District 1 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III
1000 Rio Brazos Road, Aztec, NM 87410 <u>District IV</u> 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources

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

Revised August 8, 2011

Form C-141

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

Release Notification and Corrective Action

			14014	ase i totilit		OPERAT	İ		Γ	☐ Initi	al Report	\boxtimes	Final Report
Name of Co	mpany: X	TO Energy.	Inc.			Contact: Ku		a					
Address: 38				co 87410		elephone N			00				
Facility Nan						acility Typ				ota)			
Surface Own	ner: Feder	al		Mineral C	Owner	ner API No.: 30-045-25783							
				LOCA	ATION	N OF RELEASE							
Unit Letter	Section	Township	Range	Feet from the	North/S	South Line	Feet from	the East/West Line County					
Н	26	27N	10W	1520	FN	VL	450		FE	L	San Juan		
				Latitude 36.5			ude -107.	8 <u>5792</u>		Ď	CVD SEP	11'1	1
				NAT	TURE (OF REL					OTI CONS		
Type of Rele	ase: Conde	nsate/ Produce	ed Water			Volume of		t		Volume 1	Recovered: 1	Vone	
				Condensat Water					DIST.				
Source of Release: Production Tank						Date and I- Unknown	Iour of Occ	urrence	:		Hour of Dis 25,2014 12:		
Was Immedia	ate Notice (1 */ [1 x 52 x x p	. ,	If YES, To	Whom?			· · · · · · · · · · · · · · · · · · ·			
By Whom?			Yes [No Not R	.equired	Date and I	Iour	<u> </u>					
Was a Water	course Rea	ched?				If YES, V		acting th	ne Water	course			
			Yes 🛭] No		1 135, 1	, 			•••••			
If a Watercon	ırse was Im	pacted, Desci	ibe Fully.	*		·							
from the bott tank berm, or Leaks, Spills 1000 feet, an Describe Are foot below the made and on All samples TPH, but still excavated from	com of the profirming to and Release distance as Affected ne tank, the 9-3-2014 to were below it above state om the east	and Cleanup sample result he site was expressed and cleanup sample result he site was expressed and ards for notated and ards for total transfer and ards for the ards	k on the J las occurre las ranked er greater Action Ta s were ab lavated to BTEX vi al BTEX a ther comp	on Taken.* On Mo ack Frost C#1E lo ed at this location. a 0 due to an esti than 1000 feet. To ken.* A remediat over the standards of approximately 2 a EPA Method 80 at 197 ppm via EP osite sample was s required.	ion plan v for the R 2.5'x18'> 21and Tl A method	3 BBL produces was then rare with to groun eclosure standard was submitted emediation of the corp. The cor	diced water of radard to 50 d, initial safe Leaks, Sinposite sar Method 80 excavation	and 5 B ling to t nore that 00 ppm imples wo pills and nples wo 15, exce	BL cond he NMC in 100 fe TPH, 10 were coll were colle ere colle ept the e	densate s OCD Guid et, distant Oppm be ected usi es for TP cted from ast wall v	neeped into the delines for the bottom which was been additional	e grou e Removell gro 0 ppm ger at 0 A one and all clow sta three f	nd inside the ediation of eater than total BTEX. 0-6" and one e call was four walls. andards for eet was
regulations a public health should their or the enviro	all operators or the envoperations onment. In	s are required ironment. Th have failed to	to report a e acceptar adequatel OCD acce	e is true and com and/or file certain ace of a C-141 rep y investigate and ptance of a C-141	release no ort by the remediate	otifications a e NMOCD n e contaminat	nd perform narked as " ion that po we the oper	Final Reseator of r	tive action eport" do eat to gro responsil	ons for re oes not re ound wat oility for	eleases which elieve the ope er, surface w compliance	may e erator o ater, ho with an	ndanger f liability ıman health
Signature:	Kurt W.	telu					· · · · · · · · · · · · · · · · · · ·			1	N DIVISI	V.	
Printed Nam	e: Kurt Ho	ekstra				Approved by	Environn	nental S	pecialist		77	rev	
Title: EHS (Coordinator	•				Approval D	ate: 9/18	6/14	/ I	Expiration	n Date:		
		Hoekstra@xtc				Conditions of	of Approva	1:			Attache	# 🗀	
Date: 9-9-2014 Phone: 505-333-3100 Attach Additional Sheets If Necessary								 				_£	\
TAπach Add	itional Sh	eets II Neces	ssary			Anco	14261	398	Day 2	7		(2	3

Hoekstra, Kurt

From:

McDaniel, James

Sent:

Friday, August 29, 2014 3:50 PM

То:

'Brandon Powell (brandon.powell@state.nm.us)'; Smith, Cory, EMNRD; Ketcham, Shari;

Mark Kelly (Mark_Kelly@blm.gov)

Cc:

Hixon, Logan; Hoekstra, Kurt; Nee, Martin; Daniels, Melissa

Subject:

Jack Frost Gas COM C #1E Release

Please accept this email as notification of spill remediation activities to be performed at the Jack Frost C #1E well site (3004525783) located in Section 26H, Township 27N, Range 10W, San Juan County, New Mexico. On 8/25/2014, the lease operator discovered fluid missing from the on-site production tank, and discovered a small, pinhole leak at the base of the tank. Approximately 5 bbls of condensate and 13 bbls of water were lost into the soil inside the bermed area. All liquids remained on-site. The remaining fluids were transferred to the pit tank, and initial soil samples were collected. XTO proposes to excavate the impacted soils beneath the tank, until extents of excavation reach 5,000 ppm TPH, 10 ppm benzene and 50 ppm BTEX, based on a ranking of the site pursuant to the NMOCD Guidelines for the Remediation of Leaks, Spills and Releases. Impacted soil will be hauled to Envirotech's landfarm for disposal, since it is extremely close to the wellsite. Work is scheduled to begin on Wednesday, September 3. Please feel free to contact myself or Kurt Hoekstra for any questions regarding this project. Thank you!

