

RCVD JAN 31'12 OIL CONS. DIV.

DIST. 3

## Federal 18 #1T Remediation System 2011 3rd Quarter Report

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January 2012

## Table of Contents

Introduction	. 1
History	. 1
3rd Quarter Activities	. 2
Recommendations	. 3

### Tables

Water Analysis Results Casing Pressure Gas Analysis Results

### Attachments

Gas Analysis Lab reports Water Analysis

### Introduction

The purpose of this report is to summarize the current on-site activities involving venting gas and producing water from a former coal bed methane gas well at the Federal 18 #1T. The casing of this well has been modified to vent gas and purge water from the Ojo Alamo Formation. The setup and initial installation of this system is detailed in a report submitted to Brandon Powell, New Mexico Oil Conservation Division (OCD), in November, 2010. This quarterly report details operations from July 1, 2011, through September 30, 2011.

### History

The vacuum system at the Federal 18 #1T is being operated as part of an on going effort between the OCD and XTO Energy, Inc. (XTO) to vent gas from the Nacimiento formation just above the Ojo Alamo Formation. Gas was recently found in the Nacimiento formation which could have come from several contributing sources. The Federal 1 #18 (30-045-09466), located in Section 10 of Township 30N, Range 13W and approximately 2,600' to the south-west of water well SJ-01737, was plugged in 1988 by Southern Union Oil Company. This well only had an initial surface casing of 200' when it was drilled in 1959. Section 18 also has one (1) additional well plugged by XTO Energy, Inc. in 2010. Section 19 of Township 30N, Range 12W has two (2) historically plugged wells. Approximately 4,400' to the south of water well SJ-01737, the Dansby #2 (30-045-09402) was plugged by Don Trader, Inc. in 1954 with a total depth of 1980' and a surface casing of only 100', and the second was well plugged by Amoco Production in 1988. There are also three (3) additional wells plugged by Texacoma in 1997 in Section 19. There are additionally numerous oil and gas wells being operated by local exploration and production companies in the area. In Section 18, there are three (3) wells being operated by XTO Energy, Inc., and two (2) wells being operated by ConocoPhillips as Burlington Resources. In Section 19, there are nine (9) wells being operated by XTO Energy, Inc. In Section 7, there are seven (7) wells being operated by XTO Energy, Inc, and four (4) wells being operated by Robert L Bayless Producers, LLC. Furthermore, there is naturally occurring gas in the formation according to statements from local water well drillers, and a casing leak was discovered at the New Mexico Federal N #3E well site, (located in Unit D, Section 18, Township 30N, Range 12W, San Juan County, New Mexico). This leak was identified as a result of discovery of gas in a local water well (SJ 1737) in April, 2010. Bradenhead pressures were observed at several XTO wells in the area. The New Mexico Federal N #3E, the New Mexico Federal N #3F and the New Mexico Federal N #3 all had bradenhead pressure tests performed. The bradenhead pressure from the New Mexico Federal N #3E was 17 psi, indicating a leak in the casing. The casing leak was repaired, and the New Mexico Federal N #3E was put back into operation. In agreement with the OCD, a nearby gas well scheduled to be plugged, Federal 18 #1T, was modified to act as a venting well by setting a plug at approximately 513 feet. Perforations were made in the casing at 437 feet and 457 feet in order to assess the groundwater and vent gas from the Nacimiento.

On September 24, 2010, a swab rig was used to determine if the well would produce water using the perforations. The swab rig recovered approximately 2 barrels of water, indicating that the perforations would produce water. A sample collected during the swab returned results above Water Quality Control Commission (WQCC) standards for benzene, total xylenes, and total chlorides; see attached *Federal 18 #1T Water Results Table*. Due to the low pH and high chlorides, it was inferred that the acid used to dissolve cement during perforation activities may

have infiltrated the aquifer, causing the increased levels shown in the sampling results. XTO recommended pumping the aquifer until sampling results were below the WQCC standards for BTEX and chlorides.

A pump was installed in the Federal 18 #1T on November 9, 2010 at approximately 485 feet. During the pump installation, the water level was checked using a Keck ET Long water level indicator. The static water level was found to be approximately 402.20 feet. The pump was initially set to operate four (4) times a day for 15 minutes, purging approximately 260 gallons per day. During swab and pump installation activities, no gas was found flowing from the well.

On November 11, 2010, a small vacuum pump was installed at the Federal 18 #1T to determine if gas could be vented. The discharge from the vacuum was checked using a MSA 4-Gas Monitor, which confirmed that methane was being vented from the vacuum pump discharge. The vacuum pump operates at a discharge rate of three (3) standard cubic feet per minute (scfm), which is equivalent to approximately six (6) actual cubic feet per minute (acfm) based on elevation. This volume was calculated using the conversion factors provided by the vacuum pump manufacturer, Becker. The vacuum pump holds a vacuum of approximately -12 inches of mercury on the casing of the Federal 18 #1T during operation. Both the vacuum pump and the water pump were powered by a portable generator placed on-site.

The water pump was plumbed into the existing water lines on site, so that all water would pump into the 210 barrel water tank left on-site from production activities. Water piping above ground was wrapped with heat trace and insulation to prevent freezing.

The system was electrified on February 3, 2011 to prevent down time due to generator maintenance issues.

### **3rd Quarter Activities**

During the third quarter of 2011, the system ran continuously with minimal down time. As of September 30, 2011, approximately 2,516.8 thousand cubic feet (MCF) of gas has been vented from the Federal 18 #1T casing, with the system venting approximately 60.4 MCF per week during operation. On August 17, 2011, a gas sample was collected from the vacuum pump discharge, and analyzed in house for percentage methane. The sample returned results of 80.5% methane.

A total of 180,392.5 gallons of water have been removed from the Federal 18 #1T as of September 30, 2011. The water pump operated for 15 minutes every 90 minutes during the third quarter, purging nearly 900 gallons of water per day. The attached *Federal 18 #1T Water Results Table* shows that benzene decreased steadily from 52 ppb at the end of the second quarter to 7.2 ppb by September of 2011. Chloride levels have showed an overall decrease from levels of 61 ppm in late June, to levels of 35 ppm in late September. These values are consistent with the increasing pH numbers throughout the third quarter. As residual acid is removed from the formation, the pH rises closer to the natural background (pH = 7.2 in well SJ 1737), and benzene and chloride levels decrease. All BTEX constituents, as well as chlorides, are below WQCC standards. TDS continues to be above WQCC standards, but background levels (1400 ppm) in water well SJ 1737 are above WQCC standards as well.

Pressure at well SJ 1737 was checked periodically over the course of the third quarter. The pressure was checked by shutting in the casing for a minimum of 24 hours prior to reading the pressure gauge. The pressure readings and average barometric pressures are outlined in the attached *Well SJ 1731 Casing Pressures Table*. The pressure did not show a correlation to the barometric pressure, but did show a slight downward trend during the third quarter, as levels dropped from 6 oz early in the quarter to levels of 4.5 oz late in the quarter. Since January of 2011, the casing pressure in the water well SJ 1737 has shown an overall decrease from 9 oz to 4.5 oz in September if 2011.

On August 17, 2011, a gas sample was collected from the vacuum pump discharge, and analyzed in house for percentage methane. The sample returned results of 80.5% methane.

### Recommendations

XTO recommends the continued operation of the remediation system at the Federal 18 #1T. Continued venting and monthly groundwater sampling will allow XTO to continue to monitor trends in the groundwater at the Federal 18 #1T. XTO will continue monitoring the pressure at water well SJ 1737 as well, to further evaluate this location.

James McDaniel, CHMM #15676 EH&S Supervisor XTO Energy, Inc. San Juan Division

## QUESTAR APPLIED TECHNOLOGY

## 1210 D. Street, Rock Springs, Wyoming 82901

(307) 352-7292

LIMS ID:	N/A		Description:	Federal 18 #1T Casing
Analysis Date/Time:	1/20/2011	12:01 PM	Field:	San Juan, NM
Analyst Initials:	AST		ML#:	XTO
Instrument ID:	Instrument 1		GC Method:	Quesbtex
Data File:	QPC13.D			
Date Sampled:	1/18/2011			
15				
Component	Mol%		Wt9	% LV%
Methane	76.8704		62.7056	78.3534
Ethane	3.5457		5.4212	5.7178
Propane	0.9279		2.0806	1.5385
Isobutane	0.3044		0.8995	0.5991
n-Butane	0.3055		0.9028	0.5795
Neopentane	0.0481		0.1763	0.1108
Isopentane	0.1021		0.3745	0.2248
n-Pentane	0.1017		0.3730	0.2216
2,2-Dimethylbutane	0.0485		0.2126	0.1219
2,3-Dimethylbutane	0.0478		0.2093	0.1178
2-Methylpentane	0.0491		0.2151	0.1226
3-Methylpentane	0.0477		0.2092	0.1172
n-Hexane	0.0493		0.2162	0.1221
Heptanes	0.0734		0.3566	0.1815
Octanes	0.0047		0.0276	0.0145
Nonanes	0.0041		0.0243	0.0115
Decanes plus	0.0012		0.0085	0.0044
Nitrogen	16.6009		23.6460	10.9514
Carbon Dioxide	0.8675		1.9411	0.8896
Oxygen	0.0000		0.0000	0.0000
Hydrogen Sulfide	0.0000		0.0000	0.0000
Total	100.0000	and the	100.0000	100.0000
Global Properties		Units		
Gross BTU/Real CF	912.3		BTU/SCF at 6	0°F and14.73 psia
Sat.Gross BTU/Real CF	897.5		BTU/SCF at 6	0°F and14.73 psia
Gas Compressibility (Z)	0.9980			
Specific Gravity	0.6807		air=1	
Avg Molecular Weight	19.667		gm/mole	
Propane GPM	0.254303		gal/MCF	
Butane GPM	0.195423		gal/MCF	
Gasoline GPM	0.221555		gal/MCF	
26# Gasoline GPM	0.318121		gal/MCF	
Total GPM	0.671781		gal/MCF	
Base Mol%	88.907		%v/v	
The second second			(a.m.)	
Sample Temperature:	N/A		۴	
Sample Pressure:	N/A		psig	
H2SLength of Stain Tube	e N/A		ppm	

Component	Mol%	Wt%	LV%
Benzene	0.0092	0.0365	0.0155
Toluene	0.0069	0.0323	0.0139
Ethylbenzene	0.0004	0.0024	0.0010
M&P Xylene	0.0015	0.0081	0.0035
O-Xylene	0.0004	0.0021	0.0009
2,2,4-Trimethylpentane	0.0044	0.0256	0.0133
Cyclopentane	0.0000	0.0000	0.0000
Cyclohexane	0.0061	0.0259	0.0124
Methylcyclohexane	0.0068	0.0337	0.0163
Description:	Federal 1E & 1 T Casing		

## GRI GlyCalc Information

Component	Mol%	Wt%	LV%	
Carbon Dioxide	0.8675	1.9411	0.8896	1
Hydrogen Sulfide	0.0000	0.0000	0.0000	
Nitrogen	16.6009	23.6460	10.9514	
Methane	76.8704	62.7056	78.3534	
Ethane	3.5457	5.4212	5.7178	
Propane	0.9279	2.0806	1.5385	
Isobutane	0.3044	0.8995	0.5991	
n-Butane	0.3055	0.9028	0.5795	
Isopentane	0.1502	0.5508	0.3356	
n-Pentane	0.1017	0.3730	0.2216	
Cyclopentane	0.0000	0.0000	0.0000	
n-Hexane	0.0493	0.2162	0.1221	
Cyclohexane	0.0061	0.0259	0.0124	
Other Hexanes	0.1931	0.8462	0.4795	
Heptanes	0.0400	0.2026	0.1101	
Methylcyclohexane	0.0068	0.0337	0.0163	
2,2,4 Trimethylpentane	0.0044	0.0256	0.0133	
Benzene	0.0092	0.0365	0.0155	
Toluene	0.0069	0.0323	0.0139	
Ethylbenzene	0.0004	0.0024	0.0010	
Xylenes	0.0019	0.0102	0.0044	
C8+ Heavies	0.0077	0.0478	0.0250	
Subtotal	100.0000	100.0000	100.0000	
Oxygen	0.0000	0.0000	0.0000	
Total	100.0000	100.0000	100.0000	

## QUESTAR APPLIED TECHNOLOGY

## 1210 D. Street, Rock Springs, Wyoming 82901

(307) 352-7292

LIMS ID:	N/A		Description:	Federal	18 # 1T - McGuii	re Well
Analysis Date/Time:	1/21/2011	7:59 AM	Field:	San Jua	in	
Analyst Initials:	BRS		ML#:	XTO/Va	c Discharge	
Instrument ID:	Instrument 1		GC Method:	Quesbte	ex	
Data File:	QPC21.D					
Date Sampled:	1/18/2011					
			10/10		11/0/	
Component	Mol%	0	VVt	/o	LV%	
Methane	62.7531		46.6842		65.4826	
Ethane	5.6688		7.9046		9.3586	
Propane	1.8958		3.8765		3.2178	
Isobutane	0.2929		0.7895		0.5903	
n-Butane	0.2687		0.7242		0.5218	
Neopentane	0.0030		0.0102		0.0072	
Isopentane	0.0661		0.2210		0.1489	
n-Pentane	0.0211		0.0707		0.0471	
2,2-Dimethylbutane	0.0013		0.0053		0.0034	
2,3-Dimethylbutane	0.0014		0.0057		0.0036	
2-Methylpentane	0.0045		0.0178		0.0114	
3-Methylpentane	0.0021		0.0083		0.0052	
n-Hexane	0.0020		0.0080		0.0051	
Heptanes	0.0014		0.0058		0.0033	
Octanes	0.0000		0.0000		0.0000	
Nonanes	0.0002		0.0016		0.0008	
Decanes plus	0.0004		0.0029		0.0017	
Nitrogen	26.3617		34.2444		17.8034	
Carbon Dioxide	2.6555		5.4193		2.7878	
Oxygen	0.0000		0.0000		0.0000	
Hydrogen Sulfide	0.0000		0.0000	- de m	0.0000	
Total	100.0000	1	100.0000	1.1.2	100.0000	
Global Properties		Units				
Gross BTU/Real CF	807.8		BTU/SCF at 6	0°F and 14	.73 psia	
Sat.Gross BTU/Real CF	794.8		BTU/SCF at 6	0°F and 14	.73 psia	
Gas Compressibility (Z)	0.9981					
Specific Gravity	0.7463		air=1			
Avg Molecular Weight	21.565		gm/mole			
Propane GPM	0.519568		gal/MCF			
Butane GPM	0.180098		gal/MCF			
Gasoline GPM	0.038060		gal/MCF			
26# Gasoline GPM	0.122610		gal/MCF			
Total GPM	0.737782		gal/MCF			
Base Mol%	98.588		%v/v			
Sample Temperature:	N/A		°F			
Sample Pressure:	9 oz		psig			
H2SLength of Stain Tube	e N/A		ppm			

Component	Mol%	Wt%	LV%
Benzene	0.0000	0.0000	0.0000
Toluene	0.0001	0.0004	0.0002
Ethylbenzene	0.0000	0.0000	0.0000
M&P Xylene	0.0001	0.0007	0.0003
O-Xylene	0.0000	0.0002	0.0001
2.2.4-Trimethylpentane	0.0000	0.0000	0.0000
Cyclopentane	0.0000	0.0000	0.0000
Cyclohexane	0.0001	0.0004	0.0002
Methylcyclohexane	0.0000	0.0000	0.0000
Description:	Federal 18 # 1T		

## GRI GlyCalc Information

Component	Mol%	Wt%	LV%	
Carbon Dioxide	2.6555	5.4193	2.7878	
Hydrogen Sulfide	0.0000	0.0000	0.0000	
Nitrogen	26.3617	34.2444	17.8034	
Methane	62.7531	46.6842	65.4826	
Ethane	5.6688	7.9046	9.3586	
Propane	1.8958	3.8765	3.2178	
Isobutane	0.2929	0.7895	0.5903	
n-Butane	0.2687	0.7242	0.5218	
Isopentane	0.0691	0.2312	0.1561	
n-Pentane	0.0211	0.0707	0.0471	
Cyclopentane	0.0000	0.0000	0.0000	
n-Hexane	0.0020	0.0080	0.0051	
Cyclohexane	0.0001	0.0004	0.0002	
Other Hexanes	0.0093	0.0371	0.0236	
Heptanes	0.0012	0.0050	0.0029	
Methylcyclohexane	0.0000	0.0000	0.0000	
2,2,4 Trimethylpentane	0.0000	0.0000	0.0000	
Benzene	0.0000	0.0000	0.0000	
Toluene	0.0001	0.0004	0.0002	
Ethylbenzene	0.0000	0.0000	0.0000	
Xylenes	0.0001	0.0009	0.0004	
C8+ Heavies	0.0005	0.0036	0.0021	
Subtotal	100.0000	100.0000	100.0000	
Oxygen	0.0000	0.0000	0.0000	
Total	100.0000	100.0000	100.0000	

## In House Gas Analysis

Meter name	sample_ date	spec_ grav	gpm	btu	n2	co2	c1	c2	c3	ic4	nc4	ic5	nc5	сбр
FEDERAL 18 1T	08/17/11	0.71	4.27	1170.00	3.10	1.54	80.50	8.65	3.40	0.54	0.89	0.31	0.27	0.80

\*collected from the vacuum discharge at the Federal 18 #1T



### EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

0	VTO		
Client:	XIU	Project #:	98031-0528
Sample ID:	First Swab Water Sample	Date Reported:	09-28-10
Chain of Custody:	10400	Date Sampled:	09-24-10
Laboratory Number:	55955	Date Received:	09-24-10
Sample Matrix:	Aqueous	Date Analyzed:	09-27-10
Preservative:	HCI	Analysis Requested:	BTEX
Condition:	Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	143	1	0.2
Toluene	221	1	0.2
Ethylbenzene	63.6	1	0.2
p,m-Xylene	674	1	0.2
o-Xylene	276	1	0.1

### **Total BTEX**

1,380

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:		Parameter	Percent Recovery
		fluorobenzene	94.5 %
		1,4-difluorobenzene	86.0 %
		4-bromochlorobenzene	109 %
References:	Method 50 December	30B, Purge-and-Trap, Test Methods for Evalua 1996.	ting Solid Waste, SW-846, USEPA,
	Method 80 Photoioniz	21B, Aromatic and Halogenated Volatiles by G ation and/or Electrolytic Conductivity Detectors	as Chromatography Using , SW-846, USEPA December 1996.
Comments:	Federal	18 #1T	
10	-		
A	/	- /	- I II
Analyst	1 P P	Review	

5796 US Highway 64, Farmington, NM 87401 Ph (505) 632-0615 Fr (800) 362-1879 Fx (505) 632-1865 lab@envirotech-inc.com envirotech-inc.com



### EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

-0528
-10
-10
-10
-10

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	320	1	0.2
Toluene	377	1	0.2
Ethylbenzene	31.8	1	0.2
p,m-Xylene	330	1	0.2
o-Xylene	238	1	0.1

### **Total BTEX**

1,300

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:		Parameter	Percent Recovery
		fluorobenzene	87.9 %
		1,4-difluorobenzene	113 %
		4-bromochlorobenzene	116 %
References:	Method 50 December	30B, Purge-and-Trap, Test Methods for Evalua 1996.	ating Solid Waste, SW-846, USEPA,
	Method 80 Photoioniz	21B, Aromatic and Halogenated Volatiles by G ation and/or Electrolytic Conductivity Detectors	as Chromatography Using s, SW-846, USEPA December 1996.
Comments:	Federal	18 #1T	
	all		
A		2	1,0
Analyst		Review	1 Sultania



### EPA METHOD 8021 AROMATIC VOLATILE ORGANICS QUALITY ASSURANCE REPORT

Client: Sample ID: Laboratory Number: Sample Matrix: Preservative: Condition:	N/A 0927BBLK QA/QC 55956 Aqueous N/A N/A		Project #: Date Reported: Date Sampled: Date Received: Date Analyzed: Analysis:		N/A 09-28-10 N/A N/A 09-27-10 BTEX
Calibration and	I-Cal RF:	C-Cal RF;	%Diff.	Blank	Detect:
Detection Limits (ug/L)		Accept. Ra	nge 0 - 15%	Conc	Limit
Benzene	7.3537E+006	7.3759E+006	0.3%	ND	0.2
Toluene	3.9467E+006	3.9586E+006	0.3%	ND	0.2
Ethylbenzene	2.9794E+006	2.9883E+006	0.3%	ND	0.2
p,m-Xylene	6.5911E+006	6.6109E+006	0.3%	ND	0.2
o-Xylene	2.2012E+006	2.2078E+006	0.3%	ND	0.1
Duplicate Conc. (ug/L)	Sample	Duplicate	%Diff.	Accept Limit	
Benzene	320	312	2.6%	0 - 30%	
Toluene	377	365	3.2%	0 - 30%	
Ethylbenzene	31.8	29.8	6.4%	0 - 30%	
p,m-Xylene	330	308	6.7%	0 - 30%	
o-Xylene	238	231	2.9%	0 - 30%	
Spike Conc: (ug/L)	Sample	Amount Spiked	Spiked Sample	% Recovery	AcceptLimits
Benzene	320	50.0	351	94.9%	39 - 150
Toluene	377	50.0	418	98.0%	46 - 148
Ethylhonzono	31.8	50.0	910	106%	32 160
	220	100	00.9	100%	40 440
p,m-xyiene	330	100	452	105%	40 - 148

ND - Parameter not detected at the stated detection limit.

References:

o-Xylene

Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996. Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

50.0

238

Comments: QA/QC for Samples 55955-55956

Analyst

296

103%

46 - 148

Review



### CATION / ANION ANALYSIS

98031-0528
09-27-10
09-24-10
09-24-10
09-24-10

Parameter	Analytical Result	Units		
pH	5.84	s.u.		
Conductivity @ 25° C	16,000	umhos/cm		
Total Dissolved Solids @ 180C	11,100	mg/L		
Total Dissolved Solids (Calc)	11,900	mg/L		
SAR	12.2	ratio		
Total Alkalinity as CaCO3	478	mg/L		
Total Hardness as CaCO3	5,810	mg/L		
Bicarbonate as CaCO3	478	mg/L	7.83	meq/L
Carbonate as CaCO3	<0.1	mg/L	0.00	meq/L
Hydroxide as CaCO3	<0.1	mg/L	0.00	meq/L
Nitrate Nitrogen	0.500	mg/L	0.01	meq/L
Nitrite Nitrogen	<0.1	mg/L	0.00	meg/L
Chloride	7,150	mg/L	201.70	meq/L
Fluoride	1.98	mg/L	0.10	meq/L
Phosphate	0.570	mg/L	0.02	meq/L
Sulfate	16.8	mg/L	0.35	meq/L
Iron	179	mg/L	6.41	meq/L
Calcium	2,180	mg/L	108.78	meq/L
Magnesium	88.7	mg/L	7.30	meq/L
Potassium	49.1	mg/L	1.25	meq/L
Sodium	2,130	mg/L	92.66	meq/L
Cations			209.99	meq/L
Anions			210.02	meq/L
Cation/Anion Difference			0.01%	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983. Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: Federal 18 #1T

Analyst

Review

## CHAIN OF CUSTODY RECORD

10400

Client:			Project Name / Federal	Location	#17					X				ANAL	YSIS	/ PAR	AME	TERS	in an				
Client Address: 382 CR 3	2100		Sampler Name: 5 Mc D	nnie	1				8015)	1 8021)	8260)	S											
Client Phone No.: 787-0519			Client No.: 9.8031 - 0	528					<b>Aethod</b>	(Method	Method	8 Meta	/ Anion		with H/F		418.1)	RIDE				e Cool	e Intact
Sample No./ Identification	Sample Date	Sample	Lab No.	S I	ample Matrix	No./Volum of Containen	Prese	rvative KI	TPH (A	BTEX	VOC (I	RCRA	Cation	RCI	TCLP	PAH	HdT	CHLOI				Sampl	Sampl
First Swab Water Sample	9/24/10	1055	55965	Soil Solid	Sludge	2/40	X	K		X		1										N	9
Bun Water	9/4/10	1235	55956	Solid	Studge	4	X	x		X	1		X	[								N	3
	200		Terrie 1	Solid	Aqueous			13				1	M	-							-		
	1.1.1.1			Solid	Aqueous	3.									14	d'a							
		15		Soil Solid	Sludge Aqueous									16						-			
	5			Soil Solid	Sludge Aqueous							N				12				1			14
				Soil Solid	Sludge Aqueous														3			1	
				Soil Solid	Sludge Aqueous	4.5	1					1											
				Soil Solid	Sludge Aqueous		R.			12		1								18			
	-	1		Soil Solid	Sludge Aqueous																		
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Tax I.D. 62-0814289 Est. 1970

James McDaniel XTO Energy - San Juan Division 382 Road 3100 Aztec, NM 87410

Report Summary

Tuesday September 28, 2010

Report Number: L480758 Samples Received: 09/25/10 Client Project:

Description: Federal 18 1T

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Daphne Richards , ESC Representative

#### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487 GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140 NJ - TN002,NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233 AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A, TX - T104704245, OK-9915

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences. Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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James McDaniel XTO Energy - San 382 Road 3100 Aztec, NM 87410	Juan Division	REPO	RT OF ANALYSIS		September 20	8, 2010	
	1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 -				ESC Sample	# : L480758-01	
Date Received Description Sample ID Collected By Collection Date	: September 25, 20 : Federal 18 1T : FIRST SWAB WATEF : James McDaniel : 09/24/10 10:55	SAMPLE			Site ID : Project # :	FEDERAL 18 1T	
Parameter		Result	Det. Limit	Units	Method	Date	Dil.
Benzene Toluene Ethylbenzene Total Xylene Surrogate Recove	ry(%)	0.15 BDL 0.076 0.67	0.050 0.50 0.050 0.15	mg/1 mg/1 mg/1 mg/1	8021B 8021B 8021B 8021B	09/26/10 09/26/10 09/26/10 09/26/10	100 100 100 100
a.a.a-Trifluor	otoluene(PID)	102.		% Rec.	8021B	09/26/10	100

BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL) Note: The reported analytical results relate only to the sample submitted. This report shall not be reproduced, except in full, without the written approval from ESC.

