District I 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

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State of New Mexico Energy Minerals and Natural Resources

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

Form C-141 Revised October 10, 2003

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

			Rele	ease Notifica	ation	ı a	nd Co	rrective A	ction				
						0	PERAT	OR		🗌 Initia	al Report	\boxtimes	Final Report
Name of Co	mpany: X	TO Energy,	Inc.		(Coi	ntact: Log	gan Hixon				_	
Address: 38	2 Road 31	00, Aztec, N	lew Mexi	co 87410		Tel	lephone N	lo.: (505) 333-3	683				
Facility Nar	ne: Jicarill	a Apache #1	4 (API 3	0-039-20140)	ŀ	Fac	cility Type	e: Gas Well (Da	akota, N	Mesa Verd	le, Pictured	l Cliffs	, Chacra)
Surface Ow	ner: Jicaril	lla Apache		Mineral Ov	wner:					Lease N	lo.: JIC-54	+	
				LOCA	TION	N (OF REI	LEASE					
Unit Letter	Section	Township	Range	Feet from the	North/	δοι	uth Line	Feet from the	East/V	Vest Line	County		
М	34	26N	5W	900		FS	L	900	F	FWL	Rio Arriba	a	
				Latitude: <u>36</u>	.43859	<u>9</u> L	Longitude	: <u>-107.35198</u>					
	NATURE OF RELEASE												
Type of Rele	ase: Produc	ed Water				\	Volume of	Release: Unknov	vn	Volume R	Recovered:	None	
Source of Re	lease: BGT						Jate and H Jnknown	our of Occurrenc	e:	Date and Novembe	Hour of Dis r 9, 2012	covery:	
Was Immedia	ate Notice (Given?				I	f YES, To	Whom?			NIN TAN	00.14	
			Yes 🗌	No 🛛 Not Red	quired	N	N/A			κ.		Z3'1	ů
By Whom?				<u> </u>		Π	Date and H	our:	1 117 .	(<u>DIL CONS</u>	<u>; o</u> u	u
Was a Water	course Read	ched?	Yes 🛛	No		If YES, Volume Impacting the Watercourse. DIST. 3							
If a Wataraa	If a Watersourse was Impacted Describe Fully *												
Describe Cau	use of Proble	em and Reme	dial Actio	n Taken *				·					
The below gr	ade tank wa	as taken out o	f service a	t the Jicarilla Apac	:he #14	we	ell site due	to upgrades bein	g made	to this well	site. A com	posite s	sample was
collected ben	eath the loc	ation of the o	n-site BG	F, and submitted fo	or labor	ato	ry analysis	for TPH via US	ËPA Me	ethod 418.1	and 8015, 1	Benzen	e and BTEX
via USEPA N	Aethod 802	1, and for tota	l chloride	s. The sample retur	ned res	sult	s below the	e 'Pit Rule' spill	confirm	ation stand	ards for Ber	izene, T	otal BTEX
and total chlo	orides, but a	bove the 'pit	rule' stanc	lards for TPH, con	firming	tha	at a release	has occurred at t	this loca	tion. The s	ite was then	ranked	pursuant to
the NMOCD	Guidelines	for the Reme	diation of	Leaks, Spills and I	Release:	s. 1	The site wa	is ranked a 20 du	e to an e	estimated di	istance of le	ss than	200 feet to
Describe Are	ek. This set	and Cleanup	Action Tal	$\frac{100}{200}$ ppm 1PH, 10	ppm bei	nze	ene and 50	ppin total BTEA	, 01 100	ppm organ	ne vapors.		
* Please see	attached do	cument for ar	ea affected	and cleanup actio	n requi	red							
I hereby certi	fy that the	information g	iven above	e is true and compl	ete to th	he l	best of my	knowledge and u	indersta	nd that purs	suant to NM	IOCD r	ules and
regulations a	ll operators	are required t	o report a	nd/or file certain re	lease n	otif	fications ar	nd perform correct	ctive act	ions for rel	eases which	i may er	ndanger
public health	or the envi	ronment. The	acceptan	ce of a C-141 report	rt by the	e N	IMOCD m	arked as "Final R	leport" c	loes not rel	ieve the ope	rator of	f liability man haalth
or the enviro	operations r	ave falled to	DCD accer	tance of a C-141 r	enort de	e co oes	ontannau s not reliev	e the operator of	respons	ibility for c	omnliance v	with any	v other
federal, state	, or local la	ws and/or reg	ulations.		epore		, not renet	e nie operator or	respons				, other
								<u>OIL CON</u>	SERV	ATION	DIVISIO	<u>NC</u>	
	-f	11 -								1	1		
Signature: *	Jogo	- nua	· · · · · · · · · · · · · · · · · · ·			An	nroved hv	District Supervis	$or \Lambda$. 110	γ . / //		
Printed Nam	e: Logan Hi	ixon			1	· •P	proved by	District Super ne	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	SVOUT .	I KOW	7	
								1/~/	7			1	
Title: Enviro	nmental Te	chnician				Ap	proval Dat	ie: 1/21/20	5	Expiration	Date:		
E-mail Addr	ess: Logan_	Hixon@xtoe	nergy.com			Со	nditions of	f Approval:			Attached	d 🗖	
Date: 1-	18 -1	ζ.	I	Phone: 505-333-32	02				Attached				
	10	J		<u></u>				411	2020	9420	57		
								NJKI			-		

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Affected Area and Cleanup Actions

December 5, 2012

Logan Hixon (XTO) was on-site to oversee the excavation of impacted soil and collect samples. The excavation reached an extent of 15'x 15'x 6', where a composite sample was taken of the bottom. The composite sample was screened in the field for organic vapor (OV) using a photo ionization detector (PID), and returned results above the organic vapor standard of 100 ppm determined for this site as outlined in the NMOCD Guidelines for the Remediation of Leaks, Spills and Releases. The excavation continued to an extent of 15'x 15' x 10' deep, where a composite sample was taken of the bottom, east wall, west wall, north wall, and south wall. The five composite samples were screened in the field for OV, and returned results above the OV standard of 100 ppm determined for this site for the bottom, east, west, and south wall, but under OV standard for the north wall. The samples from the bottom, east, south and west wall were sent in to the lab for TPH, benzene, and BTEX analysis via US EPA method 8015 and 8021 respectively. The composite sample from the north wall was sent in for TPH analysis via 8015 method. *See attached field sheet.

December 7, 2012-

Lab analysis of the bottom, east, south, and west walls returned results below the standards determined for this site for benzene and BTEX, but above the 100 ppm TPH standard determined for this site. The lab analysis for the north wall returned results below the TPH standards determined for this site. *See attached sample results.

December 10, 2012-

Logan Hixon (XTO) and Brent Beaty (XTO) were on-site to oversee the continued excavation of the impacted soil. The excavation reached an extent of 34'x 30' x 12', where a hard sandstone bottom was exposed. Composite samples were taken of the bottom, west, east, south walls of the excavation. OV sampling was completed on the four composite samples. The four composite samples returned results above the OV standard determined for this site. The composite samples were sent in to the lab for TPH, benzene, and BTEX analysis via US EPA method 8015 and 8021 respectively. *See attached field sheet.

December 12, 2012-

Lab analysis of the bottom and east wall returned results below the standards determined for this site for benzene, but above the standards determined for this site for BTEX and TPH. The south and west walls returned results below the benzene and BTEX standards determined for this site, but above the 100 ppm TPH standard. *See attached sample results.

Logan Hixon (XTO) and Brent Beaty (XTO) were on-site to oversee the continued excavation of impacted soil. The excavation reached an extent of 36' x 36' x 12' deep. Composite samples were collected from the south and east walls. OV sampling was completed on two samples. The composite sample from the south wall returned results

above the OV standard determined for this site. The composite sample from the east wall returned results below the OV standard determined for this site. The composite sample from the south wall was sent in to the lab for TPH, benzene, and BTEX analysis via US EPA method 8015 and 8021 respectively. The composite sample from the east wall was sent in to the lab for TPH analysis via US EPA method 8015. Approximately 378 CY of soil was disposed of at the TNT land farm. *See attached field sheet.

December 13, 2012-

Lab analysis of the south wall returned results below the standards determined for this site for benzene, BTEX, but above the 100 ppm TPH standard. The east wall returned results below the regulatory standards for all constituents analyzed. *See attached sample results.

Logan Hixon (XTO) and Scott Baxstrom (XTO) were onsite to oversee the continued excavation of impacted soil. The excavation reached an extent of 37' x 37'x 12' deep. Composite samples were collected from the bottom, south and west walls. OV sampling was completed on all three samples. The composite sample from the bottom returned results above the 100 ppm OV standard determined for this site. The composite sample from the bottom was sent in to the lab for TPH, benzene, and BTEX analysis via US EPA method 8015 and 8021 respectively. The composite sample from the west and south walls returned values under the 100 ppm OV standard determined for this site. The composite sample from the west and south walls were sent in to the lab for TPH analysis via US EPA method 8015. Approximately 480 CY of soil was disposed of at the TNT land farm. *See attached field sheet.

