

May 31, 2018

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

**RE: Closure Request
Bass Federal 3 Well #4 Release #3
Remediation Permit Number 2RP-0403
Eddy County, New Mexico**

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), is pleased to present the following letter report detailing the soil sampling activities at the Bass Federal 3 Well #4 well pad (Site) in Unit Letter I, Section 3, Township 22 South, Range 28 East, in Eddy County, New Mexico (Figure 1). The purpose of the investigation was to assess impacts to soil after a flow line delivering produced water and crude oil from the well to the tank battery developed a leak. The leak caused a release of approximately 5 barrels (bbls) of crude oil and 15 bbls of produced water discovered on March 7, 2010. The release impacted approximately 1,200 square feet of the lease road and approximately 500 square feet of pasture land. The pipeline was excavated to install a temporary repair clamp, and the excavation was backfilled and compacted to allow traffic to continue on the road. 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 March 15, 2010, and was assigned Remediation Permit Number (RP) 2RP-0403 (Attachment 1). The soil sampling was conducted to evaluate existing site conditions. 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 determine if additional remediation is warranted. Based on the results of the sampling event as described herein, XTO is requesting no further action for this release event.

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 03534, located approximately 1,620 feet southwest of the Site, with a depth to groundwater of 106 feet bgs and a total depth of 150 feet bgs. The Site is greater than 1,000 feet from a water source and greater than 200 feet from a private domestic water source. The closest surface water to the Site is an arroyo located approximately 288 feet northwest of the Site. Based on these criteria, the NMOCD site ranking for remediation action levels is 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 practices in the 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 Form C-141 information. Based on the description of the affected area, latitude/longitude, and visual inspection, LTE determined the release occurred along the access road just west of the well pad. Soil samples were collected from either side of the road to verify remediation activities occurred during the initial release as indicated on the Form C-141. LTE collected five soil samples on March 3, 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 areas potentially affected by the release.

To eliminate the effects from weathering and natural degradation of contaminants at the ground surface, subsurface samples were collected from each sample location at roughly 1-foot 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 shipped at 4 degrees Celsius (°C) under strict chain-of-custody procedures via FedEx to Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, for analysis of BTEX by United States Environmental Protection Agency (USEPA) by Method 8021B, TPH-gasoline range organics (GRO), TPH-diesel range organics (DRO), and motor oil range organics (MRO) by USEPA Method 8015M, and chloride by method USEPA Method 300.0.

ANALYTICAL RESULTS

Laboratory analytical results for the five soil samples indicated BTEX concentrations were below laboratory reporting limits. Laboratory analytical results for TPH indicated no detected concentrations exceeded the NMOCD remediation action levels for the Site with all values below the laboratory reporting limit. Chloride concentrations were below the laboratory reporting limit in all five soil samples. 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 estimated 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 at this Site.





LTE appreciates the opportunity to provide this report to XTO. 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 black ink that reads "Ashley L. Ager".

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
Attachment 1 Initial/Final NMOCD Form C-141
Attachment 2 Laboratory Analytical Report



