State of New Mexico Energy Minerals and Natural Resources

Final Report

trict III 0 Rio Brazos Road, Aztec, NM 87410	Oil C	Conserv	vation Div	vision			Submit 2 District	Copies (Office i	to appropriate
trict IV 0.S. St. Francis Dr. Santa Fe. NM 87505	1220	South	St. Franc	is Dr.			W	ith Rule	a 116 on back
		inta Fe	, NM 875	05					
	Release Notific	eation	and Co	orrective A	ction				
			OPERA'	<u>FOR</u>		📋 Initia	il Report		Final Report
ddress 550 W Toyan Suite 1200	Ig LLC. Midland TX 70701		Contact	Pat Ellis	3023				
acility Name Bonds #1			acility Typ	e Productio	5025 on	<u> </u>			
	Mineral (Jumor				Lasse		20 025	25275
				EACE		Lease I	0. AI I II	50-025	-23213
Init LetterSectionTownshipH209S	LOCARangeFeet from the35E1650	North/S	South Line	Feet from the 330	East/W	Vest Line ast	County	Lea	<u> </u>
	Latitude <u>33 deg.</u>	<u>31.333'</u>	Longitue	le <u>103 deg. 22,5</u>	<u>13'</u>				
	NAT	URE	OF REL	EASE					
Source of Release Kill switch malfun	ction		Date and H	Hour of Occurrence	æ	Date and	Recovered Hour of Di	40 BV	/
			10/30/08	5:00 AM		10/30/08	9:30 AI	Λ	
Nas Immediate Notice Given? ⊠	Yes 🗌 No 🗍 Not R	equired	If YES, To Larry Joh) Whom? nson w/NMOCD	•				
By Whom? Kanicia Carrillo			Date and H	Iour 10/30/08	2:18	PM			
Was a Watercourse Reached?	Yes 🛛 No		If YES, Vo	olume Impacting t	he Wate	ercourse.			
f a Watercourse was Impacted, Describ	pe Fully.*	. <u> </u>	<u> </u>						
	•								
						v	JATER (F) 150)
Describe Cause of Problem and Remedia Cause: The kill switch on the water Remedial Action: Replaced the heat	ial Action Taken.* r tank did not operate pi adswitch and reset the l	roperly o lease kil	ausing the I to shut pu	overflow. mping unit down	when t	ank gaug	e gets to 1	2 ft.	
Describe Area Affected and Cleanup A Picked up 40 bbls with vacuum truck results below regulatory limits and c	ction Taken.* Spill Area k = Net Loss 5 bbls. of we shore the state of the state	a: 30' x water. 1 881 ma/k	50' in area, Tetra Tech c ra at depth	45 bbls of produ felineated and s	iced wa ampled	ater spillec spill site.	l, all conta All TPH a	ined w and BT	ithin firewall. EX sample
I hereby certify that the information giv regulations all operators are required to public health or the environment. The a should their operations have failed to ac or the environment. In addition, NMOO federal, state, or local laws and/or regul	report and/or file certain acceptance of a C-141 rep dequately investigate and a CD acceptance of a C-141 lations.	olete to the release no ort by the remediate report d	e best of my otifications a NMOCD n e contaminat oes not relie	v knowledge and u and perform correct narked as "Final R ion that pose a thr we the operator of	inderstan ctive act ceport" c reat to gr respons	nd that pur ions for rel loes not rel round wate ibility for o	suant to NM cases whic ieve the op r, surface v compliance	MOCD in h may e erator o vater, hu with an	rules and endanger of liability uman health uy other
K				<u>OIL CON</u>	SERV	ATION	DIVISI	ON	
Signature:	the second s			ENN ENVINEER			0.0		
Printed Name: Ike Tavarez (agent for	r COG)		Approved by	/ District-Supervis	Sot: Jf	offreis	Lekinz		
Title: Project Manager			Approval Da	nte: 10/05/00	i	Expiration	Date: -		
E-mail Address: ike.tavarez@tetratech	n.com		Conditions o	of Approval:			Attache	zd 🗌	
Date: 8/13/2009	Phone: 432-682-4559						IRP-	200	8
Attach Additional Sheets If Necessa	ary								
FGRE ONT , C	(1 .)								

SITE INFORMATION

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Type of Rep	ort: Closu	re Report		
General Site Info	rmation:			
Site:		Bonds #1 Tank	Battery	
Company:		COG Operating	g LLC	
Section, Townsh	ip and Range	Section 20, T9	S, R35E	
Unit Letter:	· · · · · · · · · · · · · · · · · · ·	H	<u> </u>	
Lease Number:		API 30-025-252	275	
County:		Lea		
GPS:		33° 31.333' , 10	3° 22.513'	
Surface Owner:		BLM		
Mineral Owner:		Various private		
Directions:		From Crossroads	NM at the interse	ction of Hwy 206 and CR 170, go west on Cr 170
		for 2.0 mileo Tu	m right and as north	for 0.6 miles to tank better:
		tor 2.0 miles. Tu	m ngm and go nom	Tior 0.6 miles to tank battery.
Release Data:				
Date Released:		10/30/2008	<u>, , , , , , , , , , , , , , , , , , , </u>	
Type Release:		produced water	n	
Source of Contan	nination:	water storage ta	ank	
Fluid Released:		45 barrels		
Fluids Recovered	1:	40 barrels		
Official Commun	nication:			
Name:	Pat Ellis			Ike Tavarez
Company:	COG Operating I	LLC		Tetra Tech
Address:	550 W. Texas, S	uite 1300		1910 N. Big Spring
P.O. Box				
City:	Midland Texas, 7	79701		Midland, Texas
Phone number:	(432) 686-3023			(432) 682- 4559
Email:	pellis@concho	resources.com		ike.tavarez@tetratech.com
Ranking Criteria	vator:		Panking Score	Sito Data
<50 ft			20	Sile Dala
50-99 ft	, , , , , , , , , , , , , , , , ,		10	
>100 ft.	·		0	148 ft.
MallHaad Protect			Banking Sooro	Site Data
Water Source <1 (1011. 100 ft Private < 20	0 ff		Site Data
Water Source >1 (000 ft Private >20	0 ft	20	None
		<u> </u>		
Surface Body of V	Vater:		Ranking Score	Site Data
<200 ft.			20	None
200 ft - 1,000 ft.			10	None
>1,000 ft.		_	0	
Tot	al Ranking Scol	re:	0	
		a - United and a street of the		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	_	Accepta	DIEISOIIIKKAL (II	<u>9/K9/</u>
		Benzene	I otal BIEX	
		10	50	5,000



August 13, 2009

RECEIVED

SER U 9 2009 HUBBBUCD

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

Re: Assessment and Closure Report for the COG Operating LLC, Bonds #1 Tank Battery, Unit H, Section 20, Township 9 South, Range 35 East, Lea County, New Mexico, NMOCD API No. 30-025-25275

Mr. Johnson:

Tetra Tech, Inc. was contacted by COG Operating LLC (COG) to assess a spill from the Bonds #1 Tank Battery, located in Unit H, Section 20, Township 9 South, Range 35 East, Lea County, New Mexico (Site). The spill site coordinates are N 33° 31.333', W 103° 22.513'. The site location is shown on Figures 1 and 2.

Background

According to the State of New Mexico C-141 Initial Report, the high level switch at the water tank malfunctioned causing an overflow on October 30, 2008. Approximately 45 barrels of produced water was released, however, all of the spill volume was contained within the firewall. A vacuum truck was used to recover 40 barrels of produced water. The initial Form C-141 is enclosed in Appendix C.

Groundwater

According to the United States Geological Survey (USGS) database, the reported depth of water in Section 20, where the spill site is located, is 148' below ground surface (bgs). The depths to water in adjoining sections ranged from 114' to 153' bgs. No published water depth data was available at the NMOSE iWaters database. Copies of available groundwater data are included 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 (>100'), the proposed RRAL for TPH is 5,000 mg/kg.

Soil Assessment and Results

On December 2, 2008, Tetra Tech personnel inspected and sampled the spill area. The spill area is shown on Figure 3. A total of five (5) auger holes (AH-1 through AH-5) were 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. All of the submitted samples were below the TPH and BTEX RRAL. The chloride concentrations ranged from a high of 1,220 mg/kg at AH-1 (2.5' to 3.0') to 274 mg/kg at AH-3 (1'-1.5'). Chloride concentrations generally showed decline with depth, but were not defined in AH-1 or AH-5. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix B. The results of the sampling are summarized in Table 1. The auger hole locations are shown on Figure 3.

In order to complete delineation of the chlorides at the site, on February 11, 2009, Tetra Tech personnel were onsite to supervise the installation of two (2) backhoe trenches (T-1 and T-2). The trenches were installed in the vicinity of the auger holes AH-1 and AH-5, respectively. Samples from trench T-1 showed chloride concentrations declining to 381 mg/kg at 4.0'. Samples from trench T-2 showed chloride concentrations declining to 407 mg/kg at 4.0'. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix B. The results of the sampling are summarized in Table 1. The excavation depths and trench locations are shown on Figure 3.



Conclusions

The depth to groundwater was reported greater than 100' bgs at the Site. The TPH and BTEX sample results were all below the regulatory levels and showed declining chloride level to 381 mg/kg. On June 12, 2009, Tetra Tech personnel met with Larry Johnson, with the NMOCD, to discuss the results of the investigation. Based on the results, Mr. Johnson approved the closure of the site. The final Form C-141 is included in Appendix C.

If you require any additional information or have any questions or comments concerning this Closure Report, please call at (432) 682-4559.

Respectfully submitted, TETRA TECH

Pobet hipili

Robert McNeill Sr. Project Manager

cc: Pat Ellis - COG Operating LLC.

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TABLES

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Table 1 COG Bonds #1 Tank Battery Lea County, New Mexico

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Sample	Date	Sample	Soil S	Status		TPH (mg/kg))	Benzene	Toluene	Ethlybenzene	Xylene	Chloride
ID	Sampled	Depth (ft)	In-Situ	Removed	DRO	GRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
AH-1	12/2/2008	0-1	Х		63.7	1.97	65.67	-	-	-	-	780
	12/2/2008	1-1.5	Х		_	-	-	-	-	_	-	801
	12/2/2008	2-2.5	Х		-	-	-	-	-	-	-	1,060
	12/2/2008	2.5-3.0	Х		-	-	_	-	-	-	-	1,220
T-1	2/11/2009	2.0	Х									<200
	2/11/2009	3.0	Х									258
	2/11/2009	4.0										381
AH-2	12/2/2008	0-1			159	63.2	222.2	<0.0100	<0.0100	<0.0100	<0.0100	1.530
	12/2/2008	1-1.5	Х		-	-	-	-	-		-	310
AH-3	12/2/2008	0-1	X		<50.0	13.8	13.8	-		-		652
	12/2/2008	1-1.5	Х		-	-	-	-	-	-	-	274
	12/2/2008	2-2.5	Х		-			_	-		-	341
AH-4	12/2/2008	0-1			135	88.0	223	<0.0200	0.175	0.366	0.343	692
	12/2/2008	1-1.5	Х		-	-	-	-	-	-	-	470
	12/2/2008	2-2.5	X		-	_	-	-	-	-	-	368
AH-5	12/2/2008	0-1	x		<50.0	4.30	4.30	_	-	-	_	409
	12/2/2008	1-1.5	Х		-	-	-	-	-	-	-	552
T-2	2/11/2009	4.0	Х									521
	2/11/2009	5.0	X									407
												· · · · · · · · · · · · · · · · · · ·

T-1, T-2 (trench - backhole samples)

FIGURES







APPENDIX A

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Water Well Data COG - Bonds #1 Tank Battery Average Depth to Groundwater (ft)