. Reported: 09/28/10 17:08 Printed: 09/28/10 17:09

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James McDaniel XTO Energy - San 382 Road 3100	Juan Division	REPO	RT OF ANALYSIS		September 2	8, 2010	
AZCEC, MM 0/410					ESC Sample	# : L480758-02	
Date Received :	September 25, 201	LO					
Description :	Federal 18 1T				Site ID :	FEDERAL 18 1T	
Sample ID :	SECOND SWAB RUN W	ATER			Project # :		
Collected By : Collection Date :	James McDaniel 09/24/10 12:35						
Parameter		Result	Det. Limit	Units	Method	Date	Dil.
Benzene		0.19	0.00050	mg/l	8021B	09/26/10	1
Toluene		0.17	0.0050	mg/l	8021B	09/26/10	1
Ethulbenzene		0 024	0.00050	mg/l	8021B	09/26/10	1
Total Xylene	(8)	0.21	0.0015	mg/l	8021B	09/26/10	1
a,a,a-Trifluoro	btoluene(PID)	95.3		% Rec.	8021B	09/26/10	1

BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL) Note: The reported analytical results relate only to the sample submitted. This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 09/28/10 17:08 Printed: 09/28/10 17:09

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Est. 1970

James McDaniel XTO Energy - San Juan Division 382 Road 3100 Aztec, NM 87410	REPO	RT OF ANALYSIS	3	September 28,	2010	
Date Received : September 25, 20 Description : Federal 18 1T	10			ESC Sample #	: L480758-03	
Sample ID : SECOND SWAB RUN	WATER			Site ID :	FEDERAL 18 1T	
Collected By : James McDaniel Collection Date : 09/24/10 12:35				Project # :		
Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride Fluoride Nitrate Nitrite Sulfate	6800 0.71 BDL BDL 860	100 0.50 0.10 0.10 250	mg/1 mg/1 mg/1 mg/1 mg/1	9056 9056 9056 9056 9056	09/25/10 09/28/10 09/25/10 09/25/10 09/28/10	100 5 1 1 50
Alkalinity Alkalinity,Bicarbonate Alkalinity,Carbonate Alkalinity,Hydroxide	230 230 BDL BDL	20. 20. 20. 20.	mg/l mg/l mg/l mg/l	2320B 2320B 2320B 2320B	09/27/10 09/28/10 09/28/10 09/28/10	1 1 1 1
Hardness, Total (mg/L as CaCO3)	5800	600	mg/l	130.1	09/27/10	20
pH	6.1		su	9040C	09/28/10	1
Phosphorus, Total	3.8	0.10	mg/l	365.1	09/28/10	1
Specific Conductance	18000		umhos/cm	9050A	09/28/10	1
Dissolved Solids	13000	10.	mg/l	2540C	09/28/10	1
Suspended Solids	1500	1.0	mg/l	2540D	09/27/10	1
Calcium Iron Magnesium Potassium Sodium	2300 370 88. 63. 1000	2.5 0.10 0.10 0.50 0.50	mg/l mg/l mg/l mg/l mg/l	6010B 6010B 6010B 6010B 6010B	09/28/10 09/28/10 09/28/10 09/28/10 09/28/10	5 1 1 1

BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL) Note: The reported analytical results relate only to the sample submitted. This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 09/28/10 17:08 Printed: 09/28/10 17:09 L480758-03 (PH) - 6.1@18.8c

Page 4 of 6

### Attachment A List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L480758-03	WG500154	SAMP	рН	R1398088	Т8

#### Attachment B Explanation of QC Qualifier Codes

Qualifier	Meaning
Т8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.
	Qualificer Depart Information

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

#### Definitions

- Accuracy The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Differrence.
- Surrogate Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Page 6 of 6

## Summary of Remarks For Samples Printed 09/28/10 at 17:09:19

TSR Signing Reports: 288 R1 - Rush: Sameday

report J's if above limits-B 0.01, T 0.75, E 0.75, X 0.62 mg/l

Sample: L480758-01 Account: XTORNM Received: 09/25/10 09:00 Due Date: 09/27/10 00:00 RPT Date: 09/28/10 17:08 Sample: L480758-02 Account: XTORNM Received: 09/25/10 09:00 Due Date: 09/27/10 00:00 RPT Date: 09/28/10 17:08 Sample: L480758-03 Account: XTORNM Received: 09/25/10 09:00 Due Date: 09/28/10 00:00 RPT Date: 09/28/10 17:08

Company Name/Address			Alternate Bi	lling	8 4 8 8 5	3		Analy	sis/Cont	tainer	r/Preserv	ative	E225	Chain of Custody
XTO Energy, Inc.			VTODUN	0240400			1	SN	- All				1.2.2.4	Pageof
82 County Road 3100 ztec, NM 87410			XTORNM	ClrCa	/Cool +HI				10	Prepared by:	MENTAL			
			Report to: Jam	es McDaniel			H	Jac 1					Science cor	'p
			E-mail to: Jam	es_McDaniel@>	toenergy.com		120	-19 -19			15		12065 Leba	non Road
Project Description: Federal PHONE: 505-333-3701 FAX:	( & Client Project	#17 No.	F	City/S Farmine Lab Project #	State Collected:	m	12-40.	try/2					Phone (615) Phone (800 FAX (61	)758-5858 )) 767-5859  5)758-5859
Collected by: James McDaniel	Site/Facility ID	# IG.	#1-	P.O.#			31)	Sim					CaCada	(Internet and internet)
Collected by signature:	Rush? (1	Lab MUST to Next Day Two Day Three Day	be Notified) 100% 50% 25%	Date Result 9/27 Email?N FAX?N	Needed	No	TEX (Oa	neral Che			1.00		XTORNM Template/Prelogin Shipped Via: Fed Ex	(iau use piny)
Sample ID	Comp/Grab	Matrix	Depth	Date	Time	Cntrs	N	10	Sec. 1		1000	1	Remarks/contaminant	Sample # (lab only)
First Swab Water Sample	Grad	62	560'	9/24/10	1055	2	V		Sale of				SAME DAY	(480758-01
Second Swab Kun Water	Grab	GW	560	9/24/10	12 55	5	V	$\checkmark$	-				SAME DAY	-02/03
	1.5					-	1							
		1		1.00		-					2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1.31 (2)		
						5.7	1			1	1 all			
	-			1		1	E.							
Call and the second	and a state	1.1.1	12.13%		1. A. A.	100	1			14				
and the second second			122.00	1924	1019		-6.			ALC: NO			C. P. Carlos and	
Matrix: SS-Soil/Solid GW-Groundwa	ater WW-Wa	astewater (	DW-Drinking V	Vater OT-O	ther						F	pH low	Temp	- 3
Relinguisher by (Signature	Date: 9 24/10 Date:	Time: 1430 Time:	Received by:(S Received by: (S	Signature) Signature) T	SMZ		Sample B(J) Temp:	$\frac{52}{71}$	ned via: F $D \le C$	edEX	X_UPS_ 3333	Other	Condition Old PT poured up +	(lab use only) - preserved & ESC
Relinquisher by:(Signature	Date:	Time:	Received for I	ab by: (Signatur	e)	2	Date:	5-6	1	T	7		pH Checked:	NCF:
			Ken	- Wa	le-		191	25	110		09	60	62	AND IN THE REAL PROPERTY OF

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James McDaniel XTO Energy - San Juan Division 382 Road 3100 Aztec, NM 87410

### Report Summary

Monday November 08, 2010

Report Number: L487434 Samples Received: 11/05/10 Client Project:

Description: Federal 18-1T

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Daphne Richards , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487 GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140 NJ - TN002,NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233 AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A, TX - T104704245, OK-9915

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Page 1 of 10



XTO Energy - San Juan Division 382 Road 3100 Aztec, NM 87410

Date Received : November 05, 2010 Description : Federal 18-1T

Sample ID : MCQUIRE WELL 11-04-10

James McDaniel

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Tax I.D. 62-0814289

Est. 1970

November 08, 2010

ESC Sample # : L487434-01

Site ID : MCQUIRE WELL

Project # :

Collected By : Bernie Lauctes Collection Date : 11/04/10 14:40										
Parameter	Result	Det. Limit	Units	Method	Date	Dil.				
Chloride Fluoride	15. 0.32	1.0	mg/l mg/l	9056 9056	11/05/10 11/05/10	1				
Nitrate Nitrite Sulfate	BDL BDL 1600	0.10 0.10 250	mg/l mg/l mg/l	9056 9056 9056	11/05/10 11/05/10 11/06/10	1 50				
Alkalinity Alkalinity,Bicarbonate Alkalinity,Carbonate Alkalinity,Hydroxide	220 220 BDL BDL	20. 20. 20. 20.	mg/l mg/l mg/l mg/l	2320B 2320B 2320B 2320B	11/08/10 11/08/10 11/08/10 11/08/10	1 1 1 1				
Hardness, Total (mg/L as CaCO3)	1400	300	mg/l	130.1	11/08/10	10				
рн	7.2		su	9040C	11/06/10	1				
Phosphorus, Total	3.0	0.10	mg/l	365.1	11/08/10	1				
Specific Conductance	2600		umhos/cm	9050A	11/08/10	1				
Dissolved Solids	1400	10.	mg/l	2540C	11/07/10	1				
Suspended Solids	21.	1.0	mg/l	2540D	11/05/10	1				
Calcium Iron Magnesium Potassium Sodium	490 1.2 46. 5.6 120	0.50 0.10 0.10 0.50 0.50	mg/1 mg/1 mg/1 mg/1 mg/1	6010B 6010B 6010B 6010B 6010B	11/06/10 11/06/10 11/06/10 11/06/10 11/06/10	1 1 1 1				
Benzene Toluene Ethylbenzene Total Xylene	BDL 0.0052 BDL BDL	0.00050 0.0050 0.00050 0.0015	mg/l mg/l mg/l mg/l	8021B 8021B 8021B 8021B	11/05/10 11/05/10 11/05/10 11/05/10	1 1 1 1				
Surrogate Recovery(%) a,a,a-Trifluorotoluene(PID)	99.7		% Rec.	8021B	11/05/10	1				

REPORT OF ANALYSIS

BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL) Note: The reported analytical results relate only to the sample submitted. This report shall not be reproduced, except in full, without the written approval from ESC.

. Reported: 11/08/10 17:52 Printed: 11/08/10 17:58 L487434-01 (PH) - 7.2@13.5c

Page 2 of 10

#### Attachment A List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L487434-01	WG507071 WG507025	SAMP SAMP	pH Nitrate	R1461350 R1459869	T8 J6

#### Attachment B Explanation of QC Qualifier Codes

Qualifier	Meaning
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low
TB	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

#### Definitions

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- Precision The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Differrence.
- Surrogate Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Page 4 of 10

## L.A.B S.C.I.E.N.C.E.S

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Tax I.D. 62-0814289

Est. 1970

Quality Assurance Report Level II

L487434

November 08, 2010

		Laboratory	Blank			
Analyte	Result	Units	* Rec	Limit	Batch	Date Analyzed
Benzene	< .0005	mg/l			WG506984	11/05/10 17:4
Ethylbenzene	< .0005	mg/1			WG506984	11/05/10 17:4
Toluene	< .005	mg/l			WG506984	11/05/10 17:4
Total Xylene	< .0015	mg/l			WG506984	11/05/10 17:4
a,a,a-Trifluorotoluene(PID)		% Rec.	100.7	55-122	WG506984	11/05/10 17:4
Benzene	< .0005	mg/l			WG506984	11/05/10 17:4
Ethylbenzene	< .0005	mg/1			WG506984	11/05/10 17:4
Toluene	< .005	mg/l			WG506984	11/05/10 17:4
Total Xylene	< .0015	mg/l			WG506984	11/05/10 17:40
a, a, a-Trifluorotoluene (PID)		* Rec.	100.7	54.8-121.7	WG506984	11/05/10 17:4
Chloride	. 1	mg /1			WG507025	11/05/10 07.2
Fluoride	- 1	mg/1			WG507025	11/05/10 07:2
Nitrate		mg/1			WG507025	11/05/10 07:2
Nitrito	s . 1	mg/1			WG507025	11/05/10 07:2
NICIICE		mg/1	CALL STREET, SALES		WG507025	11/05/10 07:2
Calcium	< .5	mg/l			WG507079	11/06/10 20:30
Iron	< .1	mg/l			WG507079	11/06/10 20:30
Magnesium	< .1	mg/l			WG507079	11/06/10 20:30
Potassium	< .5	mg/l			WG507079	11/06/10 20:30
Sodium	< .5	mg/l			WG507079	11/06/10 20:3
Dissolved Solids	< 10	mg/1			WG507057	11/07/10 19:21
Dissource Sources	10	mg/1			10307037	11/01/10 19.20
Suspended Solids	< 1	mg/l			WG507053	11/05/10 15:4
рН	5.10	su			WG507071	11/06/10 08:54
Sulfate	< 5	mg/l			WG507185	11/06/10 06:3
Hardness, Total (mg/L as CaCO3)	< 30	mg/l			WG507371	11/08/10 12:00
Alkalinity	< 20	mg/l			WG506979	11/08/10 12:19
Specific Conductance	1.30	umhos/cm			WG507156	11/08/10 16:00
Phosphorus, Total	< .1	mg/l			WG507159	11/08/10 16:33
		D-14-		2 Part - Sand	C STATES	
Analyte	Units	Result Duplica	licate RPD	Limit	Ref Sam	p Batch

Nitrate mg/l 20 L487436-07 WG507025 0 0 0 Chloride 43.0 43.0 0.232 L486754-01 WG507025 mg/l 20 L486784-03 L486784-03 L486784-03 Calcium mg/l 220. 220. 0.913 20 WG507079 WG507079 Iron mg/l 1.10 1.10 1.83 20 # sium mg/l 35.0 35.0 1.15 20
\* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.' Magnesium WG507079

Page 5 of 10

## S.C.I.E.N.C.E.S L.A.B

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Aztec, NM 87410

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Est. 1970

Quality Assurance Report Level II L487434

November 08, 2010

			Duplicate				
Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
			and the second second	and a second	in the second second		MARAZAZA
Potassium	mg/1	1.10	1.00	5.83	20	L486784-03	WG507079
Sodium	mg/l	80.0	81.0	0.868	20	L486784-03	WG507079
Dissolved Solids	mg/l	1400	1400	0.285	5	L487434-01	WG507057
Suspended Solids	mg/l	310.	310.	0.322	5	L486931-01	WG507053
рн	su	8.10	8.10	0	1	L485184-02	WG507071
Sulfate	mg/1	1500	1600	4.47	20	L487434-01	WG507185
Sulfate	mg/l	0	3.20	NA	20	L485927-08	WG507185
Hardness, Total (mg/L as CaCO3)	mg/l	700.	710.	0.849	20	L486784-03	WG507371
Hardness, Total (mg/L as CaCO3)	mg/l	380.	390.	2.60	20	L487069-07	WG507371
Alkalinitu	mg/1	420	420	0.948	20	L486566-19	WG506979
Alkalinity	mg/1	630	620	0 963	20	L487069-04	WG506979
Alkalinity	mg/ 1	050.	020.	0.505			
Specific Conductance	umhos/cm	270.	270.	0.260	20	L486754-01	WG507156
Specific Conductance	umhos/cm	88.0	88.0	0.228	20	L487553-01	WG507156
Phosphorus, Total	mg/l	6.30	6.20	0.963	20	L486999-03	WG507159
Phosphorus, Total	mg/l	4.10	3.80	7.84	20	L486074-01	WG507159
				-	-		
		Laborato	Laboratory Control Samp				Detals
Analyte	Units	Known 1	/al R	Result	* Rec	Limit	Batch
Bangana	mc /1	05	0.0	495	0.99	79-114	WG506984
Ethulhangano	mg/1	.05	0.0	515	103.	80-116	WG506984
Telupe	mg/1	05	0.0	1501	100	79-112	WG506984
Total Vulene	mg/1	15	0.1	52	102.	84-118	WG506984
a a Trifluorotoluene(PID)	mg/ +				99.37	55-122	WG506984
Benzene	mcr/1	05	0.0	495	99.0	79-114	WG506984
Ethylborrane	mg/1	05	0.0	515	103.	80-116	WG506984
Toluene	mg/1	05	0.0	0501	100.	79-112	WG506984
Total Vulene	mg/1	15	0.1	152	102.	84-118	WG506984
a, a, a-Trifluorotoluene (PID)		R SEPTIME	in second second	Cherty Witches	99.37	54.8-121.7	WG506984
Service and the service of the service of the	10			-		00 110	MOLOZOZE
Chloride	mg/1	40	39.	5	98.8	90-110	WG507025
Fluoride	mg/1	8	7.9	1	98.9	90-110	WG507025
Nitrate	mg/l	8	8.2	24	103.	90-110	WG507025
Nitrite	mg/1	8	7.8	50	98.3	30-110	WG507025
Calcium	mg/l	11.3	10.	.8	95.6	85-115	WG507079
Iron	mg/l	1.13	1.0	05	92.9	85-115	WG507079
Magnesium	mg/1	11.3	11.	.1	98.2	85-115	WG507079
Potassium	mg/1	11.3	10.	.8	95.6	85-115	WG507079
Sodium	mg/l	11.3	10.	. 8	95.6	85-115	WG507079

\* Performance of this Analyte is outside of established criteria. For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

Page 6 of 10

# LAB S.C.I.E.N.C.E.S

YOUR LAB OF CHOICE

XTO Energy - San Juan Division James McDaniel 382 Road 3100

Aztec, NM 87410

12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Quality Assurance Report Level II	
L487434	
	1 230

November 08, 2010

Analyte	Units	Labor Know	atory Cont n Val	rol Sample Result	% Rec	Li	mit	Batch
Dissolved Solids	mg/l	8800	Line way	8700	98.8	85	-115	WG507057
Suspended Solids	mg/l	773		836.	108.	85	-115	WG507053
pH	su	6.92		7.00	101.	97	.98-102.02	WG507071
Sulfate	mg/l	40		40.5	101.	90	-110	WG507185
Hardness, Total (mg/L as CaCO3)	mg/l	200		186.	93.0	85	-115	WG507371
Alkalinity	mg/l	40		34.8	87.0	85	-115	WG506979
Specific Conductance	umhos	cm 406		420.	103.	85	-115	WG507156
Phosphorus, Total	mg/l	1		1.05	105.	85	-115	WG507159
Analyte	Units	Laboratory Result	Control S Ref	ample Duplicat %Rec	e Limit	RPD	Limit	Batch
Benzene	mg/l	0.0509	0.0495	102.	79-114	2.73	20	WG506984
Ethylbenzene	mg/l	0.0520	0.0515	104.	80-116	1.11	20	WG506984
Toluene	mg/l	0.0512	0.0501	102.	79-112	2.23	20	WG506984
Total Xylene	mg/l	0.154	0.152	102.	84-118	0.770	20	WG506984
a, a, a-Trifluorotoluene (PID)				99.34	55-122	10.000		WG506984
Benzene	mg/l	0.0509	0.0495	102.	79-114	2.73	20	WG506984
Ethylbenzene	mg/l	0.0520	0.0515	104.	80-116	1.11	20	WG506984
Toluene	mg/1	0.0512	0.0501	102.	79-112	2.23	20	WG506984
a,a,a-Trifluorotoluene(PID)	mg/1	0.154	0.152	99.34	54.8-121.7	0.770	20	WG506984
Chloride	mg/l	39.1	39.5	98.0	90-110	1.02	20	WG507025
Fluoride	mg/l	7.78	7.91	97.0	90-110	1.66	20	WG507025
Nitrate	mg/l	8.28	8.24	104.	90-110	0.484	20	WG507025
Nitrite	mg/l	7.80	7.86	98.0	90-110	0.766	20	WG507025
Dissolved Solids	mg/l	8680	8700	99.0	85-115	0.184	20	WG507057
Suspended Solids	mg/l	808.	836.	104.	85-115	3.41	20	WG507053
рН	su	7.00	7.00	101.	97.98-102.02	0	20	WG507071
Sulfate	mg/l	40.5	40.5	101.	90-110	0	20	WG507185

Hardness, Total (mg/L as CaCO3) mg/l 189. 186. 94.0 85-115 1.60 20 WG507371 \* Performance of this Analyte is outside of established criteria. For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

Page 7 of 10



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Est. 1970

Quality Assurance Report Level II

L487434

November 08, 2010

· 在14年月,世界的社會的任何。		Laborator	y Control	Sample Du	plicate				
Analyte	Units	Result	Ref	*Rec	1	Limit	RPD	Limit	Batch
Alkalinity	mg/l	36.3	34.8	91.0	8	35-115	4.22	20	WG50697
Specific Conductance	umhos/	420.	420.	103.	٤	35-115	0	20	WG50715
Phosphorus, Total	mg/l	1.02	1.05	102.	8	5-115	2.90	20	WG50715
			Matrix S	nike					
Analyte	Units	MS Res	Ref Re	s TV	% Rec	Limit	_	Ref Samp	Batch
Pengene		0.0500	0 0000	10 05	100	25.145	-		MARACAA
Ethylhongene	mg/1	0.0506	0.0006	40 .05	100.	35-147		L487321-03	WG50698
Toluene	mg/1	0.0514	0	.05	103.	39-141		L487321-03	WG50698
Total Vylene	mg/1	0.0501		.05	100.	35-148		L487321-03	WG50698
a a artifluorotoluene (BTD)	mg/1	0.155	0	.15	102.	33-151		148/321-03	WG50698
Benzane	ma / 1	0.0506	0 0006	40 05	98.59	35-142		1407221 02	WG50698
Ethylhenzene	mg/1	0.0506	0.0006	40 .05	100.	35-14/		1487321-03	WG50698
Toluene	mg/1	0.0514	0	.05	103.	35-141		L407321-03	WGS0698
Total Xylene	mg/1	0.153	0	.05	100.	33-140		1407321-03	WGSOGOS
a.a.a-Trifluorotoluene(PID)	mg/ ±	0.133	V	.15	98 59	54 8-1	21 7	LN10/321-03	WGEOGOR
a, a, a ===============================					20.33	54.0-4	min to fi		1030030
Chloride	mg/1	63 6	15 0	50	97 2	80-120		1.487434-01	WG50702
Fluoride	mg/1	5.52	0.320	5	104	80-120		1.487434-01	WG50702
Nitrate	mg/1	3.39	0	5	67.8*	80-120		L487434-01	WG50702
Nitrite	mg/l	4.97	0	5	99.4	80-120		L487434-01	WG50702
Calcium	mg/1	224	220	11.2	124	75-195		1486784-03	WGE0707
Iron	mg/1	2 12	1 10	1 1 2	124.	75-125		1486784-03	WG50707
Dotageium	mg/1	11 0	1.10	11.13	90.3	75-125		1400784-03	WG50707
Sodium	mg/1	11.8	1.00	11.3	95.0	75-125		1486784-03	WG50707
Souran	mg/ 1	09.0	01.0	11.5	11.5	/3-125		1400/04-03	WG50707
Sulfate	mg/l	60.9	9.60	50	103.	80-120		L485927-06	WG50718
Hardness, Total (mg/L as CaCO3)	mg/l	1130	680.	150	75.0*	80-120		L486784-02	WG50737
Alkalinity	mg/l	881.	610.	200	67.8*	80-120		L486784-02	WG50697
Phosphorus, Total	mg/l	5.64	3.40	2.5	89.6	80-120	-	L486084-02	WG50715
		Mat	rix Snike	Duplicate				Party Barrier	201
Analyte	Units	MSD	Ref	*Rec	Limit	RPD	Limit	Ref Samp	Batch
Pangana		0 0530	0.0500	105	25.145	4 03		T 107203 00	Waracaa
Pthulboncone	mg/1	0.0532	0.0506	105.	35-147	4.93	20	L487321-03	WG506984
Toluene	mg/1	0.0538	0.0514	108.	39-141	4.49	20	1487321-03	WG506984
Total Xvlene	mg/1	0 159	0.153	106	33-151	3.39	20	1487321-03	WG506984
a, a, a-Trifluorotoluene(PID)	may r	0.105	0.133	98.14	55-122	5.00	20	110/321-03	WG50698
Benzene	mg/1	0.0532	0.0506	105	35-147	4 93	20	1.487321-03	WG506984
Ethylbenzene	mg/1	0.0538	0.0514	108.	39-141	4.49	20	1487321-03	WG506984
Toluene	mg/l	0.0529	0.0501	106.	35-148	5.39	20	L487321-03	WG506984
Total Vulene	mg/1	0 159	0 153	106	33-151	3 96	20	1497321-03	WG506984

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

Page 8 of 10

# S.C.I.E.N.C.E.S

YOUR LAB OF CHOICE

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Aztec, NM 87410

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Tax I.D. 62-0814289

Est. 1970

Quality Assurance Report Level II

L487434

November 08, 2010

			Matrix Spike	e Duplicate					
Analyte	Units	MSD	Ref	*Rec	Limit	RPD	Limit	Ref Samp	Batch
a,a,a-Trifluorotoluene(PID)				98.14	54.8-121.7				
Chloride	mg/l	63.5	63.6	97.0	80-120	0.157	20	L487434-01	WG507025
Fluoride	mg/l	5.49	5.52	103.	80-120	0.545	20	L487434-01	WG507025
Nitrate	mg/l	3.08	3.39	61.6*	80-120	9.58	20	L487434-01	WG507025
Nitrite	mg/l	4.94	4.97	98.8	80-120	0.605	20	L487434-01	WG507025
Calcium	mg/l	232.	234.	106.	75-125	0.858	20	L486784-03	WG507079
Iron	mg/l	2.11	2.12	89.4	75-125	0.473	20	L486784-03	WG507079
Potassium	mg/l	11.9	11.8	96.5	75-125	0.844	20	L486784-03	WG507079
Sodium	mg/l	93.6	89.8	112.	75-125	4.14	20	L486784-03	WG507079
Sulfate	mg/l	60.0	60.9	101.	80-120	1.49	20	L485927-06	WG507185
Hardness, Total (mg/L as CaCO3)	mg/l	1130	1130	75.0*	80-120	0	20	L486784-02	WG507371
Alkalinity	mg/l	884.	881.	68.5*	80-120	0.340	20	L486784-02	WG506979
Phosphorus, Total	mg/l	5.71	5.64	92.4	80-120	1.23	20	L486084-02	WG507159

Batch number /Run number / Sample number cross reference

WG506984:	R1459849:	L487434-01
WG507025:	R1459869:	L487434-01
WG507079:	R1460350:	L487434-01
WG507057:	R1460890:	L487434-01
WG507053:	R1460949:	L487434-01
WG507071:	R1461350:	L487434-01
WG507185:	R1462009:	L487434-01
WG507371:	R1462349:	L487434-01
WG506979:	R1462769:	L487434-01
WG507156:	R1463029:	L487434-01
WG507392:	R1463089:	L487434-01
WG507395:	R1463109:	L487434-01
WG507442:	R1463129:	L487434-01
WG507159:	R1463209:	L487434-01

\* \* Calculations are performed prior to rounding of reported values .
 \* Performance of this Analyte is outside of established criteria.
 For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

Page 9 of 10



XTO Energy - San Juan Division James McDaniel 382 Road 3100

Aztec, NM 87410

#### Quality Assurance Report Level II

L487434

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier. 12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

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November 08, 2010

Page 10 of 10



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James McDaniel XTO Energy - San Juan Division 382 Road 3100 Aztec, NM 87410

Report Summary

Monday November 15, 2010

Report Number: L487440 Samples Received: 11/05/10 Client Project:

Description: Federal 18-1T

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

alan Hamill

Entire Report Reviewed By:

T. Alan Harvill , ESC Representative

#### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487 GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140 NJ - TN002,NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233 AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A, TX - T104704245, OK-9915

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences. Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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Page 1 of 4

End	FCC
-	LOU
L·A·B	S.C.I.E.N.C.E.S

12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859 Tax I.D. 62-0814289

Est. 1970

Culfate Reduct	ng Basteri	2	Present				BART	11/15/10	1	
Parameter	n' -	1.1	Result	Det.	Limit	Units	Method	Date	Dil.	_
Collection Date	: 11/04/	10 14:40								
Collected By	· Bernie	Lauctes					Project # :			
Sample ID	: MCQUIR	E WELL								
Date Received Description	: Federa	l 18-1T	0				Site TD :			
			•				ESC Sample # :	L487440-01		
James McDaniel XTO Energy - Sar 382 Road 3100 Aztec, NM 87410	Juan Divi	sion					November 15, 20	010		
			REPOR	T OF A	NALYSIS					

BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL) Note: The reported analytical results relate only to the sample submitted. This report shall not be reproduced, except in full, without the written approval from ESC.