December 14, 2012

Lab Analysis from the west and south wall returned values below the 100 ppm TPH standard determined for this site. The sample results for the bottom returned values below the standards for benzene and BTEX, but over the standards for TPH determined for this site. *See attached sample results

A Phone call was made from Logan Hixon (XTO) to Hobson Sandoval (Hobson Sandoval (Jicarilla Apache EPO) to request the closure of the excavation with values above the standards for the bottom of the excavation. Hobson Sandoval (Jicarilla Apache EPO) approved closure of excavation with values above the closure standards on bottom, but requested that XTO apply potassium permanganate to bottom of excavation to facilitate bioremediation. A phone call was made by Logan Hixon (XTO) to Brandon Powell (NMOCD) requesting closure of the excavation with values above the standards for the bottom of the excavation. Brandon Powell approved closure of excavation with values above the standards permanganate to the bottom of the excavation to facilitate bioremediation. Brandon Powell approved closure of excavation with values above the standards for the bottom of the excavation. Brandon Powell approved closure of excavation with values above the NMOCD standards on the bottom, but requested XTO apply potassium permanganate to the bottom of the excavation to facilitate bioremediation.

January 4, 2013

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Logan Hixon (XTO) was on-site with Nelson Revegetation and Hobson Sandoval (Jicarilla Apache EPO) to apply potassium permanganate to the bottom of excavation as requested by Hobson Sandoval (Jicarilla Apache EPO) and Brandon Powell (NMOCD). Approximately 350 gallons of 5% solution of potassium permanganate was applied to the bottom of the excavation where sandstone was encountered. After the application verbal confirmation to begin backfilling the excavation was granted by Hobson Sandoval (Jicarilla Apache EPO). The site was backfilled with clean fill soil from an area that Hobson Sandoval (Jicarilla Apache EPO) had designated. Reclamation of the excavated area was completed and the site was reconfigured for continued operations. *Field notes are attached for your viewing

ENERGY	XTO End	ergy On-Site For	m			
Well Name_ <u><u>j</u>ica (i)</u>	Ia Apache #14	API :	# <u>_30-03</u> ;	1		
Section	Township F	Range Co	ounty			
Contractors On-Site_	TPL, VTO MAN DU	Time On-Site	<u> 3. Co A</u> Tim	ne Off-Site <u>] 2 ; 5 9</u>		
Spill Amount <u>It istore</u>	Lal bbls Spilled (Oil/RTOO	Juced W/Other)	RCVRD		
Land Use (Range / F	Residential / Tribe Jucarill) Excavation	x	x deep		
n		1 200				
w s 15 00 15 15 15 15 15 15 15 15 15 15			00	000 4' 000 .		
	х Х			200-10		
			Sample Loc	ation		
	- Wy-PU	besm				
				DOG I		
Site Diagram			Sample Location			
sent for and	laysis & to plan	excavation				
Comments			Number of I	Photos Taken		
Complex			· · · · · · · · · · · · · · · · · · ·			
Time ISample #	Sample Description	Characteristics		Analysis Requested		
8:15 NA	100 Standard	NA NA	iol	NA		
8:30 1	Byt Sufface comp	Sand	121.7	Loirclation		
9:17 2	Est 6' bettern	Sand Dor	3082	nalah		
11:55 3	65T 10' 60thom	Sand odor	1235	8015,8021		
12:00 4	65T 10' FWGN	Sand DORE	835	8015,8021		
12:15 5	by I lo' Al wan	Sand	122.6	8615		
12:20 6	691 10' WWen	Saw	1353	18015,8021		
17:75 7	65T 10' 5 Wall	Sand	923	8015,802)		
Name (Print) <u>Lorian</u>	Hirco		Date / 2-5	-12		
∬ Name (Signature) <u> </u>	ing 1	Company _	170			



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Est. 1970

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

Report Summary

Friday December 07, 2012

Report Number: L609450

Samples Received: 12/06/12

Client Project:

Description: Jicarilla Apache #14

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.

Tai

T. Alan Harvill , ESC Representative

Laboratory Certification Numbers

Entire Report Reviewed By:

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

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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REPORT OF ANALYSIS

James McDaniel XTO Energy - San Juan Division 382 County Road 3100 Aztec, NM 87410			Dec	ember 07,2012		
Date Received : December 06, 2 Description : Jicarilla Apach Sample ID : BGT 10FT BOTTO	012 e #14 M		L609450-01 ARILLA APAC	:H #14		
Collected By : Logan Hixon Collection Date : 12/05/12 11:55			Pro	oject # :		
Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	88.7	0.100	р <mark>о</mark>	2540G	12/07/12	1
Benzene Toluene Ethylbenzene Total Xylene TPH (GC/FID) Low Fraction	BDL BDL 0.22 0.48 76.	0.028 0.28 0.028 0.084 5.6	mg/kg mg/kg mg/kg mg/kg mg/kg	8021/8015 8021/8015 8021/8015 8021/8015 GRO	12/06/12 12/06/12 12/06/12 12/06/12 12/06/12	50 50 50 50 50
a,a,a-Trifluorotoluene(FID) a,a,a-Trifluorotoluene(PID)	95.0 101.		% Rec. % Rec.	8021/8015 8021/8015	12/06/12 12/06/12	50 50
TPH (GC/FID) High Fraction	870	90.	mg/kg	3546/DRO	12/07/12	20
o-Terphenyl	0.00		% Rec.	3546/DRO	12/07/12	20

Results listed are dry weight basis. BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL) Note: This report shall not be reproduced, except in full, without the written approval from ESC. The reported analytical results relate only to the sample submitted Reported: 12/07/12 14:20 Printed: 12/07/12 15:07



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James McDaniel

Surrogate Recovery-%

Surrogate recovery(%)

o-Terphenyl

a,a,a-Trifluorotoluene(FID)

a,a,a-Trifluorotoluene(PID)

TPH (GC/FID) High Fraction

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12/06/12 5 12/06/12 5

12/07/12 1

12/07/12 1

Est. 1970

December 07,2012

8021/8015

8021/8015

3546/DRO

3546/DRO

% Rec.

% Rec.

mg/kg

% Rec.

REPORT OF ANALYSIS

XTO Energy - San 382 County Road Aztec, NM 87410	1 Ju 310	an Division O						
Date Received	:	December 06, 20	012		ESC	C Sample # :	L609450-02	
Description	:	Jicarilla Apache	2 #⊥4		Sit	te ID : JIC	ARILLA APAC	H #14
Sample ID	:	BGT 10FT EAST V	WALL		Pro	viect # ·		
Collected By Collection Date	: :	Logan Hixon 12/05/12 12:00						
Parameter			Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids			88.4	0.100	qlo	2540G .	12/07/12	1
Benzene			BDL	0.0028	mg/kg	8021/8015	12/06/12	5
Toluene			BDL	0.028	mg/kg	8021/8015	12/06/12	5
Ethylbenzene			BDL	0.0028	mg/kg	8021/8015	12/06/12	5
Total Xylene			BDL	0.0085	mg/kg	8021/8015	12/06/12	5
TPH (GC/FID) I	WOL	Fraction	0.66	0.56	mg/kg	GRO	12/06/12	5

4.5

97.8

101.

190

77.1

Results listed are dry weight basis. BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL) Note: This report shall not be reproduced, except in full, without the written approval from ESC. The reported analytical results relate only to the sample submitted Reported: 12/07/12 14:20 Printed: 12/07/12 15:07

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REPORT OF ANALYSIS

James McDaniel XTO Energy - San Juan Division 382 County Road 3100 Aztec, NM 87410		01 11111010	Dec	cember 07,2012	2				
Date Received : December 06, 2 Description : Jicarilla Apach	2012 Ne #14		ESC	C Sample # :	L609450-03				
Sample ID : BGT 10FT NORTH	WALL		Sit	te ID : JIC	ARILLA APACH #14				
Collected By : Logan Hixon Collection Date : 12/05/12 12:15			Pro	oject # :					
Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.			
Total Solids	87.1	0.100	90	2540G	12/07/12	1			
Benzene Toluene Ethylbenzene Total Xylene TPH (GC/FID) Low Fraction Surrogate Pacouarue ⁸	BDL BDL BDL BDL BDL	0.0029 0.029 0.0029 0.0086 0.57	mg/kg mg/kg mg/kg mg/kg mg/kg	8021/8015 8021/8015 8021/8015 8021/8015 GRO	12/06/12 12/06/12 12/06/12 12/06/12 12/06/12	5 5 5 5 5			
a,a,a-Trifluorotoluene(FID) a,a,a-Trifluorotoluene(PID)	98.2 102.		% Rec. % Rec.	8021/8015 8021/8015	12/06/12 12/06/12	5 5			
TPH (GC/FID) High Fraction	BDL	4.6	mg/kg	3546/DRO	12/07/12	1			
o-Terphenyl	67.4		% Rec.	3546/DRO	12/07/12	1			

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TPH (GC/FID) High Fraction

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

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REPORT OF ANALYSIS

James McDaniel XTO Energy - San Juan Division 382 County Road 3100 Aztec, NM 87410		01 111121010	Dec	ember 07,2012				
Date Received : December 06,	2012		ESC	Sample # :	L609450-04			
Description : Jicarilla Apache #14 Sample ID : BGT 10FT WEST WALL Site ID : JICARILLA APACH #14								
Sample ID : BG1 IOF1 WES	T WALL		Project # :					
Collected By : Logan Hixon Collection Date : 12/05/12 12:2	0							
Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.		
Total Solids	89.8	0.100	용	2540G	12/07/12	1		
Benzene Toluene Ethylbenzene Total Xylene TPH (GC/FID) Low Fraction Surrogate Recoverv-%	0.044 BDL BDL 0.19 20.	0.028 0.28 0.028 0.084 5.6	mg/kg mg/kg mg/kg mg/kg mg/kg	8021/8015 8021/8015 8021/8015 8021/8015 GRO	12/06/12 12/06/12 12/06/12 12/06/12 12/06/12	50 50 50 50 50		
a,a,a-Trifluorotoluene(FID) a,a,a-Trifluorotoluene(PID)	93.9 100.		% Rec. % Rec.	8021/8015 8021/8015	12/06/12 12/06/12	50 50		

220

mg/kg

% Rec.