	9 So	uth		34 Ea	st		9 Sou	th	35	5 East	t		9 Sc	outh	3	36 Eas	st
6	5	4	3	2	1	6	5	4	3	2	1	6	5	4	3	2	1
7	8	9	10	11	12	7	8	9	10	11	12	7	8	9	10	11	12
18	17	16	15	14	13	18	17	16	15	14	13	18	17	16	15	14	13
19	20	21	22	23	24	19	20 Site	21	22	23	24	19	20	21	22	23	24
30	29	28	27	26	25	30	29	28 114	27	26 1 39	25	30	29	28	27	26	25
21	32	33	34	35	36	31	32	33	34	35	36	31	32	33	34	35	36
51								<u> </u>		137							
51	 10 So	outh	<u> </u>	34 Ea			10 Sou	uth	3	5 Eas	st		10 S	outh		36 Ea	st
6	10 So	outh 4	3	34 E a	ast	6	10 Sou	ith	3	5 Eas	st	6	10 S	outh	3	36 Ea	st 1
6	10 So 5 8	outh 4 9	3 10	34 E a 2 11	ast 1 12	6 7	10 Sou 5 8	1th 4 9	3 10	5 Eas	it 1 12	6 7	10 S 5 8	outh 4 9	3 10	36 Ea 2 11	st 1 12
6 7 18	10 So 5 8 17	9 16	3 10 15	34 E a 2 11 14	ast 1 12 13	6 7 18	10 Sou 5 8 17	1th 4 9 16	3 10 15	5 Eas 2 11 14	it 1 12 13	6 7 18	10 S 5 8 17	outh 4 9 16	3 10 15	36 Ea 2 11 14	st 1 12 13
6 7 18 19	10 So 5 8 17 20	9 16 21	3 10 15 22	34 E 2 11 14 23	ast 1 12 13 24	6 7 18 19	10 Sou 5 8 17 20	1th 4 9 16 21	3 3 10 15 22	5 Eas 2 11 14 23	st 1 12 13 24	6 7 18 19	10 S 5 8 17 20	outh 4 9 16 21	3 10 15 22	36 Ea 2 11 14 23	st 1 12 13 24
6 7 18 19 30	10 So 5 8 17 20 31 29	Puth 4 9 16 21 28	3 10 15 22 27	34 E 2 11 14 23 26	ast 1 12 13 24 25	6 7 18 19 30	10 Sou 5 8 17 20 29	111 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 1 	3 10 15 22 27	5 Eas 2 11 14 23 26	1 12 13 24 25	6 7 18 19 30	10 S 5 8 17 20 29	outh 4 9 16 21 28	3 10 15 22 27	36 Ea 2 11 14 23 26	st 1 12 13 24 25

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105 USGS Well Reports

90 Geology and Groundwater Conditions in Southern Lea, County, NM (Report 6) Geology and Groundwater Resources of Eddy County, NM (Report 3)

34 NMOCD - Groundwater Data

123 Field water level



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site_no list = • 333057103232401

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site_no list = • 333123103222401

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USGS 333123103222401 09S.35E.17.44440

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Lea County, New Mexico Hydrologic Unit Code 12080001	Output formats
Latitude 33°31'38", Longitude 103°22'28" NAD27 Land-surface elevation 4,166.00 feet above sea level NGVD29 This well is completed in the CHINLE FORMATION	Table of data Tab-separated data Graph of data
(231CHNL) local aquifer.	Reselect period



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Lea County, New Mexico Hydrologic Unit Code 12080001	Output formats
Land-surface elevation 4,139.00 feet above sea level	Table of data
NGVD29	Craph of data
(1210GLL) local aquifer.	Reselect period
	,



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site_no list = • 332940103201502

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USGS 332940103201502 09S.35E.26.333

Available data for this site Ground-water: Field measurements

GC)
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Lea County, New Mexico	Output formats
Hydrologic Unit Code 12080001	Table of data
Latitude 33°29'56", Longitude 103°20'16" NAD27	Tab-separated data
Land-surface elevation	Graph of data
4,114.00 leet above sea level NGVD29	Reselect period



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site_no list = • 332931103201501

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USGS 332931103201501 09S.35E.35.11313

Available data for this site Ground-water: Field measurements

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Lea County, New Mexico Hydrologic Unit Code 12080001	Output formats
Latitude 33°29'43", Longitude 103°20'19" NAD27 Land-surface elevation 4,112.00 feet above sea level NGVD29 This well is completed in the OGALLALA FORMATION (1210GLL) local aquifer.	Table of data Tab-separated data Graph of data Reselect period



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Geographic Area: New Mexico

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site_no list = • 333031103211701

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USGS 333031103211701 09S.35E.22.333343

Available data for this site Ground-water: Field measurements

Lea County, New Mexico Hydrologic Unit Code 12080001 Latitude 33°30'45", Longitude 103°21'20" NAD27 Land-surface elevation 4,136.00 feet above sea level NGVD29 The depth of the well is 156 feet below land surface. This well is completed in the OGALLALA FORMATION (121OGLL) local aquifer.



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site_no list = • 333408103184101

Minimum number of levels = 1

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USGS 333408103184101 09S.35E.01.122424

Available data for this site Ground-water: Field measurements

Lea County, New Mexico Hydrologic Unit Code	Output formats
Latitude 33°34'09", Longitude 103°18'49" NAD27 Land-surface elevation 4,131.00 feet above sea level NGVD29 This well is completed in the CRETACEOUS SYSTEM	Table of data Tab-separated data Graph of data
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site_no list = • 333032103184301

Data Category:

Ground Water

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

USGS 333032103184301 09S.35E.24.344441

Available data for this site Ground-water: Field measurements



Lea County, New Mexico Hydrologic Unit Code 12080001 Latitude 33°30'46", Longitude 103°18'49" NAD27	Output formats
Land-surface elevation 4,092.00 feet above sea level NGVD29 The depth of the well is 156 feet below land surface. This well is completed in the OGALLALA FORMATION (1210GLL) local aquifer.	Table of data Tab-separated data Graph of data Reselect period

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APPENDIX B

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Summary Report

Ike Tavarez Tetra Tech 1910 N. Big Spring Street Midland, TX 79705

Report Date: February 16, 2009

Work Order: 9021134

Project Location:Lea County, NMProject Name:COG/Bonds #1 Tank BatteryProject Number:115-6403637

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
187208	T-1 2.0'	soil	2009-02-11	00:00	2009-02-11
187209	T-1 3.0'	soil	2009-02-11	00:00	2009-02-11
187210	T-1 4.0'	soil	2009-02-11	00:00	2009-02-11
187211	T-2 4.0'	soil	2009-02-11	00:00	2009-02-11
187212	T-2 5.0'	soil	2009-02-11	00:00	2009-02-11

Sample: 187208 - T-1 2.0'

Param	Flag	Result	Units	\mathbf{RL}
Chloride		<200	mg/Kg	4.00

Sample: 187209 - T-1 3.0'

Param	Flag	Result	Units	\mathbf{RL}
Chloride		258	mg/Kg	4.00

Sample: 187210 - T-1 4.0'

Param	Flag	Result	Units	RL
Chloride		381	mg/Kg	4.00

Sample: 187211 - T-2 4.0'

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: February 16, 2009 115-6403637		Work Order: 9021134 COG/Bonds #1 Tank Battery		Page Number: 2 of 2 Lea County, NM	
Param	Flag	Result	Units	RL	
Chloride		521	mg/Kg	4.00	

Sample: 187212 - T-2 5.0' *

Param	Flag	Result	Units	\mathbf{RL}
Chloride		407	mg/Kg	4.00

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 67:11
 Aberdeen Avenue, Suite 9
 1

 209
 East Suiset Road, Suite 8
 1

 5002
 Basin Street, Suite A1
 1

 6015
 Harris Parkway, Suite 110
 Ft

Lubbock, lexas /9424 800 • 378 • 1290 Et Paso, Texas 79922 888 • 588 • 3443 Midland, lexas 79703 Ft Worth Texas 76132 E-Mail lab@traceanalysis.com

800 • 378 • 1296 806 • 794 • 1296 888 • 588 • 3443 915 • 585 • 3443 432 • 689 • 6301 817 • 201 • 5260

5 FAX 806 • 794 • 1298 3 FAX 915 • 585 • 4944 1 FAX 432 • 689 • 63 • 3

WBENC: 237019

HUB:1752439743100-86536NCTRCAWFWB38444Y0909

Certifications

DBE: VN 20657

NELAP Certifications

Lubbock: T104704219-08-TX LELAP-02003 Kansas E-10317 El Paso: T104704221-08-TX LELAP-02002 Midland: T104704392-08-TX

Analytical and Quality Control Report

Ike Tavarez Tetra Tech 1910 N. Big Spring Street Midland, TX, 79705

Report Date: February 16, 2009

Work Order: 9021134

Project Location:Lea County, NMProject Name:COG/Bonds #1 Tank BatteryProject Number:115-6403637

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	\mathbf{Taken}	Received
187208	T-1 2.0'	soil	2009-02-11	00:00	2009-02-11
187209	T-1 3.0'	soil	2009-02-11	00:00	2009-02-11
187210	T-1 4.0'	soil	2009-02-11	00:00	2009-02-11
187211	T-2 4.0'	soil	2009-02-11	00:00	2009-02-11
187212	T-2 5.0'	soil	2009-02-11	00:00	2009-02-11

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 6 pages and shall not be reproduced except in its entirety, without written approval of

TraceAnalysis, Inc.

Michael avel

Dr. Blair Leftwich, Director

Standard Flags

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 ${f B}$ - The sample contains less than ten times the concentration found in the method blank.

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Case Narrative

Samples for project COG/Bonds #1 Tank Battery were received by TraceAnalysis, Inc. on 2009-02-11 and assigned to work order 9021134. Samples for work order 9021134 were received intact at a temperature of 11.6 deg. C.

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

			Prep	Prep	\mathbf{QC}	Analysis
Test	a	Method	Batch	Date	Batch	Date
Chloride	(Titration)	SM 4500-Cl B	48563	2009-02-13 at 10:02	56848	2009-02-13 at 15:03

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 9021134 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.

Analytical Report

Sample: 187208 - T-1 2.0'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 56848 48563	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2009-02-13 2009-02-13	Prep Method: Analyzed By: Prepared By:	N/A AR AR
		RL			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		<200	mg/Kg	50	4.00

Sample: 187209 - T-1 3.0'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56848	Date Analyzed:	2009-02-13	Analyzed By:	AR
Prep Batch:	48563	Sample Preparation:	2009-02-13	Prepared By:	AR
		RL			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		258	mg/Kg	50	4.00

Sample: 187210 - T-1 4.0'

Chloride		381	mg/Kg	50	4.00
Parameter	Flag	RL Result	Units	Dilution	RL
Prep Batch:	48563	Sample Preparation:	2009-02-13	Prepared By:	AR
QC Batch:	56848	Date Analyzed:	2009-02-13	Analyzed By:	AR
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Laboratory:	Midland				

Sample: 187211 - T-2 4.0'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56848	Date Analyzed:	2009-02-13	Analyzed By:	AR
Prep Batch:	48563	Sample Preparation:	2009-02-13	Prepared By:	AR

continued ...

sample 187211 continued ...

