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

August 6, 2018

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

RE: Closure Request
JRU #36
Remediation Permit Number 2RP-2981 and 2RP-3617
Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), is pleased to present the following letter report detailing the soil sampling activities at the JRU #36 well pad (Site) in Unit Letter G, Section 1, Township 23 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the investigation was to assess impacts to soil after two separate events caused the release of crude oil in the processing equipment containment area.

On April 23, 2015, an air eliminator failure on the circulating pump broke off at the valve due to vibration of the pump, causing a release of approximately 20 barrels (bbls) of crude oil. The spill impacted approximately 2,000 square feet of the containment area. Free-standing liquid was removed with a vacuum truck; approximately 11 bbls of crude oil was recovered. The former operator reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 on April 29, 2015, and was assigned Remediation Permit Number (RP) 2RP-2981 (Attachment 1).

On February 1, 2016, a discharge bleed valve was left open on the circulating pump. This caused a release of approximately 17 barrels (bbls) of crude oil. The spill impacted approximately 1,575 square feet of the well pad within the process equipment area. Free-standing liquid was removed with a vacuum truck; approximately 5 bbls of crude oil was recovered. The former operator reported the release to the NMOCD on a Release Notification and Corrective Action Form C-141 on March 15, 2016, and was assigned 2RP-3617 (Attachment 1).

Although the releases 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. The sampling was conducted to assess current site conditions. Based on the results of the confirmation sampling events conducted after impacted soil was removed, XTO is requesting no further action for these release events.

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 is C 03139, located approximately 0.44 miles southeast of the Site, with a depth to groundwater of 354 feet bgs and a total depth of 425 feet bgs. The Site is greater than 1,000 feet from a water source and greater than 200 feet from a private domestic water source. The closest surface water to the Site is an arroyo located approximately 0.74 miles southwest of the Site. 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 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.

SOIL SAMPLING

On January 4, 2018, an LTE scientist collected nine soil samples (SS-1 through SS-9) from a depth of 0.5 feet bgs to determine the lateral extent of soil impact. The soil sample locations, depicted on Figure 2, were based on information provided on both the initial Form C-141s and field observations. Both releases were a result of the circulating pump in the processing equipment area. The latitude and longitude on the Form C-141 for 2RP-3617 is incorrect and was corrected to be 32.336152, -103.831835 on the final Form C-141. Samples were screened for volatile aromatic hydrocarbons using a photo-ionization detector (PID) equipped with a 10.6 electron volt lamp in accordance with the NMOCD *Guidelines for Remediation of Leaks, Spills and Releases*, August 13, 1993. Hydrocarbon odor or soil staining was not observed at the Site. The soil samples were placed directly into pre-cleaned glass jars, labeled with location, date, time, sampler, and method of analysis, and immediately placed on ice. The samples were delivered at 4 degrees Celsius (°C) under strict chain-of-custody procedures to ESC Lab Sciences in Mount Juliet, Tennessee, for laboratory analysis of BTEX by United States Environmental Protection Agency (EPA) Method 8021B, total petroleum hydrocarbons (TPH)-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) by EPA Method SW8015 Modified, and chloride by EPA Method 300.

Laboratory analytical results indicated two soil samples (SS-1 and SS-5) exceeded the NMOCD site-specific remediation action level for TPH. No soil samples exceeded the remediation action level for chloride. Analytical results are depicted on Figure 2 and summarized in Table 1, and the laboratory analytical reports are attached.

EXCAVATION ACTIVITIES

Based on results of the initial sampling, XTO excavated in the areas around surface samples SS-1 and SS-5 on April 18 through May 25, 2018. An LTE scientist field screened soil using a PID and

chloride test strips to direct the hydro-vacuum and hand digging to delineate and remove impacted soil laterally and vertically in two excavations. LTE collected eleven confirmation soil samples (SS-2, SS-3, SS-4, SS-6 through SS-11, SS1A, and SS5A). Samples collected on April 19 and May 25, 2018, were collected and handled as previously described and submitted to Xenco Laboratories in Midland, Texas.

The western excavation was approximately 72 square feet with an average depth of three feet. The eastern excavation was approximately 190 square feet with a depth ranging from 1 foot to 2 feet. The horizontal extents of these two excavations are illustrated on Figure 2. Approximately 17 cubic yards of impacted soil were removed via hand digging and hydro excavation. Impacted soil from the western and the eastern excavations were transported and properly disposed of at the Lea Land and R360, in Eunice, New Mexico, and Hobbs, New Mexico.

ANALYTICAL RESULTS

Laboratory analytical results for the soil samples indicated BTEX and chloride concentrations were compliant with NMOCD remediation action levels. Laboratory analytical results indicated concentrations of TPH were compliant with the NMOCD remediation action level of 5,000 mg/kg in all soil samples except SS-1 and SS-5. The areas around sample locations SS-1 and SS-5 were excavated and subsequent soil samples SS1A and SS5A indicated TPH concentrations of 189 mg/kg and 24.2 mg/kg, respectively. Laboratory analytical results are presented on Figure 2 and summarized in Table 1, and the complete laboratory analytical report is included as Attachment 2.

CONCLUSIONS

Laboratory analytical results for eleven confirmation soil samples collected within the former release footprints indicate impact to soil, as defined by concentrations of BTEX, TPH, and chloride, do not exceed NMOCD site-specific remediation action levels. Initial response efforts, natural degradation, and remediation work has mitigated impacts at this Site, and XTO therefore respectfully requests no further action for these releases.

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, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
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 (2RP-2981 and 2RP-3617)
Attachment 2	Laboratory Analytical Reports