3546/DRO

3546/DRO

12/07/12 50

12/07/12 50

2900

0.00

Results listed are dry weight basis. BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL) Note: This report shall not be reproduced, except in full, without the written approval from ESC. The reported analytical results relate only to the sample submitted Reported: 12/07/12 14:20 Printed: 12/07/12 15:07

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REPORT OF ANALYSIS

James McDaniel XTO Energy - San Juan Division 382 County Road 3100 Aztec, NM 87410			Dec	ember 07,2012		
Date Received : December 06, 2 Description : Jicarilla Apach	2012 ne #14		ESC	CSample # :	L609450-05	5
			Sit	e ID : JIC	ARILLA APAC	CH #14
Sample ID : BGT IOFT SOUTH	I WALL		Pro	viect # ·		
Collected By : Logan Hixon Collection Date : 12/05/12 12:25						
Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	88.0	0.100	do	2540G	12/07/12	1
Benzene	BDL	0.28	mg/kg	8021/8015	12/06/12	500
Toluene	BDL	2.8	mg/kg	8021/8015	12/06/12	500
Ethylbenzene	2.8	0.28	mg/kg	8021/8015	12/06/12	500
TOTAL XYLENE TRH (CC(FID) Low Fraction	16. 010	0.85	mg/kg	CBO CBO	12/06/12	500
Surrogate Becovery-%	010	57.	mg/kg	GRO	12/00/12	500
a,a,a-Trifluorotoluene(FID)	97.9		% Rec.	8021/8015	12/06/12	500
a,a,a-Trifluorotoluene(PID)	102.		% Rec.	8021/8015	12/06/12	500
TPH (GC/FID) High Fraction Surrogate recovery(%)	5300	230	mg/kg	3546/DRO	12/07/12	50
o-Terphenyl	0.00		% Rec.	3546/DRO	12/07/12	50

Results listed are dry weight basis. BDL - Below Detection Limit Det. Limit - Practical Quantitation Limit(PQL) Note: This report shall not be reproduced, except in full, without the written approval from ESC. The reported analytical results relate only to the sample submitted Reported: 12/07/12 14:20 Printed: 12/07/12 15:07

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Attachment A List of Analytes with QC Qualifiers

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Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L609450-01 L609450-04 L609450-05	WG626600 WG626600 WG626600	SAMP SAMP SAMP	o-Terphenyl o-Terphenyl o-Terphenyl	R2468658 R2468658 R2468658	J7 J7 J7 J7

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Attachment B Explanation of QC Qualifier Codes

Qualifier	Meaning
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.

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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.

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LAB SICILEINCES

YOUR LAB OF CHOICE

XTO Energy - San Juan Division James McDaniel 382 County Road 3100

Aztec, NM 87410

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Quality Assurance Report Level II

L609450

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

December 07, 2012

		Laboratory	Blank			
Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Benzene	< .0005	mg/kg			WG626236	12/06/12 13:48
Ethylbenzene	< .0005	mg/kg			WG626236	12/06/12 13:48
Toluene	< .005	mg/kg			WG626236	12/06/12 13:48
TPH (GC/FID) Low Fraction	< .1	mg/kg			WG626236	12/06/12 13:48
Total Xylene	< .0015	mg/kg			WG626236	12/06/12 13:48
a,a,a-Trifluorotoluene(FID)		% Rec.	97.50	59-128	WG626236	12/06/12 13:48
a,a,a-Trifluorotoluene(PID)		% Rec.	101.2	54-144	WG626236	12/06/12 13:48
Total Solids	< .1	8			WG626532	12/07/12 09:46
TPH (GC/FID) High Fraction	< 4	mg/kg			WG626600	12/07/12 10:40
o-Terphenyl		% Rec.	59.80	50-150	WG626600	12/07/12 10:40

			Duplicate				
Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
Total Solids	<u>8</u>	88.0	88.0	0.0221	5	L609450-05	WG626532
		Laborato	ry Control Sam	nple			
Analyte	Units	Known V	al Re	esult	% Rec	Limit	Batch
Benzene	mg/kg	.05	0.0	157	91.3	76-113	WG626236
Ethylbenzene	mg/kg	.05	0.0	188	97.6	78-115	WG626236
Toluene	mg/kg	.05	0.0	177	95.4	76-114	WG626236
Total Xylene	mg/kg	.15	0.1	14	96.3	81-118	WG626236
a,a,a-Trifluorotoluene(PID)					98.55	54-144	WG626236
TPH (GC/FID) Low Fraction	mg/kg	5.5	5.0	1	91.6	67-135	WG626236
a,a,a-Trifluorotoluene(FID)	5 5				94.28	59-128	WG626236
Total Solids	ę	50	50.)	99.9	85-115	WG626532
TPH (GC/FID) High Fraction	mg/kg	60	42.	Э	71.5	50-150	WG626600
0-TerbuenAT					63.70	50-150	<u>wG6</u> 26600

Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
Benzene	mg/kg	0.0467	0.0457	93.0	76-113	2.24	20	WG626236
Ethylbenzene	mg/kg	0.0486	0.0488	97.0	78-115	0.370	20	WG626236
Toluene	mg/kg	0.0476	0.0477	95.0	76-114	0.120	20	WG626236
Total Xylene	mg/kg	0.143	0.144	96.0	81-118	0.750	20	WG626236
a,a,a-Trifluorotoluene(PID)				98.70	54-144			WG626236
TPH (GC/FID) Low Fraction	mg∕kg	4.75	5.04	86.0	67-135	5.85	20	WG626236
a,a,a-Trifluorotoluene(FID)				93.05	59~128			WG626236
TPH (GC/FID) High Fraction	mg∕kg	43.9	42.9	73.0	50-150	2.17	20	WG626600
o-Terphenyl				66.80	50~150			WG626600

			Matrix Spi	ke				
Analyte	Units	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Benzene	mg/kg	0.216	0	.05	86.5	32-137	L609054-11	WG626236
Ethylbenzene	mg∕kg	0.175	0	.05	70.0	10-150	L609054-11	WG626236
Toluene	mg/kg	0.207	0	.05	82.9	20-142	L609054-11	WG626236
+ Porformance of this Applut	o in outrido o	f ontablic	abod oritor	÷ ~				

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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YOUR LAB OF CHOICE

Aztec, NM 87410

XTO Energy - San Juan Division James McDaniel 382 County Road 3100

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

L609450

December 07, 2012

70.3	16-141	L609054-11	WG626236
98.31	54-144		WG626236
	Q. 1.		
71.3	55-109	L609054-11	WG626236
92.05	59-128		WG626236
ce Limit	BPD I.	imit Ref Samp	Batch
	92.05	92.05 59-128	92.05 59-128
	te	Le	te
	Limit	Limit RPD I	Limit RPD Limit Ref Samp

Benzene	mg∕kg (0.233	0.216	93.2	32-137	7.41	39	L609054-11	WG626236
Ethylbenzene	mg/kg (0.218	0.175	87.0	10-150	21.7	44	L609054-11	WG626236
Toluene	mg/kg (0.229	0.207	91.7	20-142	10.1	42	L609054-11	WG626236
Total Xylene	mg∕kg (0.645	0.528	86.0	16-141	20.0	46	L609054-11	WG626236
a,a,a-Trifluorotoluene(PID)				98.98	54-144				WG626236
TPH (GC/FID) Low Fraction	mg∕kg 1	19.2	19.6	69.7	55-109	2.18	20	L609054-11	WG626236
a,a,a-Trifluorotoluene(FID)				91.79	59-128				WG626236

.