FIGURES

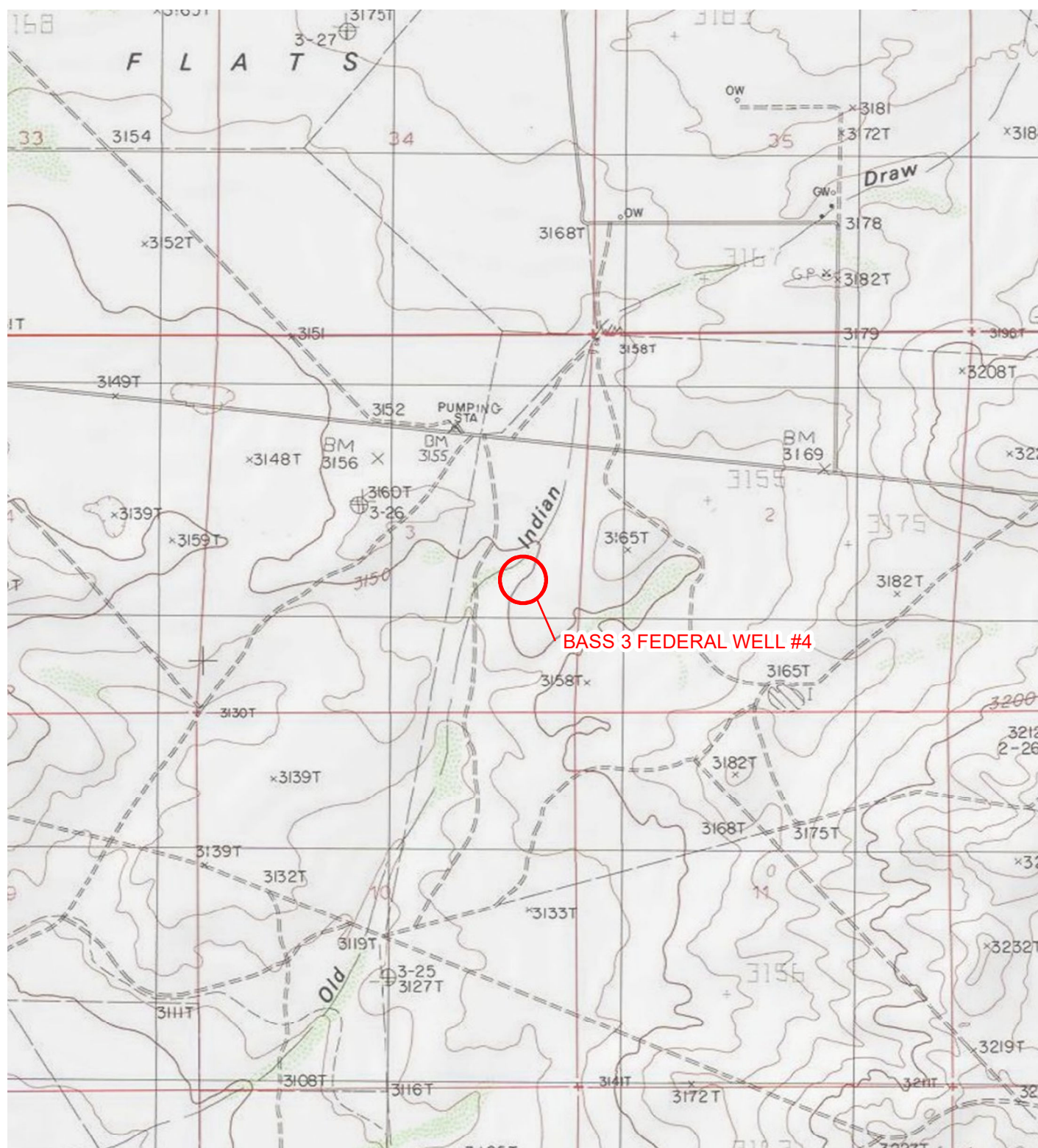
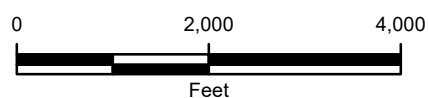


