LT Environmental, Inc.
3300 North A Street, Building 1, #103
Midland, Texas 79705
T 432.704.5178 / F 432.704.5179

August 6, 2018

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

RE: Closure Request
James Ranch Unit #074
Remediation Permit Number 2RP-3165
Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following letter report detailing excavation and confirmation soil sampling activities at the James Ranch Unit (JRU) #074 well pad (Site) located in Unit Letter D, Section 6, Township 23 South, Range 31 East, in Eddy County, New Mexico (Figure 1). The purpose of the excavation activities was to remove impacted soil after a failed gauge on the wellhead caused the release of 3 barrels (bbls) of crude oil and 11 bbls of produced water. The release occurred on July 25, 2015, and impacted approximately 365 square feet of the well pad. The valve to the gauge was closed until the gauge was replaced and approximately 3 bbls of free-standing liquids were 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 28, 2015, and was assigned Remediation Permit Number (RP) 2RP-3165. Although the release occurred while the facility was operated by the previous operator, XTO is the current operator and is committed to addressing any releases that remain unresolved. Based on the results of the confirmation sampling event conducted after impacted soil was removed, XTO is requesting no further action for this release.

BACKGROUND

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest water well data and known aquifer properties. The nearest permitted water well with depth to groundwater data is C 02492, located approximately 1.23 miles southeast of the Site, with a depth to groundwater of 85 feet bgs and a total depth of 135 feet bgs. The closest surface water to the Site is an unnamed arroyo located approximately 1.1 miles south southwest of the Site. The Site is greater than 200 feet from any private domestic water source and greater than 1,000 feet from a water source. Based on these criteria, the NMOCD site ranking for remediation action levels is 0, and the following remediation action levels apply: 10 milligrams per kilogram (mg/kg) benzene; 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX); and 5,000 mg/kg total petroleum hydrocarbons (TPH). Based on standard practice in this

region, LTE proposes a site-specific chloride action level of 600 mg/kg or within 10 percent (%) of the background concentrations.

PRELIMINARY SOIL SAMPLING

On January 18, 2018, LTE collected five soil samples (SS1 through SS5) to assess current site conditions. Soil sample locations were based on visual inspection of the Site and the information provided on the Form C-141. Sample SS1 was collected next to the wellhead, and samples SS2 through SS5 were collected in each cardinal direction from the wellhead release location (Figure 2). To eliminate the effects from weathering and natural degradation of contaminants at the ground surface, subsurface soil samples were collected from each sample location at approximately six inches bgs using a hand auger. The soil samples were placed directly into pre-cleaned glass jars, labeled with location, date, time, sampler, and method of analysis, and immediately placed on ice. The soil samples were shipped at 4 degrees Celsius (°C) under strict chain-of-custody procedures to ESC Laboratories in Mount Juliet, Tennessee, for analysis of BTEX by United States Environmental Protection Agency (USEPA) Method 8021B, TPH-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) by USEPA Method 8015M, and chloride by USEPA Method 300.

EXCAVATION ACTIVITIES

On April 18, 2018, LTE personnel returned to the Site to oversee excavation of impacted soil around the locations of soil samples SS1 and SS4 based on laboratory analytical results for TPH exceeding the NMOCD remediation action levels in these samples SS1 and SS4. In an effort to direct excavation activities, LTE screened soil samples using a photo-ionization detector (PID) and Hach® chloride QuanTab® test strips. The final excavation measured approximately 1,200 square feet in area. The excavation depth ranged from 12-inches bgs in the southern portion of the excavation to 22-inches bgs in the northern portion. Approximately 62 cubic yards of impacted soil were removed via backhoe or by hand digging when within 10 feet of production equipment or pipelines. All impacted soil was transported and properly disposed of at Lea Land Landfarm, in Eunice, New Mexico.

Upon removal of the impacted soil, LTE collected two confirmation soil samples (SS1A and SS4A) from the excavation from depths of 22-inches bgs and 12-inches bgs, respectively. The soil samples were collected, shipped, and analyzed as described above with the exception of being delivered by courier to Xenco Laboratories in Midland, Texas.

On May 23, 2018, LTE personnel returned to the Site to collect confirmation soil samples (SS06 through SS08) near the west, south, and east sidewalls of the excavation extent. Confirmation soil samples were collected at a depth of six inches bgs to delineate the excavation extent. The soil samples were collected, shipped, and analyzed as described above and were delivered to Xenco Laboratories in Midland, Texas. Soil sample locations are depicted on Figure 2.

ANALYTICAL RESULTS

Laboratory analytical results indicated two soil samples (SS1 and SS4) initially exceeded the site-specific remediation action level for TPH, ranging from 8,200 mg/kg in SS4 to 14,260.152 mg/kg in SS1. The excavation was extended vertically in those areas, and subsequent samples (SS1A and SS4A) confirmed TPH concentrations were below the laboratory reporting limit. Laboratory analytical results indicated BTEX, TPH, and chloride concentrations were compliant with the NMOCD remediation action levels in all final confirmation soil samples. Laboratory analytical results are presented on Figure 2 and summarized in Table 1, and complete laboratory analytical reports are included as Attachment 2.

CONCLUSIONS

Laboratory analytical results for soil samples collected from the excavation indicate that BTEX, TPH, and chloride concentrations are in compliance with NMOCD site-specific remediation action levels. XTO has successfully removed the impacted soil at the Site and requests no further action for this release. Upon approval of this request, XTO will backfill the excavation with caliche well pad material and recontour the Site. An updated NMOCD Form C-141 is included with Attachment 1. 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
Project Geologist

Ashley L. Ager, M.S., P.G.
Senior Geologist

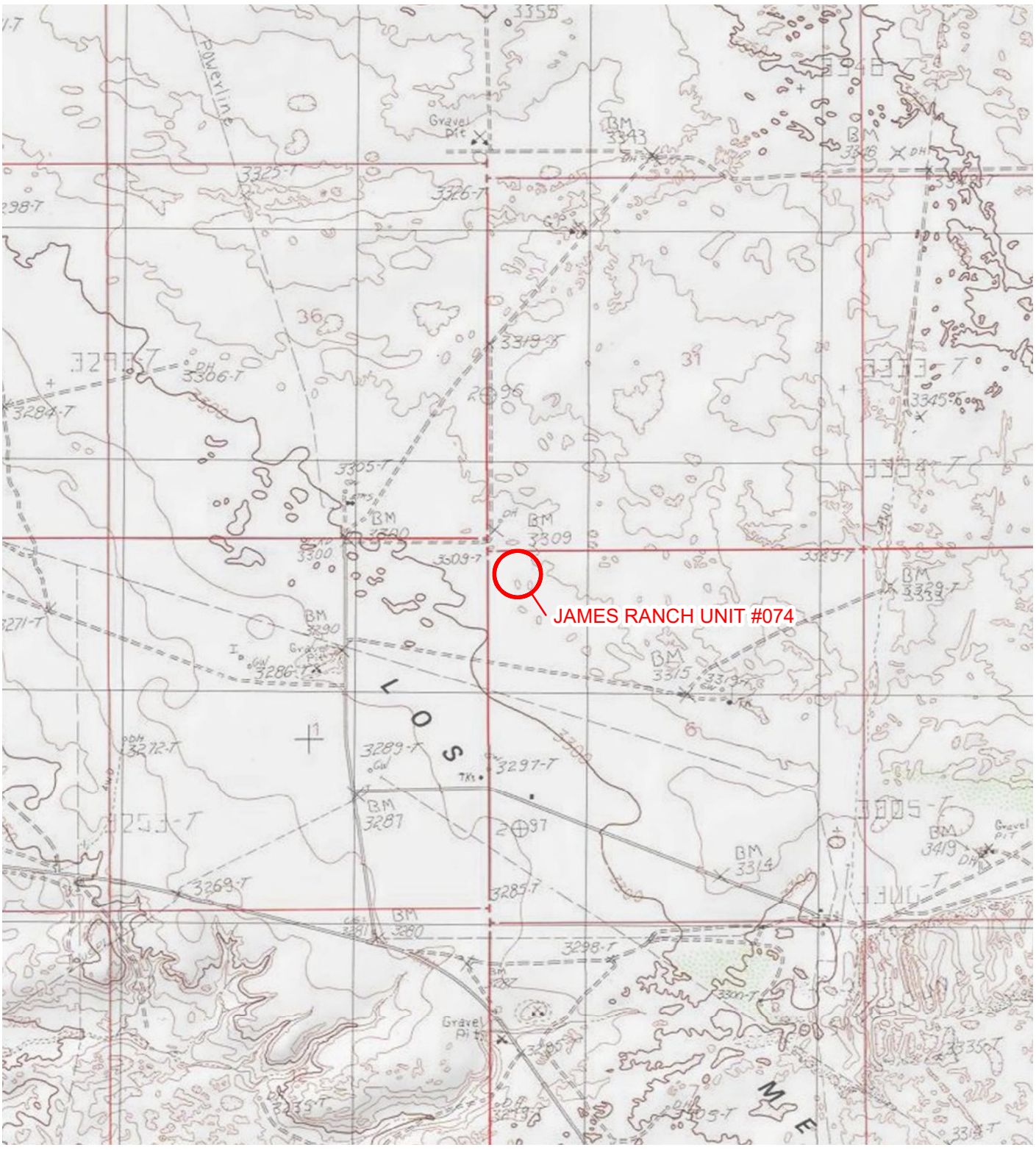
cc: Kyle Littrell, XTO
Mike Bratcher, NMOCD
Maria Pruett, NMOCD
Jim Amos, BLM
Shelly Tucker, BLM

