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	icis Dr., Santa	a Fe, NM 87505	;	Sa	inta Fe	e, NM 875	05						
			Rele	ase Notific	ation	1 and Co	orrective A	ction					
						<b>OPERA</b>	ГOR		🗌 Initia	al Report	$\boxtimes$	Final Report	
				urces Co, LLC		Contact: Pa							
				Denver, CO 802			No. 303.534.46		45				
Facility Na	me: State	A Tank Batt	ery			Facility Typ	e: Tank Batter	у					
Surface Ow	ner			Mineral C	)wner				API No.: 30-025-05245				
				LOCA	TIO	N OF RE	LEASE						
Unit Letter	Section	Township	Range	Feet from the		South Line	Feet from the	East/W	est Line	County			
-	2	158	37E							Lea			
L	1,	I			4(1)1	<b>T</b>	1 102 17(22			I			
			1	Latitude: 33.04	461N	Longiti	ide: 103.17622	2 W					
				NAT	URE	OF REL					7 1		
Type of Rele	ease: Produc	ed water and	oil			Volume of water and	Release: 238 Bb	1	Volume F 36 Bbl oil	Recovered: 2	204 Bbl	water and	
Source of Re	lease: Over	ran water tank					lour of Occurrence	ce:		Hour of Dis	covery	:	
117 T 1		7' 0			• ••• ••••		hours of discover	ry	12/12/14	@ 8:30AM			
Was Immedi	ate Notice (		Yes 🖂	No 🗌 Not Re	equired	If YES, To Reported b	Whom? by phone to Toma	as Oberdi	ng on 12.1	5.14			
By Whom? I	Patrick Flyn				1		Jour 12.15.14		0				
Was a Water					the manufacture of the stands		olume Impacting	the Wate	rcourse.				
			Yes 🛛	No									
If a Waterco	urse was Im	pacted, Descr	ibe Fully.*	4						1			
Describe Ca	ise of Probl	em and Reme	dial Action	n Taken *					1, Parata para na mangana dan kata dan	ter ( Anna in 1909) (2007) (2007)			
Water transfe	er pump fail	ed, as did the	in-field te	lemetry, allowing									
area within s and most of			asuring ap	proximately 65-f	t x 30-ft	. Infiltration	was limited due to	o hard pa	cked soil a	and clay und	lerlying	the facility	
and most of	the fluid wa	s recovered.										1	
		1.01											
Describe Are	ea Affected	and Cleanup A	Action Tak	ten.*									
				ondary containm									
				to the production									
				Confirmation soil s was composited									
summarized	on the follo	wing page and	the labor	atory report and c	hain of	custody form	are attached.		-,	Ber The unit	.,		
				is true and comp									
				nd/or file certain r e of a C-141 repo									
				investigate and r									
or the enviro	nment. In a	ddition, NMC	CD accep	tance of a C-141									
federal, state	, or local lay	ws and/or regu	ilations.			and the second	OIL CON	CEDV	ATION	DIVICIO			
	11742						OIL CON	SERV	ATION	DIVISIO	JIN		
Signature:	107	/											
Printed Nam	e: Patrick F	lynn				Approved by	Environmental S	Specialist	:				
Title: Vice I		e na 1949 de la construcción de la construcción de la constru				Approval Da	te:	F	Expiration	Date:			
		~ 1							1	1			
E-mail Addr	ess: pflynn	@resoluteener	rgy.com			Conditions of	t Approval:			Attached			
Date: 1/	/21/15	Phone:	303.534.4	600 X1145									

#### \* Attach Additional Sheets If Necessary

Four soil samples were collected from each corner of the spill-affected area located entirely within the secondary containment berm. A fifth sample was collected from adjacent pasture for background analysis of chlorides. The samples were collected after the upper six- to twelve-inches of impacted pea gravel and soil were removed for offsite disposal. Soil analytical results are summarized below.

Sample No.	Sample Location	Analytical Results (mg/Kg)							
		Benzene	Toluene	Ethylbenzene	Xylene	TPH-D	TPH-G	Chlorides	
SS-1	NE Corner	ND	ND	ND	ND	ND	ND	3780	
SS-2	SW Corner	ND	0.107	ND	0.304	ND	ND	2110	
SS-3	NW Corner	ND	ND	ND	ND	ND	ND	2160	
SS-4	SE Corner	0.184	1.95	2.00	6.05	3220	172	1760	
SS-5	Background	NA	NA	NA	NA	NA	NA	147	

Notes: ND - Not Detected; NA - Not Analyzed

Review of observations associated with the drilling approximately 18 months ago of a water well located approximately 2.5 miles north of the State A tank battery indicate the depth to ground water exceeds 100-ft. The water well is located at lat. 33 deg 04'57"N long. 103 deg 10'11"W and the measured depth to water is 138-ft. Based on the depth to ground water and the analytical results, remedial activities associated with this release are deemed complete. Additional soil remediation will be performed when the facility is abandoned.

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Work Order: 15010810

#### Page Number: 1 of 2

## **Summary Report**

James Allison **Resolute Energy** 4000 N. Big Spring #500 Midland, TX 79705

Report Date: January 9, 2015

Work Order: 15010810 

Project Location: Lea Co., NM **Project Name:** State A Tank Battery

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
383887	SS-1	soil	2015-01-07	10:00	2015-01-08
383888	SS-2	soil	2015-01-07	10:00	2015-01-08
383889	SS-3	soil	2015-01-07	10:00	2015-01-08
383890	SS-4	soil	2015-01-07	10:00	2015-01-08
383891	SS-5	soil	2015-01-07	10:00	2015-01-08

		B	TEX		TPH DRO - NEW	TPH GRO
	Benzene	Toluene	Ethylbenzene	Xylene	DRO	GRO
Sample - Field Code	(mg/Kg)	$(m_{\rm K}/{\rm K_{\rm H}})$	$(m_{\tilde{h}}/K_{\tilde{s}})$	(m <sub>5</sub> /K <sub>8</sub> )	(m <sub>8.7</sub> K <sub>45</sub> )	(mg/Kg)
383887 - SS-1	<0.0400 <sup>1</sup> qs	< 0.0400	< 0.0400	< 0.0400	<50.0	<8.00 <sup>2</sup> g <sub>8</sub>
383888 - SS-2	<0.0400 <sup>3</sup> g <sub>*</sub>	0.107	< 0.0400	0.304	<50.0	<8.00 <sup>4</sup> Q <sub>3</sub>
383889 - SS-3	<0.0400 <sup>5</sup> q.	< 0.0400	< 0.0400	<0.0400	<50.0	<8.00 <sup>6</sup> Q.
383890 - SS-4	0.184 Q×	1.95	2.00	6.05	3220	172 q.

#### Sample: 383887 - SS-1

Param	Flag	Result	Units	RL
Chloride		3780	mg/Kg	4

Sample: 383888 - SS-2

<sup>4</sup>Dilution due to surfactants. <sup>5</sup>Dilution due to surfactants.

<sup>&</sup>lt;sup>1</sup>Dilution due to surfactants.

<sup>&</sup>lt;sup>2</sup>Dilution due to surfactants. <sup>3</sup>Dilution due to surfactants.

<sup>&</sup>lt;sup>6</sup>Dilution due to surfactants.

TraceAnalysis, Inc. • 6701 Aberdeen Ave., Suite 9 • Lubbock, TX 79424-1515 • (806) 794-1296 This is only a summary. Please, refer to the complete report package for quality control data.

Report Date: Janu	lary 9, 2015	Work Order: 15010810		Page Number: 2 of 2
	in any approximation and an and a second		an a	anna ann an a
Param	Flag	Result	Units	RL
Chloride		2110	mg/Kg	4
Sample: 383889	- SS-3			
Param	Flag	Result	Units	RL
Chloride	······································	2160	mg/Kg	4
01000000	00.4			
Sample: 383890	- 55-4			
Param	Flag	Result	Units	RL
Chloride		1760	mg/Kg	4
Sample: 383891	- SS-5			
Param	Flag	Result	Units	RL
Chloride		147	mg/Kg	4

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6701 Aberdeen Avenue, Suite 9 200 East Sunset Road, Suite E 5002 Basin Street, Suite A1 (BioAquatic) 2501 Mayes Rd., Suite 100 (Brandon & Clark) 3403 Industrial Blvd. Lubbock, TX 79424 El Paso, TX 79922 Midland, TX 79703 Carrollton, TX 75006 Hobbs NM 88240

TX 79424 800•378•1296 TX 79922 TX 79703 TX 75006 NM 88240 806 • 794 • 1296 915 • 585 • 3443 432 • 689 • 6301 972 • 242 • 7750 575 • 392 • 7561 Fax 806 • 794 • 1298 Fax 915 • 585 • 4944 Fax 432 • 689 • 6313 Fax 972 • 242 • 7749 Fax 575 • 392 • 4508

