Received by OCD: 9/12/2023 8:51:51 AM						62X	K 15'	3 <i>5251238</i> 4944
1625 N. French Dr., Hobbs, NM 88240		lew Mexi nd Natural	co Resources			Re		Form C-141
1301 W. Grand Avenue, Artesia, NM 88210 District III Oil 6	•	ation Div				Submit 2 C	Copies (o appropriate
L 1000 Rin Brazos Road, Aztec, NM 87410		St. Franci						n accordance 116 on back
1220 S. St. Francis Dr., Santa Fe, NM 87505	anta Fe,	NM 875	05					side of form
Release Notific	cation	and Co	rrective A	ction				
	(OPERAT	OR		🔲 Initia	al Report	\boxtimes	Final Report
Name of Company COG Operating LLC		ontact		at Ellis				
Address 550 W. Texas, Suite 100 Midland, Texas 797 Facility Name BC Federal #10 Tank Battery		elephone N acility Typ		230-00'				
Surface Owner: Federal Mineral O		<u></u>				In (ADI#)	20.024	27021
					Lease r	↓o. (API#)	50-02.	-57021
LOCA Unit Letter Section Township F 19 17S 32E Feet from the 32E		OF REI outh Line	EASE Feet from the	East/V	Vest Line	County	Lea	
Latitude N32.8		Longitude DF RELH		o				
Type of Release: Oil			Release 10bbls	{	Volume F	Recovered 9	bbls	
Source of Release: Oil Tank		Date and H 05/17/2012	our of Occurrence	e		Hour of Dis 2 8:00 a.m.		
Was Immediate Notice Given?	equired	If YES, To			05/17/201	<u>2 8.00 a.m</u>		
By Whom?		Date and H						
Was a Watercourse Reached?		lf YES, Vo N/A	lume Impacting t	he Wate	rcourse.			
If a Watercourse was Impacted, Describe Fully.*	ł.							
Describe Cause of Problem and Remedial Action Taken.*			,.					
Tank did not equalize due to the valve being shut. The equalizer	valve has s	since been o	pened.					
Describe Area Affected and Cleanup Action Taken.*								
Tetra Tech personnel inspected site and collected samples to defin disposal. Once excavated to the appropriate depths, the site was the closure report and submitted it to NMOCD for review.								
I hereby certify that the information given above is true and comp regulations all operators are required to report and/or file certain r public health or the environment. The acceptance of a C-141 report should their operations have failed to adequately investigate and re- or the environment. In addition, NMOCD acceptance of a C-141 federal, state, or local laws and/or-regulations.	release not ort by the l remediate of	ifications an NMOCD ma contaminatio	d perform correct irked as "Final Re on that pose a thre	tive actio eport" do eat to gro	ons for rele bes not reli bund water	eases which eve the oper , surface wa	may en ator of ter, hur	danger liability nan health
Signature MI			OIL CONS	SERV.	ATION	DIVISIO	<u>N</u>	
Printed Name: Ike Tavarez (agent for COG)	A	pproved by I	District Supervise	or: J	ocelyn H	larimon		
Title: Project Manager	A	pproval Date	e: 09/12/202	3 E	xpiration I	Date:		
E-mail Address: ike.tavarez@tetratech.com	C.	onditions of	Approval:			Attached		
Date: /b-/?-, ?- Phone: (432) 686-3023 * Attach Additional Sheets If Necessary			/					
		\mathcal{V}						