Batch number /Run number / Sample number cross reference

WG626236: R2467799: L609450-01 02 03 04 05 WG626532: R2468217: L609450-01 02 03 04 05 WG626600: R2468658: L609450-01 02 03 04 05

* * 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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YOUR LAB OF CHOICE

XTO Energy - San Juan Division James McDaniel 382 County Road 3100

Aztec, NM 87410

Quality Assurance Report Level II

L609450

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

December 07, 2012

Company Name/Address:		Billing	Informati	on:			-	Analy	vsis/Co	ntainer/Pre	servative	A1	Chain of Custody
XTO Energy - San Juan 382 County Road 3100 Aztec.NM 87410	n Divisio	n XTI Acc PO Eng	O Energ counts F Box 65 glewood	iy Inc Payable 01 I,CO 80155	5		200					L-A-B S-G-	SC.
Report to: Jaws Nelanie Project Description: Jicciy Illa Apech Phone: (505) 333-3100 FAX:	<u>4</u> - 14 nt Project #:	Email to <u>i</u> cyg Ci Cc	n Jam n_Hiko ty/Sate Dillected Ri ESC Key:	is-McDa n @ xtee o Arrito	niet Gr niet Gr n. CO	toeixi ~>) [-402] 3 c	11-402 / Coc				12065 Leba Mt. Juliet, Phone: (800 Phone: (615 Fax: (615	anon Road TN 37122 1) 767-5859 1) 758-5858 1) 758-5859
Collected by: (print) . Site C.G.A. HIXON THE Collected by (signature): Rus Immediately Packed on Ice N Y	Facility ID#: Ar / I G Ap (Lab MU Same Da Next Day Two Day Three Da	сиц 14 ST Be Not и	P.O.#: ified) 00% 00% 0% 25%	Date Resul Email?N FAX?N	ts Needed: No_Yes No_Yes	No. of Cntrs	RO/6RO(E015	TEX(BORI) /				CoCode : XTORN Template/Prelogin Shipped Via:	∀I. (lab use only)
Sample ID Con	np/Grab M	atrix*	Depth	Date	Time		N	$\frac{N}{X}$				Remarks/Contaminant	Sample # (lab only)
BGI 10 Bottorn Co	mp 2	2	<u>[0</u>	1 2 1 2 1 1 2	17:00	$\frac{1}{1}$		$\frac{x}{x}$					<u>L 60 19750 *01</u> -02
BGT 10 Last Wall	~~~ <u>~</u>	$\overrightarrow{ }$	1		12:15	 	X X	$\frac{X}{X}$					0 <u>7</u> 04
BGT 10 South Wall					12:25	1	X	X					-05
										600			
									R. in		100 A 100 A	· · · · · · · · · · · · · · · · · · ·	<pre>interaction interaction i</pre>
*Matrix: SS - Soil/Solid GW - Groundwate Remarks:	er WW - Wastel	Vater DW	- Drinking	Water OT -	Other						рН	Ten	np
Relinguished by (Signature)	Date: $\frac{2}{5}/12$ Date:	Time:	Receiv	ed by: (Signa	iture)				5040 Sapabl	<u>063</u> € es returned Ex □Couri	via: UPS er	Orndition:	(lab use only)
Relinquished by: (Signature)	Date:	Time:	Recei	ved for lab by	/: (Signature)				Date	.4 { 2	<u>5-407</u> Time OSOE	CoC Seals Intact	

		XTO End	ergy On-Site Forr	n	
Well Nan	ne <u>Tica</u>	rilla Apache #11	<u>/</u> API#		
Section_		Township F	Range Cou	inty <u>Rec</u>	Arrica
Contracto	ors On-Site_	Coret TPC + Xto	<u>ίταν</u> Time On-Site <u>12</u>	City Time	e Off-Site_15`; 44
Spill Amo	unt	bbls_Spilled_(Oil/Prod	uced W/Other)	RCVRD
Land Use	(Range/R	esidential (Tribe)	Lace) Excavation	217 × 15 21 × 15	x <u>i (^</u> deep X i 2_'
site Diag	ram	izidecp (4) (1)] 34 (4) (1)] (4) (1)]		Sample Loca	ation
Commen	1 5			Number of P	thotos Takan
Sample	<u>~</u>				
Time	Sample #	Sample Description	Characteristics	OVM (ppm)	Analysis Requested
12:15	NA	100 Standard	NA	161	NA
17:20		W.WALL 12	Sam Store Clay	1300	001), KOUL
15:00	2	E Wall 12'	Sava Chulicous	2345	BAIL BALI
15:20	Ч	botton 12'	Sand Clay soort	2908	8015, 8021
			Sandstone borrid		
Name (Pri Name (Sig	nt) <u>Locya</u> gnature) G	n Hivon	Company _/	Date <u> - 0</u> T 0) -/ 2
- W. S. McLanda, database		· · · · · · · · · · · · · · · · · · ·			

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

December 13, 2012

Logan Hixon XTO Energy 382 County Road 3100 Aztec, NM 87410 TEL: (505) 386-8018 FAX (505) 333-3280

RE: Jicarilla Apache #14

OrderNo.: 1212432

Dear Logan Hixon:

Hall Environmental Analysis Laboratory received 4 sample(s) on 12/11/2012 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to <u>www.hallenvironmental.com</u> or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

Sincerely,

andia

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report Lab Order 1212432 Date Reported: 12/13/2012

12/11/2012 12:15:20 PM

12/11/2012 4:05:30 PM

12/11/2012 4:05:30 PM

Hall Environmental Analysis Laboratory, Inc.

CLIENT:XTO EnergyProject:Jicarilla Apache #14Lab ID:1212432-001	Matrix:	MEOH (So	C DIL)	Client Sample Collection D Received D	e ID: East W Date: 12/10/ Date: 12/11/	Vall @ 12' 2012 1:00:00 PM 2012 10:00:00 AM
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	E ORGANICS					Analyst: MMD
Diesel Range Organics (DRO)	3900	200		mg/Kg	20	12/11/2012 3:15:43 PM
Surr: DNOP	0	72.4-120	S	%REC	20	12/11/2012 3:15:43 PM
EPA METHOD 8015B: GASOLINE RA	NGE					Analyst: NSB
Gasoline Range Organics (GRO)	2600	250		mg/Kg	50	12/11/2012 4:05:30 PM
Surr: BFB	273	84-116	S	%REC	50	12/11/2012 4:05:30 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	0.70	0.25		mg/Kg	5	12/11/2012 12:15:20 PM
Toluene	16	0.25		mg/Kg	5	12/11/2012 12:15:20 PM

0.25

5.0

80-120

mg/Kg

mg/Kg

%REC

5

50

50

11

130

109

Qualifiers:

*

Ethylbenzene

Xylenes, Total

Surr: 4-Bromofluorobenzene

Value exceeds Maximum Contaminant Level.

E Value above quantitation range

- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1212432

Date Reported: 12/13/2012

Hall Environmental Analysis Laboratory, Inc.

Analysas		D I		T 1 •4	DE	
Lab ID:	1212432-002	Matrix:	MEOH (SOIL)	Received I	Date: 12/11/2	2012 10:00:00 AM
Project:	Jicarilla Apache #14			Collection I	Date: 12/10/2	2012 1:15:00 PM
CLIENT:	XTO Energy		C	lient Sampl	e ID: West V	Vall @ 12'

· · · · · · · · · · · · · · · · · · ·			-			
EPA METHOD 8015B: DIESEL RANGE C	RGANICS					Analyst: MMD
Diesel Range Organics (DRO)	1100	100		mg/Kg	10	12/11/2012 3:39:22 PM
Surr: DNOP	0	72.4-120	S	%REC	10	12/11/2012 3:39:22 PM
EPA METHOD 8015B: GASOLINE RANG	E					Analyst: NSB
Gasoline Range Organics (GRO)	110	25		mg/Kg	5	12/11/2012 3:36:46 PM
Surr: BFB	200	84-116	S	%REC	5	12/11/2012 3:36:46 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.12		mg/Kg	5	12/11/2012 3:36:46 PM
Toluene	ND	0.25		mg/Kg	5	12/11/2012 3:36:46 PM
Ethylbenzene	ND	0.25		mg/Kg	5	12/11/2012 3:36:46 PM
Xylenes, Total	1.1	0.50		mg/Kg	5	12/11/2012 3:36:46 PM
Surr: 4-Bromofluorobenzene	102	80-120		%REC	5	12/11/2012 3:36:46 PM

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- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH greater than 2
- RL Reporting Detection Limit

- Analyte detected in the associated Method Blank В
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits S

Analytical Report Lab Order 1212432

Date Reported: 12/13/2012

Hall Environmental Analysis Laboratory, Inc.