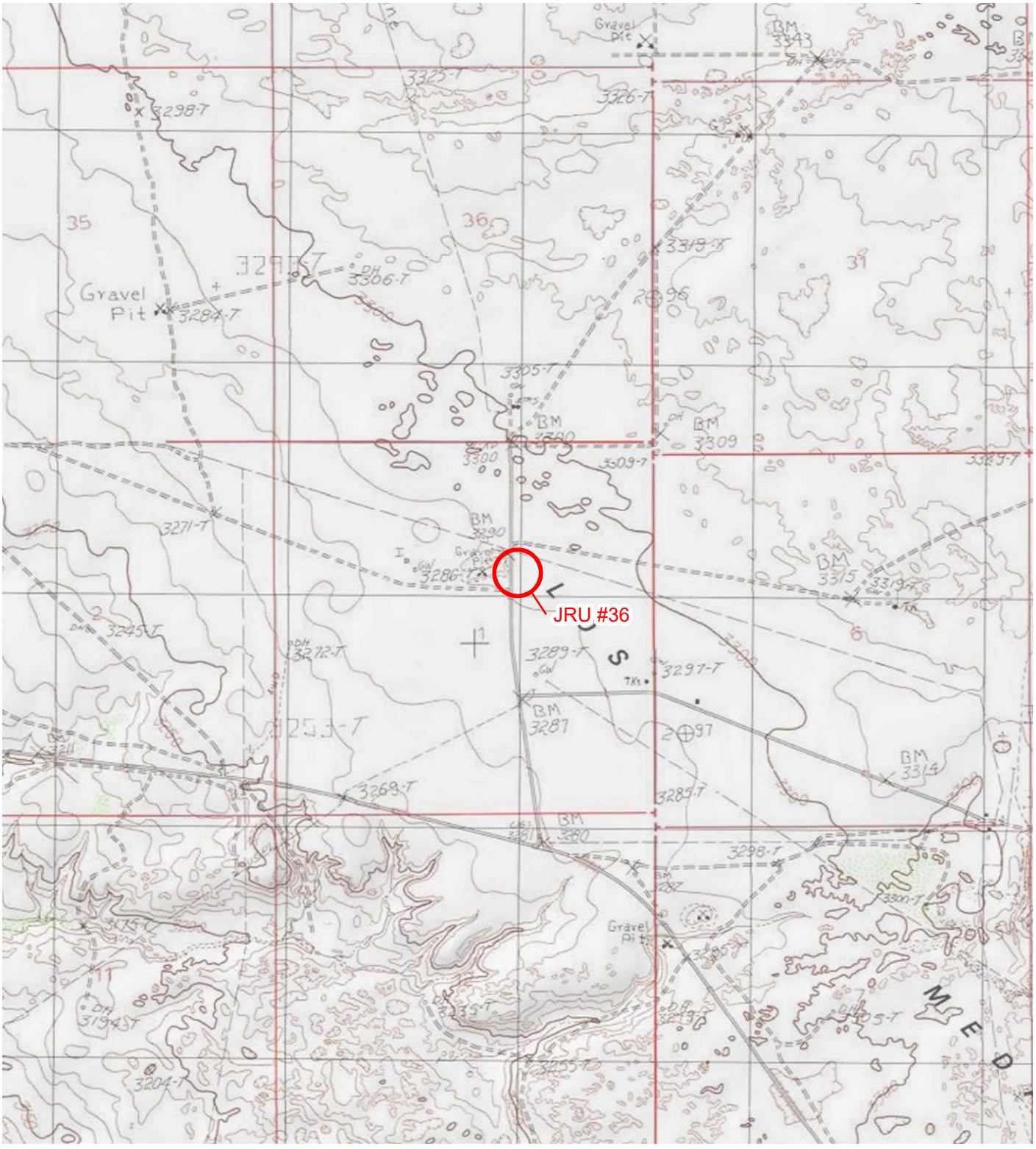


IMAGE COURTESY OF ESRI/USGS

LEGEND

SITE LOCATION

0 2,000 4,000

Feet

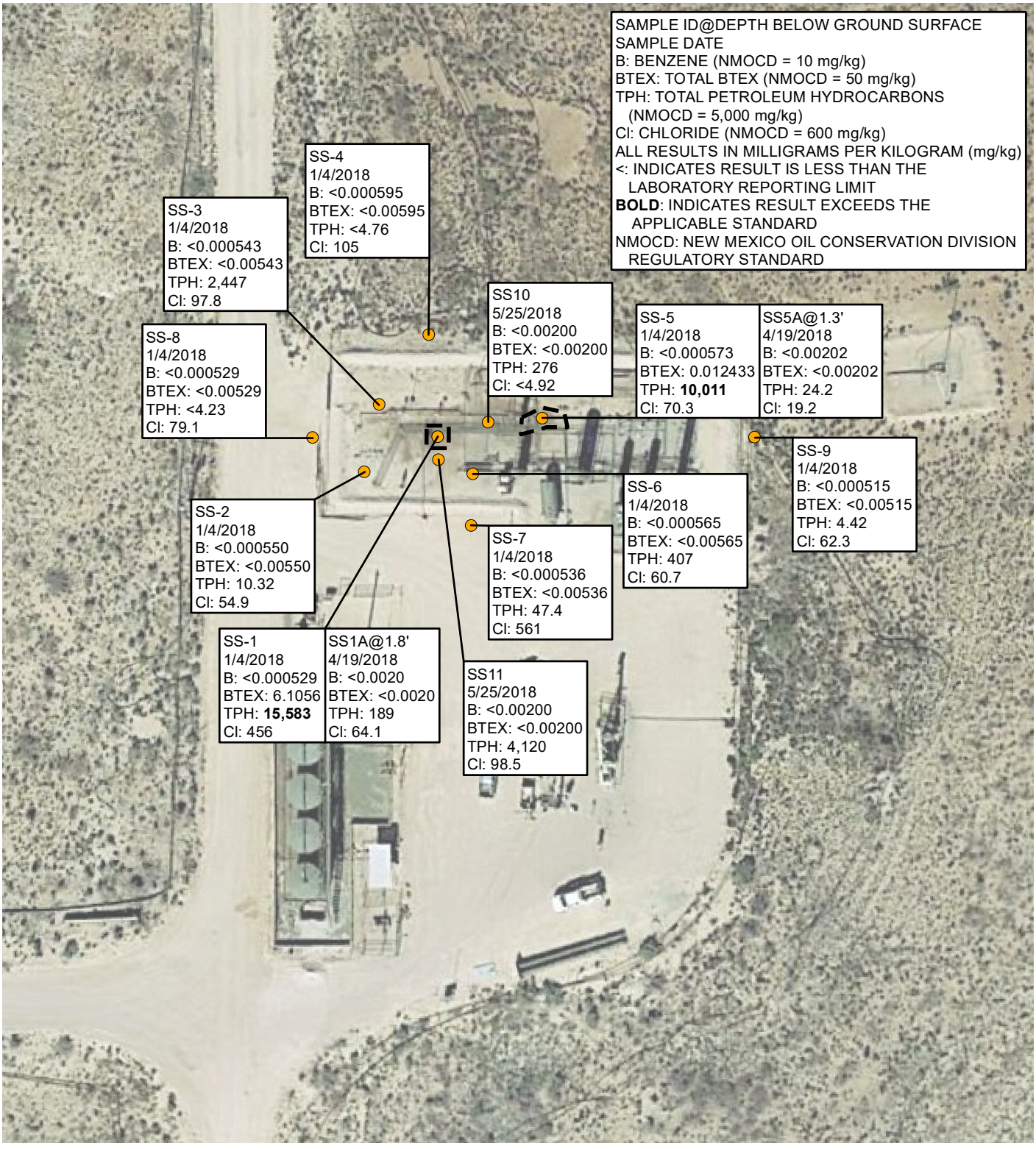
N

NEW MEXICO

NOTE: REMEDIATION PERMIT NUMBER 2RP-2981 AND 2RP-3617

FIGURE 1
SITE LOCATION MAP
JRU #36
SWNE SEC 1 T23S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918001_JRU 36\012918001_FIG01_SL_2018.mxd



LEGEND

IMAGE COURTESY OF GOOGLE EARTH 2017

SOIL SAMPLE

HYDRO-VACUUM & HAND DIGGING EXCAVATION EXTENT

0 60 120

Feet

N

FIGURE 2
SOIL SAMPLE LOCATIONS
JRU #36
SWNE SEC 1 T23S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

NOTE: REMEDIATION PERMIT NUMBERS 2RP-2981 & 2RP-3617

P:\XTO Energy\GIS\MXD\012918001_JRU 36\012918001_FIG02_SITE_2018.mxd

TABLE 1
SOIL ANALYTICAL RESULTS
JRU #36
REMEDIATION PERMIT NUMBER 2RP-2981 and 2RP-3617
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 Organics (mg/kg)	C28-C40 Motor Oil Range Organics (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS-1	0.5	1/4/2018	<0.000529	<0.00529	0.0456	6.06	6.1056	183	12,300	3,100	**15,583**	456
SS1A	1.8	4/19/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	189	<15.0	189	64.1
SS-2	0.5	1/4/2018	<0.000550	<0.00550	<0.000550	<0.00165	<0.00550	<0.110	5.41	4.91	10.32	54.9
SS-3	0.5	1/4/2018	<0.000543	<0.00543	<0.000543	<0.00163	<0.00543	<0.109	1,730	717	2,447	97.8
SS-4	0.5	1/4/2018	<0.000595	<0.00595	<0.000595	<0.00178	<0.00595	<0.119	<4.76	<4.76	<4.76	105
SS-5	0.5	1/4/2018	<0.000573	<0.00573	0.000733 B	0.0117	0.012433	1.58	7,180	2,830	**10,011**	70.3
SS5A	1.3	4/19/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	24.2	<15.0	24.2	19.2
SS-6	0.5	1/4/2018	<0.000565	<0.00565	<0.000565	<0.00170	<0.00565	<0.113	281	126	407	60.7
SS-7	0.5	1/4/2018	<0.000536	<0.00536 J3	<0.000536 J3	<0.00161 J3, J6	<0.00536	<0.107 J3	29.5	17.9	47.4	561
SS-8	0.5	1/4/2018	<0.000529	<0.00529	<0.000529	<0.00159	<0.00529	<0.106	<4.23	<4.23	<4.23	79.1
SS-9	0.5	1/4/2018	<0.000515	<0.00515	<0.000515	<0.00155	<0.00515	<0.103	<4.12	4.42	4.42	62.3
SS10	0.5	5/25/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	255	21.3	276	<4.92
SS11	0.5	5/25/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	72.5	4,000	44.5	4,120	98.5
NMOCD Remediation Action Levels			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
< - indicates result is less than the stated laboratory method detection limit
Bold indicates result exceeds the applicable regulatory standard.
B - Same analyte is found in the associated blank.
J3 - The associated batch QC was outside the established quality control range for precision.
J6 - The sample matrix interfered with the ability to make any accurate determination; spike value is low.

NM OIL CONSERVATION
ARTESIA DISTRICT
APR 29 2015
RECEIVED

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

nAB1512437681

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P. 260737	Contact: Bradley Blevins
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: JRU #36	Facility Type: Exploration and Production

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-27686

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	1	23S	30E	1980	North	1860	East	Eddy

Latitude: N 32.336152° **Longitude:** W 103.831835°

NATURE OF RELEASE

Type of Release: oil	Volume of Release: 20 bbls	Volume Recovered: 11 bbls
Source of Release: An air eliminator failure on the circulating pump. The air eliminator broke off at the valve due to vibration of the pump.	Date and Hour of Occurrence: 4/23/15 @ 8:24 am	Date and Hour of Discovery: 4/23/15 @ 8:24 am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher, OCD; Jim Amos, BLM via email	
By Whom? Bradley Blevins	Date and Hour: 4/24/15 @ 2:55 pm	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse: Not Applicable	

If a Watercourse was Impacted, Describe Fully.* Not Applicable

Describe Cause of Problem and Remedial Action Taken.*
An air eliminator failure on the circulating pump. The air eliminator broke off at the valve due to vibration of the pump.

