							2 A.	
District I 1625 N. French Dr., Hobbs, NM 88240		St En angel Mi	ate of	New Mex	ico J	AN 1 2 2012	Form C-141	
District II 1301 W. Grand Avenue, Artesia, NM 882	10	Energy Mi	nerais	and matura	a Resources		Revised October 10, 2003	
District III 1000 Rio Brazos Road, Aztec, NM 87410)	Oil C	Conser	vation Div	vision	RECEIVED	Submit 2 Copies to appropriate	
District IV 1220 S. St. Emneis Dr., Santa Fr. NM 87	505	1220	South	1 St. Franc	is Dr.	a the for an a line and	with Rule 116 on back	
		Sa	inta Fo	e, NM 875	05		Side of form	
	Rel	ease Notific	cation	n and Co	orrective A	ction	東京にも知道	
Nome of Company COG		GUC		OPERA	IUK	At Filie	ial Report 🔲 Final Report	
Address 550 W. Texas, Su	ite 100. Mi	idland. TX 7970	1	Telephone N	No. 432-	230-0077		
Facility Name Falcor	Federal 2	and 3H		Facility Typ	e Tan	k Battery		
Surface Owner Federal		Mineral	Jwner			Lease	No.	
					FAL	CON FEDERA	22	
Linit Latter Section Townshi	Parma	LUCA	North	N OF RE	LEASE API	# 30-025-3	39009	
B 9 19S	32E	reet from the	NOTUD	Soun Line	Feet from the	Lasy west Line	Lea .	
	<u></u>	Latitude 32 4	40.857	Longitu	ide 103 46.339	<u> </u>	L	
		NAT	URE	OF RELI	EASE	/	. •	
Type of Release Produced fluid				Volume of	Release 12bbls	Volume	Recovered 10bbls	
Source of Release Heater treater				Date and H	lour of Occurrenc	e Date and 04/11/20	Hour of Discovery	
Was Immediate Notice Given?			<u></u>	11 YES, To Whom?				
]Yes 🛛	No 🛛 Not Re	equired					
By Whom?		· · · · · · · · · · · · · · · · · · ·		Date and H	lour	1 197.1		
Was a Watercourse Reached?	🗍 Yes 🗵] No		IT YES, VO	olume impacting t	he Watercourse.		
If a Watercourse was Impacted, De	cribe Fully.	•		<u> </u>				
D. 1. C	- d'at A sta							
Describe Cause of Problem and Rei	nedial Actio	n Taken.*						
A hole in the fire tube caused the re	lease. The h	eater is currently	out of se	rvice and is g	going to be replac	ed with a new one		
Describe Area Affected and Cleanu	p Action Tal	ken.*		······		······································		
Initially 10kb) of fluid upp release) fina ma sha fi	no take and we we	m chlai	o recover 10	hle with a manu	n mule The estin		
contained inside the berm wall arou	nd the produ	ction equipment.	The spil	l area measur	ed 30' x 30'. Con	taminated soil has	been scraped and hauled	
appropriately. Tetra Tech will samp	le the spill s	ite area to delineat	te any po	ossible contar	nination from the	release and we wi	Il present a remediation work	
pian to the NMOCD / BLM for app	roval prior u	o any signineant r	emedian	ion work.				
I hereby certify that the information	given above	is true and comp	lete to ti	ne best of my	knowledge and u	nderstand that pur	suant to NMOCD rules and	
regulations all operators are require	to report as	nd/or file certain r	elease n	olifications ar	nd perform correct arked as "Final R	tive actions for rel eport" does not rel	eases which may endanger	
should their operations have failed i	o adequately	investigate and r	emediat	e contaminati	on that pose a thr	eat to ground wate	r, surface water, human health	
or the environment. In addition, NM	10CD accep	stance of a C-141	report d	oes not reliev	e the operator of i	responsibility for c	ompliance with any other	
recersi, state, or local laws and/or h	gulations.				OIL CONS	SERVATION	DIVISION .	
	17		~		<u>012 0011</u>	h. 2/101	La YORMA	
Signature:	` (`	<u> </u>		Annual ba	District Summer	and and	8	
Printed Name: Jo	sh Russo	• 		Approved by		* Environm	anal Specialist	
Title. HSE	Coordinator			Approval Dat	e: 10/25/11	<u>د</u> Expiration	Date:	
E-mail Address: jrusso@cc	nchoresourc	es.com	!	Conditions of	Approval: _		Attached	
Date: 04/18/2011	hone: 4	32-212-2399					IRP-10-12-2858	
Attach Additional Sheets If Nece	ssary						لـــــــــــــــــــــــــــــــــــــ	

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SITE INFORMATION

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		Report	t Type: Clo	sure Re	oort		
General Site Info	ormation:						
Site:	a sin an	Falcon Fede	eral 2 and 3H	a la sugar la sugar com	and an a second reading of the second se	and the advance of the second state of the sec	
Company:		COG Operat	ting LLC			<u> </u>	
Section, Townsl	hip and Range	Sec 9	T19S	R32E	Т	·····	
Lease Number:					· · · · · · · · · · · · · · · · · · ·		
County:		Lea County					
GPS:			32.68165° N			103.77211° W	
Surface Owner:		Federal					
Mineral Owner:							
Directions:		From Hwy 529 travel for 1.7 n	and CR 126 trave niles, turn right and	əl south on CF d travel 0.7 mi	R 126 for 7.9 m les, turn right a	niles, turn left onto lease road and and travel for 0.2 miles to site.	
Release Data:	มาร์ สามาร์ สามาร์ มาร์ สามาร์ สามาร์ สามาร์ สามาร์ มาร์ สามาร์ สามาร์ สามาร์ สามาร์ สามาร์		مان				
Date Heleaseu.	. <u> </u>	Broducod Eli		- Signat			
Type neiease.	mination	Hoator Treat		ENV		oecialist V	
Eluid Released		12 hhls		NIMAC	N-DIST	· · · · · · · · · · · · · · · · · · ·	
Fluids Recovered	1.	10 bbls		1012	<u>C112</u>	•	
Official Commun	nication:			MORE LA			
Name:	Pat Filis	(新) 20 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		ನ್ನಿನ ಗಿರ್ಧಾರವನ್ನು ಗ್ರಾಮ್ಮ	like Tavarez	and a second of the second	
Company:	COG Operating 11	<u></u>	-		Totra Tech		
Address	550 W Toyas Ave	Sto 1300	+		1010 N Big S	2ndina	
D C Roy		016. 1000	<u> </u>		1310 N. Dig C	spring	
	Midland Toyoo 707	701			Aidland Toys		
City:		01					
Pnone number:	(432) 686-3023				(432) 682-4559		
Fax:	(432) 684-7137						
Email:	pellis@conchoreso	urces.com			ike.tavarez@	etetratech.com	
Ranking Criteria	vater:	รัตราสาร รรับข้าง สาราว สาราวราชชาติสาราวราช	Ranking Score		an a	Site Data	
<50 ft			20	-			
50-99 ft			10			· · · · · · · · · · · · · · · · · · ·	
>100 ft.			0			0	
WellHead Protecti	ion·		Banking Score			Site Data	
Water Source <1.0	000 ft Private <200 ft	t	20	+		Sile Dala	
Water Source >1,0	000 ft., Private >200 ft	<u>.</u>	0			0	
				L		·····	
Surface Body of Water:			Ranking Score			Site Data	
<200 ft.			20				
200 ft - 1,000 ft.				-		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
>1,000 π.			U	-	• • •	<u> </u>	
• Same Same CTot	al Banking Score					HORES OCD	
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			blessoilBRAL	(ma/ka)	I	JAN 1 2 2012	
	ļ	Benzene	Total BTEX	TPH			
		10	50	5,000	Þ.	RECEIVED	