. Reported: 11/15/10 16:16 Printed: 11/15/10 16:16 L487440-01 (SRB) - SRB Population= 500 cfu/ml

Page 2 of 4

## Summary of Remarks For Samples Printed 11/15/10 at 16:16:52

TSR Signing Reports: 288 R5 - Desired TAT

report J's if above limits-B 0.01, T 0.75, E 0.75, X 0.62 mg/l

Sample: L487440-01 Account: XTORNM Received: 11/05/10 09:00 Due Date: 11/12/10 00:00 RPT Date: 11/15/10 16:16 Refer to L487434.


XTO Energy - San Juan Division James McDaniel 382 Road 3100

Aztec, NM 87410

Quality Assurance Report Level II

November 15, 2010

12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

L487440

Batch number /Run number / Sample number cross reference

: R1473092: L487440-01

\* Calculations are performed prior to rounding of reported values .
 \* Performance of this Analyte is outside of established criteria.
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Page 3 of 4



XTO Energy - San Juan Division James McDaniel 382 Road 3100

Aztec, NM 87410

#### Quality Assurance Report Level II

L487440

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

> Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

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Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier. 12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

November 15, 2010

		19.2	Alternate B	illing				Analy	ysis/Co	ontain	er/Pre	serva	tive	-	and the second	Chain of Custody		
XTO Energy, Inc. 382 County Road 3100 Aztec, NM 87410			XTORNM	<i>1</i> 031810S				The Article			lo Pres	lo Pres ·	「「「「」」		A233 Prepared by:	Page_1_of_2_		
			Report to: Jar	nes McDaniel	-				の 一日 日本		E/ N	E/N			Science cor	p Dood		
			E-mail to: Jan	mes_McDaniel@x	toenergy.com		1.8	res .	res		HDP	HDP			Mt Juliet TN	1 37122		
Project Description: Federal 18	-1T			City/S	State Collected:		12.24	No P	NoF		- IFI	Oml	-	67	Dhana (615)	750 5050		
PHONE: 505-333-3701	Client Project	No.		Lab Project #			NHCL-	HDPE/	HDPE/	es	ALKOH	fate/ 50	304 L	HNO3	Phone (800 . FAX (61	) 767-5859 5)758-5859		
Collected by: James MoDeniel	Site/Facility ID	REWE	4	P.O.#			I Amt	Oml 1	S/ 1L	No Pr	CA.	e, Sul	/ H2S	PE/ I	CoCode	(lab use only)		
BLASA Terror Tark	Rush? (L	ab MUST be Next Day	e Notified) 100%	Date Result	s Needed	No	EX/ 40m	Nitrite/ 25	ON, TDS	HDPE/ N	KBI, ALK	, Flouride	MI HDPE	250ml HD	XTORNM Template/Prelogin			
		Three Day	25%	FAX?N	o_Yes	OT	1-87	ate, I	SPC	S/ 1L	(, AL	oride	250	SD/ 3	Shipped Via: Fed Ex			
Sample ID	Comp/Grab	Matrix	Depth	Date	Time	Cntrs	802	Nitr	ЪН	TSS	ALF	Chl	PT/	HAI	Remarks/contaminant	Sample # (lab only)		
nequire Well 11-07-10	GRAB	GW	-	11-04-10	14:40	10	×	×	×	×	7	×	x	¥		24874340		
		-	1					2 F			1							
N							10			10.2	1		196-27. 	1	<u> Marina di Kultan</u>	The second se		
		1.20			1		12	-		-		1			10 A 45			
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and the second se	a state to see a	1.1.1.1	Cost 2	1. 1. 1.	152.808	1.0	1			1				2.9	Carlo Bar			

Company Name/Address			Alternate B	Silling		7 × 4	X	Analy	sis/Con	ainer/Pres	ervative	A STATE OF STATE	Chain of Custody
XTO Energy, Inc. 382 County Road 3100 Aztec, NM 87410			XTORNM	M031810S			00ml HDPE/ HNO3	210				Prepared by: ENVIRON Science cor	Page_2_of_2_ MENTAL P
			Report to: Jar	mes McDaniel		n it	P/ 5	·L	1			12065 Leba	non Road
			E-mail to: Jai	mes_McDaniel@x	toenergy.com	12.1	AIC	1	12-1		100 A	Mt. Juliet TN	37122
Project Description: Federal 18-	11	1 5	- 13 T. M	City/S	State Collected:		a	N	die .			Phone (615)	758-5858
PHONE: 505-333-3701 FAX:	Client Project I	No.		Lab Project #			P, KIO	00		1 - Sould		Phone (800 . FAX (61	) 767-5859 5)758-5859
Collected by: Lames MeDaniel	Site/Facility ID	RE WE	EL	P.O.#			MGIC	1-5	1977 - 14		N NOT	CoCode	(lab use only)
Tetra Tech	Rush? (L	ab MUST b Next Day Two Day Three Day	e Notified) 100% 50% 25%	Email?N FAX?N	s Needed	No of	DP, CAICP,	88				XTORNM Template/Prelogin Shipped Via: Fed Ex	
Sample ID	Comp/Grab	Matrix	Depth	Date	Time	Cntrs	E	in	New Y		Sec.	Remarks/contaminant	Sample # (lab only)
McQuire Well 11-04-10	Grab	GW	-	11-04-10	14:40	10	¥	×		1.	2	-	24874340
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	See Land	100	North P	Sec. 1			- 0			- Aller and a	373		
		4	1.200		<b>Ne</b> l se se s			2.4		ALC: NOT			· 建丁酸
Matrix: SS-Soil/Solid GW-Groundw Remarks:	ater WW-Wa	stewater D	W-Drinking	Water OT- O	ther <u>GW</u>	•					pH	Temp	
Relinquisher by: (Signature	Date///10	Time: 1515	Received by:	(Signature)	SV2		Samp Fe	les retu	rned via: F	edEx_X_UP	S_Other_	Condition	(lab use only)
Relinquisher by:(Signature	Date:	Time:	Received by:	(Signature)	200		Temp	5.		Bottles F	II + ITP	cocst.	DK
rkeiinquisher by:(Signature	Date:	Time:	Received for	r lab by: (Sigpetur	e)	Margare Ha	Date:	Gli	0	Time:	00	pH Checked:	NCF:



### COVER LETTER

Wednesday, January 05, 2011

James McDaniel XTO Energy 382 County Road 3100 Aztec, NM 87410

TEL: (505) 787-0519 FAX (505) 333-3280

RE: Federal 18 #1T

Dear James McDaniel:

Order No.: 1012482

Hall Environmental Analysis Laboratory, Inc. received 1 sample(s) on 12/13/2010 for the analyses presented in the following report.

This report is an addendum to the report.dated January 04, 2011. This is an updated report.

No determination of compounds below these (denoted by the ND or < sign) has been made.

Reporting limits are determined by EPA methodology.

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

Sincerely,

Andy Freeman, Laboratory Manager

NM Lab # NM9425 AZ license # AZ0682 ORELAP Lab # NM100001 Texas Lab# T104704424-08-TX



4901 Hawkins NE Suite D Albuquerque, NM 87109 505.345.3975 Fax 505.345.4107 www.hallenvironmental.com

CLIENT:	XTO Energy			Clie	nt Sample ID:	Federal 1	8 #1T
Lab Order:	1012482			Co	llection Date:	12/10/20	10 11:10:00 AM
Project:	Federal 18 #1T			D	ate Received:	12/13/20	10
Lab ID:	1012482-01				Matrix:	AQUEOU	US
Analyses	i - e pla	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD	300.0: ANIONS	Contraction of the second		1.	N RO ST		Analyst: LJB
Fluoride		ND	2.0		mg/L	20	12/13/2010 11:54:59 PM
Chloride		2800	100		mg/L	200	12/21/2010 10:48:01 PM
Bromide	A CANADA AND A CANADA	0.11	0.10		mg/L	1	12/13/2010 11:43:45 PM
Nitrate (As N)+I	Nitrite (As N)	ND	4.0		mg/L	20	12/21/2010 10:36:48 PM
Phosphorus, Or	rthophosphate (As P)	ND	0.50	н	mg/L	1	12/13/2010 11:43:45 PM
Sulfate		1400	25		mg/L	50	12/21/2010 11:21:42 PM
EPA METHOD	6010B: DISSOLVED ME	TALS					Analyst: RAGS
Calcium		1900	50		mg/L	50	12/21/2010 10:47:11 AM
Magnesium		74	5.0		mg/L	5	12/21/2010 10:36:45 AM
Potassium		22	5.0		mg/L	5	12/21/2010 10:36:45 AM
Sodium		130	5.0		mg/L	5	12/21/2010 10:36:45 AM
SM 2320B: AL	KALINITY						Analyst: IC
Alkalinity, Total	(As CaCO3)	210	20		mg/L CaCO3	1	12/19/2010 3:16:00 PM
Carbonate		ND	2.0		mg/L CaCO3	1	12/19/2010 3:16:00 PM
Bicarbonate		210	20		mg/L CaCO3	1	12/19/2010 3:16:00 PM
EPA 120.1: SPI	ECIFIC CONDUCTANCE						Analyst: IC
Specific Conduc	ctance	8900	0.010		µmhos/cm	1	12/22/2010 12:12:00 PM
SM4500-H+B: F	РН						Analyst: IC
рН		6.36	0.100	н	pH units	1	12/19/2010 3:16:00 PM
SM2540C MOD	TOTAL DISSOLVED S	OLIDS					Analyst: KS
Total Dissolved	Solids	7610	100		mg/L	1	12/15/2010 7:59:00 PM

### Hall Environmental Analysis Laboratory, Inc.

Date: 05-Jan-11

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

VTO D

### **QA/QC SUMMARY REPORT**

Analyte	Result	Units	PQL	SPK V	a SPK ref	%Rec L	owLimit Hi	ghLimit %RPI	D RPDLimit	Qual
Method: EPA Method 300.0: Anio	ons									
Sample ID: MB		MBLK				Batch ID:	R42637	Analysis Date:	12/13/2010	4:14:33 PN
Fluoride	ND	mg/L	0.10							
Chloride	ND	mg/L	0.50							
Bromide	ND	mg/L	0.10							
Nitrate (As N)+Nitrite (As N)	ND	mg/L	0.20					1		
Phosphorus, Orthophosphate (As P)	ND	mg/L	0.50							
Sulfate	ND	mg/L	0.50							
Sample ID: MB		MBLK				Batch ID:	R42674	Analysis Date:	12/14/2010	8:14:59 AN
Fluoride	ND	mg/L	0.10							
Chloride	ND	mg/L	0.50							
Bromide	ND	mg/L	0.10							
Nitrate (As N)+Nitrite (As N)	ND	mg/L	0.20							
Phosphorus, Orthophosphate (As P)	ND	mg/L	0.50							
Sulfate	ND	mg/L	0.50						*	
Sample ID: MB		MBLK				Batch ID:	R42674	Analysis Date:	12/14/2010 8	8:02:35 PM
Fluoride	ND	ma/L	0.10							
Chloride	ND	mo/L	0.50							
Bromide	ND	mg/L	0.10							
Nitrate (As N)+Nitrite (As N)	ND	mg/L	0.20							
Phosphorus, Orthophosphate (As P)	ND	mg/L	0.50							
Sulfate	ND	mg/L	0.50							
Sample ID: MB		MBLK				Batch ID:	R42804	Analysis Date:	12/21/2010 1	1:05:40 PM
Fluoride	ND	ma/l	0 10							
Chloride	ND	mg/L	0.50							
Bromide	ND	mg/L	0.10							
Nitrate (As N)+Nitrite (As N)	ND	mg/L	0.20							
Phosphorus, Orthophosphate (As P)	ND	mg/L	0.50							
Sulfate	ND	ma/L	0.50							
Sample ID: LCS		LCS				Batch ID:	R42637	Analysis Date:	12/13/2010 4	1:25:46 PM
Fluoride	0.4734	ma/L	0.10	0.5	0	94.7	90	110		
Chloride	4.612	ma/L	0.50	5	0.0904	90.4	90	110		
Bromide	2.268	mg/L	0.10	2.5	0	90.7	90	110		
Nitrate (As N)+Nitrite (As N)	3.347	mg/L	0.20	3.5	0	95.6	90	110		
Phosphorus, Orthophosphate (As P)	4.700	mg/L	0.50	5	0	94.0	90	110		
Sulfate	9.346	mg/L	0.50	10	0.1205	92.3	90	110		
Sample ID: LCS		LCS				Batch ID:	R42674	Analysis Date:	12/14/2010 8	3:26:12 AM
Fluoride	0.5382	mg/L	0.10	0.5	0	108	90	110		
Chloride	4.938	mg/L	0.50	5	0	98.8	90	110		
Bromide	2.526	mg/L	0.10	2.5	0	101	90	110		
Nitrate (As N)+Nitrite (As N)	3.574	mg/L	0.20	3.5	0	102	90	110		
Phosphorus, Orthophosphate (As P)	5.055	mg/L	0.50	5	0	101	90	110		
Sulfate	9.949	mg/L	0.50	10	0	99.5	90	110		
Sample ID: LCS		LCS				Batch ID:	R42674	Analysis Date:	12/14/2010 8	:13:49 PM
		100 100 100 100 100 100 100 100 100 100						A COMPANY OF THE OWNER OF THE OWNER OF		

Qualifiers:

Ciliant.

Estimated value E

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Holding times for preparation or analysis exceeded NC Non-Chlorinated

Н

R RPD outside accepted recovery limits Page 1

### **QA/QC SUMMARY REPORT**

Project: Federal 18 #1	Т					18			Work	Order:	1012482
Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec L	owLimit Hi	ghLimit	%RPD	RPDLimit	Qual
Method: EPA Method 300.0: Ani	ons	3	S		30	35.89		1		4.5	
Sample ID: LCS		LCS				Batch ID:	R42674	Analysis	s Date:	12/14/2010	8:13:49 PM
Chloride	4.918	mg/L	0.50	5	0	98.4	90	110			
Bromide	2.488	mg/L	0.10	2.5	0	99.5	90	110			
Nitrate (As N)+Nitrite (As N)	3.552	mg/L	0.20	3.5	0	101	90	110			
Phosphorus, Orthophosphate (As P)	4.967	mg/L	0.50	5	0	99.3	90	110			
Sulfate	9.845	mg/L	0.50	10	0	98.4	90	110			
Sample ID: LCS		LCS				Batch ID:	R42804	Analysis	s Date:	12/21/2010	2:26:26 PM
Fluoride	0.5189	mg/L	0.10	0.5	0	104	90	110			
Chloride	5.014	mg/L	0.50	5	0	100	90	110			
Bromide	2.530	mg/L	0.10	2.5	0	101	90	110			
Nitrate (As N)+Nitrite (As N)	3.571	mg/L	0.20	3.5	0	102	90	110			
Phosphorus, Orthophosphate (As P)	5.075	mg/L	0.50	5	0	101	90	110			
Sulfate	10.13	mg/L	0.50	10	0	101	90	110			
Method: SM 2320B: Alkalinity											
Sample ID: MB-1		MBLK				Batch ID:	R42779	Analysis	B Date:	12/19/2010	1:47:00 PM
Alkalinity, Total (As CaCO3)	ND	mg/L Ca	20								
Carbonate	ND	mg/L Ca	2.0							,	
Bicarbonate	ND	mg/L Ca	20								
Sample ID: MB-2		MBLK				Batch ID:	R42779	Analysis	Date:	12/19/2010	7:02:00 PM
Alkalinity, Total (As CaCO3)	ND	mg/L Ca	20								
Carbonate	ND	mg/L Ca	2.0								
Bicarbonate	ND	mg/L Ca	20								
Sample ID: MB-3		MBLK				Batch ID:	R42779	Analysis	Date:	12/20/2010 12	2:35:00 AM
Alkalinity, Total (As CaCO3)	ND	mg/L Ca	20								
Carbonate	ND	mg/L Ca	2.0								
Bicarbonate	ND	mg/L Ca	20								
Sample ID: LCS-2		LCS				Batch ID:	R42779	Analysis	Date:	12/19/2010	1:52:00 PM
Alkalinity, Total (As CaCO3)	79.44	mg/L Ca	20	80	0	99.3	96.5	104			
Sample ID: LCS-2		LCS				Batch ID:	R42779	Analysis	Date:	12/19/2010 7	7:07:00 PM
Alkalinity, Total (As CaCO3)	79.52	mg/L Ca	20	80	0	99.4	96.5	104			
Sample ID: LCS-3		LCS				Batch ID:	R42779	Analysis	Date:	12/20/2010 12	2:41:00 AM
Alkalinity, Total (As CaCO3)	80.72	mg/L Ca	20	80	0	101	96.5	104			

### Qualifiers:

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded

NC Non-Chlorinated

R RPD outside accepted recovery limits

Qualifiers: E Estimated value

J Analyte detected below quantitation limits

Not Detected at the Reporting Limit ND

### Hall Environmental Analysis Laboratory, Inc.

**XTO Energy** 

Client:

### **QA/QC SUMMARY REPORT**

Project:	Federal	18 #1T								Work	Order:	1012482
Analyte		Result	Units	PQL	SPK V	a SPK ref	%Rec L	owLimit Hi	ghLimit	%RPD	RPDLimit	Qual
Method:	EPA Method 6010	B: Dissolved M	etals				1	1.5			1.1	
Sample ID:	MB		MBLK				Batch ID:	R42762	Analys	sis Date:	12/17/2010	4:27:32 PM
Calcium		ND	mg/L	1.0								
Magnesium		ND	mg/L	1.0								
Sodium		ND	mg/L	1.0								
Sample ID:	MB		MBLK				Batch ID:	R42786	Analys	sis Date:	12/21/2010	9:38:42 AM
Calcium		ND	mg/L	1.0								
Magnesium		ND	mg/L	1.0								
Potassium		ND	mg/L	1.0								
Sodium		ND	mg/L	1.0								
Sample ID:	LCS		LCS				Batch ID:	R42762	Analys	is Date:	12/17/2010	4:30:51 PM
Calcium		51.83	ma/l	10	50.5	0	103	80	120			
Magnesium		52.38	ma/L	10	50.5	0	104	80	120			
Sodium		51.49	ma/L	1.0	50.5	0	102	80	120			
Sample ID:	LCSRR		LCS			1	Batch ID:	R42762	Analys	is Date:	12/17/2010	4:35:02 PM
Calcium		41.88	ma/L	1.0	50.5	-0	82.9	80	120	21.3	0	
Magnesium		42.26	mg/L	1.0	50.5	0	83.7	80	120	21.4	0	
Sodium		41.84	mg/L	1.0	50.5	0	82.8	80	120	20.7	0	
Sample ID:	LCS		LCS				Batch ID:	R42786	Analys	is Date:	12/21/2010	9:41:18 AM
Calcium		51.21	mg/L	1.0	50.5	0.1547	101	80	120			
Magnesium		50.80	mg/L	1.0	50.5	0.1655	100	80	120			
Potassium		49.52	mg/L	1.0	55	0.1727	89.7	80	120			
Sodium		49.52	mg/L	1.0	50.5	0.1497	97.8	80	120			
Sample ID:	LCSRR		LCS				Batch ID:	R42786	Analys	is Date:	12/21/2010	9:43:34 AM
Potassium		49.24	mg/L	1.0	55	0.1727	89.2	80	120	0.563	0	
Method:	SM2540C MOD: T	otal Dissolved S	olids									
Sample ID:	MB-24872		MBLK				Batch ID:	24872	Analys	is Date:	12/15/2010	7:59:00 PM
Total Dissol	ved Solids	ND	mg/L	20.0			500					
Sample ID:	LCS-24872		LCS				Batch ID:	24872	Analys	is Date:	12/15/2010	7:59:00 PM
Total Discol	and Collida	1016	mag/1	20.0	1000	7	101	90	100			

Н Holding times for preparation or analysis exceeded Non-Chlorinated

NC

RPD outside accepted recovery limits R

Page 3

Date: 05-Jan-11

Client: Mailing Phone	Address	-of-Cu o En : 382 +24c	Rd 3100 Nm 87410	Turn-Around Standard Project Name Feder Project #:	Time: <b>Rush</b> al 18 #	. 17	HALL ENVIRONMENTAL ANALYSIS LABORATOR Www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109 Tel. 505-345-3975 Fax 505-345-4107 Analysis Request						RY							
email o QA/QC XStar Accred	r Fax#: Package: ndard itation AP	j Ome:	Level 4 (Full Validation)	Project Mana Jan Sampler:	J. mcD	poniel	X + MTBE + TMB's (8021) X + MTBE + TMB's (8021) X + MTBE + TPH (Gas only) Method 8015B (Gas/Diesel) (Method 8015B (Gas/Diesel) (Method 504.1) (Method 504.1) (Pola or PAH) (Method 504.1) (Pola or PAH) (Pola or PAH				54+	or N)								
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No	BTEX + MTB	BTEX + MTB	TPH Method	<b>TPH (Method</b>	EDB (Method	3310 (PNA or	<b>RCRA 8 Mete</b>	Anions (F,CI,I	3081 Pesticid	3260B (VOA)	3270 (Semi-V	Alouto		vir Bubbles (Y
	10 11:10 H20 Federal 18#1-		2:500ns- 1-125ne- 1-125ne-		10/2482-(												X			
Date:	Time:	Relinquish	ed by:	Received hur		Data Time									May 2 1					
12/16/10 Date:	1330 Time:	Alinquish	ed by:	Received by:	med	Date Time	Rer	nark	S:											

If necessary, samples submitted to Hall 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.



### COVER LETTER

Friday, January 07, 2011

James McDaniel XTO Energy 382 County Road 3100 Aztec, NM 87410

TEL: (505) 787-0519 FAX (505) 333-3280

RE: Federal 18 #1T

Dear James McDaniel:

Order No.: 1101166

Hall Environmental Analysis Laboratory, Inc. received 1 sample(s) on 1/6/2011 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites.

Reporting limits are determined by EPA methodology.