"Safety takes time, take the time to be safe" (PL)

James McDaniel

EH&S Supervisor CHMM #15676 ASP #A18313 XTO Energy Inc. 382 Road 3100

Aztec, New Mexico 87410

Phone: 505.333.3701 | Mobile: 505.787.0519

james mcdaniel@xtoenergy.com

An ExxonMobil Subsidiary



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Tax I.D. 62-0814289

Est. 1970

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

Report Summary

Thursday August 28, 2014

Report Number: L718291 Samples Received: 08/27/14 Client Project: 30-045-25763

Description: Jack Frost GC C 1E

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 - 01157CA, CT - PH-0197, FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704/BIO041, ND - R-140. NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1, TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

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REPORT OF ANALYSIS

August 28,2014

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

Date Received : August 27, 2014
Description : Jack Frost GC C 1E

ESC Sample # : L718291-01

Description : Jack Frost GC C 1E

Site ID :

Sample ID : FARKH-082614-0900 0-6IN

Project #: 30-045-25763

Collected By : Hurt-Otto Collection Date : 08/26/14 09:00

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	86.6		8	2540 G-2011	08/28/14	1
Benzene	47,	0.58	mq/kq	8021	08/27/14	1000
Toluene	280	5.8	mq/kq	8021	08/27/14	1000
Ethylbenzene	80.	0.58	mg/kg	8021	08/27/14	1000
Total Xylene	1100	3.5	mq/kq	8021	08/28/14	2000
TPH (GC/FID) Low Fraction	13000	120	mg/kg	8015	08/27/14	1000
Surrogate Recovery-%			1			
a,a,a-Trifluorotoluene(FID)	91.5		% Rec.	8015	08/27/14	1000
a,a,a-Trifluorotoluene(PID)	98.3		% Rec.	8021	08/27/14	1000
TPH (GC/FID) High Fraction Surrogate recovery(%)	5500	230	mg/kg	3546/DRO	08/28/14	50
o-Terphenyl	156.		% Rec.	3546/DRO	08/28/14	50

Results listed are dry weight basis. BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL)

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Reported: 08/28/14 16:50 Printed: 08/28/14 16:51



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REPORT OF ANALYSIS

August 28,2014

Kurt Hoekstra XTO Energy - San Juan Division 382 County Road 3100

Aztec, NM 87410

Date Received : August 27, 2014 Description : Jack Frost GC C 1E Sample ID FARKH-082614-0910 1FT

Collected By : Hurt-Otto
Collection Date : 08/26/14 09:10

ESC Sample # : L718291-02

Site ID :

Project # : 30-045-25763

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil
Total Solids	86.0		*	2540 G-2011	08/28/14	1
Benzene	110	0.58	mg/kg	8021	08/27/14	1000
Toluene	980	58.	mg/kg	8021	08/28/14	10000
Ethylbenzene	98.	0.58	mg/kg	8021	08/27/14	1000
Total Xylene	1900	17,	mg/kg	8021	08/28/14	10000
TPH (GC/FID) Low Fraction	23000	1200	mq/kq	8015	08/28/14	10000
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	90.6		% Rec.	8015	08/27/14	1000
a,a,a-Trifluorotoluene(PID)	95.0		% Rec.	8021	08/27/14	1000
TPH (GC/FID) High Fraction Surrogate recovery(%)	5800	230	mg/kg	3546/DRO	08/28/14	50
o-Terphenyl	31.0		% Rec.	3546/DRO	08/28/14	50

Results listed are dry weight basis. BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Attachment A List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L718291-01	WG739300	SAMP	o-Terphenyl	R2982148	J7
L718291-02	WG739300	SAMP	o-Terphenyl	R2982148	J7

Attachment B Explanation of QC Qualifier Codes

Oualifier

Meaning

J7

Surrogate recovery cannot be used for control limit evaluation due to

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 Difference.
- 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.

Summary of Remarks For Samples Printed 08/28/14 at 16:51:04

TSR Signing Reports: 288 R2 - Rush: Next Day

Domestic Water Well Sampling-see L609759 Lobato for tests EDD's on ALL projects email James, Kurt and Logan all reports

Sample: L718291-01 Account: XTORNM Received: 08/27/14 09:00 Due Date: 08/28/14 00:00 RPT Date: 08/28/14 16:50 Sample: L718291-02 Account: XTORNM Received: 08/27/14 09:00 Due Date: 08/28/14 00:00 RPT Date: 08/28/14 16:50



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Quality Assurance Report Level II

L718291

August 28, 2014

Analyte	Result	Laborator Units	y Blank % Rec	Limit	Batch D	ate Analyzed
Total Solids :	M/s (51)				WG739753 0	8/28/14 08:25
Benzene Ethylbenzene Toluene TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene(FID) a,a,a-Trifluorotoluene(PID)	< .0005 < .005 < .005 < .1	mg/kg mg/kg mg/kg mg/kg k Rec k	and the second papers of the second s	595128 54-144	WG739674 0 WG739674 0 WG739674 0 WG739674 0	8/27/14 16:53 8/27/14 16:53 8/27/14 16:53 8/27/14 16:53 8/27/14 16:53 8/27/14 16:53
TPH (GC/FID) High Fraction o-Terphenyl	/r < 14	mg/kgs/ % Rec.	65.40	50-150		08/27/14-21:55 08/27/14-21:55
Total Xylene a,a,a-Trifluorotoluene(FID) a,a,a-Trifluorotoluene(PID) Toluene TPH (GC/FID) Low Fraction Total Xylene a,a,a-Trifluorotoluene(FID) a,a,a-Trifluorotoluene(PID)	<pre></pre>	mg/kg;	100.0 100.0 100.0 102.0 106.0	59-128 54-144 59-128 59-128 54-144	WG739845 (WG739845 (WG739988 (WG739988 (WG739988 (WG739988 (88/28/14 12:47 18/28/14 12:47 18/28/14 12:47 18/28/14 13:58 18/28/14 13:58 18/28/14 13:58 18/28/14 13:58
Analyte	Units	Dupli Result Du	cate:	Limit	Ref Samp	Batch
Total Solids			0.429			
Analyte	Units	Laboratory Co Known Val	ntrol Sample Result	% Rec	Limit	Batch
Total Solids		11 ·50 / 24 / 4 / 4	11k 50 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	100.7	85-115-	WG739753
Benzene Ethylbenzene Toluene a,a,a-Trifluorotoluene(PID) TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene(FID)	mg/kg mg/kg mg/kg	. 05 . 05 . 05	0.0427 0.0473 0.0461	85.4 92.3 103.0 82.7 99.60	70-130 70-130 70-130 54-144 63 5-137 59-128	WG739674 WG739674 WG739674 WG739674 WG739674 WG739674
TPH: (GC/FID) High Fraction O-Terphenyl	mg/kg	THE CONTRACTOR	46.9 (11.11	78.2 80.10	50-150 50-150	WG739300 WG739300
Total Xylene a,a,a-Trifluorotoluene(PID)	, mg/kg₃.∷	#### #	0.147	977.8	70=130 54-144	WG739845 WG739845
Toluene Total Xylene a.a.a-Trifluorotoluene(FID) a.a.a-Trifluorotoluene(PID) TPH (GC/FID) Low Fraction a.a.a-Trifluorotoluene(FID) * Performance of this Analyte is	mg/kg mg/kg mg/kg	.15 .15 5.5 established cri	0.0451 0.141 4.55	90.10 93.7 102.0 106.0 82.8 100.0	70-130 70-130 59-128 54-144 63.5-137 59-128	WG739988 WG739988 WG739988 WG739988 WG739988 WG739988