shranie Sourchuwr (ma/va)						
e Total BTEX	ТРН					
50	5,000					

E. RECEIVED



December 9, 2011

HOBESOCO

JAN 1 2 2012

Mr. Geoffrey Leking Environmental Engineer Specialist Oil Conservation Division, District 1 1625 North French Drive Hobbs, New Mexico 88240

RECEIVED

Re: Closure Report for the COG Operating LLC., Falcon Federal 2 and 3H Tank Battery, Unit B, Section 9, Township 19 South, Range 32 East, Lea County, New Mexico.

Mr. Leking:

Tetra Tech, Inc. (Tetra Tech) was contacted by COG Operating LLC. (COG) to assess a spill from the Falcon Federal 2 and 3H Tank Battery located in Unit B, Section 9, Township 19 South, Range 32 East, Lea County, New Mexico (Site). The spill site coordinates are N 32.68165°, W 103.77211°. The site location is shown on Figures 1 and 2.

Background

According to the State of New Mexico C-141 Initial Report, the leak was discovered on April 11, 2011, and released approximately twelve (12) barrels of produced fluid due to a hole in the fire tube of the heater treater. To alleviate the problem, COG personnel will replace the heater treater. Ten (10) barrels of standing fluids were recovered. The spill was contained within the facility firewall. The initial C-141 form is enclosed in Appendix C.

Groundwater

No water wells were listed within Section 9. According to the NMOCD groundwater map, the average depth to groundwater in the area is approximately 375' below surface. The average depth to groundwater map is shown in Appendix A.



Regulatory

A risk-based evaluation was performed for the Site in accordance with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and Releases, dated August 13, 1993. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene and xylene (collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) in soil. The proposed RRAL for benzene was determined to be 10 parts per million (ppm) or milligrams per kilogram (mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene, and xylene). Based upon the depth to groundwater, the proposed RRAL for TPH is 5,000 mg/kg.

Soil Assessment and Analytical Results

On May 10, 2011, Tetra Tech personnel inspected and sampled the spill area, which measured approximately 30' X 30'. A total of one (1) auger hole (AH-1) was installed using a stainless steel hand auger to assess the impacted soils. Select samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix B. The sampling results are summarized in Table 1. The auger hole location is shown on Figure 3.

Referring to Table 1, all of the submitted samples were below the TPH and BTEX RRAL. A chloride high of 4,160 mg/kg at 0-1' was detected and declined with depth to 4.0' to 5.0' where there was an increase to 2,780 mg/kg, before declining to 397 mg/kg at 7.0'. Based on the results, the deeper chloride impact appears to be historical.

Assessment and Corrective Action

As stated in the approved work plan, deeper excavation of the spill could not be achieve due to proximity of oil and gas equipment, structures or lines, which may cause cave ins and safety concerns for onsite equipment and personnel.

From November 9-16, 2011, Tetra Tech personnel supervised the excavation as recommended in the approved work plan. Approximately 20 cubic yards of impacted soil was hauled to CRI for proper disposal. Once excavated to the appropriate depth, the NMCOD and BLM were contacted and approved the backfilling of the excavation.



Based upon the results of the investigation and approved remediation performed at this site, COG requests closure of this site. The C-141 (Final) is included in Appendix A. If you have any question or comments concerning the activities performed at the Site, please call me at (432) 682-4559.

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Respectfully submitted, TETAA TECH

J

ι Ike Tavarez

Project Manager

cc: Pat Ellis – COG cc: Terry Gregston – BLM

FIGURES

DELORME



www.delorme.com

Data Zoom 10-2 1" = 3.16 mi

ODELORME





TABLES

-1

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Table 1 COG Operating LLC. FALCON FEDERAL 2 AND 3H Eddy County, New Mexico

Sample	Comula Data	Sample	Soil Status		TPH (mg/kg)		Benzene	Toluene	Ethlybenzene	Xylene	Chloride	
ID	Sample Date	Depth (ft)	In-Situ	Removed	GRO	DRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
AH-1	5/10/2011	0-1"		X	376	844	1,220	<0.200	0.836	0.789	2.71	4,160
\$ \$	II	1-1.5'	Х		-	-	-	-	-	-	-	1,090
	11	2-2.5'	Х		-	-	-	-	-	-	-	1,560
	11	3-3.5'	Х		-	-	-	-	-	-	-	899
	11	4-4.5'	Х		-	-	-	-	-	-	-	2,780
	11	5-5.5'	Х		-	-	-	-	-	-	-	2,420
	11	6-6.5'	Х		-	-	-		-	-	-	1,840
	II	7-7.5'	Х		-	-	-	-	-		-	397



Not Analyzed

Excavated Material and Depths

PHOTOGRAPHS

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COG Operating LLC Falcon Fed 2 and 3H Tank Battery Eddy County, New Mexico Site Excavation Date: Nov. 9-16, 2011







View east - 1' bgs excavated

COG Operating LLC Falcon Fed 2 and 3H Tank Battery Eddy County, New Mexico Site Excavation Date: Nov. 9-16, 2011



View south - Backfilling with clean material



View south – Site backfilled with clean material and remediation complete

APPENDIX A

Water Well Data Average Depth to Groundwater (ft) COG - Falcon Federal 2 and 3H Lea County, New Mexico