Please do not hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Laboratory Manager

NM Lab # NM9425 NM0901 AZ license # AZ0682 ORELAP Lab # NM100001 Texas Lab# T104704424-08-TX



4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109 505.345.3975 ■ Fax 505.345.4107 www.hallenvironmental.com

### Hall Environmental Analysis Laboratory, Inc.

Surr: 4-Bromofluorobenzene

Date: 07-Jan-11

5

1/6/2011 6:18:16 PM

CLIENT:	XTO Energy			Client Sample I	D: Water Sa	mple
Lab Order:	1101166			Collection Dat	te: 1/5/2011	11:30:00 AM
Project:	Federal 18 #1T			Date Receive	d: 1/6/2011	
Lab ID:	1101166-01			Matr	ix: AQUEOU	JS
Analyses		Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD	8021B: VOLATILES	1.1	1.1	Contrast Sector		Analyst: NSB
Benzene		67	5.0	µg/L	5	1/6/2011 6:18:16 PM
Toluene		93	5.0	µg/L	5	1/6/2011 6:18:16 PM
Ethylbenzene		7.9	5.0	µg/L	5	1/6/2011 6:18:16 PM
Xylenes, Total		25	10	µg/L	5	1/6/2011 6:18:16 PM

81.3-151

%REC

129

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

### **QA/QC SUMMARY REPORT**

Client: XTO Project: Feder	Energy al 18 #1T								Work	Order:	1101166
Analyte	Result	Units	PQL	SPK Val S	PK ref	%Rec L	owLimit Hi	ghLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8	021B: Volatiles	-11-1									
Sample ID: 5ML RB		MBLK			-	Batch ID:	R43022	Analysis	Date:	1/6/2011	10:01:13 AM
Benzene	ND	µg/L	1.0								
Toluene	ND	µg/L	1.0								
Ethylbenzene	ND	µg/L	1.0								
Xylenes, Total	ND	µg/L	2.0								
Sample ID: 100NG BTEX	LCS	LCS				Batch ID:	R43022	Analysis	Date:	1/6/2011	9:20:45 PM
Benzene	21.59	µg/L	1.0	20	0	108	84.7	118			
Toluene	22.29	µg/L	1.0	20	0	111	82	123			
Ethylbenzene	22.10	µg/L	1.0	20	0	110	83	118			
Xylenes, Total	66.91	µg/L	2.0	60	0	112	85.4	119			

### Qualifiers:

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded

NC Non-Chlorinated

R RPD outside accepted recovery limits

Page 1

### Hall Environmental Analysis Laboratory, Inc.

Sample	Rece	eipt Ch	ecklist			
Client Name XTO ENERGY			Date Re	ceived:		1/6/2011
Work Order Number 1101166			Receiv	ved by: AMG		
Checklist completed by	1	Date	Sample	e ID labels checked	l by:	Initials A.C.
Matrix: Carrier name:	Grey	hound				
Shipping container/cooler in good condition?	Yes		No 🗆	Not Present	ı 🗆	
Custody seals intact on shipping container/cooler?	Yes		No 🗖	Not Present		Not Shipped
Custody seals intact on sample bottles?	Yes		No 🗆	N/A		
Chain of custody present?	Yes		No 🗔			
Chain of custody signed when relinquished and received?	Yes		No 🗆			
Chain of custody agrees with sample labels?	Yes		No 🗆			
Samples in proper container/bottle?	Yes		No 🗆			
Sample containers Intact?	Yes		No 🗔			
Sufficient sample volume for indicated test?	Yes		No 🗆			
All samples received within holding time?	Yes		No 🗆			Number of preserved
Water - VOA vials have zero headspace? No VOA vials subn	nitted		Yes 🗹	No 🗆	]	pH:
Water - Preservation labels on bottle and cap match?	Yes		No 🗌	N/A 🗹	1	and the second
Water - pH acceptable upon receipt?	Yes		No 🗆	N/A	J	<2 >12 unless noted
Container/Temp Blank temperature?	1.	6°	<6° C Acc	eptable		0000
COMMENTS:			If given suf	ficlent time to cool.		
			e 1.			
	•				==	
Client contacted Date contacted:				Person contacted	_	<u>in statestatestatestatestatestatestatestat</u>
Contacted by: Regarding:						
Comments:						
				and the second se	-	
				1	-	C. C
Corrective Action						

50

C	hain	-of-Cu	stody Record	Turn-Around	Time:		7			-										
Client:	XTO	Ener	gy	Standard     Project Name	C Rush	24 how	-			A			YS	IS	IR 5 L		BO	TEN RAT	TA	L LY
Mailing	Address	: 382	Road 3100	Fede	ral 18	# IT		49	01 H	awki	www.	.hall	Albu	ione	ent	al.co	om M 87 <sup>.</sup>	109		
	4	tatec	Nm 87410	Project #:	. The store	22014		Te	el. 50	5-34	5-39	75	Fa	ax 5	505-	345-	-4107	,		
Phone	#: (	505)	787-0519	A. C. C.	1. L. M.	a stand						Ar	nalys	sis I	Req	uest	t.			
email o QA/QC	or Fax#: Package: ndard	james	Level 4 (Full Validation)	Project Mana	es mer	saniel	s (8021)	(Gas only)	as/Diesel					PO4,SO4)	PCB's					
Accred	itation AP	Othe	۲ <u></u>	Sampler:	J.mc Da	niel No	- TMB'	HdT	15B (G	8.1)	(1)	(H)		3,NO2	/ 8082		1			r N)
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If necessary, samples submitted to Hall 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.



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Est. 1970

James McDaniel XTO Energy - San Juan Division 382 Road 3100 Aztec, NM 87410

### Report Summary

Monday January 10, 2011

Report Number: L496359 Samples Received: 01/06/11 Client Project:

Description: Federal 18 #1T

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Daphne Richards , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487 GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140 NJ - TN002,NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233 AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A, TX - T104704245, OK-9915

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences. Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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Page 1 of 9



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REPORT OF ANALYSIS James McDaniel January 10, 2011 XTO Energy - San Juan Division 382 Road 3100 Aztec, NM 87410 ESC Sample # : L496359-01 January 06, 2011 Federal 18 #1T Date Received . Description : Site ID : FEDERAL 18 1T WATER SAMPLE Sample ID . Project # : James McDaniel 01/05/10 11:30 Collected By 1 Collection Date : Dil Result Det. Limit Units Method Date Parameter 9056 01/06/11 50 1600 50. Chloride mg/1 0.10 mg/l 01/06/11 Fluoride 2.4 9056 BDL 0.10 mg/l 9056 01/06/11 Nitrate 1 Nitrite BDL 0.10 mg/l 9056 01/06/11 01/06/11 50 mg/l 9056 Sulfate 1800 250 20. 01/10/11 01/10/11 01/10/11 230 2320B 1 Alkalinity mg/l Alkalinity, Bicarbonate Alkalinity, Carbonate Alkalinity, Hydroxide 230 20. mg/l 2320B mg/l mg/l 2320B BDT. 20. 1 2320B 01/10/11 1 20. BDL 01/07/11 20 Hardness, Total (mg/L as CaCO3) 3100 600 mg/l 130.1 9040C 01/07/11 6.6 su 1 pH Phosphorus, Total 1.9 0.10 mg/l 365.1 01/07/11 1 umhos/cm 9050A 01/10/11 1 Specific Conductance 6000 01/10/11 Dissolved Solids 4800 10. mg/l 2540C 1 mg/l 2540D 01/06/11 1 Suspended Solids 18. 1.0 01/08/11 1100 0.50 mg/l 6010B 1 Calcium mg/l mg/l 01/08/11 01/08/11 0.10 Iron 18. 6010B 1 6010B 1 Magnesium 53. mg/101/08/11 6010B 0.50 Potassium 16. mg/1 Sodium 110 0.50 6010B 01/08/11 1 0.073 0.099 0.010 0.0050 8021B 01/06/11 10 mg/l Benzene mg/1 01/06/11 0.050 8021B 10 Toluene 0.0050 mg/l 8021B 01/06/11 10 Ethylbenzene Total Xylene 0.039 0.015 mg/l 8021B 01/06/11 10

% Rec.

8021B

BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL) Note: The reported analytical results relate only to the sample submitted. This report shall not be reproduced, except in full, without the written approval from ESC.

109.

Reported: 01/10/11 16:18 Printed: 01/10/11 16:18 L496359-01 (PH) - 6.6@17.6c

Surrogate Recovery (%)

a,a,a-Trifluorotoluene(PID)

Page 2 of 9

01/06/11

10

### Attachment A List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L496359-01	WG516357	SAMP	рН	R1529689	Т8

Page 3 of 9

#### Attachment B Explanation of QC Qualifier Codes

Qualifier T8	Meaning									
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.									
	Qualifier Report Information									

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

- Definitions Accuracy The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Differrence.
- Surrogate Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chem-ically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Page 4 of 9

### Summary of Remarks For Samples Printed 01/10/11 at 16:18:28

TSR Signing Reports: 288 R3 - Rush: Two Day

No Energy fee. Charge \$10 Shipping Fee per Dave V 1/4/10 When transfering TS to a new dash # DO NOT charge a fee

Sample: L496359-01 Account: XTORNM Received: 01/06/11 09:00 Due Date: 01/10/11 00:00 RPT Date: 01/10/11 16:18

## L·A·B S.C.I.E.N.C.E.S

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Quality Assurance Report Level II

L496359

January 10, 2011

		Labo	oratory Blank				
Analyte	Result	Uni	ts & Re	ec	Limit	Batch	Date Analyzed
Benzene	< 0005	mer	/1			WG516259	01/06/11 13.39
Ethylhenzene	< 0005	mg/	1			WG516259	01/06/11 13:35
Toluene	< 005	ma	1			WG516259	01/06/11 13.35
Total Xvlene	< 0015	ma	17			WG516259	01/06/11 13:35
a, a, a-Trifluorotoluene (PID)		% F	Rec. 109	. 0	55-122	WG516259	01/06/11 13:35
Suspended Solids	< 1	mg/	1			WG516167	01/06/11 15:07
Chloride	< 1	ma	1			WG516230	01/06/11 09:08
Fluoride	< .1	mcr	1			WG516230	01/06/11 09:08
Nitrate	< .1	ma	/1			WG516230	01/06/11 09:08
Sulfate	< 5	mg/	/1	and the second second		WG516230	01/06/11 09:08
рн	5.20	su				WG516357	01/07/11 14:05
Hardness, Total (mg/L as CaCO3)	< 30	mg/	1			WG516428	01/07/11 15:02
Phosphorus, Total	< .1	mg/	1			WG516349	01/07/11 16:15
Calcium	< .5	mg/	1			WG516344	01/08/11 20:22
Iron	< .1	mg/	1			WG516344	01/08/11 20:22
Magnesium	< .1	mg/	1			WG516344	01/08/11 20:22
Potassium	< .5	mg/	/1			WG516344	01/08/11 20:22
Sodium	0.674	mg/	1			WG516344	01/08/11 20:22
Dissolved Solids	< 10	mg/	1			WG516306	01/10/11 12:21
Alkalinity	< 20	mg/	/1			WG516671	01/10/11 12:40
Specific Conductance	1.60	umh	nos/cm			WG516480	01/10/11 12:30
		10.00	Duplicate	Contraction of the second	and the second sec		
Analyte	Units	Result	Duplicate	RPD	Limit	Ref Sam	Batch
Suspended Solids	mg/l	9.00	9.00	0	5	L496366	-01 WG516167
Suspended Solids	mg/l	18.0	18.0	2.82	5	L496094	-01 WG516167
Fluoride	mg/l	0.110	0	NA	20	L495870	-03 WG516230
Chloride	mg/l	21.0	21.0	0	20	L496385	-09 WG516230
рн	su	6,90	6.90	0	1	L495874	-01 WG516357
рн	su	7.00	6.90	1.44*	1	L496065	-02 WG516357
Hardness, Total (mg/L as CaCO3)	mg/l	45.0	39.0	14.9	20	L496555	-02 WG516428
Hardness, Total (mg/L as CaCO3)	mg/l	200.	200.	0.499	20	L496096	-02 WG516428

\* Performance of this Analyte is outside of established criteria. For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

Page 5 of 9

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L496359

January 10, 2011

			Duplicate				
Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
Phoenhorus Total	mg/1	3 20	3 00	5 14	20	L496410-01	WG51634
Phosphorus, Total	mg/1	2.00	2.00	0.501	20	L496159-01	WG516349
Calcium	mg/l	3.80	3.79	1.06	20	L496474-10	WG516344
Iron	mg/l	0.260	0.252	5.03	20	L496474-10	WG516344
Magnesium	mg/l	1.20	1.20	0	20	L496474-10	WG51634
Potassium	mg/1	0.850	0.810	5.17	20	L496474-10	WG51634
Sodium	mg/1	220.	210.	3.28	20	L496474-10	WG516344
Dissolved Solids	mg/l	580.	580.	0.692	5	L496474-02	WG516306
Alkalinitu	mg /1	40.0	41.0	1 72	20	1496700-01	WG51667
Alkalinity	mg/1	40.0	41.0	1.72	20	1496509-01	WG51667
Aikalinity	mg/1	0	0	0	20	1430303-01	NG51007.
Specific Conductance	umhos/cm	92.0	92.0	0.545	20	L496700-02	WG51648
		Laborato	ry Control Sa	ample			
Analyte	Units	Known V	al l	Result	% Rec	Limit	Batch
Banzana	mcr/1	05	0.0	0516	103.	79-114	WG516255
Ethylhenzene	mg/1	05	0.1	0541	108.	80-116	WG51625
Toluene	mg/1	.05	0.4	0526	105.	79-112	WG51625
Total Xylene	mg/1	.15	0.1	160	107.	84-118	WG51625
a, a, a-Trifluorotoluene (PID)					108.0	55-122	WG51625
Suspended Solids	mg/l	773	78	4. 197.0.00	101.	85-115	WG51616
manuta		40		0	100	90-110	WG51623
Chioride Theories	mg/1	40		20	103	90-110	WG51623
Fluoride	mg/1	8	0	20	103.	90-110	WG51623
Sulfate	mg/l	40	40	.0	100.	90-110	WG51623
					00.7	07 09-102 02	WORLES
PH	BU	6.92	6.	90	99.1	97.98-102.02	NG51055
Hardness, Total (mg/L as CaCO3)	mg/l	200	18	8.	94.0	85-115	WG51642
Phosphorus, Total	mg/l	1	1.	05	105.	85-115	WG51634
Calcium	mg/1	11.3	11	. 6	103.	85-115	WG51634
Iron	mg/l	1.13	1	06	93.8	85-115	WG51634
Magnagium	mg/1	11.3	11	.8	104.	85-115	WG51634
Potaggium	mg/l	11.3	11	.0	97.3	85-115	WG51634
Sodium	mg/l	11.3	11	. 3	100.	85-115	WG51634
Dissolved Solids	mg/1	8800	87	90	99.9	85-115	WG51630
Alkalinity	mg /1	40	20	2	95 5	85-115	WG51667
ALAALIHLUY	mg/1	40	30	*			

mg/1 40

\* Performance of this Analyte is outside of established criteria. For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

Page 6 of 9

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L496359

January 10, 2011

Analyte	Units	Labor Know	atory Cont n Val	trol Sample Result	% Rec	B.C.	Limit	Batch
Specific Conductance	umhos/	cm 561	(P. Raine)	570.	102.	200	85-115	WG516480
analyte	Inite	Laboratory	Control :	Sample Duplicate	Limit	RPD	Limit	Batch
Allaryce	UNICO	NCOULC	101	84100	Dama c			
Benzene	mg/l	0.0527	0.0516	105.	79-114	2.00	20	WG516259
Ethylbenzene	mg/l	0.0555	0.0541	111.	80-116	2.68	20	WG516259
Toluene	mg/l	0.0535	0.0526	107.	79-112	1.73	20	WG516259
Total Xylene	mg/1	0.165	0.160	110.	84-118	3.01	20	WG516259
a,a,a-Trifluorotoluene(PID)				109.0	55-122			WG516259
Suspended Solids	mg/l	756.	784.	98.0	85-115	3.64	20	WG516167
Nitrite	mg/1	7.90	7.80	790*		1.27	20	WG516230
Chloride	mg/1	40.0	40.0	100.	90-110	0	20	WG516230
Fluoride	mg/l	8.20	8.20	102.	90-110	0	20	WG516230
Nitrate	mg/l	8.20	8.20	102.	90-110	0	20	WG516230
Sulfate	mg/l	40.0	40.0	100.	90-110	0	20	WG516230
рн	su	6.90	6.90	100.	97.98-102.02	0	20	WG516357
Hardness, Total (mg/L as CaCO3)	mg/l	189.	188.	94.0	85-115	0.531	20	WG516428
Phosphorus, Total	mg/l	1.06	1.05	106.	85-115	0.948	20	WG516349
Dissolved Solids	mg/l	8810	8790	100.	85-115	0.227	20	WG516306
Alkalinity	mg/l	38.9	38.2	97.0	85-115	1.82	20	WG516671
Specific Conductance	umhos/	570.	570.	102.	85-115	0	20	WG516480
			Matrix S	pike				
Analyte	Units	MS Res	Ref Re	s TV % Red	c Limit	- new	Ref Samp	Batch
Benzene	mg/1	0.0478	0	.05 95.6	35-147		L496405-03	WG516259

Benzene	mg/l	0.0478	0	.05	95.6	35-147	L496405-03	WG516259
Ethylbenzene	mg/l	0.0520	0	.05	104.	39-141	L496405-03	WG516259
Toluene	mg/l	0.0495	0	.05	98.9	35-148	L496405-03	WG516259
Total Xylene	mg/l	0.152	.0	.15	101.	33-151	L496405-03	WG516259
a, a, a-Trifluorotoluene (PID)					107.3	55-122		WG516259
Chloride	mg/l	50.0	0	50	100.	80-120	L496002-01	WG516230
Fluoride	mg/l	5.20	0	5	104.	80-120	L496002-01	WG516230
Sulfate	mg/l	50.0	0	50	100.	80-120	L496002-01	WG516230
Hardness, Total (mg/L as CaCO3)	mg/l	250.	120.	150	86.7	80-120	L496131-01	WG516428
Phoenborns Total	mm/1	2 3.8	0	2 5	95.2	80-120	L496183-04	WG516349

\* Performance of this Analyte is outside of established criteria. For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

Page 7 of 9

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L496359

January 10, 2011

			Matrix	Spike					
Analyte	Units	MS Res	Ref R	es TV	% Rec	Limit		Ref Samp	Batch
Calcium	mg/l	14.8	3.79	11.3	97.4	75-125		L496474-10	WG51634
Iron	mg/l	1.27	0.252	1.13	90.1	75-125		L496474-10	WG51634
Magnesium	mg/l	12.4	1.20	11.3	99.1	75-125		L496474-10	WG51634
Potassium	mg/l	11.4	0.810	11.3	93.7	75-125		L496474-10	WG51634
Sodium	mg/l	234.	210.	11.3	212.*	75-125		L496474-10	WG516344
Alkalinity	mg/1	625.	500.	200	62.5*	80-120		L496518-04	WG51667
		Mat	rix Spike	Duplicate					
Analyte	Units	MSD	Ref	*Rec	Limit	RPD	Limit	Ref Samp	Batch
Benzene	mg/l	0.0481	0.0478	96.1	35-147	0.530	20	L496405-03	WG51625
Ethylbenzene	mg/l	0.0519	0.0520	104.	39-141	0.190	20	L496405-03	WG51625
Toluene	mg/l	0.0493	0.0495	98.6	35-148	0.280	20	L496405-03	WG51625
Total Xylene	mg/1	0.152	0.152	101.	33-151	0.150	20	L496405-03	WG51625
a,a,a-Trifluorotoluene(PID)				106.2	55-122				WG51625
Chloride	mg/1	51.0	50.0	102.	80-120	1.98	20	L496002-01	WG51623
Fluoride	mg/1	5.10	5.20	102.	80-120	1.94	20	L496002-01	WG51623
Sulfate	mg/l	51.0	50.0	102.	80-120	1.98	20	L496002-01	WG51623
Hardness, Total (mg/L as CaCO3)	mg/l	248.	250.	85.3	80-120	0.803	20	L496131-01	WG51642
Phosphorus, Total	mg/l	2.37	2.38	94.8	80-120	0.421	20	L496183-04	WG51634
Calcium	mg/l	14.6	14.8	95.7	75-125	1.36	20	L496474-10	WG51634
Iron	mg/l	1.24	1.27	87.4	75-125	2.39	20	L496474-10	WG51634
Magnesium	mg/l	12.3	12.4	98.2	75-125	0.810	20	L496474-10	WG51634
Potassium	mg/l	11.6	11.4	95.5	75-125	1.74	20	L496474-10	WG51634
Sodium	mg/l	234.	234.	212.*	75-125	0	20	L496474-10	WG516344
Alkalinity	mg/l	627.	625.	63.5*	80-120	0.319	20	L496518-04	WG51667

Batch number /Run number / Sample number cross reference

WG516259: R1528749: L496359-01 WG516167: R1528989: L496359-01 WG516230: R1529509: L496359-01 WG516428: R1529809: L496359-01 WG516349: R1529870: L496359-01 WG516344: R1529889: L496359-01 WG516666: R153200: L496359-01 WG5166671: R1532429: L496359-01 WG516671: R1532430: L496359-01 WG516674: R1532459: L496359-01 WG516674: R1532459: L496359-01 WG516674: R1532459: L496359-01

\* Calculations are performed prior to rounding of reported values.
 \* Performance of this Analyte is outside of established criteria.
 For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

Page 8 of 9



XTO Energy - San Juan Division James McDaniel 382 Road 3100

Aztec, NM 87410

#### Quality Assurance Report Level II

L496359

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier. 12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

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												F126			
Company Name/Address			Alternate Bi	lling	33 C			Analysis	s/Conta	ainer/Prese	vative		Chain of Custody Page of		
XTO Energy, Inc			XTORNM0318105				3	2				Stand Street			
382 County Road Aztec, NM 87410	3100							Cool-H				Prepared by: ENVIRONMENTAL Science corp			
			Report to: Jam	es McDaniel	A.S.S.		-S	$\searrow$				12065 Lebar	on Road		
			E-mail to: James_McDaniel@xtoenergy.com				12	Jul		194		Mt. Juliet TN	37122		
Project Description: Fee PHONE: 505-333-3701 FAX: Collected by: James McDaniel Collected by(signature): Packeer on Ice N_Y_X	Cilient Project Site/Facility II Federa Rush? (	$\begin{array}{c c c c c c c c c c c c c c c c c c c $		City/State Collected: Farming fon , M Lab Project # P.O.# Date Results Needed No Email?No_X_Yes of FAX? No Yes		NM No of	eneral Chemistry	STEX (8021) / 3-40				Phone (615)758-5858 Phone (800) 767-5859 FAX (615)758-5859 CoCode (lab use only) XTORNM Template/Prelogin Shipped Via: Fed Ex			
Sample ID	Comp/Grab	Matrix	Depth	Date	Time	Cntra	0	N	138			Remarks/contaminant	Sample # (lab only)		
Water Sam	ple Grab	GW	500	1/5/10	1130	6	X	X					1496359-01		
							A STATE								
			1995	Section 2.			N. L.	the discontinue of			19.00 19.00 19.00				
	and the second	1.2	46.00			1	1			11- 125 - 14					
		1 in the	- Contract	See.M.		1					1.000	Carlos and			
			1.1.1.1		18.0.2	1	1	1		ALCONT.	1.2%				
			16 201	1 States			1.04		1		and a				

\*Matrix: SS-Soil/Solid GW-Groundwater WW-Wastewater DW-Drinking Water OT- Other\_

pH\_\_\_\_\_Temp

Remarks:	434196	302 157	10		Flow	Other	and the second
Relinquister by Signature	Date:	Time: 1330	Received by:(Signature)	Samples returned via: Fe	edEx_X_UPSOther	- AOUSI	(lab use only)
Relinquisher by:(Signature	Date:	Time:	Received by: (Signature)	Temp: 3,4	Bottles Received:		K
Relinquisher by:(Signature	Date:	Time:	Received for lab by (Signature)	Date: [-(2-1]		pH Checked:	NCF:
	B S POND	22-22	J		and distance is a second s		



12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859 Tax I.D. 62-0814289

Est. 1970

James McDaniel XTO Energy - San Juan Division 382 Road 3100 Aztec, NM 87410

Report Summary

Thursday February 03, 2011

Report Number: L499517 Samples Received: 01/29/11 Client Project:

Description: Federal 18 1T

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Daphne Richards , ESC Representative

#### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487 GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140 NJ - TN002,NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233 AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A, TX - T104704245, OK-9915

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences. Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

This report may not be reproduced, except in full, without written approval from ESC Lab Sciences. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

Page 1 of 7



Aztec, NM 87410

.

Sample ID

Parameter

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February 03, 2011

James McDaniel XTO Energy - San Juan Division 382 Road 3100 ESC Sample # : L499517-01 Date Received : January 29, 2011 Description : Federal 18 1T Site ID : FEDERAL 18 1T WATER SAMPLE Project # : Collected By : James McDaniel Collection Date : 01/28/11 14:20 Det. Limit Units Method Date Result 9056 01/31/11 20. mg/l 930

Chloride	930	20.	mg/l	9056	01/31/11	20
рН	6.4		su	9040C	02/01/11	1
Specific Conductance	4900		umhos/cm	9050A	02/02/11	1
Benzene Toluene Ethylbenzene Total Xylene	0.060 0.093 0.010 0.033	0.0050 0.050 0.0050 0.015	mg/l mg/l mg/l mg/l	8021B 8021B 8021B 8021B 8021B	01/29/11 01/29/11 01/29/11 01/29/11	10 10 10 10
Surrogate Recovery(%)	111.		% Rec.	8021B	01/29/11	10

REPORT OF ANALYSIS

BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL) Note: The reported analytical results relate only to the sample submitted. This report shall not be reproduced, except in full, without the written approval from ESC.