Attachments:

Figure 1	Site Location Map
Figure 2	Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Initial/Final NMOCD Form C-141
Attachment 2	Laboratory Analytical Reports

FIGURES

Advancing Opportunity



LEGEND

SITE LOCATION

IMAGE COURTESY OF ESRI/USGS

0 2,000 4,000

Feet

N

NEW MEXICO

NOTE: REMEDIATION PERMIT NUMBER 2RP-3165

FIGURE 1
SITE LOCATION MAP
JAMES RANCH UNIT #074
UNIT D SEC 6 T23S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918012_JRU #74\012918012_FIG01_SL_2018.mxd

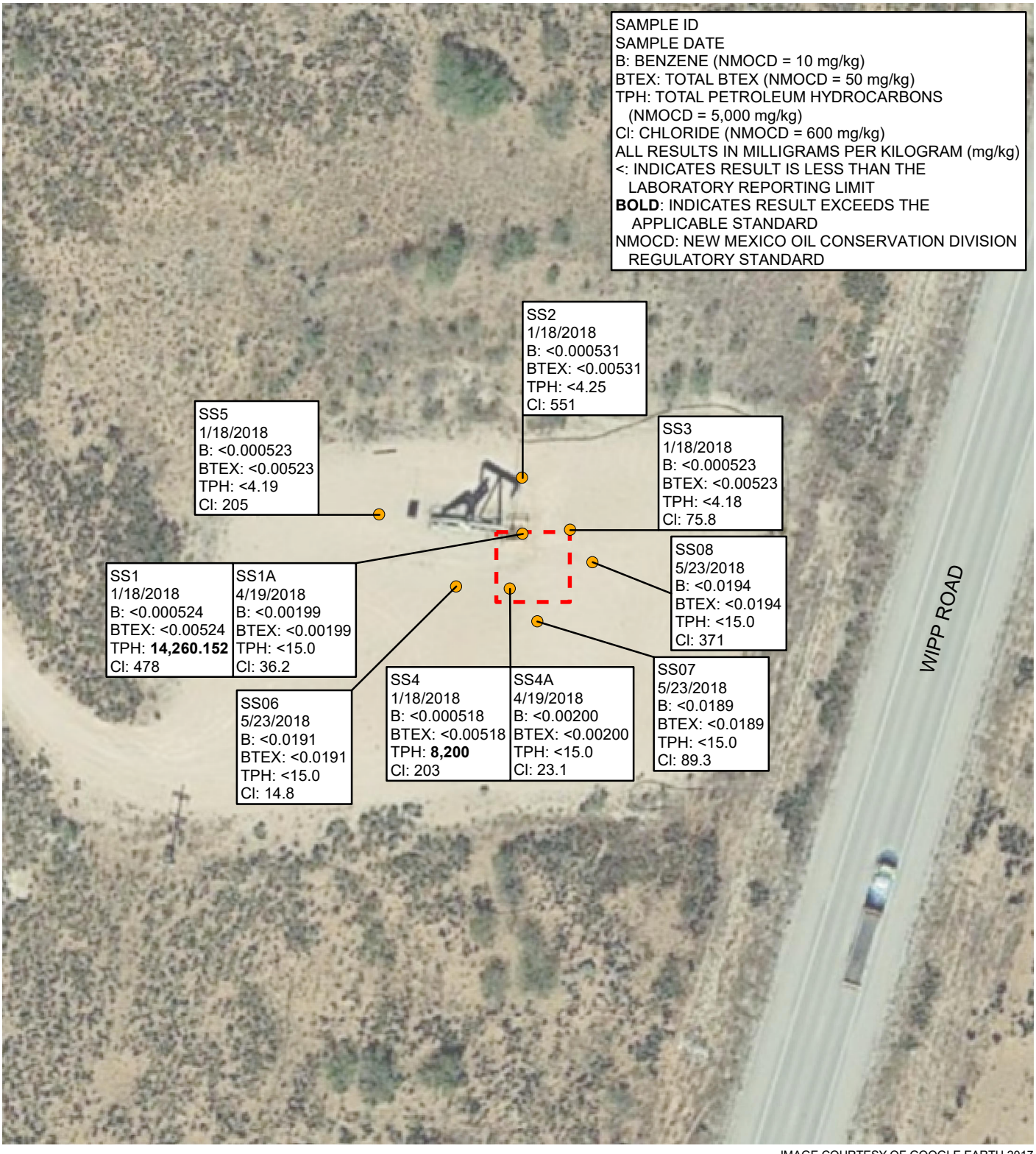


IMAGE COURTESY OF GOOGLE EARTH 2017

LEGEND

SOIL SAMPLE

EXCAVATION EXTENT

0 60 120

Feet

N

FIGURE 2
SOIL SAMPLE LOCATIONS
JAMES RANCH UNIT #074
UNIT D SEC 6 T23S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

NOTE: REMEDIATION PERMIT NUMBER 2RP-3165

P:\XTO Energy\GIS\MXD\012918012_JRU #74\012918012_FIG02_SITE_2018.mxd

TABLE

Advancing Opportunity

TABLE 1
SOIL ANALYTICAL RESULTS

JAMES RANCH UNIT #074
REMEDIATION PERMIT NUMBER 2RP-3165
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 Gasoline Range Organics (mg/kg)	C10-C28 Diesel Range (mg/kg)	C28-C40 Oil Range Organics (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS1	0.5	1/18/2018	<0.000524	<0.00524	<0.000524	<0.00157	<0.00524	0.152	8,860	5,400	**14,260.152**	478
SS2	0.5	1/18/2018	<0.000531	<0.00531	<0.000531	<0.00159	<0.00531	<0.106	<4.25	<4.25	<4.25	551
SS3	0.5	1/18/2018	<0.000523	<0.00523	<0.000523	<0.00157	<0.00523	<0.105	<4.18	<4.18	<4.18	75.8
SS4	0.5	1/18/2018	<0.000518	<0.00518	<0.000518	<0.00155	<0.00518	<0.104	2,760	5,440	**8,200**	203
SS5	0.5	1/18/2018	<0.000523	<0.00523	<0.000523	<0.00157	<0.00523	<0.105	<4.19	<4.19	<4.19	205
SS1A	1.8	4/19/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	36.2
SS4A	1.0	4/19/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	23.1
SS06	0.5	05/23/2018	<0.0191	<0.0191	<0.0191	<0.0191	<0.0191	<15.0	<15.0	<15.0	<15.0	14.8
SS07	0.5	05/23/2018	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<15.0	<15.0	<15.0	<15.0	89.3
SS08	0.5	05/23/2018	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<15.0	<15.0	<15.0	<15.0	371
NMOCD Remediation Action Level			10	NE	NE	NE	50	NE	NE	NE	5,000	600

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
TPH - total petroleum hydrocarbons
Bold - indicates result exceeds the applicable regulatory standard.