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

State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised October 10, 2003

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

Release Notification and Corrective Action

						OPERA T	ГOR		🛛 Initi	ial Report		Final 3	Repor
Name of Co			PERATIN			Contact		at Ellis				•	`
Address				idland, TX 7970		Telephone N		230-007					
Facility Na	me	BC Federa	al #10 Ta	nk Battery	[]	Facility Typ	e Tan	k Batter	у				
Surface Ow	mer Fed	leral		Mineral (Owner				Lease I Closest	No. (API# t well) 30-02	5-3702	! 1
				LOCA	ATION	N OF REI	LEASE			•			
Unit Letter F	Section 19	Township 17S	Range 32E	Feet from the	North/	South Line	Feet from the	East/W	est Line	County	Lea		
				Latitude 3		•	ide 103.809						
Time of Rela				NAI	URE	OF RELI	·		Valuma I	Decession d	01.h.l.a		
Type of Rele Source of Re		Tonk		· · · · ·			Release 10bbis			Recovered Hour of D			
Ovaros of 1.5	Total off.	1 (41 m				05/17/2012		-		12 8:00 a.r		/	
Was Immedi	ate Notice (Yes 🛛	No 🛛 Not Re	equired	If YES, To	Whom?						
By Whom?					· · · · · · · · ·	Date and H	our						
Was a Water	course Read		Yes 🛛	No		If YES, Vo	lume impacting t	he Water	course.				
If a Watercou	irse was Im	pacted, Descri	ibe Fully.*)			· -				<u>-</u>		
Describe Cau	ise of Probl	em and Reme	dial Action	Taken.*	<u> </u>								<u> </u>
Tank did not	equalize du	ie to the valve	being shu	t. The equalizer v	valve has	since been o	pened.						
Describe Are	a Affected	and Cleanup A	Action Tak	en.*						#*************************************	·		
inside the fac	ility walls. amination fi	All free fluid	has been p	tank and we were picked up and the will submit a remo	tank has	been steam o	leaned. Tetra Te	ch will sa	ample the	spill site a	rea to d	elineate a	
regulations al public health should their o or the environ	l operators : or the envir operations has oment. In a	are required to ronment. The ave failed to a	o report an acceptanc idequately ICD accept	is true and compl d/or file certain ru- e of a C-141 repo investigate and re tance of a C-141 r	elease no ort by the emediate	tifications an NMOCD ma contaminatio	d perform correct inked as "Final Re in that pose a three	tive actio eport" doc at to grou	ns for rele es not reli und water	eases which eve the ope , surface w	h may ei erator ol vater, hu	ndanger f liability man heal	y
Signature:		ZT	7				OIL CONS		TION	DIVISI	<u>NC</u>		
Printed Name	" <i>(</i>	Josh	Russo		A	pproved by I	District Superviso	or:					
Title:		HSE Co	ordinator		A	pproval Date	:	Ex	piration I	Date:			
E-mail Addre	ss:	jrusso@concl	horesource	es.com	c	onditions of	Approval:			Attached	∃ 🗌		
Date: 00	5/01/2012		Phone:	432-212-2399						1			

* Attach Additional Sheets If Necessary

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	· · · · · ·	Rec	oort Type:	Work Pla	an MOBBES OCD
General Site Inf	ormation:				
Site:	·····		#10 Tank Batt		
Company:		COG Opera	ting LLC		SEP 2 8 2012
Section, Towns	hip and Range	Unit F	Sec 19	T17S	R32E
Lease Number:		API-30-025	the second s		RECEIVED
County:		Lea County		····	
GPS:		32.82264° N	1		103.80886° W
Surface Owner: Mineral Owner:		Federal		·	
Directions:	· · · · · · · · · · · · · · · · · · ·				2, travel east on Hwy 82 for 3.2 miles, turn right left (North) and travel 0.1 miles to location.
Dalas a Datas d	ALADEM Alter & A.	1 1 5 × 20 10 50 400	· · · · · · · · · · · · · · · · · · ·	مريونية المراجع	
Release Data:				米米 谷石 (空空)合	
Date Released: Type Release:	*	5/17/2012 Oil	· · ·	<u> </u>	
Source of Contai	nination	Oil Tank			· · · · · · · · · · · · · · · · · · ·
Fluid Released:		10 bbls			· · · · · · · · · · · · · · · · · · ·
Fluids Recovered	d:	9 bbls	· · · · · · ·		
Name:	Pat Ellis		·	·. ·	Ike Tavarez
Company:	COG Operating, L	COG Operating, LLC		······································	Tetra Tech
Address:	550 W. Texas Ave. Ste. 1300				1910 N. Big Spring
P.O. Box	550 W. TEXAS AVE. SIE. 1500			•	
City:	Midland Texas, 79	Midland Texas, 79701		· .	Midland, Texas
Phone number:	(432) 686-3023	<u> </u>	· · ·	<u> </u>	(432) 682-4559
Fax:	(432) 684-7137			· · · · ·	
Email:	pellis@conchores	ources.com			Ike.tavarez@tetratech.com
Ranking:Criteria Depth to Groundy			Ranking Scon		Site Data
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50-99 ft >100 ft	······································				
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50-99 ft >100 ft. WellHead Protecti Water Source <1,(Water Source >1,(Surface Body of V <200 ft.	000 ft., Private <200 000 ft., Private >200		Ranking Scon 20 0 Ranking Scon 20		Site Data0
50-99 ft >100 ft. WellHeed Protecti Water Source <1,0 Water Source >1,0 Water Source >1,0 Surface Body of V <200 ft. 200 ft - 1,000 ft.	000 ft., Private <200 000 ft., Private >200		Ranking Scon 20 0 Ranking Scon 20 10		0 Site Data
50-99 ft >100 ft. WellHeed Protecti Water Source <1,0 Water Source >1,0 Water Source >1,0 Surface Body of V <200 ft. 200 ft - 1,000 ft.	000 ft., Private <200 000 ft., Private >200		Ranking Scon 20 0 Ranking Scon 20		Site Data0
Water Source >1,0 Surface Body of V <200 ft. 200 ft - 1,000 ft. >1,000 ft.	000 ft., Private <200 000 ft., Private >200	A.	Ranking Score 20 0 Ranking Score 20 10 0	•	0 Site Data
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0-99 ft 100 ft. VellHead Protecti Vater Source <1,0 Vater Source >1,0 Surface Body of V 200 ft. 1,000 ft.	000 ft., Private <200 000 ft., Private >200 Vater:	h. Accept Benzene	Ranking Scon 20 0 Ranking Scon 20 10 0 5 0 0 sole Soli RRAL Total BTEX	•	O Site Data O Site Data O Approved Speckflery Lekin