. Reported: 02/03/11 09:37 Printed: 02/03/11 10:17 L499517-01 (PH) - 6.4@17.6c

Page 2 of 7

### Attachment A List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L499517-01	WG519439	SAMP	рН	R1558389	T8

Page 3 of 7

### Attachment B Explanation of QC Qualifier Codes

Qualifier	Meaning	
Т8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.	
	Qualifian Depart Information	

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

- Definitions Accuracy The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Differrence.
- Surrogate Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chem-ically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Page 4 of 7

## L.A.B S.C.I.E.N.C.E.S

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Est. 1970

### Quality Assurance Report Level II

L499517

February 03, 2011

		T.a	boratory B	lank						
Analyte	Result	U	Units	% Red	0	Limit		Batch	Date	Analyzed
the second s		Constant service		in line	aware the		Charles In			-
PH	4.20	S	iu					WG519439	02/01	/11 09:52
Chloride	< 1	π	ng/l					WG519527	01/31	/11 10:43
Benzene	< 0005		na/1					WG519447	01/29	/11 21.26
Ethylbenzene	< .0005	T	ng/1					WG519447	01/29	/11 21:26
Toluene	< .005	T	ng/1					WG519447	01/29	/11 21:26
Total Xylene	< .0015	UT I	ng/1					WG519447	01/29	/11 21:26
a, a, a-Trifluorotoluene (PID)			Rec.	110.1	1	55-122		WG519447	01/29	/11 21:26
Specific Conductance	1.10	u	mhos/cm					WG519793	02/02	/11 14:52
			Destination	-			Tel III	1.1.1.2.2		2
Analyte	Units	Result	Duplicat Duplicat	e cate	RPD	Limit	1	Ref Sam	2	Batch
рн	su	8.30	8.10		2.44*	1		L499230-	-01	WG519439
рн	su	6.40	6.40		0	1		L499517	-01	WG519439
Chloride	mg/l	45.0	44.0		1.58	20		L499553-	-01	WG519527
Specific Conductance	umhos/cm	380.	380.		0.263	20		L499744	-01	WG519793
		Labora	tom. Contr	al Cam	10			1.00	1993 R.	C. P. C.
Analyte	Units	Known	Val	Res	Bult	* Rec	11	Limit	Act	Batch
рн	รน	6.3		6.20		98.4		97.98-10	2.02	WG519439
Chloride	mg/l	40		40.0		100.		90-110		WG519527
Pengane	mg / 1	0.E		0.05	22	105		70-114		WELDAAT
Ethylbenzene	mg/1	.05		0.057	12	105.		80-116		WG519447
Toluene	mg/1	.05		0.053	26	105		79-112		WG519447
Total Xvlene	mg/1	15		0 156	5	104		84-118		WG519447
a, a, a-Trifluorotoluene (PID)	mg/ ±			0.150		110.0		55-122		WG519447
Specific Conductance	umhos/cm	561		570.		102.		85-115		WG519793
	La	boratory	Control Sa	mple D	mlicate			1000		Nº IN
Analyte	Units R	esult	Ref	*Rec	pricace	Limit	RPD	Lin	nit	Batch
рн	su 6	.20	6.20	98.0		97.98-102.02	0	20		WG519439
Chloride	mg/1 4	0.0	40.0	100.		90-110	0	20		WG519527
Benzene	mg/1 0	0527	0.0523	105		79-114	0.720	20		WG519447
Ethylbenzene	mg/1 0	.0544	0.0532	109		80-116	2.16	20		WG519447
Toluene	mg/1 0	.0527	0.0526	105		79-112	0.180	20		WG519447
Total Xylene	mg/1 0	.159	0.156	106.		84-118	2.19	20		WG519447
a, a, a-Trifluorotoluene (PID)			NULTER STATE	109.0	0	55-122	and the second			WG519447

a,a,a-Trifluorotoluene(PID)
 \* Performance of this Analyte is outside of established criteria. For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

Page 5 of 7

# EA-B BICHENICIES

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### Quality Assurance Report Level II

L499517

February 03, 2011

		Laboratory	Control	Sample Dup	licate				
Analyte	Units	Result	Ref	*Rec		Limit	RPD	Limit	Batch
Specific Conductance	umhos/	570.	570.	102.	1.1.94	85-115	0	20	WG519793
			Matrix	Spike					
Analyte	Units	MS Res	Ref R	es TV	* Rec	Limit		Ref Samp	Batch
Benzene	mg/1	0.0511	0.001	60 .05	99.0	35-147		L499524-05	WG519447
Ethylbenzene	mg/l	0.0515	0.001	60 .05	99.8	39-141		L499524-05	WG519447
Toluene	mg/1	0.0503	0	.05	101.	35-148		L499524-05	WG519447
Total Xylene	mg/l	0.149	0.003	60 .15	96.8	33-151		L499524-05	WG519447
a, a, a-Trifluorotoluene (PID)					109.4	55-122			WG519447
		Mati	ix Spike	Duplicate					
Analyte	Units	MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Benzene	mg/1	0.0530	0.0511	103.	35-147	3.60	20	L499524-05	WG519447
Ethylbenzene	mg/l	0.0540	0.0515	105.	39-141	4.79	20	L499524-05	WG519447
Toluene	mg/l	0.0524	0.0503	105.	35-148	4.13	20	L499524-05	WG519447
Total Xylene	mg/1	0.157	0.149	102.	33-151	5.37	20	L499524-05	WG519447
a,a,a-Trifluorotoluene(PID)				108.2	55-122				WG519447

Batch number /Run number / Sample number cross reference

WG519439: R1558389: L499517-01 WG519527: R1558549: L499517-01 WG519447: R1558830: L499517-01 WG519793: R1561029: L499517-01

 \* \* Calculations are performed prior to rounding of reported values.
 \* Performance of this Analyte is outside of established criteria. For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

Page 6 of 7



XTO Energy - San Juan Division James McDaniel 382 Road 3100

Aztec, NM 87410

#### Quality Assurance Report Level II

L499517

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier. 12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

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February 03, 2011

Company Name/Address			Alternate Billing				Analysis/Container/Preservative						Chain of Custody		
XTO Energy, Inc. 382 County Road 3100 Aztec, NM 87410		XTORNM031810S					2) (1) - 20 - 12	The second second	ec /	and the second second		Prepared by:	Page_of_ F027 IMENTAL		
		Report to: James McDaniel E-mail to: James_McDaniel@xtoenergy.com				ad Coc	Cec/	1	1/2		and the second	12065 Lebanon Road Mt. Juliet TN 37122	rp Inon Road N 37122		
Project Description: Federo PHONE: 505-333-3701 FAX:	Client Project	<u>‡   ⊤</u> №.		Earmi Lab Project#	state collected	VM	12-40	Onl /	71 / C	- 200 r	1	and the second second	Phone (615 Phone (80 . FAX (6	)758-5858 0) 767-5859 15)758-5859	
Collected by: James McDaniel Collected by(signature)	ted by: James McDaniel     Site/Facility ID#       cted by(signature)     Rush?       cted by(signature)     Rush?       cted by(signature)     Next Day100%		HIT e Notified) 100% 50% 25%	P.O.# Date Results Needed N Email?No_X_Yes c FAX?NoYes		No	TEX (2021)	C/1-50	1/1- SOC	10rides/1	And the second sec		CoCode XTORNM Template/Prelogin Shipped Via: Fed Ex	(lab use only) Ex	
Sample ID	Comp/Grab	Matrix	Depth	Date	Time	Cntrs	2	Ш	d	0	in the second		Remarks/contaminant	Sample # (lab only)	
Water Sample	Grac	GW	-	1/20/11	1420	3	X	x	X	X				6499517-01	
	-				1	-	1	2.	112	-	1				
	-	1.1.1.1				-	1		1			考え			
			-					-	-		1				
			1	-	13-1.21	+	1	-			-		-	<u>Beauty</u>	
	-	La la la	San Art		-	-	1	-	1	-	#	1		1	
						-	12 1		<u>.</u>	-					
	-				1	-	1	-	11		97 - 18 39 - 24				
Matrix: SS-Soil/Solid GW-Ground Remarks: Relinquisher by Signature Relinquisher by: (Signature Relinquisher by: (Signature	Date:	Time:	Received by:	Water OT-Ot (Signature) (Signature)	her	871	9 (cC Sample Temp:	30 as return 3.	ned via	FedEx	7 X_UPS Bottles Re	pH Flow _Other ceived:	Other Condition COCST	(lab use only)	
and and a state of the state of	Date.	THIE.	Maceived Jon	by (bignature	1	35 1	Uate:	- 1	5	8. 7.	ime:	×	pH Checked:	NCF:	



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Tax I.D. 62-0814289 Est. 1970

James McDaniel XTO Energy - San Juan Division 382 Road 3100 Aztec, NM 87410

Report Summary

Wednesday March 02, 2011

Report Number: L503820 Samples Received: 03/01/11 Client Project:

Description: Federal 18 No. 1T

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

#### Daphne Richards , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487 GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140 NJ - TN002,NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233 AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A, TX - T104704245, OK-9915

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences. Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

Page 1 of 7



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Est. 1970

James McDaniel XTO Energy - San Juan Division 382 Road 3100 Aztec. NM 87410	REPOR	T OF ANALYSIS	1	March 02, 2011					
Date Received : March 01, 2011 Description : Federal 18 No. 1T				ESC Sample # : L503820-01					
Sample ID : WATER SAMPLE				Site ID : Project # :	FEDERAL 18 NO.	1T			
Collected By : James McDaniel Collection Date : 02/28/11 13:25						241			
Parameter	Result	Det. Limit	Units	Method	Date	D11.			
Chloride	550	10.	mg/l	9056	03/01/11	10			
рн	6.7		su	9040C	03/02/11	1			
Specific Conductance	4000		umhos/cm	9050A	03/02/11	1			
Dissolved Solids	3400	10.	mg/l	2540C	03/02/11	1			
Benzene Toluene Ethylbenzene Total Xylene	0.042 0.060 0.0061 0.020	0.00050 0.0050 0.00050 0.0015	mg/l mg/l mg/l mg/l	8021B 8021B 8021B 8021B 8021B	03/01/11 03/01/11 03/01/11 03/01/11	1 1 1 1			
a,a,a-Trifluorotoluene(PID)	97.9		% Rec.	8021B	03/01/11	1			

BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL) Note: The reported analytical results relate only to the sample submitted. This report shall not be reproduced, except in full, without the written approval from ESC.

. Reported: 03/02/11 13:28 Printed: 03/02/11 13:45 L503820-01 (PH) - 6.7@18.0c

Page 2 of 7
### Attachment A List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L503820-01	WG523798	SAMP	рН	R1594689	Т8

Page 3 of 7

#### Attachment B Explanation of QC Qualifier Codes

Qualifier	Meaning									
Т8	(ESC) - Additional method/sample information: Sample(s) received par close to holding time expiration.	st/too								
	Qualifier Percet Information									

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

### Definitions

- Accuracy The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
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TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Page 4 of 7

# L·A·B S.C.I.E.N.C.E.S

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### Quality Assurance Report Level II

L503820

March 02, 2011

		Labo	ratory Blank				
Analyte	Result	Uni	ts %	Rec	Limit	Batch Date	Analyzed
Pangana	- 000E		1			WOE03753 03//	
Ethylhenzene	< .0005	mg/	1			WG523753 03/0	1/11 13:0
Toluene	< .0005	mg/	1			WG523753 03/0	1/11 13:0
Total Yulene	< .005	mg/	1			WG523753 03/0	1/11 13:0
a a a-Trifluorotoluene(PID)	¢ .0015	ing/	-	2 02	55-100	WG523753 03/0	11/11 13:0-
a, a, a mini aorocordene (Fib)		* A	ec.	7.02	55-122	MG525755 03/0	11/11 13:04
Chloride	< 1	mg/	1			WG523733 03/0	1/11 07:50
Specific Conductance	1.20	umh	os/cm			WG523866 03/0	2/11 11:50
рн	7.70	su				WG523798 03/0	2/11 09:41
Dissolved Solids	< 10	mg/	1	5.0	Sector Constitution	WG523769 03/0	2/11 12:55
			Duplicate				
Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
Chloride	mg/l	24.0	24.0	1.24	20	L503617-01	WG52373
Chloride	mg/l	200.	200.	2.47	20	L503638-22	WG523733
Specific Conductance	umhos/cm	330.	330.	0.608	20	L503969-01	WG523866
							-
pH pH	su	9.50	9.50	0	1	L503230-01 L503890-01	WG523798
The second second second second second							
Dissolved Solids	mg/l	8900	9120	2.55	5	L503823-01	WG523769
		Laborato	ry Control S	Sample			
Analyte	Units	Known V	al	Result	* Rec	Limit	Batch
Pangana	ma /1	0.E	0	0470	04.0	70-114	WOEDDOE
Ethylbergene	mg/1	.05	0.	0470	94.0	90-116	WCE33753
Toluene	mg/1	.05	0	0499	97.6	20-112	WGE22753
Total Vylene	mg/1	.05	0.	146	97.0	94-110	WG523751
a, a, a-Trifluorotoluene (PID)	mg/ 1	.15	0.	140	94.41	55-122	WG523753
Chloride	mg/l	40	40	0.2	101.	90-110	WG52373
Specific Conductance	umhos/cm	561	56	50.	99.8	85-115	WG523866
pH	รน	6.3	6.	.30	100.	97.98-102.02	WG523798
Dissolved Solids	mg/l	8800	87	780	99.7	85-115	WG523765
Analyte	La Unite P	boratory Co	ntrol Sample	Duplicate	Limit D	PD Limit	Batch
	Stard R				A A A A A A A A A A A A A A A A A A A	and the second s	
Benzene	mg/1 0	.0474 0	.0470 95	5.0	79-114 0	.890 20	WG523753

 Benzene
 mg/l
 0.0474
 0.0470
 95.0
 79-114
 0.890

 \* Performance of this Analyte is outside of established criteria.
 For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

Page 5 of 7

# S.C.I.E.N.C.E. S

YOUR LAB OF CHOICE

XTO Energy - San Juan Division James McDaniel 382 Road 3100

Aztec, NM 87410

12065 Lebanon Rd. 12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Quality Assurance Report Level II

L503820

March 02, 2011

	1.0	Laborator	Control	Sample Dun	licate				
Analyte	Units	Result	Ref	*Rec	140000	Limit	RPD	Limit	Batch
Ethylbenzene	mg/1	0.0485	0.0479	97.0		80-116	1.30	20	WG52375
Toluene	mg/l	0.0491	0.0488	98.0		79-112	0.600	20	WG52375
Total Xylene	mg/l	0,147	0.146	98.0		84-118	1.03	20	WG52375.
a,a,a-Trifluorotoluene(PID)				106.7		55-122			WG52375
Chloride	mg/l	40.2	40.2	100.		90-110	0	20	WG52373
Specific Conductance	umhos/	560.	560.	100.		85-115	0	20	WG52386
рн	su	6.30	6.30	100.		97.98-102.02	0	20	WG52379
Dissolved Solids	mg/l	8700	8780	99.0	1.0	85-115	0.824	20	WG52376
			Matrix	Spike					
Analyte	Units	MS Res	Ref R	es TV	% Rec	Limit		Ref Samp	Batch
Benzene	mg/l	0.0625	0.017	0.05	91.1	35-147		L503691-01	WG52375
Ethylbenzene	mg/l	0.0598	0.013	0.05	93.7	39-141		L503691-01	WG52375
Toluene	mg/l	0.0454	0	.05	90.9	35-148		L503691-01	WG52375
Total Xylene	mg/l	0.143	0	.15	95.3	33-151		L503691-01	WG52375
a,a,a-Trifluorotoluene(PID)					101.4	55-122			WG52375
Chloride	mg/l	84.6	36.0	50	97.2	80-120	NA THE	L503620-01	WG52373
		Mat	rix Spike	Duplicate					
Analyte	Units	MSD	Ref	*Rec	Limit	RPD	Limit	Ref Samp	Batch
Benzene	mg/l	0.0631	0.0625	92.1	35-147	0.810	20	L503691-01	WG52375
Ethylbenzene	mg/l	0.0608	0.0598	95.6	39-141	1.55	20	L503691-01	WG52375
Toluene	mg/l	0.0467	0.0454	93.4	35-148	2.76	20	L503691-01	WG52375
Total Xylene	mg/l	0.147	0.143	98.0	33-151	2.78	20	L503691-01	WG52375
a,a,a-Trifluorotoluene(PID)				101.1	55-122				WG52375
Chloride	mg/l	83.4	84.6	94.8	80-120	1.43	20	L503620-01	WG52373

Batch number /Run number / Sample number cross reference

WG523753: R1593509: L503820-01 WG523733: R1593869: L503820-01 WG523866: R1594630: L503820-01 WG523798: R1594689: L503820-01 WG523769: R1594749: L503820-01

\* Calculations are performed prior to rounding of reported values.
 \* Performance of this Analyte is outside of established criteria.
 For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

Page 6 of 7



XTO Energy - San Juan Division James McDaniel 382 Road 3100

Aztec, NM 87410

#### Quality Assurance Report Level II

L503820

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

> Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier. 12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

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Est. 1970

March 02, 2011



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Tax I.D. 62-0814289 Est. 1970

James McDaniel XTO Energy - San Juan Division 382 Road 3100 Aztec, NM 87410

Report Summary

Thursday April 07, 2011

Report Number: L509262 Samples Received: 04/02/11 Client Project:

Description: Federal 18 1T

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Daphne Richards , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487 GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140 NJ - TN002,NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233 AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A, TX - T104704245, OK-9915

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences. Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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Page 1 of 7



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James McDaniel XTO Energy - San Juan Division 382 Road 3100 Aztec, NM 87410	REPOI	RT OF ANALYSIS		April 07, 2	011	
Date Received : April 02, 201 Description : Federal 18 1T	1			ESC Sample	# : L509262-01	
Sample ID : WATER SAMPLE			18-17	Site ID : Project # :	FEDERAL 18 1T	
Collected By : James McDaniel Collection Date : 04/01/11 12:30						
Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	260	5.0	mg/l	9056	04/04/11	5
pH	6.8		su	9040C	04/07/11	1
Specific Conductance	3100	1.8	umhos/cm	9050A	04/06/11	1
Dissolved Solids	2700	10.	mg/l	2540C	04/06/11	1
Benzene Toluene Ethylbenzene Total Xylene	0.023 0.027 0.0018 0.0068	0.00050 0.0050 0.00050 0.0015	mg/l mg/l mg/l mg/l	8021B 8021B 8021B 8021B	04/03/11 04/03/11 04/03/11 04/03/11	1 1 1 1
Surrogate Recovery(%)	103.		% Rec.	8021B	04/03/11	1

BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL) Note: The reported analytical results relate only to the sample submitted. This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 04/07/11 13:11 Printed: 04/07/11 13:24 L509262-01 (PH) - 6.8@18.9c

Page 2 of 7

### Attachment A List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L509262-01	WG529807	SAMP	рН	R1640732	T8

### Attachment B Explanation of QC Qualifier Codes

Qualifier	Meaning			
Т8	(ESC) - Additional method/sample information: close to holding time expiration.	Sample(s)	received	past/too
	Qualifier Report Information			

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

- Definitions Accuracy The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Differrence.
- Surrogate Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chem-ically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Page 4 of 7

# S.C.I.E.N.C.E.S L.A.B

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Quality Assurance Report Level II L509262

April 07, 2011

		Labo	ratory Blan	ak			
Analyte	Result	Uni	ts 1	Rec	Limit	Batch Da	te Analyzed
		1.1.1.1.1.1.1.1				A DOM TO DO	
Benzene	< .0005	mg/	1			WG529217 04	/03/11 01:45
Ethylbenzene	< .0005	mg/	1			WG529217 04	/03/11 01:45
Toluene	< .005	mg/	1			WG529217 04	/03/11 01:45
Total Xvlene	< .0015	mg/	1			WG529217 04	/03/11 01:45
a, a, a-Trifluorotoluene (PID)		* R	ec. 1	104.0	55-122	WG529217 04	/03/11 01:45
Chloride	< 1	mg/	1			WG529309 04	/04/11 10:22
Dissolved Solids	< 10	mg/	1			WG529211 04	/06/11 11:01
Specific Conductance	< 1.8	umh	los/cm			WG529535 04	/06/11 14:12
рН	4.70	su	MARSHERM		1.1.1	WG529807 04	/07/11 11:16
	Theire	Description	Duplicate		* inda	Def Com	Patah
Analyce	UNICS	Result	Dupiicat	le RPD	TTUTC	Ret Samp	Batth
Chloride	mcr/1	320	320	0 313	20	1.509005-01	WG529309
Chloride	mg/1	210	210	0.949	20	1509034-02	WGE20300
chioride	mg/1	210.	210.	0.948	20	1909034-02	WG529309
Dissolved Solids	mg/l	420.	421.	0.946	5	L509099-23	WG529211
Specific Conductance	umhos/cm	310.	310.	0.322	20	L509033-06	WG529535
рH	su	6.60	6.60	0	1	L508799-01	WG529807
pH	su	1.30	1.30	0	1	L509609-09	WG529807
		Laborato	ry Control	Sample			
Analyte	Units	Known V	al	Result	% Rec	Limit	Batch
Poprono	mg/1	0.E		0471	04.3	79-114	W0520217
Ethylhennene	mg/1	.05		0472	94.5 04 E	90-116	WGE20217
Teluere	mg/1	.05		0475	05.3	20.110	WG529217
Totuene	mg/1	.05		1.0470	95.3	04-110	WG529217
iotal Aylene	mg/1	.15		1.141	98.0	04-110	WG529217
a, a, a-Trifiuorotoluene (PID)					102.9	55-122	WG529217
Chloride	mg/l	40	4	0.8	102.	90-110	WG529309
Dissolved Solids	mg/l	8800	Ę	860	101.	85-115	WG529211
Specific Conductance	umhos/cm	561	5	50.	98.0	85-115	WG529535
рн	su	6.3	e	5.30	100.	97.98-102.0	2 WG529807
Analyte	Lal Units Re	coratory Co	ntrol Sampl	e Duplicate Rec	Limit	RPD Limit	Batch
Benzene	mg/1 0	0494 0	0471	19.0	79-114	4 69 20	WG529217

\* Performance of this Analyte is outside of established criteria. For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

Page 5 of 7

### S.C.I.E.N.C.E.S L.A.B

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James McDaniel 382 Road 3100 Aztec, NM 87410		Qua	ality Ass Lev L509	urance Repo rel II 262	rt	1		April	07, 2011
Inslute	Unite	Laboratory	Y Control	Sample Dup	licate	Limit	RDD	Limit	Patch
Analyce	UNICS	Result	Rei	SREC		Limic	RPD	Limit	Batten
Ethylbenzene	mg/l	0.0491	0.0473	98.0		80-116	3.85	20	WG52921
Toluene	mg/l	0.0492	0.0476	98.0		79-112	3.15	20	WG529217
Total Xylene	mg/l	0.153	0.147	102.		84-118	3.68	. 20	WG52921
a,a,a-Trifluorotoluene(PID)				102.2		55-122			WG529217
Chloride	mg/l	40.8	40.8	102.		90-110	0	20	WG529309
Dissolved Solids	mg/l	8880	8860	101.		85-115	0.271	. 20	WG529211
Specific Conductance	umhos/	550.	550.	98.0		85-115	0	20	WG529535
рн	su	6.30	6.30	100.	1.25	97.98-102.02	0	20	WG529807
			Matrix	Spike					
Analyte	Units	MS Res	Ref R	les TV	* Rec	Limit	121-	Ref Samp	Batch
Benzene	mg/l	0.0508	0.007	50 .05	86.7	35-147		L509313-02	WG529217
Ethylbenzene	mg/l	0.0480	0.002	90 .05	90.2	39-141		L509313-02	WG529217
Toluene	mg/l	0.0651	0.025	.05	80.2	35-148		L509313-02	WG529217
Total Xylene	mg/l	0.188	0.058	0 .15	86.9	33-151		L509313-02	WG529217
a,a,a-Trifluorotoluene(PID)	1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.			1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	101.8	55-122	-	1. 1. 1. 1. 1. N.	WG529217
Analyte	Units	Mata	rix Spike Ref	Duplicate %Rec	Limit	RPD	Limit	Ref Samp	Batch
Benzene	mg/1	0.0562	0.0508	97.5	35-147	10.1	20	L509313-02	WG529217
Ethylbenzene	mg/l	0.0519	0.0480	98.0	39-141	7.75	20	L509313-02	WG529217
Toluene	mg/l	0.0707	0.0651	91.4	35-148	8.26	20	L509313-02	WG529217
Total Xylene	mg/1	0.203	0.188	96.6	33-151	7.44	20	L509313-02	WG529217
a, a, a-Trifluorotoluene (PID)				102.9	55-122				WG529217

Batch number /Run number / Sample number cross reference

WG529217: R1635809: L509262-01 WG529211; R163869: L509262-01 WG529309; R1636590: L509262-01 WG529211: R1638693: L509262-01 WG529535: R1639330: L509262-01 WG529807: R1640732: L509262-01

\* Calculations are performed prior to rounding of reported values.
 \* Performance of this Analyte is outside of established criteria.
 For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

Page 6 of 7



XTO Energy - San Juan Division James McDaniel 382 Road 3100

Aztec, NM 87410

#### Quality Assurance Report Level II

L509262

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

> Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier. 12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

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Est. 1970

April 07, 2011

Umpany Name/Address	E Sideral		Alternate B	illing	No L			Anatys	sis/Cont	ainer/Prese	vative		Chain of Custody
(TO Energy, Inc. 82 County Road 3100 Aztec, NM 87410			XTORNM	1031810S			+HCL	conc/co			44	D160 Prepared by:	Pageot
			Report to: Jan E-mail to: Jan	nes McDaniel nes_McDaniel@x	toenergy.com		L/Cool	les /1-5			10 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -	Environn Science corr 12065 Leban	MENTAL on Road 37122
HONE: 505-333-3701	Client Project P	#   No.	T	Farmin Lab Project #	State Collected: Igfen, N	<u>IM</u>	) /2-40m	Chloric		10 A		Phone (615) Phone (800) FAX (61	758-5858 9 767-5859 5)758-5859
illected by: James McDaniel Illected by(signature) acked on Ice N_Y	Site/Facility IDI Fe.OCC Rush? (L	ab MUST b Next Day Wo Day Two Day	2 # /T e Notified) 100% 	P.O.# Date Result Email?N FAX?N	s Needed	No	TEX (EQUI	C, PH, TDS	A			CoCode XTORNM Template/Prelogin Shipped Via: Fed Ex	(lab use only)
Sample ID	Comp/Grab	Matrix	Depth	Date	Time	Cntrs	2	M		Sale -		Remarks/contaminant	Sample # (lab only)
Nater Sample	Grab	GW	-	14/1/11	1230	3	X	X	1		*		L S092620
	18 194		1011	13.13	12.23		i m de		1				
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	13. 13						-1 Line		资 <u>(信</u> )	朝夏马	1.00		李 清潔子 强沉
		Start's	an and		Stora 2			Sec.			- Card -		
latrix: SS-Soil/Solid GW-Groundwa	ater WW-Wa	stewater [	OW-Drinking \	Water OT-O	ther		8	71	940	31 15	pH	Temp Other	-
induisper ty signature	4/1/11	1400	Received by:(	Signature)	5mz		Sampl	es returr	ned via: F	edEx_X_UPS	_Other	Condition	(lab use only)
linquisher by (Signature	Date:	Time:	Received by:	(Signature)	25		Temp	211	1 6.0	Bottles R	ceived:		UI



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Tax I.D. 62-0814289

Est. 1970

James McDaniel XTO Energy - San Juan Division 382 Road 3100 Aztec, NM 87410

Report Summary

Wednesday May 04, 2011

Report Number: L513658 Samples Received: 04/30/11 Client Project:

Description: Federal 18 1T

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Daphne Richards , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487 GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140 NJ - TN002,NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233 AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A, TX - T104704245, OK-9915

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences. Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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James McDaniel XTO Energy - San Jua 382 Road 3100	n Division	REPORT	OF ANALYSIS		May 04, 2013	L	
Aztec, NM 87410	April 30, 2011				ESC Sample #	∉ : L513658-01	
Description :	Federal 18 1T				Site ID :	FEDERAL 18 1 1	C
Sample ID :	WATER SAMPLE				Project # :		
Collected By : Collection Date :	James McDaniel 04/29/11 10:15						
Parameter	State State	Result	Det. Limit	Units	Method	Date	Dil.
Chloride		140	2.0	mg/l	9056	04/30/11	2
рН		6.9		su	9040C	05/04/11	1
Specific Conductar	ice	2900	1.8	umhos/cm	9050A	05/04/11	1
Dissolved Solids		2600	10.	mg/l	2540C	05/04/11	1
Benzene Toluene Ethylbenzene Total Xylene		0.029 0.028 0.0024 0.0073	0.00050 0.0050 0.00050 0.0015	mg/l mg/l mg/l mg/l	8021B 8021B 8021B 8021B 8021B	04/30/11 04/30/11 04/30/11 04/30/11	1 1 1 1
Surrogate Recovery(%	s) Luene(PID)	107.		% Rec.	8021B	04/30/11	1

BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL) Note: The reported analytical results relate only to the sample submitted. This report shall not be reproduced, except in full, without the written approval from ESC.

