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

June 15, 2018

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

RE: Closure Request
James Ranch Unit #85 Flowline
Remediation Permit Number 2RP-3128
Eddy County, New Mexico

Dear Mr. Bratcher;

LT Environmental, Inc. (LTE) on behalf of XTO Energy Inc. (XTO), presents the following letter report detailing the soil sampling activities at a former release from a flowline associated with the James Ranch Unit (JRU) #85 at the JRU #017 tank battery (Site) in Section 6 of Township 23 South, Range 31 East, in Eddy County, New Mexico (Figure 1). The purpose of the investigation was to assess impacts to soil after external corrosion on the JRU #85 flowline west of the JRU #017 tank battery caused a release of approximately 4 barrels (bbls) of oil and 24 bbls of produced water on July 10, 2015. The release impacted approximately 780 square feet of pasture west of the JRU #017 tank battery. No free-standing liquid was recovered. An emergency clamp was placed on the affected flowline, the well was shut in while a section of the flowline was replaced, and the leak area was covered with a plastic liner to prevent the vertical migration of impact.

The previous operator reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 on July 14, 2015, and was assigned Remediation Permit Number (RP) 2RP-3128 (Attachment 1). Although the impact occurred while the well 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 sampling event as described herein, XTO is requesting no further action for this release.

BACKGROUND

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest water well data and known aquifer properties. The nearest permitted water well is C 02492, located approximately 0.87 miles south-southeast of the Site, with a depth to groundwater of 125 feet bgs and a total depth of 400 feet bgs. The Site is greater than 1,000 feet from a water source and greater than 200 feet from a private or domestic water source. The closest surface water to the Site is an arroyo located approximately 4,410 feet 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

Soil sample locations were based on visual inspection of the Site and the information provided on the initial C-141 Form. Based on the description of the affected area, LTE determined the release occurred west-northwest of the tank battery. Because the initial C-141 form does not specify that remediation occurred, other than clamping and repairing the flow line and placing a liner on the surface of the impact following the 2015 release, it is unlikely that any soil was removed. The liner that is described in the C-141 was observed at the Site on February 6, 2018. LTE pulled back the liner and exposed soil under the liner to collect five soil samples (SS1 through SS5). No visual or olfactory evidence of the release was observed at the Site or the soil samples. LTE made an effort to collect representative samples around the reported release source and areas potentially affected by the release. Sample locations are depicted on Figure 2.

To eliminate effects from weathering and natural degradation of contaminants at the ground surface, subsurface samples were collected from each location at approximately 0.5 feet bgs by hand auger. The soil samples were collected 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 Xenco Laboratories in Midland, Texas, for analysis of BTEX by United States Environmental Protection Agency (EPA) Method 8021B, 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.

ANALYTICAL RESULTS

Laboratory analytical results for the five soil samples indicated BTEX and TPH concentrations were below laboratory reporting limits and were compliant with NMOCD remediation action levels. Chloride concentrations ranged from below the laboratory reporting limit in soil samples SS2, SS3, and SS4 to 547 mg/kg in soil sample SS1. The laboratory analytical results are presented on Figure 2 and in Table 1, and the complete laboratory analytical report is included as Attachment 2.

CONCLUSIONS

Laboratory analytical results for soil samples collected within the former release footprint indicated concentrations of BTEX, TPH, and chloride do not exceed NMOCD site-specific standards. Initial response efforts and natural degradation have remediated this Site. XTO will remove the plastic liner from the Site, and requests no further action for this release.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Adrian Baker
Project Geologist