E-Mail: lab@traceanalysis.com Web: www.traceanalysis.com

## Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

## **Analytical and Quality Control Report**

James Allison Resolute Energy 4000 N. Big Spring #500 Midland, TX, 79705

Report Date: January 9, 2015

Work Order: 15010810

Project Location:Lea Co., NMProject Name:State A Tank BatteryProject Number:State A Tank Battery

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
383887	SS-1	soil	2015-01-07	10:00	2015-01-08
383888	SS-2	soil	2015-01-07	10:00	2015-01-08
383889	SS-3	soil	2015-01-07	10:00	2015-01-08
383890	SS-4	soil	2015-01-07	10:00	2015-01-08
383891	SS-5	soil	2015-01-07	10:00	2015-01-08

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 23 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director James Taylor, Assistant Director Brian Pellam, Operations Manager

# **Report Contents**

### **Case Narrative**

a

Sample 383888 (SS-2) . Sample 383889 (SS-3) . Sample 383890 (SS-4) .		  	  	 	  	 	 	· · · ·	•••	  	  	· ·	• •	••	• • • •	· ·	• '• • •	• • • •	•	•••		  	•••	  	4 4 5 6 8 9
Method Blanks QC Batch 118504 - Meth QC Batch 118521 - Meth QC Batch 118545 - Meth QC Batch 118546 - Meth	od Blank od Blank od Blank	(1) (1) (1)	  	•••	 			•••			•••	•••	• •		•••	•••						•••			11 11 11 11
Laboratory Control Spik QC Batch 118504 - LCS QC Batch 118521 - LCS QC Batch 118545 - LCS QC Batch 118546 - LCS	$(1) \dots (1) \dots (1) \dots (1) \dots (1) \dots$	 	 	•••		•••	•••	•••	•••	•••			•••				•••			••	• •	i s		• •	13 13 13 13 14
Matrix Spikes QC Batch 118504 - MS ( QC Batch 118521 - xMS QC Batch 118545 - MS ( QC Batch 118546 - MS (	(1) 1)	• • •	 . <b>.</b> .			•••	•••	 	•••	•••		ere Gén		• •	•••	• • •	•••	 	•••	1	•••	1	• •	•	16 16 16 16
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Appendix Report Definitions Laboratory Certifications Standard Flags Result Comments Attachments	 	 	· · ·	  	 	 	•••	•••	i di si Na si si Na si si	· · ·		 	•••	 	•••	••	• •	•	••	•	•••	•••	•••	•	22 22 22 22 23 23

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## **Case Narrative**

Samples for project State A Tank Battery were received by TraceAnalysis, Inc. on 2015-01-08 and assigned to work order 15010810. Samples for work order 15010810 were received intact at a temperature of 3.9 C.

Samples were analyzed for the following tests using their respective methods.

		Prep	Prep	QC	Analysis
Test	Method	Batch	Date	Batch	Date
BTEX	S 8021B	100163	2015-01-07 at 11:20	118545	2015-01-09 at 12:40
Chloride (Titration)	SM 4500-Cl B	100198	2015-01-08 at 11:50	118504	2015-01-08 at 14:47
TPH DRO - NEW	S 8015 D	100187	2015-01-08 at 16:00	118521	2015-01-09 at 10:03
TPH GRO	S 8015 D	100163	2015-01-07 at 11:20	118546	2015-01-09 at 12:46

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 15010810 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Work Order: 15010810 State A Tank Battery Page Number: 4 of 23 Lea Co., NM

# **Analytical Report**

### Sample: 383887 - SS-1

Laboratory: Analysis:	Midland BTEX			Analartica	l Method:	S 802	1R		Prep Metho	d. S	5035
QC Batch:	118545			Date Ana			01-09		Analyzed B		K
Prep Batch:	100163				reparation		01-07		Prepared By		K
1 ICP Datch.	100100			ampic 1	i cpai acioi	1. 2010-	01-07		Trepared D	, 1	
						RL			D.U		DI
Parameter		Flag		Cert		Result	Unit		Dilution		RL
Benzene	1	Q U		8		< 0.0400	mg/K		2		.0200
Toluene		U		8		< 0.0400	mg/K		2		.0200
Ethylbenzene	9	U		8		< 0.0400	mg/K		2		.0200
Xylene		U		8		< 0.0400	mg/K	g	2	0	.0200
								Spike	Percent	Rec	overy
Surrogate			Flag	Cert	Result	Units	Dilution	Amount	Recovery	Liı	mits
Trifluorotoluc	ene (TFT)				3.51	mg/K	g 2	4.00	88	70 -	- 130
4-Bromofluor	obenzene (4-BFB)				3.98	mg/K	g 2	4.00	100	70 -	- 130
Sample: 38											
Laboratory: Analysis: QC Batch: Prep Batch:	<b>3887 - SS-1</b> Midland Chloride (Titratic 118504 100198			Date Sam	lytical Me Analyzec plc Prcpa	d: ration: RL	SM 4500-Cl B 2015-01-08 2015-01-08 Unit	q	Prep Met Analyzed Prepared Dilutiou	By:	N/A AK AK BL
Sample: 38: Laboratory Analysis: QC Batch: Prep Batch: Parameter Chloride	Midland Chloride (Titratic 118504	m) Flag		Date	e Analyzee ple Prepa	d: ration:	2015-01-08 2015-01-08 Unit		Analyzed	By:	AK
Laboratory Analysis: QC Batch: Prep Batch: Parameter	Midland Chloride (Titratic 118504 100198			Date Sam	e Analyzee ple Prepa	d: ration: RL Result	2015-01-08 2015-01-08		Analyzed Prepared Dilution	By:	AK AK RL
Laboratory: Analysis: QC Batch: Prep Batch: Parameter Chloride Sample: 38: Laboratory:	Midland Chloride (Titratic 118504 100198 3887 - SS-1 Midland	Flag		Date Samj Cert	e Analyze plc Prepa	d: ration: RL Result 3780	2015-01-08 2015-01-08 Unit mg/K		Analyzed Prepared Dilution 5	By: By:	AK AK RL 4.00
Laboratory: Analysis: QC Batch: Prep Batch: Parameter Chloride Sample: 38: Laboratory: Analysis:	Midland Chloride (Titratic 118504 100198 3887 - SS-1 Midland TPH DRO - NEV	Flag		Date Sam; Cert	e Analyze ple Prepa	d: ration: RL Result 3780	2015-01-08 2015-01-08 Unit mg/K S 8015 D		Analyzed Prepared Dilution 5 Prep Metl	By: By:	AK AK RL 4.00
Laboratory: Analysis: QC Batch: Prep Batch: Prep Batch: Chloride Sample: 38: Laboratory: Analysis: QC Batch:	Midland Chloride (Titratic 118504 100198 3887 - SS-1 Midland TPH DRO - NEV 118521	Flag		Date Sam; Cert Ana Dat	e Analyze plc Prepa alytical M se Analyze	d: ration: RL Result 3780	2015-01-08 2015-01-08 Unit mg/K S 8015 D 2015-01-09		Analyzed Prepared Dilution 5 Prep Meth Analyzed	By: By: hod: By:	AK AK RL 4.00 N/A SC
Laboratory: Analysis: QC Batch: Prep Batch: Prep Batch: Chloride Sample: 38: Laboratory: Analysis: QC Batch:	Midland Chloride (Titratic 118504 100198 3887 - SS-1 Midland TPH DRO - NEV	Flag		Date Sam; Cert Ana Dat	e Analyze ple Prepa	d: ration: RL Result 3780	2015-01-08 2015-01-08 Unit mg/K S 8015 D		Analyzed Prepared Dilution 5 Prep Metl	By: By: hod: By:	AK AK RL 4.00
Laboratory: Analysis: QC Batch: Prep Batch: Prep Batch: Chloride Sample: 38: Laboratory: Analysis: QC Batch:	Midland Chloride (Titratic 118504 100198 3887 - SS-1 Midland TPH DRO - NEV 118521	Flag		Date Sam; Cert Ana Dat	e Analyze plc Prepa alytical M se Analyze	d: ration: RL Result 3780	2015-01-08 2015-01-08 Unit mg/K S 8015 D 2015-01-09		Analyzed Prepared Dilution 5 Prep Meth Analyzed	By: By: hod: By:	AK AK RL 4.00 N/A SC
Laboratory: Analysis: QC Batch: Prep Batch: Parameter Chloride	Midland Chloride (Titratic 118504 100198 3887 - SS-1 Midland TPH DRO - NEV 118521	Flag		Date Sam; Cert Ana Dat	e Analyze ple Prepa alytical M se Analyze aple Prep	d: ration: RL Result 3780 ethod: ed: aration:	2015-01-08 2015-01-08 Unit mg/K S 8015 D 2015-01-09	5	Analyzed Prepared Dilution 5 Prep Meth Analyzed	By: By: hod: By:	AK AK RL 4.00 N/A SC