August 15, 2011

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

Re: Work Plan for the COG Operating LLC., BC Federal #10 Tank Battery, Unit F, Section 19, Township 17 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 BC Federal #10 Tank Battery, Unit F, Section 19, Township 17 South, Range 32 East, Lea County, New Mexico (Site). The spill site coordinates are N 32.82264°, W 103.80886°. 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 May 17, 2012, and released approximately ten (10) barrels of oil due to the equalizer valve being shut causing the oil tank to overflow. To alleviate the problem, COG personnel opened the equalizer valve. Nine (9) barrels of standing fluids were recovered. The spill measured approximately 10' x 100' and was contained inside the tank battery firewalls. The initial C-141 form is enclosed in Appendix A.

Groundwater

No water wells were listed within Section 21. According to the NMOCD groundwater map, the depth to groundwater in this area is approximately 200' below surface. The groundwater data is shown in Appendix B.



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 August 1, 2012, Tetra Tech personnel inspected and sampled the spill area. Three (3) auger holes (AH-1, AH-2 and AH-3) were installed using a stainless steel hand auger to assess the impacted soils. Soil samples were not collected on the east side of the tank battery, due to the limited impacted area and multiple lines in the area. Selected 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 C. The sampling results are summarized in Table 1. The auger hole locations are shown on Figure 3.

Referring to Table 1, all of the submitted samples were all below the RRAL for BTEX and TPH. The chlorides detected in the areas of AH-1 and AH-2 did not show significant impact to these areas. Elevated chloride concentrations were detected in AH-3 in the shallow soils, with a chloride high of 2,890 mg/kg at 0-1', which declined to 653 mg/kg at 3-3.5' below surface.

Work Plan

COG proposes to remove impacted material as highlighted (green) in Table 1 and shown on Figure 4. The area of AH-3 will be excavated to a depth of approximately 2.0' below surface. Based on the depth to groundwater (200' below surface), the areas of AH-1 and AH-2 do not appear to be an environmental concern.



Once excavated to the appropriate depth, the excavation will be backfilled with clean soil. The excavated soil will be transported offsite to proper disposal.

The proposed excavation depths may not be reached due to safety concerns for onsite personnel. In addition, impacted soil around oil and gas equipment, structures or lines may not be feasible or practicable to be removed due to safety concerns. As such, Tetra Tech will excavate the soils to the maximum extent practicable.

If you have any questions or comments concerning the assessment or the proposed remediation activities for this site, please call me at (432) 682-4559.