Describe Area Affected and Cleanup Action Taken.*
The release impacted approximately 2,000 sq. ft. of containment area. Vacuum truck recovered 11 bbls of fluid. The area will be remediated in accordance with 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: Bradley Blevins	OIL CONSERVATION DIVISION
Printed Name: Bradley Blevins	Approved by Environmental Specialist:
Title: Assistant Remediation Foreman	Approval Date: 5/4/15 Expiration Date:
E-mail Address: bblevins@basspet.com	Conditions of Approval: Attached ☐
Date: 4-29-15 Phone: 432-214-3704	Remediation per O.C.D. Rules & Guidelines SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 6/4/15

* Attach Additional Sheets If Necessary

2RP-2981

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, N.M. 88220	Telephone No. 432-221-7331
Facility Name JRU #36	Facility Type Exploration and Production

Surface Owner Federal	Mineral Owner Federal	API No. 30-015-27686

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	1	23S	30E	1980	North	1860	East	Eddy

Latitude N 32.336152 **Longitude** 103.831835 NAD83

NATURE OF RELEASE

Type of Release Crude Oil	Volume of Release 20 bbls	Volume Recovered 11 bbls
Source of Release An air eleiminator failure on the circulating pump. The air eliminator broke off at the valve due to vibration of the pump.	Date and Hour of Occurrence 4/23/15 8:24 A.M	Date and Hour of Discovery 4/23/15 8:24 A.M
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher, OCD; Jim Amos, BLM via email	
By Whom? Bradley Blevins	Date and Hour: 4/24/15 @ 2:55 pm	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

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

Describe Cause of Problem and Remedial Action Taken.*
An air eliminator failure on the circulating pump. The air eliminator broke off at the valve due to vibration of the pump.

Describe Area Affected and Cleanup Action Taken.*
The release impacted approximately 2,000 square feet of containment area. Vacuum truck recovered 11 bbls of fluid.

Between January 4, 2018 and May 25, 2018, XTO collected soil samples and excavated impacted soil at the Site. LTE collected eleven confirmation soil samples from within and surrounding the processing equipment area on the north side of the well pad. Laboratory analytical results for the eleven confirmation soil samples indicate impact to soil, as defined by concentrations of BTEX, TPH, and chloride, do not exceed NMOCD site-specific remediation action level. Initial response efforts, natural degradation, and excavation have remediated this Site, and XTO requests no further action for this release.

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: Bradford Billings	
Title: SH&E Coordinator	Approval Date: 11/18/2019	Expiration Date:
E-mail Address: Kyle_Littrell@xtoenergy.com	Conditions of Approval:	Attached ☐
Date: 8/01/2018 Phone: 432-221-7331		

* Attach Additional Sheets If Necessary

NM OIL CONSERVATION
ARTESIA DISTRICT
MAR 15 2016
RECEIVED

District I
1625 N. French Dr., Hobbs, NM 88240
District II
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State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

nAB1608139873 2RP-737

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P.	Contact: Amy Ruth
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: James Ranch Unit #036	Facility Type: Exploration and Production

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-27686

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	1	23S	30E	1980	North	1860	East	Eddy

Latitude 32.335850° Longitude -103.861675°

NATURE OF RELEASE

Type of Release: Crude Oil	Volume of Release: 17 bbls	Volume Recovered: 5 bbls
Source of Release: Valve on Circulating Pump	Date and Hour of Occurrence: 2/1/2016 Time Unknown	Date and Hour of Discovery: 2/1/2016 8:30 am
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom? N/A	
By Whom? N/A	Date and Hour N/A	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

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

Describe Cause of Problem and Remedial Action Taken.*
A discharge bleed valve was left open on the circulating pump. The valve was closed and the handle was removed from the valve.

Describe Area Affected and Cleanup Action Taken.*
The leak affected 1575 square feet of well pad within the process equipment area. Standing fluids were recovered.

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

Signature:

Printed Name: Amy C. Ruth

Title: EHS Remediation Specialist

E-mail Address: ACRuth@basspet.com

Date: 3/15/2016 Phone: 432-661-0571

OIL CONSERVATION DIVISION

Signed By

Approved by Environmental Specialist:

Approval Date: 3/21/16 Expiration Date: N/A

Conditions of Approval: Attached ☐

Remediation per O.C.D. Rules & Guidelines
SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 4/21/16

2RP-3617

* Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
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811 S. First St., Artesia, NM 88210
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State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised 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, N.M. 88220	Telephone No. 432-221-7331
Facility Name JRU #36	Facility Type Exploration and Production

Surface Owner Federal	Mineral Owner Federal	API No. 30-015-27686

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Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	1	23S	30E	1980	North	1860	East	Eddy

Latitude N 32.336152 **Longitude** 103.831835 NAD83

NATURE OF RELEASE

Type of Release Crude Oil	Volume of Release 17 bbls	Volume Recovered 5 bbls
Source of Release Valve on circulating pump	Date and Hour of Occurrence 2/1/2016 Time unknown	Date and Hour of Discovery 2/1/16 8:30 A.M
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom? N/A	
By Whom? N/A	Date and Hour N/A	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

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

Describe Cause of Problem and Remedial Action Taken.*
A discharge bleed valve was left open on the circulating pump. The valve was closed and the handle was removed from the valve.

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The leak affected 1,575 square feet of well pad within the process equipment area. Standing fluids were recovered.

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Signature:

Printed Name: Kyle Littrell

Title: SH&E Coordinator

E-mail Address: Kyle_Littrell@xtoenergy.com

Date: 8/01/2018 Phone: 432-221-7331

OIL CONSERVATION DIVISION

Approved by Environmental Specialist: Bradford Billings

Approval Date: 11/18/2019 Expiration Date:

Conditions of Approval: Attached ☐

* Attach Additional Sheets If Necessary

ATTACHMENT 2: LABORATORY ANALYTICAL REPORTS

ANALYTICAL REPORT

January 15, 2018

XTO Energy- Delaware Division

Sample Delivery Group:	L961532
Samples Received:	01/06/2018
Project Number:	30-015-27686
Description:	Confrimation Soil Sampling
Site:	JRU #36 (2RP-298I)
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 L961532-01 Solid

Collected by	Collected date/time	Received date/time
Aaron Williamson	01/04/18 11:08	01/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1060778	1	01/10/18 12:40	01/10/18 12:43	KDW
Wet Chemistry by Method 300.0	WG1060409	1	01/08/18 16:26	01/08/18 23:53	MAJ
Volatile Organic Compounds (GC) by Method 8015/8021	WG1060512	25	01/08/18 07:33	01/09/18 18:38	BMB
Volatile Organic Compounds (GC) by Method 8021	WG1060512	1	01/08/18 07:33	01/09/18 15:26	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1060456	50	01/08/18 19:43	01/11/18 08:16	ACM

SS2 L961532-02 Solid

Collected by	Collected date/time	Received date/time
Aaron Williamson	01/04/18 11:17	01/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1060784	1	01/10/18 11:03	01/10/18 11:05	KDW
Wet Chemistry by Method 300.0	WG1060409	1	01/08/18 16:26	01/09/18 00:18	MAJ
Volatile Organic Compounds (GC) by Method 8015/8021	WG1060512	1	01/09/18 18:01	01/09/18 19:00	BMB
Volatile Organic Compounds (GC) by Method 8021	WG1060512	1	01/08/18 07:33	01/09/18 15:48	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1060456	1	01/08/18 19:43	01/11/18 00:39	ACM

SS3 L961532-03 Solid

Collected by	Collected date/time	Received date/time
Aaron Williamson	01/04/18 11:20	01/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1060779	1	01/09/18 12:42	01/09/18 12:53	KDW
Wet Chemistry by Method 300.0	WG1060409	1	01/08/18 16:26	01/09/18 00:27	MAJ
Volatile Organic Compounds (GC) by Method 8015/8021	WG1060512	1	01/04/18 11:20	01/09/18 19:22	BMB
Volatile Organic Compounds (GC) by Method 8021	WG1060512	1	01/08/18 07:33	01/09/18 16:10	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1060456	10	01/08/18 19:43	01/11/18 07:34	ACM

SS4 L961532-04 Solid

Collected by	Collected date/time	Received date/time
Aaron Williamson	01/04/18 11:23	01/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1060784	1	01/10/18 11:03	01/10/18 11:05	KDW
Wet Chemistry by Method 300.0	WG1060409	1	01/08/18 16:26	01/09/18 00:35	MAJ
Volatile Organic Compounds (GC) by Method 8015/8021	WG1060512	1	01/08/18 07:33	01/08/18 17:12	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1060456	1	01/08/18 19:43	01/11/18 00:52	ACM