Report Date: January 9, 2015 State A Tank Battery					Work Ord State A 7	Page Number: 5 of 23 Lea Co., NM				
Surrogate F	lag	Cert	;	Result	Units	Dilut		pike nount	Percent Recovery	Recovery Limits
n-Tricosane				118	mg/Kg	; 1		100	118	70 - 130
Sample: 383887 - SS-:	L									
Laboratory: Midland Analysis: TPH GRO QC Batch: 118546 Prep Batch: 100163				Date Ana	al Methoc alyzed: Preparatic	2015-0	1-09		Prep Method Analyzed By Prepared By	: AK
						$\mathbf{RL}$				
Parameter		Flag		Cert		Result	Uni	ts	Dilution	RL
GRO <sup>2</sup>		Q.,U		8		<8.00	mg/F	(g	2	4.00
Surrogate			Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)					3.68	mg/Kg	2	4.00	92	70 - 130
4-Bromofluorobenzene (4	-BFB)			ngggun distriction	3.85	mg/Kg	2	4.00	96	70 - 130

### Sample: 383888 - SS-2

Laboratory:MidlandAnalysis:BTEXQC Batch:118545Prep Batch:100163		Analytical Date Anal Sample Pr	lyzed:	S 8021F 2015-01 : 2015-01	-09		Prep Method Analyzed By: Prepared By:	AK
				RL				
Parameter	Flag	Cert		Result	Unit	5	Dilution	RL
Benzene <sup>3</sup>	Qs,U	8	<	:0.0400	mg/K	S	2	0.0200
Toluene		8		0.107	mg/K	3	2	0.0200
Ethylbenzene	U	8	<	0.0400	mg/K	S	2	0.0200
Xylene		8		0.304	mg/K	5	2	0.0200
	T21.	Cont	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Surrogate	Flag	Cert			2	4.00	87	70 - 130
Trifluorotoluene (TFT)			3.47	mg/Kg			96	70 - 130
4-Bromofluorobenzene (4-BFB)			3.84	mg/Kg	2	4.00	30	10 - 130

Report Date State A Tanl	: January 9, 2015 k Battery			Work Orde State A T				Page Numbe Ler	er: 6 of 23 Co., NM
Sample: 38	3888 - SS-2								
Laboratory: Analysis: QC Batch:	Midland Chloride (Titratio 118504	m)	Date	ytical Met Analyzed	: 20	M 4500-Cl 1 015-01-08 015-01-08	В	Prep Metho Analyzed E Prepared B	y: AK
Prep Batch:	100198		Samp	ole Prepara	ation: 20	119-01-08		Frepareu B	y. An
			-		RL			-	
Parameter	2 	Flag	Cert	F	Result		iits Ka	Dilution 5	RL 4.00
Chloride	1000-001-0-				2110	mg/	Kg	5	4.00
Sample: 38	3888 - SS-2								
Laboratory:	Midland								
Analysis:	TPH DRO - NEV	V		lytical Me		5 8015 D		Prep Metho	
QC Batch:	118521			e Analyzed		2015-01-09		Analyzed E	
Prep Batch:	100187		Sam	ple Prepa	ration: 2	2015-01-08		Prepared B	y: SC
					RL				
Parameter		Flag	Cert	F	Result	Uı	nits	Dilution	RL
DRO	<b></b>	U	8		<50.0	mg/	Kg	1	50.0
							Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilı	ition A	Amount	Recovery	Limits
n-Tricosane	1 10-5	0011	101	mg/Kg		1	100	101	70 - 130
Sample: 38	3888 - SS-2								
Laboratory:	Midland								
Analysis:	TPH GRO			al Method				Prep Method	
QC Batch:	118546		Date An	v		01-09		Analyzed By	
Prep Batch:	100163		Sample I	Preparatio	n: 2015-	01-07		Prepared By:	AN
			-		RL		••	D'1	DI
Parameter	4	Flag	Cert		Result	U	nits ///	Dilution 2	RL 4.00
GRO	-1	Q-,U	ĥ		<8.00	ing/	ng	4	4.00
0		101-	a Cont	Docult	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Surrogate		Fla	g Cert	Result 3.59	mg/Kg	2	4.00	90	70 - 130
Trifluorotolu				3.99	mg/Kg	2	4.00	98	70 - 130
4-Bromonuol	robenzene (4-BFB)			0.00	mg/ mg	4	1.00		

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	: January 9, 2015 k Battery		Work Order: 15010810 State A Tank Battery					Page Number: 7 of 23 Lea Co., NM		
Sample: 38	3889 - SS-3									
Laboratory:	Midland									
Analysis:	BTEX		Analytical	Method	: S 80	21B			Prep Metho	d: S 50
QC Batch:	118545		Date Anal			-01-09			Analyzed By	
Prep Batch:	100163		Sample Pr			-01-07			Prepared By	
					RL					
Parameter		Flag	Cert		Result		Units		Dilution	F
Benzene	5	Q#,U	8	3	< 0.0400		mg/Kg		2	0.02
Toluene		1	R		< 0.0400		mg/Kg		2	0.02
Ethylbenzene		t	я		< 0.0400		mg/Kg		2	0.02
Xylene		t	8		<0.0400		mg/Kg		2	0.02
								Spike	Percent	Recove
Surrogate	ana	Flag	g Cert	Result	Units	i Di	ilution	Amount	Recovery	Limit
Trifluorotoluc	ene (TFT)			3.42	mg/K	g	2	4.00	86	70 - 13
4-Bromofluor	obenzene (4-BFB)	1		3.63	mg/K	g	2	4.00	91	70 - 13
Sample: 38	3889 - SS-3									
Laboratory:	Midland									
a feet second or comp	Midland Chloride (Titrati	on)	Analy	ytical Me	thod:	SM 45	00-Cl B		Prep Metł	od: N/
Analysis:		on)		ytical Me Analyze		SM 450 2015-0			Prep Meth Analyzed	
Analysis: QC Batch:	Chloride (Titrati	on)	Date		d:		1-08			By: AF
Laboratory: Analysis: QC Batch: Prep Batch:	Chloride (Titrati 118504	011)	Date	Analyze	d:	2015-0	1-08		Analyzed	By: AF
Analysis: QC Batch:	Chloride (Titrati 118504	on) Flag	Date	Analyze	d: ration <sup>.</sup>	2015-0	1-08		Analyzed	By: AF
Analysis: QC Batch: Prep Batch: Parameter	Chloride (Titrati 118504	·	Date Samp	Analyze	d: ration <sup>.</sup> RL	2015-0	1-08 1-08		Analyzed Prepared 1	By: Ał By: Ał
Analysis: QC Batch: Prep Batch: Parameter	Chloride (Titrati 118504	·	Date Samp	Analyze	d: ration <sup>.</sup> RL Result	2015-0	1-08 1-08 Units		Analyzed Prepared D	By: AF By: AF F
Analysis: QC Batch: Prep Batch: Parameter Chloride	Chloride (Titrati 118504 100198	·	Date Samp	Analyze	d: ration <sup>.</sup> RL Result	2015-0	1-08 1-08 Units		Analyzed Prepared D	By: AF By: AF F
Analysis: QC Batch: Prep Batch: Parameter Chloride Sample: 38: Laboratory:	Chloride (Titrati 118504 100198 3889 - SS-3 Midland	Flag	Date Samp Cert	Analyze ole Prepa	d: ration <sup>.</sup> RL Result <b>2160</b>	2015-0	1-08 1-08 <u>Units</u> <u>mg/Kg</u>		Analyzed Prepared 1 Dilution 5	By: AF By: AF F 4.0
Analysis: QC Batch: Prep Batch: Parameter Chloride Sample: 38: Laboratory: Analysis:	Chloride (Titrati 118504 100198 3889 - SS-3 Midland TPH DRO - NEV	Flag	Date Samp Cert	Analyze de Prepa	d: ration RL Result 2160	2015-0 2015-0 S 801	1-08 1-08 <u>Units</u> <u>mg/Kg</u> 5 D		Analyzed Prepared 1 Dilution 5 Prep Meth	By: AF By: AF F 4.0
Analysis: QC Batch: Prep Batch: Parameter Chloride Sample: 38: Laboratory: Analysis:	Chloride (Titrati 118504 100198 3889 - SS-3 Midland TPH DRO - NET 118521	Flag	Date Samp Cert Ana Date	Analyze le Prepa lytical M e Analyze	d: ration RL Result 2160	2015-0	1-08 1-08 <u>Units</u> <u>mg/Kg</u> 5 D		Analyzed Prepared 1 Dilution 5 Prep Meth Analyzed 1	By: AF By: AF F 4.0 Nod: N/ By: SC
Analysis: QC Batch: Prep Batch: Parameter Chloride Sample: 38: Laboratory: Analysis: QC Batch:	Chloride (Titrati 118504 100198 3889 - SS-3 Midland TPH DRO - NEV	Flag	Date Samp Cert Ana Date	Analyze de Prepa	d: ration RL Result 2160	2015-0 2015-0 S 801	1-08 1-08 <u>Units</u> <u>mg/Kg</u> 5 D 01-09		Analyzed Prepared 1 Dilution 5 Prep Meth	By: AF By: AF F 4.0 Nod: N/ By: SC
Analysis: QC Batch: Prep Batch: Parameter Chloride Sample: 38: Laboratory: Analysis: QC Batch: Prep Batch:	Chloride (Titrati 118504 100198 3889 - SS-3 Midland TPH DRO - NET 118521	Flag W	Date Samp Cert Ana Date Sam	Analyzed le Prepa lytical M e Analyzed ple Prepa	d: ration: RL Result 2160 2160 ed: aration: RL	2015-0 2015-0 S 801 2015-0	1-08 1-08 <u>Units</u> mg/Kg 5 D 01-09 01-08		Analyzed Prepared 1 Dilution 5 Prep Meth Analyzed 1 Prepared 1	By: AF By: AF F 4.0 bod: N/ By: SC By: SC
Analysis: QC Batch: Prep Batch: Parameter Chloride Sample: 38: Laboratory: Analysis: QC Batch: Prep Batch: Prep Batch:	Chloride (Titrati 118504 100198 3889 - SS-3 Midland TPH DRO - NET 118521	Flag	Date Samp Cert Ana Date	Analyzed le Prepa lytical M e Analyzed ple Prepa	d: ration: RL Result 2160 2160 ed: aration: RL Result	2015-0 2015-0 S 801 2015-0	1-08 1-08 <u>Units</u> <u>mg/Kg</u> 5 D 01-09 01-08 Units		Analyzed Prepared 1 Dilution 5 Prep Meth Analyzed 1 Prepared 1 Dilution	By: AF By: AF F 4.0 bod: N/ By: SC By: SC By: SC
Analysis: QC Batch: Prep Batch: Parameter Chloride Sample: 38: Laboratory: Analysis: QC Batch: Prep Batch: Prep Batch:	Chloride (Titrati 118504 100198 3889 - SS-3 Midland TPH DRO - NET 118521	Flag W	Date Samp Cert Ana Date Sam	Analyzed le Prepa lytical M e Analyzed ple Prepa	d: ration: RL Result 2160 2160 ed: aration: RL	2015-0 2015-0 S 801 2015-0	1-08 1-08 <u>Units</u> mg/Kg 5 D 01-09 01-08		Analyzed Prepared 1 Dilution 5 Prep Meth Analyzed 1 Prepared 1	By: AF By: AF F 4.0 bod: N/ By: SC By: SC
Analysis: QC Batch: Prep Batch: Parameter Chloride Sample: 38: Laboratory: Analysis: QC Batch: Prep Batch: Parameter	Chloride (Titrati 118504 100198 3889 - SS-3 Midland TPH DRO - NET 118521	Flag W	Date Samp Cert Ana Date Sam Cert	Analyzed le Prepa lytical M e Analyzed ple Prepa	d: ration: RL Result 2160 2160 ed: aration: RL Result	2015-0 2015-0 S 801 2015-0	1-08 1-08 <u>Units</u> <u>mg/Kg</u> 5 D 01-09 01-08 Units		Analyzed Prepared 1 Dilution 5 Prep Meth Analyzed 1 Prepared 1 Dilution	By: AF By: AF F 4.0 bod: N/ By: SC By: SC By: SC
Analysis: QC Batch: Prep Batch: Parameter Chloride Sample: 38: Laboratory: Analysis: QC Batch:	Chloride (Titrati 118504 100198 3889 - SS-3 Midland TPH DRO - NET 118521	Flag W	Date Samp Cert Ana Date Sam Cert	Analyzed le Prepa lytical M e Analyzed ple Prepa	d: ration: RL Result 2160 2160 2160 2160 2160 2160 200 200 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	2015-0 2015-0 S 801 2015-0	1-08 1-08 5 D 01-09 01-08 Units mg/Kg	ke	Analyzed Prepared 1 Dilution 5 Prep Meth Analyzed 1 Prepared 1 Dilution 1	By: AF By: AF F 4.0 bod: N/ By: SC By: SC By: SC By: SC Sy: SC

