

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 August 8, 2011

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, Inc.	Contact: Logan Hixon
Address: 382 Road 3100, Aztec, New Mexico 87410	Telephone No.: (505) 333-3683
Facility Name: Caldwell A 1E	Facility Type: Gas Well
Surface Owner: Private	Mineral Owner: Federal
API No. 30-045-34442	

**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
M	27	26 N	11W	665	FSL	825	FWL	San Juan

Latitude: N36.4534561 Longitude: W-107.997591

**NATURE OF RELEASE**

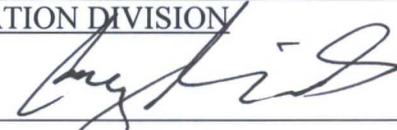
Type of Release: Produced Water/Oil	Volume of Release: Approximately 20 bbl.	Volume Recovered: 15 bbl. Recovered
Source of Release: Above Grade Water Tank (overflow)	Date and Hour of Occurrence: May 30, 2017 at Unknown Time	Date and Hour of Discovery: May 30, 2017 at 0800.
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom? N/A	
By Whom?	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.\* On May 30, 2017, an over flow was discovered on the produced water above grade tank. An estimated 20 bbls of fluids (produced water/oil) was released. In immediate response 15 bbls of fluid was recovered. The well was shut in and it was discovered that the tank had overflowed due to surging of fluids up the backside of the well bore allowing for oil/produced water to be produced to the tank. The impacted area was approximately 20'x 18'x 19' deep. The site was ranked a 20 pursuant to the NMOCD Guidelines for the Remediation of Leaks, Spills, and Releases. The distance to a waterway is estimated to be less than 1,000 feet from the end of the release, and ground water is estimated to be greater than 50' below ground surface. This set the regulatory limits to 100 ppm TPH, 10 ppm benzene, and 50 ppm total BTEX.

Describe Area Affected and Cleanup Action Taken.\* On May 30, 2017 (2) two samples were collected from the impacted area, (1) one at the surface below the gravel, and (1) at approximately 19" below the surface. The samples were analyzed for TPH (DRO/GRO/MRO) via USEPA Method 8015, BTEX via USEPA Method 8021, and for chlorides. The samples collected returned results below the standards for Benzene, and BTEX, but above the standard for TPH determined for this site. On June 2, 2017, the NMOCD was notified of remediation activities to begin on June 5, 2017. On June 5, 2017, excavation activities began to remove the impacted soil. The excavation reached an extent of 22'x19'x 5' 6" deep, where composite samples were collected of the (4) four walls and the bottom. All (5) five samples were sent for laboratory analysis for TPH (DRO/GRO/MRO) and BTEX analysis via US EPA method 8015 and 8021 respectively, and chlorides. All (5) five samples returned results below the standard set for this site. Approximately 150 CY of soil was disposed of at the Envirotech Landfarm. No further action required. \*See attached field sheet\*

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: 	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Logan Hixon	Approved by Environmental Specialist: 	
Title: EHS Coordinator	Approval Date: 8/24/17	Expiration Date:
E-mail Address: Logan_Hixon@xtoenergy.com	Conditions of Approval: —	Attached <input type="checkbox"/> —
Date: June 8, 2017	Phone: 505-333-3683	

\* Attach Additional Sheets If Necessary

OIL CONS. DIV DIST. 3

#NCS1723647436

JUN 12 2017

25



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

June 05, 2017

James McDaniel  
XTO Energy  
382 County Road 3100  
Aztec, NM 87410  
TEL: (505) 787-0519  
FAX (505) 333-3280

RE: Caldwell A1 E

OrderNo.: 1706007

Dear James McDaniel:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/1/2017 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](http://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 light blue horizontal line.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: XTO Energy

Client Sample ID: Top 4"

