District I 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 8750

1

State of New Mexico Energy Minerals and Natural Resources

Form C-141 Revised August 8, 2011

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

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

1220 S. St. Fran	ncis Dr., Santa	a Fe, NM 87505		Sa	anta Fe	, NM 875	05					Same in
			Rele	ase Notifi	cation	and Co	orrective A	ction	-		19.19	1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.
	Ske Artis					OPERA	TOR		Initi	al Penort		Final Report
Name of Co	ompany: X	TO Energy	Inc			Contact: Ku	rt Hoekstra		j mnu	ai Kepon		r mai Report
Address: 38	32 Road 31	00. Aztec. N	lew Mex	co 87410		Telephone No.: (505) 333-3100						
Facility Na	me: Pan Ai	m Federal C	# 1F			Facility Type: Gas Well, Basin Dakota						
Surface Ow	ner: Feder	al		Mineral (Owner				API No	o.: 30-045-3	3705	
		A star		LOC	ATION	OFRE	FASE		•	i have		
Unit Letter	Section	Township	Range	Feet from the	North/	South Line	Feet from the	East/Wes	st Line	County	-	
N	19	30N	11W	840	F	SL	2120	FW	L :	San Juan		
Latitude 36 793375						Longi	ude -108 14072	2			14.5	
				NAT	FURE	OF REL	EASE	-				
Type of Rele	ease: Conder	nsate and Proc	luced Wat	er		Volume of Condensat	Release: 101 bbl e, 20 bbls Produce	s V ed	olume l	Recovered: N	lone	
Source of Re	elease: Produ	uction Tank			-	Date and H	lour of Occurrenc	e: D	ate and	Hour of Disc	covery:	3-2-2016
Source of Re		detroit runk			Constant of	Unknown	iour of occurrence	9	:30 am	field of bio		0 2 2010
Was Immedi	iate Notice (Given?	Yes [No 🗌 Not R	lequired	If YES, To	Whom? Cory Sn	nith (NMC	DCD), K	atherina Die	mer (BI	.M)
By Whom? James McDaniel (EHS Supervisor XTO Energy)					Date and H	lour: 3-2-2016 3:2	23 pm					
Was a Watercourse Reached?				If YES, Volume Impacting the Watercourse. OIL CONS. DIV DIST. 3								
If a Waterco	urse was Im	pacted, Descr	ibe Fully.				2		AP	PR 01 201	6	
released int NMOCD G estimated d total BTEX	to the lined duidelines f lepth to gro	bermed area for the Reme oundwater be	a with no diation o tween 50	ne being recove f Leaks, Spills a and 100 feet.	and Rele This wil	liquids left eases due to l set the clo	the bermed are a water well ap sure standards to	a. The site proximate o 100 ppn	e was ra ely 700 n TPH,	anked a 30 p feet to the s 10 ppm ber	oursuar outh, a nzene a	nd an nd 50 ppm
Describe Ard confirmed at deep north analysis we north and w slightly abo variance wa collected. O I hereby cert regulations a public health should their or the enviro federal state	ea Affected this locatio east end an ere witnesse vest walls. ove the 100 as allowed Closure has ify that the i all operators n or the envi operations h or ment. In a	and Cleanup / n. XTO remo- nd south side ed by NMOO All but one (ppm TPH si for this part been approv- information gi are required t ronment. The nave failed to a iddition, NMO	Action Tal ved appro of excav CD emplo (1) sampl tandard a of the ex ved at the ved at the ven above o report an acceptane adequately OCD accept ulations	ken.*Based on the ximately 1800 ation, and 15' cover e cory Smith e returned result t 64ppm DRO a cavation. Benz se NMOCD acce is true and comp nd/or file certain ce of a C-141 rep investigate and in tance of a C-141	e loss of cu yds. o deep in t h (two (2 lts below and 62pp cene and ceptable plete to th release mo ort by the remediate report de	101 bbls of c of impacted he North we 2) samples) y the NMOC om GRO to BTEX resu levels, the the best of my otifications a e NMOCD m e contaminations poss not reliev	ondensate and 20 soil and the dim est corner of the were collected 2D standards for taling 126 ppm lts are below the variance is attac knowledge and u nd perform correc arked as "Final R on that pose a thr e the operator of the	bbls produ nensions c excavatio for confir r this local TPH, but e NMOCE hed, and inderstand t ctive action eport" does eat to grou responsibil	aced was of the e on. All i mation tion. Th was in D regula no furt that pur- s for rel s not rel nd wate ity for c	tter, a release xcavation ar samples col and were u he NW Base very hard s atory limits her action is suant to NMC leases which ieve the oper r, surface wat	has been re 65'x lected is sed to to see sample andstor for all requir DCD rul may end ator of l ter, hun ith any	n 55' x 8' for lab close the e was ne and a samples red. les and danger liability nan health other
Signature:	Kurt Ha	teten	*			Approved by	OIL CON	SERVA	TION	DIVISIO	N/J	II
Printed Nam	e: Kurt Hoe	kstra					1 1					
Title: EHS C	Coordinator		-			Approval Dat	e: 4/4/16	Exp	oiration	Date:		60
				#	NCS	1601	25388	28				(37)

mail Address: Kurt Hoekstra@xtoenergy.com	Conditions of Approval:	
		Attached
Date: 3-29-2016 Phone: 505-333-3100		

Summary of Closure sample results:

Pan Am Federal C # 1F

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Date:	Sample Name:	TPH DRO ppm	TPH GRO ppm	Benzene ppm	Toluene ppm	Ethylbenzene ppm	Xylenes, Total ppm	Chloride ppm	
3/4/2016	N. Wall	ND	ND	ND	ND	ND	ND	ND	
3/4/2016	W. Wall	ND	ND	ND	ND	ND	ND	N/A	
3/8/2016	SW Bottom **	ND	ND	ND	ND	ND	ND	N/A	
3/8/2016	NW Base	64	62	ND	0.44	0.24	2.8	N/A	Variance
3/9/201£	NE Bottom**	590	1500	ND	27	9.9	110	N/A	
3/9/2016	S. Bottom	30	41	N/D	0.13	0.13	1.2	N/A	
3/9/2016	S. Wall	14	7.8	ND	0.014	ND	0.42	N/A	
3/9/2016	E. Wall	ND	ND	ND	ND	ND	ND	N/A	
3/11/2016	NE Bottom	ND	ND	ND	ND	' ND	ND	N/A	

** These samples were not used for closure

Hoekstra, Kurt

From: Sent: To: Subject: Smith, Cory, EMNRD <Cory.Smith@state.nm.us> Tuesday, March 22, 2016 7:30 AM Hoekstra, Kurt RE: Pan Am Federal C # 1F Variance Request

Categories:

External Sender

Kurt,

XTO request for an alternative closure standard is approved.

Thanks,

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

From: Hoekstra, Kurt [mailto:Kurt Hoekstra@xtoenergy.com] Sent: Monday, March 21, 2016 2:15 PM To: Smith, Cory, EMNRD Subject: FW: Pan Am Federal C # 1F Variance Request

Hello Cory, I cannot find a written confirmation for this variance request, would please send me in writing this variance approval so I can include it in my Final C-141.

Thank You.

From: Hoekstra, Kurt
Sent: Thursday, March 10, 2016 8:29 AM
To: Smith, Cory, EMNRD; Fields, Vanessa, EMNRD (<u>Vanessa.Fields@state.nm.us</u>); Brandon Powell (<u>brandon.powell@state.nm.us</u>); Katherina Diemer (<u>kdiemer@blm.gov</u>); <u>mflanike@blm.gov</u>
Cc: McDaniel, James (<u>James McDaniel@xtoenergy.com</u>); Hixon, Logan; Farnsworth, Rex
Subject: Pan Am Federal C # 1F Variance Request

Hello Cory,

Per our conversation on location on 3-9-2016, XTO is requesting a variance to the 100ppm TPH closure for the NW Base of the excavation, based on the sample results of:

DRO 64 ppm GRO 62 ppm Benzene ND Toluene 0.44 ppm Ethyl benzene 0.24 Xylenes Total 2.8 ppm

.

Based on the location: the excavation is in very hard sandstone, an estimate depth to groundwater between 50 and 100 feet, distance to a water well at approximately 700 feet to the south and the combined TPH DRO /GRO at 126 ppm, no benzene and almost no BTEX. XTO believes this does not pose a risk to human health or the environment.