Report Date: January 9, 2015 State A Tank Battery		Work Order: 15010810 State A Tank Battery					Page Number: 8 of 23 Lea Co., NM	
Sample: 383889 - SS-3								
Laboratory:MidlandAnalysis:TPII GROQC Batch:118546Prep Batch:100163		Analytic Date An Sample I	•	2015-0	01-09		Prep Metho Analyzed B Prepared B	y: AK
				RL				
Parameter	Flag	Cert		Result	Uni	ts	Dilution	RL
GRO <sup>6</sup>	Q, ,U	8		<8.00	mg/k	g	2	4.00
Sumarata	171	Cent	Derult	TT	Dilution	Spike	Percent	Recovery
Surrogate	Fla	ag Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			3.44	mg/Kg	2	4.00	86	70 - 130
4-Bromofluorobenzene (4-BFB)			3.70	mg/Kg	2	4.00	92	70 - 130

### Sample: 383890 - SS-4

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Laboratory:MidlandAnalysis:BTEXQC Batch:118545Prep Batch:100163		Analytical Date Ana Sample Pr	lyzed:	S 80211 2015-01 : 2015-01	-09		Prep Metho Analyzed By Prepared By	r: AK
				RL				
Parameter	Flag	Cert	]	Result	Units		Dilution	RL
Benzene	Q	8		0.184	mg/Kg	n en	4	0.0200
Toluene		8		1.95	mg/Kg		4	0.0200
Ethylbenzene		8		2.00	mg/Kg		4	0.0200
Xylene		8	and a state of the	6.05	mg/Kg		4	0.0200
						Spike	Percent	Recovery
Surrogate	Flag	; Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)	and the second state of the second		6.34	mg/Kg	4	8.00	79	70 - 130
4-Bromofluorobenzene (4-BFB)			8.94	mg/Kg	4	8.00	112	70 - 130

#### Sample: 383890 - SS-4

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	118504	Date Analyzed:	2015-01-08	Analyzed By:	AK
Prep Batch:	100198	Sample Preparation:	2015-01-08	Prepared By:	AK
And the second difference of the second s					

continued ...

Report Date: January 9, 2015     Work Order: 15010810       State A Tank Battery     State A Tank Battery							antinenen se se ser av	Page Numł Le	er: 9 of 23 a Co., NM			
sample 3838	90 continue	d										
		~					RL					
Parameter			Flag		Cert	R	esult		Unit	8	Dilution	RL
							RL					
Parameter			Flag		Cert	R	esult		Unit		Dilution	RL
Chloride	engelo a 1999 Stanne en regiona para para para para para para para pa	an general for all the second s				-	760		ing/K	5	5	4.00
Sample: 38	3890 - SS	-4										
Laboratory:	Midland	-							<b>D</b>		D	J. NI/A
Analysis:	TPH DR	0 - NEV	V			lytical Met		5 8015 1 2015-01			Prep Meth Analyzed	
QC Batch:	118521					e Analyzed ple Prepara		2015-01			Prepared 1	
Prep Batch:	100187				Jam	pie r repara	1.51011. 2	2010-01	-00		1 Tephred 1	<i>y</i> . 50
							RL					
Parameter			Flag		Cert		esult	~	Unit		Dilution	RL
DRO					8	3	3220		mg/K	g	5	50.0
									S	vike	Percent	Recovery
Surrogate		Flag	Cert	1	Result	Units	Dil	ution		nount	Recovery	Limits
n-Tricosane	Qar	Q-r	0010		251	mg/Kg		5		100	251	70 - 130
Sample: 38 Laboratory: Analysis: QC Batch: Prep Batch:	3890 - SS Midland TPH GR 118546 100163			I	Date Ana	al Method: alyzed: Preparation	S 801 2015- : 2015-	01-09			Prep Metho Analyzed By Prepared By	: AK
Parameter			Flag		Cert	R	RL esult		Unit	s	Dilution	RL
GRO			Q.8		B		172		mg/K		4	4.00
				Flag	Cert	Result	Units		ition	Spike Amount	Percent Recovery	Recovery Limits
Surrogate				0							and the second state of th	
Surrogate Trifluorotolu	ene (TFT)					6.69	mg/Kg		4	8.00	84	70 - 130

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Report Date State A Tan	: January 9, 2015 k Battery	8		k Order: 150 e A Tank Ba	Page Number: 10 of 23 Lea Co., NM		
Sample: 38	3891 - SS-5				5		
Laboratory: Analysis:	Midland Chloride (Titratio	n)	Analytic	al Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	118504		Date Analyzed: 2015-01-08			Analyzed By:	AK
Prep Batch:	100198		Sample I	Preparation:	2015-01-08	Prepared By:	AK
				RL			
Parameter		Flag	Cert	Result	Units	Dilution	RL
Chloride				147	mg/Kg	5	4.00

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## Method Blanks

Method B	Blank (1)	QC Batch:	118504
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QC Batch: Prep Batch:	118504 100198		Date Analyzed: QC Preparation:	2015-01-08 2015-01-08	Analyzed By: Prepared By:	
Parameter		Flag	Cert	MDL Result	Units	RL
Chloride	an a			<3.85	mg/Kg	4