	18 S	outh	3	B1 East			18 \$	South	3	2 East	t		18 S	outh	3	33 East
6	5	4	3	2	1	6	5	4 65	3	2	1	6	5	4	3	2
7	8	9	10	11	12 400	7 460 82	8	9	10	11	12	7	8 100	9	10	11
18	17	16	15	14	13	18	17	16 84	15	14	13	18	17	16	15	14
19	20	21	22	23	24	19	20 164	21	22 429	23	24	19 > 140	20	21	22	23
30	29	28	27	26	25	30	29	28	27	26	25	30 35	29	28	27	26
31	32	33	34	35 261	36	31	32	33	34 117	35	36	31	32	33	34 177	35
	19 S	outh		B1 East			19 \$	South	3	2 East			19 Se	outh	3	3 East
6	5 SITE	4	3	2	1	6	5	4	3	2	1	6	5	4	3	2
7	8	9	10	11	12	7	8 365	9 SITE	10	11	12	7	8	9	10	11
18	17	16	15	14	13	18	17	16	15	14	13 135 dry	18 340	17 116	16	15	14
19	20	21	22	23	24	19 102	20 345	21	22	23	24	19	20	21	22	23
30	29	28 180	27	26	25	30	29	28	27	26	25	30	29	28	27	26 92 85
31	32	33 101	34	35	36 1 30	31	32	33	34 250	35	36	31	32 185	33	34	35
	20 S	outh	3	B1 East			20 \$	South	32	2 East			20 So	outh	3	3 East
6	5	4	3	2	1	6	5	4	3	2	1	6	5	4	3	2
7	8	9	10 130	11	12	7	8	9	10	11	12	7	8	9	10	11
18	17	16	15	14	13	18 89	17	16	15	14	13	18	17	16	15	14
19	20	21	22	23	24	19	20	21	22	23	24	19	20	21	22	23
30	29	28	27	26	25	30 9.9	29	28	27 1 2.3	26	25	30	29	28	27	26
31	32	33	34	35	36 80	31	32	33	34	35	36	31	32	33	34	35

New Mexico State Engineers Well Reports

USGS Well Reports

Geology and Groundwater Conditions in Southern Eddy, County, NM

NMOCD - Groundwater Data

APPENDIX B

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Summary Report

Ike Tavarez Tetra Tech 1910 N. Big Spring Street Midland, TX 79705 Report Date: June 1, 2011

Work Order: 11051104

Project Name:	COG/Falcon Federal 2 and 3H
Project Number:	114-6400891

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
266100	AH-1 0-1'	soil	2011-05-10	00:00	2011-05-10
266101	AH-1 1-1.5'	soil	2011-05-10	00:00	2011-05-10
266102	AH-1 2-2.5'	soil	2011-05-10	00:00	2011-05-10
266103	AH-1 3-3.5'	soil	2011-05-10	00:00	2011-05-10
266104	AH-1 4-4.5'	soil	2011-05-10	00:00	2011-05-10
266105	AH-1 5-5.5'	soil	2011 - 05 - 10	00:00	2011-05-10
266106	AH-1 6-6.5'	soil	2011-05-10	00:00	2011-05-10
266107	AH-1 7-7.5'	soil	2011-05-10	00:00	2011-05-10

]	BTEX	TPH DRO - NEW	TPH GRO	
	Benzene	Toluene	Ethylbenzene	Xylene	DRO	GRO
Sample - Field Code	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
266100 - AH-1 0-1'	< 0.200	0.836	0.789	2.71	844	376

Sample: 266100 - AH-1 0-1'

Param	\mathbf{Flag}	Result	Units	RL
Chloride		4160	mg/Kg	4

Sample: 266101 - AH-1 1-1.5'

Param	Flag	Result	Units	RL
Chloride		1090	mg/Kg	4

Sample: 266102 - AH-1 2-2.5'

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: June	1, 2011	Work Order: 11051104	Page	Page Number: 2 of 2		
Param	Flag	Result	Units	RL		
		1300	ng	<u>T</u>		
Sample: 266103 -	- AH-1 3-3.5'					
Param	Flag	Result	Units	RL		
Chloride		899	mg/Kg	4		
Sample: 266104 -	- AH-1 4-4.5'					
Param	Flag	Result	Units	RL		
Chloride		2780	mg/Kg	4		
Sample: 266105 -	- AH-1 5-5.5'					
Param	Flag	Result	Units	RL		
Chloride		2420	mg/Kg	4		
Sample: 266106 -	- AH-1 6-6.5'					
Param	Flag	Result	Units	RL		
Chloride .	······································	1840	mg/Kg	4		
Sample: 266107 -	- AH-1 7-7.5'					
Param	Flag	Result	Units	RL		
Chloride		397	mg/Kg	4		



6701 Aherdeen Avenue, Suite 9 200 East Sunset Road, Suite E 5002 Basin Street, Suite A1 6015 Harris Parkway, Suite 110

El Paso, Texas 79922 888 • 586 • 3443 Midland, Texas 79703 Ft Worth, Texas 76132 E-Mait: Tab@traceanalysis.com
 806•794•1296
 FAX 806•794•1298

 915•585•3443
 FAX 915•585•4944

 432•689•6301
 FAX 432•689•6313

 817•201•5260
 FAX 432•689•6313

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Ike Tavarez Tetra Tech 1910 N. Big Spring Street Midland, TX, 79705 Report Date: June 1, 2011

Work Order: 11051104

Project Name: COG/Falcon Federal 2 and 3H Project Number: 114-6400891

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
266100	AH-1 0-1'	soil	2011-05-10	00:00	2011-05-10
266101	AH-1 1-1.5'	soil	2011-05-10	00:00	2011-05-10
266102	AH-1 2-2.5'	soil	2011-05-10	00:00	2011-05-10
266103	AH-1 3-3.5'	soil	2011-05-10	00:00	2011-05-10
266104	AH-1 4-4.5'	soil	2011-05-10	00:00	2011-05-10
266105	AH-1 5-5.5'	soil	2011-05-10	00:00	2011-05-10
266106	AH-1 6-6.5'	soil	2011-05-10	00:00	2011-05-10
266107	AH-1 7-7.5'	soil	2011-05-10	00:00	2011-05-10

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(cs) in which your sample(s) were analyzed.

This report consists of a total of 19 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Michael april

Dr. Blair Leftwich, Director Dr. Michael Abel, Project Manager

Report Contents

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Sample 266100 (AH-1 0-1')	5
Sample 266101 (AH-1 1-1.5')	6
Sample 266102 (AH-1 2-2.5')	6
Sample 266103 (AH-1 3-3.5')	7
Sample 266104 (AH-1 4-4.5')	7
Sample 266105 (AH-1 5-5.5')	7
Sample 266106 (AH-1 6-6.5')	8
Sample 266107 (AH-1 7-7.5')	8
Method Blanks	9
QC Batch 81213 - Method Blank (1)	9
QC Batch 81214 - Method Blank (1)	9
QC Batch 81246 - Method Blank (1)	9
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Laboratory Control Spikes	11
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QC Batch 81214 - LCS (1)	11
QC Batch 81246 - LCS (1)	12
QC Batch 81651 - LCS (1)	12
QC Batch 81213 - MS (1)	13
QC Batch 81214 - MS (1)	13
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Case Narrative

Samples for project COG/Falcon Federal 2 and 3H were received by TraceAnalysis, Inc. on 2011-05-10 and assigned to work order 11051104. Samples for work order 11051104 were received intact at a temperature of 8.4 C.

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

		Prep	Prep	\mathbf{QC}	Analysis
Test	Method	Batch	Date	Batch	Date
BTEX	S 8021B	68938	2011-05-12 at 08:58	81213	2011-05-12 at 21:06
Chloride (Titration)	SM 4500-Cl B	69151	2011-05-20 at 10:57	81651	2011-05-26 at 14:22
TPH DRO - NEW	S 8015 D	68968	2011-05-13 at 10:42	81246	2011-05-13 at 10:42
TPH GRO	S 8015 D	68938	2011-05-12 at 08:58	81214	2011-05-12 at 21:06

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 11051104 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.