ATTACHMENT 1

INITIAL/FINAL NMOCD FORM C-141

Advancing Opportunity

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

nAB1520453746 2RP-737

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P.	Contact: Tony Savoie
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: James Ranch Unit #074	Facility Type: Exploration and Production

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-31168

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	6	23S	31E	330	North	430	West	Eddy

Latitude N 32.339824° **Longitude** W 103.824221°

NATURE OF RELEASE

Type of Release: Crude oil & Produced Water	Volume of Release: 3 bbls. oil & 11 bbls. PW	Volume Recovered: 2 bbls. oil & 1 bbl. PW
Source of Release: ¼" Pressure gauge	Date and Hour of Occurrence: 7/25/15 time unknown	Date and Hour of Discovery: 7/25/15 at approximately 10:00 a.m.
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

NM OIL CONSERVATION
ARTESIA DISTRICT
JUL 28 2015
RECEIVED

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
A ¼" gauge on the wellhead failed internally releasing oil and water on to the wellhead pad. A valve to the gauge was shut until the gauge could be replaced.

Describe Area Affected and Cleanup Action Taken.*The spill impacted approximately 365 sq.ft. of the bermed wellhead and pad area. All of the free standing fluid was recovered with a vacuum truck.
The stained are will be cleaned up in accordance to the NMOCD and BLM remediation guidelines.

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: Tony Savoie

Printed Name: Tony Savoie

Title: Waste Management and Remediation Specialist

E-mail Address: tasavoie@basspet.com

Date: 7/28/15 Phone: 432-556-8730

OIL CONSERVATION DIVISION

Approved by Environmental Specialist:

Approval Date: 7/28/15 Expiration Date: N/A

Conditions of Approval: Attached ☐

Remediation per O.C.D. Rules & Guidelines
SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 8/30/15

2RP-3165

* 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

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

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company XTO Energy	Contact: Kyle Littrell
Address 3104 E Greene Street, Carlsbad, NM 88220	Telephone No: 432-221-7331
Facility Name: James Ranch Unit #074	Facility Type: Exploration and Production

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-31168

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	6	23S	31E	330	North	430	West	Eddy

Latitude N 32.339824 **Longitude** W 103.824221 NAD83

NATURE OF RELEASE

Type of Release Crude Oil & Produced Water	Volume of Release 3 bbls. Oil & 11 bbls. PW	Volume Recovered 2 bbls. Oil & 1 bbl PW
Source of Release: ¼" Pressure gauge	Date and Hour of Occurrence 7/25/15 time unknown	Date and Hour of Discovery 7/25/15 at approximately 10:00 am
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour:	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse:	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* A ¼" gauge on the wellhead failed internally releasing oil and water onto the wellhead and pad area. A valve to the gauge was shut until the gauge could be replaced.

Describe Area Affected and Cleanup Action Taken.* The spill impacted approximately 365 sq. ft. of the bermed wellhead and pad area. All of the free standing fluid was recovered with a vacuum truck. The stained area will be cleaned up in accordance to the NMOCD and BLM remediation guidelines.

The impacted soil was excavated and confirmation soil samples were collected on January 18, April 18, and May 23, 2018. Laboratory analytical results from 7 confirmation soil samples indicate concentrations of BTEX, TPH, and chloride do not exceed NMOCD remediation action levels. Based on the volume of soil removed and analytical results of the confirmation samples, XTO requests no further action for this release and will backfill and re-contour the well pad.

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:	OIL CONSERVATION DIVISION	
Printed Name: Kyle Littrell	Approved by Environmental Specialist: Brittany Hall	
Title: SH&E Coordinator	Approval Date: 3/17/2023	Expiration Date: N/A
E-mail Address: Kyle_Littrell@xtoenergy.com	Conditions of Approval: N/A	Attached ☐
Date: 8/01/2018 Phone: 432-221-7331		

* Attach Additional Sheets If Necessary

ATTACHMENT 2

LABORATORY ANALYTICAL REPORTS

Advancing Opportunity

ANALYTICAL REPORT

January 25, 2018

XTO Energy- Delaware Division

Sample Delivery Group:	L964332
Samples Received:	01/19/2018
Project Number:	30-015-31168
Description:	Soil Samples
Site:	JAMES RANCH UNIT #074
Report To:	Kyle Littrell 6401 N Holiday Hill Rd Suite 200 Midland, TX 79707

Entire Report Reviewed By:

Daphne R Richards

Daphne Richards
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

SS1 L964332-01 Solid

			Collected by	Collected date/time	Received date/time
			Aaron Williamson	01/18/18 10:06	01/19/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1065349	1	01/23/18 13:04	01/23/18 13:12	JD
Wet Chemistry by Method 300.0	WG1064507	1	01/19/18 16:06	01/20/18 15:09	DR
Volatile Organic Compounds (GC) by Method 8015/8021	WG1065021	1	01/20/18 08:12	01/23/18 01:25	DWR
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1064561	50	01/19/18 17:00	01/21/18 20:00	ACM

SS2 L964332-02 Solid

			Collected by	Collected date/time	Received date/time
			Aaron Williamson	01/18/18 10:09	01/19/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1065349	1	01/23/18 13:04	01/23/18 13:12	JD
Wet Chemistry by Method 300.0	WG1064507	1	01/19/18 16:06	01/20/18 15:17	DR
Volatile Organic Compounds (GC) by Method 8015/8021	WG1065021	1	01/20/18 08:12	01/23/18 01:48	DWR
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1064561	1	01/19/18 17:00	01/20/18 18:20	ACM

SS3 L964332-03 Solid

			Collected by	Collected date/time	Received date/time
			Aaron Williamson	01/18/18 10:12	01/19/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1065350	1	01/23/18 11:03	01/23/18 11:11	JD
Wet Chemistry by Method 300.0	WG1064507	1	01/19/18 16:06	01/20/18 15:34	DR
Volatile Organic Compounds (GC) by Method 8015/8021	WG1065021	1	01/20/18 08:12	01/23/18 02:10	DWR
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1064561	1	01/19/18 17:00	01/20/18 16:08	ACM

SS4 L964332-04 Solid

			Collected by	Collected date/time	Received date/time
			Aaron Williamson	01/18/18 10:15	01/19/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1065350	1	01/23/18 11:03	01/23/18 11:11	JD
Wet Chemistry by Method 300.0	WG1064507	1	01/19/18 16:06	01/20/18 15:42	DR
Volatile Organic Compounds (GC) by Method 8015/8021	WG1065021	1	01/20/18 08:12	01/23/18 02:33	DWR
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1064561	20	01/19/18 17:00	01/21/18 19:09	ACM

SS5 L964332-05 Solid

			Collected by	Collected date/time	Received date/time
			Aaron Williamson	01/18/18 10:18	01/19/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1065350	1	01/23/18 11:03	01/23/18 11:11	JD
Wet Chemistry by Method 300.0	WG1064507	1	01/19/18 16:06	01/20/18 15:51	DR
Volatile Organic Compounds (GC) by Method 8015/8021	WG1065021	1	01/20/18 08:12	01/23/18 02:55	DWR
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1064561	1	01/19/18 17:00	01/20/18 16:25	ACM

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Daphne R Richards

Daphne Richards
Technical Service Representative

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.4		1	01/23/2018 13:12	WG1065349

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Chloride	478		10.5	1	01/20/2018 15:09	WG1064507

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND		0.000524	1	01/23/2018 01:25	WG1065021
Toluene	ND		0.00524	1	01/23/2018 01:25	WG1065021
Ethylbenzene	ND		0.000524	1	01/23/2018 01:25	WG1065021
Total Xylene	ND		0.00157	1	01/23/2018 01:25	WG1065021
TPH (GC/FID) Low Fraction	0.152		0.105	1	01/23/2018 01:25	WG1065021
(S) a,a,a-Trifluorotoluene(FID)	*92.9*		*77.0-120*		*01/23/2018 01:25*	WG1065021
(S) a,a,a-Trifluorotoluene(PID)	*104*		*75.0-128*		*01/23/2018 01:25*	WG1065021