Project: Caldwell AI E

Collection Date: 5/30/2017 2:30:00 PM

Lab ID: 1706007-001

Matrix: SOIL

Received Date: 6/1/2017 7:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	6/1/2017 12:16:53 PM	32061
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	1200	99		mg/Kg	10	6/2/2017 11:23:19 AM	32064
Motor Oil Range Organics (MRO)	540	500		mg/Kg	10	6/2/2017 11:23:19 AM	32064
Surr: DNOP	0	70-130	S	%Rec	10	6/2/2017 11:23:19 AM	32064
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	83	18	D	mg/Kg	5	6/1/2017 3:02:28 PM	R43189
Surr: BFB	313	54-150	SD	%Rec	5	6/1/2017 3:02:28 PM	R43189
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	ND	0.089	D	mg/Kg	5	6/1/2017 3:02:28 PM	B43189
Toluene	0.62	0.18	D	mg/Kg	5	6/1/2017 3:02:28 PM	B43189
Ethylbenzene	0.56	0.18	D	mg/Kg	5	6/1/2017 3:02:28 PM	B43189
Xylenes, Total	3.1	0.35	D	mg/Kg	5	6/1/2017 3:02:28 PM	B43189
Surr: 4-Bromofluorobenzene	131	66.6-132	D	%Rec	5	6/1/2017 3:02:28 PM	B43189

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

<b>Qualifiers:</b>	* 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
	R RPD outside accepted recovery limits	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.**

CLIENT: XTO Energy

Client Sample ID: Bottom 19"

Project: Caldwell A1 E

Collection Date: 5/30/2017 2:45:00 PM

Lab ID: 1706007-002

Matrix: SOIL

Received Date: 6/1/2017 7:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	6/1/2017 12:54:08 PM	32061
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	99	9.6		mg/Kg	1	6/2/2017 8:48:24 AM	32064
Motor Oil Range Organics (MRO)	50	48		mg/Kg	1	6/2/2017 8:48:24 AM	32064
Surr: DNOP	107	70-130		%Rec	1	6/2/2017 8:48:24 AM	32064
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	17	D	mg/Kg	5	6/1/2017 3:26:08 PM	R43189
Surr: BFB	130	54-150	D	%Rec	5	6/1/2017 3:26:08 PM	R43189
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	ND	0.084	D	mg/Kg	5	6/1/2017 3:26:08 PM	B43189
Toluene	ND	0.17	D	mg/Kg	5	6/1/2017 3:26:08 PM	B43189
Ethylbenzene	ND	0.17	D	mg/Kg	5	6/1/2017 3:26:08 PM	B43189
Xylenes, Total	ND	0.34	D	mg/Kg	5	6/1/2017 3:26:08 PM	B43189
Surr: 4-Bromofluorobenzene	117	66.6-132	D	%Rec	5	6/1/2017 3:26:08 PM	B43189

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

<b>Qualifiers:</b>	* 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
	R RPD outside accepted recovery limits	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#: 1706007  
 05-Jun-17

**Client:** XTO Energy  
**Project:** Caldwell AI E

Sample ID <b>MB-32061</b>	SampType: <b>mbk</b>		TestCode: <b>EPA Method 300.0: Anions</b>							
Client ID: <b>PBS</b>	Batch ID: <b>32061</b>		RunNo: <b>43191</b>							
Prep Date: <b>6/1/2017</b>	Analysis Date: <b>6/1/2017</b>		SeqNo: <b>1360495</b>	Units: <b>mg/Kg</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID <b>LCS-32061</b>	SampType: <b>ics</b>		TestCode: <b>EPA Method 300.0: Anions</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>32061</b>		RunNo: <b>43191</b>							
Prep Date: <b>6/1/2017</b>	Analysis Date: <b>6/1/2017</b>		SeqNo: <b>1360496</b>	Units: <b>mg/Kg</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.1	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
- R RPD outside accepted recovery limits
- 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#: 1706007

05-Jun-17

**Client:** XTO Energy  
**Project:** Caldwell A1 E

Sample ID <b>LCS-32064</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>32064</b>		RunNo: <b>43209</b>							
Prep Date: <b>6/1/2017</b>	Analysis Date: <b>6/2/2017</b>		SeqNo: <b>1360326</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	10	50.00	0	87.3	73.2	114			
Surr: DNOP	4.7		5.000		94.5	70	130			

Sample ID <b>MB-32064</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>32064</b>		RunNo: <b>43209</b>							
Prep Date: <b>6/1/2017</b>	Analysis Date: <b>6/2/2017</b>		SeqNo: <b>1360330</b>		Units: <b>mg/Kg</b>					
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	9.5		10.00		95.1	70	130			