> Respectfully submitted, TETRATEGH

Ike Tavarez, PG Project Manage

cc: Pat Ellis - COG cc: Jim Amos - BLM



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Released to Imaging: 9/1					-	COG (BC Lea Cou	Table 1 COG Operating LLC. BC Federal #10 :a County, New Mexi	Table 1 COG Operating LLC. BC Federal #10 -ea County, New Mexico					
Sample	le Sample	Sample	Soil :	Soil Status		TPH (mg/kg)	(6)	Benzene	Toluene	Ethivbenzene	Xvlene	Total	Chloride
		Depth (ft)	In-Situ	Removed	GRO	DRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	BTEX (mg/kg)	(mg/kg)
FHY 54:01	1 8/1/2012	0-1	X		102	457	559	<0.100	<0.100	<0.100	0.112	0.112	139
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		4-4.5	×				-		•	•	- - - -	2 28 - 19 - 19	41.3
AH-2	2 8/1/2102	0-1	×		44.0	1,590	1,634	<0.100	<0.100	<0.100	<0.100	<0.100	872
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	8	3-3.5	×		P	•		-					395
	•	4-4.5	×						. •				422
AH-3	3 8/1/2012	0-1	×		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0:0200	<0:0200	<0.0200	2,890
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Not Analyzed ÷

Proposed Excavated Depths

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TETRA TECH



View West - Area of AH-1



View South - Area of AH-2

E TETRA TECH

COG Operating LLC BC Federal #10 Tank Battery Lea County, New Mexico



View North – Area of AH-3

Water Well Data Average Depth to Groundwater (ft) COG - BC Federal #10 Tank Battery Lea County, New Mexico

32 East

16 South

	18	South		1 East	
6	5	4	3	5	1
7	8	•	10	. 11	12
18	17	16	15	- 14	13
19	20	-21	22	25	113 24
30	- 29 -	26	27	26	25
31 290	32	33	34	35	38
	17	South	3	1 East	
6	5	4	3	2	1
7	8	•	10	11	12
19	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34 271	35	36
	18	South		1 East	
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	17 80	outh	33	East	

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7 167	8 173	9 161	10	11	12
18 188	17 180	18	15	14	13 185
19	20 180	21	22	23 1 15	24
SID :	29	28	27	28	25
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18 South 33 East 10 12 143 100 11 140 82 15 ā 13 -17 16 12 6 83 38 Ô ř 20 .. 2 23 140 195 25 1 2 20 ŝŝ :7

New Maxico State Engineers Well Reports

USGS Well Reports

Geology and Groundwater Conditions in Southern Eddy, County, NM

NMOCD - Groundwater Data

Field water level

New Mexico Water and Infrastructure Data System

Site - GC Federal #1

S Tetra Tech Temporary we'l

Page Number: 1 of 3

Report Date: August 14, 2012

12080318

Work Order:

Summary Report

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

Project Location:	Lea Co., NM
Project Name:	COG/BC Federal #10
Project Number:	114-6401453

Date Time Date Sample Description Matrix Taken Taken Received AH-1 0-1' soil 2012-08-01 00:00 2012-08-02 305783 AH-1 1-1.5' soil 2012-08-01 00:00 2012-08-02 305784 AH-1 2-2.5' soil 2012-08-01 00:00 2012-08-02 305785 AH-1 3-3.5' soil 2012-08-01 00:00 2012-08-02 305786 305787 AH-1 4-4.5' soil 2012-08-01 00:00 2012-08-02 305788 AH-2 0-1' soil 2012-08-01 00:00 2012-08-02 305789 AH-2 1-1.5' soil 2012-08-01 00:00 2012-08-02 305790 AH-2 2-2.5' soil 2012-08-01 00:00 2012-08-02 305791 AH-2 3-3.5' soil 2012-08-01 00:00 2012-08-02 305792 AH-2 4-4.5' soil 2012-08-01 00:00 2012-08-02 305793 AH-3 0-1' 80il 2012-08-01 00:00 2012-08-02 AH-3 1-1.5' 2012-08-01 305794 soil 00:00 2012-08-02 AH-3 2-2.5' soil 2012-08-01 305795 00:00 2012-08-02 AH-3 3-3.5' soil 2012-08-01 00:00 2012-08-02 305796 AH-3 4-4.5' 2012-08-01 00:00 soil 2012-08-02 305797

			BTEX	<u>-</u>	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)
305783 - AH-1 0-1'	<0.100 1	< 0.100	<0.100	0.112	457 q.	102 qa
805788 - AH-2 0-1'	<0.100 ²	< 0.100	< 0.100	<0.100	1590 q.	44.0 o
305793 - AH-3 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0 ໑ະ	<4.00 gs

Sample: 305783 - AH-1 0-1'

¹Dilution due to excessive hydrocarbons.