IMAGE COURTESY OF ESRI/USGS

LEGEND

 SITE LOCATION

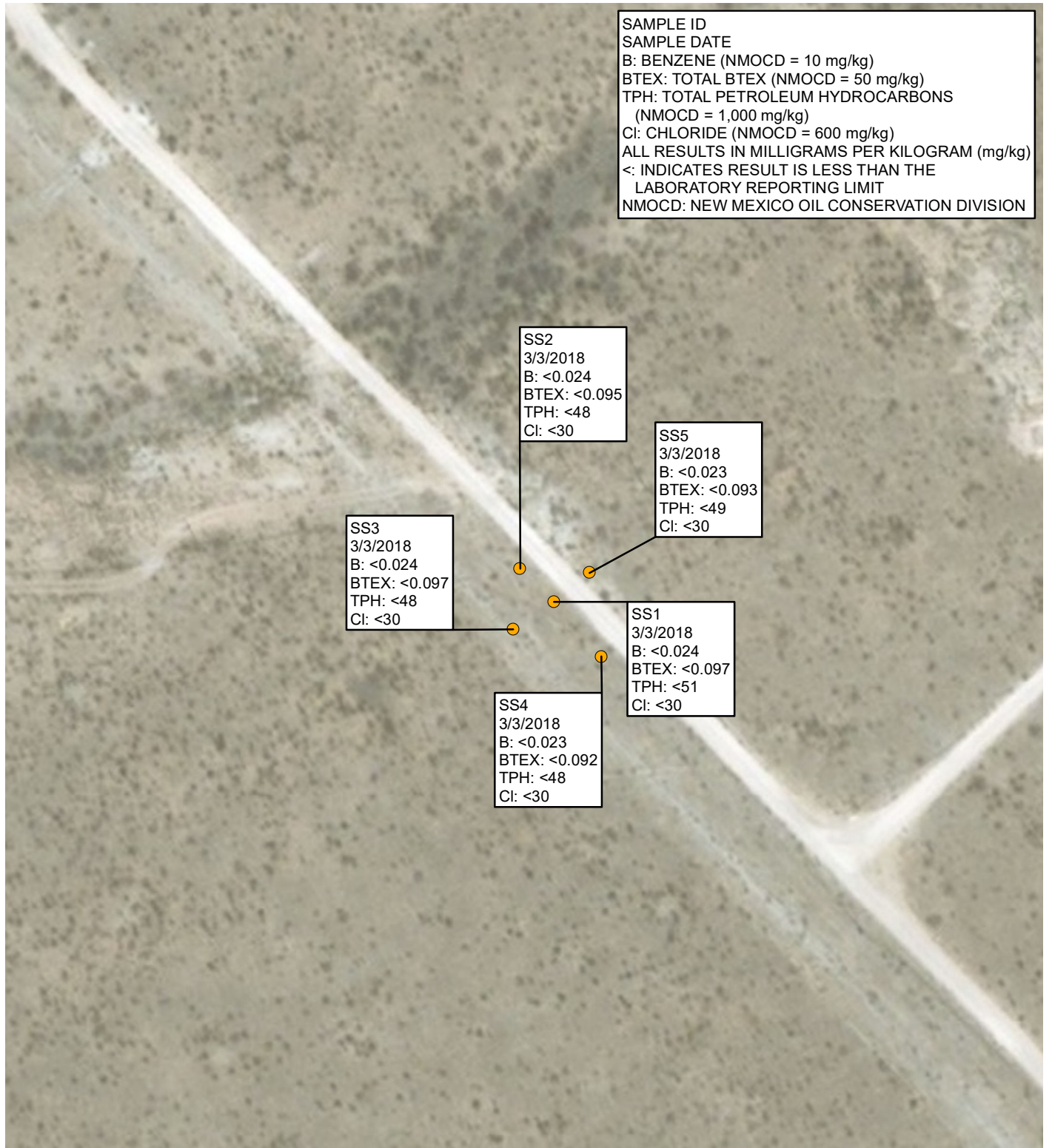


NOTE: REMEDIATION PERMIT
NUMBER 2RP-0403

FIGURE 1
SITE LOCATION MAP
BASS 3 FEDERAL WELL #4
UNIT 1 SEC 3 T22S R28E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.



SAMPLE ID
 SAMPLE DATE
 B: BENZENE (NMOCD = 10 mg/kg)
 BTEX: TOTAL BTEX (NMOCD = 50 mg/kg)
 TPH: TOTAL PETROLEUM HYDROCARBONS
 (NMOCD = 1,000 mg/kg)
 Cl: CHLORIDE (NMOCD = 600 mg/kg)
 ALL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)
 <: INDICATES RESULT IS LESS THAN THE
 LABORATORY REPORTING LIMIT
 NMOCD: NEW MEXICO OIL CONSERVATION DIVISION



LEGEND

● SOIL SAMPLE

IMAGE COURTESY OF ESRI

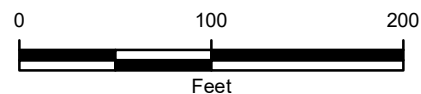


FIGURE 2
 SOIL SAMPLE LOCATIONS
 BASS 3 FEDERAL WELL #4
 UNIT I SEC 3 T22S R28E
 EDDY COUNTY, NEW MEXICO
 XTO ENERGY, INC.