Sample ID <b>LCS-32081</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>32081</b>		RunNo: <b>43209</b>							
Prep Date: <b>6/2/2017</b>	Analysis Date: <b>6/2/2017</b>		SeqNo: <b>1360770</b>		Units: <b>%Rec</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.8		5.000		96.4	70	130			

Sample ID <b>MB-32081</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>32081</b>		RunNo: <b>43209</b>							
Prep Date: <b>6/2/2017</b>	Analysis Date: <b>6/2/2017</b>		SeqNo: <b>1360771</b>		Units: <b>%Rec</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10		10.00		104	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
- R RPD outside accepted recovery limits
- 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#: 1706007

05-Jun-17

Client: XTO Energy  
Project: Caldwell A1 E

Sample ID <b>2.5UG GRO LCS</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>R43189</b>	RunNo: <b>43189</b>								
Prep Date:	Analysis Date: <b>6/1/2017</b>	SeqNo: <b>1359964</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	99.4	76.4	125			
Surr: BFB	1200		1000		120	54	150			

Sample ID <b>RB</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>R43189</b>	RunNo: <b>43189</b>								
Prep Date:	Analysis Date: <b>6/1/2017</b>	SeqNo: <b>1359965</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1100		1000		111	54	150			

### 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
- R RPD outside accepted recovery limits
- 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#: 1706007

05-Jun-17

**Client:** XTO Energy  
**Project:** Caldwell A1 E

Sample ID <b>100NG BTEX LCS</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>B43189</b>		RunNo: <b>43189</b>							
Prep Date:	Analysis Date: <b>6/1/2017</b>		SeqNo: <b>1359968</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.025	1.000	0	94.5	80	120			
Toluene	0.94	0.050	1.000	0	93.7	80	120			
Ethylbenzene	0.94	0.050	1.000	0	94.0	80	120			
Xylenes, Total	2.8	0.10	3.000	0	94.2	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		112	66.6	132			

Sample ID <b>RB</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>B43189</b>		RunNo: <b>43189</b>							
Prep Date:	Analysis Date: <b>6/1/2017</b>		SeqNo: <b>1359971</b>		Units: <b>mg/Kg</b>					
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	1.1		1.000		110	66.6	132			

**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
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
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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: XTO Energy

Work Order Number: 1706007

RcptNo: 1

Received By: Anne Thorne

6/1/2017 7:20:00 AM

*Anne Thorne*

Completed By: Anne Thorne

6/1/2017 8:32:58 AM

*Anne Thorne*

Reviewed By: *AT*

61117

### Chain of Custody

- 1. Custody seals intact on sample bottles? Yes  No  Not Present
- 2. Is Chain of Custody complete? Yes  No  Not Present
- 3. How was the sample delivered? Courier

### Log In

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

# of preserved bottles checked for pH: \_\_\_\_\_  
 (<2 or >12 unless noted)  
 Adjusted? \_\_\_\_\_  
 Checked by: \_\_\_\_\_