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

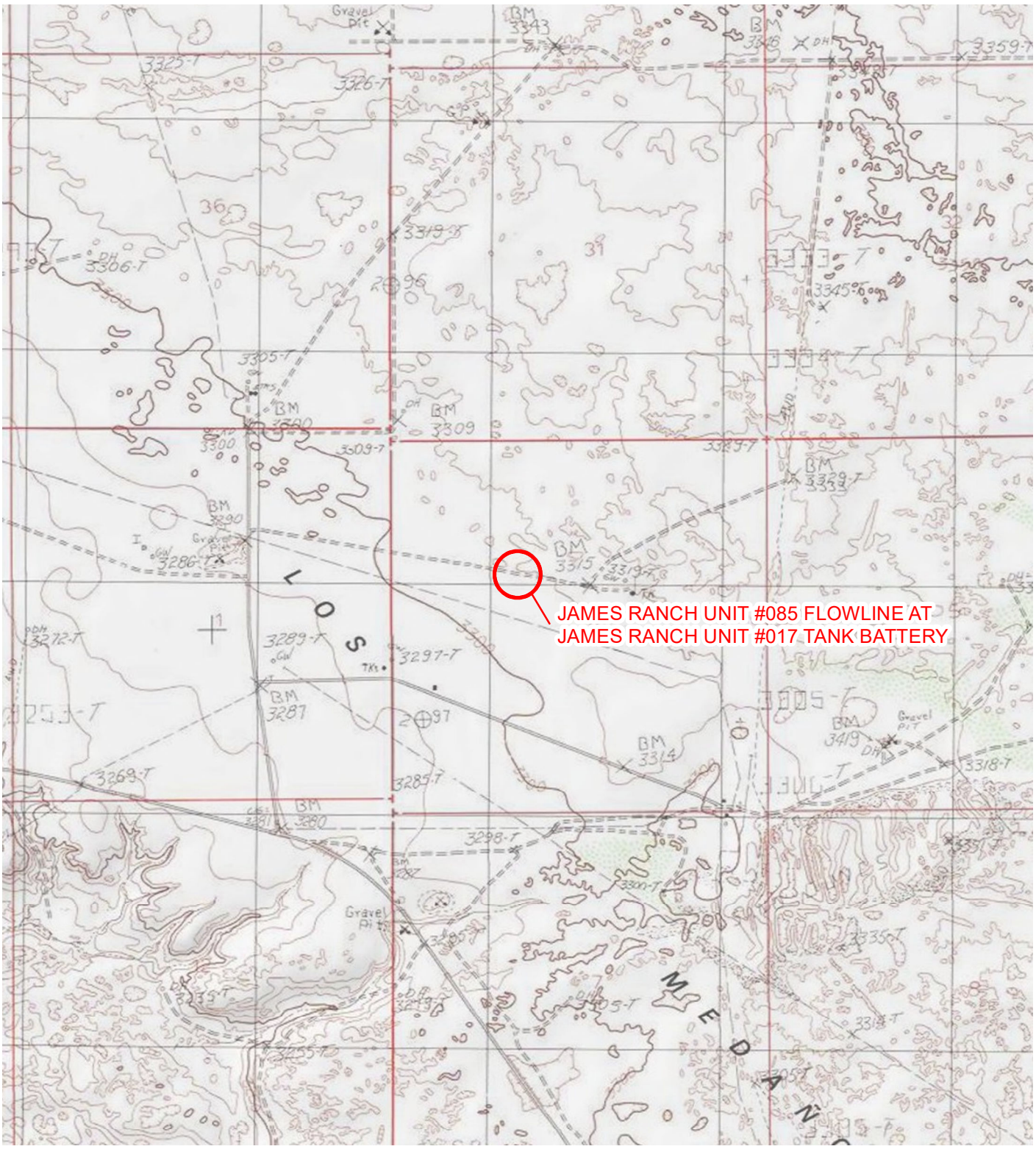
cc: Kyle Littrell, XTO
Crystal Weaver, NMOCD
Jim Amos, BLM
Shelly Tucker, BLM

Attachments:

Figure 1 Site Location Map
Figure 2 Soil Sample Locations
Table 1 Soil Analytical Results: Volatile Organic Compounds
Attachment 1 Initial/ Final NMOCD Form C-141
Attachment 2 Laboratory Analytical Report

FIGURES

Advancing Opportunity



LEGEND

SITE LOCATION

IMAGE COURTESY OF ESRI/USGS

0 2,000 4,000

Feet

N

NEW MEXICO

NOTE: REMEDIATION PERMIT NUMBER 2RP-3128

FIGURE 1
SITE LOCATION MAP
JAMES RANCH UNIT #085 FLOWLINE AT
JAMES RANCH UNIT #017 TANK BATTERY
UNIT L SEC 6 T23S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918034_JRU 85 FLOW LINE\012918034_FIG01_SL_2018.mxd