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
C10-C28 Diesel Range	8860		210	50	01/21/2018 20:00	WG1064561
C28-C40 Oil Range	5400		210	50	01/21/2018 20:00	WG1064561
(S) o-Terphenyl	*0.000*	J7	*18.0-148*		*01/21/2018 20:00*	WG1064561

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.2		1	01/23/2018 13:12	WG1065349

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Chloride	551	J3	10.6	1	01/20/2018 15:17	WG1064507

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND		0.000531	1	01/23/2018 01:48	WG1065021
Toluene	ND		0.00531	1	01/23/2018 01:48	WG1065021
Ethylbenzene	ND		0.000531	1	01/23/2018 01:48	WG1065021
Total Xylene	ND		0.00159	1	01/23/2018 01:48	WG1065021
TPH (GC/FID) Low Fraction	ND		0.106	1	01/23/2018 01:48	WG1065021
(S) a,a,a-Trifluorotoluene(FID)	*94.7*		*77.0-120*		*01/23/2018 01:48*	WG1065021
(S) a,a,a-Trifluorotoluene(PID)	*107*		*75.0-128*		*01/23/2018 01:48*	WG1065021

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
C10-C28 Diesel Range	ND		4.25	1	01/20/2018 18:20	WG1064561
C28-C40 Oil Range	ND		4.25	1	01/20/2018 18:20	WG1064561
(S) o-Terphenyl	*77.2*		*18.0-148*		*01/20/2018 18:20*	WG1064561

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.6		1	01/23/2018 11:11	WG1065350

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Chloride	75.8		10.5	1	01/20/2018 15:34	WG1064507

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND		0.000523	1	01/23/2018 02:10	WG1065021
Toluene	ND		0.00523	1	01/23/2018 02:10	WG1065021
Ethylbenzene	ND		0.000523	1	01/23/2018 02:10	WG1065021
Total Xylene	ND		0.00157	1	01/23/2018 02:10	WG1065021
TPH (GC/FID) Low Fraction	ND		0.105	1	01/23/2018 02:10	WG1065021
(S) a,a,a-Trifluorotoluene(FID)	*93.9*		*77.0-120*		*01/23/2018 02:10*	WG1065021
(S) a,a,a-Trifluorotoluene(PID)	*105*		*75.0-128*		*01/23/2018 02:10*	WG1065021

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
C10-C28 Diesel Range	ND		4.18	1	01/20/2018 16:08	WG1064561
C28-C40 Oil Range	ND		4.18	1	01/20/2018 16:08	WG1064561
(S) o-Terphenyl	*78.8*		*18.0-148*		*01/20/2018 16:08*	WG1064561

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.5		1	01/23/2018 11:11	WG1065350

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Chloride	203		10.4	1	01/20/2018 15:42	WG1064507

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND		0.000518	1	01/23/2018 02:33	WG1065021
Toluene	ND		0.00518	1	01/23/2018 02:33	WG1065021
Ethylbenzene	ND		0.000518	1	01/23/2018 02:33	WG1065021
Total Xylene	ND		0.00155	1	01/23/2018 02:33	WG1065021
TPH (GC/FID) Low Fraction	ND		0.104	1	01/23/2018 02:33	WG1065021
(S) a,a,a-Trifluorotoluene(FID)	*93.7*		*77.0-120*		*01/23/2018 02:33*	WG1065021
(S) a,a,a-Trifluorotoluene(PID)	*105*		*75.0-128*		*01/23/2018 02:33*	WG1065021

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
C10-C28 Diesel Range	2760		82.9	20	01/21/2018 19:09	WG1064561
C28-C40 Oil Range	5440		82.9	20	01/21/2018 19:09	WG1064561
(S) o-Terphenyl	*127*	J7	*18.0-148*		*01/21/2018 19:09*	WG1064561

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.5		1	01/23/2018 11:11	WG1065350

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Chloride	205		10.5	1	01/20/2018 15:51	WG1064507

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND		0.000523	1	01/23/2018 02:55	WG1065021
Toluene	ND		0.00523	1	01/23/2018 02:55	WG1065021
Ethylbenzene	ND		0.000523	1	01/23/2018 02:55	WG1065021
Total Xylene	ND		0.00157	1	01/23/2018 02:55	WG1065021
TPH (GC/FID) Low Fraction	ND		0.105	1	01/23/2018 02:55	WG1065021
(S) a,a,a-Trifluorotoluene(FID)	*94.2*		*77.0-120*		*01/23/2018 02:55*	WG1065021
(S) a,a,a-Trifluorotoluene(PID)	*105*		*75.0-128*		*01/23/2018 02:55*	WG1065021

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
C10-C28 Diesel Range	ND		4.19	1	01/20/2018 16:25	WG1064561
C28-C40 Oil Range	ND		4.19	1	01/20/2018 16:25	WG1064561
(S) o-Terphenyl	*74.0*		*18.0-148*		*01/20/2018 16:25*	WG1064561

Method Blank (MB)

(MB) R3281353-1 01/23/18 13:12

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.001			

L964304-03 Original Sample (OS) • Duplicate (DUP)

(OS) L964304-03 01/23/18 13:12 • (DUP) R3281353-3 01/23/18 13:12

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	90.5	90.2	1	0		5

Laboratory Control Sample (LCS)

(LCS) R3281353-2 01/23/18 13:12

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85-115	

Method Blank (MB)

(MB) R3281345-1 01/23/18 11:11

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.001			

Original Sample (OS) • Duplicate (DUP)

(OS) • (DUP) R3281345-3 01/23/18 11:11

Analyte	Original Result	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids		93.0	1	1		5

Laboratory Control Sample (LCS)

(LCS) R3281345-2 01/23/18 11:11

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85-115	

Method Blank (MB)

(MB) R3280741-1 01/20/18 13:20

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	U		0.795	10.0

L964332-02 Original Sample (OS) • Duplicate (DUP)

(OS) L964332-02 01/20/18 15:17 • (DUP) R3280741-4 01/20/18 15:25

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	551	408	1	29.9	J3	20

L964340-02 Original Sample (OS) • Duplicate (DUP)

(OS) L964340-02 01/20/18 17:25 • (DUP) R3280741-7 01/20/18 17:33

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	3280	3650	10	10.8		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3280741-2 01/20/18 13:29 • (LCSD) R3280741-3 01/20/18 13:37

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloride	200	203	208	102	104	90-110			2.29	20

L964337-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L964337-03 01/20/18 16:34 • (MS) R3280741-5 01/20/18 16:42 • (MSD) R3280741-6 01/20/18 16:51

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	500	514	1030	922	103	81.7	1	80-120	E		10.8	20

Method Blank (MB)

(MB) R3281239-5 01/23/18 00:05

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	0.000184	J	0.000120	0.000500
Toluene	0.000346	J	0.000150	0.00500
Ethylbenzene	0.000117	J	0.000110	0.000500
Total Xylene	U		0.000460	0.00150
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*94.1*			*77.0-120*
(S) a,a,a-Trifluorotoluene(PID)	*106*			*75.0-128*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3281239-1 01/22/18 22:13 • (LCSD) R3281239-2 01/22/18 22:35

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0500	0.0416	0.0413	83.2	82.7	71.0-121			0.590	20
Toluene	0.0500	0.0446	0.0436	89.2	87.3	72.0-120			2.13	20
Ethylbenzene	0.0500	0.0435	0.0428	87.0	85.7	76.0-121			1.50	20
Total Xylene	0.150	0.135	0.132	89.9	88.1	75.0-124			2.10	20
(S) a,a,a-Trifluorotoluene(FID)				*95.4*	*95.7*	*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)				*107*	*106*	*75.0-128*				

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3281239-3 01/22/18 22:58 • (LCSD) R3281239-4 01/22/18 23:20

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	5.18	5.26	94.1	95.7	70.0-136			1.64	20
(S) a,a,a-Trifluorotoluene(FID)				*106*	*107*	*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)				*119*	*119*	*75.0-128*				

Method Blank (MB)

(MB) R3280810-1 01/20/18 11:55

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	*96.7*			*18.0-148*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3280810-2 01/20/18 12:12 • (LCSD) R3280810-3 01/20/18 12:30