### Special Handling (If applicable)

- 16. 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: \_\_\_\_\_

17. Additional remarks:

### 18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.7	Good	Yes			

		Quote Number		Page <u>1</u> of <u>1</u>		Analysis/Container				Lab Information		
		XTO Contact <i>Logan H</i>		XTO Contact Phone # <i>505 386-8018</i>		<i>8015 (CO2) (600/MRO)</i> <i>8021 (STEK)</i> <i>Chlorides</i>				<b>Office Abbreviations:</b> Farmington = FAR Durango = DUR Bakken = BAK Raton = RAT Piceance = PC Roosevelt = RSU La Barge = LB Orangeville = OV		
		Email Results to: <i>James, Kurt, Logan</i>										
Well Site/Location <i>Cold well ALE</i>		API Number		Saturday Delivery (Y/N) <input checked="" type="checkbox"/>		Turnaround <input checked="" type="checkbox"/> Standard <input checked="" type="checkbox"/> Next Day <input type="checkbox"/> Two Day <input type="checkbox"/> Three Day <input type="checkbox"/> Same Day Date Needed _____		Sample Number <i>1706007-001</i> <i>-002</i>				
Collected By <i>Logan H</i>		Samples on Ice <input checked="" type="checkbox"/> (Y/N)		Test Reason <i>Release</i>								
Company <i>XTO</i>		Signature <i>Logan H</i>		Gray Areas for Lab Use Only!								
Sample ID	Sample Name	Media	Date	Time	Preservative	No. of Cont.					Sample Number	
<i>Top 4"</i>	<i>TOP 4"</i>	<i>S</i>	<i>5-30</i>	<i>1430</i>	<i>COOL</i>	<i>1-402</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Bottom 19"</i>	<i>Bottom 19"</i>	<i>L</i>	<i>↓</i>	<i>1448</i>	<i>L</i>	<i>L</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Media: Filter = F Soil = S Wastewater = WW Groundwater = GW Drinking Water = DW Sludge = SG Surface Water = SW Air = A Drill Mud = DM Other = OT												
Relinquished By: (Signature) <i>[Signature]</i>			Date: <i>5-31-17</i>		Time: <i>1256</i>		Received By: (Signature) <i>[Signature]</i>			Number of Bottles		Sample Condition
Relinquished By: (Signature) <i>[Signature]</i>			Date: <i>5/31/17</i>		Time: <i>1857</i>		Received for Lab by: (Signature) <i>[Signature]</i>			Temperature: <i>2.7-CF-1.0=1.7</i>		Other Information
Relinquished By: (Signature)			Date:		Time:		Date: <i>06/01/17</i>			Time: <i>1720</i>		
Comments												

\* Sample ID will be the office and sampler-date-military time FARJM-MMDDYY-1200

## Hixon, Logan

---

**From:** Smith, Cory, EMNRD <Cory.Smith@state.nm.us>  
**Sent:** Monday, June 05, 2017 8:30 AM  
**To:** Hixon, Logan; Fields, Vanessa, EMNRD  
**Cc:** McDaniel, James; Hoekstra, Kurt; Weaver, John; Percell, Bob; Dawes, Thomas; Powell, Brandon, EMNRD  
**Subject:** RE: Caldwell A 1E  
  
**Categories:** External Sender

Mr. Hixon,

Based upon the provided sample results, since the contamination only extends 19" below the surface and there are no extenuating circumstances the OCD is denying XTO alternative closure standard request.

Cory Smith  
Environmental Specialist  
Oil Conservation Division  
Energy, Minerals, & Natural Resources  
1000 Rio Brazos, Aztec, NM 87410  
(505)334-6178 ext 115  
[cory.smith@state.nm.us](mailto:cory.smith@state.nm.us)

**From:** Hixon, Logan [mailto:Logan\_Hixon@xtoenergy.com]  
**Sent:** Friday, June 2, 2017 4:29 PM  
**To:** Smith, Cory, EMNRD <Cory.Smith@state.nm.us>; Fields, Vanessa, EMNRD <Vanessa.Fields@state.nm.us>  
**Cc:** McDaniel, James <James\_McDaniel@xtoenergy.com>; Hoekstra, Kurt <Kurt\_Hoekstra@xtoenergy.com>; Weaver, John <John\_Weaver@xtoenergy.com>; Percell, Bob <Bob\_Percell@xtoenergy.com>; Dawes, Thomas <Thomas\_Dawes@xtoenergy.com>  
**Subject:** Caldwell A 1E

Hello All,

This is to notify you of a release on the Caldwell A 1E location. On May 30, 2017 it was discovered that the above grade water tank had overflowed due to surging of fluids up the backside of the well bore allowing for oil/produced water to be produced to the tank. Approximately (5) five barrels of fluids were lost. On May 30, 2017 (2) two samples were collected from the impacted area, (1) one at the surface below the gravel, and (1) at approximately 19" below the surface. The surface sample returned results requiring soil removal at the surface based on total TPH. (*Samples attached*) We would like to begin the soil remediation on Monday June 5, 2017, and collect final samples on the same day.

The site was ranked a 20 pursuant to the NMOCD Guidelines for the Remediation of Leaks, Spills and Releases due to distance to surface water 200-1000 feet, and an estimated depth to groundwater between 50 and 100 feet. This will set the closure standards to 100 ppm TPH, 10 ppm benzene and 50 ppm total BTEX.

We would like to propose an alternative closure standard for this site due to the dense clay, and depth to groundwater being deeper than (50) fifty feet, and we are dealing with Diesel Range Organics which are considered a non-mobile constituent based on the samples collected.

