



LT Environmental, Inc.

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

April 6, 2018

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

**RE: Closure Request
Hasta La Vista 1 DI Federal COM 001H
Remediation Permit Number 2RP-3725
Eddy County, New Mexico**

Dear Mr. Bratcher;

LT Environmental, Inc. (LTE), representing XTO Energy, Inc. (XTO), is pleased to present to the New Mexico Oil Conservation Division (NMOCD) the following letter report detailing confirmation soil sampling activities at the Hasta La Vista 1 DI Federal COM 001H (Site) in Section 5 of Township 20 South, Range 31 East, in Eddy County, New Mexico (Figure 1). The purpose of the investigation was to assess impacts to soil after the flare scrubber was loaded and caused fluid to exit the flare. This resulted in a release of approximately 9 barrels (bbls) of crude oil that was discovered on May 26, 2016. The spill impacted approximately 34,600 square feet of a pasture to the east of the flare due to high winds. No free-standing liquids were recovered and vegetation and soil in the pasture was treated with Micro-Blaze® the morning of May 27, 2016. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 on June 7, 2016, and was assigned Remediation Permit Number (RP) 2RP-3725 (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 confirm remediation had been conducted successfully. 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 02095, located approximately 1.13 miles northeast of the Site, with a depth to groundwater of 140 feet bgs and a total depth of 220 feet bgs. The closest surface water to the Site is an arroyo located approximately 670 feet to the south of the Site. Based on these criteria, the NMOCD site ranking for remediation action levels is a 10, 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 1,000 mg/kg total petroleum hydrocarbons (TPH). Based on standard practice for this region, LTE proposes a site-specific chloride action level of 600 mg/kg or within a range (plus or minus 10 percent [%]) of the background concentrations.



Bratcher, M
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SOIL SAMPLING

Soil sample locations were selected based on visual inspection of the Site and Form C-141 information. Based on the latitude and longitude provided for the flow line release location and description of the affected area, LTE determined the release occurred in an area north of the well pad. LTE collected six soil samples on February 27, 2018 as depicted on Figure 2. No visual or olfactory evidence of the release was observed. LTE made an effort to collect representative samples around the reported release source and at any potential downgradient surface areas as identified by topographic slope and/or evidence of surface flow features (channels, depressions, or other erosional features).

To eliminate the effects from weathering and natural degradation of contaminants at the ground surface, subsurface samples were collected from each location at roughly six inches 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 3.4 degrees Celsius (°C) under strict chain-of-custody to Xenco Laboratories in Midland, Texas, for analysis of BTEX by United States Environmental Protection Agency (USEPA) Method 8021B, TPH-gasoline range organics (GRO), TPH-diesel range organics (DRO), and motor oil range organics (MRO) by USEPA Method 8015, and chloride by method USEPA Method 300.0.

ANALYTICAL RESULTS

Laboratory analytical results for all six soil samples indicated BTEX concentrations were below laboratory detection limits. Laboratory analytical results for TPH indicated no detected concentrations exceeded the NMOCD remediation action levels for the Site with values ranging from below the detection limit (SS1, SS2, SS3, SS4, and SS05) to 941 mg/kg in sample SS6. Chloride concentrations in all soil samples were below the detection limit. Laboratory analytical results are presented in Table 1 and Figure 2, and the complete laboratory analytical report is included as Attachment 2.

CONCLUSIONS

Laboratory analytical results for soil samples collected within the former release footprint indicate impact to soil, as defined by concentrations of BTEX, TPH, and chloride, do not exceed NMOCD site-specific standards. Initial response efforts and natural degradation have remediated this Site, and XTO requests no further action for this release.





Bratcher, M
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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.

A handwritten signature in blue ink that reads "Adrian Baker".

Adrian Baker
Project Geologist

A handwritten signature in blue ink that reads "Ashley L. Ager".

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

Attachments:

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

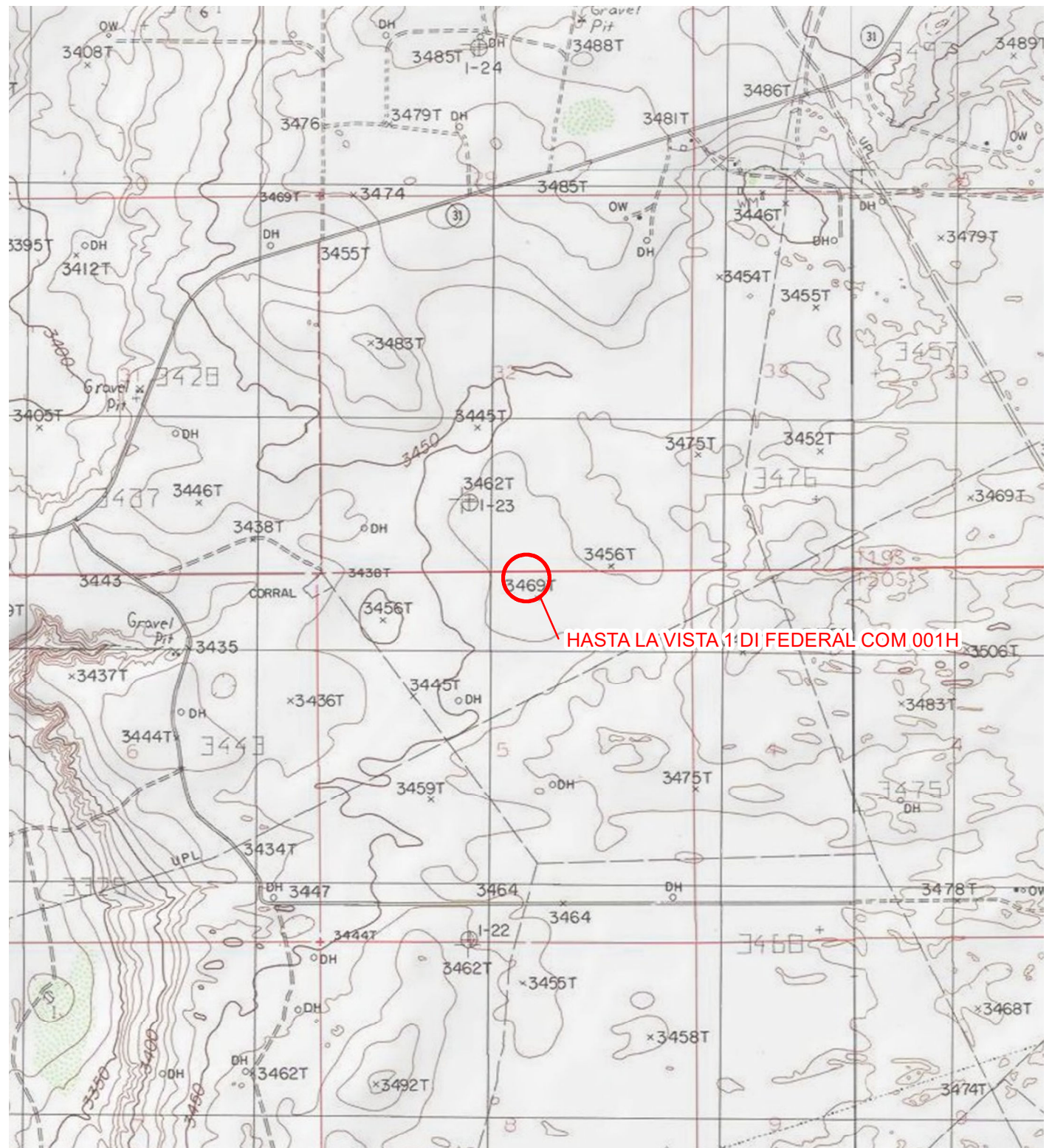
cc: Kyle Littrell, XTO
Crystal Weaver, NMOCD
Jim Amos, BLM
Shelly Tucker, BLM