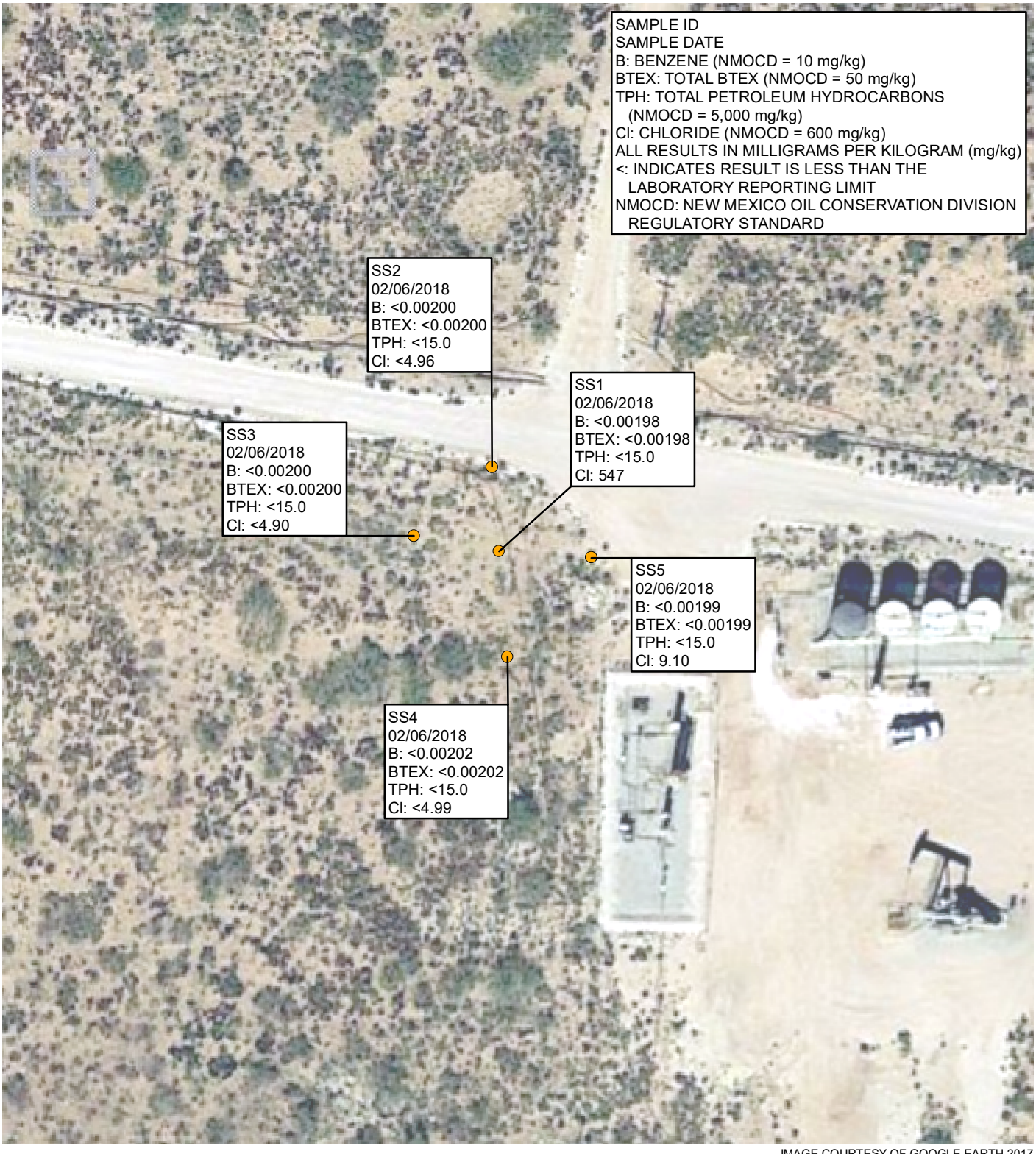


FIGURE 2
SOIL SAMPLE LOCATIONS
JAMES RANCH UNIT #085 FLOWLINE AT
JAMES RANCH UNIT #017 TANK BATTERY
UNIT L SEC 6 T23S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

NOTE: REMEDIATION PERMIT NUMBER 2RP-3128

P:\XTO Energy\GIS\MXD\012918034_JRU 85 FLOW LINE\012918034_FIG02_SITE_2018.mxd

TABLE

Advancing Opportunity

TABLE 1
SOIL ANALYTICAL RESULTS
REMEDIATION PERMIT NUMBER 2RP-3128
JAMES RANCH UNIT #085 FLOW LINE AT JAMES RANCH UNIT #017 TANK BATTERY
EDDY COUNTY, NEW MEXICO
XTO ENERGY INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	C6-C10 Gasoline Range Organics (mg/kg)	C10-C28 Diesel Range Organics (mg/kg)	C28-C40 Oil Range Organics (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS1	0.5	02/06/2018	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	547
SS2	0.5	02/06/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<4.96
SS3	0.5	02/06/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<4.90
SS4	0.5	02/06/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<4.99
SS5	0.5	02/06/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	9.10
NMOCD Remediation Action Level			10	NE	NE	NE	50	NE	NE	NE	5,000	600

Notes:

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

ATTACHMENT 1

INITIAL/FINAL NMOCD FORM C-141

Advancing Opportunity

NM OIL CONSERVATION
ARTESIA DISTRICT
JUL 14 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

nAB1519857428 2100737

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 #085 at James Ranch Unit #017 Battery (Battery at JRU #017 well, API 30-015-27784)	Facility Type: Exploration and Production