²Dilution due to excessive hydrocarbons.

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: Augu	ust 14, 2012	Work Order: 12080318	Page 1	Number: 2 of 3
Param	Flag	Result	Units	RL
Chloride		139	mg/Kg	4
Sample: 305784	- AH-1 1-1.5'			
Param	Flag	Result	Units	\mathbf{RL}
Chloride		91.8	mg/Kg	4
Sample: 305785	- AH-1 2-2.5'			
Param	Flag	Result	Units	RL
Chloride		266	mg/Kg	4
Sample: 305786 ·	- AH-1 3-3.5'			
Param	Flag	Result	Units	RL
Chloride		207	mg/Kg	4
Sample: 305787 -	- AH-1 4-4.5'	itema		
Param	Flag	Result	Units	RL
Chloride	G	41.3	mg/Kg	4
Sample: 305788 -	• AH-2 0-1'			· •
Param	Flag	Result	Units	RL
Chloride		872	mg/Kg	4
Sample: 305789 -	- AH-2 1-1.5'			-3
Param	Flag	Result	Units	RL
Chloride		335	mg/Kg	4
Sample: 305790 -	· AH-2 2-2.5'			
Param	Flag	Result	Units	RL
Chloride		253	mg/Kg	4

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.

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SITE INFORMATION

General Site Info	ormation:	自己的法律法律		的教育的			
Site:			#10 Tank Batte				
Company:		COG Opera	ting LLC				······································
Section, Towns	hip and Range	Unit F	Sec 19	T17S	R32E		
Lease Number:		API-30-025-	37021				····
County:		Lea County					
GPS:		32.82264° N			103.808	86° W	
Surface Owner:	·	Federal					
Mineral Owner:							
Directions:							2 for 3.2 miles, turn right 0.1 miles to location.
Release Data:		5/17/2012					
Type Release:		Oil					
Source of Contar	nination.	Oil Tank					
Fluid Released:		10 bbls					
Fluids Recovered	d:	9 bbls	· · · · · · · · · · · · · · · · · · ·				
	nication:			er hât is tratik	er en sa	i sin kees	
Name:	Pat Ellis		an na h-frainn a' suide an	<u> </u>	Ike Tavar		naste i nazio investori a relación o menis el origini.
Company:	COG Operating, LI	C			Tetra Tec		
Address:							
	550 W. Texas Ave, Ste. 1300				1910 N. 1	Big Spring	
P.O. Box						-	
City:	Midland Texas, 79	701			Midland,		
Phone number:	(432) 686-3023			(432) 682-4559			
Fax:	(432) 684-7137						
Email:	peilis@conchoresc	urces.com			<u>lke.tava</u>	rez@tetrat	ech.com
Ranking(Criteria Depth to Groundw <50 ft 50-99 ft	vater:		Ranking Score 20 10			Site D	
>100 ft.			0			0	······································
				·			
NellHead Protecti			Ranking Score	Site Data		ata	
	000 ft., Private <200 i 000 ft., Private >200 i		20	_	0		
mater obuice >1,t	00 n., Frivale >2001			<u> </u>	0		<u></u> -
Surface Body of V	Vater:		Ranking Score		Site Data		ata
<200 ft.			20				
200 ft - 1,000 ft. >1,000 ft.			10				
			0			0	
>1,000 ft.	- 1- D (0	<i>\$</i> 1.		н	DBBS OCD 0 1 2012
	Total Ranking Score:						
	ai/Hanking/Score		able Soil RRAI	(ma/ka)	7	NOV	01 2012
	ai Hanking Score	Accept	able Soil RRAL			NOV	0 1 2012
	ai Hanking Score		able Soil RRAL	(mg/kg) TPH 5,000			0 1 2012 CEIVED