### Method Blank (1) QC Batch: 118521

QC Batch:	118521	Date Analyzed:	2015-01-09	Analyzed By:	SC
Prep Batch:	100187	QC Preparation:	2015-01-08	Prepared By:	SC

n-Tricosane			94.0	mg/Kg	1	100	94	70 - 130
Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
DRO				8	<1	7.41	mg/Kg	50
Parameter	-	Fla	ıg	Cert		DL sult	Units	$\mathbf{RL}$

#### Method Blank (1) QC Batch: 118545

QC Batch: Prep Batch:	118545 100163	-1	Date Analyzed: QC Preparation:	2015-01-09 2015-01-07	Analyzed By: Prepared By:	
				MDL		
Parameter		Flag	Cert	Result	Units	RL
Benzene			¥	< 0.00533	mg/Kg	0.02
Toluene			,	< 0.00645	mg/Kg	0.02
Ethylbenzene	9		ж	< 0.0116	mg/Kg	0.02
Xylene			8	< 0.00874	mg/Kg	0.02

Report Date: January 9, 2015 State A Tank Battery				er: 150108 ank Batter			÷	er: 12 of 23 ea Co., NM
Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	and a second		1.74	mg/Kg	1	2.00	87	70 - 130
4-Bromofluorobenzene (4-BFB)			2.00	mg/Kg	1	2.00	100	70 - 130

## Method Blank (1) QC Batch: 118546

QC Batch: 118546 Prep Batch: 100163			nalyzed: eparation:	2015-01-0 2015-01-0			Analyzed Prepared	
Parameter	Flag		Cert		MDL Result		Units	RL
GRO			8		<2.32		mg/Kg	4
Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB)			1.76 1.89	mg/Kg mg/Kg	1 1	2.00 2.00	88 94	70 - 130 70 - 130

Prep Batch: 100187

Work Order: 15010810 State A Tank Battery Page Number: 13 of 23 Lea Co., NM

Prepared By: SC

## Laboratory Control Spikes

#### Laboratory Control Spike (LCS-1)

QC Batch: Prep Batch:	118504 100198			e Analyzee Preparatie		5-01-08 5-01-08				yzed B ared B	0
rep Baten.	100130		QU .	reparation	511. 201	0-01-00			Trep	area D	y. AR
				LCS			Spike	М	atrix		Rec.
Param		F	C I	Result	Units	Dil.	Amount	R	csult R	ec.	Limit
Chloride				2740	mg/Kg	5	2500	<	19.2 1	10	85 - 115
Percent recov	very is based on the spi	ke rest	ılt. RPD	is based o	on the sp	oike and sp	ike duplica	ate res	ult.		
			LCSD			Spike	Matrix		Rcc.		RPD
Param	1	FC	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride			2600	mg/Kg	5	2500	<19.2	104	85 - 115	5	20
Percent recov	very is based on the spi	ke rest	ilt. RPD	is based o	on the sp	oike and sp	ike duplice	ate res	ult.		
Laboratory	Control Spike (LCS	-1)									
QC Batch:	118521		Date	e Analyze	d: 201	5-01-09			Ana	lyzed E	y: SC

Param	F	С	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	,	8	208	mg/Kg	1	250	<7.41	83	70 - 130

QC Preparation: 2015-01-08

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

			LCSD			Spike	Matrix		Rec.		RPD
Param	F	С	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
DRO		A	229	mg/Kg	1	250	<7.41	92	70 - 130	10	20
Percent recovery is based on t	he spike	result	t. RPD is	s based or	n the s	pike and sp	oike duplic	ate resu	ılt.		
	LO	CS	LCSD				Spike	LCS	5 LCSI	)	Rec.
Surrogate	Res	sult	Result	; Un	its	Dil.	Amount	Rec	. Rec.		Limit
n-Tricosane	92	2.4	95.5	mg/	/Kg	1	100	92	96		70 - 130

Report Date: January 9, 2015 State A Tank Battery						15010810 Battery		- Partition and a start	Page	e Number: Lea	14 of 23 Co., NM
Laboratory Control Spike (L	CS-1	L)									
QC Batch: 118545			Da	te Analyz	ed: 20	015-01-09			А	nalyzed B	y: AK
Prep Batch: 100163			QC	Preparat	ion: 20	015-01-07			P	repared B	y: AK
Param		F	С	LCS Result	Units	Dil.	Spike Amount		atrix esult	Rec.	Rec. Limit
Benzene		r		1.71	mg/Kg		2.00		00533	86	70 - 130
Toluene			8	1.79	mg/Kg		2.00		00533	90	70 - 130 70 - 130
Ethylbenzene			8	1.88	mg/Kg		2.00		.0116	94	70 - 130
Xylene			8	5.67	mg/Kg		6.00		00874	94	70 - 130
Percent recovery is based on the :	spike	rest	ılt. RPI	) is based			spike duplic				
			LCSD			Spike	Matrix		Rec		RPD
Param	F	С	Result		Dil.	Amount	Result	Rec.	Limi		Limit
Benzene		ß	1.55	mg/Kg	1	2.00	< 0.00533	78	70 - 1	30 10	20
Toluene		8	1.64	mg/Kg	1	2.00	< 0.00645	82	70 - 1	30 9	20
Ethylbenzene		B	1.74	mg/Kg		2.00	<0.0116	87	70 - 1	30 8	20
Xylene		в	5.29	mg/Kg	1	6.00	< 0.00874	88	70 - 1	30 7	20
Percent recovery is based on the	spike	rest	ilt. RPI	) is based	on the	spike and	spike duplic	ate res	ult.		
			T	CS LO	CSD		Sn	ike	LCS	LCSD	Rec.
Surrogate					esult	Units		ount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	erer research and below	in the Philaneously				mg/Kg		00	86	83	70 - 130
			*			ILLE/ILE					
· ,						mg/Kg		00	101	94	70 - 130
4-Bromofluorobenzene (4-BFB) Laboratory Control Spike (La QC Batch: 118546	CS-1	l)	2 Da		.89 ed: 20				A	94 nalyzed B repared B	y: AK
4-Bromofluorobenzene (4-BFB) Laboratory Control Spike (Lo QC Batch: 118546 Prep Batch: 100163	CS-1		Da QC	.02 1 te Analyze Preparat LCS	.89 ed: 20 ion: 20	mg/Kg 015-01-09 015-01-07	<u>1</u> 2. Spike	00 M	A: Pi atrix	nalyzed B repared B	y: AK Rec.
4-Bromofluorobenzene (4-BFB) Laboratory Control Spike (La QC Batch: 118546 Prep Batch: 100163 Param	CS-1	L) F	2 Dat QC C	.02 1 te Analyze Preparat LCS Result	.89 ed: 20 ion: 20 Unit:	mg/Kg 015-01-09 015-01-07 Dil.	1 2. Spike Amount	00 M	A: Pr atrix csult	nalyzed B repared B Rec.	y: AK y: AK Rec. Limit
4-Bromofluorobenzene (4-BFB) Laboratory Control Spike (Lo QC Batch: 118546 Prep Batch: 100163 Param GRO		F	Da QC C	.02 1 te Analyze Preparat LCS <u>Result</u> 14.3	.89 ed: 20 ion: 20 Unit: mg/K	mg/Kg 015-01-09 015-01-07 <u>Dil.</u> g 1	1 2. Spike Amount 20.0	00 M ; R <	A: Pr esult 2.32	nalyzed B repared B	y: AK y: AK Rec.
4-Bromofluorobenzene (4-BFB) Laboratory Control Spike (Lo QC Batch: 118546 Prep Batch: 100163 Param GRO		F	Da QC C alt. RPI	.02 1 te Analyze Preparat LCS Result 14.3 D is based	.89 ed: 20 ion: 20 Unit: mg/K	mg/Kg 015-01-09 015-01-07 g 1 spike and	1 2. Spike Amount 20.0 spike duplic	00 M ; R <	A: Pr atrix csult 2.32 ult.	nalyzed B repared B Rec. 72	y: AK y: AK Rec. Limit 70 - 130
4-Bromofluorobenzene (4-BFB) Laboratory Control Spike (Le QC Batch: 118546 Prep Batch: 100163 Param GRO Percent recovery is based on the s		F	Da QC <u>C</u> ilt. RPI LCSE	.02 1 te Analyze Preparat LCS Result 14.3 D is based	.89 ed: 20 ion: 20 Units mg/K on the s	mg/Kg 015-01-09 015-01-07 g 1 spike and Spike	1 2. Spike Amount 20.0 spike duplic Matrix	00 M ; R <	A: Pr esult 2.32	nalyzed B repared B Rec. 72	y: AK y: AK Rec. Limit
4-Bromofluorobenzene (4-BFB) Laboratory Control Spike (Le QC Batch: 118546 Prep Batch: 100163 Param GRO	spike	F	Da QC C alt. RPI	.02 1 te Analyze Preparat LCS Result 14.3 D is based	.89 ed: 20 ion: 20 Units mg/K on the Dil.	mg/Kg 015-01-09 015-01-07 g 1 spike and	1 2. Spike Amount 20.0 spike duplic Matrix	M R ate res	A: Pr esult (2.32 ult. Rec.	nalyzed B repared B Rec. 72 RPD	y: AK y: AK <u>Limit</u> 70 - 130 RPD