^{*} 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

L718291

August 28, 2014

	194d# (4.33%)	Laboratory	Control Sa	mple Dup	licate				
Analyte	Units	Result	Ref	%Rec		Limit	RPD	Limit	Batch
ava;a-Trifluorotoluene(PID)						w# 113.0		54-144	
- The state of the		*	, y make management and Management		and a construction of the	H. J. H. J.	and the second s	Administration	
			Control Sa		licate				
Analyte	Units	Result	Ref	%Rec		Limit	RPD	Limit	Batch
Benzene	ma/ka	0.0408	0.0427	82.0	2010 BY 1818	70-130	## 4.55	10 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	WG739674
Ethylbenzene	mg/kg	0.0451	0.0473	90.0	addonues, schrister	70-130	4.84	20	WG73967
Toluene	mg/kg	0.0439	0.0461	88.0		70-130	5.06	20	WG73967
a, a, a-Trifluorotoluene (PID)				103.0		54-144			WG73967
TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene(FID)	mg/kg	4.58	4.55	83.0 99.60	,	63.5-13 59-128	0.650	20	WG73967 WG73967
. If the Control of t						159-128 150-1450	ieriz.ezma	PERCENTAGO A	13 307 13 301
TPH (GC/FID) High Fraction	mg/kg	46.2	46.9	77.0	10 C + D Breitskater	50-150	1.67	20	WG73930
o-Terphenyl	r ma coron pro e i pose ma	grana and a linear and management there	er. 191 . Imparin ar vincas arrivas e	74.60) 2004 - 11 - 12 - 12 - 12 - 12 - 12 - 12 - 1	50-150	disputate a anna .n., tiss.e	to angular designation and the second of the	WG73930
		igiga##	fyjg <u>j</u> tt				Mark Kright		8.31.4. Boston
Total Xylene a,a,a-Trifluorotoluene(PID)	mg/kg	0.145	0.147	96.0 103.0		70-130 54-144	1.21	20	WG73984 WG73984
	tracconstant.				landari ka	324441698	ing paragraphia		
Toluene	mg/kg	0.0436	0.0451	87.0	HOLKESPACITE FREE FALSE	70-130	3.29	20	WG73998
Total Xylene	mg/kg	0.137	0.141	91.0	na a mara ann aite al mar	70-130	2.89	20	WG73998
a,a,a-Trifluorotoluene(FID)				101.0		59-128			₩G73998
a,a,a-Trifluorotoluene(PID) TPH (GC/FID) Low Fraction	ma/ka	4.49	4.55	106.0 82.0		54-144 63.5-1	37 1.30	20	WG73998 WG73998
a a a Trifluorotoluene (FID)	mg/kg		anisatemberahera	102.0		59-128			WG73998
a,a,a-Trifluorotoluene(PID)	Serge printers and an intermediate	peng a appetract areaser.	manings to make a to the to continue	113.0	ADMORAL STATES	54-144	a the silling party in the last with	tions and organization of the contraction of the	WG73998
			ARTER BURGES SALES CONTRACT AND STATE	1 tatabata					
haaluta	Inita		Matrix Spi	remeneral transfer	% Pos		[imi=	Pof Camp	Patch
Analyte .	Units	MS Res	Matrix Spi Ref Res	ke TV_	% Rec]	Limit	Ref Samp	Batch
	Units_			TV	% Rec	İ.	Limit 4917-127	Ref Samp	
Benzene Ethylbenzene	mg/kg	MS Res 0.186 0.202	Ref Res 0.000249 0.000192	TV .05,	74.0 81.0		49.7-127 40.8-141	L718093-01	 ₩G73967 WG73967
Benzene Ethylbenzene Toluene	mg/kg	MS Res 0.186	Ref Res	TV 05	74.0 81.0 80.0		49.7-127. 40.8-141 49.8-132	L718093-01 L718093-01 L718093-01	WG73967 WG73967 WG73967
Benzene; Ethylbenzene Toluene a,a;a-Trifluorotoluene(PID)	mg/kg mg/kg mg/kg	MS Res 0.186 0.202 0.200	Ref Res 0.000249 0.000192 0.000566	TV .05 .05	74.0 81.0 80.0		49.7-127. 40.8-141 49.8-132 54-144	L718093-01 L718093-01 L718093-01	WG73967 WG73967 WG73967 WG73967
Benzene Ethylbenzene Toluene a,a-a-Trifluorotoluene(PID) TPH (GC/FID) Low Fraction	mg/kg	MS Res 0.186 0.202	Ref Res 0.000249 0.000192	TV .05,	74.0 81.0 80.0 103.0 64.0		49.7-127. 40.8-141 49.8-132 54-144 28.5-138	L718093-01 L718093-01 L718093-01	WG73967 WG73967 WG73967 WG73967
Benzene Ethylbenzene Toluene a,a;a-Trifluorotoluene(PID)	mg/kg mg/kg mg/kg	MS Res 0.186 0.202 0.200	Ref Res 0.000249 0.000192 0.000566	TV .05 .05	74.0 81.0 80.0		49.7-127. 40.8-141 49.8-132 54-144	L718093-01 L718093-01 L718093-01	WG73967 WG73967 WG73967 WG73967
Benzene; Ethylbenzene Toluene a,a;a-Trifluorotoluene(PID) TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene(FID) Total Xylene	mg/kg mg/kg mg/kg	MS Res 0.186 0.202 0.200	Ref Res 0.000249 0.000192 0.000566	TV .05 .05	74 0 81.0 80.0 103.0 64.0 97.10		49:7-127, 40:8-141 49:8-132 54-144 58:5-138 59-128	L718093-01 L718093-01 L718093-01	WG73967 WG73967 WG73967 WG73967 WG73967 WG73967
Benzene Ethylbenzene Toluene a,a,a-Trifluorotoluene(FID) TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene(FID) Total Xylene a,a,a-Trifluorotoluene(PID)	mg/kg mg/kg mg/kg mg/kg	MS Res 0.186 0.202 0.200 17.7	Ref Res 0::000249 0::000192 0::000566	05 .05 .05 .05	74.0 81.0 80.0 103.0 64.0 97.10 91.0 102.0		49.7-127 40.8-141 49.8-132 54-144 28.5-138 59-128	L718093-01 L718093-01 L718093-01 L718093-01	WG73967 WG73967 WG73967 WG73967 WG73967 WG73984 WG73984
Benzene: Ethylbenzene Toluene a,a,a-Trifluorotoluene(PID) TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene(FID) Total Xylene a,a,a-Trifluorotoluene(PID)	mg/kg mg/kg mg/kg mg/kg	MS Res 0.186 0.202 0.200 17.7	Ref Res 0.000249 0.000192 0.00566 0.0	TV .05 .05 .05 .5.5	74.0 81.0 80.0 103.0 64.0 97.10 91.0 102.0		49.7-127 40.8-141 49.8-132 54-144 28.5-138 59-128 41.2-140 54-144	L718093 01 L718093 01 L718093 01 L718093 01 L718093 01 L718093 - 01	WG73967 WG73967 WG73967 WG73967 WG73967 WG73967 WG73984
Benzene Ethylbenzene Toluene a,a,a-Trifluorotoluene(PID) TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene(FID) Total Xylene a,a,a-Trifluorotoluene(PID) Toluene	mg/kg mg/kg mg/kg mg/kg mg/kg	MS Res 0.186 0.202 0.200 17.7	Ref Res 0::000249 0::000192 0::000566	05 .05 .05 .05	74.0 81.0 80.0 103.0 64.0 97.10 91.0 102.0		49:7-127, 40:8-141 49:8-132 54-144 58:5-138 59-128	L718093-01 L718093-01 L718093-01 L718093-01	WG73967 WG73967 WG73967 WG73967 WG73967 WG73967
Benzene; Ethylbenzene Toluene a,a,a-Trifluorotoluene(PID) TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene(FID) Total Xylene a,a,a-Trifluorotoluene(PID) Toluene Total Xylene a,a,a-Trifluorotoluene(PID)	mg/kg mg/kg mg/kg mg/kg	MS Res 0 186 0.202 0.200 17.7 0.684	Ref Res 0.000249 0.000192 0.000566 0.0 0.00201	TV .05 .05 .05 .15	74 0 81.0 80.0 103.0 64.0 97.10 102.0		49.7-127 49.8-141 49.8-132 54.144 28.5-138 59-128 41.2-140 54-144 49.8-132	L718093-01 L718093-01 L718093-01 L718093-01 L718332-13	WG73967 WG73967 WG73967 WG73967 WG73967 WG73984 WG73984 WG73998
Benzene: Ethylbenzene Toluene a, a, a-Trifluorotoluene(PID) TPH (GC/FID) Low Fraction a, a, a-Trifluorotoluene (FID) Total Xylene a, a, a-Trifluorotoluene (PID) Toluene Total Xylene a, a, a-Trifluorotoluene(FID) a, a, a-Trifluorotoluene(FID)) a, a, a-Trifluorotoluene(FID)	mg/kg mg/kg mg/kg mg/kg mg/kg	MS Res 0.186 0.202 0.200 17.7 0.684	Ref Res 0.000249 0.00019 0.000566 0.0 0.00 0.00201	TV	91.0 91.0 97.10 97.10 91.0 102.0 100.0 105.0		49.7-127. 49.8-141 49.8-132 54-144 28.5-138 59-128 41.2-140 54-144 49.8-132 41.2-140 59-128	L718093-01 L718093-01 L718093-01 L718093-01 L718093-01 L718332-13 L718459-10 L718459-10	WG73967 WG73967 WG73967 WG73967 WG73967 WG73984 WG73984 WG73998 WG73998 WG73998