October 17, 2012

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

Re: Closure Report for the COG Operating LLC., BC Federal #10 Tank Battery, Unit F, Section 19, Township 17 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 BC Federal #10 Tank Battery, Unit F, Section 19, Township 17 South, Range 32 East, Lea County, New Mexico (Site). The spill site coordinates are N 32.82264°, W 103.80886°. 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 May 17, 2012, and released approximately ten (10) barrels of oil due to the equalizer valve being shut causing the oil tank to overflow. To alleviate the problem, COG personnel opened the equalizer valve. Nine (9) barrels of standing fluids were recovered. The spill measured approximately 10' x 100' and was contained inside the tank battery firewalls. The initial C-141 form is enclosed in Appendix A.

Groundwater

No water wells were listed within Section 21. According to the NMOCD groundwater map, the depth to groundwater in this area is approximately 200' below surface. The groundwater data is shown in Appendix B.



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 August 1, 2012, Tetra Tech personnel inspected and sampled the spill area. Three (3) auger holes (AH-1, AH-2 and AH-3) were installed using a stainless steel hand auger to assess the impacted soils. Soil samples were not collected on the east side of the tank battery, due to the limited impacted area and multiple lines in the area. Selected 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 C. The sampling results are summarized in Table 1. The auger hole locations are shown on Figure 3.

Referring to Table 1, all of the submitted samples were all below the RRAL for BTEX and TPH. The chlorides detected in the areas of AH-1 and AH-2 did not show significant impact to these areas. Elevated chloride concentrations were detected in AH-3 in the shallow soils, with a chloride high of 2,890 mg/kg at 0-1', which declined to 653 mg/kg at 3-3.5' below surface.

Remediation and Conclusion

Based on the approved work plan, Tetra Tech personnel supervised the excavation of the site. The excavated area and depths are highlighted in Table 1. The final excavation depths of the soil remediation were met as stated in the approved work plan. Approximately 12 cubic yards of soil were excavated and transported to R360 facility for proper disposal. The excavated area measured approximately 5' x 15' at a depth of approximately 2.0' below surface. The excavated area was then backfilled to grade with clean material.



Based on the remedial activities performed, COG request closure of the site. A copy of the C-141 (Final) is included in Appendix A. If you have any questions or comments concerning the remedial activities, please call at (432) 682-4559.

Respectfully submitted,

TETRA TECH

Ike Tavarez.PG Senior Project Manager

cc: Pat Ellis - COG cc: Jim Amos - BLM





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Released to Imaging: 9/12/2023 8:54:01 AM



Released to Imaging: 9/12/2023 8:54:01 AM

Released to Imaging: 9/12/2			I	- [COG C BC Lea Cou	Table 1 COG Operating LLC. BC Federal #10 a County, New Mexio	Table 1 DG Operating LLC. BC Federal #10 County, New Mexico			1		Received by OCD: 9/12/202
	Sample	Sample	Soil	Soil Status		TPH (mg/kg)	9)	Benzene	Toluene	Ethivbenzene	Xviene	Total	Chloride: 8
ם 8:54:0		Depth (ft)	In-Situ	Removed	GRO	DRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	BTEX (mg/kg)	:5(A (mg/kg)
HHHH	8/1/2012	0-1	×		102	457	559	<0.100	<0.100	<0.100	0.112	0.112	139
1	=	1-1.5	Х		•	•	1	1	1	I	1		91.8
		2-2.5	×		•	-	,	•	•		1	1	266
	H	3-3.5	X			•	1	,	•	ł	,		207
	=	4-4.5	×		•	ı	•	ı	1		1	6	41.3
AH-2	8/1/2102	0-1	×		44.0	1,590	1,634	<0.100	<0.100	<0.100	<0.100	<0.100	872
	=	1-1.5	×		F	,	3	1	1	3	r	1	335
	н	2-2.5	×		•	,	1	•	ŀ	1	1		253
	H	3-3.5	×			-	ı	•	1	I	-	1	395
	1	4-4.5	×		•	r	1		ı	L L	1	ı	422
AH-3	8/1/2012		, K	X	<4.00	50.0	.<50.0	<0.0200	<0.0200	· <0:0200	<0.0200	<0.0200 <0.0200	2,890
	=	1-1.5		×	 	in the second					「「「「」」		1,320
	=	2-2.5	×		ı	•	۲	-	. •	•	1	1	905
	=	3-3.5	×		1	ı	1	1	,	-	ł	L	653
	=	4-4.5	×		-	•	1	-	•	•	1		690