FIGURES



Advancing Opportunity

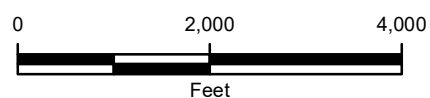


HASTA LA VISTA 1 DI FEDERAL COM 001H

LEGEND

 SITE LOCATION

IMAGE COURTESY OF ESRI/USGS

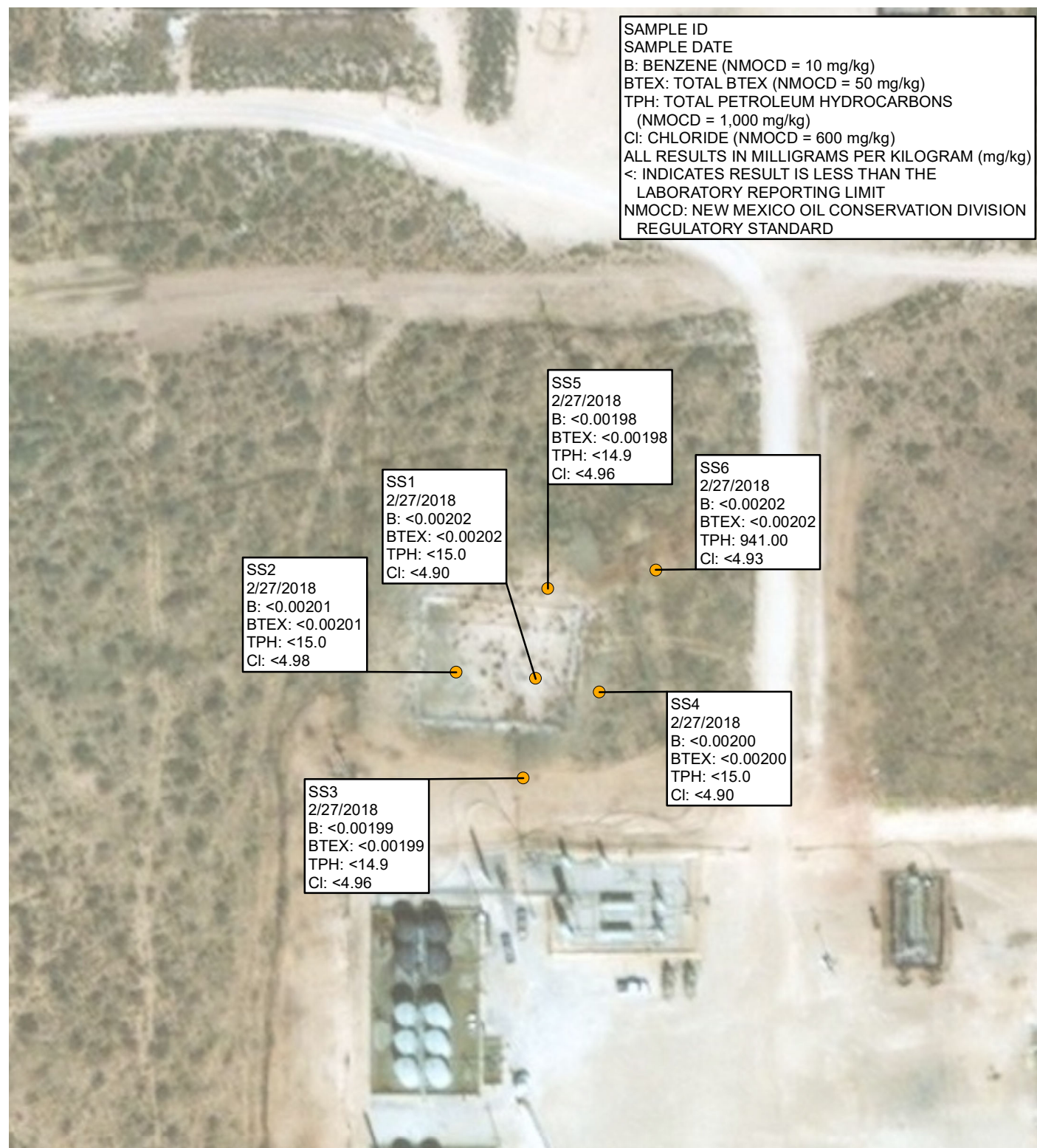


NEW MEXICO

NOTE: REMEDIATION PERMIT
NUMBER 2RP-3725

FIGURE 1
SITE LOCATION MAP
HASTA LA VISTA 1 DI FEDERAL COM 001H
LOT 2 SEC 5 T20S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY INC.



**LEGEND**

● SOIL SAMPLE

0 100 200
 Feet



FIGURE 2
SITE SAMPLE LOCATIONS
 HASTA LA VISTA 1 DI FEDERAL COM 001H
 LOT 2 SEC 5 T20S R31E
 EDDY COUNTY, NEW MEXICO
XTO ENERGY INC.



NOTE: REMEDIATION PERMIT NUMBER 2RP-3725

P:\XTO Energy\GIS\MXD\012918076_HASTA LA VISTA D1 FED COM 001H\012918076_FIG02_SITE_2018.mxd

TABLE



Advancing Opportunity

TABLE 1
SOIL ANALYTICAL RESULTS
HASTA LA VISTA 1 DI FEDERAL COM 001H
REMEDIATION PERMIT NUMBER 2RP-3725
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)
SS1	1	2/27/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<4.90
SS2	1	2/27/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<4.98
SS3	1	2/27/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<4.96
SS4	1	2/27/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<4.90
SS5	1	2/27/2018	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<14.9	<14.9	<14.9	<14.9	<4.96
SS6	1	2/27/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	873	68	941.00	<4.93
NMOCD Regulatory Standard		NE	10	NE	NE	NE	50	NE	NE	NE	1,000	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

ARTESIA DISTRICT

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

JUN 07 2016

Form C-141
Revised August 8, 2011

Submitted to appropriate District Office in
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

NAB1416126496 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: Hasta La Vista 1 DI Federal Com 001H	Facility Type: Exploration and Production
Surface Owner: Federal	Mineral Owner: Federal
API No. 30-015-42533	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	5	20S	31E	100	North	2330	East	Eddy

Latitude 32.609315° Longitude -103.890512°

NATURE OF RELEASE

Type of Release	Crude Oil	Volume of Release	9 bbls	Volume Recovered	0 bbls
Source of Release	Flare	Date and Hour of Occurrence	5/26/2016 time unknown	Date and Hour of Discovery	5/26/2016 10:15 am
Was Immediate Notice Given?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required				
By Whom?	N/A	If YES, To Whom?	N/A		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
Date and Hour		N/A			
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.*
Flare scrubber loaded up causing fluid to exit flare.