Benzene Ethylbenzene Toluene a,a,a-Trifluorotoluene(PTD) TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene(FTD) Total Xylene a,a,a-Trifluorotoluene(PID) Toluene Total Xylene a,a,a-Trifluorotoluene(FID) a,a,a-Trifluorotoluene(FID) TPH (GC/FID) Low Fraction	mg/kg mg/kg mg/kg mg/kg mg/kg	MS Res 0 186 0.202 0.200 17.7 0.684	Ref Res 0.000249 0.000192 0.000566 0.0 0.00201	TV .05 .05 .05 .15	91.0 91.0 97.10 97.10 98.0 100.0 100.0 105.0 88.0		49.7-127, 49.8-141 49.8-132 54.144 28.5-138 59-128 41.2-140 49.8-132 41.2-140 59-128 59-128 42.5-138	L718093-01 L718093-01 L718093-01 L718093-01 L718332-13 L718459-10 L718459-10	WG73967 WG73967 WG73967 WG73967 WG73967 WG73984 WG73998 WG73998 WG73998 WG73998 WG73998
Benzene; Ethylbenzene Toluene a,a,a-Trifluorotoluene(PID) TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene(PID) Total Xylene a,a,a-Trifluorotoluene(PID) Toluene Total Xylene a,a,a-Trifluorotoluene(FID) a,a,a-Trifluorotoluene(FID) TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene(FID)	mg/kg mg/kg mg/kg mg/kg mg/kg	MS Res 0.186 0.202 0.200 17.7 0.684	Ref Res 0.000249 0.00019 0.000566 0.0 0.00 0.00201	TV	74.0 81.0 80.0 103.0 64.0 97.10 91.0 102.0 100.0 105.0 88.0		49.7-127. 49.8-131 49.8-132 53-144 28.5-138 59-128 41.2-140 54-144 49.8-132 41.2-140 59-128 54-144 28.5-138 59-128	L718093-01 L718093-01 L718093-01 L718093-01 L718093-01 L718332-13 L718459-10 L718459-10	WG73967 WG73967 WG73967 WG73967 WG73967 WG73984 WG73984 WG73998 WG73998 WG73998 WG73998
Benzene Ethylbenzene Toluene a,a,a-Trifluorotoluene(PTD) TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene(FTD) Total Xylene a,a,a-Trifluorotoluene(PID) Toluene Total Xylene a,a,a-Trifluorotoluene(FID) a,a,a-Trifluorotoluene(FID) TPH (GC/FID) Low Fraction	mg/kg mg/kg mg/kg mg/kg mg/kg	MS Res 0.186 0.202 0.200 17.7 0.684	Ref Res 0.000249 0.00019 0.000566 0.0 0.00 0.00201	TV	91.0 91.0 97.10 97.10 98.0 100.0 100.0 105.0 88.0		49.7-127, 49.8-141 49.8-132 54.144 28.5-138 59-128 41.2-140 49.8-132 41.2-140 59-128 59-128 42.5-138	L718093-01 L718093-01 L718093-01 L718093-01 L718332-13 L718459-10 L718459-10	WG73967 WG73967 WG73967 WG73967 WG73967 WG73984 WG73984 WG73998 WG73998 WG73998 WG73998
Benzene Ethylbenzene Toluene a, a, a-Trifluorotoluene(PID) TPH (GC/FID) Low Fraction a, a, a-Trifluorotoluene (FID) Total Xylene a, a, a-Trifluorotoluene (PID) Toluene Total Xylene a, a, a-Trifluorotoluene (FID) a, a, a-Trifluorotoluene (FID) TPH (GC/FID) Low Fraction a**a** Trifluorotoluene (FID) a, a, a-Trifluorotoluene (FID) a, a, a-Trifluorotoluene (FID) a, a, a-Trifluorotoluene (FID)	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	MS Res 0 186 0.202 0.200 17.7 0.684 0.251 0.737 24.3	Ref Res 0.000249 0.000192 0.000566 0.0 0.00201 0.00182 0.00269 0.175	TV	91.0 91.0 97.10 97.10 91.0 102.0 100.0 105.0 88.0 102.0		49.7-127, 49.8-141 49.8-132 28.5-138 59-128 41.2-140 54-144 49.8-132 41.2-140 54-144 28.5-138 59-128	L718093-01 L718093-01 L718093-01 L718093-01 L718332-13 L718459-10 L718459-10	WG73967 WG73967 WG73967 WG73967 WG73984 WG73984 WG73988 WG73998 WG73998 WG73998 WG73998
Benzene; Ethylbenzene Toluene a,a,a-Trifluorotoluene(PID) TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene(FID) Total Xylene a,a,a-Trifluorotoluene(PID) Toluene Total Xylene a,a,a-Trifluorotoluene(FID) a,a,a-Trifluorotoluene(FID) TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene(FID)	mg/kg mg/kg mg/kg mg/kg mg/kg	MS Res 0 186 0.202 0.200 17.7 0.684 0.251 0.737 24.3	Ref Res 0.000249 0.000192 0.000566 0.0 0.00201 0.00182 0.00269 0.175	TV	91.0 91.0 97.10 97.10 91.0 100.0 105.0 88.0 113.0		49.7-127, 49.8-141 49.8-132 28.5-138 59-128 41.2-140 54-144 49.8-132 41.2-140 54-144 28.5-138 59-128	L718093-01 L718093-01 L718093-01 L718093-01 L718332-13 L718459-10 L718459-10	WG73967 WG73967 WG73967 WG73967 WG73967 WG73984 WG73984 WG73998 WG73998 WG73998 WG73998
Benzene Ethylbenzene Toluene a,a,a-Trifluorotoluene(PID) TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene(FID) Total Xylene a,a,a-Trifluorotoluene(PID) Toluene Total Xylene a,a,a-Trifluorotoluene(FID) a,a,a-Trifluorotoluene(FID) TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene(FID) a,a,a-Trifluorotoluene(FID) A,a,a-Trifluorotoluene(FID)	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	MS Res 0.186, 0.202 0.200 17.7 0.684 0.251 0.737 24.3	Ref Res 0.000249 0.000192 0.000566 0.0 0.00201 0.00182 0.00269 0.175	.05 .05 .05 .05 .15 .15	74 0 81.0 80.0 97.10 91.0 102.0 100.0 105.0 88.0 103.0	R	49.7-127. 49.8-141 49.8-132 54.144 28.5-138 59-128 41.2-140 54-144 41.2-140 59-128 54-144 28.5-138 59-128 PD Limit	L718093-01 L718093-01 L718093-01 L718093-01 L718332-13 L718459-10 L718459-10 L718459-10	WG73967 WG73967 WG73967 WG73967 WG73984 WG73984 WG73998 WG73998 WG73998 WG73998 WG73998 WG73998 WG73998
Benzene Ethylbenzene Toluene a, a, a-Trifluorotoluene(PID) TPH (GC/FID) Low Fraction a, a, a-Trifluorotoluene (FID) Total Xylene a, a, a-Trifluorotoluene (PID) Toluene Total Xylene a, a, a-Trifluorotoluene (FID) a, a, a-Trifluorotoluene (FID) TPH (GC/FID) Low Fraction a**a** Trifluorotoluene (FID) a, a, a-Trifluorotoluene (FID) a, a, a-Trifluorotoluene (FID) a, a, a-Trifluorotoluene (FID)	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	MS Res 0 186 0.202 0.200 17.7 0.684 0.251 0.737 24.3	Ref Res 0.000249 0.000192 0.000566 0.0 0.00201 0.00182 0.00269 0.175 cix Spike Du Ref & R	TV	91.0 91.0 97.10 97.10 91.0 102.0 100.0 105.0 88.0 102.0	R 27	49.7-127. 49.8-141 49.8-132 36.144 28.5-138 59-128 41.2-140 54-144 49.8-132 41.2-140 59-128 54-144 28.5-138 59-128 PD Limit	L718093-01 L718093-01 L718093-01 L718093-01 L718332-13 L718459-10 L718459-10	WG73967 WG73967 WG73967 WG73967 WG73984 WG73984 WG73988 WG73998 WG73998 WG73998 WG73998 WG73998
Benzene Ethylbenzene Toluene a,a,a-Trifluorotoluene(PID) TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene(FID) Total Xylene a,a,a-Trifluorotoluene(PID) Toluene Total Xylene a,a,a-Trifluorotoluene(FID) a,a,a-Trifluorotoluene(FID) a,a,a-Trifluorotoluene(FID) TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene(FID) a,a,a-Trifluorotoluene(FID) Analyte Benzene	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	MS Res 0.186, 0.202 0.200 17.7 0.684 0.251 0.737 24.3 MACU	Ref Res 0.000249 0.000192 0.000566 0.0 0.00201 0.00182 0.00269 0.175 ix Spike Du Ref %R 0.186, 67 0.202 71 0.200 71	TV	91.0 91.0 102.0 100.0 100.0 100.0 100.0 113.0 Limit	R. 27 15 41 11 32 1	49.7-127. 49.8-141 49.8-132 36.144 28.5-138 59-128 41.2-140 54-144 49.8-132 41.2-140 59-128 54-144 28.5-138 59-128 PD Limit	L718093-01 L718093-01 L718093-01 L718093-01 L718332-13 L718459-10 L718459-10 L718459-10	WG73967 WG73967 WG73967 WG73967 WG73984 WG73984 WG73988 WG73998 WG73998 WG73998 WG73998 WG73998 WG73998