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control spikes continued							2	
•	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	1.62	1.77	mg/Kg	1	2.00	81	88	70 - 130
4-Bromofluorobenzene (4-BFB)	1.94	1.96	mg/Kg	1	2.00	97	98	70 - 130

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## **Matrix Spikes**

Matrix Spike (MS-1)

QC Batch: 118504 Prep Batch: 100198				e Analyzo Preparat		15-01-08 15-01-08				yzed By ared By	
Param		F	С	MS Result	Units	Dil.	Spike Amount		atrix sult Rec		Rec. Limit
Chloride				12000	mg/Kg	5	2500	92	216 11	. 78	.9 - 121
Percent recovery is based o	n the spik	e resi	ult. RPD	) is based	on the s	spike and s	spike dupli	cate re	sult.		
			MSD			Spike	Matrix		Rec.		RPD
Param	F	С	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride			11900	mg/Kg	5	2500	9216	107	78.9 - 121	1	20
Percent recovery is based o	n the spike	e rest	ult. RPD	is based	on the s	spike and s	pike dupli	cate rea	sult.		

Spiked Sample: 383837

#### Matrix Spike (xMS-1) Spiked Sample: 383857

MS Spike Matrix Rec.					340			G		n
	Prep Batch: 100187 QC Preparation: 2015-01-08 Prepared By	Prep Batch:	100187	ເ	C Prepara	tion: 2015	-01-08		Prepared	By: SC

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	С	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		8	192	mg/Kg	1	250	<7.41	77	70 - 130	9	20
Percent recovery is based	on the spike	resu	lt. RPD	is based or	n the :	pike and sp	oike duplic	ate res	ult.		
	Ν	1S	MSI	)			Spike	M	S MS	D	Rec.
Surrogate	Re	sult	Resu	lt U:	nits	Dil.	Amount	Re	ec. Ree	3.	Limit
n-Tricosane	91	9.8	91.1	mg	/Kg	1	100	10	0 91	And the second second second	70 - 130