. Reported: 05/04/11 16:02 Printed: 05/04/11 16:35 L513658-01 (PH) - 6.9@19.1c

Page 2 of 7

### Attachment A List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L513658-01	WG533921	SAMP	рн	R1673710	T8

### Attachment B Explanation of QC Qualifier Codes

Qualifier	Meaning
Т8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

#### Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

- Definitions Accuracy The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Differrence.
- Surrogate Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chem-ically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Page 4 of 7

# S.C.I.E.N.C.E.S L.A.B

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Tax I.D. 62-0814289

Est. 1970

Quality Assurance Report Level II

L513658

May 04, 2011

		La	boratory B	lank						
Analyte	Result	U	nits	* Rec	1.1	Limit	F	Batch I	Date Anal	yzed
	0005	and a state of the	-/3				And and a state of		14/20/11	22.3
Benzene	< .0005	m	g/1 g/1						04/30/11	22.3
Echylbenzene Telwene	< .0005	m	9/1						1/30/11	22.2
Toruene	< .005	m	g/1 g/1					10533565 (	14/30/11	22.2
Total Aylene	< .0015	iii iii	g/1 Per	106.0		EE-122	A COLORED OF THE OWNER OWNER OF THE OWNER OF THE OWNER OF THE OWNER OWNER OWNER OF THE OWNER	10533565 (	04/30/11	22.2
a, a, a-iririuorotoiuene (PID)			Rec.	106.0		55-122		10533505 1	04/30/11	64:3
Chloride	< 1	m	g/1				P	VG533515 (	04/30/11	06:00
Dissolved Solids	< 10	m	g/1				P	G533572 (	05/04/11	12:59
рН	4.60 \$	5	u				P	NG533921 (	05/04/11	14:0'
Specific Conductance	< 1.8	u	mhos/cm	ALTRAINT	1.129	13120199	P	NG533938 (	05/04/11	15:36
Analyte	Unite	Regult	Duplicate	ate P	מפ	Limit		Ref Samp	Bat	ch
Anaryce	Unico	ACDU10	Duptit	acc a		alama o	12115	tion bump		
Dissolved Solids	mg/l	2600	2610	0	.0766	5		L513658-0	01 WG5	33572
nH	911	8 20	8 20	0		1		L513426-0	02 WG5	3392
pH	su	1.70	1.70	0		î		L514131-0	04 WG5	3392
Specific Conductance	umnos/cm	940.	930.	0	.043	20		15134/1-0	JI WG5	22020
Specific Conductance	umnos/cm	350.	350.	1	.14	20	ANT GALL	T214049-0	JI WG5	22220
Analyte	Units	Labora	tory Contro Val	Sample Resul	t	% Rec	1	Limit	Bat	ch
					-					
Benzene	mg/1	.05		0.0501		100.	CALCULATION OF	79-114	WG5	3356
Ethylbenzene	mg/l	.05		0.0486		97.2	8	30-116	WG5	3356
Toluene	mg/l	.05		0.0485		96.9	1	79-112	WG5	3356
Total Xylene	mg/1	.15		0.149		99.0	8	34-118	WG5	3356
a, a, a-Trifluorotoluene (PID)						104.8	5	55-122	WG5	3356
Chloride	mg/l	40		40.6		102.	9	90-110	WG5	3351
Dissolved Solids	mg/l	8800		8720		99.0	8	35-115	WG5	3357:
		6.3		6 30		100	Real Party	00-102	02 1025	2202
рн	su	0.3		6.30		100.		77.90-102	.02 405	3332.
Specific Conductance	umhos/cm	556		560.	a state	101.		35-115	WG5	33931
	La	boratory	Control Sam	nple Dupl	icate		-			-
Analyte	Units R	esult	Ret	*Rec	a straight of	Limit	RPD	Lim:	it Bat	en
Benzene	mg/1 0	.0514	0.0501	103.		79-114	2.44	20	WG5	3356
Ethylbenzene	mg/1 0	.0493	0.0486	98.0		80-116	1.30	20	WG5	3356
Toluene	mg/1 0	.0492	0.0485	98.0		79-112	1.44	20	WG5	3356
Total Vulene	/1 0	140	0 140	00 0		04.110	0 200	20	M/3 E	33561

t Xylene mg/l 0.148 0.149 99.0 84-118
\* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

Page 5 of 7

## S.C.I.E.N.C.E.S L.A.B

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Tax I.D. 62-0814289

Est. 1970

Quality Assurance Report Level II

L513658

May 04, 2011

	- 600	Tabayatay	Control	Cample Dup	licato	Sen the			115.43
Analyte	Units	Result	Ref	Rec	IICate	Limit	RPD	Limit	Batch
a a a-Trifluorotoluere(PID)				103 5		55-122			
Chloride	mg/l	40.6	40.6	102.		90-110	0	20	WG533515
Dissolved Solids	mg/1	8780	8720	100.		85-115	0.732	20	WG533572
рн	su	6.30	6.30	100.		97.98-102.02	0	20	WG533921
Specific Conductance	umhos/	560.	560.	101.	No. Constant	85-115	0	20	WG533938
			Matrix S	pike					
Analyte	Units	MS Res	Ref Re	s TV	% Rec	Limit	-	Ref Samp	Batch
Benzene	mg/l	0.0503	0	.05	101.	35-147		L513698-01	WG533565
Ethylbenzene	mg/1	0.0485	0	.05	97.1	39-141		L513698-01	WG533565
Toluene	mg/l	0.0484	0	.05	96.8	35-148		L513698-01	WG533565
Total Xvlene	mg/l	0.148	0	.15	98.5	33-151		L513698-01	WG533565
a, a, a-Trifluorotoluene (PID)		- 200 A C - 2			105.8	55-122			WG533565
Chloride	mg/l	68.0	18.0	50	100.	80-120	31673	L513645-02	WG533515
		Mata	rix Spike	Duplicate					
Analyte	Units	MSD	Ref	*Rec	Limit	RPD	Limit	Ref Samp	Batch
Benzene	mg/l	0.0496	0.0503	99.2	35-147	1.46	20	L513698-01	WG533565
Ethylbenzene	mg/l	0.0477	0.0485	95.4	39-141	1.70	20	L513698-01	WG533565
Toluene	mg/l	0.0471	0.0484	94.2	35-148	2.66	20	L513698-01	WG533565
Total Xvlene	mg/l	0.144	0.148	95.8	33-151	2.82	20	L513698-01	WG533565
a, a, a-Trifluorotoluene (PID)				105.3	55-122				WG533565
Chloride	mg/l	66.9	68.0	97.8	80-120	1.63	20	L513645-02	WG533515

Batch number /Run number / Sample number cross reference

WG533565: R1669269: L513658-01 WG533515: R1671909: L513658-01 WG533572: R1673329: L513658-01 WG533921: R1673710: L513658-01 WG533938: R1673813: L513658-01

\* Calculations are performed prior to rounding of reported values.
 \* Performance of this Analyte is outside of established criteria.
 For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

Page 6 of 7



XTO Energy - San Juan Division James McDaniel 382 Road 3100

Aztec, NM 87410

Quality Assurance Report Level II

L513658

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier. 12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

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May 04, 2011

Page 7 of 7

Company Name/Address	S. C. S. C.	Alternate Billing					Analysis/Container/Preservative					E001	Chain of Custody	
(TO Energy, Inc. 182 County Road 3100 Aztec, NM 87410			XTORNM031810S Report to: James McDaniel E-mail to: James McDaniel@xtoenergy.com					es /i-santle				Prepared by: ENVIRONMENTAL Science corp 12065 Lebanon Road		
Project Description: Federa PHONE: 505-333-3701 AX: collected by: James McDaniel collected b	Client Project I Site/Facility IDI FeCera Rush? (L Comp/Grab Grab	# 17 No. Ab MUST be Next Day WO Day Two Day hree Day Matrix GW	+ 17 Notified) 	City/S Farmin Lab Project # P.O.# Date Result Email?N FAX?N Date Y/2.9/11	s Needed	No of Critrs	X RTEX (8021) / 2-40	XEC. PH. TDS, Chlorides				Mt. Juliet Th Phone (615 Phone (800 FAX (6 CoCode XTORNM Template/Prelogin Shipped Via: Fed Ex Remarks/contaminant	N 37122 )758-5858 D) 767-5859 (lab use only) (lab use only) Sample # (lab only) CS/3658-1	
the state of the s	-	1.1229			1.000	-								
						-	20			調整	Contract of the second		Arata Arata	
		1000		-			1.11.11		2	- 2 - 2 - 2 - 2			4	
		1.7	1.5				1.15		6.5	- 2000 - 75 77			125	
S. S. Standard		1.1.1				-								
Matrix: SS-Scil/Solid GW-Coundw Remarks:	Date ///29/11	Stewater D	W-Drinking	Water OT-O	ther		Sample	es retur	ned via: I	FedEx_X_ UPS	pH Flow SOther	Temp Other Condition	(lab use only)	
elinquisher by:(Signature	Dete:	Time:	Received by:	(Signature)	Sat		Temp: 3.C	( 潮	「「「「「「「「」」」「「「」」」」「「」」」」」」」」」」」」」」」」」」	Bottles F	Received:	12003	1X	
				Contraction of the second	Martin Contraction of the	1905	-			and the second second	and the second second second			



12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859 Tax I.D. 62-0814289

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James McDaniel XTO Energy - San Juan Division 382 Road 3100 Aztec, NM 87410

### Report Summary

Thursday June 02, 2011

Report Number: L518471 Samples Received: 06/01/11 Client Project:

Description: FEDERAL 18 1T

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Daphne Richards , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487 GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140 NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233 AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A, TX - T104704245, OK-9915

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences. Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

This report may not be reproduced, except in full, without written approval from ESC Lab Sciences. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

Page 1 of 7



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James McDaniel XTO Energy - San Juan Division 382 Road 3100 Aztec, NM 87410	REPOR	T OF ANALYSIS		June 02, 201	1	
Date Received : June 01, 2013 Description : FEDERAL 18 1T Sample ID : WATER SAMPLE Collected By : James McDaniel Collection Date : 05/31/11 13:10	1			3SC Sample # Site ID : Project # :	: L518471-01 FEDERAL 18 1T	
Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	89.	2.0	mg/l	9056	06/01/11	2
pH	6.7		su	9040C	06/02/11	1
Specific Conductance	2800	1.8	umhos/cm	9050A	06/02/11	1
Dissolved Solids	2500	10.	mg/l	2540C	06/02/11	1
Benzene Toluene Ethylbenzene Total Xylene Surrogate Recovery(%)	0.014 0.019 0.0014 0.0049	0.00050 0.0050 0.00050 0.0015	mg/l mg/l mg/l mg/l	8021B 8021B 8021B 8021B	06/01/11 06/01/11 06/01/11 06/01/11	1 1 1
a,a,a-Trifluorotoluene(PID)	106.		% Rec.	8021B	06/01/11	1

BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL) Note: The reported analytical results relate only to the sample submitted. This report shall not be reproduced, except in full, without the written approval from ESC.

. Reported: 06/02/11 16:38 Printed: 06/02/11 16:45 L518471-01 (PH) - 6.7@19.7c

Page 2 of 7

### Attachment A List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifie
L518471-01	WG538372	SAMP	рН	R1707873	T8

### Attachment B Explanation of QC Qualifier Codes

Qualifier	Meaning	
T8	(ESC) - Additional method/sample information:	Sample(s) received past/too

### Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

- Definitions Accuracy The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
  - Precision The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Differrence.
- Surrogate Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chem-ically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Page 4 of 7

# L.A.B S.C.I.E.N.C.E.S

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# Quality Assurance Report Level II

L518471

June 02, 2011

		Labo	oratory Blank					
Analyte	Result	Uni	its % 1	Rec	Limit	Bat	tch D	ate Analyzed
Benzene	< .0005	mq	/1			WGS	538279 0	6/01/11 15:07
Ethylbenzene	< .0005	mg	/1			WGS	538279 0	6/01/11 15:07
Toluene	< .005	mg	/1			WG	538279 0	6/01/11 15:07
Total Xvlene	< .0015	ma	/1			WG	538279 0	6/01/11 15:07
a,a,a-Trifluorotoluene(PID)		\$ I	Rec. 11	0.1	55-122	WG	538279 0	6/01/11 15:07
pH	4.30	su				WG	538372 0	6/02/11 09:40
Dissolved Solids	< 10	mg,	/1			WG	538352 0	6/02/11 12:36
Specific Conductance	1.90	uml	nos/cm			WG	538413 0	6/02/11 12:23
Chloride	< 1	mg	/1			WGS	538282 0	6/01/11 08:39
	19 . P. 19	States	Dunlinute	all'al Lorenza			The sea	
Analyte	Units	Result	Duplicate	RPD	Limit	Re	ef Samp	Batch
н	su	6.60	6,60	0	1	L	517674-0	1 WG538372
pH	su	6.70	6.70	0	1	L	518471-0	1 WG538372
Dissolved Solids	mg/l	800.	780.	2.91	5	Ŀ	518093-0	5 WG538352
Specific Conductance	umhos/cm	350.	360.	1.68	20	LS	518406-0	1 WG538413
		Laborato	ory Control S	ample				
Analyte	Units	Known V	Val 1	Result	% Rec	Lit	nit	Batch
Benzene	mg/l	.05	0.0	0537	107.	79.	-114	WG538279
Ethylbenzene	mg/l	.05	0.0	0565	113.	80-	-116	WG538279
Toluene	mg/l	.05	0.0	0544	109.	79-	-112	WG538279
Total Xylene	mq/1	.15	0.3	169	113.	84-	-118	WG538279
a, a, a-Trifluorotoluene (PID)					106.6	55-	-122	WG538279
рн	su	6.3	6.3	30	100.	97.	.98-102.	02 WG538372
Dissolved Solids	mg/l	8800	868	30	98.6	85-	-115	WG538352
Specific Conductance	umhos/cm	556	560	o.	101.	85-	-115	WG538413
Chloride	mg/l	40	40.	.5	101.	90-	-110	WG538282
	La	horatory Co	entrol Cample	Duplicate				and the second
Analyte	Units R	esult F	Ref %Re	BC	Limit	RPD	Limi	t Batch
Benzene	mg/1 0	.0527 0	0.0537 10	5.	79-114	1.90	20	WG538279
Ethylbenzene	mg/1 0	.0558 0	0.0565 112	2.	80-116	1.15	20	WG538279
Toluene	mg/1 0	.0544 0	0.0544 105	э.	79-112	0.0600	20	WG538279
Total Xylene	mg/1 0	.170 0	0.169 113	3	84-118	0.320	20	WG538279
a, a, a-Trifluorotoluene (PID)			100	5.7	55-122			WG538279

a,a,a-Trifluorotoluene(PID)
 \* Performance of this Analyte is outside of established criteria.
 For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

Page 5 of 7

## L.A.B S.C.I.E.N.C.E.S

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382 Road 3100	Quality Assurance Report Level II	
Aztec, NM 87410		June 02, 2011
	L518471	
		and the second se

		Laboratory	y Control	Sample Dup	licate				
Analyte	Units	Result	Ref	*Rec		Limit	RPD	Limit	Batch
рН	su	6.30	6.30	100.		97.98-102.02	0	20	WG538372
Dissolved Solids	mg/l	8710	8680	99.0		85-115	0.322	20	WG538352
Specific Conductance	umhos/	560.	560.	101.		85-115	0	20	WG538413
Chloride	mg/l	40.3	40.5	101.	(had a de	90-110	0.495	20	WG538282
			Matrix S	pike					
Analyte	Units	MS Res	Ref Re	s TV	% Rec	Limit	1	Ref Samp	Batch
Benzene	mg/l	0.0710	0.0140	.05	114.	35-147		L518471-01	WG538279
Ethylbenzene	mg/l	0.0594	0.0014	.05	116.	39-141		L518471-01	WG538279
Toluene	mg/l	0.0740	0.0190	.05	110.	35-148		L518471-01	WG538279
Total Xylene	mg/l	0.185	0.0049	.15	120.	33-151		L518471-01	WG538279
a,a,a-Trifluorotoluene(PID)					105.2	55-122			WG538279
		Mati	rix Spike	Duplicate					
Analyte	Units	MSD	Ref	*Rec	Limit	RPD	Limit	Ref Samp	Batch
Benzene	mg/l	0.0732	0.0710	118.	35-147	3.07	20	L518471-01	WG538279
Ethylbenzene	mg/l	0.0604	0.0594	118.	39-141	1.53	20	L518471-01	WG538279
Toluene	mg/l	0.0752	0.0740	112.	35-148	1.55	20	L518471-01	WG538279
Total Xylene	mg/1	0.182	0.185	118.	33-151	1.35	20	L518471-01	WG538279
a, a, a-Trifluorotoluene (PID)				105.7	55-122				WG538279

Batch number /Run number / Sample number cross reference

WG538279: R1707229: L518471-01 WG538372: R1707873: L518471-01 WG538352: R1708009: L518471-01 WG538413: R1708089: L518471-01 WG538282: R1708609: L518471-01

\* Calculations are performed prior to rounding of reported values.
 \* Performance of this Analyte is outside of established criteria.
 For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

Page 6 of 7



XTO Energy - San Juan Division James McDaniel 382 Road 3100

Aztec, NM 87410

#### Quality Assurance Report Level II

L518471

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier. 12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

June 02, 2011

Company Name/Address	a/Address Alternate Billing				Analys	sis/Cont	tainer/Prese	rvative	Chain of Custor								
KTO Energy, Inc. 382 County Road 3100 Aztec, NM 87410		XTORNM031810S					XTORNM031810S Report to: James McDaniel E-mail to: James_McDaniel@xtoenergy.com				1Coc + HCI	5/1-500mc/cocl				Prepared by: ENVIRON Science cor 12065 Leba	MENTAL p non Road
Project Description: Feder PHONE: 505-333-3701 FAX:	G Client Project	8 # No		City/S Farmi Lab Project #	tate Collected:	, Nim	201-1/(1	chloride.				Mt. Juliet TN Phone (615) Phone (800 . FAX (61	1 37122 758-5858 ) 767-5859 5)758-5859				
Collected by: James McDaniel Collected by(signature)	Site/Facility ID Feder Rush? (I	Lab MUST b Next Day Two Day Three Day	<b>#   T</b> e Notified) 100% 50% 25%	P.O.# Date Results Email?N FAX?N	s Needed	No	TEX/BOD	SQL Hat				CoCode XTORNM Template/Prelogin Shipped Via: Fed Ex	(lab use only) D141				
Sample ID Water Sample	Comp/Grab	Matrix GW	Depth	Date 5/31/11	Time 13 <sup>10</sup>	Cntrs	XR	XE	1			Remarks/contaminant	Sample # (lab only)				
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		12.0.1					1000		<b>3</b>		All and a second						
Matrix: SS-Soil/Solid GW-Ground	water WW-Wa	astewater [	W-Drinking	Water OT- Ot	her		434	119	1818	2861	pH	Temp	-				
Relinguisher by (Signature	Date:	Time: 17	Received by:(	Signature)	Smy		Samp	les retur	ned via: F	FedEx_X_ UPS	_Other	Condition	(lab use only)				
Relinquisher by:(Signature	Date:	Time:	Received for	Hab by: (Signature	20	100	Date:	3.	6	(-D, Time:	2-1/1	pHChecked:	COLSE				
			1 A.S.M.	the	A	THE .	6	1-1	/ Store	0	900	14. No. 24	A States				



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James McDaniel XTO Energy - San Juan Division 382 Road 3100 Aztec, NM 87410

Report Summary

Friday June 17, 2011

Report Number: L520947 Samples Received: 06/15/11 Client Project:

Description: Federal 18 #1T

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Daphne Richards , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487 GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140 NJ - TN002,NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233 AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A, TX - T104704245, OK-9915

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences. Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

This report may not be reproduced, except in full, without written approval from ESC Lab Sciences. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

Page 1 of 7



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James McDaniel XTO Energy - San Juan Division 382 Road 3100 Aztec, NM 87410	REPORT	OF ANALYSIS		June 17, 2011		
Date Received : June 15, 2013 Description : Federal 18 #1T Sample ID : WATER SAMPLE Collected By : James McDaniel Collection Date : 06/14/11 10:30				ESC Sample # : Site ID : Project # :	L520947-01	
Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	73.	1.0	mg/l	9056	06/17/11	1
рН	6.7		su	9040C	06/17/11	1
Specific Conductance	2700	1.8	umhos/cr	n 9050A	06/16/11	1
Dissolved Solids	2500	10.	mg/l	2540C	06/17/11	1
Benzene Toluene Ethylbenzene Total Xylene Surrogate Recovery(%)	0.055 0.081 0.0028 0.015	0.00050 0.0050 0.00050 0.0015	mg/1 mg/1 mg/1 mg/1	8021B 8021B 8021B 8021B	06/17/11 06/17/11 06/17/11 06/17/11	1 1 1 1
a,a,a-Trifluorotoluene(PID)	99.2		% Rec.	8021B	06/17/11	1

BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL) Note: The reported analytical results relate only to the sample submitted. This report shall not be reproduced, except in full, without the written approval from ESC.

. Reported: 06/17/11 17:11 Printed: 06/17/11 17:11 L520947-01 (PH) - 6.7@14.8c

Page 2 of 7

### Attachment A List of Analytes with QC Qualifiers

Carl

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L520947-01	WG540925	SAMP	рн	R1727651	T8

### Attachment B Explanation of QC Qualifier Codes

Qualifier	Meaning
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

### Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

### Definitions

Accuracy	-	The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and
		relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.

Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Differrence.

Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Page 4 of 7

### Summary of Remarks For Samples Printed 06/17/11 at 17:11:45

TSR Signing Reports: 288 R3 - Rush: Two Day

drywt

Sample: L520947-01 Account: XTORNM Received: 06/15/11 09:00 Due Date: 06/17/11 00:00 RPT Date: 06/17/11 17:11

### S.C.I.E.N.C.E. L.A.B S

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Quality Assurance Report Level II

L520947

June 17, 2011

		Labor	ratory Blank				
Analyte	Result	Unit	ts 🖁 Re	c	Limit	Batch Da	te Analyzed
Benzene	< 0005	mer / 1	Carlo State			WG541000 06	/17/11 02:08
Ethylbenzene	< .0005	mg/1				WG541000 06	/17/11 02:00
Toluene	< .005	mg/l				WG541000 06	/17/11 02:01
Total Xylene	< .0015	mg/1	P. BERGERSON ST.			WG541000 06	/17/11 02:00
a,a,a-Trifluorotoluene(PID)		* Re	ec. 101.	0	55-122	WG541000 06	/17/11 02:08
Chloride	< 1	mg/1	I STARTING			WG540875 06	/16/11 07:14
Dissolved Solids	< 10	mg/1	1			WG540697 06	/17/11 12:3
рН	5.10	su				WG540925 06	/17/11 14:28
Specific Conductance	2.20	umbo	os/cm	State State	no net and a set	WG540817 06	/16/11 22:30
			Duplicate			2.6.0	Datah
Analyte	Units	Result	Duplicate	RPD	Limit	Ker Samp	Batch
Chloride	mg/l	9.60	9.60	0.208	20	L520839-02	WG540875
Chloride	mg/l	5.20	5.20	0.579	20	L520839-04	WG54087
Dissolved Solids	mg/l	2500	2500	1.59	5	L520947-01	WG54069
pH	su	7.30	7.30	0	1	L520647-01	WG54092
рН	su	8.80	8.70	1.14*	1	L521098-02	WG540925
Specific Conductance	umhos/cm	54000	54000	0	20	L520695-01	WG54081
		Laborator	ry Control San	ple			
Analyte	Units	Known Va	al Re	Result		Limit	Batch
Benzene	mg/l	.05	0.04	86	97.2	79-114	WG54100
Ethylbenzene	mg/1	.05	0.04	82	96.4	80-116	WG54100
Toluene	mg/l	.05		81	96.2	79-112	WG541000
Total Xvlene	mg/1	.15 0.		13	95.3	84-118	WG541000
a, a, a-Trifluorotoluene (PID)					99.46	55-122	WG54100
Chloride	mg/l	40	39.4		98.5	90-110	WG54087
Dissolved Solids	mg/l	8800	8610	,	97.9	85-115	WG54069
рн	รน	6.3	6.30		100.	97.98-102.0	2 WG54092
Specific Conductance	umhos/cm	445	440	A statute a	98.9	85-115	WG54081
Analyte	La Units R	boratory Con esult Re	ntrol Sample I ef %Red	Duplicate	Limit	RPD Limit	Batch
Danzana	mg/1 0	0499 0	0485 100		79-114	2 76 20	WG54100

me mg/1 0.0499 0.0486 100. /9-114
\* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

Page 5 of 7

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### Quality Assurance Report Level II

L520947

June 17, 2011

		Laborator	y Control	Sample Dupl	icate			and the set of	
Analyte	Units	Result	Ref	*Rec	-	Limit	RPD	Limit	Batch
Ethylbenzene	mg/l	0.0497	0.0482	99.0		80-116	3.13	20	WG541000
Toluene	mg/l	0.0489	0.0481	98.0		79-112	1.70	20	WG541000
Total Xylene	mg/l	0.147	0.143	98.0		84-118	3.09	20	WG541000
a,a,a-Trifluorotoluene(PID)				99.67		55-122			WG541000
Chloride	mg/l	39.4	39.4	98.0		90-110	0	20	WG540875
Dissolved Solids	mg/l	8660	8610	98.0		85-115	0.602	20	WG54069
рн	su	6.30	6.30	100.	netern	97.98-102.02	0	20	WG54092
			Matrix	Spike					
Analyte	Units	MS Res	Ref R	tes TV	% Rec	Limit		Ref Samp	Batch
Benzene	mg/l	0.0492	0	.05	98.3	35-147		L521370-09	WG541000
Ethylbenzene	mg/l	0.0495	0	.05	99.0	39-141		L521370-09	WG541000
Toluene	mg/1	0.0483	0	.05	96.7	35-148		L521370-09	WG541000
Total Xylene	mg/l	0.147	0	.15	98.1	33-151		L521370-09	WG541000
a,a,a-Trifluorotoluene(PID)					98.67	55-122			WG541000
Chloride	mg/l	60.3	11.0	50	98.6	80-120		L520728-02	WG54087
		Mat	rix Spike	Duplicate					
Analyte	Units	MSD	Ref	*Rec	Limit	RPD	Limit	Ref Samp	Batch
Benzene	mg/l	0.0480	0.0492	96.0	35-147	2.43	20	L521370-09	WG541000
Ethylbenzene	mg/l	0.0480	0.0495	95.9	39-141	3.11	20	L521370-09	WG541000
Toluene	mg/1	0.0472	0.0483	94.3	35-148	2.48	20	L521370-09	WG541000
Total Xylene	mg/1	0.143	0.147	95.1	33-151	3.07	20	L521370-09	WG541000
a,a,a-Trifluorotoluene(PID)				99.05	55-122				WG541000
Chloride	mg/l	60.8	60.3	99.6	80-120	0.826	20	L520728-02	WG540875