Report Date: June 1, 2011 114-6400891

Analytical Report

Sample: 266100 - AH-1 0-1'

Laboratory:	Midland								
Analysis:	BTEX		Analytica	l Method:	S 8021	В		Prep Metho	d: S 5035
QC Batch:	81213		Date Ana	lyzed:	2011-03	5-12		Analyzed By	y: ME
Prep Batch:	68938		Sample P	reparation	n: 2011-08	5-12		Prepared By	y: ME
					RL				
Parameter		Flag	Cert		Result	Uni	ts	Dilution	RL
Benzene			1		< 0.200	mg/ŀ	g	10	0.0200
Toluene			1		0.836	mg/ŀ	(g	10	0.0200
Ethylbenzene	3		1		0.789	mg/F	(g	10	0.0200
Xylene			1		2.71	mg/k	g	10	0.0200
							Spike	Percent	Recovery
Surrogate		Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotolue	ene (TFT)	4		11.2	mg/Kg	10	10.0	112	52.8 - 137
4-Bromofluor	obenzene (4-BFB)			13.0	mg/Kg	10	10.0	130	38.4 - 157

Sample: 266100 - AH-1 0-1'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 81651 69151	Analytic Date An Sample I	al Method: alyzed: Preparation:	SM 4500-Cl B 2011-05-26 2011-05-20	Prep Method: Analyzed By: Prepared By:	N/A AR AR
			RL			
Parameter	Flag	Cert	Result	Units	Dilution	\mathbf{RL}
Chloride			4160	mg/Kg	100	4.00

Sample: 266100 - AH-1 0-1'

Laboratory: Analysis: QC Batch: Prep Batch:	oratory: Midland dysis: TPH DRO - NEW Batch: 81246 p Batch: 68968		alytical Method: te Analyzed: uple Preparation:	S 8015 D 2011-05-13 2011-05-13	Prep Method: Analyzed By: Prepared By:	N/A kg kg
			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
DRO		1	844	mg/Kg	1	50.0

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Surrogate	Flag	Cer	t	Result	Units	Dilu	tion A	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane				245	mg/Kg]	L	100	245	70 - 130
Sample: 26	6100 - AH-1 0-1 ³	,	•							
Laboratory: Analysis: QC Batch: Prep Batch:	Midland TPH GRO 81214 68938			Analytic Date An Sample 1	al Method: alyzed: Preparation	S 801; 2011-(: 2011-(5 D)5-12)5-12		Prep Meth Analyzed F Prepared F	od: S 5035 3y: ME 3y: ME
						\mathbf{RL}				
Parameter		Flag		Cert	R	esult	Uı	nits	Dilution	RL
GRO				1		376	ng/	Kg	10	2.00
								Spike	Percent	Recovery
Surrogate			Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotolue	ene (TFT)				12.4	mg/Kg	10	10.0	124	48.5 - 152
4-Bromofluor	obenzene (4-BFB)				13.2	mg/Kg	10	10.0	132	42 - 159

Sample: 266101 - AH-1 1-1.5'

.

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration 81651 69151	Midland Chloride (Titration) 81651 69151		cal Method: nalyzed: Preparation:	SM 4500-Cl B 2011-05-26 2011-05-20	Prep Method: Analyzed By: Prepared By:	N/A AR AR
				RL			
Parameter		Flag	Cert	Result	Units	Dilution	RL
Chloride				1090	mg/Kg	100	4.00

Sample: 266102 - AH-1 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	81651	Date Analyzed:	2011-05-26	Analyzed By:	AR.
Prep Batch:	69151	Sample Preparation:	2011-05-20	Prepared By:	AR.

continued ...

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sample 26610	02 continued						
Parameter	Flag	Cert	RL Result	Units	Dilution	RL	
Parameter	Flag	Cert	RL Result	Units ng/Kg	Dilution 100		
			1000				
Sample: 26	6103 - AH-1 3-3.5'						
Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 81651 69151	Analytic Date An Sample	al Method: alyzed: Preparation:	SM 4500-Cl B 2011-05-26 2011-05-20	Prep Method: Analyzed By: Prepared By:	N/A AR AR	
Parameter	Flag	Cert	RL Result	Units	Dilution		
Chioride				ing/ Kg	017	4.00	
Sample: 26	6104 - AH-1 4-4.5'						
Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 81651 69151	Analytic Date An Sample 1	al Method: alyzed: Preparation:	SM 4500-Cl B 2011-05-26 2011-05-20	Prep Method: Analyzed By: Prepared By:	N/A AR AR	

			RL			
Parameter	Flag	Cert	\mathbf{Result}	Units	Dilution	\mathbf{RL}
Chloride			2780	mg/Kg	100	4.00

Sample: 266105 - AH-1 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	81651	Date Analyzed:	2011-05-26	Analyzed By:	AR
Prep Batch:	69151	Sample Preparation:	2011-05-20	Prepared By:	AR

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	11005		2420		100	4.00
Ononue			2420	<u> </u>	100	4.00

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Sample: 266106 - AH-1 6-6.5'

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Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 81651 69151	Analytic Date An Sample I	al Method: alyzed: Preparation:	SM 4500-Cl B 2011-05-26 2011-05-20	Prep Method: Analyzed By: Prepared By:	N/A AR AR
Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			1840	mg/Kg	100	4.00

Sample: 266107 - AH-1 7-7.5'

Chloride			397	mg/Kg	50	4.00
Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Prep Batch:	69151	Sample I	Preparation:	2011-05-20	Prepared By:	AR
QC Batch:	81651	Date An	alyzed:	2011-05-26	Analyzed By:	AR
Analysis:	Chloride (Titration)	Analytic	al Method:	SM 4500-Cl B	Prep Method:	N/A
Laboratory:	Midland					

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Method Blanks

Method Blank (1)	QC Batch: 81213								
QC Batch: 81213		Date A	nalyzed:	2011-05-1	12		Analyzeo	ł By: ME	
Prep Batch: 68938		QC Pre	eparation:	2011-05-1	12		Prepared I		
					MDI.				
Parameter	Flag		Cert		Result		Units	RL	
Benzene			3		< 0.0118		mg/Kg	0.02	
Toluene			1		< 0.00600		mg/Kg	0.02	
Ethylbenzene			1		< 0.00850		mg/Kg	0.02	
Xylene			1		< 0.00613		mg/Kg	0.02	
Surromto	Flog	Cort	Regult	Unite	Dilution	Spike A mount	Percent	Recovery	
Trifluorotoluono (TET)	1'lag		1 71	ng/Ka	1	2.00	86	66.6 - 192	
4-Broniofluorobenzene (4-	BFB)		1.46	mg/Kg	1	2.00	73	55.4 - 124	