Thank You

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Kurt Hoekstra EHS Coordinator XTO Energy 505-333-3202 Office 505-486-9543 Cell Kurt Hoekstra@xtoenergy.com An ExxonMobil Subsidiary



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

March 08, 2016 James McDaniel XTO Energy 382 County Road 3100 Aztec, NM 87410 TEL: (505) 787-0519 FAX (505) 333-3280

OrderNo.: 1603272

RE: Pan Am Federal C #1F

Dear James McDaniel:

Hall Environmental Analysis Laboratory received 2 sample(s) on 3/5/2016 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. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Lab Order 1603272

Date Reported: 3/8/2016

CLIENT: Project: Lab ID:	XTO Energy Pan Am Federal C #1F 1603272-001	Client Sample ID: N. WallCollection Date: 3/4/2016 11:00:00 AMMatrix: SOILReceived Date: 3/5/2016 8:05:00 AM								
Analyses	S. S. and The	Result	PQL	Qual	Units	DF	Date Analyzed	Batch		
EPA MET	HOD 300.0: ANIONS						Analyst:	LGT		
Chloride		ND	30		mg/Kg	20	3/7/2016 11:23:43 AM	24109		
EPA MET	HOD 8015M/D: DIESEL RAI	NGE ORGANIC	S				Analyst:	KJH		
Diesel Ra	ange Organics (DRO)	ND	9.5		mg/Kg	1	3/7/2016 10:07:35 AM	24099		
Surr: D	DNOP	79.1	70-130		%Rec	1	3/7/2016 10:07:35 AM	24099		
EPA MET	HOD 8015D: GASOLINE RA	NGE					Analyst:	NSB		
Gasoline	Range Organics (GRO)	ND	4.5		mg/Kg	1	3/7/2016 9:57:21 AM	24095		
Surr: E	BFB	109	66.2-112		%Rec	1	3/7/2016 9:57:21 AM	24095		
EPA MET	HOD 8021B: VOLATILES						Analyst:	NSB		
Benzene		ND	0.045		mg/Kg	1	3/7/2016 9:57:21 AM	24095		
Toluene		ND	0.045		mg/Kg	1	3/7/2016 9:57:21 AM	24095		
Ethylben	zene	ND	0.045		mg/Kg	1	3/7/2016 9:57:21 AM	24095		
Xylenes,	Total	ND	0.090		mg/Kg	1	3/7/2016 9:57:21 AM	24095		
Surr 4	L-Bromofluorobenzene	113	80-120		%Rec	1	3/7/2016 9:57:21 AM	24095		

Hall Environmental Analysis Laboratory, Inc.

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method	Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	Page 1 of 6
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range	rage roro
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limi	t as specified

Lab Order 1603272 Date Reported: 3/8/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: XTO Energy

Project: Pan Am Federal C #1F

Client Sample ID: W. Wall Collection Date: 3/4/2016 12:30:00 PM Received Date: 3/5/2016 8:05:00 AM

Lab ID: 1603272-002	Matrix:	Received				
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	s			Analys	: KJH
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	3/7/2016 10:32:58 AM	24099
Surr: DNOP	80.5	70-130	%Rec	1	3/7/2016 10:32:58 AM	24099
EPA METHOD 8015D: GASOLINE RAI	NGE				Analys	NSB
Gasoline Range Organics (GRO)	ND	4.4	mg/Kg	1	3/7/2016 10:20:59 AM	24095
Surr: BFB	111	66.2-112	%Rec	1	3/7/2016 10:20:59 AM	24095
EPA METHOD 8021B: VOLATILES					Analys	NSB
Benzene	ND	0.044	mg/Kg	1	3/7/2016 10:20:59 AM	24095
Toluene	ND	0.044	mg/Kg	1	3/7/2016 10:20:59 AM	24095
Ethylbenzene	ND	0.044	mg/Kg	1	3/7/2016 10:20:59 AM	24095
Xylenes, Total	ND	0.089	mg/Kg	1	3/7/2016 10:20:59 AM	24095
Surr: 4-Bromofluorobenzene	115	80-120	%Rec	1	3/7/2016 10:20:59 AM	24095

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method E	Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	Page 2 of 6
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range	1 age 2 01 0
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit	as specified

Hall Environmental Analysis Laboratory, Inc.

WO#:	1603272
	08-Mar-16

Qual

RPDLimit

Page 3 of 6

Client: Project:	XTO I Pan A	Energy m Federal C #1F	4.1.1				
Sample ID	MB-24109	SampType:	MBLK	TestCode:	EPA Method	300.0: Anion	s
Client ID:	PBS	Batch ID:	24109	RunNo:	32638		
Prep Date:	3/7/2016	Analysis Date:	3/7/2016	SeqNo:	998627	Units: mg/K	g
Analyte		Result PQ	L SPK value	SPK Ref Val %REG	C LowLimit	HighLimit	%RPD
Chlorida		ND 1	6				

Sample ID LCS-24109	SampType: LCS			Tes	TestCode: EPA Method 300.0: Anions					
Client ID: LCSS	Batch ID: 24109			F	RunNo: 32638					
Prep Date: 3/7/2016	Analysis D	ate: 3/	7/2016	5	SeqNo: 9	98628	Units: mg/H	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.9	90	110		1.1	

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

WO#:	1603272
	08-Mar-16

								-		
Sample ID LCS-24099	SampT	ype: LC	S	Tes	tCode: EF	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: LCSS	Batch	ID: 240	099	F	RunNo: 3	2605				
Prep Date: 3/7/2016	Analysis D	ate: 3/	7/2016	5	SeqNo: 9	97481	Units: mg/h	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
iesel Range Organics (DRO)	37	10	50.00	0	73.7	65.8	136			
Surr: DNOP	4.0		5.000	5	80.8	70	130	1	Section.	
Sample ID MB-24099	SampT	ype: ME	BLK	Tes	tCode: El	A Method	8015M/D: Di	esel Rang	e Organics	A. C.
Client ID: PBS	Batch	ID: 240	099	F	RunNo: 3	2605				
Prep Date: 3/7/2016	Analysis D	ate: 3/	7/2016	S	SeqNo: 9	97483	Units: mg/h	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10		Tradit B		-		1.4		
Surr: DNOP	7.9	See. 2	10.00	1	78.8	70	130	1. 3. 21	1.1	de la
Sample ID 1603272-001A	VIS SampT	ype: MS	;	Tes	tCode: El	A Method	8015M/D: Di	esel Rang	e Organics	
Client ID: N. Wall	Batch	ID: 240	099	F	RunNo: 3	2605				
Prep Date: 3/7/2016	Analysis D	ate: 3/	7/2016	5	SeqNo: 9	97750	Units: mg/k	٢g	2	
Analyte	Result	POI	SPK value	SPK Ref Val	%REC	Low/ imit	Highl imit	%RPD	RPDI imit	Qual
Diesel Range Organics (DRO)	40	9.7	48.40	0	83.3	31.2	162	70141 0	TH DEMIN	Quu
Surr: DNOP	4.1		4.840		84.6	70	. 130		and the	
Sample ID 1603272-001A	MSD SampT	vpe: MS	D	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: N. Wall	Batch	ID: 240	099	F	RunNo: 3	2605				
Prep Date: 3/7/2016	Analysis D	ate: 3/	7/2016		SeaNo: 9	97751	Units: ma/k	(a		
Analista	Popult	POL	SDK volue	CDK Dof Val	VDEC	Loud imit	Light imit	% PPD	PDDI imit	0.0
Diesel Range Organics (DRO)	41	9.8	49.21	OFR Rei Val	83.2	31.2	162	1.52	31.7	Qua
Surr: DNOP	4.0		4.921		80.4	70	130	0	0	
and the second										
ter a start st										
· ·										
	1. 1. 1. 1.									

Qualifiers:

D

- Value exceeds Maximum Contaminant Level. *
 - Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank В
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W
- Page 4 of 6

Hall Environmental Analysis Laboratory, Inc.

NO#:	1603272
	08-Mar-16

Client: X Project: Pa	TO Energy an Am Federal C #	t1F								
Sample ID MB-24095	SampT	ype: M	BLK	Tes	tCode: E	PA Method	8015D: Gaso	oline Rang	e	
Client ID: PBS	Batch	ID: 24	095	F	unNo: 3	32608				
Prep Date: 3/4/2016	Analysis D	ate: 3	/7/2016	S	eqNo: 9	998147	Units: mg/h	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qua
Gasoline Range Organics (G	GRO) ND	5.0				1999	1			
Surr: BFB	1100		1000		107	66.2	112	1.1	in the	1.1
Sample ID LCS-2409	5 SampT	ype: LC	cs	Tes	Code: E	PA Method	8015D: Gase	oline Rang	e	
Client ID: LCSS	Batch	ID: 24	095	F	unNo: 3	32608				

Prep Date: 3/4/2016	Analysis Date: 3/7/2016			SeqNo: 998148			Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	94.4	80	120	1 1	C. Marcallo	
Surr: BFB	1200		1000		115	66.2	112			S

Jualifiers:

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

Page 5 of 6

Hall Environmental Analysis Laboratory, Inc.