Batch number /Run number / Sample number cross reference

WG541000: R1726629: L520947-01 WG540875: R1727151: L520947-01 WG540697: R1727269: L520947-01 WG540925: R1727651: L520947-01 WG540817: R1728011: L520947-01

\* Calculations are performed prior to rounding of reported values.
 \* Performance of this Analyte is outside of established criteria.
 For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

Page 6 of 7


XTO Energy - San Juan Division James McDaniel 382 Road 3100

Aztec, NM 87410

Quality Assurance Report Level II

L520947

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier. 12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

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June 17, 2011

Company Name/Address			Alternate Billing				Analysis/Container/Preservative				- Andrewski - A	Chain of Custody	
XTO Energy, Inc. 382 County Road 3100 Aztec, NM 87410			XTORNM031810S Report to: James McDaniel E-mail to: james_mcdaniel@xtoenergy.com				10ml/Cuc/+HCL			Pageof Prepared by: A077  ENVIRONMENTAL Science corp 12065 Lebanon Road			
roject Description: Federa HONE: 505-333-3701 AX: ollected by: Jam < Ac. and ollected by(signature):	Client Project	#11 No. # Lab MUST be Next Day Two Day Three Day	e Notified) 100% 50% 25%	P.O.# Date Result Email?N FAX?N	State Collected:	No of	TEX/8021) 12-4	, pH, TDS, Chlerides				Phone (615 Phone (80 FAX (6 CoCode XTORNM Template/Prelogin Shipped Via: Fed Ex	5)758-5858 0) 767-5859 15)758-5859 (lab use only)
Sample ID	Comp/Crab	Matrix	Depth	Date	Time	Catrs	K	E	Kalalisi	No. of Concession, No. of Conces	1 1 1	Remarks/contaminant	Sample # (lab only)
Vater Sample	Grado	GW	-	6/14/11	1030	13	X	X		「物理法	1000	12520947	-01
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latrix: SS-Soil/Solid GW-Groundwi temarks: "ONLY 100C Per Site	ater WW-Wa	Time:	W-Drinking	Water OT-O	ther		Samp LL	les retur	ned via: 1 93 i	FedEx_X_UPS 73542	pH	Temp Flow	Other (lab use only)
Hinquisher by:(Signature	Date:	Time:	Received by: Received for	(Signature)	5.05		Temp	3.0	•••	Bottles Re 3	ceived:	OH Checked	COLST
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James McDaniel XTO Energy - San Juan Division 382 Road 3100 Aztec, NM 87410

#### Report Summary

Thursday July 07, 2011

Report Number: L523955 Samples Received: 07/01/11 Client Project:

Description: Federal 18 #1T

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Daphne Richards , ESC Representative

#### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487 GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140 NJ - TN002,NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233 AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A, TX - T104704245, OK-9915

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences. Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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James McDaniel XTO Energy - San 382 Road 3100 Aztec, NM 87410	Juan Division	REPOI	RT OF ANALYSIS	5	July 07, 20	11	
Date Received Description	: July 01, 2011 : Federal 18 #1T	1			ESC Sample	# : L523955-01	
Sample ID Collected By Collection Date	: WATER SAMPLE : James McDaniel : 06/30/11 13:45				Project # :	FEDERAL 10 11	
Parameter		Result	Det. Limit	Units	Method	Date	Dil.
Chloride		61.	1.0	mg/l	9056	07/01/11	1
рH		6.9		su	9040C	07/07/11	1
Specific Condu	ctance	2700	1.8	umhos/cm	9050A	07/04/11	1
Dissolved Soli	ds	2500	10.	mg/l	2540C	07/07/11	1
Benzene Toluene Ethylbenzene Total Xylene Surrogate Recove	ry(%)	0.052 0.067 0.0026 0.012	0.00050 0.0050 0.00050 0.0015	mg/l mg/l mg/l mg/l	8021B 8021B 8021B 8021B 8021B	07/01/11 07/01/11 07/01/11 07/01/11	1 1 1
a,a,a-Trifluor	otoluene(PID)	105.		% Rec.	8021B	07/01/11	1

BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL) Note: The reported analytical results relate only to the sample submitted. This report shall not be reproduced, except in full, without the written approval from ESC.

. Reported: 07/07/11 13:56 Printed: 07/07/11 14:25 L523955-01 (PH) - 6.9@17.9c

Page 2 of 7

#### Attachment A List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L523955-01	WG544372	SAMP	рН	R1751672	T8

#### Attachment B Explanation of QC Qualifier Codes

Qualifier	Meaning	1
T8	(ESC) - Additional method/sample information: close to holding time expiration.	Sample(s) received past/too

#### Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

- Definitions Accuracy The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Differrence.
- Surrogate Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chem-ically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Page 4 of 7

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#### Quality Assurance Report Level II L523955

July 07, 2011

		Labo	ratory Blank				
Analyte	Result	Uni	ts % Re	ec	Limit	Batch Da	ate Analyzed
Chloride	< 1	mg/	1			WG543729 0	7/01/11 07:42
Benzene	< .0005	ma/	1			WG543749 0	7/01/11 15:22
Ethylbenzene	< .0005	mg/	1 - Contraction			WG543749 0	7/01/11 15:22
Toluene	< .005	mg/	1			WG543749 0	7/01/11 15:22
Total Xvlene	< .0015	mg/	1			WG543749 0	7/01/11 15:22
a, a, a-Trifluorotoluene (PID)	FASTERN COMPANY	% R	ec. 104	.7	55-122	WG543749 0	7/01/11 15:22
Specific Conductance	3.20	umh	os/cm			WG543916 0'	7/04/11 08:44
рН	4.80	su				WG544372 0	7/07/11 12:06
Dissolved Solids	< 10	mg/	1	and Mans	Statistics Statist	WG543854 0	7/07/11 13:47
analyte	Unite	Pequit	Duplicate	RDD	Limit	Ref Samp	Batch
maryte	UNICO	Rebuic	Dupileace	RED	Dimit	Net bump	bacon
Chloride	mg/l	28.0	27.0	1.83	20	L523662-04	4 WG543729
Specific Conductance	umbos/cm	530	530.	0	20	L523270-04	4 WG543916
Specific Conductance	umhos/cm	170.	170.	0	20	L523734-02	2 WG543916
pH	su	6.90	6.90	0	1	L523955-0	WG544372
pH	su	7.80	7.80	0	1	L524328-0	1 WG544372
Dissolved Solids	mg/l	410.	402.	1.24	5	L524052-2	9 WG543854
		Laborato	ry Control Sam	nple			
Analyte	Units	Known V	al Re	esult	% Rec	Limit	Batch
Chloride	mg/l	40	40.0	)	100.	90-110	WG543729
Benzene	mg/l	.05	0.0	535	107.	79-114	WG543749
Ethylbenzene	mg/l	.05	0.0	549	110.	80-116	WG543749
Toluene	mg/l	.05	0.0	541	108.	79-112	WG543749
Total Xylene	mg/l	.15	0.1	59	106.	84-118	WG543749
a,a,a-Trifluorotoluene(PID)					105.2	55-122	WG543749
Specific Conductance	umhos/cm	445	450		101.	85-115	WG543916
рН	su	6.3	6.3	0	100.	97.98-102.0	02 WG544372
Dissolved Solids	mg/l	8800	868		98.6	85-115	WG543854
Analyte	Lal Units Re	boratory Con esult R	ntrol Sample I ef %Red	Duplicate	Limit	RPD Limit	Batch
Chlorida	mg/1 41	0 0 4	0 0 100		90-110	0 20	WGE43720

ride mg/l 40.0 40.0 100. 90-110 ( \* Performance of this Analyte is outside of established criteria. For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

Page 5 of 7

# EAB BICHIENICIES

YOUR LAB OF CHOICE

XTO Energy - San Juan Division James McDaniel 382 Road 3100

Aztec, NM 87410

12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Quality	Assurance	Report
	Level II	
-	6523955	

July 07, 2011

		Laborator	Control	Sample Dup	licate				
Analyte	Units	Result	Ref	*Rec		Limit	RPD	Limit	Batch
Benzene	mc /1	0.0551	0.0535	110.		79-114	2.99	20	WG543749
Ethylbenzene	mg/1	0.0577	0.0549	115.		80-116	4.91	20	WG543749
Toluene	mg/1	0.0551	0.0541	110.		79-112	1.79	20	WG543749
Total Xvlene	mg/l	0.167	0.159	112.		84-118	5.10	20	WG543749
a,a,a-Trifluorotoluene(PID)				104.6		55-122			WG543749
Specific Conductance	umhos/	440.	450.	99.0		85-115	2.25	20	WG543916
рн	su	6.30	6.30	100.		97.98-102.02	0	20	WG544372
Dissolved Solids	mg/l	8760	8680	100.	CO-HARMAN	85-115	0.872	20	WG543854
			Matrix S	pike					
Analyte	Units	MS Res	Ref Re	s TV	* Rec	Limit	1.1	Ref Samp	Batch
Benzene	mg/l	0.0506	0	.05	101.	35-147		L523607-05	WG543749
Ethylbenzene	mg/l	0.0525	0	.05	105.	39-141		L523607-05	WG543749
Toluene	mg/l	0.0513	0	.05	102.	35-148		L523607-05	WG543749
Total Xylene	mg/l	0.154	0	.15	102.	33-151		L523607-05	WG543749
a,a,a-Trifluorotoluene(PID)					103.3	55-122	Sec. 18	110 1211	WG543749
		Mat	rix Spike	Duplicate					
Analyte	Units	MSD	Ref	*Rec	Limit	RPD	Limit	Ref Samp	Batch
Benzene	mg/l	0.0493	0.0506	98.6	35-147	2,70	20	L523607-05	WG543749
Ethylbenzene	mg/l	0.0514	0.0525	103.	39-141	2.05	20	L523607-05	WG543749
Toluene	mg/l	0.0496	0.0513	99.3	35-148	3.22	20	L523607-05	WG543749
Total Xylene	mg/l	0.149	0.154	99.6	33-151	2.77	20	L523607-05	WG543749
a,a,a-Trifluorotoluene(PID)	itter en-			105.3	55-122				WG543749

Batch number /Run number / Sample number cross reference

WG543729:	R1748109:	L523955-01
WG543749:	R1748550:	L523955-01
WG543916:	R1749583:	L523955-01
WG544372:	R1751672:	L523955-01
WG543854:	R1751749:	L523955-01

\* Calculations are performed prior to rounding of reported values.
 \* Performance of this Analyte is outside of established criteria.
 For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

Page 6 of 7



XTO Energy - San Juan Division James McDaniel 382 Road 3100

Aztec, NM 87410

Quality Assurance Report Level II

L523955

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier. 12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

July 07, 2011

	all sa	and the second	Alternate Billing				Artelysis/Container/Preservative					Chain of Custody	
XTO Energy, Inc. 382 County Road 3100 Aztec, NM 87410 Project Description: Federal 18 # 1- PHONE: 505-333-3701		# 1T	XTORNM031810S Report to: James McDaniel E-mail to: james_mcdaniel@xtoenergy.com CaulKins Area- Lab Project #					Chlorides (1-Sour/C			Prepared by: Prepared by: ENVIRONMENTAL Science corp 12065 Lebanon Road Mt. Juliet TN 37122 Phone (615)758-5858		
Illected by: James Mc Danie	Site/Facility iD Fe de Rush? (L	Lab MUST be Next Day Two Day	2, <b>*</b> 1 <b>T</b> Notified) 100% 50%	P.O.# Date Result Email?N FAX?N	ts Needed	No	TEX (BOB!)	C, PH, TOS, C				CoCode XTORNM Template/Prelogin Shipped Via: Fed Ex	(lab use only)
Sample ID	Comp/Grab	Matrix	Depth	Date	Time	Cntrs		ш	A	1 P 48	· · · · · · · · · · · · · · · · · · ·	Remarks/contaminan	t Sample # (lab only)
Vater Sample	Grab	55	-	93911	44D	3	X	×			4.7		6)(51)571
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A LANGE AND	N. Salar	3.2.1.			120		110			1. Ale			



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James McDaniel XTO Energy - San Juan Division 382 Road 3100 Aztec, NM 87410

Report Summary

Thursday August 18, 2011

Report Number: L531225 Samples Received: 08/16/11 Client Project:

Description: Federal 18 1T

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Daphne Richards , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487 GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140 NJ - TN002,NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233 AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A, TX - T104704245, OK-9915

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences. Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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Page 1 of 7



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Est. 1970

REPORT OF ANALYSIS James McDaniel XTO Energy - San Juan Division 382 Road 3100 Aztec, NM 87410 August 18, 2011 ESC Sample # : L531225-01 August 16, 2011 Federal 18 1T Date Received : Description ; Site ID : FEDERAL 18 1T WATER SAMPLE Sample ID . Project # : James McDaniel 08/15/11 12:15 Collected By : Collection Date : Date Dil. Result Det. Limit Units Method Parameter 1.0 9056 08/16/11 1 mg/1 Chloride 44. 6.8 su 9040C 08/17/11 1 pH 9050A 08/18/11 1 umhos/cm 2600 1.8 Specific Conductance 2540C 08/18/11 1 2500 10. mg/l Dissolved Solids mg/l mg/l 08/16/11 1 0.00050 8021B Benzene 0.021 08/16/11 08/16/11 0.0050 8021B 1 Toluene 0.025 0.00050 mg/l 8021B 1 0.0012 Ethylbenzene 08/16/11 1 Total Xylene Surrogate Recovery(%) 0.0058 0.0015 mg/l 8021B % Rec. 8021B 08/16/11 1 a,a,a-Trifluorotoluene(PID) 101.

BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL) Note: The reported analytical results relate only to the sample submitted. This report shall not be reproduced, except in full, without the written approval from ESC.

. Reported: 08/18/11 14:09 Printed: 08/18/11 14:10 L531225-01 (PH) - 6.8@20.4c

Page 2 of 7

### Attachment A List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L531225-01	WG550790	SAMP	рн	R1817171	T8

Page 3 of 7

## Attachment B Explanation of QC Qualifier Codes

Qualifier	Meaning		
T8	(ESC) - Additional method/sample information: close to holding time expiration.	Sample(s)	received past/too

#### Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

- Definitions Accuracy The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Differrence.
- Surrogate Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chem-ically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Page 4 of 7

## Summary of Remarks For Samples Printed 08/18/11 at 14:10:11

TSR Signing Reports: 288 R3 - Rush: Two Day

drywt

Sample: L531225-01 Account: XTORNM Received: 08/16/11 09:00 Due Date: 08/19/11 00:00 RPT Date: 08/18/11 14:09

## S.C.I.E.N.C.E.S L.A.B

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Aztec, NM 87410

12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Quality	Assurance Level II	Report
1	L531225	

August 18, 2011

		Labor	ratory Blank				
Analyte	Result	Unit	:s 🕴 Re	C	Limit	Batch D	ate Analyzed
Banzana	< 0005	mcr/1				W0550723 0	9/16/11 18.5
Ethylbenzene	< .0005	mg/1				WG550723 0	8/16/11 18:5
Toluene	< .005	mg/1				WG550723 0	8/16/11 18:53
Total Xvlene	< .0015	mg/1	ALL STREET, ST			WG550723 0	8/16/11 18:5
a,a,a-Trifluorotoluene(PID)		* Re	ec. 101.	5	55-122	WG550723 0	8/16/11 18:53
pH	4.90	su				WG550790 0	8/17/11 11:05
Chloride	< 1	mg/l	-			WG550678 0	8/16/11 08:30
Dissolved Solids	< 10	mg/1				WG550753 0	8/18/11 10:52
Specific Conductance	1.80	umho	os/cm	CE UNSIG	Sector 19	WG551024 0	8/18/11 10:45
		I	Duplicate				
Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
Hq	su	7.00	7.00	0	1	L531136-0	1 WG550790
рН	su	8.50	8.50	0	1	L531300-0	1 WG550790
Chloride	mg/l	45.0	44.0	1.35	20	L531225-0	1 WG550678
Dissolved Solids	mg/l	2400	2350	2.81	5	L531174-0	1 WG550753
Specific Conductance	umhos/cm	640.	640.	0.778	20	L531217-0	1 WG551024
Specific Conductance	umhos/cm	5000	5000	1.01	20	L531563-0	4 WG551024
		Laborator	ry Control Sam	ple			
Analyte	Units	Known Va	al Re	esult	% Rec	Limit	Batch
Benzene	mg/1	.05	0.04	161	92.2	79-114	WG550723
Ethylbenzene	mg/l	.05	0.04	78	95.5	80-116	WG550723
Toluene	mg/l	.05	0.04	80	96.1	79-112	WG550723
Total Xylene	mg/l	.15	0.14	2	94.6	84-118	WG550723
a,a,a-Trifluorotoluene(PID)					100.3	55-122	WG550723
рн	su	9.04	8.90		98.5	98-101	WG550790
Chloride	mg/l	40	40.1		100.	90-110	WG550678
Dissolved Solids	mg/l	8800	8560	)	97.3	85-115	WG550753
Specific Conductance	umhos/cm	427	440.		103.	85-115	WG551024
Analyte	La Units F	boratory Cor Result Re	ntrol Sample I	Duplicate	Limit	RPD Limi	t Batch
Bangana	ma/1 (	0401	0461 00 0	and the second	70 114	6 36 30	WOLEOTO

ene mg/l 0.0491 0.0461 98.0 79-114 6 \* Performance of this Analyte is outside of established criteria. For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

Page 5 of 7

# EAB BICHERNEC

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XTO Energy - San Juan Division James McDaniel 382 Road 3100

Aztec, NM 87410

12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

#### Quality Assurance Report Level II L531225

August 18, 2011

		Laboratory	Control S	ample Dup	licate				
Analyte	Units	Result	Ref	*Rec		Limit	RPD	Limit	Batch
Ethylhenzene	mcr/1	0.0512	0 0478	102		80-116	6 93	20	WG550723
Toluene	mg/1	0.0511	0.0480	102		79-112	6.11	20	WG550723
Total Xylene	mg/1	0.152	0.142	101.		84-118	6.76	20	WG550723
a, a, a-Trifluorotoluene(PID)			IS COLOR	100.5		55-122	CPS N	VERAL STREET	WG550723
рН	รน	8.90	8.90	98.0		98-101	0	20	WG550790
Chloride	mg/l	40.1	40.1	100.		90-110	0	20	WG550678
Dissolved Solids	mg/l	8590	8560	98.0		85-115	0.327	20	WG550753
Specific Conductance	umhos/	440.	440.	103.	Constant of	85-115	0	20	WG551024
			Matrix Sp	ike					
Analyte	Units	MS Res	Ref Res	TV	* Rec	Limit	-	Ref Samp	Batch
Benzene	mg/l	0.0475	0	.05	95.0	35-147		L531149-02	WG550723
Ethylbenzene	mg/l	0.0510	0.00054	0 .05	101.	39-141		L531149-02	WG550723
Toluene	mg/l	0.0496	0	.05	99.3	35-148		L531149-02	WG550723
Total Xylene	mg/l	0.150	0	.15	100.	33-151		L531149-02	WG550723
a, a, a-Trifluorotoluene(PID)		-			100.5	55-122	100		WG550723
		Mat	rix Spike D	uplicate					
Analyte	Units	MSD	Ref 🕴	Rec	Limit	RPD	Limit	Ref Samp	Batch
Benzene	mg/l	0.0485	0.0475 9	7.0	35-147	2.10	20	L531149-02	WG550723
Ethylbenzene	mg/l	0.0518	0.0510 1	02.	39-141	1.51	20	L531149-02	WG550723
Toluene	mg/l	0.0511	0.0496 1	02.	35-148	2.97	20	L531149-02	WG550723
Total Xylene	mg/1	0.153	0.150 1	02.	33-151	1.93	20	L531149-02	WG550723
a, a, a-Trifluorotoluene(PID)	1 94		1	02.6	55-122				WG550723

Batch number /Run number / Sample number cross reference

WG550723: R1816570: L531225-01 WG550790: R1817171: L531225-01 WG550678: R1817272: L531225-01 WG550753: R1818515: L531225-01 WG551024: R1818890: L531225-01

\* Calculations are performed prior to rounding of reported values.
 \* Performance of this Analyte is outside of established criteria.
 For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

Page 6 of 7



XTO Energy - San Juan Division James McDaniel 382 Road 3100

Aztec, NM 87410

#### Quality Assurance Report Level II

L531225

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier. 12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

August 18, 2011

XTO Energy, Inc. 382 County Road 3100 Aztec, NM 87410						-	Analy	sis/Cont	ainer/Prese	rvative		Chain of Custody
382 County Road 3100 Aztec, NM 87410		VTODAU	10240400					-				Pageor
Aztec, NM 87410		ATORNI	M031810S			1	Seo				Prenared by:	B012
						HC	0mc /	A CAR			ENVIRON	MENTAL
		Report to: Ja	mes McDaniel	17. AT.			S				Science cor	p
		E-mail to: jar	mes_mcdaniel@xt	oenergy.com		0	-1/			1	12065 Leba	non Road
Project Description: Federal 18	+17	-	E City/s	State Collected:	A #A	R	des				Phone (615)	759 5959
PHONE: 505-333-3701 Client Proje	ect No.		Lab Project #	- caroni	101	7	6 ri	. jin		10	Phone (800	) 767-5859
FAX:	104	2 -	80#			60	5	en al		191 191	. FAX (61	5)758-5859
James Nc Daniel Fed	eral 18	5#1T	P.U.#	- Needed	T	in	PH.				CoCode	(lab use only)
Rush?	(Lab MUST b Next Day	be Notified)	Date Nesur	s needed	No		is'				XTORNM Template/Prelogin	
Perked on Ice N Y	_Two Day _Three Day	50%	Email?N FAX?N	lo_X_Yes lo_Yes	of	TE	F		1992		Shipped Via: Fed Ex	
Sample ID Comp/Gn	ab Matrix	Depth	Date	Time	Cntrs	M	EC	憲 -	and the second	a la companya da companya d	Remarks/contaminant	Sample # (lab only)
Water Sample Good	GW.	~	8/15/11	1215	3	X	X		10 AP 14			[531225
	100			1.10							1. A. A. A.	
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			-	1- 12"	-							a da dava telar batar
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Est. 1970

James McDaniel XTO Energy - San Juan Division 382 Road 3100 Aztec, NM 87410

Report Summary

Thursday September 08, 2011

Report Number: L534312 Samples Received: 09/03/11 Client Project:

Description: Federal 18 IT

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Mark W. Beasley , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487 GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140 NJ - TN002,NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233 AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A, TX - T104704245, OK-9915

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences. Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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Page 1 of 7



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Tax I.D. 62-0814289

Est. 1970

			REPOI	RT OF ANALYSIS				
James McDaniel XTO Energy - Sar 382 Road 3100 Aztec, NM 87410	າ ປັນ	an Division				September 08	8, 2011	
						ESC Sample	# : L534312-01	
Date Received Description	:	September 03, 2011 Federal 18 IT	1			site TD :	FEDERAL 18 IT	
Sample ID	:	WATER SAMPLE				Project # .		
Collected By Collection Date	:	James McDaniel 09/02/11 12:30				FIOJECC # .		
Parameter			Result	Det. Limit	Units	Method	Date	Dil.
Chloride			41.	1.0	mg/l	9056	09/06/11	1
рН			7.2		su	9040C	09/07/11	l
Specific Cond	ucta	ance	2600	1.8	umhos/cm	9050A	09/07/11	1
Dissolved Sol	ids		2500	10.	mg/l	2540C	09/08/11	1
Benzene Toluene Ethylbenzene Total Xylene			0.010 0.012 0.00064 0.0032	0.00050 0.0050 0.00050 0.0015	mg/l mg/l mg/l mg/l	8021B 8021B 8021B 8021B	09/05/11 09/05/11 09/05/11 09/05/11	1 1 1
Surrogate Recov a.a.a-Trifluo	rot	(%) oluene(PID)	97.6		% Rec.	8021B	09/05/11	1

BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL) Note: The reported analytical results relate only to the sample submitted. This report shall not be reproduced, except in full, without the written approval from ESC.

. Reported: 09/08/11 17:14 Printed: 09/08/11 17:33 L534312-01 (PH) - 7.21@20.7c

Page 2 of 7

#### Attachment A List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L534312-01	WG553747 WG553641	SAMP	Dissolved Solids pH	R1849656 R1848632	B T8

Page 3 of 7

#### Attachment B Explanation of QC Qualifier Codes

Qualifier	Meaning
В	(EPA) - The indicated compound was found in the associated method blank as well as the laboratory sample.
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

#### Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.

Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Differrence.