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	60.0	45.8	43.0	76.4	71.6	50.0-150			6.46	20
(S) o-Terphenyl				*116*	*110*	*18.0-148*				

L964340-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L964340-03 01/20/18 17:00 • (MS) R3280810-4 01/20/18 17:14 • (MSD) R3280810-5 01/20/18 17:31

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	60.0	ND	39.7	38.4	66.1	64.0	1	50.0-150			3.21	20
(S) o-Terphenyl					*87.0*	*85.6*		*18.0-148*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina [1]	DW21704
Florida	E87487	North Carolina [2]	41
Georgia	NELAP	North Dakota	R-140
Georgia [1]	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky [1]	90010	South Dakota	n/a
Kentucky [2]	16	Tennessee [1 4]	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

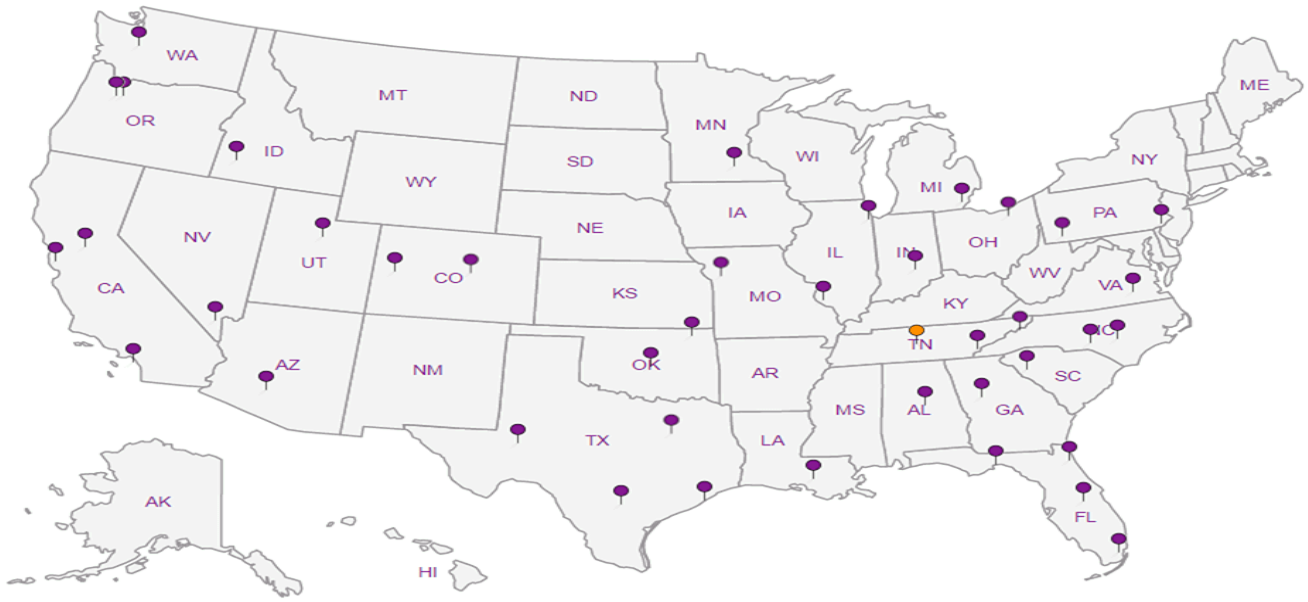
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold n/a Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. ESC Lab Sciences performs all testing at our central laboratory.



ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
XTO Energy- Delaware Division	30-015-31168	L964332	01/25/18 16:14	16 of 17

Billing Information:

Pres Chk

Report to: **Kyle Littrell**

Email To: **Abaker@ltenv.com**

Project Description: **Soil Samples**

City/State Collected: **NM**

Phone: **1-970-317-1867**

Fax:

Client Project # **30-015-31168**

Lab Project #

Collected by (print): **Aaron Williamson**

Site/Facility ID # **James Ranch Unit #074**

P.O. # 012918012

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day X Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX EPA Method 8021	TPH EPA Method 8015	Chloride EPA Method 300.1	Remarks	Sample # (lab only)
SS1	Grab	SS	0.5 feet	1/18/2018	10:06	1	X	X	X		-01
SS2	Grab	SS	0.5 feet	1/18/2018	10:09	1	X	X	X		02
SS3	Grab	SS	0.5 feet	1/18/2018	10:12	1	X	X	X		03
SS4	Grab	SS	0.5 feet	1/18/2018	10:15	1	X	X	X		04
SS5	Grab	SS	0.5 feet	1/18/2018	10:18	1	X	X	X		05
		N.F.E. ARW									

Chain of Custody Page

ESC LABORATORY SCIENCES

YOUR LAB OF CHOICE

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L964332

F152

Acctnum: XTOMTX

Template:

Prelogin:

TSR:

PB:

Shipped Via:

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Also Email to: Awilliamson@ltenv.com
All times recorded in Mountain Time
(2RP-3165)

pH _____ Temp _____

Flow _____ Other _____

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking #

Trip Blank Received: Yes (No) HCL / MeoH TBR

Temp: 1.7 and 3.0 °C Bottles Received: 5-4oz

If preservation required by Login: Date/Time

Hold:

Condition: NCF (OK)

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	1-18-18	3:40	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	1/18/18	17:20	FedEx
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			834

Date: 1-19-18 Time: 0845

Certificate of Analysis Summary 583286

LT Environmental, Inc., Arvada, CO

Project Name: JRU 74

Project Id: 30-015-31688 2RP-3165
Contact: Adrian Baker
Project Location: NM

Date Received in Lab: Mon Apr-23-18 08:33 am
Report Date: 27-APR-18
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	583286-001		583286-002					
	Field Id:	SS 1A		SS 4A					
	Depth:	0-22 In		0-12 In					
	Matrix:	SOIL		SOIL					
	Sampled:	Apr-19-18 12:10		Apr-19-18 11:00					
BTEX by EPA 8021B	***Extracted:***	Apr-24-18 13:00		Apr-24-18 13:00					
	Analyzed:	Apr-25-18 00:51		Apr-25-18 01:10					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00199	0.00199	<0.00200	0.00200				
Toluene		<0.00199	0.00199	<0.00200	0.00200				
Ethylbenzene		<0.00199	0.00199	<0.00200	0.00200				
m,p-Xylenes		<0.00398	0.00398	<0.00399	0.00399				
o-Xylene		<0.00199	0.00199	<0.00200	0.00200				
Total Xylenes		<0.00199	0.00199	<0.00200	0.00200				
Total BTEX		<0.00199	0.00199	<0.00200	0.00200				
Chloride by EPA 300	***Extracted:***	Apr-26-18 12:00		Apr-26-18 12:00					
	Analyzed:	Apr-26-18 15:03		Apr-26-18 15:13					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		36.2	4.98	23.1	5.00				
TPH By SW8015 Mod	***Extracted:***	Apr-24-18 14:00		Apr-24-18 14:00					
	Analyzed:	Apr-24-18 19:19		Apr-24-18 19:46					
	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				
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0				
Total TPH		<15.0	15.0	<15.0	15.0				

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

Jessica Kramer
Project Assistant

Analytical Report 583286

for

LT Environmental, Inc.