Describe Area Affected and Cleanup Action Taken.*
Leak affected 34,600 sq. ft. of pasture to the east of the flare due to high winds. Area was washed down with microblaze on morning of 5/27/2016.

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: <u>Amy C. Ruth</u>	OIL CONSERVATION DIVISION	
Printed Name: Amy C. Ruth	Signed By: <u>[Signature]</u> Approved by Environmental Specialist:	
Title: EHS Remediation Specialist	Approval Date: <u>6/8/16</u>	Expiration Date: <u>N/A</u>
E-mail Address: ACRuth@basspet.com	Conditions of Approval: Remediation per O.C.D. Rules & Guidelines <input type="checkbox"/> Attached <input type="checkbox"/>	
Date: 6/7/2016 Phone: 432-661-0571	SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 7/9/16 <u>2RP-3725</u>	

* 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, N.M. 88220	Telephone No. 432-221-7331
Facility Name Hasta La Vista 1 DI Federal Com 001H	Facility Type Exploration and Production

Surface Owner Federal	Mineral Owner Federal	API No. 30-015-42533
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LOCATION OF RELEASE

Unit Letter B	Section 5	Township 20S	Range 31E	Feet from the 100	North/South Line South	Feet from the 2330	East/West Line East	County Eddy
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Latitude _____ N 32.609315 _____ Longitude _____ 103.890512 _____ NAD83

NATURE OF RELEASE

Type of Release Crude Oil	Volume of Release 9 bbls	Volume Recovered 0 bbls
Source of Release Flare	Date and Hour of Occurrence 5/26/16 time unknown	Date and Hour of Discovery 5/26/2016 10:15AM
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom? N/A	
By Whom? N/A	Date and Hour N/A	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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.*
Flare scrubber loaded up causing fluid to exit flare.

Describe Area Affected and Cleanup Action Taken.*
Leak affected 34,600 sq. ft. of pasture to the east of the flare due to high winds. Area was washed down with microblaze on morning of 5/27/2016.

LTE collected six soil samples from the affected area on February 27, 2018.
Laboratory analytical results from soil samples collected within the release footprint indicate concentrations of BTEX, TPH, and chloride do not exceed NMOCD remediation standards.

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 <input type="checkbox"/>
Date: 4/6/2018 Phone: 432-221-7331		

* Attach Additional Sheets If Necessary

ATTACHMENT 2
LABORATORY ANALYTICAL REPORT



Advancing Opportunity

Analytical Report 577913

for
LT Environmental, Inc.

Project Manager: Adrian Baker

Hasta la vista 001H/ 2RP-3725

09-MAR-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)



09-MAR-18

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

Reference: XENCO Report No(s): **577913**
Hasta la vista 001H/ 2RP-3725
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) 577913. 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. 577913 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,

A handwritten signature in black ink that reads 'Jessica Kramer'.

Jessica Kramer
Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

**Sample Cross Reference 577913****LT Environmental, Inc., Arvada, CO**

Hasta la vista 001H/ 2RP-3725

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS1	S	02-27-18 09:55	12 In	577913-001
SS2	S	02-27-18 10:10	12 In	577913-002
SS3	S	02-27-18 10:20	12 In	577913-003
SS4	S	02-27-18 10:35	12 In	577913-004
SS5	S	02-27-18 10:45	12 In	577913-005
SS6	S	02-27-18 10:55	12 In	577913-006



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Hasta la vista 001H/ 2RP-3725

Project ID:

Work Order Number(s): 577913

Report Date: 09-MAR-18

Date Received: 03/01/2018

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3042981 BTEX by EPA 8021B

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



Certificate of Analysis Summary 577913

LT Environmental, Inc., Arvada, CO

Project Name: Hasta la vista 001H/ 2RP-3725



Project Id:

Contact: Adrian Baker

Project Location: NM

Date Received in Lab: Thu Mar-01-18 01:10 pm

Report Date: 09-MAR-18

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	577913-001	577913-002	577913-003	577913-004	577913-005	577913-006
	<i>Field Id:</i>	SS1	SS2	SS3	SS4	SS5	SS6
	<i>Depth:</i>	12- In	12- In	12- In	12- In	12- In	12- In
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Feb-27-18 09:55	Feb-27-18 10:10	Feb-27-18 10:20	Feb-27-18 10:35	Feb-27-18 10:45	Feb-27-18 10:55
BTEX by EPA 8021B	<i>Extracted:</i>	Mar-06-18 15:00	Mar-06-18 15:00	Mar-06-18 15:00	Mar-06-18 15:00	Mar-06-18 15:00	Mar-06-18 15:00
	<i>Analyzed:</i>	Mar-07-18 14:39	Mar-07-18 14:39	Mar-07-18 14:39	Mar-07-18 14:39	Mar-07-18 14:39	Mar-07-18 14:39
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00202 0.00202	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00198 0.00198	<0.00202 0.00202
Toluene		<0.00202 0.00202	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00198 0.00198	<0.00202 0.00202
Ethylbenzene		<0.00202 0.00202	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00198 0.00198	<0.00202 0.00202
m,p-Xylenes		<0.00404 0.00404	<0.00402 0.00402	<0.00398 0.00398	<0.00399 0.00399	<0.00396 0.00396	<0.00403 0.00403
o-Xylene		<0.00202 0.00202	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00198 0.00198	<0.00202 0.00202
Total Xylenes		<0.00202 0.00202	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00198 0.00198	<0.00202 0.00202
Total BTEX		<0.00202 0.00202	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00198 0.00198	<0.00202 0.00202
Inorganic Anions by EPA 300	<i>Extracted:</i>	Mar-07-18 13:00	Mar-07-18 13:00	Mar-07-18 13:00	Mar-07-18 13:00	Mar-07-18 13:00	Mar-07-18 13:00
	<i>Analyzed:</i>	Mar-08-18 23:28	Mar-08-18 23:43	Mar-08-18 23:49	Mar-08-18 23:54	Mar-08-18 23:59	Mar-09-18 00:05
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		<4.90 4.90	<4.98 4.98	<4.96 4.96	<4.90 4.90	<4.96 4.96	<4.93 4.93
TPH by SW8015 Mod	<i>Extracted:</i>	Mar-05-18 07:00	Mar-05-18 07:00	Mar-05-18 07:00	Mar-05-18 07:00	Mar-05-18 07:00	Mar-05-18 07:00
	<i>Analyzed:</i>	Mar-05-18 12:06	Mar-05-18 12:32	Mar-05-18 12:58	Mar-05-18 13:23	Mar-05-18 13:48	Mar-05-18 14:16
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	<14.9 14.9	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	<14.9 14.9	873 15.0
Oil Range Hydrocarbons (ORO)		<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	<14.9 14.9	68.0 15.0
Total TPH		<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	<14.9 14.9	941 15.0

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

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

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 577913



LT Environmental, Inc., Arvada, CO

Hasta la vista 001H/ 2RP-3725

Sample Id: **SS1**
Lab Sample Id: 577913-001

Matrix: Soil
Date Collected: 02.27.18 09.55

Date Received: 03.01.18 13.10
Sample Depth: 12 In

Analytical Method: Inorganic Anions by EPA 300

Tech: OJS

Analyst: OJS

Seq Number: 3043195

Date Prep: 03.07.18 13.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.90	4.90	mg/kg	03.08.18 23.28	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3042902

Date Prep: 03.05.18 07.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.05.18 12.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.05.18 12.06	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	03.05.18 12.06	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.05.18 12.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	03.05.18 12.06	
o-Terphenyl	84-15-1	96	%	70-135	03.05.18 12.06	



Certificate of Analytical Results 577913



LT Environmental, Inc., Arvada, CO

Hasta la vista 001H/ 2RP-3725

Sample Id: **SS1**
Lab Sample Id: 577913-001

Matrix: Soil
Date Collected: 02.27.18 09.55

Date Received: 03.01.18 13.10
Sample Depth: 12 In

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3042981

Date Prep: 03.06.18 15.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.07.18 14.39	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	03.07.18 14.39	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	03.07.18 14.39	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	03.07.18 14.39	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.07.18 14.39	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	03.07.18 14.39	U	1
Total BTEX		<0.00202	0.00202	mg/kg	03.07.18 14.39	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	109	%	70-130	03.07.18 14.39		
1,4-Difluorobenzene	540-36-3	77	%	70-130	03.07.18 14.39		



Certificate of Analytical Results 577913



LT Environmental, Inc., Arvada, CO

Hasta la vista 001H/ 2RP-3725

Sample Id: **SS2**
Lab Sample Id: 577913-002

Matrix: Soil
Date Collected: 02.27.18 10.10

Date Received: 03.01.18 13.10
Sample Depth: 12 In

Analytical Method: Inorganic Anions by EPA 300

Tech: OJS

Analyst: OJS

Seq Number: 3043195

Date Prep: 03.07.18 13.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	03.08.18 23.43	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3042902

Date Prep: 03.05.18 07.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.05.18 12.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.05.18 12.32	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	03.05.18 12.32	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.05.18 12.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	03.05.18 12.32	
o-Terphenyl	84-15-1	104	%	70-135	03.05.18 12.32	



Certificate of Analytical Results 577913



LT Environmental, Inc., Arvada, CO

Hasta la vista 001H/ 2RP-3725

Sample Id: **SS2**
Lab Sample Id: 577913-002

Matrix: Soil
Date Collected: 02.27.18 10.10

Date Received: 03.01.18 13.10
Sample Depth: 12 In

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3042981

Date Prep: 03.06.18 15.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.07.18 14.39	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.07.18 14.39	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.07.18 14.39	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.07.18 14.39	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.07.18 14.39	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.07.18 14.39	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.07.18 14.39	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	112	%	70-130	03.07.18 14.39		
1,4-Difluorobenzene	540-36-3	81	%	70-130	03.07.18 14.39		