Page 6 of 6

Client: **XTO Energy Project:** Pan Am Federal C #1F Sample ID MB-24095 SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: PBS Batch ID: 24095 RunNo: 32608 SeqNo: 998163 Units: mg/Kg Prep Date: Analysis Date: 3/7/2016 3/4/2016 **RPDLimit** Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD Qual Benzene ND 0.050 ND 0.050 Toluene ND 0.050 Ethylbenzene ND Xylenes, Total 0.10 Surr: 4-Bromofluorobenzene 1.1 1.000 113 80 120 Sample ID LCS-24095 SampType: LCS TestCode: EPA Method 8021B: Volatiles LCSS Client ID: Batch ID: 24095 RunNo: 32608 Prep Date: 3/4/2016 Analysis Date: 3/7/2016 SeqNo: 998164 Units: mg/Kg Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Analyte 0.95 0 94.8 80 Benzene 0.050 1.000 120 0.96 0.050 1.000 0 96.4 80 120 Toluene 0 98.9 120 0.99 0.050 1.000 80 Ethylbenzene Xylenes, Total 3.0 0.10 3.000 0 99.4 80 120 120 Surr: 4-Bromofluorobenzene 1.2 1.000 117 80

Qualifiers:

- Value exceeds Maximum Contaminant Level. *
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits R
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- E Value above quantitation range
- 1
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified
- Analyte detected below quantitation limits

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

Sample Log-In Check List

Client Name: XTO Energy Work Order Numb	per: 1603272		RcptNo: 1
Received by/date: Da 03/05/1	5		
Lorged By: Joe Archuleta 3/5/2016 8:05:00 A	M	DERT	
Completed Pure los Archulete 2/5/2016 9:22:53 Al		Dent	
Poviewed By: Art A 2167///2	VI	ye.un	
Chain of Custody		-	
1 Custody seels intact on sample bottles?	Vee 🗍	No 🗌	Not Present
2 Is Chain of Custody complete?	Yes V	No 🗆	Not Present
2. How was the sample delivered?	Courier	1.1	
O, now was the sample delivered :	ordiner		
Log In			
4. Was an attempt made to cool the samples?	Yes 🔽	No 🗆	NA 🗔
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes 🗹	No	NA
6. Sample(s) in proper container(s)?	Yes 🗹	No 🗌	
7. Sufficient sample volume for indicated test(s)?	Yes 🗹	No 🗆	
8. Are samples (except VOA and ONG) properly preserved?	Yes 🗹	No 🗆	
9. Was preservative added to bottles?	Yes	No 🗹	NA 🗆
10.VOA vials have zero headspace?	Yes 🗌	No 🗆	No VOA Vials
11. Were any sample containers received broken?	Yes	No 🗹	# of preserved
10		No. [7]	bottles checked
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ⊻	NO L	(<2 or >12 unless note
13. Are matrices correctly identified on Chain of Custody?	Yes 🗹	No 🗆	Adjusted?
14. Is it clear what analyses were requested?	Yes 🗹	No 🗆	
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes 🗹	No 🗌	Checked by:
Casaial Handling (If applicable)			
16 Was client notified of all discremencies with this order?	Ves 🗍	No 🗔	NA 🔽
Dense Netledt	103	ŅQ 🗆	
By Whom: Via:		Phone Fax	In Person
Regarding:			
Client Instructions:		COLOR MINISTRA MANAGEM	
17. Additional remarks:			
18. Cooler Information			
Cooler No Temp °C Condition Seal Intact Seal No	Seal Date	Signed By	
1 1.0 Good Yes			

Page 1 of 1

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		YT	O Contact	111-01											
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1 man come			Dates	×	Time:	Recorder to the	aur Killin	- Property				Ditell	In the second		
(elinguished By: (Signature)					and and an and a state of the state of the	B COLORED TO THE REAL PROPERTY OF THE REAL PROPERTY	THE REAL PROPERTY AND ADDRESS OF THE OWNER.	THE R P. LEWIS CO., No. 7			The Party of Lot		NAME OF TAXABLE PARTY.		

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

Fr.



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

March 10, 2016 James McDaniel XTO Energy 382 County Road 3100 Aztec, NM 87410 TEL: (505) 787-0519 FAX (505) 333-3280

RE: Pan Am Federal C #1F

OrderNo.: 1603445

Dear James McDaniel:

Hall Environmental Analysis Laboratory received 2 sample(s) on 3/9/2016 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. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Lab Order 1603445

Date Reported: 3/10/2016

Hall Environmenta	I Analysis	Laboratory,	Inc.
-------------------	-------------------	-------------	------

CLIENT: XTO Energy Project: Pan Am Federal C #1F Lab ID: 1603445-001	Client Sample ID: SW Bottom Collection Date: 3/8/2016 1:00:00 PM Matrix: SOIL Received Date: 3/9/2016 7:15:00 AM										
Analyses	Result	PQL Qual	Units	Date: 5/5	Date Analyzed	Batch					
EPA METHOD 8015M/D: DIESEL RANG	E ORGANIC	s	341.5	- L.	Analyst:	том					
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	3/9/2016 10:32:49 AM	24154					
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	3/9/2016 10:32:49 AM	24154					
Surr: DNOP	80.5	70-130	%Rec	1	3/9/2016 10:32:49 AM	24154					
EPA METHOD 8015D: GASOLINE RANG	GE				Analyst:	NSB					
Gasoline Range Organics (GRO)	ND	4.0	mg/Kg	1	3/9/2016 9:47:06 AM	24131					
Surr: BFB	104	66.2-112	%Rec	1	3/9/2016 9:47:06 AM	24131					
EPA METHOD 8021B: VOLATILES					Analyst:	NSB					
Benzene	ND	0.040	mg/Kg	1	3/9/2016 9:47:06 AM	24131					
Toluene	ND	0.040	mg/Kg	1	3/9/2016 9:47:06 AM	24131					
Ethy!benzene	ND	0.040	mg/Kg	1	3/9/2016 9:47:06 AM	24131					
Xylenes, Total	ND	0.080	mg/Kg	1	3/9/2016 9:47:06 AM	24131					
Surr: 4-Bromofluorobenzene	106	80-120	%Rec	1	3/9/2016 9:47:06 AM	24131					

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 5
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1603445

Date Reported: 3/10/2016

CLIENT:	XTO Energy			Cli	ient Samp	e ID: N	W Base				
Project:	Pan Am Federal C #1F		0.011	(Date: 3/8	Date: 3/8/2016 2:00:00 PM					
Lab ID:	1603445-002	Matrix:	SOIL		Received	Date: 3/9	0/2016 7:15:00 AM	A			
Analyses	in the second	Result	PQL Q	Qual	Units	DF	Date Analyzed	Batch			
EPA MET	HOD 8015M/D: DIESEL RA	NGE ORGANIC	S				Analys	TOM			
Diesel Ra	ange Organics (DRO)	64	9.6		mg/Kg	1	3/9/2016 10:54:08 AM	24154			
Motor Oil	Range Organics (MRO)	ND	48		mg/Kg	1	3/9/2016 10:54:08 AM	24154			
Surr: D	DNOP	86.5	70-130		%Rec	1	3/9/2016 10:54:08 AM	24154			
EPA MET	HOD 8015D: GASOLINE RA	ANGE					Analys	NSB			
Gasoline	Range Organics (GRO)	62	24		mg/Kg	5	3/9/2016 10:10:42 AM	24131			
Surr: E	BFB	165	66.2-112	S	%Rec	5	3/9/2016 10:10:42 AM	24131			
EPA MET	HOD 8021B: VOLATILES						Analys	NSB			
Benzene		ND	0.12		mg/Kg	5	3/9/2016 10:10:42 AM	24131			
Toluene		0.44	0.24		mg/Kg	5	3/9/2016 10:10:42 AM	24131			
Ethylben	zene	0.24	0.24		mg/Kg	5	3/9/2016 10:10:42 AM	24131			
Xylenes,	Total	2.8	0.49		mg/Kg	5	3/9/2016 10:10:42 AM	24131			
Surr: 4	-Bromofluorobenzene	119	80-120		%Rec	5	3/9/2016 10:10:42 AM	24131			

Hall Environmental Analysis Laboratory, Inc.

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Bla	ank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	Daga 2 of S
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range	age 2 01 5
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit a	s specified
	ND R S	Not Detected at the Reporting Limit RPD outside accepted recovery limits % Recovery outside of range due to dilution or matrix	P RL W	Sample pH Not In Range Reporting Detection Limit Sample container temperature is out of limit a	s specified

Hall Environmental Analysis Laboratory, Inc.