Not Analyzed Excavated Depths

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COG Operating LLC BC Federal #10 Tank Battery Lea County, New Mexico





View North – Area of AH-3



Backfill

Water Well Data Average Depth to Groundwater (ft) COG - BC Federal #10 Tank Battery Lea County, New Mexico

	16 5	South	3	1 East	
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	28	25
31 290	32	33	34	35	36
	17 !	South	. 3	1 East	
6	5	4	3	2	
7	в	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	20	28	27	26	25
31	32	33	34	35	36
	18 5	South		1 East	
6	5	4	3	2	
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	317 23	24
30	29	28	27	26	25
31	32	33	34	35 261	36

	16 S	outh	3	2 East	
6	5	4	3	65 2 26	5 1 265
7	8	9	10	11	12
	1	1	1	<u> </u>	215
18	17	16	15	14	13
		221			215
19	20	21	22	23	24
220		210		210	
30	29	28	27	26	25
			1	243	
31	32	33	34	35	36
	L	1	L.		260
	17 S	outh	3	2 East	
6	5	4	3	2	1 225
	i i	82	175	60	
7	8	9	10	11	12
				70 88	120
18	17	16	15	14	13
19	20	21	22	23	24
SITE	I .	1			
30 🚫 _ 300 ūn	29	28	27	26	25
31	32	33	34	35 🚫	1 1
	18 S	outh	3	2 East	
5	5	4 65	3	2	1
7 450	8	9	10	11 🚫	
32			10	14	'i i3 -
9 <u>2</u> 18	17	16	15	14	
18	17	16 84	15	<u> </u>	
18	17 20		13 22	23	24
18 19		84			
18	20	84	22		

	16 Sc	outh	33	East	
6	5 150	4 150	3 130	2	1 142
				148	1.
7	8	9	10	11	12
	200	1	182	1	142
1 B	17	16	15	14	13
	182	180	175	143	110
19	20	21	22	23	24
				120	
30	29	28	27	26	25
191		190	130	143	120
31	32	33	34	35	36
190	16B	[160		1

	17 Sc	outh	. 3	13 East	
8 90	5	1	3 15	5 2 158	1 150
90 7 167	8 173	9 161	10	11	12
18 188	17 180	16	15	14	13 165
19	20 190	21	22	23 115	24
30	29	28	27	26	25
31	32	33	34	35	36

	18 Sc	outh	:	33 East	
6	5	4	3	2	1
7	8 100	9	10 62	11	12 1 43 140
18	17 85	16	15	14 38	13 60
19 >140	20	21	22	23	24 195
30 115	29	28	27	26	25
31	32	33	34 177	35	36

New Mexico State Engineers Well Reports

USGS Well Reports

Geology and Groundwater Conditions in Southern Eddy, County, NM

NMOCD - Groundwater Data

Field water level

388 New Mexico Water and Infrastructure Data System

Site - GC Federal #1

8 Tetra Tech Temporary well

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Report Date: August 14, 2012

Work Order: 12080318

Page Number: 1 of 3

Report Date: August 14, 2012

12080318

Work Order:

Summary Report

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

Project Location:Lea Co., NMProject Name:COG/BC Federal #10Project Number:114-6401453