NOTE: REMEDIATION PERMIT NUMBER 2RP-0403

TABLES



Advancing Opportunity

TABLE 1
SOIL ANALYTICAL RESULTS
BASS FEDERAL 3 WELL #4 RELEASE #3
REMEDIATION PERMIT NUMBER 2RP-0403
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)	C28-40 Motor Oil Range Organics (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS1	1	3/3/2018	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	<10	<51	<51	<30
SS2	1	3/3/2018	<0.024	<0.047	<0.047	<0.095	<0.095	<4.7	<9.6	<48	<48	<30
SS3	1	3/3/2018	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	<9.6	<48	<48	<30
SS4	1	3/3/2018	<0.023	<0.046	<0.046	<0.092	<0.092	<4.6	<9.7	<48	<48	<30
SS5	1	3/3/2018	<0.023	<0.046	<0.046	<0.093	<0.093	<4.6	<9.8	<49	<49	<30
NMOCD Remediation Action Levels			10	NE	NE	NE	50	NE	NE	NE	5,000	600

Notes:

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

mg/kg - milligrams per kilogram

NE - not established

NMOCD - New Mexico Oil Conservation Division

TPH - total petroleum hydrocarbons

< - indicates result is below laboratory detection limit



ATTACHMENT 1
INITIAL/FINAL NMOCD FORM C-141



Advancing Opportunity

District I
1625 N French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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

RECEIVED

MAR 16 2010

NMOCD ARTESIA

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company BOPCO, L.P.	260137	Contact Tony Savoie
Address 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220		Telephone No. 432-556-8730
Facility Name Bass Federal 3 Well #4	Release #3	Facility Type E&P

Surface Owner Federal	Mineral Owner Federal	Lease No.
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3001528736

LOCATION OF RELEASE

Unit Letter I	Section 3	Township 22S	Range 28E	Feet from the 1980	North/South Line	Feet from the 330	East/West Line	County Eddy
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Latitude N 32.419880 Longitude W 104.069150

NATURE OF RELEASE

Type of Release: Produced water and crude oil	Volume of Release: 15 Bbls of Produced water and 5 Bbls of Crude oil	Volume Recovered: none
Source of Release: Above ground 2 3/8" flow line	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 3/7/10 8:00 a.m.
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* The flow line delivering produced fluid from the well to the tank battery developed a leak, the well was shut in and a temporary repair clamp was placed on the affected area.

Describe Area Affected and Cleanup Action Taken.* The released fluid affected an area of approximately 1200 sq. ft of lease road and approximately 500 sq. ft of pasture land, the pipeline was excavated for the temporary repair, backfilled and compacted to allow traffic to continue to use the lease road. The Site remediation for the produced water and crude oil spill will follow the NMOCD guidelines for leaks and spills.

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

Signature: Tony Savoie	OIL CONSERVATION DIVISION	
Printed Name: Tony Savoie	Approved by District Supervisor:	Remediation Actions to be completed and Final C-141 submitted with confirmation, analyses/documentation on or before the Expiration Date
Title: Waste Mgmt. & Remediation Specialist	Approval Date: 4-8-10	Expiration Date: 6-8-10
E-mail Address: TASavoie@BassPet.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 3/15/10	DELINEATION REQUIRED until contamination reaches background levels or a site specific acceptable level. As warranted, a work plan may be required.	2 RP-403
Phone: 432-556-8730	Notify OCD 48 hours prior to obtaining samples where analyses are to be presented to OCD	

* 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

Form C-141
Revised April 3, 2017

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

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: Bass Federal 3 Well #4 "Release #3"	Facility Type: Exploration and Production	
Surface Owner Federal	Mineral Owner: Federal	API No.