Surface Owner: Federal	Mineral Owner: Unknown	API No. 30-015-35322

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
L	6	23S	31E	2180	South	185	West	Eddy

Latitude 32.33553° **Longitude** -103.81980°

NATURE OF RELEASE

Type of Release Crude Oil and Produced Water	Volume of Release 4 bbls oil, 24 bbls PW	Volume Recovered None
Source of Release Flow Line	Date and Hour of Occurrence 7/10/2015 hour unknown	Date and Hour of Discovery 7/10/2015 at 12 pm
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher/Heather Patterson (NMOCD), Jim Amos (BLM)	
By Whom? Amy Ruth	Date and Hour 7/10/2015 at 5:36 pm	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Buried steel line weakened by corrosion. Line was clamped until joint of line replaced.

Describe Area Affected and Cleanup Action Taken.*
Leak affected 780 square feet of pasture west of the JRU 17 Battery pad. Leak area was covered with plastic to prevent downward migration until it is addressed.

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 Ruth

Title: Assistant Remediation Foreman

E-mail Address: ACRuth@basspet.com

Date: 7/14/2015 Phone: 432-661-0571

OIL CONSERVATION DIVISION

Signed By

Approved by Environmental Specialist:

Approval Date: 7/17/15 Expiration Date: N/A

Conditions of Approval: Attached ☐
Remediation per O.C.D. Rules & Guidelines
SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 8/20/15

2RP-3128

* Attach Additional Sheets If Necessary

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company XTO Energy	Contact: Kyle Littrell
Address 3104 E Greene Street, Carlsbad, NM 88220	Telephone No: 432-221-7331
Facility Name: James Ranch Unit #085 at James Ranch Unit #017 Battery (Battery at JRU #017 well, API 30-015-27784)	Facility Type: Exploration and Production

Surface Owner Federal	Mineral Owner: Unknown	API No. 30-015-35322

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
L	6	23S	31E	2180	South	185	West	Eddy

Latitude 32.33553° **Longitude** -103.81980° NAD83

NATURE OF RELEASE

Type of Release Crude oil and Produced water	Volume of Release 4 bbls oil and 24 bbls of produced water	Volume Recovered None
Source of Release: Flow line	Date and Hour of Occurrence 7/10/2015 hour unknown	Date and Hour of Discovery 7/10/2015 at 12 pm
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher/Heather Patterson (NMOCD), Jim Amos (BLM)	
By Whom? Amy Ruth	Date and Hour: 7/10/2015 at 5:36 pm	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse: NA	

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

Describe Cause of Problem and Remedial Action Taken.*
Buried steel line weakened by corrosion. Line was clamped until joint of line replaced.

Describe Area Affected and Cleanup Action Taken.*
Leak affected 780 square feet of pasture west of the JRU 17 Battery pad. Leak area was covered with liner to prevent downward migration until it was addressed.

On February 6, 2018, five confirmation soil samples were collected from underneath the liner within the release area. Laboratory analytical results from confirmation soil samples indicated concentrations of BTEX, TPH, and chloride did not exceed NMOCD remediation standards. Initial response and natural degradation have remediated this Site, and XTO requests a no further action at this Site

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:	
Title: SH&E Coordinator	Approval Date:	Expiration Date:
E-mail Address: Kyle_Littrell@xtoenergy.com	Conditions of Approval:	Attached ☐
Date: 6/1/2018 Phone: 432-221-7331		

* Attach Additional Sheets If Necessary

ATTACHMENT 2

LABORATORY ANALYTICAL REPORT

Advancing Opportunity

Analytical Report 575585

for

LT Environmental, Inc.

Project Manager: Adrian Baker

JRU 85 at JRU 17 Battery/ 30-015-35322

15-FEB-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-17-23), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab code: TX01468):
Texas (T104704295-17-15), 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 (T104704400-17-13)
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)

15-FEB-18

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

Reference: XENCO Report No(s): **575585**
JRU 85 at JRU 17 Battery/ 30-015-35322
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) 575585. 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. 575585 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
Odessa Laboratory Director

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

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

Sample Cross Reference 575585

LT Environmental, Inc., Arvada, CO

JRU 85 at JRU 17 Battery/ 30-015-35322

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS1	S	02-06-18 12:26	6"	575585-001
SS2	S	02-06-18 12:28	6"	575585-002
SS3	S	02-06-18 12:30	6"	575585-003
SS4	S	02-06-18 12:32	6"	575585-004
SS5	S	02-06-18 12:34	6"	575585-005

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: JRU 85 at JRU 17 Battery/ 30-015-35322