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CLIENT: XTO Energy		(lient Sample	e ID: South	Wall
Project: Jicarilla Apache #14			Collection I	Date: 12/10/2	2012 1:20:00 PM
Lab ID: 1212432-003	Matrix: N	IEOH (SOIL)	Received I	Date: 12/11/2	2012 10:00:00 AM
Analyses	Result	RL Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RAN	NGE ORGANICS				Analyst: MMD
Diesel Range Organics (DRO)	750	100	ma/Ka	10	12/11/2012 2:32:07 PM

Dieser Runge Organies (Dr.O)	, 50	100		mgning	10	12/11/2012 2.02.01 1 10
Surr: DNOP	0	72.4-120	S	%REC	10	12/11/2012 2:32:07 PM
EPA METHOD 8015B: GASOLINE RANGE	E					Analyst: NSB
Gasoline Range Organics (GRO)	310	25		mg/Kg	5	12/11/2012 1:12:49 PM
Surr: BFB	451	84-116	S	%REC	5	12/11/2012 1:12:49 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.12		mg/Kg	5	12/11/2012 1:12:49 PM
Toluene	ND	0.25		mg/Kg	5	12/11/2012 1:12:49 PM
Ethylbenzene	ND	0.25		mg/Kg	5	12/11/2012 1:12:49 PM
Xylenes, Total	5.9	0.50		mg/Kg	5	12/11/2012 1:12:49 PM
Surr: 4-Bromofluorobenzene	121	80-120	s	%REC	5	12/11/2012 1:12:49 PM

Qualifiers:

*

- Value exceeds Maximum Contaminant Level.
- Ë Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH greater than 2
- RL Reporting Detection Limit

- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits S

Analytical Report Lab Order 1212432

Hall Environmental Analysis Laboratory, Inc.

CLIENT: XTO Energy

Lab ID:

Project: Jicarilla Apache #14

1212432-004

Date Reported: 12/13/2012 Client Sample ID: Bottom @ 12' Collection Date: 12/10/2012 1:20:00 PM

Matrix: MEOH (SOIL) Received Date: 12/11/2012 10:00:00 AM

Analyses	Result	RL (Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE	ORGANICS					Analyst: MMD
Diesel Range Organics (DRO)	2900	100		mg/Kg	10	12/11/2012 2:53:51 PM
Surr: DNOP	0	72.4-120	S	%REC	10	12/11/2012 2:53:51 PM
EPA METHOD 8015B: GASOLINE RAM	NGE					Analyst: NSB
Gasoline Range Organics (GRO)	1700	25		mg/Kg	5	12/11/2012 2:10:27 PM
Surr: BFB	1360	84-116	s	%REC	5	12/11/2012 2:10:27 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	0.20	0.12		mg/Kg	5	12/11/2012 2:10:27 PM
Toluene	7.8	0.25		mg/Kg	5	12/11/2012 2:10:27 PM
Ethylbenzene	7.0	0.25		mg/Kg	5	12/11/2012 2:10:27 PM
Xylenes, Total	51	5.0		mg/Kg	50	12/11/2012 4:34:12 PM
Surr: 4-Bromofluorobenzene	101	80-120		%REC	50	12/11/2012 4:34:12 PM

Qualifiers:

*

- Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Ρ Sample pH greater than 2
- Reporting Detection Limit RL

- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits S

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

WO#: 1212432

13-Dec-12

Client: XTO Energy

Project: Jicarilla Apache #14

Sample ID MB-5212	SampT	vne: MF	а к		tCode: FI		8015B · Dies	el Range (Draanics	
Client ID: PBS	Batch	n ID: 52	12	F	RunNo: 74	421	00100.0103	er range v	Jiguines	
Prep Date: 12/11/2012	Analysis D	Date: 12	2/11/2012	S	SeqNo: 2'	15171	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO) Surr: DNOP	ND 9.9	10	10.00		99.2	72.4	120			
Sample ID LCS-5212	SampT	ype: LC	:S	Tes	tCode: El	PA Method	8015B: Dies	el Range (Drganics	
Sample ID LCS-5212 Client ID: LCSS	SampT Batcl	Type: LC h ID: 52	:S 12	Tes	tCode: El	PA Method 421	8015B: Dies	el Range (Drganics	
Sample ID LCS-5212 Client ID: LCSS Prep Date: 12/11/2012	SampT Batcl Analysis D	Type: LC h ID: 52 Date: 12	:S 12 2/11/2012	Tes Fi	tCode: Ef RunNo: 74 SeqNo: 2	PA Method 421 15172	8015B: Diese Units: mg/H	el Range ((g	Drganics	
Sample ID LCS-5212 Client ID: LCSS Prep Date: 12/11/2012 Analyte	SampT Batcl Analysis D Result	Type: LC n iD: 52 Date: 1 2 PQL	:S 12 2/11/2012 SPK value	Tes F SPK Ref Val	tCode: El RunNo: 74 SeqNo: 2 %REC	PA Method 421 15172 LowLimit	8015B: Diese Units: mg/M HighLimit	el Range ((g %RPD	Drganics RPDLimit	Qual
Sample ID LCS-5212 Client ID: LCSS Prep Date: 12/11/2012 Analyte Diesel Range Organics (DRO)	SampT Batch Analysis D Result 46	Fype: LC h ID: 52 Date: 12 PQL 10	S 12 2/11/2012 SPK value 50.00	Tes F S SPK Ref Val 0	tCode: El RunNo: 7 SeqNo: 2 %REC 91.4	PA Method 421 15172 LowLimit 47.4	8015B: Diese Units: mg/F HighLimit 122	el Range ((g %RPD	Drganics RPDLimit	Qual

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

WO#: 1212432 13-Dec-12

Hall Environmental Analysis Laboratory, Inc.

Client:XTO EnergyProject:Jicarilla Apache #14

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Sample ID MB-5186 Client ID: PBS	SampT Batch	ype: ME 1 ID: R7	3LK 427	Tes F	tCode: El RunNo: 7	PA Method 427	8015B: Gaso	line Rang	e	
Prep Date: 12/10/2012	Analysis D)ate: 12	2/11/2012	S	BeqNo: 2	15515	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO) Surr: BFB	ND 920	5.0	1000		92.1	84	116			
Sample ID LCS-5186	SampT	ype: LC	S	Tes	tCode: El	PA Method	8015B: Gaso	oline Rang	e	
Sample ID LCS-5186 Client ID: LCSS	SampT Batcl	ype: LC	S 427	Tes F	tCode: El RunNo: 7	PA Method 427	8015B: Gaso	oline Rang	e	
Sample ID LCS-5186 Client ID: LCSS Prep Date: 12/10/2012	SampT Batcl Analysis D	Type: LC n ID: R7 Date: 12	S 427 2/11/2012	Tes F S	tCode: El RunNo: 7 SeqNo: 2	PA Method 427 15516	8015B: Gaso Units: mg/P	bline Rang	e	
Sample ID LCS-5186 Client ID: LCSS Prep Date: 12/10/2012 Analyte	SampT Batch Analysis D Result	Type: LC n ID: R7 Date: 12 PQL	S 427 2/11/2012 SPK value	Tes F S SPK Ref Val	tCode: El RunNo: 7 SeqNo: 2 %REC	PA Method 427 15516 LowLimit	8015B: Gaso Units: mg/F HighLimit	oline Rang (g %RPD	e RPDLimit	Qual
Sample ID LCS-5186 Client ID: LCSS Prep Date: 12/10/2012 Analyte Gasoline Range Organics (GRO)	SampT Batcl Analysis D Result 22	Type: LC n ID: R7 Date: 12 PQL 5.0	S 427 2/11/2012 SPK value 25.00	Tes F S SPK Ref Val 0	tCode: El RunNo: 7 SeqNo: 2 %REC 88.3	PA Method 427 15516 LowLimit 74	8015B: Gaso Units: mg/k HighLimit 117	oline Rang (g %RPD	e RPDLimit	Qual

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R . RPD outside accepted recovery limits

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

WO#:	1212432

13-Dec-12

-----**Client:** XTO Energy

Jicarilla Apache #14 **Project:**

						<u> </u>				
Sample ID MB-5186	Samp1	Гуре: МЕ	BLK	Test	tCode: El	PA Method	8021B: Volat	tiles		
Client ID: PBS	Batcl	h ID: R7	427	R	RunNo: 7	427				
Prep Date: 12/10/2012	Analysis [Date: 12	2/11/2012	S	SeqNo: 2	15544	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.98		1.000		97.8	80	120			
Sample ID LCS-5186	Samp	Type: LC	S	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: LCSS	Batc	h ID: R7	427	F	RunNo: 7	427				
Prep Date: 12/10/2012	Analysis [Date: 12	2/11/2012	S	SeqNo: 2	15545	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.050	1.000	0	96.6	76.3	117			
Toluene	0.96	0.050	1.000	0	96.4	80	120			
Ethylbenzene	0.98	0.050	1.000	0	97.6	77	116			
Xylenes, Total	2.9	´ 0.10	3.000	0	97.9	76.7	117			
Surr: 4-Bromofluorobenzene	1.0		1.000		100	80	120			

- * Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- Analyte detected below quantitation limits J
- Р Sample pH greater than 2

- Analyte detected in the associated Method Blank В
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits R