Method Blank (1) QC Batch: 81214

QC Batch: 81214 Prep Batch: 68938		Date A QC Pre	.nalyzed: eparation:	2011-05-1 2011-05-1	2 2		Analyzed By: Prepared By:		
Parameter	Flag		Cert		MDL Result		Units	RL	
GRO			1		< 0.753		mg/Kg	2	
Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits	
Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB)			$1.82 \\ 1.51$	mg/Kg mg/Kg	1 1	$\frac{2.00}{2.00}$	91 76	67.6 - 150 52.4 - 130	

Method Bla	ank (1)	QC Batch: 81246				
QC Batch:	81246		Date Analyzed:	2011-05-13	Analyzed By:	kg
Prep Batch:	68968		QC Preparation:	2011-05-13	Prepared By:	kg

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Parameter	-	Fla	۹g	Cert		DL sult	Units	RL
DRO Surrogate Flag Cert				1	<1	5.7	mg/Kg	50
		Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			105	mg/Kg	1	100	105	70 - 130
Method Blank (1)	QC I	Batch: 8165	51					
QC Batch: 81651 Prep Batch: 69151			Date A QC Pre	nalyzed: 20 paration: 20	011-05-26 011-05-20		Analyze Prepare	d By: AR d By: AR

			MDL		
Parameter	Flag	Cert	Result	Units	\mathbf{RL}
Chloride			<3.85	mg/Kg	4

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Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch:	81213	Date Analyzed:	2011-05-12	Analyzed By:	ME
Prep Batch:	68938	QC Preparation:	2011-05-12	Prepared By:	ME

		LCS					Matrix		Rec.	
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	
Benzenc		1	2.04	mg/Kg	1	2.00	< 0.0118	102	81.9 - 108	
Toluene		1	2.18	mg/Kg	1	2.00	< 0.00600	109	81.9 - 118	
Ethylbenzene		1	1.88	mg/Kg	1	2.00	< 0.00850	94	78.4 - 115	
Xylene		1	5.62	mg/Kg	1	6.00	< 0.00613	94	79.1 - 116	

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

	LCSD					Spike	Matrix		Rec.			
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	\mathbf{Limit}	RPD	Limit	
Benzene		1	2.00	mg/Kg	1	2.00	< 0.0118	100	81.9 - 108	2	20	
Toluene		1	2.13	mg/Kg	1	2.00	<0.00600	106	81.9 - 118	2	20	
Ethylbenzene		1	1.87	mg/Kg	1	2.00	< 0.00850	94	78.4 - 115	0	20	
Xylene		1	5.56	mg/Kg	1	6.00	< 0.00613	93	79.1 - 116	1	20	

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

	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	$\operatorname{Rec.}$	Limit
Trifluorotoluene (TFT)	1.60	1.57	mg/Kg	1	2.00	80	78	70.2 - 114
4-Bromofluorobenzene (4-BFB)	1.59	1.56	mg/Kg	1	2.00	80	78	69.8 - 121

Laboratory Control Spike (LCS-1)

QC Batch:	81214		D	ate Analy	zed: 2011	-05-12			Analyz	ed By: ME
Prep Batch:	68938		C,	C Prepara	tion: 2011	-05-12			Prepare	ed By: ME
				LCS			Spike	Matrix		Rec.
Param		\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	\mathbf{Limit}
GRO			1	12.7	mg/Kg	1	20.0	< 0.753	64	60.9 - 95.4

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

control spikes continued Param	F					eral z and 3	SH					
Param	Ŧ											
Param	F		LCSD			Spike	Matrix		R	ec.]
Porom		С	Result	Units	Dil.	Amount	Result	Rec.	Liı	mit	RPD]
Porom			LCSD			Spike	Matrix		R	ec.		
r aram	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Liı	mit	RPD	1
GRO		1	12.3	mg/K	g 1	20.0	< 0.753	62	60.9	- 95.4	3	
Percent recovery is based on the	spike	resu	ılt. RPD	is based	l on the	e spike and	spike dup	licate 1	result.			
			LC	S LO	CSD		S	oike	LCS	LCSD)	Re
Surrogate			Res	ult Re	\mathbf{sult}	Units	Dil. An	iount	Rec.	Rec.		Lir
Trifluorotoluene (TFT)			1.9	9 1	.95	mg/Kg	1 2	.00	100	98	61	.9
4-Bromofluorobenzene (4-BFB)			1.7	<u>'8 1</u>	.79	mg/Kg	1 2	.00	89	90	68	.2
Prep Batch: 68968			QC	Prepara	tion: 2	2011-05-13				Prepa	red B	y:
]	LCS			Spike	Me	ıtrix	_	J	Ree
Param]	F	C R	LCS lesult	Units	Dil.	Spike Amount	Ma Re	utrix esult	Rec.	[Ree
Param DRO Percent recovery is based on the	spike	F		LCS esult 206 is based	Units mg/Ki	Dil. g 1	Spike Amount 250 spike dup	Ma Re 	utrix esult 15.7 result	Rec. 82] L 47.5	Ree .im
Param DRO Percent recovery is based on the	spike	F resu	C R 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	LCS esult 206 is based	Units mg/Kg l on the	$\frac{\text{Dil.}}{\text{g} 1}$ e spike and	Spike Amount 250 spike dup Matrivi	Ma Re < licate r	utrix sult 15.7 cesult.	Rec. 82] L 47.5	Rec
Param DRO Percent recovery is based on the Param	spike F	F rest	C R 1 1 LCSD Result	LCS esult 206 is based Units	Units mg/Kg l on the Dil	Dil. <u>g 1</u> e spike and Spike Amount	Spike Amount 250 spike dup Matrix Result	Ma Re <: licate r	ıtrix <u>sult</u> 15.7 cesult. Re	Rec. 82 ec.	1 <u>1</u> 47.5 RPD	
Param DRO Percent recovery is based on the Param DRO	spike F	F resu C	C R 1 1 1 1 1 1 1 1 1 1 1 1 1	LCS esult 206 is based Units mg/Kg	Units mg/Kg l on the Dil.	Dil. g 1 e spike and Spike Amount 250	Spike Amount 250 spike dup Matrix Result <15.7	Ma Re circle licate r Rec. 80	itrix isult 15.7 :esult. Re Lin 47.5 -	Rec. 82 ec. nit 144.1] <u>1</u> 47.5 <u>47.5</u> <u>RPD</u> <u>3</u>	
Param DRO Percent recovery is based on the Param DRO Percent recovery is based on the	spike F spike	F resu C ı resu	C R i lt. RPD LCSD Result 200 lt. RPD	LCS esult 206 is based Units mg/Kg is based	Units mg/Kg l on the Dil. 5 1 l on the	Dil. g 1 e spike and Spike Amount 250 e spike and	Spike Amount 250 spike dup Matrix Result <15.7 spike dup	Ma Re licate r <u>Rec.</u> 80 licate r	atrix sult 15.7 cesult. Re Lin 47.5 - cesult.	Rec. 82 xc. nit 144.1] <u>1</u> 47.5 <u>RPD</u> <u>3</u>	
Param DRO Percent recovery is based on the Param DRO Percent recovery is based on the	spike F spike LC	F resu C resu	C R i lt. RPD LCSD Result 200 ilt. RPD LCS	LCS esult 206 is based Units mg/Kg is based SD	Units mg/Ki l on the Dil. 5 1 l on the	Dil. g 1 spike and Spike Amount 250 spike and	Spike Amount 250 spike dup Matrix Result <15.7 spike dup Spike	Ma Re licate r <u>Rec.</u> 80 licate r	atrix sult 15.7 result. Re Lin 47.5 - result. LCS	Rec. 82 ec. nit 144.1 LCSD] <u>1</u> 47.5 <u>RPD</u> 3	Rec Jim I
Param DRO Percent recovery is based on the Param DRO Percent recovery is based on the Surrogate	spike F spike LC Res	F resu C resu CS sult	C R I ILCSD Result 200 ILCS Result LCS Result	LCS esult 206 is based Units mg/Kg is based SD ilt	Units mg/Kg l on the <u>Dil.</u> <u>1</u> l on the Units	Dil. <u>g 1</u> e spike and Spike Amount 250 e spike and Dil.	Spike Amount 250 spike dup Matrix Result <15.7 spike dup Spike Amoun	Ma Re licate r <u>Rec.</u> 80 licate r t 1	sult sult 15.7 result. <u>Re</u> <u>Lin</u> 47.5 - result. LCS Rec.	Rec. 82 ec. nit 144.1 LCSD Rec.] 47.5 <u>RPD</u> 3	Red Jim