SS5 L961532-05 Solid

Collected by	Collected date/time	Received date/time
Aaron Williamson	01/04/18 11:26	01/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1059974	1	01/09/18 14:06	01/09/18 14:22	JD
Wet Chemistry by Method 300.0	WG1060409	1	01/08/18 16:26	01/09/18 00:44	MAJ
Volatile Organic Compounds (GC) by Method 8015/8021	WG1060512	1	01/08/18 07:33	01/09/18 16:32	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1060456	50	01/08/18 19:43	01/11/18 08:30	ACM

SS6 L961532-06 Solid

Collected by	Collected date/time	Received date/time
Aaron Williamson	01/04/18 11:29	01/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1060779	1	01/09/18 12:42	01/09/18 12:53	KDW
Wet Chemistry by Method 300.0	WG1060409	1	01/08/18 16:26	01/09/18 00:53	MAJ
Volatile Organic Compounds (GC) by Method 8015/8021	WG1060512	1	01/08/18 07:33	01/08/18 17:55	BMB

SS6 L961532-06 Solid

Collected by	Collected date/time	Received date/time
Aaron Williamson	01/04/18 11:29	01/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1060456	1	01/08/18 19:43	01/10/18 07:57	ACM

SS7 L961532-07 Solid

Collected by	Collected date/time	Received date/time
Aaron Williamson	01/04/18 11:34	01/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1060773	1	01/09/18 13:10	01/09/18 13:17	KDW
Wet Chemistry by Method 300.0	WG1060409	1	01/08/18 16:26	01/09/18 01:05	MAJ
Volatile Organic Compounds (GC) by Method 8015/8021	WG1060512	1	01/08/18 07:33	01/08/18 18:16	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1060456	1	01/08/18 19:43	01/10/18 07:13	ACM

SS8 L961532-08 Solid

Collected by	Collected date/time	Received date/time
Aaron Williamson	01/04/18 11:37	01/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1060784	1	01/10/18 11:03	01/10/18 11:05	KDW
Wet Chemistry by Method 300.0	WG1060409	1	01/08/18 16:26	01/09/18 01:30	MAJ
Volatile Organic Compounds (GC) by Method 8015/8021	WG1060512	1	01/08/18 07:33	01/08/18 18:37	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1060456	1	01/08/18 19:43	01/10/18 07:27	ACM

SS9 L961532-09 Solid

Collected by	Collected date/time	Received date/time
Aaron Williamson	01/04/18 11:40	01/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1060784	1	01/10/18 11:03	01/10/18 11:05	KDW
Wet Chemistry by Method 300.0	WG1060409	1	01/08/18 16:26	01/09/18 01:39	MAJ
Volatile Organic Compounds (GC) by Method 8015/8021	WG1060512	1	01/08/18 07:33	01/08/18 18:59	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1060456	1	01/08/18 19:43	01/10/18 23:57	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	94.5		1	01/10/2018 12:43	WG1060778

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Chloride	456		10.6	1	01/08/2018 23:53	WG1060409

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		0.000529	1	01/09/2018 15:26	WG1060512
Toluene	ND		0.00529	1	01/09/2018 15:26	WG1060512
Ethylbenzene	0.0456		0.000529	1	01/09/2018 15:26	WG1060512
Total Xylene	6.06		0.0397	25	01/09/2018 18:38	WG1060512
TPH (GC/FID) Low Fraction	183		2.65	25	01/09/2018 18:38	WG1060512
(S) a,a,a-Trifluorotoluene(FID)	*63.1*	J2	*77.0-120*		*01/09/2018 15:26*	WG1060512
(S) a,a,a-Trifluorotoluene(FID)	*95.5*		*77.0-120*		*01/09/2018 18:38*	WG1060512
(S) a,a,a-Trifluorotoluene(PID)	*102*		*75.0-128*		*01/09/2018 18:38*	WG1060512
(S) a,a,a-Trifluorotoluene(PID)	*67.8*	J2	*75.0-128*		*01/09/2018 15:26*	WG1060512

Sample Narrative:

L961532-01 WG1060512: Low surrogates due to matrix interference. Confirmed by a previous run.

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	12300		212	50	01/11/2018 08:16	WG1060456
C28-C40 Oil Range	3100		212	50	01/11/2018 08:16	WG1060456
(S) o-Terphenyl	*0.000*	J7	*18.0-148*		*01/11/2018 08:16*	WG1060456

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.9		1	01/10/2018 11:05	WG1060784

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Chloride	54.9		11.0	1	01/09/2018 00:18	WG1060409

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		0.000550	1	01/09/2018 15:48	WG1060512
Toluene	ND		0.00550	1	01/09/2018 15:48	WG1060512
Ethylbenzene	ND		0.000550	1	01/09/2018 15:48	WG1060512
Total Xylene	ND		0.00165	1	01/09/2018 19:00	WG1060512
TPH (GC/FID) Low Fraction	ND		0.110	1	01/09/2018 19:00	WG1060512
(S) a,a,a-Trifluorotoluene(FID)	*93.4*		*77.0-120*		*01/09/2018 15:48*	WG1060512
(S) a,a,a-Trifluorotoluene(FID)	*90.6*		*77.0-120*		*01/09/2018 19:00*	WG1060512
(S) a,a,a-Trifluorotoluene(PID)	*100*		*75.0-128*		*01/09/2018 15:48*	WG1060512
(S) a,a,a-Trifluorotoluene(PID)	*97.6*		*75.0-128*		*01/09/2018 19:00*	WG1060512

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	5.41		4.40	1	01/11/2018 00:39	WG1060456
C28-C40 Oil Range	4.91		4.40	1	01/11/2018 00:39	WG1060456
(S) o-Terphenyl	*66.1*		*18.0-148*		*01/11/2018 00:39*	WG1060456

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.1		1	01/09/2018 12:53	WG1060779

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Chloride	97.8		10.9	1	01/09/2018 00:27	WG1060409

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		0.000543	1	01/09/2018 16:10	WG1060512
Toluene	ND		0.00543	1	01/09/2018 16:10	WG1060512
Ethylbenzene	ND		0.000543	1	01/09/2018 16:10	WG1060512
Total Xylene	ND		0.00163	1	01/09/2018 19:22	WG1060512
TPH (GC/FID) Low Fraction	ND		0.109	1	01/09/2018 19:22	WG1060512
(S) a,a,a-Trifluorotoluene(FID)	*89.5*		*77.0-120*		*01/09/2018 19:22*	WG1060512
(S) a,a,a-Trifluorotoluene(FID)	*81.9*		*77.0-120*		*01/09/2018 16:10*	WG1060512
(S) a,a,a-Trifluorotoluene(PID)	*87.8*		*75.0-128*		*01/09/2018 16:10*	WG1060512
(S) a,a,a-Trifluorotoluene(PID)	*96.3*		*75.0-128*		*01/09/2018 19:22*	WG1060512

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	1730		43.4	10	01/11/2018 07:34	WG1060456
C28-C40 Oil Range	717		43.4	10	01/11/2018 07:34	WG1060456
(S) o-Terphenyl	*212*		*18.0-148*		*01/11/2018 07:34*	WG1060456

Sample Narrative:

L961532-03 WG1060456: High surrogate due to matrix

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	84.1		1	01/10/2018 11:05	WG1060784

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Chloride	105		11.9	1	01/09/2018 00:35	WG1060409

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		0.000595	1	01/08/2018 17:12	WG1060512
Toluene	ND		0.00595	1	01/08/2018 17:12	WG1060512
Ethylbenzene	ND		0.000595	1	01/08/2018 17:12	WG1060512
Total Xylene	ND		0.00178	1	01/08/2018 17:12	WG1060512
TPH (GC/FID) Low Fraction	ND		0.119	1	01/08/2018 17:12	WG1060512
(S) a,a,a-Trifluorotoluene(FID)	*88.8*		*77.0-120*		*01/08/2018 17:12*	WG1060512
(S) a,a,a-Trifluorotoluene(PID)	*94.8*		*75.0-128*		*01/08/2018 17:12*	WG1060512

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		4.76	1	01/11/2018 00:52	WG1060456
C28-C40 Oil Range	ND		4.76	1	01/11/2018 00:52	WG1060456
(S) o-Terphenyl	*63.2*		*18.0-148*		*01/11/2018 00:52*	WG1060456

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	87.3		1	01/09/2018 14:22	WG1059974

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Chloride	70.3		11.5	1	01/09/2018 00:44	WG1060409

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		0.000573	1	01/09/2018 16:32	WG1060512
Toluene	ND		0.00573	1	01/09/2018 16:32	WG1060512
Ethylbenzene	0.000733	B	0.000573	1	01/09/2018 16:32	WG1060512
Total Xylene	0.0117		0.00172	1	01/09/2018 16:32	WG1060512
TPH (GC/FID) Low Fraction	1.58		0.115	1	01/09/2018 16:32	WG1060512
(S) a,a,a-Trifluorotoluene(FID)	*65.6*	J2	*77.0-120*		*01/09/2018 16:32*	WG1060512
(S) a,a,a-Trifluorotoluene(PID)	*70.1*	J2	*75.0-128*		*01/09/2018 16:32*	WG1060512

Sample Narrative:

L961532-05 WG1060512: Low surrogates due to matrix interference. Confirmed by a previous run.