		RL			
Parameter	Flag	Result	Units	Dilution	RL
		BL			
Parameter	Flag	Result	Units	Dilution	RL
Chloride		521	mg/Kg	50	4.00

Sample: 187212 - T-2 5.0'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 56848 48563	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2009-02-13 2009-02-13	Prep Method: Analyzed By: Prepared By:	N/A AR AR
		RL			
Parameter	\mathbf{Flag}	\mathbf{Result}	Units	Dilution	\mathbf{RL}
Chloride		407	mg/Kg	50	4.00

Method Blank (1) QC Batch: 56848

QC Batch:	56848	τ	Date Analyzed:	2009-02-13	Analyzed By:	\mathbf{AR}
Prep Batch:	48563		QC Preparation:	2009-02-13	Prepared By:	AR

		MDL		
Parameter	Flag	Result	Units	\mathbf{RL}
Chloride		<2.01	mg/Kg	4

Laboratory Control Spike (LCS-1)

QC Batch: Prep Batch:	56848 48563	,	Date Ar QC Prej	nalyzed: paration:	2009-02-13 2009-02-13			A P:	nalyzed B repared B	y: AR y: AR
		\mathbf{LC}	S			Spike	Mat	trix		Rec.
Param		Resu	ılt	Units	Dil.	Amount	Res	\mathbf{ult}	Rec.	\mathbf{Limit}
Chloride		97.	9	mg/Kg	1	100	<2	.01	98	85 - 115
Percent recov	very is based on the sp	ike result.	RPD is	based on	the spike and	d spike dup	olicate re	esult.		
		LCSD			Spike	Matrix		Rec.		RPD
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride		100	mg/Kg	<u>ç 1</u>	100	<2.01	100	85 - 115	2	20

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

QC Batch: Prep Batch:	56848 48563		Date A: QC Pre	nalyzed: paration:	2009-02-1 2009-02-1	3 3		An Pre	alyzed By pared By	r: AR r: AR
		М	IS			Spike	Ma	trix		Rec.
Param		Res	sult	Units	Dil.	Amount	Re	sult R	ec.	Limit
Chloride		55	60	mg/Kg	50	5000	4	07 1	03	85 - 115
Percent reco	overy is based	on the spike result.	RPD is	based on	the spike ar	nd spike dup	olicate r	esult.		
		MSD			Spike	Matrix		Rec.		RPD
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride		5640	mg/K	g 50	5000	407	105	85 - 115	1	20
Standard	(ICV-1)		Date A	nalvzed:	2009-02-13			An	alvzed B	v· AR
Standard QC Batch:	(ICV-1) 56848		Date A ICVs	nalyzed: IC	2009-02-13 CVs	ICVs		An Percent	alyzed B	y: AR
Standard QC Batch:	(ICV-1) 56848		Date A ICVs True	nalyzed: IC Fo	2009-02-13 CVs und	ICVs Percent		An Percent Recovery	alyzed B	y: AR Date
Standard QC Batch: Param	(ICV-1) 56848 Flag	Units	Date A ICVs True Conc.	nalyzed: IC Fo Co	2009-02-13 CVs und onc.	ICVs Percent Recovery		An Percent Recovery Limits	alyzed B	y: AR Date nalyzed
Standard QC Batch: Param Chloride	(ICV-1) 56848 Flag	Units mg/Kg	Date A ICVs True Conc. 100	nalyzed: IC Fo Ca 9	2009-02-13 CVs und onc. 9.2	ICVs Percent Recovery 99		An Percent Recovery Limits 85 - 115	alyzed B A 20	y: AR Date nalyzed 09-02-13
Standard QC Batch: Param Chloride Standard	(ICV-1) 56848 Flag (CCV-1)	Units mg/Kg	Date A ICVs True Conc. 100	nalyzed: IC Fo Ca 9	2009-02-13 CVs und onc. 9.2	ICVs Percent Recovery 99		An Percent Recovery Limits 85 - 115	alyzed B A 20	y: AR Date nalyzed 09-02-13
Standard QC Batch: Param Chloride Standard QC Batch:	(ICV-1) 56848 Flag (CCV-1) 56848	Units mg/Kg	Date A ICVs True Conc. 100 Date A	nalyzed: IC Fo Q 9 nalyzed:	2009-02-13 CVs und onc. 9.2 2009-02-13	ICVs Percent Recovery 99		An Percent Recovery Limits 85 - 115	alyzed B A 20 alyzed B	y: AR Date nalyzed 09-02-13 y: AR
Standard QC Batch: Param Chloride Standard QC Batch:	(ICV-1) 56848 Flag (CCV-1) 56848	Units mg/Kg	Date A ICVs True Conc. 100 Date A CCVs	nalyzed: IC Fo Ca 9 .nalyzed: Ca	2009-02-13 CVs und onc. 9.2 2009-02-13 CVs	ICVs Percent Recovery 99 CCVs		An Percent Recovery Limits 85 - 115 Ar Percent	alyzed B A 20 alyzed B	y: AR Date nalyzed 09-02-13 y: AR
Standard QC Batch: Param Chloride Standard QC Batch:	(ICV-1) 56848 Flag (CCV-1) 56848	Units mg/Kg	Date A ICVs True Conc. 100 Date A CCVs True	nalyzed: Fo Ca 9 .nalyzed: Cu Fc	2009-02-13 CVs ound onc. 9.2 2009-02-13 CVs ound	ICVs Percent Recovery 99 CCVs Percent		An Percent Recovery Limits 85 - 115 Ar Percent Recovery	alyzed B A 20 alyzed B	y: AR Date nalyzed 09-02-13 y: AR Date
Standard QC Batch: Param Chloride Standard QC Batch: Param	(ICV-1) 56848 Flag (CCV-1) 56848 Flag	Units mg/Kg Units	Date A ICVs True Conc. 100 Date A CCVs True Conc.	nalyzed: Fo Ca 9 .nalyzed: Fc Ca	2009-02-13 UVs und onc. 9.2 2009-02-13 CVs ound onc.	ICVs Percent Recovery 99 CCVs Percent Recovery		An Percent Recovery Limits 85 - 115 Ar Percent Recovery Limits	alyzed B A 20 alyzed B A	y: AR Date nalyzed 09-02-13 y: AR Date nalyzed

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

Summary Report

Ike Tavarez Tetra Tech 1910 N. Big Spring Street Midland, TX 79705 Report Date: December 10, 2008

Work Order: 8120325

Project Location:	Lea County, NM
Project Name:	COG/Bonds #1 Tank Battery
Project Number:	115-6403637

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
181098	AH-1 0-1'	soil	2008-12-02	00:00	2008-12-03
181099	AH-1 1-1.5'	soil	2008-12-02	00:00	2008-12-03
181100	AH-1 2-2.5'	soil	2008-12-02	00:00	2008-12-03
181101	AH-1 2.5-3.0'	\mathbf{soil}	2008-12-02	00:00	2008-12-03
181102	AH-2 0-1'	soil	2008-12-02	00:00	2008-12-03
181103	AH-2 1-1.5'	soil	2008-12-02	00:00	2008-12-03
181104	AH-3 0-1'	soil	2008-12-02	00:00	2008-12-03
181105	AH-3 1-1.5'	soil	2008-12-02	00:00	2008-12-03
181106	AH-3 2-2.5'	soil	2008-12-02	00:00	2008-12-03
181107	AH-4 0-1'	soil	2008-12-02	00:00	2008-12-03
181108	AH-4 1-1.5'	soil	2008-12-02	00:00	2008-12-03
181109	AH-4 2-2.5'	soil	2008-12-02	00:00	2008-12-03
181110	AH-5 0-1'	soil	2008-12-02	00:00	2008-12-03
181111	AH-5 1-1.5'	soil	2008-12-02	00:00	2008-12-03

]	BTEX		TPH DRO	TPH GRO
	Benzene	Toluene	Ethylbenzene	Xylene	DRO	GRO
Sample - Field Code	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
181098 - AH-1 0-1'					63.7	1.97
181102 - AH-2 0-1'	< 0.0100	< 0.0100	< 0.0100	<0.0100	159	63.2
181104 - AH-3 0-1'					<50.0	13.8
181107 - AH-4 0-1'	< 0.0200	0.175	0.366	0.343	135	88.0
181110 - AH-5 0-1'					<50.0	4.30

Sample: 181098 - AH-1 0-1'

Param	Flag	Result	Units	\mathbf{RL}
Chloride		780	mg/Kg	2.00

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Report Date: Decer 115-6403637	mber 10, 2008	Work Order: 8120325 COG/Bonds #1 Tank Battery		Page Number: 2 of 3 Lea County, NM
Sample: 181099 -	- AH-1 1-1.5'			
Param	Flag	Result	Units	RL
Chloride		801	mg/Kg	2.00
			2	
Sample: 181100 -	- AH-1 2-2.5'			
Param	Flag	Result	Units	RL
Chloride		1060	mg/Kg	2.00
Sample: 181101	- AH-1 2.5-3.0'			
Param	Flag	Result	Units	RL
Chloride		1220	mg/Kg	2.00
Sample: 181102	- AH-2 0-1'			
Param	Flag	Result	Units	RL
Chloride		1530	mg/Kg	2.00
Sample: 181103	- AH-2 1-1.5'	:		
Param	Flag	Result	Units	RL
Chloride		310	mg/Kg	2.00
Samples 191104	AU 9 0 1'			
Sample, 101104	- AII-3 0-1		TT •.	D.I.
Param Chloride	Flag	652	Units	
Sample: 181105	- AH-3 1-1.5'			
Param	Flag	Result	Units	RL
Chloride		274	mg/Kg	2.00
Sample: 181106	- AH-3 2-2.5'			
Param	Flag	Result	Units	RL
Chloride		341	mg/Kg	2.00

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: December 10, 2 115-6403637	2008	Work Order: 8120325 COG/Bonds #1 Tank Battery	Work Order: 8120325 COG/Bonds #1 Tank Battery		
Sample: 181107 - AH-4 0	-1'				
Param	Flag	Result	Units	RL	
Chloride		692	mg/Kg	2.00	
Sample: 181108 - AH-4 1	-1.5'				
Param	Flag	Result	Units	\mathbf{RL}	
Chloride		470	mg/Kg	2.00	
Sample: 181109 - AH-4 2	2-2.5'				
Param	Flag	Result	Units	RL	
Chloride		368	mg/Kg	2.00	
Sample: 181110 - AH-5 ()-1'				
Param	Flag	Result	Units	\mathbf{RL}	
Chloride		409	mg/Kg	2.00	
Sample: 181111 - AH-5	l-1.5'				
Param	Flag	Result	Units	RL	
Chloride		552	mg/Kg	2.00	

TRACEANALYSIS, INC. MILLING MILLING

6701 Aberdeen Avenue, Suite 9 – 1 200 Eucl Suiser Roed, Suite E – 6 5002 Basin Street, Suite A1 – 6 6015 Harris Parkway, Suite 110 – Ft

Lubbock, Iexas 70424 800-378+1296 El Paso, Texas 70922 889+588+3443 Midrand, Texas 70703 Ft Worth Texas 76132 E-Mail: Tab@traceanalysis.com

806 • 794 • 1296 F 915 • 585 • 3443 F 432 • 689 • 6301 F 817 • 201 • 5260

FAX 806 • 794 • 1298 FAX 915 • 585 • 4944 FAX 432 • 689 • 63 13

WBENC: 237019

HUB:1752439743100-86536NCTRCAWFWB38444Y0909

Certifications

DBE: VN 20657

NELAP Certifications

Lubbock: T104704219-08-TX LELAP-02003 Kansas E-10317 El Paso: T104704221-08-TX LELAP-02002 Midland: T104704392-08-TX

Analytical and Quality Control Report

Ike Tavarez Tetra Tech 1910 N. Big Spring Street Midland, TX, 79705

Report Date: December 10, 2008

Work Order: 8120325

Project Location:Lea County, NMProject Name:COG/Bonds #1 Tank BatteryProject Number:115-6403637

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

			Date	Lime	Date
Sample	Description	Matrix	Taken	Taken	Received
181098	AH-1 0-1'	soil	2008-12-02	00:00	2008-12-03
181099	AH-1 1-1.5'	soil	2008-12-02	00:00	2008 - 12 - 03
181100	AH-1 2-2.5'	soil	2008-12-02	00:00	2008-12-03
181101	AH-1 2.5-3.0'	soil	2008-12-02	00:00	2008-12-03
181102	AH-2 0-1'	soil	2008-12-02	00:00	2008-12-03
181103	AH-2 1-1.5'	soil	2008-12-02	00:00	2008-12-03
181104	AH-3 0-1'	soil	2008-12-02	00:00	2008-12-03
181105	AH-3 1-1.5'	soil	2008-12-02	00:00	. 2008-12-03
181106	AH-3 2-2.5'	soil	2008-12-02	00:00	2008-12-03
181107	AH-4 0-1'	soil	2008-12-02	00:00	2008-12-03

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
181108	AH-4 1-1.5'	soil	2008-12-02	00:00	2008-12-03
181109	AH-4 2-2.5'	soil	2008-12-02	00:00	2008-12-03
181110	AH-5 0-1'	soil	2008-12-02	00:00	2008-12-03
181111	AH-5 1-1.5'	soil	2008-12-02	00:00	2008-12-03

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 21 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Michael about

Dr. Blair Leftwich, Director

Standard Flags

 ${\bf B}\,$ - The sample contains less than ten times the concentration found in the method blank.