The proposed alternative closure standard requested for this site is 1,000 mg/kg TPH (DRO/GRO/MRO), 10 mg/kg Benzene, and 50 mg/kg total BTEX.

Thank you for your consideration and if you have any questions do not hesitate to contact us at any time.

*If you have any questions do not hesitate to contact us.*

**Thank You!**

**EHS Coordinator**

Logan Hixon | 382 CR 3100 | Aztec, NM 87410 | ph: 505-333-3100 | Cell: 505-386 8018 |

Home: 505-320-6133 | [Logan\\_Hixon@xtoenergy.com](mailto:Logan_Hixon@xtoenergy.com)

**XTO ENERGY INC.**, an ExxonMobil subsidiary

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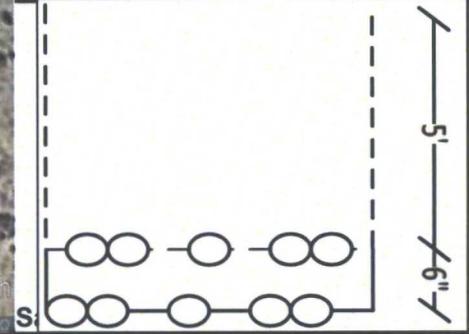
# XTO Energy On-Site Form

Well Nam Caldwell A 1E

Land Use ( Range / Residential / Tribe \_\_\_\_\_ ) Excavation 22 x 18 x 5'6" deep



Sample Location



Comments

Number of Photos Taken

## Samples

Time	Sample #	Sample Description	Characteristics	OVM (ppm)	Analysis Requested
1230	NA	100 Standard	NA	100	NA
1435	1	Bottom 40"	Clay/Shale/Sand	227	No
1500	1	S-Wall	Clay/Shale/Sand	27	8015(DRO/GRO/MRO), BTEX, Chl
1520	1	E-Wall	Clay/Shale/Sand	59	8015(DRO/GRO/MRO), BTEX, Chl
1530	1	N-Wall	Clay/Shale/Sand	8.9	8015(DRO/GRO/MRO), BTEX, Chl
1550	1	Bottom 5'	Clay/Shale/Sand	171	No
1600	1	W-Wall	Clay/Shale/Sand	0	8015(DRO/GRO/MRO), BTEX, Chl
1630	1	Bottom 5'6"	Clay/Shale	10	8015(DRO/GRO/MRO), BTEX, Chl

Name (Print) \_\_\_\_\_ Logan Hixon

6/5/2017

Name (Signature) *Logan Hixon* Company XTO



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

June 07, 2017

James McDaniel  
XTO Energy  
382 County Road 3100  
Aztec, NM 87410  
TEL: (505) 787-0519  
FAX (505) 333-3280

RE: Caldwell A 1 E

OrderNo.: 1706218

Dear James McDaniel:

Hall Environmental Analysis Laboratory received 5 sample(s) on 6/6/2017 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](http://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 light blue horizontal line.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109



**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: XTO Energy

Client Sample ID: E Wall 5'

Project: Caldwell A 1 E

Collection Date: 6/5/2017 3:20:00 PM

Lab ID: 1706218-002

Matrix: SOIL

Received Date: 6/6/2017 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	6/6/2017 11:11:37 AM	32133
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	12	9.3		mg/Kg	1	6/6/2017 9:54:33 AM	32126
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/6/2017 9:54:33 AM	32126
Surr: DNOP	88.7	70-130		%Rec	1	6/6/2017 9:54:33 AM	32126
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.0		mg/Kg	1	6/6/2017 9:51:52 AM	32111
Surr: BFB	104	54-150		%Rec	1	6/6/2017 9:51:52 AM	32111
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.015		mg/Kg	1	6/6/2017 9:51:52 AM	32111
Toluene	ND	0.030		mg/Kg	1	6/6/2017 9:51:52 AM	32111
Ethylbenzene	ND	0.030		mg/Kg	1	6/6/2017 9:51:52 AM	32111
Xylenes, Total	ND	0.060		mg/Kg	1	6/6/2017 9:51:52 AM	32111
Surr: 4-Bromofluorobenzene	117	66.6-132		%Rec	1	6/6/2017 9:51:52 AM	32111