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	7180		229	50	01/11/2018 08:30	WG1060456
C28-C40 Oil Range	2830		229	50	01/11/2018 08:30	WG1060456
(S) o-Terphenyl	*0.000*	J7	*18.0-148*		*01/11/2018 08:30*	WG1060456

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	88.5		1	01/09/2018 12:53	WG1060779

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Chloride	60.7		11.3	1	01/09/2018 00:53	WG1060409

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		0.000565	1	01/08/2018 17:55	WG1060512
Toluene	ND		0.00565	1	01/08/2018 17:55	WG1060512
Ethylbenzene	ND		0.000565	1	01/08/2018 17:55	WG1060512
Total Xylene	ND		0.00170	1	01/08/2018 17:55	WG1060512
TPH (GC/FID) Low Fraction	ND		0.113	1	01/08/2018 17:55	WG1060512
(S) a,a,a-Trifluorotoluene(FID)	*87.8*		*77.0-120*		*01/08/2018 17:55*	WG1060512
(S) a,a,a-Trifluorotoluene(PID)	*92.4*		*75.0-128*		*01/08/2018 17:55*	WG1060512

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	281		4.52	1	01/10/2018 07:57	WG1060456
C28-C40 Oil Range	126		4.52	1	01/10/2018 07:57	WG1060456
(S) o-Terphenyl	*56.0*		*18.0-148*		*01/10/2018 07:57*	WG1060456

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.3		1	01/09/2018 13:17	WG1060773

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Chloride	561		10.7	1	01/09/2018 01:05	WG1060409

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		0.000536	1	01/08/2018 18:16	WG1060512
Toluene	ND	J3	0.00536	1	01/08/2018 18:16	WG1060512
Ethylbenzene	ND	J3	0.000536	1	01/08/2018 18:16	WG1060512
Total Xylene	ND	J3 J6	0.00161	1	01/08/2018 18:16	WG1060512
TPH (GC/FID) Low Fraction	ND	J3	0.107	1	01/08/2018 18:16	WG1060512
(S) a,a,a-Trifluorotoluene(FID)	*89.8*		*77.0-120*		*01/08/2018 18:16*	WG1060512
(S) a,a,a-Trifluorotoluene(PID)	*95.1*		*75.0-128*		*01/08/2018 18:16*	WG1060512

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	29.5		4.29	1	01/10/2018 07:13	WG1060456
C28-C40 Oil Range	17.9		4.29	1	01/10/2018 07:13	WG1060456
(S) o-Terphenyl	*53.7*		*18.0-148*		*01/10/2018 07:13*	WG1060456

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.5		1	01/10/2018 11:05	WG1060784

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Chloride	79.1		10.6	1	01/09/2018 01:30	WG1060409

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		0.000529	1	01/08/2018 18:37	WG1060512
Toluene	ND		0.00529	1	01/08/2018 18:37	WG1060512
Ethylbenzene	ND		0.000529	1	01/08/2018 18:37	WG1060512
Total Xylene	ND		0.00159	1	01/08/2018 18:37	WG1060512
TPH (GC/FID) Low Fraction	ND		0.106	1	01/08/2018 18:37	WG1060512
(S) a,a,a-Trifluorotoluene(FID)	*89.6*		*77.0-120*		*01/08/2018 18:37*	WG1060512
(S) a,a,a-Trifluorotoluene(PID)	*95.5*		*75.0-128*		*01/08/2018 18:37*	WG1060512

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		4.23	1	01/10/2018 07:27	WG1060456
C28-C40 Oil Range	ND		4.23	1	01/10/2018 07:27	WG1060456
(S) o-Terphenyl	*66.6*		*18.0-148*		*01/10/2018 07:27*	WG1060456

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.1		1	01/10/2018 11:05	WG1060784

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Chloride	62.3		10.3	1	01/09/2018 01:39	WG1060409

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		0.000515	1	01/08/2018 18:59	WG1060512
Toluene	ND		0.00515	1	01/08/2018 18:59	WG1060512
Ethylbenzene	ND		0.000515	1	01/08/2018 18:59	WG1060512
Total Xylene	ND		0.00155	1	01/08/2018 18:59	WG1060512
TPH (GC/FID) Low Fraction	ND		0.103	1	01/08/2018 18:59	WG1060512
(S) a,a,a-Trifluorotoluene(FID)	*91.2*		*77.0-120*		*01/08/2018 18:59*	WG1060512
(S) a,a,a-Trifluorotoluene(PID)	*94.3*		*75.0-128*		*01/08/2018 18:59*	WG1060512

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		4.12	1	01/10/2018 23:57	WG1060456
C28-C40 Oil Range	4.42		4.12	1	01/10/2018 23:57	WG1060456
(S) o-Terphenyl	*76.0*		*18.0-148*		*01/10/2018 23:57*	WG1060456

Method Blank (MB)

(MB) R3278464-1 01/09/18 14:22

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

L961178-02 Original Sample (OS) • Duplicate (DUP)

(OS) L961178-02 01/09/18 14:22 • (DUP) R3278464-3 01/09/18 14:22

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	83.7	85.2	1	2		5

Laboratory Control Sample (LCS)

(LCS) R3278464-2 01/09/18 14:22

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

Method Blank (MB)

(MB) R3278455-1 01/09/18 13:17

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.002			

L961517-04 Original Sample (OS) • Duplicate (DUP)

(OS) L961517-04 01/09/18 13:17 • (DUP) R3278455-3 01/09/18 13:17

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	94.3	94.3	1	0		5

Laboratory Control Sample (LCS)

(LCS) R3278455-2 01/09/18 13:17

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

Method Blank (MB)

(MB) R3278697-1 01/10/18 12:43

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

L961506-01 Original Sample (OS) • Duplicate (DUP)

(OS) L961506-01 01/10/18 12:43 • (DUP) R3278697-3 01/10/18 12:43

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	77.4	80.0	1	3		5

Laboratory Control Sample (LCS)

(LCS) R3278697-2 01/10/18 12:43

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

Method Blank (MB)

(MB) R3278447-1 01/09/18 12:53

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.002			

L961532-03 Original Sample (OS) • Duplicate (DUP)

(OS) L961532-03 01/09/18 12:53 • (DUP) R3278447-3 01/09/18 12:53

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	92.1	92.1	1	0		5

Laboratory Control Sample (LCS)

(LCS) R3278447-2 01/09/18 12:53

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

Method Blank (MB)

(MB) R3278693-1 01/10/18 11:05

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0			

L961534-21 Original Sample (OS) • Duplicate (DUP)

(OS) L961534-21 01/10/18 11:05 • (DUP) R3278693-3 01/10/18 11:05

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	76.9	77.0	1	0		5

Laboratory Control Sample (LCS)

(LCS) R3278693-2 01/10/18 11:05

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

Method Blank (MB)

(MB) R3278237-1 01/08/18 17:56

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	3.47	J	0.795	10.0

L961528-09 Original Sample (OS) • Duplicate (DUP)

(OS) L961528-09 01/08/18 23:10 • (DUP) R3278237-4 01/08/18 23:19

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	235	225	1	4.39		20

L961532-09 Original Sample (OS) • Duplicate (DUP)

(OS) L961532-09 01/09/18 01:39 • (DUP) R3278237-7 01/09/18 01:47

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	62.3	60.3	1	3.27		20

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

(LCS) R3278237-2 01/08/18 18:05 • (LCSD) R3278237-3 01/08/18 18:13

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	199	200	99.4	100	90-110			0.657	20

L961532-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L961532-01 01/08/18 23:53 • (MS) R3278237-5 01/09/18 00:01 • (MSD) R3278237-6 01/09/18 00:10

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	529	456	1070	1040	116	111	1	80-120	E		2.62	20

Method Blank (MB)

(MB) R3278105-5 01/08/18 11:32

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000120	0.000500
Toluene	0.000207	J	0.000150	0.00500
Ethylbenzene	0.000113	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)	*92.4*			*77.0-120*
(S) a,a,a-Trifluorotoluene(PID)	*96.3*			*75.0-128*