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Case Narrative

Samples for project COG/Bonds #1 Tank Battery were received by TraceAnalysis, Inc. on 2008-12-03 and assigned to work order 8120325. Samples for work order 8120325 were received intact at a temperature of 3.2 deg. C.

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

Test	Method
BTEX	S 8021B
Chloride (Titration)	SM 4500-Cl B
TPH DRO	Mod. 8015B
TPH GRO	S 8015B

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 8120325 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.

Analytical Report

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Sample: 181098 - AH-1 0-1'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 54915 46913	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2008-12-08 2008-12-05	Prep Method: Analyzed By: Prepared By:	N/A AR AR
		RL			
Parameter	Flag	\mathbf{Result}	Units	Dilution	\mathbf{RL}
Chloride		780	mg/Kg	50	2.00

Sample: 181098 - AH-1 0-1'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland TPH DRO 54883 46895		Analytical M Date Analyze Sample Prepa	ethod: Mod. 8 ed: 2008-12 aration: 2008-12	3015B 2-04 2-04	Prep M Analyz Prepar	fethod: N/A ed By: LD ed By: LD
_			RL			D .1	
Parameter	Fla	ıg	Result	Uni	ts	Dilution	\mathbf{RL}
DRO			63.7	mg/H	(g	1	50.0
					Spike	Percent	Recovery
Surrogate	\mathbf{Flag}	Result	Units	Dilution	Amount	Recovery	Limits
n-Triacontan	e	122	mg/Kg	1	100	122	10 - 250.4

Sample: 181098 - AH-1 0-1'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland TPH GRO 54873 46906		Analytical Date Anal Sample Pr	Method: yzed: reparation:	S 8015B 2008-12-04 2008-12-04		Prep Meth Analyzed Prepared 1	od: S 5035 By: ME By: ME
			RL					
Parameter	Flag		\mathbf{Result}		Units	D	ilution	\mathbf{RL}
GRO			1.97		mg/Kg		1	1.00
Surrogato		Flag	Regult	Unite	Dilution	Spike Amount	Percent	Recovery
Surrogate	(mpm)	r lag	nesuit	Units	Dilution	Amount	Recovery	
Trinuorotolu	ene (TFT)		0.991	mg/Kg	1	1.00	99	75 - 117.2
4-Bromofluor	robenzene (4-BFB)		0.812	mg/Kg	1	1.00	81	56 - 142.8

Sample: 181099 - AH-1 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	54915	Date Analyzed:	2008-12-08	Analyzed By:	AR
Prep Batch:	46913	Sample Preparation	2008-12-05	Prepared By:	AR
		\mathbf{RL}			
Parameter	\mathbf{Flag}	\mathbf{Result}	Units	Dilution	\mathbf{RL}
Chloride		801	mg/Kg	50	2.00

Sample: 181100 - AH-1 2-2.5'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 54915 46913	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2008-12-08 2008-12-05	Prep Method: Analyzed By: Prepared By:	N/A AR AR
		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	RL
Chloride		1060	mg/Kg	50	2.00

Sample: 181101 - AH-1 2.5-3.0'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	54915	Date Analyzed:	2008-12-08	Analyzed By:	AR
Prep Batch:	46913	Sample Preparation:	2008-12-05	Prepared By:	\mathbf{AR}
		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		1220	mg/Kg	50	2.00

Sample: 181102 - AH-2 0-1'

Laboratory:	Midland					
Analysis:	BTEX		Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	54871		Date Analyzed:	2008-12-04	Analyzed By:	ME
Prep Batch:	46906		Sample Preparation:	2008-12-04	Prepared By:	ME
			\mathbf{RL}			
Parameter		Flag	Result	Units	Dilution	\mathbf{RL}
Benzene			< 0.0100	mg/Kg	1	0.0100
Toluene			< 0.0100	mg/Kg	1	0.0100

continued ...

sample 181102 continued ...

			RI	L				
Parameter F	`lag		Result	t	Units		Dilution	\mathbf{RL}
Ethylbenzene			< 0.0100)	mg/Kg	<u> </u>	1	0.0100
Xylene			< 0.0100)	mg/Kg		1	0.0100
-						Spike	Percent	Recovery
Surrogate	F	lag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			1.02	mg/Kg	1	1.00	102	49 - 129.7
4-Bromofluorobenzene (4-BF)	B)		1.04	mg/Kg	1	1.00	104	45.2 - 144.3

Sample: 181102 - AH-2 0-1'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 54915 46913	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2008-12-08 2008-12-05	Prep Method: Analyzed By: Prepared By:	N/A AR AR
		RL			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		1530	mg/Kg	50	2.00

Sample: 181102 - AH-2 0-1'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland TPH DRO 54883 46895		Analytical Me Date Analyze Sample Prepa	ethod: Mod. d: 2008-1 uration: 2008-1	8015B 12-04 12-04	Prep M Analyz Prepar	fethod: N/A ed By: LD ed By: LD
			\mathbf{RL}				
Parameter	Flag	5	Result	Ur	nits	Dilution	\mathbf{RL}
DRO			159	mg/	Kg	1	50.0
					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
n-Triacontan	e	103	mg/Kg	1	100	103	10 - 250.4

Sample: 181102 - AH-2 0-1'

Laboratory:	Midland	Ż.			
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	54873	Date Analyzed:	2008-12-04	Analyzed By:	ME
Prep Batch:	46906	Sample Preparation:	2008-12-04	Prepared By:	ME

Report Date: 115-6403637	Report Date: December 10, 2008 115-6403637			Work Order: 8120325 COG/Bonds #1 Tank Battery				Page Number: 7 of 21 Lea County, NM		
D /			RL		TIt.		Dilation		DT	
Parameter	Flag		Result		Units				$\frac{\mathrm{RL}}{1.00}$	
GRU			03.2	·	mg/Kg		<u>_</u>		1.00	
Surrogate		Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Rec Lii	overy mits	
Trifluorotolue	ene (TFT)		0.960	mg/Kg	1	1.00	96	75 -	117.2	
4-Bromofluor	obenzene (4-BFB)		1.01	mg/Kg	1	1.00	101	<u>56 -</u>	142.8	
Sample: 18	1103 - AH-2 1-1.5'									
Laboratory:	Midland		. 1		CD 6 4500	CLD			NT / A	
Analysis:	Chloride (Titration)		Analy	tical Method	: SM 4500-	CI B	Prep Me	thod:	N/A	
QU Batch:	54915 46012		Date I Sampl	Analyzed:	2008-12-0	18 15	Analyzed	і Бу: і р	AR AD	
Prep batch:	40915		Sampi	e rieparatio	II: 2008-12-0	10	riepared	і Бу:	An	
			\mathbf{RL}							
Parameter	Flag		Result		Units		Dilution		RL	
Chloride			310	•	mg/Kg		50		2.00	
Sample: 18 Laboratory: Analysis: QC Batch: Prep Batch:	1104 - AH-3 0-1' Midland Chloride (Titration) 54915 46913		Analy Date . Sampl	tical Method Analyzed: le Preparatio	: SM 4500- 2008-12-0 n: 2008-12-0	-Cl B)8)5	Prep Me Analyzed Prepared	thod: d By: d By:	N/A AR AR	
			RL							
Parameter	Flag		Result		Units		Dilution		RL	
Chloride			652	<u> </u>	mg/Kg		50		2.00	
Sample: 18	51104 - AH-3 0-1'									
Laboratory:	Midland									
Analysis:	TPH DRO		Analytica	l Method:	Mod. 8015B		Prep Me	ethod:	N/A	
QC Batch:	54883		Date Ana	lyzed:	2008-12-04		Analyze	d By:	LD	
Prep Batch:	46895		Sample P	reparation:	2008-12-04		Prepared	d By:	LD	
5			RL		.					
Parameter	Flag		Result		Units		Dilution		RL	
DRO			$<\!50.0$		mg/Kg		1		50.0	

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Report Date: 115-6403637	: December 10, 20	08	Work Order: 8120325 COG/Bonds #1 Tank Battery				Page Number: 8 of 21 Lea County, NM		
Surrogate	Flag	Result	Units mg/Kg	Diluti	on	Spike Amount	Percent Recovery 92	Reco Lim	very hits 250-4
II- IIIacontaile	e	92.0	mg/ ng	1		100	52	10 - 2	
Sample: 18	1104 - AH-3 0-1	,						•	
Laboratory:	Midland								
Analysis:	TPH GRO		Analytical	Method:	S 8015B		Prep Met	hod: S	5035
QC Batch:	54873		Date Anal	yzed:	2008-12-04	:	Analyzed	By: M	ΙE
Prep Batch:	46906		Sample Pr	reparation:	2008-12-04	:	Prepared	By: M	ΙE
			RI.						
Parameter	Flag	r	Result		Units		Dilution		RL
GRO)	13.8		mg/Kg		2		1.00
					0,0				
						Spike	Percent	Reco	overy
Surrogate		Flag	Result	Units	Dilution	Amount	Recovery	Lin	nits
Trifluorotolu	ene (TFT)	、 、	1.60	mg/Kg	2	2.00	80	75 -	117.2
4-Bromofluor	robenzene (4-BFB)	1.61	mg/Kg	2	2.00	80	56 -	142.8
Sample: 18 Laboratory: Analysis: OC Batch:	1105 - AH-3 1-1 Midland Chloride (Titrat 54015	1. 5' ion)	Analy	tical Method	: SM 45	00-Cl B 2-08	Prep M Analyz	lethod:	N/A
Prep Batch:	46913		Sampl	le Preparatio	n: 2008-1	2-05	Prepar	ed By	AR
1100 20000	10010		2000-P	io i roportatio		- 00	Topa	ou 29.	
			RL						
Parameter	Flag	5	Result		Units		Dilution		RL
Chloride			274		Mg		50	·	2.00
Sample: 18	31106 - AH-3 2-2	2.5'							
Laboratory:	Midland								
Analysis:	Chloride (Titrat	ion)	Analy	rtical Method	: SM 45	500-Cl B	Prep M	lethod:	N/A
QC Batch:	54915		Date	Analyzed:	2008-1	2-08	Analyz	ed By:	AR
Prep Batch:	46913		Samp	le Preparatio	n: 2008-1	2-05	Prepar	ed By:	AR
			Dĭ						
Parameter	Flag	or	Result		Unite		Dilution		тg
Chloride		D	341		mg/Kg		50		2.00
·····					0/0				

Sample: 181107 - AH-4 0-1'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland BTEX 54871 46906			Analytical Date Analy Sample Pre	Method: vzed: eparation:	S 8021B 2008-12-04 2008-12-04		Prep Met Analyzed Prepared	chod: S 50 By: ME By: ME	035 } }
				RI						
Parameter		Flag		Resul	t	Units		Dilution		\mathbf{RL}
Benzene				< 0.0200)	mg/Kg		2	0.0	100
Toluene				0.17	5	mg/Kg		2	0.0	100
Ethylbenzen	e			0.366	3	mg/Kg		2	0.0	100
Xylene				0.34	3	mg/Kg		2	0.0	100
Sumo mete			Flo a	Decult	Unite	Dilution	Spike	Percent	Recove	ry
Surrogate			Flag	Result	Units	Dilution	Amount	Recovery	Limit	s
Trifluorotolu	ene (TFT)			2.05	mg/Kg	2	2.00	102	49 - 129	9.7
4-Bromofluo	robenzene (4-I	3FB)		2.15	mg/Kg	2	2.00	108	45.2 - 14	44.3