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

<b>Qualifiers:</b>	* 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
	R RPD outside accepted recovery limits	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 1706218  
 Date Reported: 6/7/2017

CLIENT: XTO Energy  
 Project: Caldwell A 1 E  
 Lab ID: 1706218-003  
 Matrix: SOIL  
 Client Sample ID: N Wall 5'  
 Collection Date: 6/5/2017 3:30:00 PM  
 Received Date: 6/6/2017 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	6/6/2017 11:24:02 AM	32133
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	13	9.6		mg/Kg	1	6/6/2017 10:16:45 AM	32126
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/6/2017 10:16:45 AM	32126
Surr: DNOP	91.1	70-130		%Rec	1	6/6/2017 10:16:45 AM	32126
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.2		mg/Kg	1	6/6/2017 10:15:48 AM	32111
Surr: BFB	109	54-150		%Rec	1	6/6/2017 10:15:48 AM	32111
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.016		mg/Kg	1	6/6/2017 10:15:48 AM	32111
Toluene	ND	0.032		mg/Kg	1	6/6/2017 10:15:48 AM	32111
Ethylbenzene	ND	0.032		mg/Kg	1	6/6/2017 10:15:48 AM	32111
Xylenes, Total	ND	0.065		mg/Kg	1	6/6/2017 10:15:48 AM	32111
Surr: 4-Bromofluorobenzene	122	66.6-132		%Rec	1	6/6/2017 10:15:48 AM	32111

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

<b>Qualifiers:</b>	* 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
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Analytical Report

Lab Order 1706218

Date Reported: 6/7/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: XTO Energy

Client Sample ID: W Wall 5'

Project: Caldwell A I E

Collection Date: 6/5/2017 4:00:00 PM

Lab ID: 1706218-004

Matrix: SOIL

Received Date: 6/6/2017 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	6/6/2017 11:36:26 AM	32133
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	6/6/2017 10:39:05 AM	32126
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/6/2017 10:39:05 AM	32126
Surr: DNOP	89.4	70-130		%Rec	1	6/6/2017 10:39:05 AM	32126
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	6/6/2017 10:39:41 AM	32111
Surr: BFB	95.2	54-150		%Rec	1	6/6/2017 10:39:41 AM	32111
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.018		mg/Kg	1	6/6/2017 10:39:41 AM	32111
Toluene	ND	0.036		mg/Kg	1	6/6/2017 10:39:41 AM	32111
Ethylbenzene	ND	0.036		mg/Kg	1	6/6/2017 10:39:41 AM	32111
Xylenes, Total	ND	0.072		mg/Kg	1	6/6/2017 10:39:41 AM	32111
Surr: 4-Bromofluorobenzene	118	66.6-132		%Rec	1	6/6/2017 10:39:41 AM	32111

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

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	Page 4 of 9
	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	
	R RPD outside accepted recovery limits	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.

CLIENT: XTO Energy

Client Sample ID: Bottom 5' 6"

Project: Caldwell A 1 E

Collection Date: 6/5/2017 4:30:00 PM

Lab ID: 1706218-005

Matrix: SOIL

Received Date: 6/6/2017 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	6/6/2017 11:48:51 AM	32133
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/6/2017 11:01:30 AM	32126
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/6/2017 11:01:30 AM	32126
Surr: DNOP	87.0	70-130		%Rec	1	6/6/2017 11:01:30 AM	32126
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	6/6/2017 11:03:46 AM	32111
Surr: BFB	98.1	54-150		%Rec	1	6/6/2017 11:03:46 AM	32111
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.021		mg/Kg	1	6/6/2017 11:03:46 AM	32111
Toluene	ND	0.043		mg/Kg	1	6/6/2017 11:03:46 AM	32111
Ethylbenzene	ND	0.043		mg/Kg	1	6/6/2017 11:03:46 AM	32111
Xylenes, Total	ND	0.085		mg/Kg	1	6/6/2017 11:03:46 AM	32111
Surr: 4-Bromofluorobenzene	120	66.6-132		%Rec	1	6/6/2017 11:03:46 AM	32111

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

<b>Qualifiers:</b>	* 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
	R RPD outside accepted recovery limits	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#: 1706218