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

(LCS) R3278105-1 01/08/18 09:46 • (LCSD) R3278105-2 01/08/18 10:07

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	0.0448	0.0450	89.7	90.1	71.0-121			0.456	20
Toluene	0.0500	0.0473	0.0471	94.7	94.2	72.0-120			0.484	20
Ethylbenzene	0.0500	0.0486	0.0485	97.2	96.9	76.0-121			0.247	20
Total Xylene	0.150	0.146	0.147	97.6	97.7	75.0-124			0.0683	20
(S) a,a,a-Trifluorotoluene(FID)				*89.8*	*89.6*	*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)				*93.0*	*92.4*	*75.0-128*				

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

(LCS) R3278105-3 01/08/18 10:29 • (LCSD) R3278105-4 01/08/18 10:50

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	4.88	4.76	88.7	86.5	70.0-136			2.47	20
(S) a,a,a-Trifluorotoluene(FID)				*87.7*	*85.9*	*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)				*104*	*103*	*75.0-128*				

L961532-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L961532-07 01/08/18 18:16 • (MS) R3278105-6 01/08/18 19:20 • (MSD) R3278105-7 01/08/18 19:41

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.0536	ND	0.0233	0.0274	43.5	51.2	1	10.0-146			16.2	29
Toluene	0.0536	ND	0.0171	0.0238	31.6	44.1	1	10.0-143		J3	32.7	30
Ethylbenzene	0.0536	ND	0.0106	0.0180	19.5	33.5	1	10.0-147		J3	52.3	31
Total Xylene	0.161	ND	0.0309	0.0536	19.2	33.3	1	10.0-149	J6	J3 J6	53.8	30
(S) a,a,a-Trifluorotoluene(FID)					*89.0*	*88.9*		*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)					*92.2*	*91.7*		*75.0-128*				

L961532-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L961532-07 01/08/18 18:16 • (MS) R3278105-8 01/08/18 20:02 • (MSD) R3278105-9 01/08/18 20:24

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.89	ND	4.13	1.18	70.1	20.0	1	10.0-147		J3	111	30
(S) a,a,a-Trifluorotoluene(FID)					*86.2*	*88.9*		*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)					*96.4*	*92.8*		*75.0-128*				

Method Blank (MB)

(MB) R3278394-1 01/09/18 19:44

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	*63.5*			*18.0-148*

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

(LCS) R3278394-2 01/09/18 19:59 • (LCSD) R3278394-3 01/09/18 20:13

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	41.0	35.2	68.3	58.6	50.0-150			15.2	20
(S) o-Terphenyl				*72.3*	*64.5*	*18.0-148*				

L961532-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L961532-09 01/10/18 23:57 • (MS) R3278802-1 01/10/18 22:35 • (MSD) R3278802-2 01/10/18 22:48

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	61.8	ND	43.9	45.6	67.5	70.2	1	50.0-150			3.86	20
(S) o-Terphenyl					*57.9*	*58.2*		*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
B	The same analyte is found in the associated blank.
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.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.

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		

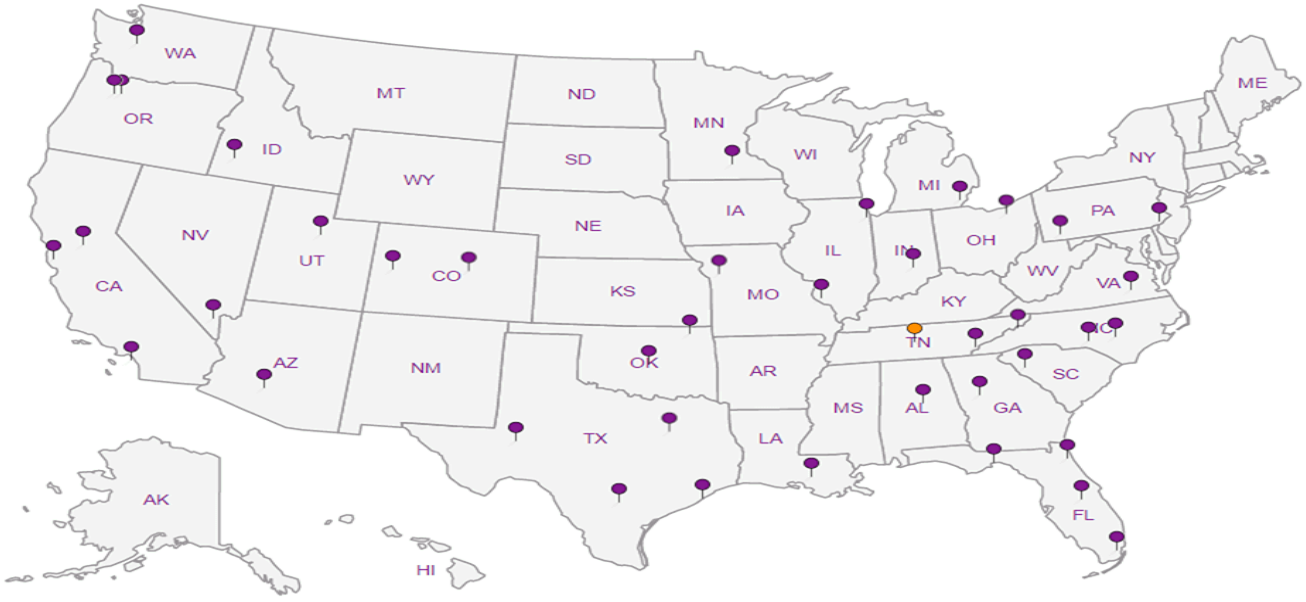
Third Party & Federal Accreditations

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.**



LTE

Billing Information: XTO

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

ESC LAB SCIENCES

YOUR LAB OF CHOICE

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L# 961532

G092

Report to: Kyle Littrell

Email To: Kyle_Littrell@Xtoenergy.com
Abaker@LTenv.com

Project Description: Confirmation Soil Samples

City/State Collected: NM

Phone: Fax: 1-970-317-1867

Client Project # 30-015-27686

Lab Project #

Collected by (print): Aaron Williamson

Site/Facility ID # JRU #36 (2RP-2981)

P.O. # 01291800 1

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

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

Quote #

Date Results Needed

Acctnum: XTOMTX
Template:
Prelogin:
TSR:
PB:
Shipped Via:

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	6"	1-4-18	11:08	1	✓	✓	✓		-01
SS2	Grab	SS	6"	1-4-18	11:17	1	✓	✓	✓		-02
SS3	Grab	SS	6"	1-4-18	11:20	1	✓	✓	✓		-03
SS4	Grab	SS	6"	1-4-18	11:23	1	✓	✓	✓		-04
SS5	Grab	SS	6"	1-4-18	11:26	1	✓	✓	✓		-05
SS6	Grab	SS	6"	1-4-18	11:29	1	✓	✓	✓		-06
SS7	Grab	SS	6"	1-4-18	11:34	1	✓	✓	✓		-07
SS8	Grab	SS	6"	1-4-18	11:37	1	✓	✓	✓		-08
SS9	Grab	SS	6"	1-4-18	11:40	1	✓	✓	✓		-09
N.F.E. ARW			6"	AR							-10

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

Remarks:

pH ____ Temp ____
Flow ____ Other ____

Samples returned via: ___ UPS ✓ FedEx ___ Courier ___

Tracking # 682711101610

Sample Receipt Checklist
COC Seal Present/Intact: ___NP ___Y ___N
COC Signed/Accurate: ✓ ___N
Bottles arrive intact: ✓ ___N
Correct bottles used: ✓ ___N
Sufficient volume sent: ✓ ___N
If Applicable
VOA Zero Headspace: ___Y ___N
Preservation Correct/Checked: ___Y ___N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	1-5-18	10:00	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	1-5-18	12:30	FedEx
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			Marina

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 1.1w °C Bottles Received: 9

Date: 01-06-18 Time: 0815

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Certificate of Analysis Summary 583282

LT Environmental, Inc., Arvada, CO

Project Name: JRU 36

Project Id: (2RP-2981 & 2RP-3618)
Contact: Adrian Baker
Project Location: NM

Date Received in Lab: Sat Apr-21-18 10:00 am
Report Date: 27-APR-18
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	583282-001		583282-002					
	Field Id:	SS5A		SS1A					
	Depth:	16- In		22- In					
	Matrix:	SOIL		SOIL					
	Sampled:	Apr-19-18 09:00		Apr-19-18 09:40					
BTEX by EPA 8021B	***Extracted:***	Apr-24-18 13:00		Apr-24-18 13:00					
	Analyzed:	Apr-24-18 20:03		Apr-24-18 20:22					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00202	0.00202	<0.00200	0.00200				
Toluene		<0.00202	0.00202	<0.00200	0.00200				
Ethylbenzene		<0.00202	0.00202	<0.00200	0.00200				
m,p-Xylenes		<0.00403	0.00403	<0.00401	0.00401				
o-Xylene		<0.00202	0.00202	<0.00200	0.00200				
Total Xylenes		<0.00202	0.00202	<0.00200	0.00200				
Total BTEX		<0.00202	0.00202	<0.00200	0.00200				
Chloride by EPA 300	***Extracted:***	Apr-26-18 16:00		Apr-26-18 16:00					
	Analyzed:	Apr-26-18 19:42		Apr-26-18 19:53					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		19.2	4.98	64.1	4.96				
TPH By SW8015 Mod	***Extracted:***	Apr-25-18 16:00		Apr-25-18 16:00					
	Analyzed:	Apr-25-18 22:40		Apr-26-18 00:02					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0				
Diesel Range Organics (DRO)		24.2	15.0	189	15.0				
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0				
Total TPH		24.2	15.0	189	15.0				

Jessica Kramer
Project Assistant

Analytical Report 583282

for

LT Environmental, Inc.