WO#:	1603445
	10-Mar-16

Qual

Client: XTO E Project: Pan Am	nergy 1 Federal C i	#1F							
Sample ID MB-24154	SampT	Type: Mi	BLK	Tes	tCode: E	PA Method	8015M/D: Di	esel Rang	e Organics
Prep Date: 3/9/2016	Analysis D	Date: 3	/9/2016	5	SeqNo: 9	99359	Units: mg/M	(g	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit
Diesel Range Organics (DRO)	ND	10							
Motor Oil Range Organics (MRO)	ND	50							
Surr: DNOP	8.1	1	10.00	i se li s	81.0	70	130		2.3
Sample ID LCS-24154	SampT	Type: LC	s	Tes	tCode: E	PA Method	8015M/D: Di	esel Rang	e Organics
Client ID: LCCC	Data	-	454			0000			

Cheffer 10. Looo	. Dato	110. 24	104		sunneo. J	2002					
Prep Date: 3/9/2016	Analysis D	ate: 3/	9/2016	5	SeqNo: 9	99422	Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	40	10	50.00	0	80.8	65.8	136	1.5	1.7.20		
SUT DNOP	40		5 000		80.1	70	130				

Qualifiers:

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

Page 3 of 5

Hall Environmental Analysis Laboratory, Inc.

WO#:	1603445
	10-Mar-16

Client: XTO E Project: Pan Ar	nergy n Federal C #1F									
Sample ID MB-24131	SampType: M	IBLK	TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 2	4131	F	RunNo: 32666						
Prep Date: 3/8/2016	Analysis Date:	3/9/2016	5	SeqNo: 1	000133	Units: mg/h	(g			
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	ND 5.)							200	
Surr: BFB	1000	1000	1.233	105	66.2	112			1	
Sample ID LCS-24131	SampType: L	CS	Tes	tCode: E	PA Method	8015D: Gaso	oline Rang	e		
Client ID: LCSS	Batch ID: 2	4131	F	RunNo: 3	2666					
Prep Date: 3/8/2016	Analysis Date:	3/9/2016	5	SeqNo: 1	000134	Units: mg/h	(g			
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	24 5.	25.00	0	95.0	80	120				
Surr: BFB	1100	1000		110	66.2	112				

Jualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
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- ND Not Detected at the Reporting Limit
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- S % Recovery outside of range due to dilution or matrix
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- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Page 4 of 5

Hall Environmental Analysis Laboratory, Inc.

WO#: 1603445 10-Mar-16

Client:	XIO Energy						
Project:	Pan Am Federal C #1F						

Sample ID MB-24131	SampType: MBLK			Tes	TestCode: EPA Method 8021B: Volatiles					
Client ID: PBS	Batc	h ID: 24	131	F	RunNo: 3	2666				
Prep Date: 3/8/2016	Analysis D	Date: 3/	9/2016	S	SeqNo: 1	000154	Units: mg/h	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025		1 2 3 1	13.47	A. The second				T.
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Kylenes, Total	ND	0.10								
Surr A-Bromofluorobenzene	11		1 000		110	80	120			
oun. 4-biomondolobenzene	1.1		1.000							
Sample ID LCS-24131	SampT	Type: LC	S	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Sample ID LCS-24131 Client ID: LCSS	SampT	Type: LC	:S 131	, Tes	tCode: El RunNo: 3	PA Method	8021B: Vola	tiles		
Sample ID LCS-24131 Client ID: LCSS Prep Date: 3/8/2016	Samp Batc Analysis D	Type: LC h ID: 24 Date: 3/	:S 131 9/2016	Tes F S	tCode: El RunNo: 3 SeqNo: 1	PA Method 2666 000155	8021B: Vola Units: mg/ł	tiles (g		
Sample ID LCS-24131 Client ID: LCSS Prep Date: 3/8/2016 Analyte	SampT Batc Analysis I Result	Type: LC h ID: 24 Date: 3/ PQL	:S 131 9/2016 SPK value	Tes F S SPK Ref Val	tCode: El RunNo: 3 SeqNo: 1 %REC	PA Method 2666 000155 LowLimit	8021B: Vola Units: mg/P HighLimit	tiles Kg %RPD	RPDLimit	Qual
Sample ID LCS-24131 Client ID: LCSS Prep Date: 3/8/2016 Analyte Benzene	SampT Batc Analysis D Result 0.83	Type: LC h ID: 24 Date: 3/ PQL 0.025	55 131 9/2016 SPK value 1.000	, Tes F S SPK Ref Val 0	tCode: El RunNo: 3 SeqNo: 1 %REC 83.1	PA Method 2666 000155 LowLimit 80	8021B: Vola Units: mg/P HighLimit 120	tiles (g %RPD	RPDLimit	Qual
Sample ID LCS-24131 Client ID: LCSS Prep Date: 3/8/2016 Analyte Senzene Toluene	SampT Batcl Analysis E Result 0.83 0.87	Type: LC h ID: 24 Date: 3/ PQL 0.025 0.050	S 131 9/2016 SPK value 1.000 1.000	, Tes F S SPK Ref Val 0 0	tCode: El RunNo: 3 SeqNo: 1 %REC 83.1 87.2	PA Method 2666 000155 LowLimit 80 80	8021B: Vola Units: mg/F HighLimit 120 120	tiles (g %RPD	RPDLimit	Qual
Sample ID LCS-24131 Client ID: LCSS Prep Date: 3/8/2016 Analyte Benzene Foluene Ethylbenzene	SampT Batcl Analysis D Result 0.83 0.87 0.92	Type: LC h ID: 24 Date: 3/ PQL 0.025 0.050 0.050	S 131 9/2016 SPK value 1.000 1.000 1.000	, Tes F SPK Ref Val 0 0 0 0	tCode: El RunNo: 3 SeqNo: 1 %REC 83.1 87.2 91.9	PA Method 2666 000155 LowLimit 80 80 80	8021B: Vola Units: mg/P HighLimit 120 120 - 120	tiles (g %RPD	RPDLimit	Qual
Sample ID LCS-24131 Client ID: LCSS Prep Date: 3/8/2016 Analyte Benzene Foluene Ethylbenzene Kylenes, Total	SampT Batcl Analysis D Result 0.83 0.87 0.92 2.7	Type: LC h ID: 24 Date: 3/ PQL 0.025 0.050 0.050 0.10	S 131 9/2016 SPK value 1.000 1.000 1.000 3.000	, Tes F SPK Ref Val 0 0 0 0 0 0	tCode: El RunNo: 3 SeqNo: 1 %REC 83.1 87.2 91.9 91.5	PA Method 2666 000155 LowLimit 80 80 80 80 80	8021B: Vola Units: mg/P HighLimit 120 120 - 120 120	tiles (g %RPD	RPDLimit	Qual

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
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- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Page 5 of 5

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

Sample Log-In Check List

Client Name: XTO Energy Work Orde	r Number: 1603445		RcptNo: 1
Received by/date: UM 03/09/16		-	
Logged By: Anne Thorne 3/9/2016 7:15	5:00 AM	anne Am	_
Completed By: Anne Thorne 3/9/2016		Ann. M.	
Reviewed By: 03/09/	16	Clark Arm	
Chain of Custody			
1. Custody seals intact on sample bottles?	Yes 🗆	No 🗆	Not Present
2. Is Chain of Custody complete?	Yes 🗹	No 🗌	Not Present
3. How was the sample delivered?	Courier		
Log In			
4. Was an attempt made to cool the samples?	Yes 🗹	No 🗆	
5. Were all samples received at a temperature of >0° C to 6	.0°C Yes 🗹	No 🗋	NA 🗆
6. Sample(s) in proper container(s)?	Yes 🗹	No 🗌	
7. Sufficient sample volume for indicated test(s)?	Yes 🗹	No 🗆	
8. Are samples (except VOA and ONG) properly preserved?	Yes 🗹	No 🗆	
9. Was preservative added to bottles?	Yes 🗌	No 🗹	NA 🗆
10. VOA vials have zero headspace?	Yes 🗆	No 🗆	No VOA Vials
11. Were any sample containers received broken?	Yes 🗆	No 🗹	
		12	# of preserved bottles checked
12. Does paperwork match bottle labels?	Yes 🗹	No 🗌	for pH:
(Note discrepancies on chain of custody)	Ves V	No 🗍	Adjusted?
14. Is it clear what analyses were requested?	Yes V	No 🗆	
15. Were all holding times able to be met?	Yes 🗹	No 🗆	Checked by:
(If no, notify customer for authorization.)			
Special Handling (if applicable)			
16 Was client notified of all discremancies with this order?	Vac 🗍	No 🗍	NA 🔽
Person Notified:	Date		
By Whom:		Phone E Fax	L] In Person
Client Instructions:	and the second s	and the second sec	and the second second
		-	