Project ID:
Work Order Number(s): *575585*

Report Date: *15-FEB-18*
Date Received: *02/07/2018*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3040874 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3041126 Inorganic Anions by EPA 300
Lab Sample ID 575587-002 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 575585-003, -004, -005.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analysis Summary 575585

LT Environmental, Inc., Arvada, CO

Project Name: JRU 85 at JRU 17 Battery/ 30-015-35322

Project Id:

Contact: Adrian Baker

Project Location: NM

Date Received in Lab: Wed Feb-07-18 08:00 am

Report Date: 15-FEB-18

Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	575585-001		575585-002		575585-003		575585-004		575585-005	
	Field Id:	SS1		SS2		SS3		SS4		SS5	
	Depth:	6"-		6"-		6"-		6"-		6"-	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-06-18 12:26		Feb-06-18 12:28		Feb-06-18 12:30		Feb-06-18 12:32		Feb-06-18 12:34	
BTEX by EPA 8021B	***Extracted:***	Feb-12-18 08:00		Feb-12-18 08:00		Feb-12-18 08:00		Feb-12-18 08:00		Feb-12-18 08:00	
	Analyzed:	Feb-12-18 10:36		Feb-12-18 10:55		Feb-12-18 11:14		Feb-12-18 11:33		Feb-12-18 11:52	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199
Toluene		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199
Ethylbenzene		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199
m,p-Xylenes		<0.00397	0.00397	<0.00399	0.00399	<0.00401	0.00401	<0.00404	0.00404	<0.00398	0.00398
o-Xylene		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199
Total Xylenes		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199
Total BTEX		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199
Inorganic Anions by EPA 300	***Extracted:***	Feb-14-18 11:00		Feb-14-18 11:00		Feb-14-18 15:00		Feb-14-18 15:00		Feb-14-18 15:00	
	Analyzed:	Feb-14-18 16:14		Feb-14-18 16:20		Feb-14-18 19:02		Feb-14-18 19:20		Feb-14-18 19:26	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		547	5.00	<4.96	4.96	<4.90	4.90	<4.99	4.99	9.10	4.91
TPH by SW8015 Mod	***Extracted:***	Feb-12-18 16:00		Feb-12-18 16:00		Feb-12-18 16:00		Feb-12-18 16:00		Feb-12-18 16:00	
	Analyzed:	Feb-12-18 21:36		Feb-12-18 22:38		Feb-12-18 22:58		Feb-12-18 23:18		Feb-12-18 23:39	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

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

Jessica Kramer
Odessa Laboratory Director

Certificate of Analytical Results 575585

LT Environmental, Inc., Arvada, CO

JRU 85 at JRU 17 Battery/ 30-015-35322

Sample Id:	**SS1**	Matrix:	Soil	Date Received:	02.07.18 08.00
Lab Sample Id:	575585-001	Date Collected:	02.06.18 12.26	Sample Depth:	6"

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.14.18 11.00	Basis:	Wet Weight
Seq Number:	3041037				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**547**	5.00	mg/kg	02.14.18 16.14		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.12.18 16.00	Basis:	Wet Weight
Seq Number:	3040881				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.12.18 21.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.12.18 21.36	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	02.12.18 21.36	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.12.18 21.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	02.12.18 21.36	
o-Terphenyl	84-15-1	100	%	70-135	02.12.18 21.36	

Certificate of Analytical Results 575585

LT Environmental, Inc., Arvada, CO

JRU 85 at JRU 17 Battery/ 30-015-35322

Sample Id:	**SS1**	Matrix:	Soil	Date Received:	02.07.18 08.00
Lab Sample Id:	575585-001	Date Collected:	02.06.18 12.26	Sample Depth:	6"
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.12.18 08.00	Basis:	Wet Weight
Seq Number:	3040874				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	02.12.18 10.36	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	02.12.18 10.36	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	02.12.18 10.36	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	02.12.18 10.36	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	02.12.18 10.36	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	02.12.18 10.36	U	1
Total BTEX		<0.00198	0.00198	mg/kg	02.12.18 10.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	83	%	80-120	02.12.18 10.36	
4-Bromofluorobenzene	460-00-4	116	%	80-120	02.12.18 10.36	

Certificate of Analytical Results 575585

LT Environmental, Inc., Arvada, CO

JRU 85 at JRU 17 Battery/ 30-015-35322

Sample Id:	**SS2**	Matrix:	Soil	Date Received:	02.07.18 08.00
Lab Sample Id:	575585-002	Date Collected:	02.06.18 12.28	Sample Depth:	6"