Sample: 181107 - AH-4 0-1'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 54915 46913	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2008-12-08 2008-12-05	Prep Method: Analyzed By: Prepared By:	N/A AR AR
D		RL	TT 1 .		
Parameter	Flag	Result	Units	Dilution	RL
Chloride		692	mg/Kg	50	2.00

Sample: 181107 - AH-4 0-1'

n-Triacontan	e ·	112	mg/Kg	1	100	112	10 - 250.4
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
DRO			135	mg/I	Кg	. 1	50.0
Parameter	Flag	5	RL Result	Un	its	Dilution	RL
Prep Batch:	46895		Sample Prepa	ration: 2008-1	2-04	Prepar	ed By: LD
Laboratory: Analysis: OC Batch:	Midland TPH DRO 54883		Analytical Me Date Analyze	ethod: Mod. 8	3015B 2-04	Prep M Analyz	fethod: N/A

Sample: 181107 - AH-4 0-1'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland TPH GRO 54873 46906		Analytical Date Analy Sample Pr	Method: yzed: eparation:	S 8015B 2008-12-04 2008-12-04		Prep Meth Analyzed Prepared 1	ıod: S By: M By: I	3 5035 ME ME
			RL		TT . */ .		D:1		Ы
Parameter	Flag		Result		Units		Dilution		$\frac{\text{RL}}{1.00}$
GRO			88.0		mg/Kg		Z		1.00
						Spike	Percent	Rec	covery
Surrogate		Flag	\mathbf{Result}	Units	Dilution	Amount	Recovery	Li	mits
Trifluorotolue	ene (TFT)		1.74	mg/Kg	2	2.00	87	75 -	117.2
4-Bromofluor	obenzene (4-BFB)		2.83	mg/Kg	2	2.00	142	56 -	142.8
Sample: 18 Laboratory: Analysis: QC Batch: Prep Batch:	1108 - AH-4 1-1.5' Midland Chloride (Titration) 54916 46914		Analy Date A Sampl	tical Methoo Analyzed: e Preparatio	l: SM 4500- 2008-12-0 on: 2008-12-0	-Cl B)8)5	Prep M Analyze Prepare	ethod: d By: d By:	N/A AR AR
D	Flore		RL		Theite		Dilution		ът
Chlorido	Flag						50	·····	<u></u>
Sample: 18 Laboratory: Analysis:	1109 - AH-4 2-2.5' Midland Chloride (Titration)		Analy	tical Metho	1: SM 4500	-Cl B	 Ртер М	ethod.	N/A
QC Batch:	54916		Date A	Analyzed:	2008-12-(08	Analyze	ed By:	AR

Prep Batch: 469	14	Sample Preparation:	2008-12-05	Prepared By:	AR
		\mathbf{RL}			
Parameter	\mathbf{Flag}	Result	Units	Dilution	\mathbf{RL}
Chloride		368 1	ng/Kg	50	2.00

Sample: 181110 - AH-5 0-1'

-					
Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	54916	Date Analyzed:	2008-12-08	Analyzed By:	ÁR
Prep Batch:	46914	Sample Preparation:	2008-12-05	Prepared By:	AR

Report Date: December 10, 2008 115-6403637		8	Wor COG/Bo	k Order: 812032 onds #1 Tank Ba	Page Number: 11 of 21 Lea County, NM		
_			RL				D.
Parameter	Flag		Result		.8	Dilution	
Chloride			409	mg/K	<u>g</u>	50	2.00
Sample: 18	1110 - AH-5 0-1'						
Laboratory:	Midland						
Analysis:	TPH DRO		Analytical Me	thod: Mod. 8	015B	Prep M	ethod: N/A
QC Batch:	54902		Date Analyze	d: 2008-12	2-08	Analyz	ed By: LD
Prep Batch:	46928		Sample Prepa	ration: 2008-12	2-08	Prepare	ed By: LD
			\mathbf{RL}				
Parameter	\mathbf{Flag}		Result	Unit	ts	Dilution	\mathbf{RL}
DRO	,		<50.0	mg/K	g	1	50.0
			×		Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
n-Triacontan	e	159	mg/Kg	1	100	159	10 - 250.4

Sample: 181110 - AH-5 0-1'

Laboratory:	Midland							
Analysis:	TPH GRO		Analytical	Method:	S 8015B		Prep Meth	od: S 5035
QC Batch:	54873		Date Anal	yzed:	2008-12-04		Analyzed i	By: ME
Prep Batch:	46906		Sample Pr	eparation:	2008-12-04		Prepared 1	By: ME
			RL					
Parameter	\mathbf{Flag}		\mathbf{Result}		\mathbf{Units}	D	ilution	\mathbf{RL}
GRO			4.30		mg/Kg		1	1.00
						\mathbf{Spike}	Percent	Recovery
Surrogate		Flag	\mathbf{Result}	Units	Dilution	Amount	Recovery	Limits
Trifluorotolue	ene (TFT)		0.803	mg/Kg	1	1.00	80	75 - 117.2
4-Bromofluor	obenzene (4-BFB)		0.818	mg/Kg	1	1.00	82	56 - 142.8

Sample: 181111 - AH-5 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	54916	Date Analyzed:	2008-12-08	Analyzed By:	AR
Prep Batch:	46914	Sample Preparation:	2008-12-05	Prepared By:	\mathbf{AR}

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Report Date: Decembe 115-6403637	er 10, 2008	CO	Work Ord G/Bonds #	er: 8120325 1 Tank Battery	,	Page Number: 12 of 21 Lea County, NM			
sample 181111 continue	ed								
_		RL							
Parameter	Flag	Result		Units		Dilution	RL		
		\mathbf{RL}							
Parameter	Flag	Result		Units]	Dilution	RL		
Chloride		552		Mg/Kg		50	2.00		
Method Blank (1)	QC Batch: 54871								
QC Batch: 54871		Date An	alyzed: 2	2008-12-04		Analy	zed By: ME		
Prep Batch: 46906		QC Prep	aration: 2	2008-12-04		Prepa	red By: ME		
			М	DL					
Parameter	Flag		Re	sult	Un	its	\mathbf{RL}		
Benzene			< 0.00	800	mg/	′Kg	0.01		
Toluene			<0.00	800	mg/	′Kg	0.01		
Ethylbenzene			<0.00	820	mg/	′Kg	0.01		
Xylene			<0.00	960	mg/	′Kg	0.01		
					Spike	Percent	Recovery		
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits		
Trifluorotoluene (TFT)		1.00	mg/Kg	1	1.00	100	65.6 - 130.6		
4-Bromofluorobenzene	(4-BFB)	0.984	mg/Kg	1	1.00	98	51.9 - 128.1		
Method Blank (1)	QC Batch: 54873								
QC Batch: 54873		Date An	alyzed:	2008-12-04		Analy	zed By: ME		
Prep Batch: 46906		QC Prep	paration:	2008-12-04		Prepa	ared By: ME		
Demonster			MD	L	T* -				
rarameter CBO	riag		Kesu.	IC	Uni		RL		
			0.77	4	mg/	va	<u>I</u>		
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits		
Trifluorotoluene (TFT))	0.822	mg/Kg	1	1.00	82	58.3 - 129.3		
4-Bromofluorobenzene	(4-BFB)	0.815	mg/Kg	11	1.00	82	57 - 124.9		

Report Date: December 10, 2008 115-6403637 Mathed Blank (1)OC Batch: 548			Work Or COG/Bonds	der: 8120325 #1 Tank Bat	tery	Page Number: 13 of 21 Lea County, NM			
Method Blank (1)	QC	Batch: 54883							
QC Batch: 54883			Date Analyzed:	2008-12-04			Analyzed By:	LD	
Prep Batch: 46895			QC Preparation:	2008-12-04			Prepared By:	LD	
			MI	DL					
Parameter		Flag	Res	ult		Units		RL	
DRO			<1	5.8		mg/Kg		50	
					Spike	Percent	Reco	verv	
Surrogate	Flag	Result	Units D	ilution	Amount	Recovery	y Lim	its	
n-Triacontane		118	mg/Kg	1	100	118	30.9 -	146.4	
Method Blank (1) QC Batch: 54902 Prep Batch: 46928) QC	Batch: 54902	Date Analyzed: QC Preparation:	2008-12-08 2008-12-08			Analyzed By: Prepared By:	LD LD	
			M	DL				_	
Parameter		Flag	Res	ult		Units		RL	
DRO			<1	5.8		mg/Kg		50	
Surrogate	Flag	Regult	Unite D	Vilution	Spike Amount	Percent	Reco	very	
n-Triacontane	T lag	122	mg/Kg	1	100	122	<u>y Din</u> <u>309</u> -	$\frac{115}{1464}$	
Method Blank (1 QC Batch: 54915 Prep Batch: 46913) QC	Batch: 54915	Date Analyzed: QC Preparation:	2008-12-08 2008-12-05			Analyzed By: Prepared By:	AR AR	
			м	זת					
Parameter		Flag	Re	sult		Units		BL	
Chloride			<0.	500		mg/Kg	·····	2	
Method Blank (1 OC Batch: 54916) Q(C Batch: 54916	Date Analyzed	2008-12-08			Analyzed Ry	AR	
Prep Batch: 46914	i		QC Preparation:	2008-12-05			Prepared By:	AR	
_		-	Μ	IDL					
Parameter		Flag	Re	sult		Units		RL	
Unioride			<0.	500	·······	mg/Kg		2	

Work Order: 8120325 COG/Bonds #1 Tank Battery

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Laboratory Control Spike (LCS-1)

QC Batch:	54871		Date Ar	nalyzed	: 2008-13	2-04		Anal	yzed By:	: ME
Prep Batch:	46906		QC Pre	paratio	n: 2008-12	2-04		Prep	ared By:	ME
		LCS				Spike	Matri	x	I	lec.
Param		Resu	lt U	Jnits	Dil.	Amount	Resul	t Rec.	\mathbf{L}	imit
Benzene		0.995	2 m	g/Kg	1	1.00	< 0.008	300 99	72.7	- 129.8
Toluene		0.99) m	g/Kg	1	1.00	< 0.008	300 99	71.6	- 129.6
Ethylbenzene	<u>}</u>	1.00	m	g/Kg	1	1.00	< 0.008	320 100	70.8	- 129.7
Xylene		3.00	m	g/Kg	1	3.00	< 0.009	060 100	70.9	- 129.4
Percent recov	very is based on the	spike result.	RPD is	based o	on the spike	e and spike d	uplicate	result.		
		LCSD			Spike	Matrix		Rec.		RPD
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene		0.954	mg/Kg	1	1.00	< 0.00800	95	72.7 - 129.8	4	20

Xylene		2.91	mg/Kg	1	3.0)0	<0.0)096	0	97	70.9 - 12	9.4
			 	_		_					 	
			 +									

1

1

1.00

1.00

96

97

71.6 - 129.6

70.8 - 129.7

< 0.00800

< 0.00820

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

mg/Kg

mg/Kg

0.956

0.970

	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	\mathbf{Result}	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	0.990	0.968	mg/Kg	1	1.00	99	97	65.9 - 132
4-Bromofluorobenzene (4-BFB)	0.995	0.993	mg/Kg	1	1.00	100	99	55.2 - 128.9

Laboratory Control Spike (LCS-1)

Toluene

Ethylbenzene

QC Batch:	54873	Date	e Analyzed:	2008-12-	04		Analyzed	l By: ME
Prep Batch:	46906	QC	Preparation:	2008-12-	04		Prepared	By: ME
		LCS		·	Spike	Matrix		Rec.
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit
GRO		7.35	mg/Kg	1	10.0	< 0.171	74	70 - 130
Porcent record	vory is based on t	he spike result RPC	ie beed on	the onike	and aniles dura	ionto nogult		