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			

Page 1 of 1

	1	Quo	te Number			Dana L at L			Anal	ysis/Container	Lab Information
XATO		VXT	0 Contact		XTO Contact Phone #						
ENERCH		ANR.		Email	Results t	05-486-20	5				
Western Divisio	n	JAME	s, Ku	RT. 1	-OGA1	J. Rex					Office Abbreviations Farmington = FAR
Pan Au For E Par (Well Site/Location API Number			5	Sat	urday Delivery (Y (N)				Durango = DUR Bakken = BAK
Collected By Samples on Ice				Ste	Turnaround					Raton = RAT Piceance = PC	
Company	Company Test Reason				× Ne	ALLE SAME	DAY	510	120		Roosevelt = RSV La Barge = LB
Signature		GROVALOU	Contrast de	a anty	Three Day Same Day X		Orangeville = OV				
Sample ID	Sam	iple Name	Media	Date	Time	Preservative	No. of Conts.	t	181		Simple Number
PURCHAD 2200000000	ROOME	DETERMO	e ope	1000	acros	2000000		City			77/03344/61171
FARKH-030816-1300	5.N.	BOTTOM	5	3-8	1:00	ONICE	11402 Tone	x	X		Mar Mandesson e
FARKH-030816-1400	NW.	BAGE	15	3.8	2:00	ON ICE (1)402. The	X	x		
			1	-		m	eatt Kits	-			
						In-	03109119	-			
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	5.4					1	л	-			
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				1					-		
, 11							1997				
Media : Filter/= F/Soil/= S Waster	water = WI	W Groundwat	er = GW Dr	inking W	aster = DV	V Sludge = SG Su	rface Water	= SW	Air = A	Drill Mud = DM	Other = OT
Relinguisted By: (Signature)			Date: 3-8-	16	Time: 1548	Received By: (Sig	sft			Numbe	tor Bother Sample Condition
Relinquished By: (Signature)	10		Date: 3/8/1	10	Time:					a frankrig	eture Other Informatio
Relinquished By: (Signature)			Date:		Time:	Received for Lot		The last		Par I	Unne.
							2. 1999日) 1995年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997年 1997 1997	a statut	MERCHANNER	Real Property and the	

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



March 11, 2016 James McDaniel XTO Energy 382 County Road 3100 Aztec, NM 87410 TEL: (505) 787-0519 FAX (505) 333-3280 Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: <u>www.hallenvironmental.com</u>

OrderNo.: 1603513

Dear James McDaniel:

RE: Pan Am Federal C #1F

Hall Environmental Analysis Laboratory received 4 sample(s) on 3/10/2016 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. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

ander

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report Lab Order 1603513 Date Reported: 3/11/2016

Hall Environmental Analysis Laboratory, Inc.

. 1

CLIENT: XTO Energy

Project: Pan Am Federal C #1F

Client Sample ID: NE Bottom Collection Date: 3/9/2016 1:55:00 PM Received Date: 3/10/2016 7:25:00 AM

Lab ID: 1603513-001	Matrix:	atrix: SOIL Received Date: 3/10/2016 7:25:00 /					
Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE	ORGANIC	s	199			Analyst:	KJH
Diesel Range Organics (DRO)	590	9.6		mg/Kg	1	3/10/2016 10:25:30 AM	24181
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/10/2016 10:25:30 AM	24181
Surr: DNOP	96.4	70-130		%Rec	1	3/10/2016 10:25:30 AM	24181
EPA METHOD 8015D: GASOLINE RANG	E					Analyst:	NSB
Gasoline Range Organics (GRO)	1500	200		mg/Kg	50	3/10/2016 10:05:00 AM	A32696
Surr: BFB	224	66.2-112	S	%Rec	50	3/10/2016 10:05:00 AM	A32696
EPA METHOD 8021B: VOLATILES						Analyst:	NSB
Benzene	ND	0.99		mg/Kg	50	3/10/2016 10:05:00 AM	B32696
Toluene	27	2.0		mg/Kg	50	3/10/2016 10:05:00 AM	B32696
Ethylbenzene	9.9	2.0		mg/Kg	50	3/10/2016 10:05:00 AM	B32696
Xylenes, Total	110	4.0		mg/Kg	50	3/10/2016 10:05:00 AM	B32696
Surr: 4-Bromofluorobenzene	137	80-120	S	%Rec	50	3/10/2016 10:05:00 AM	B32696

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method	Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	Page 1 of 7
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range	Fage 1 01 /
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limi	t as specified

Lab Order 1603513

Date Reported: 3/11/2016

CLIENT:XTO EnergyProject:Pan Am Federal C #1FLab ID:1603513-002	Client Sample ID: S Bottom Collection Date: 3/9/2016 1:58:00 PM Matrix: SOIL Received Date: 3/10/2016 7:25:00 AM									
Analyses	Result	PQL Q	ual Units	DF	Date Analyzed	Batch				
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANIC	S			Analyst:	КЈН				
Diesel Range Organics (DRO)	30	9.9	mg/Kg	1	3/10/2016 10:47:01 AM	24181				
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	3/10/2016 10:47:01 AM	24181				
Surr: DNOP	93.3	70-130	%Rec	1	3/10/2016 10:47:01 AM	24181				
EPA METHOD 8015D: GASOLINE R	ANGE		*	-	Analyst:	NSB				
Gasoline Range Organics (GRO)	41	4.2	mg/Kg	1	3/10/2016 10:29:29 AM	A32696				
Surr: BFB	271	66.2-112	S %Rec	1	3/10/2016 10:29:29 AM	A32696				
EPA METHOD 8021B: VOLATILES					Analyst:	NSB				
Benzene	ND	0.021	mg/Kg	1	3/10/2016 10:29:29 AM	B32696				
Toluene	0.13	0.042	mg/Kg	1	3/10/2016 10:29:29 AM	B32696				
Ethylbenzene	0.13	0.042	mg/Kg	1	3/10/2016 10:29:29 AM	B32696				
Xylenes, Total	1.2	0.084	mg/Kg	1	3/10/2016 10:29:29 AM	B32696				
Surr: 4-Bromofluorobenzene	141	80-120	S %Rec	1	3/10/2016 10:29:29 AM	B32696				

• 2

Hall Environmental Analysis Laboratory, Inc.

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method I	Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	Page 2 of 7
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range	rage 2 01 7
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix	w	Sample container temperature is out of limi	t as specified

Lab Order 1603513

Date Reported: 3/11/2016

3/10/2016 10:54:00 AM B32696

3/10/2016 10:54:00 AM B32696

CLIENT: XTO Energy Project: Pan Am Federal C #1F	Client Sample ID: S Wall Collection Date: 3/9/2016 2:05:00 PM											
Analyses	Result	POL (Received	Date Analyzed	Ratah							
EPA METHOD 8015M/D: DIESEL RAI	NGE ORGANIC	s	cui cino		Analyst	KIH						
Diesel Range Organics (DRO)	14	9.7	ma/Ka	1	3/10/2016 11:08:29 AM	24181						
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/10/2016 11:08:29 AM	24181						
Surr: DNOP	97.4	70-130	%Rec	1	3/10/2016 11:08:29 AM	24181						
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	NSB						
Gasoline Range Organics (GRO)	7.8	4.6	mg/Kg	1	3/10/2016 10:54:00 AM	A32696						
Surr: BFB	120	66.2-112	S %Rec	1	3/10/2016 10:54:00 AM	A32696						
EPA METHOD 8021B: VOLATILES					Analyst	NSB						
Benzene	ND	0.023	mg/Kg	1	3/10/2016 10:54:00 AM	B32696						
Toluene	0.14	0.046	mg/Kg	1	3/10/2016 10:54:00 AM	B32696						
Ethylbenzene	ND	0.046	mg/Kg	1	3/10/2016 10:54:00 AM	B32696						

0.092

80-120

mg/Kg

%Rec

S

1

1

0.42

125

Hall Environmental Analysis Laboratory, Inc.