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.14.18 11.00	Basis:	Wet Weight
Seq Number:	3041037				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	02.14.18 16.20	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.12.18 16.00	Basis:	Wet Weight
Seq Number:	3040881				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.12.18 22.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.12.18 22.38	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	02.12.18 22.38	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.12.18 22.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	02.12.18 22.38	
o-Terphenyl	84-15-1	98	%	70-135	02.12.18 22.38	

Certificate of Analytical Results 575585

LT Environmental, Inc., Arvada, CO

JRU 85 at JRU 17 Battery/ 30-015-35322

Sample Id:	**SS2**	Matrix:	Soil	Date Received:	02.07.18 08.00
Lab Sample Id:	575585-002	Date Collected:	02.06.18 12.28	Sample Depth:	6"
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.12.18 08.00	Basis:	Wet Weight
Seq Number:	3040874				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.12.18 10.55	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.12.18 10.55	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.12.18 10.55	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.12.18 10.55	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.12.18 10.55	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.12.18 10.55	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.12.18 10.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	80	%	80-120	02.12.18 10.55	
4-Bromofluorobenzene	460-00-4	103	%	80-120	02.12.18 10.55	

Certificate of Analytical Results 575585

LT Environmental, Inc., Arvada, CO

JRU 85 at JRU 17 Battery/ 30-015-35322

Sample Id:	**SS3**	Matrix:	Soil	Date Received:	02.07.18 08.00
Lab Sample Id:	575585-003	Date Collected:	02.06.18 12.30	Sample Depth:	6"

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.14.18 15.00	Basis:	Wet Weight
Seq Number:	3041126				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.90	4.90	mg/kg	02.14.18 19.02	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.12.18 16.00	Basis:	Wet Weight
Seq Number:	3040881				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.12.18 22.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.12.18 22.58	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	02.12.18 22.58	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.12.18 22.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	02.12.18 22.58	
o-Terphenyl	84-15-1	89	%	70-135	02.12.18 22.58	

Certificate of Analytical Results 575585

LT Environmental, Inc., Arvada, CO

JRU 85 at JRU 17 Battery/ 30-015-35322

Sample Id:	**SS3**	Matrix:	Soil	Date Received:	02.07.18 08.00
Lab Sample Id:	575585-003	Date Collected:	02.06.18 12.30	Sample Depth:	6"
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.12.18 08.00	Basis:	Wet Weight
Seq Number:	3040874				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.12.18 11.14	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.12.18 11.14	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.12.18 11.14	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.12.18 11.14	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.12.18 11.14	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.12.18 11.14	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.12.18 11.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	86	%	80-120	02.12.18 11.14	
4-Bromofluorobenzene	460-00-4	110	%	80-120	02.12.18 11.14	

Certificate of Analytical Results 575585

LT Environmental, Inc., Arvada, CO

JRU 85 at JRU 17 Battery/ 30-015-35322

Sample Id:	**SS4**	Matrix:	Soil	Date Received:	02.07.18 08.00
Lab Sample Id:	575585-004	Date Collected:	02.06.18 12.32	Sample Depth:	6"

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.14.18 15.00	Basis:	Wet Weight
Seq Number:	3041126				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	02.14.18 19.20	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.12.18 16.00	Basis:	Wet Weight
Seq Number:	3040881				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.12.18 23.18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.12.18 23.18	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	02.12.18 23.18	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.12.18 23.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	02.12.18 23.18	
o-Terphenyl	84-15-1	99	%	70-135	02.12.18 23.18	

Certificate of Analytical Results 575585

LT Environmental, Inc., Arvada, CO

JRU 85 at JRU 17 Battery/ 30-015-35322

Sample Id:	**SS4**	Matrix:	Soil	Date Received:	02.07.18 08.00
Lab Sample Id:	575585-004	Date Collected:	02.06.18 12.32	Sample Depth:	6"
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.12.18 08.00	Basis:	Wet Weight
Seq Number:	3040874				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	02.12.18 11.33	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	02.12.18 11.33	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.12.18 11.33	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	02.12.18 11.33	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.12.18 11.33	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	02.12.18 11.33	U	1
Total BTEX		<0.00202	0.00202	mg/kg	02.12.18 11.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	85	%	80-120	02.12.18 11.33	
4-Bromofluorobenzene	460-00-4	113	%	80-120	02.12.18 11.33	

Certificate of Analytical Results 575585

LT Environmental, Inc., Arvada, CO

JRU 85 at JRU 17 Battery/ 30-015-35322

Sample Id:	**SS5**	Matrix:	Soil	Date Received:	02.07.18 08.00
Lab Sample Id:	575585-005	Date Collected:	02.06.18 12.34	Sample Depth:	6"