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{Result}	Units	Dil.	Amount	Result	Rec.	\mathbf{Limit}	RPD	Limit
GRO	7.38	mg/Kg	1	10.0	< 0.171	74	70 - 130	8	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.	Rec.	Limit
Trifluorotoluene (TFT)	0.860	0.837	mg/Kg	1	1.00	86	84	70 - 130
4-Bromofluorobenzene (4-BFB)	0.855	0.843	mg/Kg	1	1.00	86	84	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 54883 Prep Batch: 46895		1	Date Ar QC Pre	nalyzed: paration:	2008-12- 2008-12-	04 04			Analy Prepa	yzed By ared By:	: LD : LD
		LCS				Spike	Mat	rix		R	lec.
Param		Result	t 1	Units	Dil.	Amount	Res	ult	Rec.	Li	imit
DRO		187	n	1g/Kg	1	250	<1	5.8	75	27.8	- 152.1
Percent recovery is based	on the sp	ike result. I	RPD is	based on	the spike a	and spike d	uplicate	e result			
		LCSD			Spike	Matrix		P	00		חסק
Param		Result	Units	Dil	Amount	Result	Rec	Li	ec. mit	RPD	Limit
DRO		184	mg/Kg	<u>1</u>	250	<15.8	74	27.8 -	152.1	$\frac{10}{2}$	20
Percent recovery is based	on the sn	iko rogult - 1	PPD is	hasod on	the spike	and apiles d	unlight	rogult			
Tercent recovery is based	on the sp	ine result. I	I(I D 15	based OII	the spike	anu spike u	upneau	e resurt	•		
	LCS	LCSD				Spike	LC	CS	LCSD		Rec.
Surrogate	Result	Result	U	Jnits	Dil.	Amount	Re	ec.	Rec.	I	Limit
n-Triacontane	79.1	78.5	m	g/Kg	1	100	7	9	$\overline{78}$	38	- 130.4
QC Batch: 54902 Prep Batch: 46928		LCS Resul	Date A: QC Pre	nalyzed: eparation: Units	2008-12 2008-12 Dil.	-08 -08 Spike Amount	Ma Res	trix	Anal Prep Bec	yzed By ared By H	7: LD 7: LD Rec.
QC Batch: 54902 Prep Batch: 46928 Param DRO		LCS Resul 197	Date A QC Pre	nalyzed: eparation: Units ng/Kg	2008-12 2008-12 Dil.	-08 -08 Spike Amount 250	Ma Res <1	trix sult 5.8	Anal Prep <u>Rec.</u> 79	yzed By bared By H L 27.8	7: LD 7: LD Rec. .imit - 152.1
QC Batch: 54902 Prep Batch: 46928 Param DRO Percent recovery is based	on the sp	LCS Resul 197 bike result.	Date As QC Pre	nalyzed: eparation: Units ng/Kg based on	2008-12 2008-12 Dil. 1 the spike	-08 -08 Amount 250 and spike d	Ma Res <1	trix sult 5.8 e result	Anal Prep Rec. 79	yzed By bared By H L 27.8	r: LD r: LD Rec. .imit - 152.1
QC Batch: 54902 Prep Batch: 46928 Param DRO Percent recovery is based	on the sp	LCS Resul 197 Dike result. LCSD	Date A QC Pre	nalyzed: eparation: Units ng/Kg based on	2008-12 2008-12 Dil. 1 the spike Spike	-08 -08 Amount 250 and spike d Matrix	Ma Res <1 uplicate	trix sult 5.8 e result R	Anal Prep <u>Rec.</u> 79 t. t.	yzed By ared By I L 27.8	7: LD 7: LD Rec. imit - 152.1 RPD
QC Batch: 54902 Prep Batch: 46928 Param DRO Percent recovery is based Param	on the sp	LCS Resul 197 Dike result. LCSD Result	Date A QC Pre t RPD is Units	nalyzed: eparation: <u>Units</u> ng/Kg based on Dil.	2008-12 2008-12 Dil. 1 the spike Spike Amount	-08 -08 Amount 250 and spike d Matrix Result	Ma Res <1 uplicato Rec.	trix sult 5.8 e result R Li	Anal Prep <u>Rec.</u> 79 t. t. t. t. t. t. t. t.	yzed By ared By H L 27.8 RPD	r: LD r: LD Rec. .imit - 152.1 RPD Limit
QC Batch: 54902 Prep Batch: 46928 Param DRO Percent recovery is based Param DRO	on the sp	LCS Resul 197 bike result. LCSD Result 185	Date A QC Pre	nalyzed: eparation: Units ng/Kg based on Dil. 1	2008-12 2008-12 Dil. 1 the spike Spike Amount 250	-08 -08 Amount 250 and spike d Matrix Result <15.8	Ma Res <1 uplicato Rec. 74	trix sult 5.8 e result R Li 27.8	Anal Prep Rec. 79 t. t. t. t. t. t. t. t. t. t. t. t. t.	yzed By ared By H L 27.8 RPD 6	r: LD r: LD Rec. .imit - 152.1 RPD Limit 20
QC Batch: 54902 Prep Batch: 46928 Param DRO Percent recovery is based Param DRO Percent recovery is based	on the sp on the sp	LCS Resul 197 bike result. LCSD Result 185 bike result.	Date A QC Pre t RPD is Units mg/Kg RPD is	nalyzed: eparation: Units ng/Kg based on Dil. 1 based on	2008-12 2008-12 Dil. 1 the spike Spike Amount 250 the spike	-08 -08 Amount 250 and spike d Matrix Result <15.8 and spike d	Ma Res <1 uplicato Rec. 74 uplicat	trix sult 5.8 e result R Li 27.8 e result	Anal Prep Rec. 79 t. t. t. t. t. t. t. t.	yzed By ared By H L 27.8 RPD 6	r: LD r: LD Rec. imit - 152.1 RPD Limit 20
QC Batch: 54902 Prep Batch: 46928 Param DRO Percent recovery is based Param DRO Percent recovery is based	on the sp on the sp LCS	LCS Resul 197 bike result. LCSD Result 185 bike result. LCSD	Date A QC Pre	nalyzed: eparation: Units ng/Kg based on Dil. 1 based on	2008-12 2008-12 Dil. 1 the spike Spike Amount 250 the spike	-08 -08 Amount 250 and spike d Matrix Result <15.8 and spike d	Ma Res <1 uplicato Rec. 74 uplicat	trix sult 5.8 e result Li 27.8 e result	Anal Prep Rec. 79 t. t. t. t. LCSD	yzed By ared By H L 27.8 RPD 6	r: LD r: LD Rec. .imit - 152.1 RPD Limit 20
QC Batch: 54902 Prep Batch: 46928 Param DRO Percent recovery is based Param DRO Percent recovery is based Surrogate	on the sp on the sp LCS Result	LCS Resul 197 bike result. LCSD Result 185 bike result. LCSD Result	Date A QC Pre	nalyzed: eparation: <u>Units</u> <u>ng/Kg</u> based on <u>Dil.</u> 1 based on Units	2008-12 2008-12 Dil. 1 the spike Spike Amount 250 the spike Dil.	-08 -08 Amount 250 and spike d Matrix Result <15.8 and spike d Spike Amount	Ma Res <1 uplicato Rec. 74 uplicato R	trix 5.8 e result 27.8 e result cS ec.	Anal Prep Rec. 79 t. c. c. c. mit - 152.1 t. LCSD Rec.	yzed By ared By H L 27.8 RPD 6	r: LD r: LD Rec. .imit - 152.1 RPD Limit 20 Rec. Limit
QC Batch: 54902 Prep Batch: 46928 Param DRO Percent recovery is based Param DRO Percent recovery is based Surrogate n-Triacontane	on the sp on the sp LCS Result 88.2	LCS Resul 197 bike result. LCSD Result 185 bike result. LCSD Result 78.4	Date A QC Pre t RPD is Units mg/Kg RPD is	nalyzed: eparation: <u>Units</u> <u>ng/Kg</u> based on <u>Dil.</u> 1 based on <u>Units</u> ng/Kg	2008-12 2008-12 Dil. 1 the spike Spike Amount 250 the spike Dil. 1	-08 -08 <u>Amount</u> 250 and spike d <u>Matrix</u> <u>Result</u> <15.8 and spike d Spike <u>Amount</u> 100	Ma Res <1 uplicato Rec. 74 uplicat Lo R 8	trix sult 5.8 e result R Li 27.8 e result CS ec. 8	Anal Prep Rec. 79 t. tec. mit - 152.1 t. LCSD Rec. 78	yzed By ared By H L 27.8 RPD 6 38	r: LD r: LD Rec. imit - 152.1 RPD Limit 20 Rec. Limit - 130.4

QC Batch:54915Date Analyzed:2008-12-08Analyzed By:ARPrep Batch:46913QC Preparation:2008-12-05Prepared By:AR

Report Date: December 10, 2008 115-6403637	<u></u>	Work Order: 8120325 COG/Bonds #1 Tank Battery						Page Number: 16 of 21 Lea County, NM				
	LC	S			Spike	Ma	trix		Rec.			
Param	Res	ult	Units	Dil.	Amount	Rea	sult I	Rec.	Limit			
Chloride	97	.6	mg/Kg	1	100	<0.	500	98	85 - 115			
Percent recovery is based on the sp	oike result.	RPD is	based on t	he spike a	nd spike du	olicate r	esult.					
	LCGD			Spiles	Motria		Dog		חסס			
Param	Regult	Unite	Dil	Amount	Regult	Roc	Limit	ppn	Limit			
Chlorido	<u>100</u>	mg/K	$\frac{D11}{\sigma}$	100	~ 0.500	100	<u>25 115</u>	<u>- ni D</u>	20			
			<u> </u>	100		100	00 - 110	J				
Laboratory Control Spike (LC QC Batch: 54916 Prep Batch: 46914	S-1)	Date A QC Pre	nalyzed: eparation:	2008-12-0 2008-12-0	08 05		Aı Pı	nalyzed H repared H	By: AR By: AR			
Param	LC Res	CS sult	Units	Dil.	Spike Amount	MaRe	trix sult	Rec	Rec. Limit			
Chloride	10)2	mg/Kg	1	100	<0	.500	102	85 - 115			
Percent recovery is based on the sp	pike result.	RPD is	based on	the spike a	and spike du	plicate r	esult.					
	I CSD			Spiles	Motrix		Dee		חחם			
Param	Result	Units	Dil	Amount	Result	Rec	Limit	RDD	Limit			
Chloride	101	mg/K	σ 1	100		101	85 - 115		20			
Persont recovery is based on the st	nika rogult		based on	the eniles of	nd chilto du				20			
Matrix Spike (MS-1) Spiked QC Batch: 54871 Prep Batch: 46906	Sample: 1	81128 Date A QC Pre	nalyzed:	2008-12- 2008-12-	04 04	pileate I	A: Pi	nalyzed I repared I	By: ME By: ME			
	M	S			Spike	Matr	ix		Rec.			
Param	Res	ult	Units	Dil.	Amount	Resu	lt Re	c.	Limit			
Benzene	<0.00	0800	mg/Kg	1	1.00	<0.008	300 0	58	3.6 - 165.2			
Toluene	² <0.00	0800	mg/Kg	1	1.00	<0.008	300 C	64	.2 - 153.8			
Ethylbenzene	³ <0.00	0820	mg/Kg	1	1.00	<0.008	320 0	61	.6 - 159.4			
Xylene	4 <0.00	0960	mg/Kg	1	3.00	< 0.009	960 0	64	.4 - 155.3			
Percent recovery is based on the s	pike result.	RPD is	based on	the spike a	and spike du	plicate 1	esult.					
continued	•			<u>F</u>								

¹SPECIAL-Prep error MS/MSD was not spiked. Use LCS/LCSD to demonstrate method under control. • ²SPECIAL-Prep error MS/MSD was not spiked. Use LCS/LCSD to demonstrate method under control. • ³SPECIAL-Prep error MS/MSD was not spiked. Use LCS/LCSD to demonstrate method under control. • ⁴SPECIAL-Prep error MS/MSD was not spiked. Use LCS/LCSD to demonstrate method under control. •