Certificate of Analytical Results 577913



LT Environmental, Inc., Arvada, CO

Hasta la vista 001H/ 2RP-3725

Sample Id: SS3
Lab Sample Id: 577913-003

Matrix: Soil
Date Collected: 02.27.18 10.20

Date Received: 03.01.18 13.10
Sample Depth: 12 In

Analytical Method: Inorganic Anions by EPA 300

Tech: OJS

Analyst: OJS

Seq Number: 3043195

Date Prep: 03.07.18 13.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	03.08.18 23.49	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3042902

Date Prep: 03.05.18 07.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	03.05.18 12.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	03.05.18 12.58	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	03.05.18 12.58	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	03.05.18 12.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	03.05.18 12.58	
o-Terphenyl	84-15-1	110	%	70-135	03.05.18 12.58	



Certificate of Analytical Results 577913



LT Environmental, Inc., Arvada, CO

Hasta la vista 001H/ 2RP-3725

Sample Id: SS3
Lab Sample Id: 577913-003

Matrix: Soil
Date Collected: 02.27.18 10.20

Date Received: 03.01.18 13.10
Sample Depth: 12 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 03.06.18 15.00

Basis: Wet Weight

Seq Number: 3042981

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.07.18 14.39	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.07.18 14.39	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.07.18 14.39	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.07.18 14.39	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.07.18 14.39	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.07.18 14.39	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.07.18 14.39	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	109	%	70-130	03.07.18 14.39		
1,4-Difluorobenzene	540-36-3	83	%	70-130	03.07.18 14.39		



Certificate of Analytical Results 577913



LT Environmental, Inc., Arvada, CO

Hasta la vista 001H/ 2RP-3725

Sample Id: **SS4**
Lab Sample Id: 577913-004

Matrix: Soil
Date Collected: 02.27.18 10.35

Date Received: 03.01.18 13.10
Sample Depth: 12 In

Analytical Method: Inorganic Anions by EPA 300

Tech: OJS

Analyst: OJS

Seq Number: 3043195

Date Prep: 03.07.18 13.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.90	4.90	mg/kg	03.08.18 23.54	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3042902

Date Prep: 03.05.18 07.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.05.18 13.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.05.18 13.23	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	03.05.18 13.23	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.05.18 13.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	03.05.18 13.23	
o-Terphenyl	84-15-1	108	%	70-135	03.05.18 13.23	



Certificate of Analytical Results 577913



LT Environmental, Inc., Arvada, CO

Hasta la vista 001H/ 2RP-3725

Sample Id: **SS4**
Lab Sample Id: 577913-004

Matrix: Soil
Date Collected: 02.27.18 10.35

Date Received: 03.01.18 13.10
Sample Depth: 12 In

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3042981

Date Prep: 03.06.18 15.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.07.18 14.39	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.07.18 14.39	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.07.18 14.39	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.07.18 14.39	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.07.18 14.39	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.07.18 14.39	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.07.18 14.39	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	107	%	70-130	03.07.18 14.39		
1,4-Difluorobenzene	540-36-3	80	%	70-130	03.07.18 14.39		



Certificate of Analytical Results 577913



LT Environmental, Inc., Arvada, CO

Hasta la vista 001H/ 2RP-3725

Sample Id: SS5
Lab Sample Id: 577913-005

Matrix: Soil
Date Collected: 02.27.18 10.45

Date Received: 03.01.18 13.10
Sample Depth: 12 In

Analytical Method: Inorganic Anions by EPA 300

Tech: OJS

Analyst: OJS

Seq Number: 3043195

Date Prep: 03.07.18 13.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	03.08.18 23.59	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3042902

Date Prep: 03.05.18 07.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	03.05.18 13.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	03.05.18 13.48	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	03.05.18 13.48	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	03.05.18 13.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	03.05.18 13.48	
o-Terphenyl	84-15-1	99	%	70-135	03.05.18 13.48	



Certificate of Analytical Results 577913



LT Environmental, Inc., Arvada, CO

Hasta la vista 001H/ 2RP-3725

Sample Id: SS5
Lab Sample Id: 577913-005

Matrix: Soil
Date Collected: 02.27.18 10.45

Date Received: 03.01.18 13.10
Sample Depth: 12 In

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3042981

Date Prep: 03.06.18 15.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	03.07.18 14.39	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	03.07.18 14.39	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	03.07.18 14.39	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	03.07.18 14.39	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	03.07.18 14.39	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	03.07.18 14.39	U	1
Total BTEX		<0.00198	0.00198	mg/kg	03.07.18 14.39	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	77	%	70-130	03.07.18 14.39		
4-Bromofluorobenzene	460-00-4	107	%	70-130	03.07.18 14.39		