Xylenes, Total

Surr: 4-Bromofluorobenzene

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

Qualifiers: * Value exceeds Maximum Contaminant Level. B Analyte detected in the associ

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 3 of 7
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1603513

Date Reported: 3/11/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: XTO Energy

Project: Pan Am Federal C #1F

Client Sample ID: E Wall Collection Date: 3/9/2016 2:10:00 PM

Lab ID: 1603513-004	Matrix:	SOIL	Received Date: 3/10/2016 7:25:00 AM						
Analyses F	Result	PQL Qual	Units	DF	Date Analyzed	Batch			
EPA METHOD 8015M/D: DIESEL RANGE C			Analyst:	KJH					
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1	3/10/2016 11:30:03 AM	24181			
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	3/10/2016 11:30:03 AM	24181			
Surr: DNOP	97.4	70-130	%Rec	1	3/10/2016 11:30:03 AM	24181			
EPA METHOD 8015D: GASOLINE RANGE					Analyst:	NSB			
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	3/10/2016 11:18:42 AM	A32696			
Surr: BFB	109	66.2-112	%Rec	1	3/10/2016 11:18:42 AM	A32696			
EPA METHOD 8021B: VOLATILES					Analyst:	NSB			
Benzene	ND	0.024	mg/Kg	1	3/10/2016 11:18:42 AM	B32696			
Toluene	ND	0.048	mg/Kg	1	3/10/2016 11:18:42 AM	B32696			
Ethylbenzene	ND	0.048	mg/Kg	1	3/10/2016 11:18:42 AM	B32696			
Xylenes, Total	ND	0.095	mg/Kg	1	3/10/2016 11:18:42 AM	B32696			
Surr: 4-Bromofluorobenzene	118	80-120	%Rec	1	3/10/2016 11:18:42 AM	B32696			

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 4 of 7
- P Sample pH Not In Range
- RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#:	1603513
	11-Mar-16

Client: **XTO Energy Project:** Pan Am Federal C #1F

Sample ID LCS-24181	SampType: LCS			TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batc	h ID: 24	181	F	RunNo: 3	2689					
Prep Date: 3/10/2016	Analysis D	Date: 3/	10/2016	S	SeqNo: 1	000578	Units: mg/h	٢g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	50	10	50.00	0	100	65.8	136		Acres 1		
Surr: DNOP	4.6		5.000		92.4	70	130				
Sample ID MB-24181	Sampl	ype: ME	BLK	Tes	tCode: E	PA Method	8015M/D: Di	esel Rang	e Organics		
Client ID: PBS	Batc	h ID: 24	181	F	RunNo: 3	2689					
Prep Date: 3/10/2016	Analysis D	Date: 3/	10/2016	5	SeqNo: 1	000579	Units: mg/h	٢g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	ND	10									
Motor Oil Range Organics (MRO)	ND	50									
Surr: DNOP	9.7		10.00		97.2	70	130				

Qualifiers:

- Value exceeds Maximum Contaminant Level. *
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit ND
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

Page 5 of 7

Hall Environmental Analysis Laboratory, Inc.

WO#:	1603513
	11-Mar-16

Page 6 of 7

Sample ID 5ML RB	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: A32696	RunNo: 32696								
Prep Date:	Analysis Date: 3/10/2016	SeaNo: 1001371 Units: ma/Ka								
Analida	Brouk DOL ODK when		~							
Analyte Casoline Pange Organice (CPO)	ND 50	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit	Qua							
Surr: BFB	890 1000	89.0 66.2 112								
Sample ID 2.5UG GRO LCS	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: A32696	RunNo: 32696								
Prep Date:	Analysis Date: 3/10/2016	SeqNo: 1001372 Units: mg/Kg								
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit (Qua							
Basoline Range Organics (GRO)	26 5.0 25.00 1000 1000	0 104 80 120								
	1000		_							
Sample ID 1603513-001AMS	SampType: MS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: NE Bottom	Batch ID: A32696	RunNo: 32696								
Prep Date:	Analysis Date: 3/10/2016	SeqNo: 1001373 Units: mg/Kg								
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit (Qua							
Gasoline Range Organics (GRO)	2500 200 988.9	1477 101 59.3 143								
Surr: BFB	89000 39560	225 66.2 112	S							
Sample ID 1603513-001AM	SD SampType: MSD	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: NE Bottom	Batch ID: A32696	RunNo: 32696								
	Analysis Date: 3/10/2016	SeqNo: 1001431 Units: mg/Kg								
Prep Date:										
Prep Date: Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit (Qua							
Prep Date: Analyte Gasoline Range Organics (GRO)	Result PQL SPK value 2500 200 988.9	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit (1477 106 59.3 143 2.29 20	Qua							

Qualifiers:

* Value exceeds Maximum Contaminant Level.

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall	Environmental	Ana	lysis	La	borat	tory,	Inc.

Page 7 of 7

Client: Project:	XTO Ene Pan Am F	rgy Tederal C	#1F										
Sample ID	5ML RB	Samp	Гуре: МЕ	BLK	TestCode: EPA Method 8021B: Volatiles								
Client ID:	PBS	Batc	h ID: B3	2696	F	RunNo: 32696							
Prep Date:		Analysis [Date: 3/	10/2016	S	SeqNo: 1	001385	Units: mg/k	(g				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Benzene		ND	0.025		Series State								
Foluene		ND	0.050										
Ethylbenzene		ND	0.050										
kylenes, Total		ND	0.10										
Surr: 4-Brome	ofluorobenzene	1.1	12	1.000	TR. F.	110	80	120		214			
Sample ID	100NG BTEX LCS	Samp	Type: LC	S	Tes	tCode: El	PA Method	8021B: Vola	tiles		P-1		
Client ID:	LCSS	Batc	h ID: B3	2696	F	RunNo: 3	2696						
Prep Date:		Analysis [Date: 3/	10/2016	S	SeqNo: 1	001386	Units: mg/h	(g				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Benzene		0.90	0.025	1.000	0	89.6	80	120	1		100-		
oluene		0.94	0.050	1.000	0	94.1	80	120					
Ethylbenzene		0.93	0.050	1.000	0	92.8	80	120					
kylenes, Total		2.8	0.10	3.000	0	92.7	80	120					
Surr: 4-Brom	ofluorobenzene	1.1	all'a	1.000	1.1.1	112	80	120	12.3	1			
Sample ID	1603513-002AMS	Samp	Type: MS	3	Tes	tCode: E	PA Method	8021B: Vola	tiles				
Client ID:	S Bottom	Batc	h ID: B3	2696	F	RunNo: 3	2696						
Prep Date:		Analysis [Date: 3/	10/2016	S	SeqNo: 1	001387	Units: mg/H	٢g				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Benzene		0.79	0.021	0.8368	0	93.8	71.5	122	and the second	C. Level			
Toluene		0.98	0.042	0.8368	0.1259	103	71.2	123					
Ethylbenzene		1.1	0.042	0.8368	0.1279	113	75.2	130					
kylenes, Total		4.0	0.084	2.510	1.184	112	72.4	131					
Sur: 4-Brom	ofluorobenzene	1.2	durg	0.8368	11.	140	80	120	10	100	S		
Sample ID	1603513-002AMSE	Samp	Type: MS	SD	Tes	tCode: E	PA-Method	8021B: Vola	tiles				
Client ID:	S Bottom	Batc	h ID: B3	2696	F	RunNo: 3	2696						
Prep Date:		Analysis [Date: 3/	10/2016	S	SeqNo: 1	001388	Units: mg/h	٢g				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Benzene		0.75	0.021	0.8368	0	89.8	71.5	122	4.36	20			
Toluene		0.93	0.042	0.8368	0.1259	96.4	71.2	123	5.42	20			
Ethylbenzene		1.0	0.042	0.8368	0.1279	109	75.2	130	3.26	20			
Xylenes, Total		3.9	0.084	2.510	1.184	106	72.4	131	3.49	20			
Surr: 4-Brom	ofluorobenzene	1.1		0.8368		137	80	120	0	0	S		

Qualifiers:

- Value exceeds Maximum Contaminant Level. *
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded Н
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank Е
 - Value above quantitation range
- Analyte detected below quantitation limits J
- Р Sample pH Not In Range
- RL Reporting Detection Limit

Sample container temperature is out of limit as specified W

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

Albuquerque, NM 87109 Sample Log-In Check List

Client Name: XTO Energy Work Order Number:	1603513		RcptNo: 1
Received by/date: JA 63/16/16			
Logged By: Anne Thorne 3/10/2016 7:25:00 AM		anne Am	
Completed By: Anne Thorne 3/10/2016		1 M	
Reviewed By: A 13/10/16		anne Arm	
Chain of Custody			
1 Custody seals intact on sample bottles?	Yes 🗆	No 🗆	Not Present
2. Is Chain of Custody complete?	Yes 🗹	No 🗆	Not Present
3. How was the sample delivered?	Courier		
Log In			
4. Was an attempt made to cool the samples?	Yes 🗹	No 🗆	
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes 🗹	No	
6. Sample(s) in proper container(s)?	Yes 🗹	No 🗌	
7. Sufficient sample volume for indicated test(s)?	Yes 🗹	No 🗆	
8. Are samples (except VOA and ONG) properly preserved?	Yes 🗹	No 🗆	
9. Was preservative added to bottles?	Yes 🗌	No 🗹	NA 🗆
10.VOA vials have zero headspace?	Yes 🗆	No 🗆	No VOA Vials 🗹
11. Were any sample containers received broken?	Yes	No 🗹	# of preserved
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes 🗹	No 🗆	for pH: (<2 or >12 unless noted
13. Are matrices correctly identified on Chain of Custody?	Yes 🗹	No 🗆	Adjusted?
14. Is it clear what analyses were requested?	Yes 🗹	No 🗆	
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes 🗹	No 🗆	Checked by:
Special Handling (if applicable)			
16. Was client notified of all discrepancies with this order?	Yes 🗌	No 🗆	NA 🗹
Person Notified: Date By Whom: Via: Client Instructions:] eMail 📋	Phone 🗌 Fax	In Person
17. Additional remarks:	4		
18 Cooler Information			
Cooler No Temp °C Condition Seal Intact Seal No S	Seal Date	Signed By	