LOCATION OF RELEASE

Unit Letter I	Section 3	Township 22S	Range 28E	Feet from the 1980	North/South Line South	Feet from the 330	East/West Line East	County Eddy
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Latitude 32.419880 Longitude -104.069150 NAD83

NATURE OF RELEASE

Type of Release Produced water and crude oil	Volume of Release 15Bbbs of Produced water and 5 Bbbs of Crude oil	Volume Recovered: none
Source of Release: water line	Date and Hour of Occurrence unknown	Date and Hour of Discovery: 3/7/2010 8:00 am
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour:	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse: Not Applicable	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*


The flow line delivering produced fluid from the well to the tank battery developed a leak, the well was shut in and a temporary repair clamp was placed on the affected area.

Describe Area Affected and Cleanup Action Taken.*

The released fluid affected an area of approximately 1200 sq. ft. of lease road and approximately 500 sq. ft. of pasture land, the pipeline was excavated for the temporary repair, backfilled and compacted to allow traffic to continue to use the lease road.
The spill was cleaned up in accordance with the NMOCD and BLM remediation guidelines.

LTE collected five soil samples from on March 3, 2018. Laboratory analytical results for the five soil samples indicated BTEX and TPH, and chloride were below the NMOCD remediation action levels for this Site. XTO requests no further action at the 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: <i>Bradford Billings</i>	
Title: SH&E Coordinator	Approval Date: 12/14/2015	Expiration Date:
E-mail Address: Kyle.Littrell@xtoenergy.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 6/1/18	Phone: 432-221-7331	

* Attach Additional Sheets If Necessary

Note: Was already closed in 2015 by Incident file check

ATTACHMENT 2
LABORATORY ANALYTICAL REPORT



Advancing Opportunity



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 13, 2018

Adrian Baker

LTE

3300 N A St Bldg 1 #103

Midland, TX 79705

TEL: (432) 704-5178

FAX

RE: Bass Federal 4 flow lines 3 RP 2RP-0403

OrderNo.: 1803222

Dear Adrian Baker:

Hall Environmental Analysis Laboratory received 5 sample(s) on 3/6/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1803222**Date Reported: **3/13/2018****CLIENT:** LTE**Client Sample ID:** SS1**Project:** Bass Federal 4 flow lines 3 RP 2RP-0403**Collection Date:** 3/3/2018 11:10:00 AM**Lab ID:** 1803222-001**Matrix:** SOIL**Received Date:** 3/6/2018 6:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	ND	30		mg/Kg	20	3/8/2018 1:03:11 PM	36903
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/7/2018 3:43:08 PM	36866
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	3/7/2018 3:43:08 PM	36866
Surr: DNOP	88.8	70-130		%Rec	1	3/7/2018 3:43:08 PM	36866
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/7/2018 8:13:52 PM	36859
Surr: BFB	92.6	15-316		%Rec	1	3/7/2018 8:13:52 PM	36859
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/7/2018 8:13:52 PM	36859
Toluene	ND	0.049		mg/Kg	1	3/7/2018 8:13:52 PM	36859
Ethylbenzene	ND	0.049		mg/Kg	1	3/7/2018 8:13:52 PM	36859
Xylenes, Total	ND	0.097		mg/Kg	1	3/7/2018 8:13:52 PM	36859
Surr: 4-Bromofluorobenzene	92.5	80-120		%Rec	1	3/7/2018 8:13:52 PM	36859

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1803222**

Date Reported: **3/13/2018**

CLIENT: LTE

Client Sample ID: SS2

Project: Bass Federal 4 flow lines 3 RP 2RP-0403

Collection Date: 3/3/2018 11:20:00 AM

Lab ID: 1803222-002

Matrix: SOIL

Received Date: 3/6/2018 6:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	ND	30		mg/Kg	20	3/8/2018 1:15:35 PM	36903
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	3/7/2018 4:05:08 PM	36866
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/7/2018 4:05:08 PM	36866
Surr: DNOP	81.1	70-130		%Rec	1	3/7/2018 4:05:08 PM	36866
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/7/2018 8:37:18 PM	36859
Surr: BFB	90.7	15-316		%Rec	1	3/7/2018 8:37:18 PM	36859
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/7/2018 8:37:18 PM	36859
Toluene	ND	0.047		mg/Kg	1	3/7/2018 8:37:18 PM	36859
Ethylbenzene	ND	0.047		mg/Kg	1	3/7/2018 8:37:18 PM	36859
Xylenes, Total	ND	0.095		mg/Kg	1	3/7/2018 8:37:18 PM	36859
Surr: 4-Bromofluorobenzene	89.1	80-120		%Rec	1	3/7/2018 8:37:18 PM	36859