Prep Batch:100163QC Preparation:2015-01-07Prepared By:AParamFCResultUnitsDil.AmountResultRec.LimBenzoneaa1.37mg/Kg12.00<0.005336870 - 1Toluene*1.48mg/Kg12.00<0.006457470 - 1Ethylhenzene*1.59mg/Kg12.00<0.008748070 - 1Xylene*4.81mg/Kg12.00<0.008748070 - 1Percent recovery is based on the spike result.RPDbis based on the spike and spike duplicate result.ParamFCResultUnitsDil.AmountResultRec.RPDBenzene $\mathbf{q}$ *1.43mg/Kg12.00<0.006457270 - 13022Toluene*1.43mg/Kg12.00<0.008747870 - 13032Zylene*1.65mg/Kg12.00<0.008747870 - 13032Percent recovery is based on the spike result.RPD is based on the spike duplicate result.MSMSDRec.LimitMatrixRecultMSDSpikeMSMSDRec.LimitTrifluorotoluene (TFT)1.621.69mg/Kg12929570 - 14-Bromofluorobenzene (4-BFB)1.841.90mg/Kg12	Report Date: January 9, State A Tank Battery	2015					15010810 & Battery			Page 1		17 of 23 Co., NM	
Prep Batch:100163QC Preparation:2015-01-07Prepared By:AParamFCResultUnitsDil.AmountResultRecBenzencaa:1.37mg/Kg12.00<0.005336870 - 1Toluenc*1.48mg/Kg12.00<0.006457470 - 1Ethylbenzene*1.59mg/Kg12.00<0.006457470 - 1Xylene*4.81mg/Kg16.00<0.008748070 - 1Percent recovery is based on the spike result.RDDSpikeMatrixRec.RefParamFCResultUnitsDil.AmountResultRec.LimitParamFCResultUnitsDil.AmountResultRec.RefParamFCResultUnitsDil.AmountRec.LimitRefBenzeneaa1.43mg/Kg12.00<0.008747870 - 13022Toluene*1.43mg/Kg12.00<0.008747870 - 13032Striptenzene*4.65mg/Kg16.00<0.008747870 - 13032StropateMSDSpikeMSDRecRec.LimitDil.AmountRec.RecLimitThylence*1.621.69mg/Kg <th>Matrix Spike (MS-1)</th> <th>Spiked S</th> <th>ample</th> <th>e: 383642</th> <th>1</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>	Matrix Spike (MS-1)	Spiked S	ample	e: 383642	1								
ParamFCResultUnitsDil.AmountResultRec.LimBenzene $\circ$											•	•	
ParamFCResultUnitsDil.AmountResultRec.LimBenzene $\circ$					MG			Spiles	M	a tuise	×	Das	
Benzonc $\mathbf{q}$ $\mathbf{q}$ $\mathbf{s}$ $1.37$ $mg/Kg$ $1$ $2.00$ $< 0.00533$ $68$ $70 - 1$ Toluene $\mathbf{s}$ $1.48$ $mg/Kg$ $1$ $2.00$ $< 0.00645$ $74$ $70 - 1$ Zylene $\mathbf{s}$ $1.59$ $mg/Kg$ $1$ $2.00$ $< 0.00645$ $74$ $70 - 1$ Percent recovery is based on the spike result.RPD is based on the spike and spike duplicate result.ParamFCResultUnitsDil.AmountResultRec.ImitRPDImitBenzene $\mathbf{q}$ $\mathbf{q}$ $\mathbf{s}$ $1.34$ $mg/Kg$ $1$ $2.00$ $< 0.00645$ $72$ $70 - 130$ $2$ $2$ Toluene $\mathbf{s}$ $1.43$ $mg/Kg$ $1$ $2.00$ $< 0.00645$ $72$ $70 - 130$ $2$ $2$ Toluene $\mathbf{s}$ $1.43$ $mg/Kg$ $1$ $2.00$ $< 0.00645$ $72$ $70 - 130$ $2$ $2$ Ethylbenzene $\mathbf{s}$ $1.43$ $mg/Kg$ $1$ $2.00$ $< 0.00645$ $77$ $70 - 130$ $3$ $2$ Percent recovery is based on the spike result.RPD is based on the spike and spike duplicate result. $MS$ MSDSpikeMS MSDRecSurrogateMSMSDSpikeMSMSDRecLim $Marix$ RecLimTrifluoroblence (TFT) $1.62$ $1.69$ $mg/Kg$ $1$ $2$ $92$ $95$ $70 - 1$ Matrix Spike (MS-1)Spiked Sam	Param		F	С		Units	Dil				Roc		
Toluene*1.48mg/Kg12.00<0.006457470 - 1Ethylhenzene*1.59mg/Kg12.00<0.001645		0										70 - 130	
Ethylhenzene*1.59mg/Kg12.00<0.01168070 - 1Xylene*4.81mg/Kg16.00<0.00874		Q	ų										
Xylene*4.81mg/Kg16.00<0.008748070 - 1Percent recovery is based on the spike result.RPD is based on the spike and spike duplicate result.MSDSpikeMatrixRec.RefRefParamFCResultUnitsDil.AmountResultRec.LimitRPDLinBenzene $q.$ $q.$ $ng/Kg$ 12.00<0.00533							-					70 - 130	
Percent recovery is based on the spike and spike duplicate result.         MSD       Spike       Matrix       Rec.       RI         Benzene       a       1.34       mg/Kg       1<2.00       <0.00633       67       0       130       2       Z         Toluene       *       1.43       mg/Kg       1<2.00       <0.00645       72       70 - 130       3       2       Z       Z       Z       Z       Z       Z       Z       Z       Z       R       Z       Z       Z       Z       Z <th colsp<="" td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>Ŷ</td><td></td><td></td><td></td><td></td><td></td></th>	<td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Ŷ</td> <td></td> <td></td> <td></td> <td></td> <td></td>							Ŷ					
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ParamFCResultUnitsDil.AmountResultRec.LimitRPDLinBenzeneQ.a1.34mg/Kg12.00<0.00533	Percent recovery is based	on the spik	e rest	ilt. RPL	is base	d on the	spike and	spike duplic	ate res	ult.			
Benzene $q$ $q$ $n$ 1.34         mg/Kg         1         2.00         <0.00533         67         70 - 130         2         2           Toluene $n$ 1.43         mg/Kg         1         2.00         <0.00645				MSD			Spike	Matrix		Rec.		RPD	
Toluene*1.43 $mg/Kg$ 12.00<0.0064572701.3032Ethylbenzene*1.52 $mg/Kg$ 12.00<0.0116	Param	F	C Y	Result	Unit	ts Dil.	Amount	Result	Rec.	Limit	RPD	Limit	
Ethylbenzene*1.52mg/Kg12.00<0.0167670 - 13042Xylene*4.65mg/Kg16.00<0.00874		Q. Q	× 6	1.34	mg/I	Kg 1	2.00	< 0.00533	67	70 - 130	) 2	20	
Xylencs4.65mg/Kg16.00<0.008747870 - 13032Percent recovery is based on the spike result.RPD is based on the spike and spike duplicate result.MSMSDSpikeMSMSDRec.SurrogateResultResultUnitsDil.AmountRec.Rec.LimTrifluorotoluene (TFT)1.621.69mg/Kg12818470 - 14-Bromofluorobenzene (4-BFB)1.841.90mg/Kg12929570 - 1Matrix Spike (MS-1)Spiked Sample:383703QC Preparation:2015-01-09Analyzed By:APrep Batch:100163Qc Preparation:2015-01-07Prepared By:AMSSpikeMatrixRec.LimRec.LimGROqs13.0mg/Kg120.0<2.32	Toluene		8	1.43	mg/I	Kg 1	2.00	< 0.00645	72	70 - 130	) 3	20	
Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.         MS       MSD       Spike       MS       MSD       Rec.       Lim         Surrogate       Result       Units       Dil.       Amount       Rec.       Lim         Trifluorotoluene (TFT) $1.62$ $1.69$ mg/Kg       1       2       81       84       70 - 1         4-Bromofluorobenzene (4-BFB) $1.64$ $1.90$ mg/Kg       1       2       92       95       70 - 1         Matrix Spike (MS-1)       Spiked Sample: $383703$ 2       2       92       95       70 - 1         Matrix Spike (MS-1)       Spiked Sample: $383703$ 2       2       92       95       70 - 1         Matrix Spike (MS-1)       Spiked Sample: $383703$ 2       2       92       95       70 - 1         Matrix Spike (MS-1)       Spiked Sample: $383703$ 2       2       92       95       70 - 1         Matrix Spike (MS-1)       Spike Sample: $383703$ QC Preparation:       2015-01-09       Analyzed By: A         Param       F       C       Result       Units       Dil.	Ethylbenzene		8	1.52			2.00	< 0.0116	76	70 - 130	) 4	20	
MSMSDSpikeMSMSDRec.SurrogateResultResultUnitsDil.AmountRec.Rec.LimTrifluorotoluene (TFT) $1.62$ $1.69$ mg/Kg $1$ $2$ $81$ $84$ $70 - 1$ 4-Bromofluorobenzene (4-BFB) $1.84$ $1.90$ mg/Kg $1$ $2$ $92$ $95$ $70 - 1$ Matrix Spike (MS-1)Spiked Sample: 383703QC Batch: $118546$ Date Analyzed: $2015-01-09$ Analyzed By:APrep Batch: $100163$ QC Preparation: $2015-01-07$ Prepared By:AParamFCResultUnitsDil.AmountResultRec.LimGRO $\phi$ $\phi$ $*$ $13.0$ mg/Kg $1$ $20.0$ $<2.32$ $65$ $70 - 1$ ParamFCResultUnitsDil.AmountResultRec.LimGRO $\phi$ $\phi$ $*$ $13.0$ mg/Kg $1$ $20.0$ $<2.32$ $65$ $70 - 1$ ParamFCResultUnitsDil.AmountRec.RefGRO $s$ $15.6$ mg/Kg $1$ $20.0$ $<2.32$ $78$ $70 - 130$ $18$ $24$ Percent recovery is based on the spike result.RPD is based on the spike and spike duplicate result.	Xylene		ы	4.65	mg/I	Kg 1	6.00	< 0.00874	78	70 - 130	) 3	20	
4-Bromofluorobenzene (4-BFB) $1.84$ $1.90$ $mg/Kg$ $1$ $2$ $92$ $95$ $70-1$ Matrix Spike (MS-1)       Spiked Sample: $383703$ $202$ $92$ $95$ $70-1$ QC Batch:       118546       Date Analyzed: $2015-01-09$ Analyzed By: A         Prep Batch: $100163$ QC Preparation: $2015-01-07$ Prepared By: A         Param       F       C       Result       Units       Dil.       Amount       Result       Rec.       Limit         GRO $q.$ $s$ $13.0$ $mg/Kg$ $1$ $20.0$ $<2.32$ $65$ $70-1$ Percent recovery is based on the spike result.       RPD is based on the spike and spike duplicate result.       RPD Limit       RPD Limit <th< th=""><th></th><th></th><th></th><th>Re</th><th>sult</th><th>Result</th><th></th><th>Dil. Am</th><th>ount</th><th>Rec.</th><th>Rec.</th><th>Rec. Limit</th></th<>				Re	sult	Result		Dil. Am	ount	Rec.	Rec.	Rec. Limit	
Matrix Spike (MS-1)       Spiked Sample: 383703         QC Batch:       118546       Date Analyzed:       2015-01-09       Analyzed By: A         Prep Batch:       100163       QC Preparation:       2015-01-07       Prepared By: A         MS       Spike       Matrix       Rec.       Limit         GRO $\mathbf{Q} \cdot \mathbf{Q} \cdot \mathbf{S}$ 13.0       mg/Kg       1       20.0       <2.32												70 - 130	
QC Batch:118546Date Analyzed:2015-01-09Analyzed By:APrep Batch:100163QC Preparation:2015-01-07Prepared By:AParamFCResultUnitsDil.AmountResultRec.LimitGRO $\mathbf{e}$ $\mathbf{e}$ *13.0mg/Kg120.0<2.32	4-Bromofluorobenzene (4-)	BFB)		1.	.84	1.90	mg/Kg	1	2	92	95	70 - 130	
Param       F       C       Result       Units       Dil.       Amount       Result       Rec.       Limit         GRO $q$ $q$ $s$ 13.0       mg/Kg       1       20.0       <2.32       65       70 - 1         Percent recovery is based on the spike result.       RPD is based on the spike and spike duplicate result.       MSD       Spike       Matrix       Rec.       RF         Param       F       C       Result       Units       Dil.       Amount       Result       RPD       Limit       RPD       Limit         GRO $s$ 15.6       mg/Kg       1       20.0       <2.32       78       70 - 130       18       20         Percent recovery is based on the spike result.       RPD is based on the spike and spike duplicate result.       Percent recovery is based on the spike result.       RPD is based on the spike and spike duplicate result.	QC Batch: 118546	Spiked Sa	mple	Dat	e Analy						the second second	en and a second s	
GRO       q.       g.       13.0       mg/Kg       1       20.0       <2.32       65       70 - 1         Percent recovery is based on the spike result.       RPD is based on the spike and spike duplicate result.         MSD       Spike       Matrix       Rec.       RF         Param       F       C       Result       Units       Dil.       Amount       Result       Rec.       RF         GRO       s       15.6       mg/Kg       1       20.0       <2.32	D		P	a		** ••	Di					Rec.	
Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.          MSD       Spike       Matrix       Rec.       RF         Param       F       C       Result       Units       Dil.       Amount       Result       Rec.       RF         GRO       s       15.6       mg/Kg       1       20.0       <2.32		AAA										Limit	
MSDSpikeMatrixRec.RFParamFCResultUnitsDil.AmountResultRec.LimitRPDLimGROs15.6mg/Kg120.0<2.32		White makes the second state of the second sta		tanta desire telever	1.4. and the other balances			The second s			00	10 - 130	
Param         F         C         Result         Units         Dil.         Amount         Result         Rec.         Limit         RPD         Lim           GRO         s         15.6         mg/Kg         1         20.0         <2.32	Percent recovery is based (	on the spik	e resu	lt. RPD	is base	d on the	spike and s	spike duplica	ate resi	ult.			
GROs15.6mg/Kg120.0<2.327870 - 1301824Percent recovery is based on the spike result.RPD is based on the spike and spike duplicate result.				MSD			Spike	Matrix		Rec.		RPD	
Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.		F	С									Limit	
	GRO		8	15.6	mg/ł	۲g 1	20.0	<2.32	78	70 - 130	18	20	
	Percent recovery is based of	on the spik	e resu	lt. RPD	is base	d on the	spike and a						

Report Date: January 9, 2015 State A Tank Battery			: 15010810 1k Battery			Page Number: 18 of 23 Lea Co., NM			
matrix spikes continued									
	MS	MSD			Spike	MS	MSD	Rec.	
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit	
	MS	MSD			Spike	MS	MSD	Rec.	
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit	
Trifluorotoluene (TFT)	1.65	1.72	mg/Kg	1	2	82	86	70 - 130	
4-Bromofluorobenzene (4-BFB)	1.81	1.82	mg/Kg	1	2	90	91	70 - 130	

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# **Calibration Standards**

Standard (ICV-1)