Project Manager: Adrian Baker

JRU 74

30-015-31688 2RP-3165

27-APR-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-24), 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)

27-APR-18

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

Reference: XENCO Report No(s): **583286**
JRU 74
Project Address: NM

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) 583286. 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. 583286 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.
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Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 583286

LT Environmental, Inc., Arvada, CO

JRU 74

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS 1A	S	04-19-18 12:10	0 - 22 In	583286-001
SS 4A	S	04-19-18 11:00	0 - 12 In	583286-002

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: JRU 74

Project ID: *30-015-31688 2RP-3165*
Work Order Number(s): *583286*

Report Date: *27-APR-18*
Date Received: *04/23/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3047816 BTEX by EPA 8021B

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

Certificate of Analytical Results 583286

LT Environmental, Inc., Arvada, CO

JRU 74

Sample Id:	**SS 1A**	Matrix:	Soil	Date Received:	04.23.18 08.33
Lab Sample Id:	583286-001	Date Collected:	04.19.18 12.10	Sample Depth:	0 - 22 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	SCM	Date Prep:	04.26.18 12.00	Basis:	Wet Weight
Seq Number:	3048097				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**36.2**	4.98	mg/kg	04.26.18 15.03		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.24.18 14.00	Basis:	Wet Weight
Seq Number:	3047856				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.24.18 19.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.24.18 19.19	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	04.24.18 19.19	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.24.18 19.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	04.24.18 19.19	
o-Terphenyl	84-15-1	106	%	70-135	04.24.18 19.19	

Certificate of Analytical Results 583286

LT Environmental, Inc., Arvada, CO

JRU 74

Sample Id:	**SS 1A**	Matrix:	Soil	Date Received:	04.23.18 08.33
Lab Sample Id:	583286-001	Date Collected:	04.19.18 12.10	Sample Depth:	0 - 22 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	04.24.18 13.00	Basis:	Wet Weight
Seq Number:	3047816				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.25.18 00.51	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.25.18 00.51	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.25.18 00.51	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.25.18 00.51	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.25.18 00.51	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.25.18 00.51	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.25.18 00.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	90	%	70-130	04.25.18 00.51	
1,4-Difluorobenzene	540-36-3	104	%	70-130	04.25.18 00.51	

Certificate of Analytical Results 583286

LT Environmental, Inc., Arvada, CO

JRU 74

Sample Id:	**SS 4A**	Matrix:	Soil	Date Received:	04.23.18 08.33
Lab Sample Id:	583286-002	Date Collected:	04.19.18 11.00	Sample Depth:	0 - 12 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	SCM	Date Prep:	04.26.18 12.00	Basis:	Wet Weight
Seq Number:	3048097				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**23.1**	5.00	mg/kg	04.26.18 15.13		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.24.18 14.00	Basis:	Wet Weight
Seq Number:	3047856				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.24.18 19.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.24.18 19.46	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	04.24.18 19.46	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.24.18 19.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	04.24.18 19.46	
o-Terphenyl	84-15-1	114	%	70-135	04.24.18 19.46	

Certificate of Analytical Results 583286

LT Environmental, Inc., Arvada, CO

JRU 74

Sample Id:	**SS 4A**	Matrix:	Soil	Date Received:	04.23.18 08.33
Lab Sample Id:	583286-002	Date Collected:	04.19.18 11.00	Sample Depth:	0 - 12 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	04.24.18 13.00	Basis:	Wet Weight
Seq Number:	3047816				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.25.18 01.10	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.25.18 01.10	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.25.18 01.10	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.25.18 01.10	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.25.18 01.10	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.25.18 01.10	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.25.18 01.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	04.25.18 01.10	
4-Bromofluorobenzene	460-00-4	93	%	70-130	04.25.18 01.10	

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 583286

LT Environmental, Inc.

JRU 74

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3048097 — Matrix: Solid — Date Prep: 04.26.18
MB Sample Id: 7643501-1-BLK — LCS Sample Id: 7643501-1-BKS — LCSD Sample Id: 7643501-1-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	239	96	237	95	90-110	1	20	mg/kg	04.26.18 12:59	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3048097 — Matrix: Soil — Date Prep: 04.26.18
Parent Sample Id: 583233-001 — MS Sample Id: 583233-001 S — MSD Sample Id: 583233-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	31.8	250	257	90	255	89	90-110	1	20	mg/kg	04.26.18 13:30	X

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3048097 — Matrix: Soil — Date Prep: 04.26.18
Parent Sample Id: 583452-017 — MS Sample Id: 583452-017 S — MSD Sample Id: 583452-017 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	198	249	440	97	440	97	90-110	0	20	mg/kg	04.26.18 15:55	

Analytical Method: TPH By SW8015 Mod — Prep Method: TX1005P
Seq Number: 3047856 — Matrix: Solid — Date Prep: 04.24.18
MB Sample Id: 7643390-1-BLK — LCS Sample Id: 7643390-1-BKS — LCSD Sample Id: 7643390-1-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	949	95	942	94	70-135	1	20	mg/kg	04.24.18 16:06	
Diesel Range Organics (DRO)	<15.0	1000	1020	102	1010	101	70-135	1	20	mg/kg	04.24.18 16:06	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		113		112		70-135	%	04.24.18 16:06
o-Terphenyl	99		113		110		70-135	%	04.24.18 16:06

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 583286

LT Environmental, Inc.

JRU 74

Analytical Method: TPH By SW8015 Mod — Prep Method: TX1005P
Seq Number: 3047856 — Matrix: Soil — Date Prep: 04.24.18
Parent Sample Id: 583283-001 — MS Sample Id: 583283-001 S — MSD Sample Id: 583283-001 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	950	95	1030	103	70-135	8	20	mg/kg	04.24.18 17:37	
Diesel Range Organics (DRO)	<15.0	998	982	98	1060	106	70-135	8	20	mg/kg	04.24.18 17:37	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	110		122		70-135	%	04.24.18 17:37
o-Terphenyl	109		117		70-135	%	04.24.18 17:37

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3047816 — Matrix: Solid — Date Prep: 04.24.18
MB Sample Id: 7643366-1-BLK — LCS Sample Id: 7643366-1-BKS — LCSD Sample Id: 7643366-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.115	114	0.114	114	70-130	1	35	mg/kg	04.24.18 17:48	
Toluene	<0.00202	0.101	0.109	108	0.108	108	70-130	1	35	mg/kg	04.24.18 17:48	
Ethylbenzene	<0.00202	0.101	0.110	109	0.108	108	70-130	2	35	mg/kg	04.24.18 17:48	
m,p-Xylenes	<0.00403	0.202	0.226	112	0.224	112	70-130	1	35	mg/kg	04.24.18 17:48	
o-Xylene	<0.00202	0.101	0.114	113	0.112	112	70-130	2	35	mg/kg	04.24.18 17:48	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		108		109		70-130	%	04.24.18 17:48
4-Bromofluorobenzene	89		102		93		70-130	%	04.24.18 17:48

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3047816 — Matrix: Soil — Date Prep: 04.24.18
Parent Sample Id: 583285-001 — MS Sample Id: 583285-001 S — MSD Sample Id: 583285-001 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	0.0998	0.0983	98	0.0878	88	70-130	11	35	mg/kg	04.24.18 18:27	
Toluene	<0.00200	0.0998	0.0934	94	0.0824	82	70-130	13	35	mg/kg	04.24.18 18:27	
Ethylbenzene	<0.00200	0.0998	0.0937	94	0.0796	80	70-130	16	35	mg/kg	04.24.18 18:27	
m,p-Xylenes	<0.00399	0.200	0.192	96	0.162	81	70-130	17	35	mg/kg	04.24.18 18:27	
o-Xylene	<0.00200	0.0998	0.0977	98	0.0834	83	70-130	16	35	mg/kg	04.24.18 18:27	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		109		70-130	%	04.24.18 18:27
4-Bromofluorobenzene	106		103		70-130	%	04.24.18 18:27

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

Page 42 of 60

XENCO LABORATORIES

Setting the Standard since 1990

Stafford,Texas (281-240-4200)

Dallas Texas (214-902-0300)

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Midland, Texas (432-704-5251)

Phoenix, Arizona (480-355-0900)

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CHAIN OF CUSTODY

Page ___ Of ___

Xenco Quote #

Xenco Job # 583286

Client / Reporting Information

Company Name / Branch: LTE/Midland

Company Address: 3300 North A Street Building 1, Unit #103, Midland, Texas

Email: abaker@ltenv.com

Phone No: 439-894-5641

Project Contact: Adrian Baker

Samplers's Name: Eric Carroll

Project Information

Project Name/Number: JRU 74

Project Location: NM

Invoice To: Kyle Littrell, XTO Energy

PO Number: 30-015-31168 2RP-3165

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	TPH	Chloride	Field Comments
1	SS1A	22"	~~12/10~~ 4/19/23	1210	S	1								X	X	X	X	
2	SS4A	12"	~~H/06~~ 4/19/23	1100	S	1								X	X	X	X	
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] 5 Day TAT
- [ ] Next Day EMERGENCY
- [x] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

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	Eric Carroll	4/20 9:30	Esperanza Gonzalez	2 Esperanza Gonzalez	4/20 12:55	2
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
			3	4		4
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice: 0.5 Cooler Temp. Thermo. Corr. Factor
			5			

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.