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1803222**Date Reported: **3/13/2018****CLIENT:** LTE**Client Sample ID:** SS3**Project:** Bass Federal 4 flow lines 3 RP 2RP-0403**Collection Date:** 3/3/2018 11:30:00 AM**Lab ID:** 1803222-003**Matrix:** SOIL**Received Date:** 3/6/2018 6:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	ND	30		mg/Kg	20	3/8/2018 2:17:37 PM	36903
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	3/7/2018 4:49:09 PM	36866
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/7/2018 4:49:09 PM	36866
Surr: DNOP	87.6	70-130		%Rec	1	3/7/2018 4:49:09 PM	36866
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/7/2018 9:00:42 PM	36859
Surr: BFB	87.5	15-316		%Rec	1	3/7/2018 9:00:42 PM	36859
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	3/7/2018 9:00:42 PM	36859
Toluene	ND	0.049		mg/Kg	1	3/7/2018 9:00:42 PM	36859
Ethylbenzene	ND	0.049		mg/Kg	1	3/7/2018 9:00:42 PM	36859
Xylenes, Total	ND	0.097		mg/Kg	1	3/7/2018 9:00:42 PM	36859
Surr: 4-Bromofluorobenzene	87.5	80-120		%Rec	1	3/7/2018 9:00:42 PM	36859

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1803222**

Date Reported: **3/13/2018**

CLIENT: LTE

Client Sample ID: SS4

Project: Bass Federal 4 flow lines 3 RP 2RP-0403

Collection Date: 3/3/2018 11:40:00 AM

Lab ID: 1803222-004

Matrix: SOIL

Received Date: 3/6/2018 6:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	ND	30		mg/Kg	20	3/8/2018 2:30:01 PM	36903
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	3/7/2018 5:11:23 PM	36866
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/7/2018 5:11:23 PM	36866
Surr: DNOP	85.7	70-130		%Rec	1	3/7/2018 5:11:23 PM	36866
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	3/7/2018 9:24:03 PM	36859
Surr: BFB	97.0	15-316		%Rec	1	3/7/2018 9:24:03 PM	36859
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	3/7/2018 9:24:03 PM	36859
Toluene	ND	0.046		mg/Kg	1	3/7/2018 9:24:03 PM	36859
Ethylbenzene	ND	0.046		mg/Kg	1	3/7/2018 9:24:03 PM	36859
Xylenes, Total	ND	0.092		mg/Kg	1	3/7/2018 9:24:03 PM	36859
Surr: 4-Bromofluorobenzene	89.1	80-120		%Rec	1	3/7/2018 9:24:03 PM	36859

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1803222**

Date Reported: **3/13/2018**

CLIENT: LTE

Client Sample ID: SS5

Project: Bass Federal 4 flow lines 3 RP 2RP-0403

Collection Date: 3/3/2018 11:50:00 AM

Lab ID: 1803222-005

Matrix: SOIL

Received Date: 3/6/2018 6:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	ND	30		mg/Kg	20	3/8/2018 2:42:26 PM	36903
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	3/7/2018 5:33:25 PM	36866
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/7/2018 5:33:25 PM	36866
Surr: DNOP	75.9	70-130		%Rec	1	3/7/2018 5:33:25 PM	36866
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	3/7/2018 9:47:15 PM	36859
Surr: BFB	93.0	15-316		%Rec	1	3/7/2018 9:47:15 PM	36859
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	3/7/2018 9:47:15 PM	36859
Toluene	ND	0.046		mg/Kg	1	3/7/2018 9:47:15 PM	36859
Ethylbenzene	ND	0.046		mg/Kg	1	3/7/2018 9:47:15 PM	36859
Xylenes, Total	ND	0.093		mg/Kg	1	3/7/2018 9:47:15 PM	36859
Surr: 4-Bromofluorobenzene	92.5	80-120		%Rec	1	3/7/2018 9:47:15 PM	36859