Certificate of Analytical Results 577913



LT Environmental, Inc., Arvada, CO

Hasta la vista 001H/ 2RP-3725

Sample Id: SS6
Lab Sample Id: 577913-006

Matrix: Soil
Date Collected: 02.27.18 10.55

Date Received: 03.01.18 13.10
Sample Depth: 12 In

Analytical Method: Inorganic Anions by EPA 300

Tech: OJS

Analyst: OJS

Seq Number: 3043195

Date Prep: 03.07.18 13.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.93	4.93	mg/kg	03.09.18 00.05	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3042902

Date Prep: 03.05.18 07.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.05.18 14.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	873	15.0	mg/kg	03.05.18 14.16		1
Oil Range Hydrocarbons (ORO)	PHCG2835	68.0	15.0	mg/kg	03.05.18 14.16		1
Total TPH	PHC635	941	15.0	mg/kg	03.05.18 14.16		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	03.05.18 14.16	
o-Terphenyl	84-15-1	104	%	70-135	03.05.18 14.16	



Certificate of Analytical Results 577913



LT Environmental, Inc., Arvada, CO

Hasta la vista 001H/ 2RP-3725

Sample Id: **SS6**
Lab Sample Id: 577913-006

Matrix: Soil
Date Collected: 02.27.18 10.55

Date Received: 03.01.18 13.10
Sample Depth: 12 In

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3042981

Date Prep: 03.06.18 15.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.07.18 14.39	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	03.07.18 14.39	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	03.07.18 14.39	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	03.07.18 14.39	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.07.18 14.39	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	03.07.18 14.39	U	1
Total BTEX		<0.00202	0.00202	mg/kg	03.07.18 14.39	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	103	%	70-130	03.07.18 14.39		
1,4-Difluorobenzene	540-36-3	74	%	70-130	03.07.18 14.39		



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 **SQL** 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



LT Environmental, Inc.

Hasta la vista 001H/ 2RP-3725

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3043195

MB Sample Id: 7640425-1-BLK

Matrix: Solid

LCS Sample Id: 7640425-1-BKS

Prep Method: E300P

Date Prep: 03.07.18

LCSD Sample Id: 7640425-1-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	275	110	275	110	90-110	0	20	mg/kg	03.08.18 21:52	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3043195

Parent Sample Id: 577911-001

Matrix: Soil

MS Sample Id: 577911-001 S

Prep Method: E300P

Date Prep: 03.07.18

MSD Sample Id: 577911-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	199	246	470	110	478	113	90-110	2	20	mg/kg	03.08.18 22:19	X

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3043195

Parent Sample Id: 577913-001

Matrix: Soil

MS Sample Id: 577913-001 S

Prep Method: E300P

Date Prep: 03.07.18

MSD Sample Id: 577913-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.90	245	263	107	260	106	90-110	1	20	mg/kg	03.08.18 23:33	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3042902

MB Sample Id: 7640248-1-BLK

Matrix: Solid

LCS Sample Id: 7640248-1-BKS

Prep Method: TX1005P

Date Prep: 03.05.18

LCSD Sample Id: 7640248-1-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	1030	103	1030	103	70-135	0	35	mg/kg	03.05.18 09:05	
Diesel Range Organics (DRO)	<15.0	1000	1060	106	1050	105	70-135	1	35	mg/kg	03.05.18 09:05	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		121		115		70-135	%	03.05.18 09:05
o-Terphenyl	100		122		113		70-135	%	03.05.18 09:05

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



LT Environmental, Inc.

Hasta la vista 001H/ 2RP-3725

Analytical Method: TPH by SW8015 Mod

Seq Number: 3042902

Parent Sample Id: 577773-011

Matrix: Soil

MS Sample Id: 577773-011 S

Prep Method: TX1005P

Date Prep: 03.05.18

MSD Sample Id: 577773-011 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	1010	101	1040	104	70-135	3	35	mg/kg	03.05.18 10:22	
Diesel Range Organics (DRO)	<15.0	999	1060	106	1100	110	70-135	4	35	mg/kg	03.05.18 10:22	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		118		70-135	%	03.05.18 10:22
o-Terphenyl	107		111		70-135	%	03.05.18 10:22

Analytical Method: BTEX by EPA 8021B

Seq Number: 3042981

MB Sample Id: 7640285-1-BLK

Matrix: Solid

LCS Sample Id: 7640285-1-BKS

Prep Method: SW5030B

Date Prep: 03.06.18

LCSD Sample Id: 7640285-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0849	85	0.0857	85	70-130	1	35	mg/kg	03.07.18 14:39	
Toluene	<0.00201	0.100	0.0850	85	0.0856	85	70-130	1	35	mg/kg	03.07.18 14:39	
Ethylbenzene	<0.00201	0.100	0.0875	88	0.0886	88	70-130	1	35	mg/kg	03.07.18 14:39	
m,p-Xylenes	<0.00402	0.201	0.171	85	0.173	86	70-130	1	35	mg/kg	03.07.18 14:39	
o-Xylene	<0.00201	0.100	0.0866	87	0.0876	87	70-130	1	35	mg/kg	03.07.18 14:39	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	81		85		91		70-130	%	03.07.18 14:39
4-Bromofluorobenzene	108		109		113		70-130	%	03.07.18 14:39