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

			LCSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	С	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride			104	nıg/Kg	1	100	<3.85	104	85 - 115	6	20

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

Matrix Spike (MS-1) Spiked Sample: 266100

QC Batch:	81213	Date Analyzed:	2011-05-12	Analyzed By:	ME
Prep Batch:	68938	QC Preparation:	2011-05-12	Prepared By:	\mathbf{ME}

			\mathbf{MS}			Spike	Matrix		Rec.
Param	\mathbf{F}	С	Result	Units	Dil.	Amount	Result	Rec.	Limit
Benzene	- <u>,</u>	1	10.3	nıg/Kg	10	10.0	< 0.118	103	80.5 - 112
Toluene		1	11.4	m mg/Kg	10	10.0	0.8359	106	82.4 - 113
Ethylbenzene		1	9.94	mg/Kg	10	10.0	0.7886	92	83.9 - 114
Xylene		1	30.5	mg/Kg	10	30.0	2.7118	93	84 - 114

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

			MSD			Spike	Matrix		Rec.		RPD
Param	F	С	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene		1	10.1	mg/Kg	10	10.0	< 0.118	101	80.5 - 112	2	20
Toluene		1	11.0	mg/Kg	10	10.0	0.8359	102	82.4 - 113	4	20
Ethylbenzene		3	9.63	mg/Kg	10	10.0	0.7886	88	83.9 - 114	3	20
Xylene		1	29.9	mg/Kg	10	30.0	2.7118	91	84 - 114	2	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.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	11.2	10.2	mg/Kg	10	10	112	102	41.3 - 117
4-Bromofluorobenzene (4-BFB)	12.4	11.2	mg/Kg	10	10	124	112	35.5 - 129

Matrix Spike (MS-1) Spiked Sample: 266092

QC Batch:	81214		D	ate Analyz	zed: 2011	-05-12			Analyze	d By: ME
Prep Batch:	68938		Ç,	C Prepara	tion: 2011	-05-12			Prepare	d By: ME
				MS			Spike	Matrix		Rec.
Param		F	С	Result	Units	Dil.	Amount	Result	Rec.	\mathbf{Limit}
GRO			1	12.8	nıg/Kg	1	20.0	<0.753	64	61.8 - 114

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

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			MSE)		Spike	Matrix		Re	c.		
Param	\mathbf{F}	\mathbf{C}	Resul	lt Uni	ts Dil.	Amount	Result	Rec.	Lin	nit Rl	PD_	
GRO		1	12.4	mg/	Kg 1	20.0	< 0.753	62	61.8 -	- 114	3	
Percent recovery is based on the	spike	e resi	ult. RF	'D is bas	ed on the	spike and	spike dup	olicate r	esult.			
				MS	MSD			Spike	MS	MSD		
Surrogate			H	Result	Result	Units	Dil. A	Amount	Rec.	Rec.		
Trifluorotoluene (TFT)				2.22	2.20	mg/Kg	1	2	111	110	5	
4-Bromofluorobenzene (4-BFB)				2.06	2.01	_mg/Kg		2	103	100	5	
Matrix Spike (MS-1) Spike QC Batch: 81246 Prep Batch: 68968	ed Sa	mple	e: 26609 Da Qu)2 ate Anal C Prepa	yzed: 2 ration: 2	2011-05-13 2011-05-13				Analyze Prepareo	d By d By	
Param DRO		F	<u>C</u>	MS Result 184	Units 111g/Kg	Dil. g 1	Spike Amount 250	Ma Res <1	trix sult 5.7	Rec. 74 1	R Li 1.7 -	
Percent recovery is based on the	spike	e resi	ult. RP	D is bas	ed on the	spike and	spike dup	olicate re	esult.			
Param	F	С	MSD Result	t Unit	s Dil.	Spike Amount	Matrix Result	Rec.	Rec Lim	ı. it RI	PD	
DRO		1	181	mg/k	(g 1	250	<15.7	72	11.7 - 1	152.3 2	2	
Percent recovery is based on the	spike	e resi	ult. RP	D is bas	ed on the	spike and	spike dup	licate re	esult.			
	Ν	MS	Λ	4SD			Spike	;	$_{ m MS}$	MSD		
Surrogate	Re	esult	R	esult	Units	Dil.	Amoui	nt 1	Rec.	Rec.		
n-Tricosane	1	106		112	mg/Kg		100		106	112	7	
Matrix Spike (MS-1) Spike QC Batch: 81651	d Sa	anple	e: 2661(Da Q()7 .te Analy C Prepar	zed: 24 ation: 24	011-05-26 011-05-20				Analyzed Prepared	By: By:	
Prep Batch: 69151												
Prep Batch: 69151 Param		F	С	MS Result	Unit	s Dil.	Spik Amou	e l int l	Matrix Result	Rec.		