QC Batch:	118504			Date A	Analyzed:	2015-01-08		Analy	zed By: AK
					ICVs True	ICVs Found	ICVs Percent	Percent Recovery	Date
Param		Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride				mg/Kg	100	101	101	85 - 115	2015-01-08

### Standard (CCV-1)

QC Batch: 118504				Date 1	Analyzed:	2015-01-08		Analy	zed By: AK
					CCVs	CCVs	CCVs	Percent	
					True	Found	Percent	Recovery	Date
Param	F	lag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride				mg/Kg	100	99.0	99	85 - 115	2015-01-08

## Standard (CCV-1)

QC Batch:	118521		Date	Analyzed:	2015-01-09		Anal	yzed By: SC
				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		8	mg/Kg	250	228	91	80 - 120	2015-01-09

## Standard (CCV-2)

QC Batch:	118521		Date	Analyzed:	2015-01-09		Analy	vzed By: SC
				CCVs True	CCV <sub>8</sub> Found	CCVs Percent	Percent Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		8	mg/Kg	250	258	103	80 - 120	2015-01-09

Report Date: January State A Tank Battery	9, 2015			/ork Order: tate A Tanl	Page Number: 20 of 2 Lea Co., NM			
Standard (CCV-1)				-		Ь		
QC Batch: 118545			Date Analyzed: 2015-01-09				Analy	zed By: AK
				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		8	mg/kg	0.100	0.0930	93	80 - 120	2015-01-09
Tolucne		8	mg/kg	0.100	0.0940	94	80 - 120	2015-01-09
Ethylbenzene		8	mg/kg	0.100	0.0928	93	80 - 120	2015-01-09
Xylene		8	mg/kg	0.300	0.280	93	80 - 120	2015-01-09

## Standard (CCV-2)

QC Batch: 118545			Date An	Analyzed By: Ak				
				CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		B	mg/kg	0.100	0.0945	94	80 - 120	2015-01-09
Toluene		8	mg/kg	0.100	0.0941	94	80 - 120	2015-01-09
Ethylbenzene		8	mg/kg	0.100	0.0932	93	80 - 120	2015-01-09
Xylene		8	mg/kg	0.300	0.279	93	80 - 120	2015-01-09

## Standard (CCV-3)

QC Batch: 118545			Analy	zed By: AK				
				CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		Ň	mg/kg	0.100	0.0955	96	80 - 120	2015-01-09
Toluene		8	mg/kg	0.100	0.0962	96	80 - 120	2015-01-09
Ethylbenzene		*	mg/kg	0.100	0.0943	94	80 - 120	2015-01-09
Xylene		ы	mg/kg	0.300	0.283	94	80 - 120	2015-01-09

Standard (CCV-1)

QC Batch: 118546

Date Analyzed: 2015-01-09

Analyzed By: AK

Report Dat State A Tar	e: January 9, 20 nk Battery	)15		Work Ord State A '	Page Number: 21 of 23 Lea Co., NM			
Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		8	mg/Kg	1.00	1.03	103	80 - 120	2015-01-09
Standard (	(CCV-2)							
QC Batch:	118546		Date	Analyzed:	2015-01-09		Analy	zed By: AK
5		<b>a</b> .		CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param GRO	Flag	Cert 8	Units mg/Kg	Conc. 1.00	Conc. 0.928	Recovery 93	Limits 80 - 120	Analyzed 2015-01-09
Standard (	(CCV-3)							
QC Batch:	118546		Date	Analyzed:	2015-01-09		Analy	zed By: AK
				CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param GRO	Flag	Cert *	Units mg/Kg	Conc. 1.00	Conc. 0.980	Recovery 98	Limits 80 - 120	Analyzed 2015-01-09

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## Appendix

## **Report Definitions**

Definition
Method Detection Limit
Minimum Quantitation Limit
Sample Detection Limit

## Laboratory Certifications

	Certifying	Certification	Laboratory
С	Authority	Number	Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
•	WBE	237019	TraceAnalysis
1	PJLA	L14-103	El Paso
2	P.JLA	L14-93	Lubbock
3	Kansas	Kansas E-10317	Lubbock
4	LELAP	LELAP-02002	El Paso
5	LELAP	LELAP-02003	Lubbock
6	NELAP	T104704221-12-3	El Paso
7	NELAP	T104704219-14-10	Lubbock
8	NELAP	T104704392-14-8	Midland
9		2014-018	Lubbock

## **Standard Flags**

- F Description
- B Analyte detected in the corresponding method blank above the method detection limit
- H Analyzed out of hold time
- J Estimated concentration
- Jb The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
- Je Estimated concentration exceeding calibration range.
- MI1 Split peak or shoulder peak
- MI2 Instrument software did not integrate
- MI3 Instrument software misidentified the peak
- MI4 Instrument software integrated improperly
- MI5 Baseline correction

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#### F Description

Qc Calibration check outside of laboratory limits.

Qr RPD outside of laboratory limits

Qs Spike recovery outside of laboratory limits.

Qsr Surrogate recovery outside of laboratory limits.

U The analyte is not detected above the SDL

## **Result Comments**

1 Dilution due to surfactants.

2 Dilution due to surfactants.

3 Dilution due to surfactants.

4 Dilution due to surfactants.

5 Dilution due to surfactants.

6 Dilution due to surfactants.

### Attachments

The scanned attachments will follow this page. Please note, each attachment may consist of more than one page.

Custody Record Lesulute Energy 23946 Middlendi IX 79705 23946 Middlendi IX 79705 432-813-8069 432-813-8069 1 1 1100 MEHOD
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200 Ea 5002 B (BioAqu	berdeen Avenue, Suite 9 st Sunset Road, Suite E asin Street, Suite A1 uatic) 2501 Mayes Rd., Suite 100 on & Clark) 3403 Industrial Blvd.	Lubbock, El Paso, Midland, Carrollton, Hobbs,	TX 79424 TX 79922 TX 79703 TX 75006 NM 88240	911 432 972 575	6•794•1296 5•585•3443 2•689•6301 2•242•7750 5•392•7561	Fax 806 • 794 • 1298 Fax 915 • 585 • 4944 Fax 432 • 689 • 6313 Fax 972 • 242 • 7749 Fax 575 • 392 • 4508	
Bill To: Attn:	E-Mail: Resolute Energy 4000 N. Big Spring #500 Midland, TX 79705 James Allison	lab@traceana	lysis.com V	Veb: www.traceanalysis.c Invoice No. 7 Lab Location: Invoice Date: Payment Due: Send To:	Midland 2015-01-09 2015-02-08 TraceAnaly 6701 Abere		
Receiv Projec	der: 15010810	ttery					

Test	Samples	Matrix	Qty	Price	Sub- Total
Description					
BTEX	(383887 - 383890)	soil	4	\$60.00	\$240.00
TPH DRO	(383887 - 383890)	soil	4	\$60.00	\$240.00
TPH GRO	(383887 - 383890)	soil	4	\$60.00	\$240.00
Chloride (Titration)	(383887 - 383891)	soil	5	\$20.00	\$100.00
Inorganic Soil Prep	(383887 - 383891)	soil	5	\$5.00	\$25.00

Payment Terms: Net-30

Total \$845.00

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Dr. Blair Leftwich, Director James Taylor, Assistant Director Brian Pellam, Operations Manager

## State A

State A

Jay AllisonSent:Wednesday, January 21, 2015 9:00 AMTo:Patrick Flynn; Dwight MalloryAttachments:State A 1-21-2015.pdf (57 KB)

Pat, attached is the diagram you sent me with the appropriate dimensions and coordinates. I tried to edit it, but it wouldn't allow it so I had to handwrite the notes.

According to Mike Dixon, the owner of the recently drilled water well is Patrick Whitman. I added the coordinates to the diagram. Driving from that location to the battery is exactly 3 miles south on lease roads. I estimate the direct path is 2.5 miles due north of the battery. His "mud level" starts at 138 feet and his water level is from 138 feet to 160 feet. The well was drilled approximately 18 months ago.

Jay

JayAllison Community Relations Specialist Resolute 4000 N Big Spring Office: 432-684-7475 Ext. 8250 Ste. 500 Cell: 432-813-8069 Midland TX 79705 Fax: 432-684-7456

E-mail jallison@resoluteenergy.com

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Vatrick Whitman Water Well 33°04'57"/103°10'11' 2.5 miles LEGEND **Aboveground Piping Resolute Natural Resources Underground Piping (location approximate)** Cocceres Company, LLC. Berm State A #2 Tank Battery Sec 2 - T155 - R37E North Lea County, New, Mexico 103 10 33" 3302'40"/ (not to scale) **Approximate Surface Water Flow** 97 55' Contract of it 61 X -30 1 16 and and thereis 51 22 400 bbl 100 bbi FWKO 400 bbl rh (5) 30 Oil Oil (Steel) (Steel) 100 bbl PW (Steel) -581 41 and the -A 23' 2 55' end. Loadout O 74 90

Note: Underground piping is for process flow demonstration only.

No visible waterways within 500 feet.

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