1		Quo	te Number	e Number					Anal	ysis/Cor	tainer	-	Lab Information
N/A-A		XTO	Contact	1	>	XTO Contact Phone #							
AIU		K	ART	-	5	05-486-95	43	1.5				-	
ENERGY				Email	Results t	0:						- 25	Office Abbreviations
Western Division	Western Division JAMES KURT					J. REX	1						Farmington = FAR
Well Site/Location	*.~	AP	I Number	.r	Sat	urday Delivery	(VIR)	5.4	1				Durango = DUR
TAN HM FEDERAL C	-11-	30-04 Sam	ples on Ice	05		Turnground							Raton = RAT
KULL			(VDN)		Ste	andard			_				Piceance = PC
Company		Te	t Reason	- 1 ×	XN	H Day SAME	DAY	15	N			1.	Roosevelt = RSV
XTD ,		91	211.1		Tu	vo Day	1	00	30				La Barge = LB
Signature 11					Same Day				~				ordingevine - Ov
hurt Harth				e Onlige	Date Ne	eded	100	F	ũ				the second second
Semalo ID	. Com		Madia	Data	Timo	Broconuctino	No. of	t	BI			1	
EARVH-030911-1355	N C T	2 manute	K	2.6	1:55	Preservative	ILL To	×	x			1	
FARKIL-030911-1358	< R.	Marrad	10	3-9	1.58	EN ICE	A: Tu	V	X				
FAR VU-03094 -1405	5. h	Ari	R	3-9	2:05	AUNE	141An Te	x	X			1	
FARKH - 030916 - 1410	E. W	411	5	3-9	2:10	ON VE	1) 402 Jan	x	X				12004
			10.00				P				1		
			No. 10		1000	Mec	Alats					1.0	
							AT 03/10/	4			-		
					Sec. 14						-		
7			19.00		1.0								
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Aedia : Milter = 4 Soll = 5 Waster	vater = WV	V Groundwate	er = GW Dr	inking W	aster = DV	V Sludge = 3G 3	Intace Water	= 3W	AIT = A	Drill M		Utner	
Relinquished By: (Signature)	-		Date: 3-9	-11-	11me:	Received By: (3)	gnature)	F		6.8			
Relinquished By: (Signature)			Date:	10	Time:								
remit ble	lt		3-9-	16	18:41	11112 64		7					Conta Internet
Relinquished By: (Signature)			Date:		Time!						Dife		e
V	-	A State of the second		- 4.s.									

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



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

March 15, 2016 James McDaniel XTO Energy 382 County Road 3100 Aztec, NM 87410 TEL: (505) 787-0519 FAX (505) 333-3280

RE: Pan Am Federal C 1F

OrderNo.: 1603649

Dear James McDaniel:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/12/2016 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. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

ander

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report Lab Order 1603649

Date Reported: 3/15/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: XTO Energy

Project: Pan Am Federal C 1F

Client Sample ID: NE Bottom Collection Date: 3/11/2016 10:45:00 AM

Lab ID: 1603649-001	Matrix:	SOIL	Received Date: 3/12/2016 11:00:00 AM							
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch				
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	S			Analyst:	КЈН				
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	3/14/2016 10:22:43 AM	24225				
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/14/2016 10:22:43 AM	24225				
Surr: DNOP	73.5	70-130	%Rec	1	3/14/2016 10:22:43 AM	24225				
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst:	NSB				
Gasoline Range Organics (GRO)	ND	4.3	mg/Kg	1	3/14/2016 8:46:44 AM	24219				
Surr: BFB	110	66.2-112	%Rec	1	3/14/2016 8:46:44 AM	24219				
EPA METHOD 8021B: VOLATILES					Analyst:	NSB				
Benzene	ND	0.022	mg/Kg	1	3/14/2016 8:46:44 AM	24219				
Toluene	ND	0.043	mg/Kg	1	3/14/2016 8:46:44 AM	24219				
Ethylbenzene	ND	0.043	mg/Kg	1	3/14/2016 8:46:44 AM	24219				
Xylenes, Total	ND	0.086	mg/Kg	1	3/14/2016 8:46:44 AM	24219				
Surr: 4-Bromofluorobenzene	115	80-120	%Rec	1	3/14/2016 8:46:44 AM	24219				

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

Qualifiers:

* Value exceeds Maximum Contaminant Level.

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 4
- P Sample pH Not In Range
- RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#:	1603649
	15-Mar-16

Page 2 of 4

Sample ID LCS-24225	SampType: LCS Batch ID: 24225	Te	stCode: EPA Met	hod 8015M/D: Die	esel Rang	e Organics	
Prep Date: 3/14/2016	Analysis Date: 3/14/2016		SeqNo: 1003209	Units: mg/K	g		
Analyte	Result PQL SPK v	lue SPK Ref Val	%REC LowLi	imit HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO) Surr: DNOP	38 10 50 3.6 5.	00 00	76.3 6 71.5	5.8 136 70 130			
Sample ID MB-24225	SampType: MBLK	Te	stCode: EPA Met	hod 8015M/D: Die	esel Rang	e Organics	
Client ID: PBS	Batch ID: 24225		RunNo: 32764				
Prep Date: 3/14/2016	Analysis Date: 3/14/2016	. The second	SeqNo: 1003210	Units: mg/K	g		
Analyte	Result PQL SPK v	lue SPK Ref Val	%REC LowLi	imit HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND 10	1 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					
Motor Oil Range Organics (MRO)	ND 50						
Surr: DNOP	7.5 1	.00	74.7	70 130	1916	1.	
Sample ID LCS-24212	SampType: LCS	Te	stCode: EPA Met	hod 8015M/D: Die	esel Rang	e Organics	
Client ID: LCSS	Batch ID: 24212		RunNo: 32764				
Prep Date: 3/11/2016	Analysis Date: 3/14/2016		SeqNo: 1004019	Units: %Red			
Analyte	Result POL SPK v	lue SPK Ref Val	%REC LowLi	mit HighLimit	%RPD	RPDLimit	Qua
Surr: DNOP	4.1 5	000	82.4	70 130			
Sample ID MB-24212	SampType: MBLK	Те	stCode: EPA Met	hod 8015M/D: Die	esel Rang	e Organics	
Client ID: PBS	Batch ID: 24212		RunNo: 32764				
Prep Date: 3/11/2016	Analysis Date: 3/14/2016		SeqNo: 1004020	Units: %Red			
Analyte	Result PQL SPK v	lue SPK Ref Val	%REC LowLi	imit HighLimit	%RPD	RPDLimit	Qua
0.000	0.4	00	04.0	70 120			

Qualifiers:

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

Hall	Environmenta	Ana	lysis	La	borat	tory,	Inc.
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WO#:	1603649
	15-Mar-16

Client: XTO En Project: Pan Am	nergy 1 Federal C 1	١F								
Sample ID MB-24219	SampT	ype: ME	BLK	Tes	tCode: E	PA Method	8015D: Gaso	oline Rang	e	
Client ID: PBS	Batch	ID: 24	219	F	RunNo: 3	2770				
Prep Date: 3/11/2016	Analysis D	ate: 3/	14/2016	S	SeqNo: 1	004230	Units: mg/h	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0				Ten Pro-				
Surr: BFB	1100		1000		106	66.2	112			

Sample ID LCS-24219	SampT	ype: LC	s	Tes	tCode: E	PA Method	8015D: Gaso	line Rang	е	
Client ID: LCSS	Batch	D: 24	219	F	RunNo: 3	2770				
Prep Date: 3/11/2016	Analysis D	ate: 3/	14/2016	S	SeqNo: 1	004231	Units: mg/r	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	97.3	80	120	1.2		
Surr: BFB	1100		1000		114	66.2	112			S

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Page 3 of 4

Hall Environmental Analysis Laboratory, Inc.