a=Trilluorotoluene(PID):

* Performance of this Analyte is outside of established criteria.

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



XTO Energy - San Juan Division Kurt Hoekstra 382 County 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

L718291

August 28, 2014

		igi	Matrix Spi	ke Duplicat	ë! i				
Analyte	Units	MSD	Ref	%Rec	Limit	RPD	Limit R	ef Samp	Batch
TPH (GC/FID) Dow Fraction a,a,a-Trifluorotoluene(FID)	, mg/kg	17.[9]	17.7	97.60	28.5-138 59-128	1.16	1 23 6 L	718093-01	₩G739674 ₩G739674
Total Xylene; a,a,a-Trifluorotoluene(PID)	mg/kg	0.68	0.684	91.2 102.0	7 41.2-140 54-144	<i>i</i> :⊹√0,260	F23(.7)L	718332-13	WG73984 WG73984
Toluene Total Xylene	mg/kg	0.25		99.8 4 98.2	49/8-132 41.2-140	the interest to the control of the control of the	0 23.5 L	718459-10 718459-10	
a,a,a-Trifluorotoluene(FID) a,a,a-Trifluorotoluene(PID)				100.0	59-128 54-144				WG73998
TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene(FID)	mg/kg		24.3	85.9 102.0	28.5-138 59-128	2.14	23.6 L	718459-10	WG73998 WG73998
a,a,a-Trifluorotoluene(PID)				113.0	54-144				WG7399

Batch number /Run number / Sample number cross reference

WG739753: R2982079: L718291-01 02 WG739674: R2982117: L718291-01 02 WG739300: R2982148: L718291-01 02 WG739845: R2982293: L718291-01 WG739988: R2982385: L718291-02

^{* *} 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.'



XTO Energy - San Juan Division Kurt Hoekstra 382 County Road 3100

Aztec, NM 87410

Quality Assurance Report Level II

L718291

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 28, 2014

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Comments												04

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



Analytical Report

Report Summary

Client: XTO Energy Inc.