C C	hain	-of-Cu	ustody Record	Turn-Around	Time:	:									RIX	/ T I	20			NIT	' A I	
Client:	XTO			│ □ Standard	(Same Day					"IA NN		. E V	IN N 8 t (2 I 1 1		RO		IN I.	AL 101	-
	μ			Project Name	e:			1							J.L.		tal o	om			76N I	1
Mailing	Address			Tirac			Dacho #14		49	01 H	lawk	ins I	WE -	- Alt	ougu	erqu	ie. N	M 87	7109			
		<u></u>		Project #:				1	Τe	əl. 50)5-34	45-3	975	I	Fax	505	-345	-410	7			
Phone	#: <u>S</u>	05 39	86 8018										A	Analy	ysis	Req	ues	t				
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	AP	🗆 Othe	er	On be		HIN.		Ŧ	<u>⊢</u>	158	18.1	04.1	(HH)		3°S	/ 8(A)				Ń
	(Type)			Sample Tem	<i>lerat</i> i	ie /			Ш	d 80	bd 4	5 pc	Ъ Б	etals	Ň	sides	A)	0				Z
Date	Time	Matrix	Sample Request ID	Container Type and #	Prese T	ype	HEAL No	BTEX + MH	3TEX + MT	IPH Metho	IPH (Meth	EDB (Metho	3310 (PNA	RCRA 8 Me	Anions (F,C	3081 Pestic	3260B (VO	3270 (Semi				Air Bubbles
12/10/12	1300	301	East Wall @ 12'	(1) Yoziar	Cc	01	-061	Ī		X												
12/10/12	1315	Soil	West Wall eIZ"		Co	ol	-602	X		X												
12/10/12	1320	Soil	Kowh Wall		Co	bL	-003	X		χ												
12/10/12	1320	5011	Bottom 2121		Co	٥L	-004	X		Х										\square	\square	
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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.

ENER	O G Y		XTO En	ergy On⊰	Site Forr	n	
Well Name_	Tiu	rilla Aq	Dache H	=14	API#		
Section		Township	[Range	Col	unty <u> 210</u>	n Arriba
Contractors	On-Site_	Corc, Tpc	Poberts	Time	On-Site <u></u>	<u>; </u>	me Off-Site_15:30
Spill Amount		bbls Spi		duced W/Oth	er) RCVRD
Land Use (F	Range / F	Residential / Trit	Pilicar	-1(10_) Ex	Cavalion	<u>10 x 3</u>	<u>Y x 1 Z</u> deep
w w c s			Fideep	NHPU		(JOGG)	
						Sample Lo	cation
				(De Q	ig gm	00000	
Site Diagram		<u></u>				Sample Lo	cation
Comments						Number of	Photos Taken
Samples							
Time Sa	mple #	Sample De	scription	Charact	eristics	OVM (ppm) Analysis Requested
3.12	NA i	100 Sta	ndard	N	A	2770	NA NA
17:40	2	Finall	12	Isan a	LOGI BLACK	2579	<u> </u>
12:45	3	S. Wall	12'	SANISA	Jor	1705+	8015,8021
13:40	ц	W. Wail	12	ISam (aul	787	
13:45	S	E. Wall	12'	Sam ri	aul	1927	
1.1 1D	6	E. wall	12,	Sande	ay	Sou	
15:00	_1	E. Wall	12'	1 Sand C	104	967	8015, 5291
Name (Print)	<u>(.09</u> 0 ure) 1	an Hixe	<u>in</u>	L	ompany (Date <u>77</u>	-12-12
	<u>-</u>		<u> </u>	0	/		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

December 18, 2012

Logan Hixon XTO Energy 382 County Road 3100 Aztec, NM 87410 TEL: (505) 386-8018 FAX (505) 333-3280

RE: Jicarilla Apache #14

OrderNo.: 1212553

Dear Logan Hixon:

Hall Environmental Analysis Laboratory received 2 sample(s) on 12/13/2012 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to <u>www.hallenvironmental.com</u> or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

Sincerely,

andia

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

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Analytical Report Lab Order 1212553 Date Reported: 12/18/2012

Analyses		Posult	PI Qual	Unito	DF	Data Analyzad
Lab ID:	1212553-001	Matrix: N	MEOH (SOIL)	Received	Date: 12/13/2	2012 9:40:00 AM
Project:	Jicarilla Apache #14			Collection	Date: 12/12/2	2012 12:40:00 PM
CLIENT:	XTO Energy		C	lient Sampl	e ID: S. Wal	112'

	-			
ORGANICS				Analyst: MMD
260	10	mg/Kg	1	12/13/2012 12:34:07 PM
97.1	72.4-120	%REC	1	12/13/2012 12:34:07 PM
NGE				Analyst: NSB
ND	5.0	mg/Kg	1	12/13/2012 1:33:20 PM
96.2	84-116	%REC	1	12/13/2012 1:33:20 PM
				Analyst: NSB
ND	0.050	mg/Kg	1	12/13/2012 1:33:20 PM
ND	0.050	mg/Kg	1	12/13/2012 1:33:20 PM
ND	0.050	mg/Kg	1	12/13/2012 1:33:20 PM
ND	0.10	mg/Kg	1	12/13/2012 1:33:20 PM
102	80-120	%REC	1	12/13/2012 1:33:20 PM
	E ORGANICS 260 97.1 NGE ND 96.2 ND ND ND ND ND ND ND	E ORGANICS 260 10 97.1 72.4-120 NGE ND 5.0 96.2 84-116 ND 0.050 ND 0.050 ND 0.050 ND 0.050 ND 0.10 102 80-120	E ORGANICS 260 10 mg/Kg 97.1 72.4-120 %REC NGE ND 5.0 mg/Kg 96.2 84-116 %REC ND 0.050 mg/Kg ND 0.050 mg/Kg ND 0.050 mg/Kg ND 0.10 mg/Kg 102 80-120 %REC	E ORGANICS 260 10 mg/Kg 1 97.1 72.4-120 %REC 1 NGE ND 5.0 mg/Kg 1 96.2 84-116 %REC 1 ND 0.050 mg/Kg 1 ND 0.050 mg/Kg 1 ND 0.050 mg/Kg 1 ND 0.050 mg/Kg 1 ND 0.10 mg/Kg 1 102 80-120 %REC 1

Qualifiers:

*

- Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH greater than 2
- RL Reporting Detection Limit

В Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

Spike Recovery outside accepted recovery limits S

Analytical Report Lab Order 1212553

Date Reported: 12/18/2012

Hall Environmental Analysis Laboratory, Inc.

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CLIENT: XTO Energy			Client Sample	ID: E. Wa	11 12'
Project: Jicarilla Apache #14			Collection D	ate: 12/12/	2012 3:00:00 PM
Lab ID: 1212553-002	Matrix:	MEOH (SOIL)	Received D	ate: 12/13/	2012 9:40:00 AM
Analyses	Result	RL Qua	l Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE	ORGANICS				Analyst: MMD
Diesel Range Organics (DRO)	34	10	mg/Kg	1	12/13/2012 12:55:56 PM
Surr: DNOP	98.0	72.4-120	%REC	1	12/13/2012 12:55:56 PM
EPA METHOD 8015B: GASOLINE RAI	NGE				Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	12/13/2012 2:02:13 PM
Surr: BFB	98.2	84-116	%REC	1	12/13/2012 2:02:13 PM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.050	mg/Kg	1	12/13/2012 2:02:13 PM
Toluene	ND	0.050	mg/Kg	1	12/13/2012 2:02:13 PM
Ethylbenzene	ND	0.050	mg/Kg	1	12/13/2012 2:02:13 PM
Xylenes, Total	ND	0.10	mg/Kg	1	12/13/2012 2:02:13 PM
Surr: 4-Bromofluorobenzene	103	80-120	%REC	1	12/13/2012 2:02:13 PM

Qualifiers:

* Value exceeds Maximum Contaminant Level.