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matrix spikes continued			MSD			Snike	Matrix		Bec		RPD
Param	F	С	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
			MSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Linit
Chloride			10800	mg/Kg	100	10000	397	104	80 - 120	4	20

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

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Calibration Standards

Standard (CCV-1)

QC Batch:	81213			Date Ana	lyzed: 201	Analyzed By: ME			
					CCVs	CCVs	CCVs	Percent	
					True	Found	Percent	Recovery	Date
Param		Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene			1	mg/Kg	0.100	0.0983	98	80 - 120	2011-05-12
Toluene			1	mg/Kg	0.100	0.102	102	80 - 120	2011-05-12
Ethylbenzen	e		1	mg/Kg	0.100	0.0900	90	80 - 120	2011 - 05 - 12
Xylene			1	mg/Kg	0.300	0.268	89	80 - 120	2011-05-12

Standard (CCV-2)

QC Batch:	81213			Date Ana	lyzed: 201	Analyzed By: MI			
					CCVs	CCVs	CCVs	Percent	
					True	Found	Percent	Recovery	Date
Param		Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene			1	mg/Kg	0.100	0.0982	98	80 - 120	2011-05-12
Toluene			1	mg/Kg	0.100	0.106	106	80 - 120	2011 - 05 - 12
Ethylbenzer	ıe		1	mg/Kg	0.100	0.0912	91	80 - 120	2011-05-12
Xylene			1	mg/Kg	0.300	0.273	91	80 - 120	2011-05-12

Standard (CCV-1)

QC Batch:	81214			Date .	Analyzed:	2011-05-12		Analy	zed By: ME
					CCVs	CCVs Found	CCVs Percept	Percent	Deta
					True	round	Fercent	Recovery	Date
Param		Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO			}	mg/Kg	1.00	0.845	84	80 - 120	2011-05-12

Standard (CCV-2)

QC Batch: 81214

Date Analyzed: 2011-05-12

Analyzed By: ME

114-6400891	June 1, 2011	E	Page Nu	mber: 17 of 19				
Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	i	mg/Kg	1.00	0.857	86	80 - 120	2011-05-12
Standard (C	CV-3)							
QC Batch: 82	1246		Date	Analyzed:	2011-05-13		Anal	yzed By: kg
D	ות	<i>a i</i>	T T 1/	CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	Flag	Cert		Conc.	Conc.	Recovery	Limits	Analyzed
DRO	<u></u>	1	ing/itg					
DRO Standard (C) QC Batch: 81	C V-4) 246	1	Date	Analyzed:	2011-05-13		Anal	yzed By: kg
DRO Standard (C) QC Batch: 81	C V-4) 246	1	Date	Analyzed: CCVs True	2011-05-13 CCVs Found	CCVs Percent	Anal Percent Recovery	yzed By: kg Date
DRO Standard (C) QC Batch: 81 Param	CV-4) 246 Flag	Cert	Date Units	Analyzed: CCVs True Conc.	2011-05-13 CCVs Found Conc.	CCVs Percent Recovery	Anal Percont Recovery Limits	yzed By: kg Date Analyzed
DRO Standard (Co QC Batch: 81 Param DRO	C V-4) 246 Flag	Cert	Date Units mg/Kg	Analyzed: CCVs True Conc. 250	2011-05-13 CCVs Found Conc. 203	CCVs Percent Recovery 81	Anal Percent Recovery Limits 80 - 120	yzed By: kg Date Analyzed 2011-05-13
DRO Standard (C) QC Batch: 81 Param DRO Standard (IC	CV-4) 246 Flag	Cert	Date Units mg/Kg	Analyzed: CCVs True Conc. 250	2011-05-13 CCVs Found Conc. 203	CCVs Percent Recovery 81	Anal Percent Recovery Limits 80 - 120	yzed By: kg Date Analyzed 2011-05-13
DRO Standard (C) QC Batch: 81 Param DRO Standard (IC QC Batch: 81	CV-4) 246 Flag 2V-1) 651	Cert	Date Units mg/Kg Date	Analyzed: CCVs True Conc. 250 Analyzed:	2011-05-13 CCVs Found Conc. 203 2011-05-26	CCVs Percent Recovery 81	Anal Percent Recovery Limits 80 - 120 Analy	yzed By: kg Date Analyzed 2011-05-13 zed By: AR
DRO Standard (C) QC Batch: 81 Param DRO Standard (IC QC Batch: 81	CV-4) 246 Flag 2V-1) 651	Cert	Date Units mg/Kg Date	Analyzed: CCVs True Conc. 250 Analyzed: ICVs	2011-05-13 CCVs Found Conc. 203 2011-05-26 ICVs	CCVs Percent Recovery 81 ICVs Percent	Anal Percent Recovery Limits 80 - 120 Analy Percent Recovery	yzed By: kg Date Analyzed 2011-05-13 zed By: AR
DRO Standard (C) QC Batch: 81 Param DRO Standard (IC QC Batch: 81 Param	CV-4) 246 Flag 2V-1) 651	Cert	Date Units mg/Kg Date .	Analyzed: CCVs True Conc. 250 Analyzed: ICVs True Conc	2011-05-13 CCVs Found Conc. 203 2011-05-26 ICVs Found Conc.	CCVs Percent Recovery 81 ICVs Percent Recovery	Anal Percent Recovery Limits 80 - 120 Analy Percent Recovery Limits	yzed By: kg Date Analyzed 2011-05-13 zed By: AR Date Analyzed

Standard (CCV-1)

QC Batch: 81651

.

Date Analyzed: 2011-05-26

Analyzed By: AR

Report Date: J 114-6400891	June 1, 2011		V COG	Vork Order: /Falcon Fed	11051104 eral 2 and 31	H	Page Nu	mber: 18 of 19
				CCVs	CCVs	CCVs	Percent	
	<i></i>		~	True	Found	Percent .	Recovery.	. Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2011-05-26

Report Date: June 1, 2011 114-6400891 Work Order: 11051104 COG/Falcon Federal 2 and 3H Page Number: 19 of 19

Appendix

Laboratory Certifications

	Certifying	Certification	Laboratory
\mathbf{C}	Authority	Number	Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704392-10-TX	Midland

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.
- 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

Attachments

The scanned attachments will follow this page.

Please note, each attachment may consist of more than one page.

Analy	'sis F	Re	qu	est of C	Chain of Custo	ody F	?e	C	or	d	ŀ							P/	AGE: IS RI		EST		OF:		-
		[Tł	E TETI 1910 N. Midland (432) 682-4	RATECH Big Spring St. , Texas 79705 4559 • Fax (432) 682-3946							5 (Ext to C35)	Cr Bh Hn Sa	I Vr Pd Hg Se		Circ	le ol	r Spe	ecify	Met	l bor	Vo.)	SQ		-
CLIENT NAME:				SITE MA	NAGER: e Tavarez	INERS		PF	MET	TVAT HOD	IVE	001X1		S D S			SED/R24	270/625					ns, pH,		
PROJECT NO .: 114-640089	<u> </u>	PRO	DIECT	r NAME: pr Faderal	2 and 3H	F CONTA	(N/X)					5 MOD	A nA	als Ag A	tiles	i Volatile	1 8240/R	mi. Vol. 8	0/608	608	pec.	a (Air)	estos) ans/Catic		
LAB I.D. NUMBER JOIN	тіме	MATRIX	GRAB	s	AMPLE IDENTIFICATION	NUMBER C	FILTERED	HCL	HN03	NONE			PAH 8270 PCBA Met	TCLP Met	TCLP Vola	TCLP Ser	GC MS VA	GC.MS Se	PCB's 806	Pest. 8U8/ Chinidae	Gamma S	Alpha Bet	Major Ani		
266100 5/10	>	5	K	AH-1	.0-1	١			×			2/2	\square							Y	$\overline{\mathbf{I}}$				_
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RELINQUISHED BY: (Signa RECEIVING LABORATORY	iturə)			Date:	RECEIVED BY: (Signature)			Dat Tim	e:				TETR	ID DE	H CO	NTAC		RSON	1 4:				t: lesuits	by:	
ADORESS: CITY: Mada d	STATE:	<u> </u>	PHON	ZIP:			AE:							I	ke.	7	Tan	64	27	-		A A	USH (luthor) Ye:	zhari zed:	