Chain Of Custody Number: 0475

Samples Received: 9/3/2014 3:35:00PM

Job Number: 98031-0528

Work Order: P409016

Project Name/Location: Jack Frost GC C#1E

Entire Report Reviewed By:

Tim Cain, Laboratory Manager

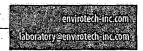
The results in this report apply to the samples submitted to Envirotech's Analytical Laboratory and were analyzed in accordance with the chain of custody document supplied by you, the client, and as such are for your exclusive use only. The results in this report are based on the sample as received unless otherwise noted. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. If you have any questions regarding this analytical report, please don't hesitate to contact Envirotech's Laboratory Staff.

5796 US Highway 64, Farmington, NM 87401

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Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301

Ph (970) 259-0615 Fr (800) 362-187



9/5/14

Date:





XTO Energy Inc. 382 CR 3100 Aztec NM, 87410 Project Name:

Jack Frost GC C#1E

Project Number: Project Manager: 98031-0528 James McDaniel **Reported:** 05-Sep-14 10:47

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
S. Wall	P409016-01A	Soil	09/03/14	09/03/14	Glass Jar, 4 oz.
W. Wall	P409016-02A	Soil	09/03/14	09/03/14	Glass Jar, 4 oz.
N. Wall	P409016-03A	Soil	09/03/14	09/03/14	Glass Jar, 4 oz.
Bottom 7'	P409016-04A	Soil	09/03/14	09/03/14	Glass Jar, 4 oz.
E. Wall	P409016-05A	Soil	09/03/14	09/03/14	Glass Jar, 4 oz.

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Page 2 of 12



Project Name:

Jack Frost GC C#1E

382 CR 3100 Aztec NM, 87410 Project Number: Project Manager: 98031-0528 James McDaniel **Reported:** 05-Sep-14 10:47

S. Wall P409016-01 (Solid)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021			 						
Benzene	ND	0.05	mg/kg	1	1436019	09/04/14	09/04/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	ı	1436019	09/04/14	09/04/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1436019	09/04/14	09/04/14	EPA 8021B	
p,m-Xylene	ND	0.10	mg/kg	1	1436019	09/04/14	09/04/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1436019	09/04/14	09/04/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1436019	09/04/14	09/04/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1436019	09/04/14	09/04/14	EPA 8021B	
Surrogate: Bromochlorobenzene		80.7 %	50-1	50	1436019	09/04/14	09/04/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		89.1 %	50-1	50	1436019	09/04/14	09/04/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1	1436019	09/04/14	09/04/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1	1436020	09/04/14	09/04/14	EPA 8015D	
Surrogate: Benzo[a]pyrene		109 %	50-2	00	1436020	09/04/14	09/04/14	EPA 8015D	





XTO Energy Inc. 382 CR 3100 Aztec NM, 87410 Project Name:

Jack Frost GC C#1E

Project Number: Project Manager: 98031-0528 James McDaniel Reported: 05-Sep-14 10:47

W. Wall P409016-02 (Solid)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1436019	09/04/14	09/04/14	EPA 8021B	
Toluene	ND	0.05	mg/kg l	l	1436019	09/04/14	09/04/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1436019	09/04/14	09/04/14	EPA 8021B	
p,m-Xylene	ND	0.10	mg/kg i	i	14360 (9	09/04/14	09/04/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	14360 19	09/04/14	09/04/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1436019	09/04/14	09/04/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1436019	09/04/14	09/04/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		95.8 %	50-15	50	1436019	09/04/14	09/04/14	EPA 8021B	
Surrogate: Bromochlorobenzene		82.5 %	50-15	50	1436019	09/04/14	09/04/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1436019	09/04/14	09/04/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1	1436020	09/04/14	09/04/14	EPA 8015D	
Surrogate: Benzo[a]pyrene		117 %	50-20	90	1436020	09/04/14	09/04/14	EPA 8015D	

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382 CR 3100

· Aztec NM, 87410

Project Name:

Jack Frost GC C#1E

Project Number: Project Manager: 98031-0528 James McDaniel Reported:

05-Sep-14 10:47

N. Wall P409016-03 (Solid)

Analyte	Result	Reporting Limit	Units I	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021					Date		7 11111 200		
Benzene	ND	0.05	mg/kg I		1436019	09/04/14	09/04/14	EPA 8021B	
Toluene	ND	0.05	mg/kg l		1436019	09/04/14	09/04/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg 1		1436019	09/04/14	09/04/14	EPA 8021B	
p,m-Xylene	ND	0.10	mg/kg l		1436019	09/04/14	09/04/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg I		1436019	09/04/14	09/04/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg l		1436019	09/04/14	09/04/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg 1		1436019	09/04/14	09/04/14	EPA 8021B	
Surrogate: Bromochlorobenzene		84.0 %	50-15	0	1436019	09/04/14	09/04/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		96.7 %	50-15	0	1436019	09/04/14	09/04/14	EPA 8021B	
Nonhalogenated Organics by 8015					ĺ				
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg l		1436019	09/04/14	09/04/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg l		1436020	09/04/14	09/04/14	EPA 8015D	
Surrogate: Benzo[a]pyrene		122 %	50-20	0	1436020	09/04/14	09/04/14	EPA 8015D	





XTO Energy Inc. 382 CR 3100

Aztec NM, 87410

Project Name:

Jack Frost GC C#1E

Project Number: Project Manager: 98031-0528 James McDaniel Reported: 05-Sep-14 10:47

Bottom 7' P409016-04 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	ı	1436019	09/04/14	09/04/14	EPA 8021B	
Toluene	2.88	0.05	mg/kg	1	1436019	09/04/14	09/04/14	EPA 8021B	
Ethylbenzene	0.90	0.05	mg/kg	I	1436019	09/04/14	09/04/14	EPA 8021B	
p,m-Xylene	8.38	0.10	mg/kg	1	1436019	09/04/14	09/04/14	EPA 8021B	
o-Xylene	1.78	0.05	mg/kg	1	1436019	09/04/14	09/04/14	EPA 8021B	
Total Xylenes	10.2	0.05	mg/kg	1	1436019	09/04/14	09/04/14	EPA 8021B	
Total BTEX	13.9	0.05	mg/kg	1	1436019	09/04/14	09/04/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		101 %	50-1	50	1436019	09/04/14	09/04/14	EPA 8021B	
Surrogate: Bromochlorobenzene		86.4 %	50-1	50	1436019	09/04/14	09/04/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	75.8	5.00	mg/kg	1	1436019	09/04/14	09/04/14	EPA 8015D	
Diesel Range Organics (C10-C28)	139	29.9	mg/kg	l	1436020	09/04/14	09/04/14	EPA 8015D	
Surrogate: Benzo[a]pyrene		105 %	50-2	200	1436020	09/04/14	09/04/14	EPA 8015D	

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XTO Energy Inc. 382 CR 3100 Aztec NM, 87410 Project Name:

Jack Frost GC C#1E

Project Number:
Project Manager:

98031-0528 James McDaniel Reported:

05-Sep-14 10:47

E. Wall P409016-05 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	1.02	0.05	mg/kg	1	1436019	09/04/14	09/04/14	EPA 8021B	
Toluene	42.2	0.05	mg/kg	1	1436019	09/04/14	09/04/14	EPA 8021B	
Ethylbenzene	15.4	0.05	mg/kg	1	1436019	09/04/14	09/04/14	EPA 8021B	
p,m-Xylene	107	0.10	mg/kg	1	1436019	09/04/14	09/04/14	EPA 8021B	
o-Xylene	31.6	0.05	mg/kg	1	1436019	09/04/14	09/04/14	EPA 8021B	
Total Xylenes	139	0.05	mg/kg	1	1436019	09/04/14	09/04/14	ÈPA 8021B	
Total BTEX	197	0.05	mg/kg	1	1436019	09/04/14	09/04/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		204 %	50-	150	1436019	09/04/14	09/04/14	EPA 8021B	S-02
Surrogate: Bromochlorobenzene		102 %	50-	150	1436019	09/04/14	09/04/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	787	4.99	mg/kg	1	1436019	09/04/14	09/04/14	EPA 8015D	
Diesel Range Organics (C10-C28)	1240	30.0	mg/kg	1	1436020	09/04/14	09/04/14	EPA 8015D	
Surrogate: Benzo[a]pyrene		131 %	50-	200	1436020	09/04/14	09/04/14	EPA 8015D	

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Project Name:

Jack Frost GC C#1E

382 CR 3100 Aztec NM, 87410 Project Number: Project Manager: 98031-0528 James McDaniel **Reported:** 05-Sep-14 10:47

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1436019 - Purge and Trap EPA 5030A										
Blank (1436019-BLK1)				Prepared: 0	3-Sep-14	Analyzed: 0	4-Sep-14			
Benzene	ND	0.05	mg/kg							
Toluene	ND	0.05	**							
Ethylbenzene	ND	0.05								
p,m-Xylene	ND	0.10								
o-Xylene	ND	0.05	**							
Total Xylenes	ND	0.05	•							
Total BTEX	ND	0.05	н							
Surrogate: 1,3-Dichlorobenzene	0.0496		"	0.0498		99.5	50-150			
Surrogate: Bromochlorobenzene	0.0496		"	0.0498		99.6	50-150			
Duplicate (1436019-DUP1)	Soi	urce: P409011-	02	Prepared: 0	3-Sep-14	Analyzed: 0	4-Sep-14			
Benzene	ND	0.05	mg/kg		ND				30	
Toluene	ND	0.05	"		ND				30	
Ethylbenzene	ND	0.05	II .		ND				30	
p,m-Xylene	ND	0.10	**		ND				30	
o-Xylene	ND	0.05	"		ND				30	
Surrogate: 1,3-Dichlorobenzene	0.0508		"	0.0499		102	50-150			
Surrogate: Bromochlorobenzene	0.0492		"	0.0499		98.6	50-150			
Matrix Spike (1436019-MS1)	Sou	urce: P409011-	02	Prepared: 0	3-Sep-14	Analyzed: 0	4-Sep-14			
Benzene	45.4		ug/L	50.0	ND	90.9	39-150	W		
Toluene	45.6		н	50.0	ND	91.3	46-148			
Ethylbenzene	45.0		**	50.0	ND	90.1	32-160			
p,m-Xylene	90.7		"	100	ND	90.7	46-148			
o-Xylene	45.3			50.0	ND	90.5	46-148			
Surrogate: 1,3-Dichlorobenzene	2.59		mg/kg	2.50		104	50-150			
Surrogate: Bromochlorobenzene	2.56		"	2.50		102	50-150			

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382 CR 3100

Aztec NM, 87410

Project Name:

Jack Frost GC C#1E

Project Number: Project Manager: 98031-0528 James McDaniel Reported:

05-Sep-14 10:47

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

						1				
		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1436019 - Purge and Trap EPA 5030A										
Blank (1436019-BLK1)				Prepared: (03-Sep-14	Analyzed:	04-Sep-14			
Gasoline Range Organics (C6-C10)	ND	4.98	mg/kg							
Duplicate (1436019-DUP1)	Sou	rce: P409011-	02	Prepared: (03-Sep-14	Analyzed:	04-Sep-14			
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg		ND				30	
Matrix Spike (1436019-MS1)	Sou	rce: P409011-	02	Prepared:	03-Sep-14	Analyzed:	04-Sep-14			
Gasoline Range Organics (C6-C10)	0.41		mg/L	0.450	ND	90.2	75-125			
						į.				

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382 CR 3100

Aztec NM, 87410

Project Name:

Jack Frost GC C#1E

Project Number: Project Manager: 98031-0528 James McDaniel Reported:

05-Sep-14 10:47

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1436020 - DRO Extraction EPA 3550M										
Blank (1436020-BLK1)				Prepared	03-Sep-14	Analyzed	04-Sep-14			
Diesel Range Organics (C10-C28)	ND	24.9	mg/kg							
Surrogate: Benzo[a]pyrene	18.3		,,	19.9		92.0	50-200			
LCS (1436020-BS1)				Prepared	03-Sep-14	Analyzed	04-Sep-14			
Diesel Range Organics (C10-C28)	491	25.0	mg/kg	500		98.4	38-132			
Surrogate: Benzo[a]pyrene	20.7		"	20.0		104	50-200			
Matrix Spike (1436020-MS1)	Sou	ırce: P409011-	02	Prepared	: 03-Sep-14	Analyzed	: 04-Sep-14			
Diesel Range Organics (C10-C28)	645	29.9	mg/kg	499	40.0	121	38-132			
Surrogate: Benzo[a]pyrene	24.8		11	20.0		124	50-200			
Matrix Spike Dup (1436020-MSD1)	Sou	urce: P409011-	02	Prepared	: 03-Sep-14	Analyzed	: 04-Sep-14			
Diesel Range Organics (C10-C28)	788	30.0	mg/kg	499	40.0	150	38-132	20.0	20	SPKI
Surrogate: Benzo[a]pyrene	21.8		,,	20.0		109	50-200			

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XTO Energy Inc. 382 CR 3100 Aztec NM, 87410 Project Name:

Jack Frost GC C#1E

Project Number: Project Manager: 98031-0528 James McDaniel Reported:

05-Sep-14 10:47

Notes and Definitions

SPK1 The spike recovery for this QC sample is outside of control limits.

S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present

in the sample extract.

DET Analyte DETECTED

Analyte NOT DETECTED at or above the reporting limit ND

NR Not Reported

dry Sample results reported on a dry weight basis

Relative Percent Difference RPD

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* Sample ID will be the office and sampler-date-military time: FARIM-MMDDYY-1200

0475

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Analytical Report

Report Summary

Client: XTO Energy Inc.