Received by OCD: 3/17/2023 2:23:30 PM

Released to Imaging: 3/17/2023 2:25:09 PM

Final 1.001

Page 13 of 14

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 04/23/2018 08:33:28 AM

Work Order #: 583286

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
#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: 04/23/2018

Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 04/23/2018

Jessica Kramer

30-MAY-18

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

Reference: XENCO Report No(s): **587074**
JRU #74 Wellhead
Project Address: NM

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) 587074. 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. 587074 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,

Julian Martinez
Project Manager

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 587074

LT Environmental, Inc., Arvada, CO

JRU #74 Wellhead

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS06	S	05-23-18 08:36	6 In	587074-001
SS07	S	05-23-18 08:47	6 In	587074-002
SS08	S	05-23-18 09:08	6 In	587074-003

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: JRU #74 Wellhead

Project ID:
Work Order Number(s): *587074*

Report Date: *30-MAY-18*
Date Received: *05/24/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3051559 BTEX by EPA 8021B

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

Certificate of Analysis Summary 587074

LT Environmental, Inc., Arvada, CO

Project Name: JRU #74 Wellhead

Project Id:
Contact: Adrian Baker
Project Location: NM

Date Received in Lab: Thu May-24-18 10:30 am
Report Date: 30-MAY-18
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	587074-001		587074-002		587074-003			
	Field Id:	SS06		SS07		SS08			
	Depth:	6- In		6- In		6- In			
	Matrix:	SOIL		SOIL		SOIL			
	Sampled:	May-23-18 08:36		May-23-18 08:47		May-23-18 09:08			
BTEX by EPA 8021B SUB: T104704219-17-16	***Extracted:***	May-25-18 12:30		May-25-18 12:30		May-25-18 12:30			
	Analyzed:	May-26-18 03:12		May-26-18 03:39		May-26-18 04:06			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		<0.0191	0.0191	<0.0189	0.0189	<0.0194	0.0194		
Toluene		<0.0191	0.0191	<0.0189	0.0189	<0.0194	0.0194		
Ethylbenzene		<0.0191	0.0191	<0.0189	0.0189	<0.0194	0.0194		
m,p-Xylenes		<0.0382	0.0382	<0.0379	0.0379	<0.0388	0.0388		
o-Xylene		<0.0191	0.0191	<0.0189	0.0189	<0.0194	0.0194		
Total Xylenes		<0.0191	0.0191	<0.0189	0.0189	<0.0194	0.0194		
Total BTEX		<0.0191	0.0191	<0.0189	0.0189	<0.0194	0.0194		
Inorganic Anions by EPA 300	***Extracted:***	May-29-18 14:00		May-29-18 14:00		May-29-18 14:00			
	Analyzed:	May-29-18 20:09		May-29-18 20:14		May-29-18 20:30			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		14.8	4.96	89.3	4.95	371	4.95		
TPH by SW8015 Mod	***Extracted:***	May-24-18 17:00		May-24-18 17:00		May-24-18 17:00			
	Analyzed:	May-25-18 17:52		May-25-18 18:10		May-25-18 19:05			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0		
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0		
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	<15.0	15.0		
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	15.0		

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

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

Version: 1.%

Julian Martinez
Project Manager

Certificate of Analytical Results 587074

LT Environmental, Inc., Arvada, CO

JRU #74 Wellhead

Sample Id:	**SS06**	Matrix:	Soil	Date Received:	05.24.18 10.30
Lab Sample Id:	587074-001	Date Collected:	05.23.18 08.36	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.29.18 14.00	Basis:	Wet Weight
Seq Number:	3051658				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**14.8**	4.96	mg/kg	05.29.18 20.09		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.24.18 17.00	Basis:	Wet Weight
Seq Number:	3051512				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.25.18 17.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.25.18 17.52	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	05.25.18 17.52	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.25.18 17.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	05.25.18 17.52	
o-Terphenyl	84-15-1	94	%	70-135	05.25.18 17.52	

Certificate of Analytical Results 587074

LT Environmental, Inc., Arvada, CO

JRU #74 Wellhead

Sample Id:	**SS06**	Matrix:	Soil	Date Received:	05.24.18 10.30
Lab Sample Id:	587074-001	Date Collected:	05.23.18 08.36	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	05.25.18 12.30	Basis:	Wet Weight
Seq Number:	3051559			SUB:	T104704219-17-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0191	0.0191	mg/kg	05.26.18 03.12	U	1
Toluene	108-88-3	<0.0191	0.0191	mg/kg	05.26.18 03.12	U	1
Ethylbenzene	100-41-4	<0.0191	0.0191	mg/kg	05.26.18 03.12	U	1
m,p-Xylenes	179601-23-1	<0.0382	0.0382	mg/kg	05.26.18 03.12	U	1
o-Xylene	95-47-6	<0.0191	0.0191	mg/kg	05.26.18 03.12	U	1
Total Xylenes	1330-20-7	<0.0191	0.0191	mg/kg	05.26.18 03.12	U	1
Total BTEX		<0.0191	0.0191	mg/kg	05.26.18 03.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	68-120	05.26.18 03.12	
a,a,a-Trifluorotoluene	98-08-8	88	%	71-121	05.26.18 03.12	

Certificate of Analytical Results 587074

LT Environmental, Inc., Arvada, CO

JRU #74 Wellhead

Sample Id:	**SS07**	Matrix:	Soil	Date Received:	05.24.18 10.30
Lab Sample Id:	587074-002	Date Collected:	05.23.18 08.47	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.29.18 14.00	Basis:	Wet Weight
Seq Number:	3051658				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**89.3**	4.95	mg/kg	05.29.18 20.14		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.24.18 17.00	Basis:	Wet Weight
Seq Number:	3051512				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.25.18 18.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.25.18 18.10	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	05.25.18 18.10	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.25.18 18.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	05.25.18 18.10	
o-Terphenyl	84-15-1	98	%	70-135	05.25.18 18.10	

Certificate of Analytical Results 587074

LT Environmental, Inc., Arvada, CO

JRU #74 Wellhead

Sample Id:	**SS07**	Matrix:	Soil	Date Received:	05.24.18 10.30
Lab Sample Id:	587074-002	Date Collected:	05.23.18 08.47	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	05.25.18 12.30	Basis:	Wet Weight
Seq Number:	3051559			SUB:	T104704219-17-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0189	0.0189	mg/kg	05.26.18 03.39	U	1
Toluene	108-88-3	<0.0189	0.0189	mg/kg	05.26.18 03.39	U	1
Ethylbenzene	100-41-4	<0.0189	0.0189	mg/kg	05.26.18 03.39	U	1
m,p-Xylenes	179601-23-1	<0.0379	0.0379	mg/kg	05.26.18 03.39	U	1
o-Xylene	95-47-6	<0.0189	0.0189	mg/kg	05.26.18 03.39	U	1
Total Xylenes	1330-20-7	<0.0189	0.0189	mg/kg	05.26.18 03.39	U	1
Total BTEX		<0.0189	0.0189	mg/kg	05.26.18 03.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	68-120	05.26.18 03.39	
a,a,a-Trifluorotoluene	98-08-8	86	%	71-121	05.26.18 03.39	

Certificate of Analytical Results 587074

LT Environmental, Inc., Arvada, CO

JRU #74 Wellhead

Sample Id:	**SS08**	Matrix:	Soil	Date Received:	05.24.18 10.30
Lab Sample Id:	587074-003	Date Collected:	05.23.18 09.08	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.29.18 14.00	Basis:	Wet Weight
Seq Number:	3051658				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**371**	4.95	mg/kg	05.29.18 20.30		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.24.18 17.00	Basis:	Wet Weight
Seq Number:	3051512				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.25.18 19.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.25.18 19.05	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	05.25.18 19.05	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.25.18 19.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	05.25.18 19.05	
o-Terphenyl	84-15-1	99	%	70-135	05.25.18 19.05	

Certificate of Analytical Results 587074

LT Environmental, Inc., Arvada, CO

JRU #74 Wellhead

Sample Id:	**SS08**	Matrix:	Soil	Date Received:	05.24.18 10.30
Lab Sample Id:	587074-003	Date Collected:	05.23.18 09.08	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	05.25.18 12.30	Basis:	Wet Weight
Seq Number:	3051559			SUB:	T104704219-17-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0194	0.0194	mg/kg	05.26.18 04.06	U	1
Toluene	108-88-3	<0.0194	0.0194	mg/kg	05.26.18 04.06	U	1
Ethylbenzene	100-41-4	<0.0194	0.0194	mg/kg	05.26.18 04.06	U	1
m,p-Xylenes	179601-23-1	<0.0388	0.0388	mg/kg	05.26.18 04.06	U	1
o-Xylene	95-47-6	<0.0194	0.0194	mg/kg	05.26.18 04.06	U	1
Total Xylenes	1330-20-7	<0.0194	0.0194	mg/kg	05.26.18 04.06	U	1
Total BTEX		<0.0194	0.0194	mg/kg	05.26.18 04.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	68-120	05.26.18 04.06	
a,a,a-Trifluorotoluene	98-08-8	90	%	71-121	05.26.18 04.06	

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 587074

LT Environmental, Inc.