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Report Date: December 10, 2008 115-6403637		COC	Work G/Bone	Order: 812 ds #1 Tanl	0325 k Batter	у	<u>.</u>]	Page Number: 17 of 21 Lea County, NM						
matrix spikes continued								_							
	MSD	.	D .1	Spike	Mat	rix	Ð	R	ec.	DDD	RPD				
Param	Result	Units	Dil.	Amount	Rest	1lt	Rec.	Li	mit	RPD	Limit				
	MSD			Spike	Mat	rix		R	ec.		RPD				
Param	Result	Units	Dil.	Amount	Res	ult	Rec.	Li	mit	RPD	Limit				
Benzene 5	< 0.00800	mg/Kg	1	1.00	< 0.00	0800	0	58.6 -	165.2	0	20				
Toluene ⁶	< 0.00800	mg/Kg	1	1.00	<0.00	0080	0	64.2 -	153.8	0	20				
Ethylbenzene ⁷	< 0.00820	mg/Kg	1	1.00	<0.00	0820	0	61.6 -	159.4	0	20				
Xylene ⁸	< 0.00960	mg/Kg	1	3.00	<0.00	0960	0	64.4 -	-155.3	0	20				
Percent recovery is based on the sp	pike result.	RPD is b	ased o	n the spike	and spi	ke dup	licate	e result.							
	MS	MS	SD			Spił	ce	MS	MSD)	Rec.				
Surrogate	Resu	lt Res	ult	Units	Dil.	Amou	unt	Rec.	Rec.	1	Limit				
Trifluorotoluene (TFT)	0.97	2 1.0)2	mg/Kg	1	1		97	$10\overline{2}$	76	- 127.9				
4-Bromofluorobenzene (4-BFB)	0.98	6 1.0)1	mg/Kg	1	1		99	101	72	- 127.8				
	MS				Spik	e	Mat	trix	,	I	lec.				
Param	Resu	sult Units		Dil.	Amount		Res	sult Rec.		L	imit				
GRO	20.5	ó m	g/Kg	2	20.0)	<0.	342	102	22.3	- 134.6				
Percent recovery is based on the s	pike result.	RPD is b	based o	n the spike	e and spi	ike dup	olicate	e result.			÷				
	MSD			Spike	Matr	ix		Re	ec.		RPD				
Param	Result	Units	Dil.	Amount	Resu	lt F	lec.	Lin	nit	RPD	Limit				
GRO	21.0	mg/Kg	2	20.0	< 0.3	42 1	105	22.3 -	134.6	2	20				
Percent recovery is based on the s	pike result.	RPD is b	based o	n the spike	e and spi	ike dup	olicate	e result.							
	MS	MS	D			Spike	e	MS	MSD]	Rec.				
Surrogate	Resu	lt Res	ult	Units	Dil.	Amou	nt	Rec.	Rec.	I	imit				
Trifluorotoluene (TFT)	1.79	1.8	33	mg/Kg	2	2		90	92	68.4	- 113.1				
4-Bromofluorobenzene (4-BFB)	1.72	2 1.6	56	mg/Kg	2	2		86	83	66.7	- 134.3				
Matrix Spike (MS-1) Spiked	l Sample: 18	80690													
QC Batch: 54883		Date An	alyzed	: 2008-1	2-04				Anal	yzed By	: LD				
Prep Batch: 46895		QC Prep	paratio	n: 2008-1	2-04				Prep	ared By	r: LD				
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ín l															

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 $^7SPECIAL-Prep error MS/MSD$ was not spiked. Use LCS/LCSD to demonstrate method under control. $^8SPECIAL-Prep error MS/MSD$ was not spiked. Use LCS/LCSD to demonstrate method under control. \bullet

Report Date: December 115-6403637	10, 2008		CO	Work O G/Bonds	Page Nu L	ge Number: 18 of 21 Lea County, NM					
		MS				Spike	Matr	rix		Rec.	
Param		Resul	.t 1	Units	Dil.	Amount	Resu	ılt Rec.		Limit	
DRO		201	n	ıg/Kg	1	250	<15	.8 80	18	- 179.5	
Percent recovery is based	on the sp	ike result. I	RPD is l	based on	the spike a	nd spike du	plicate r	esult.			
		MSD			Spike	Matrix		Rec.		RPD	
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit	
DRO		212	mg/Kg	1	250	<15.8	85	18 - 179.5	5	20	
Percent recovery is based	on the sp	ike result.]	RPD is l	based on	the spike a	nd spike du	plicate r	esult.			
	MS	MSD				Spiko	MS	MGD		Boo	
Surrogate	Result	Result	T	Inits	Dil	Amount	Rec	Bec	nec. Limit		
n-Triacontane	86.0	83.1	m	g/Kg	1	100	86	83	34.1 - 158		
QC Batch: 54902 Prep Batch: 46928			Date Ar QC Pre	nalyzed: paration:	2008-12- 2008-12-	08 08		Ana Prep	lyzed By ared By	y: LD y: LD	
D		MS		T T •,	D.1	Spike	Mat	rix		Rec.	
Param			<u>lt</u>	$\frac{\text{Units}}{\text{n}\pi/K\pi}$	<u>1</u>	Amount	Kesi	ult Rec.	Limit		
Parcent recovery is based	on the sr	140 vike result		hased on	the spike :	200 and spike du	volicato r	0.0 00 vocult		5 - 179.5	
I creent recovery is based	on the sp			based on			ipiicate i	court.			
Deners		MSD Bosult	ISD		Spike	Matrix	D.,	Rec.	מתת	RPD	
DRO		<u>136</u>	mg/Kg	<u> </u>	250	<15.8	<u> </u>	$\frac{\text{Limit}}{18 - 170.5}$	7		
Percent recovery is based	on the sr	oike result.	RPD is	based on	the spike :	and spike dr	unlicate r	result	<u> </u>		
	N/C	MCD				0 11.	.p	MOD		D	
Surrogate	Result	Result	. 1	Inite	Dil	Amount	MC Roc	Boc NISD		Kec. Limit	
n-Triacontane	97.7	96.2	, m	onto ng/Kg	1	100	98	96	34	$\frac{11111}{11 - 158}$	
Matrix Spike (MS-1) QC Batch: 54915 Prep Batch: 46913	Spiked	Sample: 18 MS Basi	Date Au QC Pre	nalyzed: paration: Upite	2008-12- 2008-12- Dil	-08 -05 Spike	Ma	Ana Prep atrix	lyzed B pared B	y: AR y: AR Rec.	
Chlorida	<u>. </u>	572	<u></u>	$\frac{0 \text{ mts}}{m \pi / V \pi}$	50	Amount 5000	KE	$\frac{100}{10}$	U.		
Unioride		013		mg/ng	00	0000	6	10	1	09 - 115	

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

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Report Date: 115-6403637	December 10, 2008		COG	Work (/Bond	Order: 812032 s #1 Tank Ba	Page N	Number: 19 of 21 Lea County, NM			
Param Chloride		MSD Result 5350	Units mg/Kg		Spike Amount 5000	Matrix Result 692	Rec.	Rec. Limit 85 - 115	RPD 7	RPD Limit 20
Percent recov	very is based on the s	spike result.	RPD is ba	used on	the spike and	l spike dup	licate r	esult.		<u>-</u>
		·P				- shine and				
Matrix Spik	ke (MS-1) Spike	d Sample: 1	81119							
QC Batch:	54916		Date Ana	lyzed:	2008-12-08			An	alyzed By	: AR
Prep Batch:	46914		QC Prepa	ration	: 2008-12-05			Pre	pared By	r: AR
		М	IS			Spike	Ma	trix		Rec.
Param		Res	sult U	Jnits	Dil.	Amount	Re	sult R	ec.	Limit
Chloride		49	80 m	g/Kg	50	5000	<'2	25.0 1	00	85 - 115
Percent recov	very is based on the	spike result.	RPD is ba	ased on	the spike and	d spike dup	licate r	esult.		
		MSD			Spike	Matrix		Rec.		RPD
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	·····	5120	mg/Kg	50	5000	<25.0	102	85 - 115	3	20
Standard (I QC Batch:	(CV-1) 54871		Date Ana	lyzed:	2008-12-04			- An	alyzed By	y: ME
			ICVs		ICVs	ICVs		Percent		
			True		Found	Percent		Recovery		Date
Param	Flag	Units	Conc.		Conc.	Recovery		Limits	A	nalyzed
Benzene		mg/Kg	0.100		0.104	104		85 - 115	20	08-12-04
Toluene		mg/Kg	0.100		0.104	104		85 - 115 95 - 115	20	08-12-04
Xvlene	2	mg/Kg	0.300		0.316	105		85 - 115	20	08-12-04
Standard (QC Batch:	CCV-1) 54871		Date Ana	alyzed:	2008-12-04			An	alyzed B	y: ME
			CCVs		CCVs	CCVs		Percent		
			True		Found	Percent		Recovery		Date
Param	Flag	Units	Conc.		Conc.	Recovery		Limits	Α	nalyzed
Benzene		mg/Kg	0.100		0.0986	99		85 - 115	20	08-12-04
Toluene		mg/Kg	0.100		0.0969	97		85 - 115	20	08-12-04
Ethylbenzene	e	mg/Kg	0.100		0.0956	96		85 - 115	20	08-12-04
Aylene		mg/ng	0.300		0.288	90		89 - 115	20	08-12-04

Report Day 115-640363	te: December 7	10, 2008	COC	Work Order: 81 G/Bonds #1 Ta	Page Number: 20 of 21 Lea County, NM					
Standard	(ICV-1)									
QC Batch:	54873		Date Ana	lyzed: 2008-12	2-04	Analyzed By: ME				
	•		ICVs	ICVs	ICVs	Percent				
			True	Found	Percent	Recovery	Date			
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed			
GRO		mg/Kg	1.00	0.894	89	85 - 115	2008-12-04			
Standard	(CCV-1)									
QC Batch:	54873		Date Ana	alyzed: 2008-1	Anal	yzed By: ME				
			CCVs	CCVs	CCVs	Percent				
			True	Found	Percent	Recovery	Date			
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed			
GRO		mg/Kg	1.00	0.878	88	85 - 115	2008-12-04			
Standard	(CCV-2)									
QC Batch:	54883		Date An	alyzed: 2008-1	Ana	lyzed By: LD				
			CCVs	CCVs	CCVs	Percent				
			True	Found	Percent	Recovery	Date			
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed			
DRO		mg/Kg	250	229	92	85 - 115	2008-12-04			
Standard	(CCV-3)			~						
QC Batch:	54883		Date An	alyzed: 2008-1	Analyzed By: LD					
			CCVs	CCVs	CCVs	Percent				
			True	Found	Percent	Recovery	Date			
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed			
DRO		mg/Kg	250	223	89	85 - 115	2008-12-04			
Standard	(ICV-1)									
QC Batch:	54902		Date An	alyzed: 2008-1	2-08	Ana	lyzed By: LD			
			ICVs	ICVs	ICVs	Percent				
			True	Found	Percent	Recoverv	Date			
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed			
	<u> </u>		250	914	06	85 115	9000 19.00			