E Value above quantitation range

- J Analyte detected below quantitation limits
- Р Sample pH greater than 2
- RL Reporting Detection Limit

- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

RPD outside accepted recovery limits R

Spike Recovery outside accepted recovery limits S

QC SUMMARY REPORT

Ha		Envi	ronme	ntal	Ana	lysis	s La	bora	tory,	Inc.
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1212553 WO#:

18-Dec-12

Client:	XTO Ene	rgy								
Project:	Jicarilla A	pache #14								
Sample ID	1212489-001AMS	SampType:	MS	Tes	tCode: EPA	A Method	8015B: Diese	l Range (Drganics	-
Client ID:	BatchQC	Batch ID:	5258	F	RunNo: 750)2				
Prep Date:	12/13/2012	Analysis Date:	12/14/2012	S	SeqNo: 217	7610	Units: mg/K	g		
Analyte		Result PC	QL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range (Organics (DRO)	36	9.9 49.50	0	71.7	12.6	148			
Surr: DNOP		4.0	4.950		80.6	72.4	120			
Sample ID	1212489-001AMSE	SampType:	M\$D	Tes	tCode: EPA	A Method	8015B: Diese	I Range (Organics	
Client ID:	BatchQC	Batch ID:	5258	F	RunNo: 750)2				
Prep Date:	12/13/2012	Analysis Date:	12/14/2012	5	SeqNo: 217	7611	Units: mg/K	g		
Analyte		Result PO	QL_SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range	Organics (DRO)	38	9.9 49.60	0	75.7	12.6	148	5.55	22.5	
Surr: DNOP		4.4	4.960	<u></u>	88.3 、	72.4	120	0	0	
Sample ID	MB-5275	SampType:	MBLK	Tes	tCode: EPA	A Method	8015B: Diese	I Range (Drganics	
Client ID:	PBS	Batch ID:	5275	F	RunNo: 750	02				
Prep Date:	12/14/2012	Analysis Date:	12/14/2012	9	SeqNo: 217	7763	Units: %REC	•		
Analyte		Result PO	QL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP		9.7	10.00		97.1	72.4	120			
Sample ID	LCS-5275	SampType:	LCS	Tes	tCode: EP/	A Method	8015B: Diese	I Range (Organics	
Client ID:	LCSS	Batch ID:	5275	F	RunNo: 750	02				
Prep Date:	12/14/2012	Analysis Date:	12/14/2012	ę	SeqNo: 217	7764	Units: %REC)		
Analyte		Result PO	QL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP		4.3	5.000		85.1	72.4	120			

Qualifiers:

Value exceeds Maximum Contaminant Level. *

Е Value above quantitation range

Analyte detected below quantitation limits J

Р Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits R

C	:hain	-of-Cu	istody Record	Turn-Around Time:						,					a tr P	20			NI T		
Client:	en	rell] □ Standard	🕅 Rush	61112-13-12 3PM				Г Д	IA N	LL AI		N V Sts	5 I 5 I		30	nc R/	IN I.)R'	• : Y
<u>_</u>		- <u>J</u>		Project Name	9:							v hai	lenv	iron	men	tal cr	om			<i>7</i> 1 ×	P
Mailing	Address	:	<u></u>	Tim	le April	it I d		10	01 H	lawki	ne N				erau	a N	M 87	109			
				Project #:	IN Apacre	<u> </u>	1	Te)5-34	5-30	475	, F	-aqu Fax	505.	345	-410	7			
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email o	r Fax#: [-090n-	Hixon @ YHEREIN COM	Project Mana	iger:			(yl	sel))4)							T
QA/QC I	Package:	J					3021	as or	'Die					04,S(CB's						
🗆 Stan	dard		Level 4 (Full Validation)	Logan	Hixon		3) S.(ů Ŭ	Gas/					2, PO	2 P(
	itation		sr.	Sampler: Logan Ity Von Onlice: X Kess Alba		₩.	TPL	5B ((F)	.	Î		N.	808						Ĩ	
	(Type)		······	Sample-Tem				+ Щ	801	41	20	r PA	als	о N	les /		٩ ٩				, Z
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Date	Time	Matrix	Sample Request ID	Container	Preservative	HEAL NO.	+ + ×	+ ×	Met	(Me	(Me	ď	A 8	l) su	Pe	B (>	(Se				44.0
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Date: Time: Relinquished by: Date Time: Of 40																					
130	649	IW	EValts	L	2 12	13/12 090	Ð												<u></u>		

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited values of the serves as notice of this possibility. Any sub contracted data will be algority and the subcontracted to the server if the

ENERGY	XTO En	ergy On-Site Fo	"M]
Well Name_ <u>J.c.</u> r	illy Apache #1	<u>ଏ</u> ନା	#
Section	Township	Range Co	ounty
Contractors On-Site	Core, TPG X to Fact	Time On-Site	<u> () () </u> Time Off-Site
Spill Amount	bbls Spilled (Gil/Prod	duced W/Other) RCVRD
Land Use (Range /	Residential / Tribe June 1	Excavation	56 x 36 x 12 deep 57' x 36' x 12
Site Diagram	27' () () () () () () () () () ()	() (S Sm () (S Sm) (S Sm	Sample Location
Comments	/		Number of Photos Taken
Samples			
Time Sample #	Sample Description	Characteristics	OVM (ppm) Analysis Requested
15.10 NA	100 Standard	NA	NA NA
15940 7	Liston 17	Scupal Charl	1951 Rais Quizi
16:00 3	15: Wall 12'	Sam	21,3 4015
	+		
Name (Print) <u>أ.: جن</u> Name (Signature)	in Huich	 Company	Date 12-13-17
	-		

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HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

December 19, 2012

Logan Hixon XTO Energy 382 County Road 3100 Aztec, NM 87410 TEL: (505) 386-8018 FAX (505) 333-3280

RE: Jicarilla Apache #14

OrderNo.: 1212657

Dear Logan Hixon:

Hall Environmental Analysis Laboratory received 3 sample(s) on 12/14/2012 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to <u>www.hallenvironmental.com</u> or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

Sincerely,

andig

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report
Lab Order 1212657

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/19/2012

CLIENT: XTO Energy		Client Sample ID: W Wall 12' Collection Date: 12/13/2012 1:20:00 PM									
Project: Jicarilla Apache #14											
Lab ID: 1212657-001	Matrix:	MEOH (SOIL) Received D	ate: 12/14/	2012 10:20:00 AM						
Analyses	Result	RL Qu	al Units	DF	Date Analyzed						
EPA METHOD 8015B: DIESEL RAN	GE ORGANICS				Analyst: MMD						
Diesel Range Organics (DRO)	93	9.8	mg/Kg	1	12/14/2012 11:39:20 AM						
Surr: DNOP	105	72.4-120	%REC	1	12/14/2012 11:39:20 AM						
EPA METHOD 8015B: GASOLINE R	ANGE				Analyst: NSB						
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	12/14/2012 12:30:43 PM						
Surr: BFB	91.1	84-116	%REC	1	12/14/2012 12:30:43 PM						

Qualifiers:

* Value exceeds Maximum Contaminant Level.

E Value above quantitation range

- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

B Analyte detected in the associated Method Blank

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits

Analytical Report Lab Order 1212657

Date Reported: 12/19/2012

Hall Environmental Analysis Laboratory, Inc.

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CLIENT: XTO Energy			Client Sample	e ID: S Wall	112'
Project: Jicarilla Apache #14			Collection I	Date: 12/13/2	2012 4:00:00 PM
Lab ID: 1212657-002	Matrix:	MEOH (SOIL)	Received I	Date: 12/14/	2012 10:20:00 AM
Analyses	Result	RL Qua	l Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE	ORGANICS				Analyst: MMD
Diesel Range Organics (DRO)	26	9.7	mg/Kg	1	12/14/2012 12:01:03 PM
Surr: DNOP	100	72.4-120	%REC	1	12/14/2012 12:01:03 PM
EPA METHOD 8015B: GASOLINE RAM	NGE				Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	12/14/2012 12:59:29 PM
Surr: BFB	94.0	84-116	%REC	1	12/14/2012 12:59:29 PM

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH greater than 2
- Reporting Detection Limit RL

- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits S

Analytical Report

Lab Order 1212657

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Date Reported: 12/19/2012

12/14/2012 1:28:11 PM

12/14/2012 1:28:11 PM

12/14/2012 1:28:11 PM

Hall Environmental Analysis Laboratory, Inc.

CLIENT:XTO EnergyProject:Jicarilla Apache #14Lab ID:1212657-003	Matrix:	MEOH (SO	C IL)	Client Sample Collection D Received D	e ID: Botton Pate: 12/13/2 Pate: 12/14/2	n 12' 2012 3:40:00 PM 2012 10:20:00 AM
Analyses	Result	RL (Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	SE ORGANICS					Analyst: MMD
Diesel Range Organics (DRO)	480	10		mg/Kg	1	12/14/2012 12:22:44 PM
Surr: DNOP	112	72.4-120		%REC	1	12/14/2012 12:22:44 PM
EPA METHOD 8015B: GASOLINE RA	ANGE					Analyst: NSB
Gasoline Range Organics (GRO)	28	25		mg/Kg	5	12/14/2012 1:28:11 PM
Surr: BFB	125	84-116	S	%REC	5	12/14/2012 1:28:11 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.12		mg/Kg	5	12/14/2012 1:28:11 PM
Toluene	ND	0.25		mg/Kg	5	12/14/2012 1:28:11 PM

0.25

0.50

80-120

mg/Kg

mg/Kg

%REC

ND

ND

101

Qualifiers:

Ethylbenzene

Xylenes, Total

Surr: 4-Bromofluorobenzene

* Value exceeds Maximum Contaminant Level.