JRU #74 Wellhead

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3051658 — Matrix: Solid — Date Prep: 05.29.18
MB Sample Id: 7655591-1-BLK — LCS Sample Id: 7655591-1-BKS — LCSD Sample Id: 7655591-1-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	267	107	262	105	90-110	2	20	mg/kg	05.29.18 18:28	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3051658 — Matrix: Soil — Date Prep: 05.29.18
Parent Sample Id: 587245-009 — MS Sample Id: 587245-009 S — MSD Sample Id: 587245-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	19.9	248	278	104	279	104	90-110	0	20	mg/kg	05.29.18 18:44	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3051658 — Matrix: Soil — Date Prep: 05.29.18
Parent Sample Id: 587245-019 — MS Sample Id: 587245-019 S — MSD Sample Id: 587245-019 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	36.0	250	278	97	280	98	90-110	1	20	mg/kg	05.29.18 19:58	

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3051512 — Matrix: Solid — Date Prep: 05.24.18
MB Sample Id: 7655529-1-BLK — LCS Sample Id: 7655529-1-BKS — LCSD Sample Id: 7655529-1-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	901	90	937	94	70-135	4	20	mg/kg	05.25.18 14:12	
Diesel Range Organics (DRO)	<15.0	1000	994	99	1040	104	70-135	5	20	mg/kg	05.25.18 14:12	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		127		126		70-135	%	05.25.18 14:12
o-Terphenyl	101		110		113		70-135	%	05.25.18 14:12

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 587074

LT Environmental, Inc.

JRU #74 Wellhead

Analytical Method: TPH by SW8015 Mod | Prep Method: TX1005P
Seq Number: 3051512 | Matrix: Soil | Date Prep: 05.24.18
Parent Sample Id: 586096-017 | MS Sample Id: 586096-017 S | MSD Sample Id: 586096-017 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	997	902	90	909	91	70-135	1	20	mg/kg	05.25.18 15:08	
Diesel Range Organics (DRO)	673	997	1690	102	1710	104	70-135	1	20	mg/kg	05.25.18 15:08	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	125		126		70-135	%	05.25.18 15:08
o-Terphenyl	129		128		70-135	%	05.25.18 15:08

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3051559 | Matrix: Solid | Date Prep: 05.25.18
MB Sample Id: 7655481-1-BLK | LCS Sample Id: 7655481-1-BKS | LCSD Sample Id: 7655481-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0200	2.00	1.55	78	1.63	82	55-120	5	20	mg/kg	05.25.18 21:19	
Toluene	<0.0200	2.00	1.53	77	1.57	79	77-120	3	20	mg/kg	05.25.18 21:19	
Ethylbenzene	<0.0200	2.00	1.57	79	1.61	81	77-120	3	20	mg/kg	05.25.18 21:19	
m,p-Xylenes	<0.0400	4.00	3.19	80	3.27	82	78-120	2	20	mg/kg	05.25.18 21:19	
o-Xylene	<0.0200	2.00	1.64	82	1.68	84	78-120	2	20	mg/kg	05.25.18 21:19	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	80		81		83		68-120	%	05.25.18 21:19
a,a,a-Trifluorotoluene	81		74		79		71-121	%	05.25.18 21:19

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3051559 | Matrix: Soil | Date Prep: 05.25.18
Parent Sample Id: 587080-001 | MS Sample Id: 587080-001 S | MSD Sample Id: 587080-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0190	1.90	1.32	69	1.29	69	54-120	2	25	mg/kg	05.25.18 23:35	
Toluene	<0.0190	1.90	1.31	69	1.34	72	57-120	2	25	mg/kg	05.25.18 23:35	
Ethylbenzene	<0.0190	1.90	1.40	74	1.48	80	58-131	6	25	mg/kg	05.25.18 23:35	
m,p-Xylenes	<0.0380	3.80	2.84	75	3.02	81	62-124	6	25	mg/kg	05.25.18 23:35	
o-Xylene	<0.0190	1.90	1.47	77	1.53	82	62-124	4	25	mg/kg	05.25.18 23:35	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	85		90		68-120	%	05.25.18 23:35
a,a,a-Trifluorotoluene	81		77		71-121	%	05.25.18 23:35

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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XENCO LABORATORIES

Setting the Standard since 1990

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 # 587074

Client / Reporting Information

Company Name / Branch: LT Environmental, Inc. - Permian Office
Company Address: 3300 North "A" Street, Building 1, Unit #103, Midland, TX 79705
Email: Abaker@LTEnv.com
Phone No: (432) 704-5178
Project Contact: Adrian Baker
Samplers's Name

Project Information

Project Name/Number: JRU #74 wellhead
Project Location: NM
Invoice To: XTO Energy - Kyle Littrell
PO Number: 30-015-31108 2RP-3105

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	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Analytical Information: BTEX EPA Method 8021	TPH ~~BTEX~~ EPA Method 8015	Chloride EPA Method 300.0	Field Comments
1	SS06	6"	5/23/18	0836	S	1								1	X	X	X	
2	SS07	6"	↓	0847	↓	1								1	↓	↓	↓	
3	SS08	6"	↓	0908	↓	1								1	↓	↓	↓	
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] Next Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 3 Day EMERGENCY
- [x] 5 Day TAT
- [ ] 7 Day TAT
- [ ] Contract TAT

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

Data Deliverable Information

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

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	Kathon Baker	5/23/18 1307				
2					5/23 15:30	5/24/18 10:30
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
4						
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. / Thermo. Corr. Factor
						✓ 1.8 R8 0.0

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.

Received by OCD: 3/17/2023 2:23:30 PM
Final 1.000
Page 14 of 16
Released to Imaging: 3/17/2023 2:25:09 PM

Inter-Office Shipment

IOS Number **107769**

Date/Time: 05/24/18 11:08
Lab# From: **Midland**
Lab# To: **Lubbock**

Created by: Katie Lowe
Delivery Priority:
Air Bill No.:

Please send report to: Jessica Kramer
Address: 1211 W. Florida Ave, Midland TX 79701
Phone:
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
587074-001	S	SS06	05/23/18 08:36	SW8021B	BTEX by EPA 8021B	05/31/18	06/06/18	JKR	BR4FBZ BZ BZME EBZ X	
587074-002	S	SS07	05/23/18 08:47	SW8021B	BTEX by EPA 8021B	05/31/18	06/06/18	JKR	BR4FBZ BZ BZME EBZ X	
587074-003	S	SS08	05/23/18 09:08	SW8021B	BTEX by EPA 8021B	05/31/18	06/06/18	JKR	BR4FBZ BZ BZME EBZ X	

Inter Office Shipment or Sample Comments:

Relinquished By Katie Lowe

Date Relinquished: 05/24/2018

Received By: _____

Date Received: _____

Cooler Temperature: _____

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 05/24/2018 10:30:00 AM

Work Order #: 587074

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)?	1.8	
#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**	Lubbock
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Katie Lowe Date: 05/24/2018

Checklist reviewed by: Jessica Kramer Date: 05/24/2018

Jessica Kramer

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 198404

CONDITIONS

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 198404
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
bhall	None	3/17/2023