Project Manager: Adrian Baker

JRU 36

(2RP-2981 & 2RP-3618)

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): **583282**
JRU 36
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) 583282. 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. 583282 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

Sample Cross Reference 583282

LT Environmental, Inc., Arvada, CO

JRU 36

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS5A	S	04-19-18 09:00	16 In	583282-001
SS1A	S	04-19-18 09:40	22 In	583282-002

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 583282

LT Environmental, Inc., Arvada, CO

JRU 36

Sample Id:	**SS5A**	Matrix:	Soil	Date Received:	04.21.18 10.00
Lab Sample Id:	583282-001	Date Collected:	04.19.18 09.00	Sample Depth:	16 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	SCM	Date Prep:	04.26.18 16.00	Basis:	Wet Weight
Seq Number:	3048105				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**19.2**	4.98	mg/kg	04.26.18 19.42		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.25.18 16.00	Basis:	Wet Weight
Seq Number:	3047990				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.25.18 22.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	**24.2**	15.0	mg/kg	04.25.18 22.40		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	04.25.18 22.40	U	1
Total TPH	PHC635	**24.2**	15.0	mg/kg	04.25.18 22.40		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	04.25.18 22.40	
o-Terphenyl	84-15-1	111	%	70-135	04.25.18 22.40	

Certificate of Analytical Results 583282

LT Environmental, Inc., Arvada, CO

JRU 36

Sample Id:	**SS5A**	Matrix:	Soil	Date Received:	04.21.18 10.00
Lab Sample Id:	583282-001	Date Collected:	04.19.18 09.00	Sample Depth:	16 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	<0.00202	0.00202	mg/kg	04.24.18 20.03	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.24.18 20.03	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.24.18 20.03	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	04.24.18 20.03	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.24.18 20.03	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	04.24.18 20.03	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.24.18 20.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	04.24.18 20.03	
4-Bromofluorobenzene	460-00-4	98	%	70-130	04.24.18 20.03	

Certificate of Analytical Results 583282

LT Environmental, Inc., Arvada, CO

JRU 36

Sample Id:	**SS1A**	Matrix:	Soil	Date Received:	04.21.18 10.00
Lab Sample Id:	583282-002	Date Collected:	04.19.18 09.40	Sample Depth:	22 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	SCM	Date Prep:	04.26.18 16.00	Basis:	Wet Weight
Seq Number:	3048105				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**64.1**	4.96	mg/kg	04.26.18 19.53		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.25.18 16.00	Basis:	Wet Weight
Seq Number:	3047990				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.26.18 00.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	**189**	15.0	mg/kg	04.26.18 00.02		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	04.26.18 00.02	U	1
Total TPH	PHC635	**189**	15.0	mg/kg	04.26.18 00.02		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	04.26.18 00.02	
o-Terphenyl	84-15-1	108	%	70-135	04.26.18 00.02	

Certificate of Analytical Results 583282

LT Environmental, Inc., Arvada, CO

JRU 36

Sample Id:	**SS1A**	Matrix:	Soil	Date Received:	04.21.18 10.00
Lab Sample Id:	583282-002	Date Collected:	04.19.18 09.40	Sample Depth:	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	<0.00200	0.00200	mg/kg	04.24.18 20.22	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.24.18 20.22	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.24.18 20.22	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	04.24.18 20.22	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.24.18 20.22	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.24.18 20.22	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.24.18 20.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	04.24.18 20.22	
4-Bromofluorobenzene	460-00-4	89	%	70-130	04.24.18 20.22	

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 583282

LT Environmental, Inc.

JRU 36

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3048105 Matrix: Solid Date Prep: 04.26.18
MB Sample Id: 7643509-1-BLK LCS Sample Id: 7643509-1-BKS LCSD Sample Id: 7643509-1-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	235	94	235	94	90-110	0	20	mg/kg	04.26.18 18:40	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3048105 Matrix: Soil Date Prep: 04.26.18
Parent Sample Id: 583288-001 MS Sample Id: 583288-001 S MSD Sample Id: 583288-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	25.2	250	247	89	247	89	90-110	0	20	mg/kg	04.26.18 21:36	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3048105 Matrix: Soil Date Prep: 04.26.18
Parent Sample Id: 583452-018 MS Sample Id: 583452-018 S MSD Sample Id: 583452-018 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	131	249	375	98	373	97	90-110	1	20	mg/kg	04.26.18 19:11	

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3047990 Matrix: Solid Date Prep: 04.25.18
MB Sample Id: 7643471-1-BLK LCS Sample Id: 7643471-1-BKS LCSD Sample Id: 7643471-1-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	1010	101	1070	107	70-135	6	20	mg/kg	04.25.18 21:46	
Diesel Range Organics (DRO)	<15.0	1000	1010	101	1090	109	70-135	8	20	mg/kg	04.25.18 21:46	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	111		114		122		70-135	%	04.25.18 21:46
o-Terphenyl	116		113		121		70-135	%	04.25.18 21:46

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

QC Summary 583282

LT Environmental, Inc.

JRU 36

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3047990 Matrix: Soil Date Prep: 04.25.18
Parent Sample Id: 583282-001 MS Sample Id: 583282-001 S MSD Sample Id: 583282-001 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	1060	106	1010	101	70-135	5	20	mg/kg	04.25.18 23:06	
Diesel Range Organics (DRO)	24.2	998	1060	104	1020	100	70-135	4	20	mg/kg	04.25.18 23:06	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	125		118		70-135	%	04.25.18 23:06
o-Terphenyl	121		115		70-135	%	04.25.18 23:06

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
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

CHAIN OF CUSTODY

Page ___ Of ___

XENCO LABORATORIES

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Phoenix, Arizona (480-355-0900)
www.xenco.com

Xenco Quote #
Xenco Job # 583282

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 36
Project Location: NM
Invoice To: Kyle Littrell, XTO Energy
PO Number: 30-015-27686 (2RP-2981 & 2RP-3517)

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	TPH	Chloride								Field Comments
1	SS5A	16"	4/19/18	0900	S	1								X	X	X	X								
2	SS1A	22"	↓	0940	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	Esperanza Gonzalez	4/20 12:55	2
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. 0.5 / Thermo. Corr. Factor

Notice: Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the Client if such loses are due to circumstances beyond the control of Xenco. A minimum charge of $75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 04/21/2018 10:00:00 AM

Work Order #: 583282

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Katie Lowe Date: 04/23/2018

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

Analytical Report 587528

for

LT Environmental, Inc.

Project Manager: Adrian Baker

JRU-36 Battery/ 012918001

04-JUN-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-14)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

04-JUN-18

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

Reference: XENCO Report No(s): **587528**
JRU-36 Battery/ 012918001
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) 587528. 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. 587528 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

Sample Cross Reference 587528

LT Environmental, Inc., Arvada, CO

JRU-36 Battery/ 012918001

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS10	S	05-25-18 13:00	- 6 In	587528-001
SS11	S	05-25-18 13:05	- 6 In	587528-002

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3052094 BTEX by EPA 8021B

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

Certificate of Analysis Summary 587528

LT Environmental, Inc., Arvada, CO

Project Name: JRU-36 Battery/ 012918001

Project Id:
Contact: Adrian Baker
Project Location: NM

Date Received in Lab: Wed May-30-18 10:40 am
Report Date: 04-JUN-18
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	587528-001		587528-002					
	Field Id:	SS10		SS11					
	Depth:	6 In		6 In					
	Matrix:	SOIL		SOIL					
	Sampled:	May-25-18 13:00		May-25-18 13:05					
BTEX by EPA 8021B	***Extracted:***	May-31-18 15:00		May-31-18 15:00					
	Analyzed:	May-31-18 21:21		May-31-18 21:37					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00200	0.00200	<0.00200	0.00200				
Toluene		<0.00200	0.00200	<0.00200	0.00200				
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200				
m,p-Xylenes		<0.00401	0.00401	<0.00400	0.00400				
o-Xylene		<0.00200	0.00200	<0.00200	0.00200				
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200				
Total BTEX		<0.00200	0.00200	<0.00200	0.00200				
Inorganic Anions by EPA 300	***Extracted:***	May-31-18 08:30		May-31-18 08:30					
	Analyzed:	May-31-18 10:47		May-31-18 11:29					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		<4.92	4.92	98.5	4.97				
TPH by SW8015 Mod	***Extracted:***	May-31-18 07:00		May-31-18 07:00					
	Analyzed:	Jun-01-18 07:52		Jun-01-18 08:12					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	72.5	15.0				
Diesel Range Organics (DRO)		255	15.0	4000	15.0				
Oil Range Hydrocarbons (ORO)		21.3	15.0	44.5	15.0				
Total TPH		276	15.0	4120	15.0				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 587528