Analytical Method: BTEX by EPA 8021B

Seq Number: 3042981

Parent Sample Id: 577912-004

Matrix: Soil

MS Sample Id: 577912-004 S

Prep Method: SW5030B

Date Prep: 03.06.18

MSD Sample Id: 577912-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0612	61	0.0529	52	70-130	15	35	mg/kg	03.07.18 14:39	X
Toluene	<0.00202	0.101	0.0490	49	0.0402	40	70-130	20	35	mg/kg	03.07.18 14:39	X
Ethylbenzene	<0.00202	0.101	0.0494	49	0.0398	39	70-130	22	35	mg/kg	03.07.18 14:39	X
m,p-Xylenes	<0.00403	0.202	0.0917	45	0.0742	37	70-130	21	35	mg/kg	03.07.18 14:39	X
o-Xylene	<0.00202	0.101	0.0518	51	0.0429	42	70-130	19	35	mg/kg	03.07.18 14:39	X

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	71		99		70-130	%	03.07.18 14:39
4-Bromofluorobenzene	101		128		70-130	%	03.07.18 14:39

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

Stafford, TX (281) 240-4200
Dallas, TX (214) 902-0300

El Paso, TX (915) 585-3443
Lubbock, TX (806) 794-1296

Midland, TX (432) 704-5440
San Antonio, TX (210) 509-3334

Phoenix, AZ (480) 355-0900
Service Center - Baton Rouge, LA (832) 712-8143

Service Center - Amarillo, TX (806) 678-4514
Service Center - Hobbs, NM (575) 392-7550

CHAIN OF CUSTODY

Page 1 of 1

Client / Reporting Information		Project Information		Analytical Information		Matrix Codes									
Company Name / Branch: <i>LTE/Permian</i>		Project Name/Number: <i>Hasta 12 Vista 6014 / 282-3725</i>													
Company Address: <i>3308 N. A Street Bld. 1 #103</i>		Project Location: <i>APM</i>													
Email: <i>abauer@hennrich.com</i>		Invoice To:													
Phone No:															
Project Contact: <i>Adrian Baker</i>		PO Number: <i>30-075-42533</i>													
Sampler's Name: <i>AC</i>															
No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MeOH	NONE	Field Comments
1	<i>SS1</i>	<i>12"</i>	<i>2/27</i>	<i>0935</i>	<i>S</i>	<i>1</i>									<i>BTEX 8021</i>
2	<i>SS2</i>														<i>TPH 8015</i>
3	<i>SS3</i>														<i>Chloride 300.1</i>
4	<i>SS4</i>														
5	<i>SS5</i>														
6	<i>SS6</i>														
7															
8															
9															
10															
Turnaround Time (Business days)															
<input type="checkbox"/> Same Day TAT		<input type="checkbox"/> 5 Day TAT													
<input type="checkbox"/> Next Day EMERGENCY		<input type="checkbox"/> 7 Day TAT													
<input type="checkbox"/> 2 Day EMERGENCY		<input type="checkbox"/> Contract TAT													
<input type="checkbox"/> 3 Day EMERGENCY															
TAT Starts Day received by Lab, if received by 5:00 pm															
Relinquished by Sampler:		SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY		FED-EX / UPS: Tracking #											
Date Time: <i>2/28/13</i>		Received By: <i>[Signature]</i>		Date Time: <i>2/28/13</i>		Received By: <i>[Signature]</i>									
Relinquished by: <i>[Signature]</i>		Date Time: <i>3/1/13</i>		Received By: <i>[Signature]</i>		Date Time: <i>3/1/13</i>									
Relinquished by: <i>[Signature]</i>		Date Time: <i>3/1/13</i>		Received By: <i>[Signature]</i>		Date Time: <i>3/1/13</i>									
Custody Seal #															
Preserved where applicable															
On Ice															
Cooler Temp.															
Thermo Corr. Factor															
Temp: <i>3.4</i>		IR ID: R-8													
CF: (0-6: -0.2°C)															
(6-23: +0.2°C)															
Corrected Temp: <i>3.2</i>															



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 03/01/2018 01:10:00 PM

Work Order #: 577913

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)?	3.2
#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?	No
#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

TPH received in bulk jars

* 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: 03/01/2018

Checklist reviewed by:

Jessica Kramer

Date: 03/01/2018

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 199058

COMMENTS

Operator: BOPCO, L.P. 6401 Holiday Hill Rd Midland, TX 79707	OGRID: 260737
	Action Number: 199058
	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