- Surrogate Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chem-ically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Page 4 of 7



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Aztec, NM 87410

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## Quality Assurance Report Level II

L534312

September 08, 2011

		Labor	ratory Blank	c			
Analyte	Result	Unit	ts 🕴	Rec	Limit	Batch Dat	e Analyzed
Chloride	< 1	mg/1	L			WG553789 09/	06/11 10:3
Benzene	< .0005	mg/1	1			WG553661 09/	04/11 18:0
Ethylbenzene	< .0005	mg/:				WG553661 09/	04/11 18:0
Toluene	< .005	mg/1	1			WG553661 09/	04/11 18:0
Total Xylene	< .0015	mg/3	1	and the second se		WG553661 09/	04/11 18:0
a, a, a-Trifluorotoluene (PID)		¥ R6	ec. 10	00.4	55-122	WG553661 09/	04/11 18:0
рН	4.30	ธน				WG553641 09/	07/11 16:0
Specific Conductance	2.10	umbo	os/cm			WG554051 09/	07/11 21:2
Dissolved Solids	< 10	mg/:	1	Law England	COLUMN SAME	WG553747 09/	08/11 13:3
		1	Duplicate				
Analyte	Units	Result	Duplicate	e RPD	Limit	Ref Samp	Batch
Chloride	mg/l	15.0	15.0	0.669	20	L534401-02	WG55378
рН	su	8.10	8.10	0.247	1	L534146-01	WG55364
Specific Conductance	umhos/cm	1600	1600	0.623	20	L534587-01	WG55405
Dissolved Solids	mg/l	2600	2550	0.118	5	L534312-01	WG55374
		Laborato	ry Control S	Sample			
Analyte	Units	Known Va	al	Result	% Rec	Limit	Batch
Chloride	mg/l	40	39	9.8	99.5	90-110	WG55378
Banzana	mg/1	05	0	0461	92.1	79-114	WG55366
Ethylhenzene	mg/1	.05	0.	0469	93.8	80-116	WG55366
Toluene	mg/1	.05	0.	0484	96.9	79-112	WG55366
Total Xvlene	mg/l	.15	0.	137	91.6	84-118	WG55366
a, a, a-Trifluorotoluene (PID)		111511-411-63			98.71	55-122	WG55366
рн	ธน	9.04	8.	.90	98.5	98-101	WG55364
Specific Conductance	umhos/cm	427	43	30.	101.	85-115	WG55405
Dissolved Solids	mg/l	8800	85	940	102.	85-115	WG55374
Analyte	La Units R	boratory Con esult Re	ntrol Sample	e Duplicate Rec	Limit R	PD Limit	Batch
Chloride	ma/1 3	9.8 3	9.8 1/	00.	90-110 0	20	WG55378

\* Performance of this Analyte is outside of established criteria. For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

Page 5 of 7



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#### Quality Assurance Report Level II

L534312

September 08, 2011

		Laboratory	Control	Sample Dur	licate				
Analyte	Units	Result	Ref	*Rec		Limit	RPD	Limit	Batch
Benzene	mg/1	0.0509	0.0461	102.		79-114	9.92	20	WG55366
Ethylbenzene	mg/l	0.0509	0.0469	102.		80-116	8.17	20	WG55366
Toluene	mg/l	0.0523	0.0484	104.		79-112	7.70	20	WG55366
Total Xylene	mg/l	0.148	0.137	98.0		84-118	7.27	20	WG55366
a,a,a-Trifluorotoluene(PID)				98.40	)	55-122			WG55366
рн	su	9.00	8.90	100.		98-101	1.12	20	WG55364
Specific Conductance	umhos/	430.	430.	101.		85-115	0	20	WG55405
Dissolved Solids	mg/l	8910	8940	101.		85-115	0.359	20	WG55374
			Matrix	Spike					
Analyte	Units	MS Res	Ref R	es TV	% Rec	Limit	-	Ref Samp	Batch
Chloride	mg/l	56.0	5.30	50	101.	80-120		L534401-01	WG55378
Benzene	mg/l	0.0509	0.000	440 .05	101.	35-147		L534152-01	WG55366
Ethylbenzene	mg/l	0.0517	0.000	260 .05	103.	39-141		L534152-01	WG55366
Toluene	mg/l	0.0535	0.000	900 .05	105.	35-148		L534152-01	WG55366
Total Xylene	mg/l	0.153	0.000	980 .15	101.	33-151		L534152-01	WG55366
a,a,a-Trifluorotoluene(PID)					97.63	55-122	19.00-2	UK DE EVIKENS	WG55366
		Mati	ix Spike	Duplicate					
Analyte	Units	MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Chloride	mg/l	55.5	56.0	100.	80-120	0.897	20	L534401-01	WG55378
Benzene	mg/l	0.0553	0.0509	110.	35-147	8.25	20	L534152-01	WG55366
Ethylbenzene	mg/l	0.0539	0.0517	107.	39-141	4.24	20	L534152-01	WG55366
Toluene	mg/l	0.0559	0.0535	110.	35-148	4.46	20	L534152-01	WG55366
Total Xylene	mg/l	0.158	0.153	105.	33-151	3.17	20	L534152-01	WG55366
a, a, a-Trifluorotoluene (PID)				97.07	55-122				WG55366

Batch number /Run number / Sample number cross reference

WG553789: R1846952: L534312-01 WG553661: R1847192: L534312-01 WG553641: R1848632: L534312-01 WG554051: R1849195: L534312-01 WG553747: R1849656: L534312-01

\* Calculations are performed prior to rounding of reported values.
 \* Performance of this Analyte is outside of established criteria.
 For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

Page 6 of 7



XTO Energy - San Juan Division James McDaniel 382 Road 3100

Aztec, NM 87410

Quality Assurance Report Level II

L534312

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier. 12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

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September 08, 2011

Page 7 of 7

Company Name/Address			Alternate B	illing		and an and a second second		Analysis/(	Container/	Preserva	ative		of Custody
XTO Energy, Inc. 382 County Road 3100 Aztec, NM 87410			XTORNN Report to: .	//031810S James McDa	niel		Cool ,	1-500ml/cal				A056 Prepared by: ENVIRON Science corr 12065 Lebar	ot MENTAL p non Road
Project Description: Feder PHONE: 505-333-3701 FAX: Collected by: Collected by(signature):	Client Project Site/Facility ID Federa Rush? (1	# 17 No. #1 18 Lab MUST bi Next Day	E-mail to: jan # 1T e Notified) 100%	P.O.#	Its Needed	No	X (BOBI) /Indez /	1, TDS, Chlerides/				Mt. Juliet TN Phone (615) Phone (800 FAX (61 CoCode <b>XTORNM</b> Template/Prelogin	37122 758-5858 ) 767-5859 5)758-5859 (lab use only)
Packed on ice N_YK Sample ID Water Sample	Comp/Grab Grab	Matrix		Email? FAX? Date, 9/2/11	No_X_Yes No_Yes Time	of Critrs	X BTE	XEC, PI				Shipped Via: Fed Ex Remarks/contaminant	Sample # (lab only)
Matrix: SS-Soil/Solid GW-Ground Remarks: ONL COC Per Sit	water WW-Wa	astewater D	W-Drinking	Water OT- 0	Other						pH	Temp Flow	Other
Relinquisher by:(Signature	9/3/11 Date:	1330 Time:	Received by:	Signature) (Signature)	SM		Temp	3.4°	na: FedEx_)	ottles Reci	Other		SZ
Relinquisher by:(Signature	Date:	Time:	Received for	lab by: (Signat	re)	· · · · · · · · · · · · · · · · · · ·	Date:	3-11	gable	me: 091	0	pH Checked:	NCF:

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James McDaniel XTO Energy - San Juan Division 382 Road 3100 Aztec, NM 87410

### Report Summary

Thursday September 22, 2011

Report Number: L536742 Samples Received: 09/17/11 Client Project:

Description: Federal 18 # 1T

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Daphne Richards , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487 GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140 NJ - TN002,NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233 AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A, TX - T104704245, OK-9915, PA - 68-02979

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences. Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

This report may not be reproduced, except in full, without written approval from ESC Lab Sciences. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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James McDaniel XTO Energy - San Juan Division 382 Road 3100 Aztec, NM 87410 REPORT OF ANALYSIS

September 22, 2011

ESC Sample # : L536742-01

Date Received Description Sample ID Collected By	::	September 17, 2011 Federal 18 # 1T WATER SAMPLE James McDamiel			S	lite ID : Project # :	FEDERAL 18 # 17	r
Collection Date Parameter	:	09/16/11 12:55	Result	Det. Limit	Units	Method	Date	Dil
Chloride	-		38.	1.0	mg/l	9056	09/17/11	1
pH			7.2		su	9040C	09/22/11	1
Specific Cond	uct	ance	2500	1.8	umhos/cm	9050A	09/19/11	1
Dissolved Sol	ids		2400	10.	mg/l	2540C	09/22/11	1
Benzene Toluene Ethylbenzene Total Xylene			0.0096 0.011 0.00064 0.0030	0.00050 0.0050 0.00050 0.0015	mg/l mg/l mg/l mg/l	8021B 8021B 8021B 8021B	09/19/11 09/19/11 09/19/11 09/19/11	1 1 1 1
Surrogate Recov a,a,a-Trifluo	ery	(%) oluene(PID)	98.8		% Rec.	8021B	09/19/11	1

BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL) Note: The reported analytical results relate only to the sample submitted. This report shall not be reproduced, except in full, without the written approval from ESC.

. Reported: 09/22/11 15:17 Printed: 09/22/11 15:17 L536742-01 (PH) - 7.19@19.8c

Page 2 of 7

### Attachment A List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L536742-01	WG556319	SAMP	рН	R1868277	Т8

#### Attachment B Explanation of QC Qualifier Codes

Qualifier	Meaning	
Т8	(ESC) - Additional method/sample information:	Sample(s) received past/too

#### Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

#### Definitions

- Accuracy The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Differrence.
- Surrogate Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Page 4 of 7

## Summary of Remarks For Samples Printed 09/22/11 at 15:17:28

TSR Signing Reports: 288 R4 - Rush: Three Day

drywt

Sample: L536742-01 Account: XTORNM Received: 09/17/11 09:00 Due Date: 09/22/11 00:00 RPT Date: 09/22/11 15:17

# L.A.B S.C.I.E.N.C.E.S

YOUR LAB OF CHOICE

Aztec, NM 87410

XTO Energy - San Juan Division James McDaniel 382 Road 3100

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Est. 1970

Quality	Assurance	Report
	Level II	
1	536742	

September 22, 2011

		Labor	atory Blank				
Analyte	Result	Unit	s % R	ec	Limit	Batch	Date Analyzed
Chloride	< 1	mg/1	. The second			WG555681	09/17/11 06:5
Benzene	< .0005	mg/1				WG555822	09/19/11 17:1
Ethylbenzene	< .0005	mg/1				WG555822	09/19/11 17:1
Toluene	< 005	mg/1				WG555822	09/19/11 17:1
Total Xvlene	< .0015	mg/1				WG555822	09/19/11 17:3
a, a, a-Trifluorotoluene (PID)		% Re	ic. 100	.5	55-122	WG555822	09/19/11 17:1
Specific Conductance	1.30	umhc	os/cm			WG555734	09/19/11 15:3
Dissolved Solids	< 10	mg/1				WG556266	09/22/11 11:5
рн	4.70	su			and the second second second second	WG556319	09/22/11 13:3
			Vupligato	ALC: NOT	1 N 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		100
Analyte	Units	Result	Duplicate	RPD	Limit	Ref Sam	p Batch
Chloride	mg/1	48.0	48.0	0.627	20	L536385	-09 WG55561
Chloride	mg/l	3.20	3.10	4.42	20	L536522	-02 WG5556
Specific Conductance	umbos/cm	1400	1400	0.285	20	L535802	-01 WG5557
Specific Conductance	umhos/cm	2600	2500	2.25	20	L536742	-01 WG5557
Dissolved Solids	mg/l	0	0	0	5	L536784	-12 WG5562
nH	811	8.10	8.00	0.747	1	L536311	-02 WG5563
рн	su	6.90	6.90	0.290	STAND TARGET	L536867	-01 WG5563
		Laborator	ry Control Sa	mple			
Analyte	Units	Known Va	al R	esult	% Rec	Limit	Batch
Chloride	mg/l	40	39.	7	99.3	90-110	WG5556
Benzene	mg/1	.05	0.0	509	102.	79-114	WG5558
Ethylbenzene	mg/l	.05	0.0	534	107.	80-116	WG5558
Toluene	mg/l	.05	0.0	550	110.	79-112	WG5558:
Total Xvlene	mg/l	.15	0.1	57	105.	84-118	WG55582
a,a,a-Trifluorotoluene(PID)					98.41	55-122	WG5558:
Specific Conductance	umhos/cm	427	430		101.	85-115	WG5557
Dissolved Solids	mg/l	8800	836	0	95.0	85-115	WG5562
рн	ธน	9.04	8.9	0	98.5	98-101	WG5563

\* Performance of this Analyte is outside of established criteria. For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

Page 5 of 7



XTO Energy - San Juan Division James McDaniel 382 Road 3100

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Tax I.D. 62-0814289

Est. 1970

Quality	Assurance	Report	
	Level II		
1	536742		

September 22, 2011

		Laborator	y Control	Sample Dup	licate				
Analyte	Units	Result	Ref	*Rec	and the second second	Limit	RPD	Limit	Batch
Chloride	mg/l	39.8	39.7	100.		90-110	0.252	20	WG555681
Benzene	mg/l	0.0504	0.0509	101.		79-114	1.12	20	WG555822
Ethylbenzene	mg/1	0.0519	0.0534	104.		80-116	2.83	20	WG555822
Toluene	mg/l	0.0535	0.0550	107.		79-112	2.93	20	WG555822
Total Xylene	mg/l	0.153	0.157	102.		84-118	3.08	20	WG555822
a, a, a-Trifluorotoluene (PID)				98.65		55-122			WG555822
Specific Conductance	umhos/	430.	430.	101.		85~115	0	20	WG555734
Dissolved Solids	mg/l	8390	8360	95.0		85-115	0.430	20	WG556266
рн	su	8.90	8.90	98.0	STREET	98-101	0	20	WG556319
			Matrix	Spike					
Analyte	Units	MS Res	Ref I	Res TV	% Rec	Limit		Ref Samp	Batch
Chloride	mg/l	78.0	30.0	50	96.0	80-120	D	L536385-08	WG555681
Benzene	mg/l	0.533	0.530	.05	5.42*	35-14	7	L536562-01	WG555822
Ethylbenzene	mg/l	0.106	0.056	.05	100.	39-14	1.000	L536562-01	WG555822
Toluene	mg/l	0.194	0.140	.05	107.	35-148	В	L536562-01	WG555822
Total Xylene	mg/l	0.373	0.250	.15	82.0	33-15	1	L536562-01	WG555822
a, a, a-Trifluorotoluene (PID)			MAN DE L		97.38	55-12	2	S MARSING PAR	WG555822
		Mat	rix Spike	e Duplicate					
Analyte	Units	MSD	Ref	*Rec	Limit	RPD	Limit	Ref Samp	Batch
Chloride	mg/l	79.5	78.0	99.0	80-120	1.90	20	L536385-08	WG555681
Benzene	mg/l	0.560	0.533	59.6	35-147	4.96	20	L536562-01	WG555822
Ethylbenzene	mg/1	0.112	0.106	112.	39-141	5.62	20	L536562-01	WG555822
Toluene	mg/l	0.206	0.194	132.	35-148	6.33	20	L536562-01	WG555822
Total Xylene	mg/l	0.393	0.373	95.2	33-151	5.18	20	L536562-01	WG555822
a, a, a-Trifluorotoluene (PID)				97.86	55-122				WG555822

Batch number /Run number / Sample number cross reference

WG555681:	R1862372:	L536742-01
WG555822:	R1864732:	L536742-01
WG555734:	R1865232:	L536742-01
WG556266:	R1867974:	L536742-01
WG556319:	R1868277:	L536742-01

\* Calculations are performed prior to rounding of reported values.
 \* Performance of this Analyte is outside of established criteria.
 For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

Page 6 of 7



XTO Energy - San Juan Division James McDaniel 382 Road 3100

Aztec, NM 87410

Quality Assurance Report Level II

L536742

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

> Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier. 12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

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September 22, 2011

Page 7 of 7

company Name/Address	A SUPERIO	100	Alternate Billing					Analys	sis/Cont	ainer/Prese	vative	hain of Custody			
XTO Energy, Inc. 382 County Road 3100 Aztec, NM 87410			XTORNM031810S					+ Ceel mu/ Ceel				Prepared by:			
			Report to:	James McDan	iel		10	Sou				12065 Lobar	p Don Road		
			E-mail to: james_mcdaniel@xtoenergy.com				E	-	5			Nt. What The 27422			
oject Description: Federa IONE: 505-333-3701 X:	Client Project M	#17 No.		Farmi Lab Project #	state Collected:	M	A-HOML	hlorides !	4. 1.			Phone (615) Phone (800 . FAX (61	758-5858 ) 767-5859 5)758-5859		
Hected by: Hected by(signature) Hected by(signature) Ked on Ice N_Y	Rush? (L	ab MUST be Next Day WO Day Three Day	<pre>//T Notified)100%50%25%</pre>	P.O.# Date Result Email?N FAX?N	s Needed	No	TEX (2021)	J, HA, SCTT, 2				CoCode XTORNM Template/Prelogin Shipped Via: Fed Ex	(lab use only)		
Sample ID	Comp/Grab	Matrix	Depth	Date,	Time	Cntrs	12	国	14			Remarks/contaminant	Sample # (lab only)		
Vater Sample	Grab	GW	-	9/16/11	1255	3	×	X					L536742-0		
atrix: SS-Soil/Solid GW-Groundv emarks: "ONLY1COC Per Site	vater WW-Wa	stewater D	W-Drinking	Water OT- O	ther						1 pH	Temp	Other		
linguisher by:(Signature	Date: / //// Date: /	Time: 1345 Time:	Received by:	(Signature)	m		Sample Signature Temp	es retur 95	ned via: Fi	edEx_X_UPS	_Other 7 acceived	Condition	(lab use only)		


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James McDaniel XTO Energy - San Juan Division 382 Road 3100 Aztec, NM 87410

Report Summary

Thursday October 06, 2011

Report Number: L539317 Samples Received: 10/01/11 Client Project:

Description: Federal 18 IT

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Daphne Richards , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487 GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140 NJ - TN002,NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233 AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A, TX - T104704245, OK-9915, PA - 68-02979

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences. Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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James McDaniel XTO Energy - San Juan Division 382 Road 3100 Aztec, NM 87410	REPOI	RT OF ANALYSIS	3	October 06,	2011	
Date Received : October 01, 20 Description : Federal 18 IT Sample ID : WATER SAMPLE Collected By : James McDaniel Collection Date : 08/30/11 13:40	011			ESC Sample Site ID : Project # :	# : L539317-01 FEDERAL 18 IT	
Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Chloride	35.	1.0	mg/l	9056	10/04/11	1
рн	7.0		su	9040C	10/05/11	1
Specific Conductance	2600	1.8	umhos/cm	9050A	10/04/11	1
Dissolved Solids	2500	10.	mg/l	2540C	10/06/11	1
Benzene Toluene Ethylbenzene Total Xylene Surrogate Recovery(%)	0.0072 0.0087 0.00064 0.0025	0.00050 0.0050 0.00050 0.0015	mg/l mg/l mg/l mg/l	8021B 8021B 8021B 8021B 8021B	10/05/11 10/03/11 10/03/11 10/03/11	1 1 1 1
a,a,a-Trifluorotoluene(PID)	99.9		% Rec.	8021B	10/03/11	1

BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL) Note: The reported analytical results relate only to the sample submitted. This report shall not be reproduced, except in full, without the written approval from ESC.

. Reported: 10/06/11 17:37 Printed: 10/06/11 17:41 L539317-01 (PH) - 7.03@17.6c

Page 2 of 7

## Attachment A List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L539317-01	WG558849	SAMP	рн	R1885297	Т8

#### Attachment B Explanation of QC Qualifier Codes

Qualifier	Meaning
<b>T</b> 8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

#### Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

#### Definitions

- Accuracy The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Differrence.
- Surrogate Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Page 4 of 7

# L.A.B S.C.I.E.N.C.E.S

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Quality Assurance Report Level II L539317

October 06, 2011

		Labo	ratory Bl	ank				
Analyte	Result	Uni	ts	% Rec	Limit	Batch	Date Analyz	ed
Ethylbenzene	< 0005	mer /	1			WG558529	10/03/11 02	.40
Toluene	< .0005	mg/	1			WG558529	10/03/11 02	. 40
Total Xylene	< .003	mg/	1			WG558529	10/03/11 02	- 40
a a Trifluorotoluere (DTD)	2 .0015	s P.	-	96 93	55-122	WG558529	10/03/11 02	. 40
a, a, a intrindiocordene (FID)		0 10	cu,	30.33	33-146	10550525	10/03/11 02	. 40
Specific Conductance	< 1.8	umh	os/cm			WG558402	10/04/11 10	:16
Chloride	< 1	mg/	1			WG558758	10/04/11 09	: 08
Benzene	< .0005	mg/	1			WG558715	10/05/11 01	:10
a, a, a-Trifluorotoluene (PID)		% R	ec.	93.78	55-122	WG558715	10/05/11 01	:10
рн	5.80	su				WG558849	10/05/11 12	:25
Dissolved Solids	< 10	ma/	1			WG558877	10/06/11 17	: 02
			-					
	201 A		Duplicate		-	-		
Analyte	Units	Result	Duplic	ate RPD	Limit	Ref Sam	p Batch	•
Specific Conductance	umbos/cm	720	720	0 278	20	1538294	-01 WG558	402
Specific Conductance	umbos/cm	210	210.	1.75	20	L539088	-11 WG558	402
optomic conditionity	united) en			41.14				
рн	su	8.70	8.70	0.115	1	L539641	-01 WG558	849
pH	នប	7.40	7.40	0.406	1	L539062	-01 WG558	849
Dissolved Solids	mg/l	0	4.00	28.6*	5	L539095	-27 WG558	877
			High Incolorarities					
		Laborato	ry Contro	1 Sample				
Analyte	Units	Known V	al	Result	* Rec	Limit	Batch	
Ethylbenzene	mg/l	.05		0.0508	102.	80-116	WG558	529
Toluene	mg/l	.05		0.0534	107.	79-112	WG558	529
Total Xvlene	mg/1	15		0.149	99.2	84-118	WG558	529
a, a, a-Trifluorotoluene (PID)		Particulars		all and an an an and	96.95	55-122	WG558	529
Specific Conductance	umhos/cm	427		420.	98.4	85-115	WG558	402
Chloride	mg/l	40		39.8	99.5	90-110	WG558	758
Benzene	mg/l	.05		0.0419	83.8	79-114	WG558	715
a,a,a-Trifluorotoluene(PID)					94.37	55-122	WG558	715
рн	su	9.04		9.00	99.6	98-101	WG558	849
Dissolved Solids	mg/l	8800		8530	96.9	85-115	WG558	877

\* Performance of this Analyte is outside of established criteria. For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

Page 5 of 7



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Quality	Assurance Report Level II
,	539317

October 06, 2011

		Laborator	Control	Sample Dupl	icate				
Analyte	Units	Result	Ref	%Rec		Limit	RPD	Limit	Batch
Ethylbenzene	mg/l	0.0487	0.0508	97.0		80-116	4.14	20	WG558529
Toluene	mg/l	0.0512	0.0534	102.		79-112	4.17	20	WG558529
Total Xylene	mg/l	0.141	0.149	94.0		84-118	5.49	20	WG558529
a,a,a-Trifluorotoluene(PID)	San Carlo			96.89		55-122			WG558529
Specific Conductance	umhos/	420.	420.	98.0		85-115	0	20	WG558402
Chloride	mg/l	39.7	39.8	99.0		90-110	0.252	20	WG558758
Benzene	mg/1 0.0428 0.0419 86.0		79-114 2.27			20	WG558715		
a,a,a-Trifluorotoluene(PID)				93.44		55-122			WG558715
рн	su	9.00	9.00	100.		98-101	0	20	WG558849
Dissolved Solids	mg/l	8470	8530	96.0	(	85-115	0.706	20	WG558877
			Matrix	Spike					
Analyte	Units	MS Res	Ref I	Res TV	% Rec	Limit	11-1	Ref Samp	Batch
Ethylbenzene	mg/1	0.0597	0	.05	119.	39-141		L539223-07	WG558529
Toluene	mg/l	0.0617	0	.05	123.	35-148		L539223-07	WG558529
Total Xylene	mg/l	0.176	0	.15	117.	33-151		L539223-07	WG558529
a,a,a-Trifluorotoluene(PID)					96.52	55-122			WG558529
Benzene	mg/l	0.0429	0	.05	85.7	35-147		L538942-11	WG558715
a,a,a-Trifluorotoluene(PID)	THE REAL PROPERTY OF	96.9999	and the second	an a share a	94.17	55-122	144	ALC: NO.	WG558715
		Mat	rix Spike	Duplicate					
Analyte	Units	MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Ethylbenzene	mg/l	0.0592	0.0597	118.	39-141	0.780	20	L539223-07	WG558529
Toluene	mg/l	0.0604	0.0617	121.	35-148	2.29	20	L539223-07	WG558529
Total Xylene	mg/l	0.174	0.176	116.	33-151	1.15	20	L539223-07	WG558529
a, a, a-Trifluorotoluene (PID)	STEPHENE		-	95.88	55-122				WG558529
Benzene	mg/l	0.0436	0.0429	87.2	35-147	1.73	20	L538942-11	WG558715
a,a,a-Trifluorotoluene(PID)				93.51	55-122				WG558715

Batch number /Run number / Sample number cross reference

WG558529:	R1881852:	L539317-01
WG558402:	R1882979:	L539317-01
WG558758:	R1883468:	L539317-01
WG558715:	R1884835:	L539317-01
WG558849:	R1885297:	L539317-01
WG558877:	R1887432:	L539317-01

\* Calculations are performed prior to rounding of reported values.
 \* Performance of this Analyte is outside of established criteria.
 For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

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Quality Assurance Report Level II

L539317

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier. 12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

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October 06, 2011

		and a second	Alternate Bi	illing		1		Analysis/Container/Preservative			eservative		Chain of Custody Page of		
XTO Energy, Inc. 382 County Road 3100 Aztec, NM 87410			XTORNM031810S					Cael + HCl				Prepared by: D070			
			Report to: J	lames McDan	iel	Ter 15	12	5	135		1.000	12065 Leban	on Road		
			E-mail to: james_mcdaniel@xtoenergy.com				100	1.00		Mt. Juliet TN	37122				
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Sample iD	Comp/Grab	Matrix	Depth	Date	Time	Cntrs	M	民				Remarks/contaminant	Sample # (lab only)		
Noter Sample	Grab	Giv	-	9/30/11	1240	3	X	X		-		L539317	-8		
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