WO#:	1603649
	15-Mar-16

Client:XTO EnergyProject:Pan Am Federal C 1F

Sample ID MB-24219	Samp	Type: ME	BLK	Tes								
Client ID: PBS	Batc	h ID: 24	219	F	RunNo: 3	2770						
Prep Date: 3/11/2016	Analysis D	Date: 3/	14/2016	SeqNo: 1004248			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Benzene	ND	0.025		2. 1. 11	1 B. 11	7						
Toluene	ND	0.050										
Ethylbenzene	ND	0.050										
Xylenes, Total	ND	0.10										
Surr: 4-Bromofluorobenzene	1.1	1	1.000		111	80	120					
Sur: 4-Bromofluorobenzene Sample ID LCS-24219	1.1 Samp1	Type: LC	1.000 S	Tes	111 tCode: El	80 PA Method	120 8021B: Vola	tiles	-			
Surr: 4-Bromofluorobenzene Sample ID LCS-24219 Client ID: LCSS	1.1 SampT Batc	Type: LC	1.000 :S 219	Tes	111 tCode: El RunNo: 3	80 PA Method 2770	120 8021B: Vola	tiles				
Surr: 4-Bromofluorobenzene Sample ID LCS-24219 Client ID: LCSS Prep Date: 3/11/2016	1.1 SampT Batc Analysis D	Type: LC h ID: 24 Date: 3/	1.000 S 219 14/2016	Tes F S	111 tCode: El RunNo: 3 SeqNo: 1	80 PA Method 2770 004249	120 8021B: Vola Units: mg/H	tiles (g				
Surr: 4-Bromofluorobenzene Sample ID LCS-24219 Client ID: LCSS Prep Date: 3/11/2016 Analyte	1.1 Samp ^T Batc Analysis I Result	Type: LC h ID: 24 Date: 3/ PQL	1.000 S 219 14/2016 SPK value	Tes F S SPK Ref Val	111 tCode: El RunNo: 3 SeqNo: 1 %REC	80 PA Method 2770 004249 LowLimit	120 8021B: Vola Units: mg/k HighLimit	tiles (g %RPD	RPDLimit	Qual		
Surr: 4-Bromofluorobenzene Sample ID LCS-24219 Client ID: LCSS Prep Date: 3/11/2016 Analyte Benzene	1.1 SampT Batc Analysis D Result 1.1	Type: LC h ID: 24 Date: 3/ PQL 0.025	1.000 S 219 14/2016 SPK value 1.000	Tes F S SPK Ref Val 0	111 tCode: El RunNo: 3 SeqNo: 1 %REC 107	80 PA Method 2770 004249 LowLimit 80	120 8021B: Vola Units: mg/F HighLimit 120	tiles (g %RPD	RPDLimit	Qual		
Surr: 4-Bromofluorobenzene Sample ID LCS-24219 Client ID: LCSS Prep Date: 3/11/2016 Analyte Benzene Toluene	1.1 Samp Batc Analysis D Result 1.1 1.0	Type: LC h ID: 24 Date: 3/ PQL 0.025 0.050	1.000 S 219 14/2016 SPK value 1.000 1.000	Tes F S SPK Ref Val 0 0	111 tCode: El RunNo: 3 SeqNo: 1 %REC 107 102	80 PA Method 2770 004249 LowLimit 80 80	120 8021B: Vola Units: mg/H HighLimit 120 120	tiles (g %RPD	RPDLimit	Qual		
Surr: 4-Bromofluorobenzene Sample ID LCS-24219 Client ID: LCSS Prep Date: 3/11/2016 Analyte Benzene Foluene Ethylbenzene	1.1 Samp Batc Analysis D Result 1.1 1.0 1.0	Type: LC h ID: 24 Date: 3/ PQL 0.025 0.050 0.050	1.000 S 219 14/2016 SPK value 1.000 1.000 1.000	Tes F SPK Ref Val 0 0 0	111 tCode: El RunNo: 3 SeqNo: 1 %REC 107 102 103	80 PA Method 2770 004249 LowLimit 80 80 80	120 8021B: Vola Units: mg/H HighLimit 120 120 . 120	tiles (g %RPD	RPDLimit	Qual		
Surr: 4-Bromofluorobenzene Sample ID LCS-24219 Client ID: LCSS Prep Date: 3/11/2016 Analyte Benzene Foluene Ethylbenzene Kylenes, Total	1.1 Samp ^T Batc Analysis D Result 1.1 1.0 1.0 3.1	Type: LC h ID: 24 Date: 3/ PQL 0.025 0.050 0.050 0.10	1.000 SS 219 14/2016 SPK value 1.000 1.000 1.000 3.000	Tes F SPK Ref Val 0 0 0 0 0	111 tCode: El RunNo: 3 SeqNo: 1 %REC 107 102 103 103	80 PA Method 2770 004249 LowLimit 80 80 80 80 80	120 8021B: Vola Units: mg/H HighLimit 120 120 . 120 120	tiles (g %RPD	RPDLimit	Qual		

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Page 4 of 4

MALL 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

Sample Log-In Check List

Client Name: XTO Energy Work Order Number:	1603649		RcptNo: 1
Received by/date: CM 03/12/16			1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Logged By: Anne Thome 3/12/2016 11:00:00 AM		ame Im	
Completed By: Anne Thorne 3/14/2016		1 M	
Reviewed By: AL APLUIU		Clarke Arm	The second second
Chain of Custody			
1 Custody seals intact on sample bottles?	Yes 🗍	No 🗆	Not Present 🗹
2 Is Chain of Custody complete?	Yes 🗹	No 🗆	Not Present
3. How was the sample delivered?	Courier		
Log In			
4. Was an attempt made to cool the samples?	Yes 🗹	No 🗆	
5. Were all samples received at a temperature of 20° C to 6 0°C	Yos M	No	
	105		
6. Sample(s) in proper container(s)?	Yes 🗹	No 🗌	
7 Sufficient sample volume for indicated test(s)?	Yes V	No 🗆	
8 Are samples (except VOA and ONG) properly preserved?	Yes 🗹	No 🗆	
9. Was preservative added to bottles?	Yes	No 🗹	NA 🗆
10.VOA vials have zero headspace?	Yes	No 🗆	No VOA Vials
11. Were any sample containers received broken?	Yes	No 🗹	# of pressned
	_		bottles checked
12. Does paperwork match bottle labels?	Yes 🗹	No 🗌	for pH: (<2 or >12 unless note
13 Are matrices correctly identified on Chain of Custody?	Yes 🗹	No 🗆	Adjusted?
14. Is it clear what analyses were requested?	Yes 🗹	No 🗆	
15. Were all holding times able to be met?	Yes 🗹	No 🗆	Checked by:
(if no, notity customer for authorization.)			
Special Handling (if applicable)			
16. Was client notified of all discrepancies with this order?	Yes	No 🗆	NA 🗹
Person Notified: Date			
By Whom: Via:	eMail	Phone - Fax	In Person
Regarding:			the second s
Client Instructions:	And Address of Barrison		
17. Additional remarks:			
18. Cooler Information			
Cooler No Temp °C Condition Seal Intact Seal No S	eal Date	Signed By	
1 44 Good Yes			

1350

11		Quo	te Number	11-22		- 1 -			An	alysis/Container	Lab Information		
XTO		K	O Contact	1	×	TO Contact Pho 5-486-95	ne # 543						
ENERGY				Email	Results t	0:					Office Abbreviations		
Western Divisio	n	J	AMER	here	Loca	N. REX					Farmington = FAR		
Well Site/Location	+	AP	I Number	0E	Sat	urday Delivery ((Y/N)				Durango = DUR Babben = BAK		
Collected By	IF	Sam	ples on Ice	05		Turnaround	-				Raton = RAT		
Kuet	_		(Y) N)		Sto	andard	N	5	N		Piceance = PC		
Company XTO /		Te	st Reason		Tu	NO Day	, Day	20	80		La Barge = LB		
Signature		Gray Areas	For Lab Us	() IIII	Th Sa Date Ne	ree Day me Day eded		P#4	EX.		Orangeville = OV		
Sample ID	Sam	ple Name	Media	Date	Time	Preservative	No. of Conts.	F	31		Sample Number		
FARKH-031116-10:45	N.E. P	BOTTON	5	3-11	10:45	ON KE	(1) for Jap	X	X		<u>1020 Strato Rolling</u>		
								-					
				10.00	1.5								
			1.1.1	1									
			-					-	_				
		-	1			1							
								-					
			-			in the second		_	-				
Media : Silter = F-Isoil = & Waster	water = WW	Groundwat	er = GW Dr	inking W	aster = DV	V Sludge = SG Se	urface Water	= SW	Air =	A Drill Mud = DM Of	ther = OT		
Relinquished By: (Signature)	7		Date:	- 11.	Time:	Received By: (Si	unature)				Beitler Comple Condition		
Relinquisted By: (Signature)	>		Date:	16	Time:	THE WAY				Temperat	one Cabe Information		
Relinquished By: (Signature)			Date:		Time:	icentred 6		ure)		Dose	Time: The second second		
Comments					·				and the second				
	1.4.2	222				v	1						

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