07-Jun-17

**Client:** XTO Energy  
**Project:** Caldwell A 1 E

Sample ID <b>MB-32133</b>	SampType: <b>mbk</b>		TestCode: <b>EPA Method 300.0: Anions</b>							
Client ID: <b>PBS</b>	Batch ID: <b>32133</b>		RunNo: <b>43284</b>							
Prep Date: <b>6/6/2017</b>	Analysis Date: <b>6/6/2017</b>		SeqNo: <b>1363498</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID <b>LCS-32133</b>	SampType: <b>lcs</b>		TestCode: <b>EPA Method 300.0: Anions</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>32133</b>		RunNo: <b>43284</b>							
Prep Date: <b>6/6/2017</b>	Analysis Date: <b>6/6/2017</b>		SeqNo: <b>1363499</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.4	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
- R RPD outside accepted recovery limits
- 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#: 1706218

07-Jun-17

Client: XTO Energy  
Project: Caldwell A 1 E

Sample ID	<b>LCS-32126</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>32126</b>	RunNo:	<b>43268</b>					
Prep Date:	<b>6/6/2017</b>	Analysis Date:	<b>6/6/2017</b>	SeqNo:	<b>1362102</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	10	50.00	0	85.6	73.2	114			
Surr: DNOP	3.6		5.000		72.9	70	130			

Sample ID	<b>MB-32126</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>32126</b>	RunNo:	<b>43268</b>					
Prep Date:	<b>6/6/2017</b>	Analysis Date:	<b>6/6/2017</b>	SeqNo:	<b>1362103</b>	Units:	<b>mg/Kg</b>			
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	9.6		10.00		96.4	70	130			

Sample ID	<b>1706218-001AMS</b>	SampType:	<b>MS</b>	TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>S Wall 5'</b>	Batch ID:	<b>32126</b>	RunNo:	<b>43268</b>					
Prep Date:	<b>6/6/2017</b>	Analysis Date:	<b>6/6/2017</b>	SeqNo:	<b>1362737</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	87	10	50.81	59.14	54.6	55.8	122			S
Surr: DNOP	4.5		5.081		87.8	70	130			

Sample ID	<b>1706218-001AMSD</b>	SampType:	<b>MSD</b>	TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>S Wall 5'</b>	Batch ID:	<b>32126</b>	RunNo:	<b>43268</b>					
Prep Date:	<b>6/6/2017</b>	Analysis Date:	<b>6/6/2017</b>	SeqNo:	<b>1362738</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	91	10	49.95	59.14	64.6	55.8	122	5.10	20	
Surr: DNOP	4.6		4.995		92.0	70	130	0	0	

**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
- R RPD outside accepted recovery limits
- 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#: 1706218

07-Jun-17

Client: XTO Energy  
Project: Caldwell A 1 E

Sample ID <b>MB-32111</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>32111</b>	RunNo: <b>43287</b>								
Prep Date: <b>6/5/2017</b>	Analysis Date: <b>6/6/2017</b>	SeqNo: <b>1363134</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	990		1000		99.2	54	150			

Sample ID <b>LCS-32111</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>32111</b>	RunNo: <b>43287</b>								
Prep Date: <b>6/5/2017</b>	Analysis Date: <b>6/6/2017</b>	SeqNo: <b>1363135</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	105	76.4	125			
Surr: BFB	1100		1000		111	54	150			

### 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
- R RPD outside accepted recovery limits
- 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#: 1706218

07-Jun-17

**Client:** XTO Energy  
**Project:** Caldwell A 1 E

Sample ID <b>MB-32111</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>32111</b>		RunNo: <b>43287</b>							
Prep Date: <b>6/5/2017</b>	Analysis Date: <b>6/6/2017</b>		SeqNo: <b>1363144</b>		Units: <b>mg/Kg</b>					
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	1.2		1.000		124	66.6	132			

Sample ID <b>LCS-32111</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>32111</b>		RunNo: <b>43287</b>							
Prep Date: <b>6/5/2017</b>	Analysis Date: <b>6/6/2017</b>		SeqNo: <b>1363145</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	102	80	120			
Toluene	1.0	0.050	1.000	0	104	80	120			
Ethylbenzene	1.1	0.050	1.000	0	105	80	120			
Xylenes, Total	3.2	0.10	3.000	0	108	80	120			
Surr: 4-Bromofluorobenzene	1.3		1.000		128	66.6	132			