Chain Of Custody Number: 0487

Samples Received: 9/5/2014 11:35:00AM

Job Number: 98031-0528 Work Order: P409027

Project Name/Location: Jack Frost GC C #1E

Date:

9/9/14

Entire Report Reviewed By:

Tim Cain, Laboratory Manager

The results in this report apply to the samples submitted to Envirotech's Analytical Laboratory and were analyzed in accordance with the chain of custody document supplied by you, the client, and as such are for your exclusive use only. The results in this report are based on the sample as received unless otherwise noted. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. If you have any questions regarding this analytical report, please don't hesitate to contact Envirotech's Laboratory Staff.





Project Name:

Jack Frost GC C #1E

382 CR 3100 Aztec NM, 87410 Project Number: Project Manager: 98031-0528 James McDaniel Reported:

09-Sep-14 14:34

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Second Sample E. Wall	P409027-01A	Soil	09/05/14	09/05/14	Glass Jar, 4 oz.





XTO Energy Inc. 382 CR 3100 Aztec NM, 87410 Project Name:

Jack Frost GC C #1E

Project Number: Project Manager: 98031-0528 James McDaniel

Reported: 09-Sep-14 14:34

Second Sample E. Wall P409027-01 (Solid)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1436039	09/05/14	09/08/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1436039	09/05/14	09/08/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1436039	09/05/14	09/08/14	EPA 8021B	
p,m-Xylene	ND	0.10	mg/kg	1	1436039	09/05/14	09/08/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1436039	09/05/14	09/08/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1436039	09/05/14	09/08/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1436039	09/05/14	09/08/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		105 %	50-	150	1436039	09/05/14	09/08/14	EPA 8021B	
Surrogate: Bromochlorobenzene		112 %	50-	150	1436039	09/05/14	09/08/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1	1436039	09/05/14	09/08/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	40.0	mg/kg	2	1437001	09/08/14	09/08/14	EPA 8015D	
Surrogate: Benzo[a]pyrene		76.1 %	50-	200	1437001	09/08/14	09/08/14	EPA 8015D	

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XTO Energy Inc. 382 CR 3100 Aztec NM, 87410 Project Name:

Jack Frost GC C #1E

Project Number: Project Manager: 98031-0528 James McDaniel **Reported:** 09-Sep-14 14:34

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1436039 - Purge and Trap EPA 5030A			· · · · · · · · · · · · · · · · · · ·							
Blank (1436039-BLK1)				Prepared: (5-Sep-14	Analyzed: (08-Sep-14			
Benzene	ND	0.001	mg/kg]				
Toluene	ND	0.001	11							
Ethylbenzene	ND	0.001	**							
p,m-Xylene	ND	0.002	**							
o-Xylene	ND	0.001	II .							
Total Xylenes	ND	0.001	u			}				
Total BTEX	ND	0.001	н			ĺ				
Surrogate: 1,3-Dichlorobenzene	51.0		ug/L	50.0		102	50-150			
Surrogate: Bromochlorobenzene	53.2		"	50.0		106	50-150			
Duplicate (1436039-DUP1)	Sou	rce: P409027-	01	Prepared: ()5-Sep-14	Analyzed: (08-Sep-14		_	_
Benzene	ND	0.05	mg/kg		ND				30	
Toluene	ND	0.05	n		ND				30	
Ethylbenzene	ND	0.05	*		ND				30	
p,m-Xylene	ND	0.10			ND				30	
₀ -Xylene	ND	0.05	n		ND	Ì			30	
Surrogate: 1,3-Dichlarobenzene	51.7		ug/l.	50.0		103	50-150			
Surrogate: Bromochlorobenzene	54.3		"	50.0		109	50-150			
Matrix Spike (1436039-MS1)	Sou	rce: P409027-	01	Prepared: ()5-Sep-14	Analyzed: ()8-Sep-14			
Benzene	49.3		ug/L	50.0	ND	98.6	39-150			
Toluene	50.5		**	50.0	ND	101	46-148			
Ethylbenzene	51.0		н	50.0	ИD	102	32-160			
p,m-Xylene	102		•	100	ND	102	46-148			
o-Xylene	51.7		**	50.0	ND	103	46-148			
Surrogate: 1,3-Dichlorobenzene	51.9		"	50.0		104	50-150			
Surrogate: Bromochlorobenzene	54.2		"	50.0		108	50-150			

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5796 US Highway 64, Farmington, NM 87401

Ph (505) 632-0615 Fx (505) 632-1865

Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301





Project Name:

Jack Frost GC C #1E

382 CR 3100 Aztec NM, 87410 Project Number: Project Manager: 98031-0528 James McDaniel Reported:

09-Sep-14 14:34

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

	.	Reporting	**	Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1436039 - Purge and Trap EPA 5030A										···
Blank (1436039-BLK1)				Prepared: 0	5-Sep-14	Analyzed: 0)8-Sep-14			
Gasoline Range Organics (C6-C10)	ND	0.10	mg/kg							
Duplicate (1436039-DUP1)	Source	e: P409027-	01	Prepared: 0	5-Sep-14	Analyzed: 0)8-Sep-14			
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg		ND				30	
Matrix Spike (1436039-MS1)	Source	ce: P409027-	01	Prepared: 0	5-Sep-14	Analyzed: 0	8-Sep-14			
Gasoline Range Organics (C6-C10)	0.48		mg/L	0.450	ND	106	75-125			





XTO Energy Inc. 382 CR 3100

Aztec NM, 87410

Project Name:

Jack Frost GC C #1E

Project Number: Project Manager: 98031-0528 James McDaniel

Reported: 09-Sep-14 14:34

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1437001 - DRO Extraction EPA 3550M	[
Blank (1437001-BLK1)				Prepared &	k Analyzed	08-Sep-14				
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Surrogate: Benzo[a]pyrene	10.6		71	20.0		53.2	50-200			
LCS (1437001-BS1)				Prepared &	k Analyzed	08-Sep-14				
Diesel Range Organics (C10-C28)	585	25.0	mg/kg	499		117	38-132			
Surrogate: Benzo[a]pyrene	15.1		"	20.0		75.5	50-200			
Matrix Spike (1437001-MS1)	Sou	rce: P409027-	01	Prepared &	k Analyzed	08-Sep-14				
Diesel Range Organics (C10-C28)	512	39.9	mg/kg	499	ND	103	38-132			
Surrogate: Benzo[a]pyrene	14.2		n	20.0		71.0	50-200			
Matrix Spike Dup (1437001-MSD1)	Sou	rce: P409027-	01	Prepared &	k Analyzed	08-Sep-14				
Diesel Range Organics (C10-C28)	545	39.9	mg/kg	499	ND	109	38-132	6.34	20	
Surrogate: Benzo[a]pyrene	13.4		"	20.0		67.0	50-200			





Project Name:

Jack Frost GC C #1E

382 CR 3100 Aztec NM, 87410 Project Number: Project Manager: 98031-0528 James McDaniel

Reported:

09-Sep-14 14:34

Notes and Definitions

DET

Analyte DETECTED

ND

Analyte NOT DETECTED at or above the reporting limit

NR

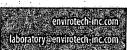
Not Reported

dry

Sample results reported on a dry weight basis

RPD

Relative Percent Difference



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