LT Environmental, Inc., Arvada, CO

JRU-36 Battery/ 012918001

Sample Id:	**SS10**	Matrix:	Soil	Date Received:	05.30.18 10.40
Lab Sample Id:	587528-001	Date Collected:	05.25.18 13.00	Sample Depth:	6 In

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

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.92	4.92	mg/kg	05.31.18 10.47	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.31.18 07.00	Basis:	Wet Weight
Seq Number:	3052046				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.01.18 07.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	**255**	15.0	mg/kg	06.01.18 07.52		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**21.3**	15.0	mg/kg	06.01.18 07.52		1
Total TPH	PHC635	**276**	15.0	mg/kg	06.01.18 07.52		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	06.01.18 07.52	
o-Terphenyl	84-15-1	94	%	70-135	06.01.18 07.52	

Certificate of Analytical Results 587528

LT Environmental, Inc., Arvada, CO

JRU-36 Battery/ 012918001

Sample Id:	**SS10**	Matrix:	Soil	Date Received:	05.30.18 10.40
Lab Sample Id:	587528-001	Date Collected:	05.25.18 13.00	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	05.31.18 15.00	Basis:	Wet Weight
Seq Number:	3052094				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.31.18 21.21	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.31.18 21.21	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.31.18 21.21	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	05.31.18 21.21	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.31.18 21.21	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.31.18 21.21	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.31.18 21.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	88	%	70-130	05.31.18 21.21	
4-Bromofluorobenzene	460-00-4	112	%	70-130	05.31.18 21.21	

Certificate of Analytical Results 587528

LT Environmental, Inc., Arvada, CO

JRU-36 Battery/ 012918001

Sample Id:	**SS11**	Matrix:	Soil	Date Received:	05.30.18 10.40
Lab Sample Id:	587528-002	Date Collected:	05.25.18 13.05	Sample Depth:	6 In

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

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**98.5**	4.97	mg/kg	05.31.18 11.29		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.31.18 07.00	Basis:	Wet Weight
Seq Number:	3052046				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**72.5**	15.0	mg/kg	06.01.18 08.12		1
Diesel Range Organics (DRO)	C10C28DRO	**4000**	15.0	mg/kg	06.01.18 08.12		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**44.5**	15.0	mg/kg	06.01.18 08.12		1
Total TPH	PHC635	**4120**	15.0	mg/kg	06.01.18 08.12		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	06.01.18 08.12	
o-Terphenyl	84-15-1	123	%	70-135	06.01.18 08.12	

Certificate of Analytical Results 587528

LT Environmental, Inc., Arvada, CO

JRU-36 Battery/ 012918001

Sample Id:	**SS11**	Matrix:	Soil	Date Received:	05.30.18 10.40
Lab Sample Id:	587528-002	Date Collected:	05.25.18 13.05	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	05.31.18 15.00	Basis:	Wet Weight
Seq Number:	3052094				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.31.18 21.37	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.31.18 21.37	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.31.18 21.37	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	05.31.18 21.37	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.31.18 21.37	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.31.18 21.37	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.31.18 21.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	111	%	70-130	05.31.18 21.37	
4-Bromofluorobenzene	460-00-4	118	%	70-130	05.31.18 21.37	

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 587528

LT Environmental, Inc.

JRU-36 Battery/ 012918001

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3051902 Matrix: Solid Date Prep: 05.31.18
MB Sample Id: 7655767-1-BLK LCS Sample Id: 7655767-1-BKS LCSD Sample Id: 7655767-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	269	108	269	108	90-110	0	20	mg/kg	05.31.18 09:22	

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

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

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

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

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3052046 Matrix: Solid Date Prep: 05.31.18
MB Sample Id: 7655868-1-BLK LCS Sample Id: 7655868-1-BKS LCSD Sample Id: 7655868-1-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	920	92	953	95	70-135	4	20	mg/kg	05.31.18 10:15	
Diesel Range Organics (DRO)	<15.0	1000	993	99	1040	104	70-135	5	20	mg/kg	05.31.18 10:15	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	86		126		128		70-135	%	05.31.18 10:15
o-Terphenyl	92		119		121		70-135	%	05.31.18 10:15

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 587528

LT Environmental, Inc.

JRU-36 Battery/ 012918001

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3052046 Matrix: Soil Date Prep: 05.31.18
Parent Sample Id: 587529-001 MS Sample Id: 587529-001 S MSD Sample Id: 587529-001 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	999	896	90	894	90	70-135	0	20	mg/kg	05.31.18 11:19	
Diesel Range Organics (DRO)	<15.0	999	979	98	980	98	70-135	0	20	mg/kg	05.31.18 11:19	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	102		103		70-135	%	05.31.18 11:19
o-Terphenyl	103		104		70-135	%	05.31.18 11:19

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3052094 Matrix: Solid Date Prep: 05.31.18
MB Sample Id: 7655894-1-BLK LCS Sample Id: 7655894-1-BKS LCSD Sample Id: 7655894-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.102	102	0.0961	96	70-130	6	35	mg/kg	05.31.18 18:01	
Toluene	<0.00200	0.100	0.0948	95	0.0990	99	70-130	4	35	mg/kg	05.31.18 18:01	
Ethylbenzene	<0.00200	0.100	0.0949	95	0.0962	96	70-130	1	35	mg/kg	05.31.18 18:01	
m,p-Xylenes	<0.00401	0.200	0.201	101	0.202	100	70-130	0	35	mg/kg	05.31.18 18:01	
o-Xylene	<0.00200	0.100	0.109	109	0.107	107	70-130	2	35	mg/kg	05.31.18 18:01	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		93		91		70-130	%	05.31.18 18:01
4-Bromofluorobenzene	125		86		103		70-130	%	05.31.18 18:01

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3052094 Matrix: Soil Date Prep: 05.31.18
Parent Sample Id: 587374-002 MS Sample Id: 587374-002 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Benzene	0.00616	0.0992	0.0262	20	70-130	mg/kg	05.31.18 18:35	X
Toluene	0.0459	0.0992	0.0540	8	70-130	mg/kg	05.31.18 18:35	X
Ethylbenzene	0.0117	0.0992	0.0177	6	70-130	mg/kg	05.31.18 18:35	X
m,p-Xylenes	0.0893	0.198	0.0957	3	70-130	mg/kg	05.31.18 18:35	X
o-Xylene	0.0314	0.0992	0.0334	2	70-130	mg/kg	05.31.18 18:35	X

Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	81		70-130	%	05.31.18 18:35
4-Bromofluorobenzene	102		70-130	%	05.31.18 18:35

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

CHAIN OF CUSTODY

Page ___ Of ___

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

Xenco Quote #

Xenco Job # 587528

Client / Reporting Information

Company Name / Branch: LTE Environmental / Carlsbad / Midland

Company Address: 4600 W 60th Ave Arvada, CO 80003

Email: abaker@ltenv.com

Phone No: 432-894-5641

Project Contact: Adrian Baker

Samplers's Name: Daniel Thomas

Project Information

Project Name/Number: JRU-36 Battery / 01291801

Project Location: NM

Invoice To: Kyle Littrell

PO Number: 2RP-2981

Analytical Information

BTEX

TPH

Chloride

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	Field Comments
1	SS10	6"	5-25-18	1300	Soil	1									
2	SS11	6"	"	1305	Soil	1									
3															
4															
5															
6															
7															
8															
9															
10															

Turnaround Time (Business days)

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

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

Data Deliverable Information

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

Notes:

FED-EX / UPS: Tracking #

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

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		5-25-18 16:27	Jamie Wilson	2		2
3	Relinquished by:	Date Time: 5/30/18 10:40	Received By: Bill Rhea	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice: ✓ Cooler Temp. 2.0 °C Thermo. Corr. Factor .98 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

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 05/30/2018 10:40:00 AM

Work Order #: 587528

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

Temperature Measuring device used : R8

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	2	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 Custody Seals intact on sample bottles?	**N/A**	
#6*Custody Seals Signed and dated?	**N/A**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	TPH WAS RECEIVED IN BULK CONTAINERS
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**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: 05/30/2018

Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 05/30/2018

Jessica Kramer