Sample ID <b>1706218-001AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>S Wall 5'</b>	Batch ID: <b>32111</b>		RunNo: <b>43287</b>							
Prep Date:	Analysis Date: <b>6/6/2017</b>		SeqNo: <b>1363146</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.75	0.018	0.7057	0.02025	104	61.5	138			
Toluene	0.97	0.035	0.7057	0.2100	108	71.4	127			
Ethylbenzene	0.87	0.035	0.7057	0.1092	108	70.9	132			
Xylenes, Total	2.8	0.071	2.117	0.5051	109	76.2	123			
Surr: 4-Bromofluorobenzene	0.96		0.7057		136	66.6	132			S

Sample ID <b>1706218-001AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>S Wall 5'</b>	Batch ID: <b>32111</b>		RunNo: <b>43287</b>							
Prep Date:	Analysis Date: <b>6/6/2017</b>		SeqNo: <b>1363147</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.74	0.018	0.7057	0.02025	102	61.5	138	1.95	20	
Toluene	0.96	0.035	0.7057	0.2100	106	71.4	127	1.36	20	
Ethylbenzene	0.85	0.035	0.7057	0.1092	106	70.9	132	2.19	20	
Xylenes, Total	2.8	0.071	2.117	0.5051	107	76.2	123	1.92	20	
Surr: 4-Bromofluorobenzene	0.93		0.7057		132	66.6	132	0	0	

**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
- R RPD outside accepted recovery limits
- 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: XTO Energy

Work Order Number: 1706218

RcptNo: 1

Received By: Anne Thorne

6/6/2017 7:15:00 AM

*Anne Thorne*

Completed By: Anne Thorne

6/6/2017 7:22:42 AM

*Anne Thorne*

Reviewed By:

*[Signature]*

6/6/17

### Chain of Custody

- 1. Custody seals intact on sample bottles? Yes  No  Not Present
- 2. Is Chain of Custody complete? Yes  No  Not Present
- 3. How was the sample delivered? Courier

### Log In

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

### Special Handling (if applicable)

- 16. 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: \_\_\_\_\_

17. Additional remarks:

### 18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			



Quote Number

Page 1 of 1

XTO Contact

XTO Contact Phone #

Email Results to:

Logan Kurt James

API Number

Test Reason

Well Site/Location  
Caldwell A 1 E

Release

Collected By

Samples on Ice

Turnaround

Logan H

(V)N

Standard

Company

QA/QC Requested

Next Day

XTO

Two Day

Three Day

Signature

Gray Areas for Lab Use Only!

Std. 5 Bus. Days (by contract)

Date Needed

04/21/17

Analysis	
8015 (D20, G20, M20)	
8021 (BTEX)	
Chloride	

Lab Information

Office Abbreviations

- Farmington = FAR
- Durango = DUR
- Bakken = BAK
- Raton = RAT
- Piceance = PC
- Roosevelt = RSV
- La Barge = LB
- Orangeville = OV

Sample ID	Sample Name	Media	Date	Time	Preservative	No. of Cont.	Sample Number
S. Wall 5'	S. wall 5' 27p	S	6-5	1500	cool	1-402	170628-201
E. Wall 5'	E. wall 5' 59p			1520			202
N. Wall 5'	N. wall 5' 89p			1530			203
W. Wall 5'	W. wall 5' 0p			1600			204
Bottom 5' 6"	Bottom 5' 6" 10p			1630			205

Media: Filter = F Soil = S Wastewater = WW Groundwater = GW Drinking Water = DW Sludge = SG Surface Water = SW Air = A Drill Mud = DM Other = OT

Relinquished By: (Signature) <u>[Signature]</u>	Date: <u>6/5/17</u>	Time: <u>1815</u>	Received By: (Signature) <u>[Signature]</u>	Number of Bottles	Sample Condition
Relinquished By: (Signature) <u>[Signature]</u>	Date: <u>6/5/17</u>	Time: <u>1830</u>	Received By: (Signature) <u>[Signature]</u>	Temperature: <u>1-0</u>	Other Information
Relinquished By: (Signature)	Date:	Time:	Received for Lab by: (Signature)	Date:	

Comments:

\* Sample ID will be the office and sampler-date-military time FARJM-MMDDYY-1200