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.14.18 15.00	Basis:	Wet Weight
Seq Number:	3041126				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9.10**	4.91	mg/kg	02.14.18 19.26		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.12.18 16.00	Basis:	Wet Weight
Seq Number:	3040881				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.12.18 23.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.12.18 23.39	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	02.12.18 23.39	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.12.18 23.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	02.12.18 23.39	
o-Terphenyl	84-15-1	95	%	70-135	02.12.18 23.39	

Certificate of Analytical Results 575585

LT Environmental, Inc., Arvada, CO

JRU 85 at JRU 17 Battery/ 30-015-35322

Sample Id:	**SS5**	Matrix:	Soil	Date Received:	02.07.18 08.00
Lab Sample Id:	575585-005	Date Collected:	02.06.18 12.34	Sample Depth:	6"
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.12.18 08.00	Basis:	Wet Weight
Seq Number:	3040874				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.12.18 11.52	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.12.18 11.52	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.12.18 11.52	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.12.18 11.52	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.12.18 11.52	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.12.18 11.52	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.12.18 11.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	81	%	80-120	02.12.18 11.52	
4-Bromofluorobenzene	460-00-4	102	%	80-120	02.12.18 11.52	

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

+ NELAC certification not offered for this compound.

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

QC Summary 575585

LT Environmental, Inc.

JRU 85 at JRU 17 Battery/ 30-015-35322

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3041037 — Matrix: Solid — Date Prep: 02.14.18
MB Sample Id: 7639085-1-BLK — LCS Sample Id: 7639085-1-BKS — LCSD Sample Id: 7639085-1-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	273	109	273	109	90-110	0	20	mg/kg	02.14.18 12:44	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3041126 — Matrix: Solid — Date Prep: 02.14.18
MB Sample Id: 7639163-1-BLK — LCS Sample Id: 7639163-1-BKS — LCSD Sample Id: 7639163-1-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	272	109	273	109	90-110	0	20	mg/kg	02.14.18 18:50	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3041037 — Matrix: Soil — Date Prep: 02.14.18
Parent Sample Id: 575583-005 — MS Sample Id: 575583-005 S — MSD Sample Id: 575583-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.90	245	288	118	293	120	90-110	2	20	mg/kg	02.14.18 15:09	X

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3041037 — Matrix: Soil — Date Prep: 02.14.18
Parent Sample Id: 576310-003 — MS Sample Id: 576310-003 S — MSD Sample Id: 576310-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	846	250	1110	106	1090	98	90-110	2	20	mg/kg	02.14.18 13:02	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3041126 — Matrix: Soil — Date Prep: 02.14.18
Parent Sample Id: 575585-003 — MS Sample Id: 575585-003 S — MSD Sample Id: 575585-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.90	245	279	114	285	116	90-110	2	20	mg/kg	02.14.18 19:08	X

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

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]

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

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

Final 1.000

QC Summary 575585

LT Environmental, Inc.

JRU 85 at JRU 17 Battery/ 30-015-35322

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3041126 Matrix: Soil Date Prep: 02.14.18
Parent Sample Id: 575587-002 MS Sample Id: 575587-002 S MSD Sample Id: 575587-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	451	250	683	93	700	100	90-110	2	20	mg/kg	02.14.18 20:31	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3040881 Matrix: Solid Date Prep: 02.12.18
MB Sample Id: 7639020-1-BLK LCS Sample Id: 7639020-1-BKS LCSD Sample Id: 7639020-1-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	877	88	923	92	70-135	5	35	mg/kg	02.12.18 20:57	
Diesel Range Organics (DRO)	<15.0	1000	941	94	1040	104	70-135	10	35	mg/kg	02.12.18 20:57	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	83		102		119		70-135	%	02.12.18 20:57
o-Terphenyl	86		98		109		70-135	%	02.12.18 20:57

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3040881 Matrix: Soil Date Prep: 02.12.18
Parent Sample Id: 575585-001 MS Sample Id: 575585-001 S MSD Sample Id: 575585-001 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	1000	929	93	900	90	70-135	3	35	mg/kg	02.12.18 21:56	
Diesel Range Organics (DRO)	<15.0	1000	1040	104	1010	101	70-135	3	35	mg/kg	02.12.18 21:56	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		112		70-135	%	02.12.18 21:56
o-Terphenyl	108		103		70-135	%	02.12.18 21:56

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
E = MSD/LCSD Result

QC Summary 575585

LT Environmental, Inc.