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1803222

13-Mar-18

Client: LTE

Project: Bass Federal 4 flow lines 3 RP 2RP-0403

Sample ID	MB-36903		SampType: mblk		TestCode: EPA Method 300.0: Anions					
Client ID:	PBS		Batch ID: 36903		RunNo: 49642					
Prep Date:	3/8/2018		Analysis Date: 3/8/2018		SeqNo: 1606266		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-36903		SampType: lcs		TestCode: EPA Method 300.0: Anions					
Client ID:	LCSS		Batch ID: 36903		RunNo: 49642					
Prep Date:	3/8/2018		Analysis Date: 3/8/2018		SeqNo: 1606267		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.0	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1803222

13-Mar-18

Client: LTE

Project: Bass Federal 4 flow lines 3 RP 2RP-0403

Sample ID	LCS-36866		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 36866		RunNo: 49602					
Prep Date:	3/6/2018		Analysis Date: 3/7/2018		SeqNo: 1603693		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	93.7	70	130			
Surr: DNOP	3.8		5.000		75.4	70	130			

Sample ID	MB-36866		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 36866		RunNo: 49602					
Prep Date:	3/6/2018		Analysis Date: 3/7/2018		SeqNo: 1603694		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.2		10.00		82.4	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1803222

13-Mar-18

Client: LTE

Project: Bass Federal 4 flow lines 3 RP 2RP-0403

Sample ID	MB-36859		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 36859		RunNo: 49627					
Prep Date:	3/6/2018		Analysis Date: 3/7/2018		SeqNo: 1604248		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	920		1000		91.9	15	316			

Sample ID	LCS-36859		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 36859		RunNo: 49627					
Prep Date:	3/6/2018		Analysis Date: 3/7/2018		SeqNo: 1604249		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	112	75.9	131			
Surr: BFB	1100		1000		108	15	316			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1803222

13-Mar-18

Client: LTE

Project: Bass Federal 4 flow lines 3 RP 2RP-0403

Sample ID	MB-36859		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 36859		RunNo: 49627					
Prep Date:	3/6/2018		Analysis Date: 3/7/2018		SeqNo: 1604285		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.90		1.000		90.2	80	120			

Sample ID	LCS-36859		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 36859		RunNo: 49627					
Prep Date:	3/6/2018		Analysis Date: 3/7/2018		SeqNo: 1604287		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	1.000	0	96.3	77.3	128			
Toluene	0.98	0.050	1.000	0	97.9	79.2	125			
Ethylbenzene	0.99	0.050	1.000	0	98.9	80.7	127			
Xylenes, Total	3.1	0.10	3.000	0	102	81.6	129			
Surr: 4-Bromofluorobenzene	0.95		1.000		95.0	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: LTE MIDLAND

Work Order Number: 1803222

RcptNo: 1

Received By: Anne Thorne

3/6/2018 6:55:00 AM

Anne Thorne

Completed By: Isaiah Ortiz

3/6/2018 8:43:28 AM

Isaiah Ortiz

Reviewed By: *gpc 03/06/18*

LB: DDS

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐ # of preserved bottles checked for pH: _____
(<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐ Adjusted? _____
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐ Checked by: _____

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks: _____

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

[illegible]

Analysis Request	
BTEX + MTBE + TMB (8021)	X
BTEX + MTBE + TMB (Gas only)	
TPH 8015B (GRO / DRO / MRO)	
TPH (Method 418.1)	
EDB (Method 504.1)	
PAH's (8310 or 8270 SIMS)	
RCRA 8 Metals	
Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	
8081 Pesticides / 8082 PCB's	
8260B (VOA)	
8270 (Semi-VOA)	
TPH 815	X
Chloride 300.1	X
Air Bubbles (Y or N)	

Remarks:

if necessary, samples submitted to ~~that~~ Environmental may be subcontracted to other/accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.