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tet/a Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

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APPENDIX C

HOBES OCD

<u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 <u>District II</u> 1301 W. Grand Avenue, Artesia, NM 88210	State of I Energy Minerals a	New Mexi and Natural	ico Resources	JAN 1	2 2012	Form C-141 Revised October 10, 2003			
<u>District III</u> 1000 Rio Brazos Road, Aztec, NM 87410 <u>District IV</u> 1220 S. St. Francis Dr., Santa Fe, NM 87505	Oil Conser 1220 South Santa Fe	vation Div St. France , NM 875	rision is Dr. 05	REC	EIVED	Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form			
Rele	ase Notification	and Co	rrective	Actio	n	an an an ann an an an an an an an an an			
		OPERAT	OR		🛛 Initia	al Report 🔲 Final Report			
Name of Company COG OPERATING	GLLC	Contact		Pat Elli	8				
Address 550 W. Texas, Suite 100, Mid	lland, TX 79701	Felephone N	lo. 4.	32-230-0	077				
Facility Name Falcon Federal 2 a		raciily Typ		ank Dau					
Surface Owner Federal	Mineral Owner				Lease N	ło.			
	LOCATION	OF REI	EASE A	7147 30	$reverse}$	9009			
Unit Letter Section Township Range B 9 19S 32E	Feet from the North/	South Line	Feet from th	e East/	West Line	County Lea			
	Latitude 32 40.857	Longitu	de 103 46.3	39					
	NATURE	OF RELE	CASE						
Type of Release Produced fluid		Volume of	Release 12bb	ence	Volume R	Lecovered 10bbls			
		04/11/2011		01100	04/11/201	1 12:00 p.m.			
Was Immediate Notice Given?	No 🛛 Not Required	If YES, To Whom?							
By Whom?		Date and H	our humo Importio	a the We					
Was a watercourse reaction	No	n 123, vu	iune inpacti	ig the ma	161 60111 86.				
If a Watercourse was Impacted, Describe Fully.*									
Describe Cause of Problem and Remedial Action	Taken.*								
A hole in the fire tube caused the release. The he	ater is currently out of se	rvice and is g	oing to be rep	laced with	a new one.				
Describe Area Affected and Cleanup Action Take	n.*								
Initially 12bbls of fluid was released from the fire contained inside the berm wall around the produc appropriately. Tetra Tech will sample the spill sit plan to the NMOCD / BLM for approval prior to	tube and we were able to tion equipment. The spill e area to delineate any po any significant remediation	o recover 10b area measure ssible contam on work.	bls with a vac ad 30' x 30'. C lination from	uum truck Contamina the release	t. The entire ated soil has le and we will	release was completely been scraped and hauled I present a remediation work			
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.									
Signature: 7- T7-	5		<u>OIL CO</u>	NSER Y	KATION I	PIVISION JERMA			
Printed Name: Josh Russo	A	pproved by I	District Super-	visor: Er	vironme	ital Specialist 🗸			
Title: HSE Coordinator	A	pproval Date	10/25	12	Expiration [Date:			

Conditions of Approval:

Attached

IRP-10-12-2858

Date: 04/18/2011 Phone: * Attach Additional Sheets If Necessary

E-mail Address:

. •

jrusso@conchoresources.com

432-212-2399

State of New Mexico Energy Minerals and Natural Resources

HOBES OCD

Form C-141 Revised October 10, 2003

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 JAN 1 2 2012 Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

		OPERATOR	Initial Report	🛛 Final Report
Name of Company COG Operating	g LLC	Contact Pat Ellis		
Address 550 W. Texas, Suite 1300 I	Midland, Texas 79701	Telephone No. (432) 230-0077		
Facility Name Falcon Federal 2 and	3H	Facility Type Tank Battery		
Surface Owner Federal	Mineral Own	er	Lease No.	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County					
В	9	19-S	32-E			1		Lea					
		1	1		'	1							

Latitude N 32 40.857° Longitude W 104 46.339°

NATURE OF RELEASE

Type of Release: Produced Fluid	Volume of Release 12 bbls	Volume Re	covered 10 bbls
Source of Release	Date and Hour of Occurrence	Date and H	our of Discovery
Heater Treater	4/11/2011	4/11/2011	12:0 <u>0 p.m.</u>
Was Immediate Notice Given?	If YES, To Whom?		
🗌 Yes 🛛 No 🖾 Not Required			
By Whom? Josh Russo	Date and Hour		
Was a Watercourse Reached?	If YES, Volume Impacting the Wa	tercourse.	
🗌 Yes 🖾 No	N/A		
If a Watercourse was Impacted, Describe Fully.*			
N/A			
Describe Cause of Problem and Remedial Action Taken.*			
A halo in the first take squard the values. The baston is surroutly and of	annias and is asing to be realized with	h	
A note in the fire tube caused the release. The heater is currently out of	service and is going to be replaced wit	n a new one.	
Describe Area Affected and Cleanup Action Taken *	······································		
boonde / Bou / Moerda and Greanup / Palon Taken.			
Tetra Tech inspected site and collected samples to define spills extent. So	oil with elevated chloride concentratio	ns was remove	ed and hauled away to
Controlled Recovery, Inc., Hobbs, NM. Site was then brought up to surfa	ace grade with clean backfill material.	Tetra Tech pre	epared closure report and
submitted to NMOCD for review.		-	-
			·
I hereby certify that the information given above is true and complete to	the best of my knowledge and underst	and that pursua	ant to NMOCD rules and
regulations all operators are required to report and/or file certain release	notifications and perform corrective ac	ctions for relea	ses which may endanger
public health of the environment. The acceptance of a C-141 report by the	he NMOCD marked as "Final Report"	does not reliev	ve the operator of liability
should their operations have lated to adequately investigate and remedia or the environment. In addition NMOCD acceptance of a C 141 report.	does not relieve the operator of respon	ground water, s	surface water, numan health
federal, state, or locablaws and/or regulations	does not reneve the operator of respon	isionity for con	inpliance with any other
	OIL CONSER		DIVISION
	<u>OIL CONSER</u>	VATION L	<u>51 V 1510 N</u>
Signature:			
a factorial date	Approved by District Supervisor:		
Printed Name: Ike Tavarez (Alexandra Cales)			
Title: Project Manager	Approval Date:	Expiration Da	ate:
E mail Address, ike tavaraz@tetratach.com	Conditions of Approval:		
D-mail Address. Re. avaice et accin.com	Conditions of Approval.		Attached
Date: 12 - 15 - // Phone: (432) 682-4559			

Attach Additional Sheets If Necessary