Е Value above quantitation range

J Analyte detected below quantitation limits

Р Sample pH greater than 2

RL Reporting Detection Limit

- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit ND

RPD outside accepted recovery limits R

Spike Recovery outside accepted recovery limits S

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

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WO#: 1212657 19-Dec-12

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Client: Project:	XTO Energy Jicarilla Apache #	14								
Sample ID MB-52	75 Sam	рТуре: М	BLK	Tes	tCode: EF	PA Method	8015B: Diese	el Range C	Organics	
Client ID: PBS	Ba	tch ID: 52	75	F	RunNo: 7	502				
Prep Date: 12/14	Analysis	Date: 1:	2/14/2012	S	SeqNo: 2'	17763	Units: mg/M	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics	(DRO) ND	10								
Surr: DNOP	9.7		10.00		97.1	72.4	120			
Sample ID LCS-5	275 Sam	рТуре: LC	s	Tes	tCode: EF	PA Method	8015B: Dies	el Range C	Organics	
Client ID: LCSS	Ba	tch ID: 52	75	F	RunNo: 7	502				
Prep Date: 12/14	l/2012 Analysis	Date: 1:	2/14/2012	S	SeqNo: 2	17764	Units: mg/#	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics	(DRO) 41	10	50.00	0	81.5	47.4	122			
Surr: DNOP	4.3		5.000		85.1	72.4	120			
Sample ID 12125	94-001AMS Sam	рТуре: М	s	Tes	tCode: Ef	PA Method	8015B: Dies	el Range (Organics	
Client ID: Batch	QC Ba	tch ID: 52	75	F	RunNo: 7	516				
Prep Date: 12/14	2012 Analysis	Date: 1	2/17/2012	5	SeqNo: 2	18072	Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics	(DRO) 41	10	49.85	0	82.6	12.6	148			
Surr: DNOP	3.7		4.985		74.4	72.4	120			
Sample ID 12125	94-001AMSD Sam	рТуре: М	SD	Tes	tCode: El	PA Method	8015B: Dies	el Range (Organics	
Client ID: Batch	QC Ba	tch ID: 52	75	F	RunNo: 7	516				
Prep Date: 12/14	l/2012 Analysis	Date: 1	2/17/2012	Ś	SeqNo: 2	18073	Units: mg/H	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics	(DRO) 42	9.8	49.07	0	85.3	12.6	148	1.67	22.5	
Surr: DNOP	3.8		4.907		77.0	72.4	120	0	0	

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental	l Analy	sis La	boratory,	Inc.
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WO#: 1212657

19-Dec-12

Client:	XTO Ene	ergy									
Project:	Jicarilla A	Apache #14	4								
Sample ID	5ML RB	SampT	ype: MI	BLK	Tes	tCode: El	PA Method	8015B: Gaso	line Rang	e	
Client ID:	PBS	Batch	n ID: R7	507	F	RunNo: 7	507				
Prep Date:		Analysis D	ate: 1	2/14/2012	S	GeqNo: 2	18193	Units: mg/k	۲g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	ge Organics (GRO)	ŃD	5.0								
Surr: BFB		910		1000		90.9	84	116			
Sample ID	2.5UG GRO LCS	SampT	ype: LC	s	Tes	tCode: El	PA Method	8015B: Gaso	line Rang	e	
Client ID:	LCSS	Batch	n ID: R7	507	F	RunNo: 7	507				
Prep Date:		Analysis D	ate: 1	2/14/2012	S	SeqNo: 2	18194	Units: mg/ł	٨g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	ge Organics (GRO)	26	5.0	25.00	0	105	74	117			
Surr: BFB		990		1000	_	99.4	84	116			
Sample ID	1212657-001AMS	SampT	ype: M	s	Tes	tCode: El	PA Method	8015B: Gase	oline Rang	e	
Client ID:	W Wall 12'	Batch	n ID: R7	507	F	RunNo: 7	507				
Prep Date:		Analysis D	ate: 1	2/14/2012	5	SeqNo: 2	18196	Units: mg/ł	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	ge Organics (GRO)	25	5.0	23.80	0	107	70	130			
Surr: BFB		960		951.8		101	84	116			
Sample ID	1212657-001AMS	D SampT	ype: M	SD	Tes	tCode: El	PA Method	8015B: Gase	oline Rang	e	
Client ID:	W Wall 12'	Batch	n ID: R7	507	F	RunNo: 7	507				
Prep Date:		Analysis D	ate: 1	2/14/2012	S	SeqNo: 2	18197	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	ge Organics (GRO)	26	5.0	23.80	0	111	70	130	3.56	22.1	
Surr: BFB		960		951.8		100	84	116	0	0	

Qualifiers:

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E Value above quantitation range

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- P Sample pH greater than 2

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- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall	Environmental	Analysis	Laborat	tory, Inc.
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WO#: 1212657

19-Dec-12

Client: XTO Energy **Project:** Jicarilla Apache #14 SampType: MBLK Sample ID 5ML RB TestCode: EPA Method 8021B: Volatiles PBS Batch ID: R7507 Client ID: RunNo: 7507 Prep Date: Analysis Date: 12/14/2012 SeqNo: 218215 Units: mg/Kg Result PQL SPK value SPK Ref Val %REC HighLimit %RPD RPDLimit Qual Analyte LowLimit ND 0.050 Benzene Toluene ND 0.050 ND 0.050 Ethylbenzene ND 0.10 Xylenes, Total 97.8 1.000 Surr: 4-Bromofluorobenzene 0.98 80 120 Sample ID 100NG BTEX LCS SampType: LCS TestCode: EPA Method 8021B: Volatiles LCSS Batch ID: R7507 RunNo: 7507 Client ID: Prep Date: Units: mg/Kg Analysis Date: 12/14/2012 SeqNo: 218216 SPK value SPK Ref Val %REC %RPD RPDLimit Result PQL LowLimit HighLimit Qual Analyte 0.97 1.000 Benzene 0.050 0 97.0 76.3 117 0.98 0.050 1.000 0 98.4 80 120 Toluene Ethylbenzene 1.0 0.050 1.000 0 99.6 77 116 Xylenes, Total 3.0 0.10 3.000 Λ 99.2 76.7 117 1.0 1.000 104 120 Surr: 4-Bromofluorobenzene 80 Sample ID 1212657-003AMS SampType: MS TestCode: EPA Method 8021B: Volatiles Client ID: Bottom 12' Batch ID: R7507 RunNo: 7507 Prep Date: Analysis Date: 12/14/2012 SeqNo: 218218 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Benzene 4.9 0.25 4.895 0 100 67.2 113 5.1 0.25 4.895 0 104 62.1 116 Toluene 67.9 5.2 0.25 4.895 0.05894 105 127 Ethylbenzene Xylenes, Total 16 0.50 14.69 0.4860 108 60.6 134 Surr: 4-Bromofluorobenzene 5.2 4.895 107 120 80 Sample ID 1212657-003AMSD SampType: MSD TestCode: EPA Method 8021B: Volatiles Client ID: Bottom 12 Batch ID: R7507 RunNo: 7507 Units: mg/Kg Prep Date: Analysis Date: 12/14/2012 SeqNo: 218219 SPK Ref Val %REC %RPD RPDLimit Analyte Result PQL SPK value HighLimit Qual LowLimit Benzene 4.6 0.25 4.895 0 94.2 67.2 113 6.12 14.3 Toluene 4.9 0.25 4.895 0 99.4 62.1 116 4.07 15.9 5.1 67.9 Ethylbenzene 0.25 4.895 0.05894 102 127 3.02 14.4 16 14.69 0.4860 60.6 12.6 Xvlenes, Total 0.50 103 134 4.61 Surr: 4-Bromofluorobenzene 5.1 4.895 104 80 120 n 0

Qualifiers:

* Value exceeds Maximum Contaminant Level.

E Value above quantitation range

- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

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	(Type)			Sample Tem	perature	1. Bernersen	BE	H	d 8(bd 4	5 pg	P	etals	31'N(ide;	A)	0 			
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEALNOY	TEX + MT	TEX + MI	PH Metho	⊃H (Meth	DB (Meth	310 (PNA	CRA 8 Me	nions (F,C	081 Pestic	260B (VO	270 (Semi		s.	r Bubbles
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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.

	XTO Ene	ergy On-Site Fo	rm _							
Well Name Juanilla Apache HIY API#										
Section Township Range County <u>Lic Alriba</u>										
Contractors On-Site Conc. Walson Changes Time On-Site /2:00 Time Off-Site										
Spill Amount bbls Spilled (Oil/Produced W/Other) RCVRD										
Land Use (Range / Residential Tribe <u>Juan (110)</u>) Excavation <u>37</u> x <u>37</u> x <u>12</u> deep										
* Application * Application - Sprayed 330 - net W/ Hold to Spray th Site Diagram	T III III III III III III III I	um permagna i fri cin i permission fri cin	Sample Loca	ation						
Comments			Number of P	hotos Taken						
Samples	Sample Description	Characteristics	OVM (ppm)	Analysis Requested						
NA	100 Standard	NA		NA						
		<u>.</u>								
Name (Print) <u>C39c</u>	in Hirch		Date 1-44	<u>′7</u>						
Name (Signature)	og 12-	Company 🛓	70							

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Photo 2: Jicarilla Apache #14 after Potassium Permanganate App.



Photo 4: Jicarilla Apache #14 after Potassium Permanganate App.



Photo 2: Jicarilla Apache #14 after Reconfigure.



Photo 4: Jicarilla Apache #14 after Reconfigure.