JRU 85 at JRU 17 Battery/ 30-015-35322

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

Seq Number: 3040874 Matrix: Solid Date Prep: 02.12.18

MB Sample Id: 7639015-1-BLK LCS Sample Id: 7639015-1-BKS LCSD Sample Id: 7639015-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.0928	93	0.0935	94	70-130	1	35	mg/kg	02.12.18 08:15	
Toluene	<0.00199	0.0994	0.0974	98	0.0987	99	70-130	1	35	mg/kg	02.12.18 08:15	
Ethylbenzene	<0.00199	0.0994	0.108	109	0.110	110	71-129	2	35	mg/kg	02.12.18 08:15	
m,p-Xylenes	<0.00398	0.199	0.213	107	0.217	109	70-135	2	35	mg/kg	02.12.18 08:15	
o-Xylene	<0.00199	0.0994	0.105	106	0.106	106	71-133	1	35	mg/kg	02.12.18 08:15	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	83		89		85		80-120	%	02.12.18 08:15
4-Bromofluorobenzene	98		115		120		80-120	%	02.12.18 08:15

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

Seq Number: 3040874 Matrix: Soil Date Prep: 02.12.18

Parent Sample Id: 575585-001 MS Sample Id: 575585-001 S MSD Sample Id: 575585-001 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	0.0837	84	0.0842	84	70-130	1	35	mg/kg	02.12.18 09:00	
Toluene	<0.00200	0.0998	0.0878	88	0.0898	90	70-130	2	35	mg/kg	02.12.18 09:00	
Ethylbenzene	<0.00200	0.0998	0.0959	96	0.0976	98	71-129	2	35	mg/kg	02.12.18 09:00	
m,p-Xylenes	<0.00399	0.200	0.190	95	0.192	96	70-135	1	35	mg/kg	02.12.18 09:00	
o-Xylene	<0.00200	0.0998	0.0920	92	0.0960	96	71-133	4	35	mg/kg	02.12.18 09:00	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	86		85		80-120	%	02.12.18 09:00
4-Bromofluorobenzene	116		115		80-120	%	02.12.18 09:00

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

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]

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

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

XENCO LABORATORIES
Setting the Standard since 1990

CHAIN OF CUSTODY

Page 1 Of 1

Revision 2016.1

Stafford, TX (281) 240-4200 | El Paso, TX (915) 585-3443 | Midland, TX (432) 704-5440 | Phoenix, AZ (480) 355-0900 | Service Center- Amarillo, TX (806)678-4514
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Xenco Quote #: | Xenco Job #: 575585

Client / Reporting Information

Company Name / Branch: LT Environmental Permian
Company Address: 3300 N. A Street Bldg 1 Suite 103
Email: Abaker@LTenv.com Phone No: 432-704-5178
Project Contact: Adrian Baker
Samplers's Name: Aaron Williamson

Project Information

Project Name/Number: JRU B5 at JRU 17 Battery / 30-015-35322
Project Location: NM
Invoice To: XTO Energy - Kyle Littrell
PO Number: 30 015 35322

Analytical Information: Btex Method 8021; TPH Method 8015; Chloride Method 300.1

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	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Btex Method 8021	TPH Method 8015	Chloride Method 300.1	Field Comments
1	551	6"	2/6/18	12:26	S	1									X	X	X	
2	552	↓	↓	12:28	↓	↓									X	X	X	
3	553			12:30											X	X	X	
4	554			12:32											X	X	X	
5	555			12:34											X	X	X	
6																		
7																		
8																		
9																		
10	NFE ARV																	

Turnaround Time (Business days)
- [ ] Same Day TAT
- [ ] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

Standard tat

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

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

Notes:
Temp: 4 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 3.8
FE.

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

Relinquished by	Date Time	Received By	Relinquished By	Date Time	Received By
1 Relinquished by Sampler: [signature]	2/6/18 17:45	1 [signature]	2 [signature]	2/7/18 8:00 Am	2 [signature]
3 Relinquished by:	Date Time:	3 Received By:	4 Relinquished By:	Date Time:	4 Received By:
5 Relinquished by:	Date Time:	5 Received By:	Custody Seal #	Preserved where applicable	On Ice: ☒ Cooler Temp. Thermo. Corr. Factor

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the Client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of $75 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: 02/07/2018 08:00:00 AM

Work Order #: 575585

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3.8
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Connie Hernandez Date: 02/07/2018

Checklist reviewed by: Jessica Kramer Date: 02/07/2018

Jessica Kramer

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

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

COMMENTS

Action 199097

COMMENTS

Operator: BOPCO, L.P. 6401 Holiday Hill Rd Midland, TX 79707	OGRID: 260737
	Action Number: 199097
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

COMMENTS

Created By	Comment	Comment Date
amaxwell	Historical document upload.	3/21/2023

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Created By	Condition	Condition Date
amaxwell	None	3/21/2023