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Report Date 115-6403637	e: December 1	10, 2008	COG	Work Order: 81 /Bonds #1 Tar	Page Number: 21 of 21 Lea County, NM					
Standard (CCV-1)									
QC Batch:	54902		Date Ana	lyzed: 2008-12	-08	Anal	yzed By: LD			
			CCVs True	CCVs Found	CCVs Percent	Percent	Data			
Param	Flag	Units	Conc.	Conc.	Becovery	Limits	Analyzed			
DRO		mg/Kg	250	223	89	85 - 115	2008-12-08			
Standard (ICV-1)									
QC Batch:	54915		Date Ana	lyzed: 2008-12	Anal	yzed By: AR				
			ICVs	ICVs	ICVs	Percent				
			True	Found	Percent	Recovery	Date			
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed			
Chloride		mg/Kg	100	98.8	99	85 - 115	2008-12-08			
Standard ((CCV-1)									
QC Batch:	54915		Date Ana	lyzed: 2008-12	2-08	Anal	yzed By: AR			
			CCVs	CCVs	CCVs	Percent				
			True	Found	Percent	Recovery	Date			
Param	\mathbf{Flag}	\mathbf{Units}	Conc.	Conc.	Recovery	Limits	Analyzed			
Chloride		mg/Kg	100	101	101	85 - 115	2008-12-08			
Standard ((ICV-1)									
QC Batch:	54916		Date Ana	alvzed: 2008-11	2-08	Analyzed By: AB				
•			TOTA	TOT	1011	D	5			
			ICVs	ICVs	ICVs	Percent	D			
Danam	Flor	Unita	Cone	Found	Percent	Limita	Date			
<u>Chloride</u>	riag	mg/Kg	100	100	<u>100</u>	85 - 115	2008-12-08			
Standard	(CCV-1)	0/0								
QC Batch:	54916		Date Ana	alyzed: 2008-1	2-08	Ana	lyzed By: AR			
			CCVs	CCVs	CCVs	Percent				
			True	Found	Percent	Recovery	Date			
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed			
Chloride		mg/Kg	100	100	100	85 - 115	2008-12-08			

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Analy	sis F	Reque	est of Cha	in of Custo	dy F	Re	ecc	orc		\vdash							GE:	<u> </u>		OF:	_2	.
		((Circi	eor	Spec	cify M	lethoc	No.)			
-			1910 N. Big S Midland, Texa (432) 682-4559 •	TECH Spring St. as 79705 Fax (432) 682-3946							05 (Ext. to C35)	d Cr Pb Hg Se	d Vr Pd Hg Se			2				TDS		
LIENT NAME:	LIENT NAME: COG SITE MANAGER: INC. TAVAREZ							SERV	ATIVE DD		TXI	s Ba C	s Ba C		560/624	270/62				ns, pH,		
PROJECT NO.: 115-640 36	37	PROJECT I	NAME: Bonds #1 Ta	nk Battery	CONTAI	(N)						ls Ag A	lls Ag A les	Volatiles	8240/82	ıl. Vol. 8	/608 08		(Air)	stos) s/Catio		
LAB I.D. NUMBER DATE	TIME	MATRIX COMP. GRAB	Lea (UUNty) SAMPLI	ん/ M E IDENTIFICATION	NUMBER OF	FILTERED (HCL HN03	CE	NONE	BTEX 80211	TPH 801	RCRA Meta	TCLP Meta	TCLP Semi	GC.MS Vol.	GC.MS Sen	PCB's 8080 Pest. 808/6	Chloride Chloride	Alpha Beta	Major Anior		
8109812/2/09	/	5 X	AH-1 0-	-1')			X			X							Х				
099		S X	AH -1 1'-	-1.5'	/			X										Х				
100		S X	AH-1 2'	-2.5'	1			X										X				
101		5 X	44-1 2.5	'-3.0'	1			X									•	Х				
102		SX	AH-2 0	-1'	j			X			χ							X			Π	T
103		SX	AH-2 1'	-1.5'	1			X								Π		X			\square	Τ
104		S X	AH-2 0.	-1'	1			Х			Х							Х				Τ
105		s X	AH-3 1'	-1.51	1			X										X	\prod			T
106		SX	4H-3 2'	-2.5'	1			X						Π				Х			\square	1
107 1		IS X	AH - 4 0	-1'	1			X		Τ	X					ŀ		Х				
ELINOUISHED BY Signat	ure)	↓	Date: 12/3/08	RECEIVED BY: (Signature)	lo		Date: Time:	_12 	7:5	28		SAMPL A 47	ED BY: 142/2	(Print 8	loitia) 4/t	6ru	665	Dat Tim	ie: <u>/</u> . ie:	27-54	<i>08</i>
ELINQUISHED BY: (Signat	.INQUISHED BY: (Signature) Date: REČEIVED BY: (Signature) Time:						Date: Time:						E SHIP X DELIV		: (Circ BU UP	le) IS IS			AIRBI	LL #: R:	<u> </u>	
ELINQUISHED BY: (Signat	ure)	7 70	Date: Time:	RECEIVED BY: (Signature)			Date: Time:				- 7	TETRA	TECH	ONTA	T PE	RSON	:		ľ	Results	by:	
DDRESS: DTY: ONTACT:	STATE:	PHONE:	ZIP:	ATE:	Ti	ME: _					-	I	llc	Ta	Vu.	le z	2			RUSH (Authon Yes	Charges zed:	No
AMPLE CONDITION WHE	NRECEIVED:		REMARKS: TL TPH EX	ceeds hoop malks	sun	dee	per	Int	~v~l	, h	un	2	DT	ΞX (on	Hi	thes	+ T.	PH'S	5		

	0120323
Analysis Request of Chain of Custody Record	PAGE: 2 OF: 2
	ANALYSIS REQUEST
TETRATECH 1910 N. Big Spring St. Midland, Texas 79705 (432) 682-4559 • Fax (432) 682-3946	Image: State of the state o
CLIENT NAME: COG SITE MANAGER: TKE TAVAREZ METHOD	TX100
PROJECT NO.: PROJECT NAME: 115-640 3637 COG/Bonds #1 Tank Battery 00 2	A MOD: A MOD: A As
LAB I.D. NUMBER DATE TIME XI HIW SOUTH SAMPLE IDENTIFICATION	BTEX 80218 PAH 8270 PAH 8270 TCLP Volatil TCLP Volatil TCLP Volatil TCLP Volatil TCLP Semi TCLP Semi ACI GC.MS Vol. I GC.MS Semi ARCI PLM (Asbes) Major Anion Major Anion
18110812108 5 X AH - 4 1'-1.5' 11 X	
109/2/2/08 S X AH - 4 Z'-Z.5'	X
110/2/2/08 S X AH - 5 0 - 1' 1 X	
111 12/2/08 S X AH - 5 1'-1.5' 11 X	
RELINGUISHID BY Signature) Date: 12/11/01 RECEIVED BY: (Signature) Date: 12/30 Time: 12/30 2/30 7/200 7/200 7/200	.30 Souther and the second sec
Heteloudorsheb By: (signature) Date: Time: Time:	FEDEX BUS OTHER
Received BY: (Signature) Date:	TETRA TECH CONTACT PERSON: Results by:
ADDRESS:	Ike Thurez RUSH Charges Authorized:
SAMPLE CONDITION WHEN RECEIVED: REMARKS: All tests Midland	

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

APPENDIX C

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District I 1625 N. French District II 1301 W. Grand District III 1000 Rio Brazos District IV 1220 S. St. Franc Name of Co Address 55 Facility Nam	Dr., Hobbs, 1 Avenue, Arte Road, Aztec cis Dr., Santa mpany C 0 W. Texa ne – Bond	NM 88240 esia, NM 88210 c, NM 87410 a Fe, NM 87505 COG OPERA is, Suite 1300 s #1	Rele TING LI D Midlar	Sta Energy Mir Oil C 1220 Sa ease Notific LC Id, TX 79701	ate of nerals Conse Sout anta F catio	New Mext and Natura rvation Div h St. Franc e, NM 875 n and Co OPERAT Contact K Telephone N Facility Typ	ico l Resources vision is Dr. 05 prrective A FOR anicia Carrillo No. 432-685-43 be- PRODUCTI	ction Ini 32 ON	Form C-141 Revised October 10, 2003 Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form					
Surface Ow	ner BLM			Mineral C)wner			Lease	No.API# 3	0-025-25275				
, ,				LOCA	TIO	N OF REI	LEASE		····					
Unit Letter	Section	Township	Range	Feet from the	North	VSouth Line	Feet from the	East/West Line	County	Lea				
Н	20	9S	35E	1650]	North	330	East		Eddy				
			La	titude		Longitud	e							
			······································	NAT	URE	OFREL	EASE							
Source of Relea	ease-Kill s	witch malfund	tion			Date and H	Release-45661s lour of Occurrence	ce- Date an	d Hour of Di	40DDIs scovery				
Was Immedia	te Notice (iiven?	<u> </u>			10/30/08- 1 If YES. To	5:00am Whom?	10/30/0	8-9:30 am					
Yes No Not Required Larry Johnson														
By Whom?	By Whom? Kanicia Carrillo Date and Hour October 30,2008, 2:18 am.													
was a watch	Was a watercourse Reached?													
Describe Cau The kill switc down when ta	se of Probl h on the wa nk gauge g	em and Reme ater tank did n jets to 12'.	dial Action ot operate	n Taken.* properly causing	, the ov	erflow. We re	placed a headswi	tch and reset the	ease kill to s	hut pumping unit				
Describe Area All the fluids will be submi	Describe Area Affected and Cleanup Action Taken.* All the fluids were contained within the firewall, estimated footage of 30' x 50'. Vacuum truck is onsite to pickup water. Soil samples and final report will be submitted by Tetra Tech.													
I hereby certin regulations al public health should their o or the environ federal, state,	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.													
l Signature:	14						<u>OIL CON</u>	<u>SERVATIO</u>	<u>N DIVISI</u>	<u>UN</u>				
Printed Name	: Kanicia (Carrillo				Approved by	District Supervis	or:						
Title: Regula	tory Analys	st				Approval Dat	e:	Expiration Date:						
E-mail Addre	ss: kandica	arrillo@conch	oresource	s.com		Conditions of	f Approval:		Attached	1 🗋				
Date: 10/31/	08	Phone:	432-685	-4332										

District I State of New Mexico 1625 N. French Dr., Hobbs, NM 88240 Form C-141 **Energy Minerals and Natural Resources** Revised October 10, 2003 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III Submit 2 Copies to appropriate **Oil Conservation Division** 1000 Rio Brazos Road, Aztec, NM 87410 District Office in accordance 1220 South St. Francis Dr. with Rule 116 on back District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 side of form Santa Fe, NM 87505 **Release Notification and Corrective Action OPERATOR** Initial Report \boxtimes Final Report Name of Company COG Operating LLC. Contact Pat Ellis Address 550 W. Texas, Suite 1300 Midland, TX 79701 432-686-3023 Telephone No. Facility Name Bonds #1 Production Facility Type Mineral Owner BLM Lease No. API# 30-025-25275 Surface Owner LOCATION OF RELEASE North/South Line East/West Line Unit Letter Feet from the Feet from the Section Township Range County 35E 1650 North 20 9S 330 East Lea Н Latitude 33 deg. 31.333' Longitude 103 deg. 22.513' NATURE OF RELEASE Type of Release Produced Water Volume of Release 45 BW Volume Recovered 40 BW Source of Release Kill switch malfunction Date and Hour of Occurrence Date and Hour of Discovery 10/30/0<u>8 5:00 AM</u> 10/30/08 9:30 AM If YES, To Whom? Was Immediate Notice Given? Yes No Not Required Larry Johnson w/NMOCD By Whom? Kanicia Carrillo Date and Hour 10/30/08 2:18 PM Was a Watercourse Reached? If YES, Volume Impacting the Watercourse. TYes No If a Watercourse was Impacted, Describe Fully.* WATER (9) 150' Describe Cause of Problem and Remedial Action Taken.* Cause: The kill switch on the water tank did not operate properly causing the overflow. Remedial Action: Replaced the headswitch and reset the lease kill to shut pumping unit down when tank gauge gets to 12 ft. Describe Area Affected and Cleanup Action Taken.* Spill Area: 30' x 50' in area, 45 bbls of produced water spilled, all contained within firewall. Picked up 40 bbls with vacuum truck = Net Loss 5 bbls. of water. Tetra Tech delineated and sampled spill site. All TPH and BTEX sample results below regulatory limits and chlorides delineated to 381 mg/kg at depth of 4 ft. 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. OIL CONSERVATION DIVISION Signature: ENV ENGINEER Approved by District Supervisor: Printed Name: Ike Tavarez (agent for COG) Title: Project Manager Approval Date: 10105109 **Expiration Date:** E-mail Address: ike.tavarez@tetratech.com Conditions of Approval: Attached Date: 8/13/2009 Phone: 432-682-4559 RP-2008 Attach Additional Sheets If Necessary

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