Date Time Date Sample Description Matrix Taken Taken Received AH-1 0-1' 2012-08-01 00:00 305783 soil 2012-08-02 AH-1 1-1.5' 2012-08-01 00:00 2012-08-02 305784 soil AH-1 2-2.5' soil 2012-08-01 00:00 2012-08-02 305785 305786 AH-1 3-3.5' soil 2012-08-01 00:00 2012-08-02 305787 AH-1 4-4.5' soil 2012-08-01 00:00 2012-08-02 305788 AH-2 0-1' soil 2012-08-01 00:00 2012-08-02 AH-2 1-1.5' 2012-08-01 00:00 2012-08-02 305789 soil AH-2 2-2.5' soil 2012-08-01 00:00 2012-08-02 305790 2012-08-01 AH-2 3-3.5' 00:00 2012-08-02 soil 305791 AH-2 4-4.5' 2012-08-01 00:00 2012-08-02 305792 soil 305793 AH-3 0-1' soil 2012-08-01 00:00 2012-08-02 305794 AH-3 1-1.5' soil 2012-08-01 00:00 2012-08-02 305795 AH-3 2-2.5' soil 2012-08-01 00:00 2012-08-02 AH-3 3-3.5' 2012-08-01 00:00 2012-08-02 305796 soil AH-3 4-4.5' 2012-08-01 00:00 2012-08-02 305797 soil

		Ι	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)
305783 - AH-1 0-1'	< 0.100 1	< 0.100	<0.100	0.112	457 Q.	102 q.
305788 - AH-2 0-1'	<0.100 ²	< 0.100	< 0.100	<0.100	1590 q.	44.0 q.
305793 - AH-3 0-1'	< 0.0200	< 0.0200	< 0.0200	< 0.0200	<50.0 qs	<4.00 Qa

Sample: 305783 - AH-1 0-1'

¹Dilution due to excessive hydrocarbons.

²Dilution due to excessive hydrocarbons.

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: Augu	1st 14, 2012	Work Order: 12080318]	Page Number: 2 of 3
Param	Flag	Result	Units	RL
Chloride		139	mg/Kg	4
Sample: 305784	- AH-1 1-1.5'			
Param	Flag	Result	Units	RL
Chloride		91.8	mg/Kg	4
Sample: 305785	- AH-1 2-2.5'			
Param	Flag	Result	Units	RL
Chloride		266	mg/Kg	4
Sample: 305786	- AH 1 2 2 5'			
Param	Flag	Result	Units	RL
Chloride	F lag	207	mg/Kg	4
Sample: 305787 Param Chloride	- AH-1 4-4.5' Flag	Result 41.3	Units mg/Kg	RL 4
Sample: 305788 -	- AH-2 0-1'			
Param	Flag	Result	Units	RL
Chloride		872	mg/Kg	4
Sample: 305789 -	- AH-2 1-1.5'			
Param	Flag	Result	Units	RL
Chloride		335	mg/Kg	4
Sample: 305790 ·	- AH-2 2-2.5'			
Param	Flag	Result	Units	RL
Chloride		253	mg/Kg	4

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.

meport Date: Aug	ust 14, 2012	Work Order: 12080318	Page 1	Number: 3 of 3
Sample: 305791	- AH-2 3-3.5'			
Param	Flag	Result	Units	RI
Chloride	Ŭ	395	mg/Kg	4
Sample: 305792	- AH-2 4-4.5'			
Param	Flag	Result	Units	RL
Chloride		422	mg/Kg	4
Sample: 305793	- AH-3 0-1'			
Param	Flag	Result	Units	RL
Chloride		2890	mg/Kg	4
	Flag	Result 1320	Units mg/Kg	
Sample: 305794 Param Chloride				RL 4
Sample: 305795	- AH-3.2-2.5'			
-	- AH-3.2-2.5' Flag	Result	Units	RL
Param		Result 905	Units mg/Kg	RL 4
Param Chloride	Flag			
Sample: 305795 Param Chloride Sample: 305796 Param	Flag			
Param Chloride Sample: 305796	Flag	905	mg/Kg	4
Param Chloride Sample: 305796 Param	Flag - AH-3 3-3.5' Flag	905 Result	mg/Kg Units	4 RL
Param Chloride Sample: 305796 Param Chloride	Flag - AH-3 3-3.5' Flag	905 Result	mg/Kg Units	4 RL

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.



5701 Aberdeen Avenue, Suite 9 200 East Sunset Road, Suite E 5002 Basin Street, Suite A1 (BioAquatic) 2501 Mayes Rd., Suite 100

9 Lubbock, Texas 79424 800-378-1296 806-El Paso, Texas 79922 915-Midland, Texas 79703 432-Suite 100 Carrolton, Texas 75006 972-E-Mail lab@traceanalysis.com WEB www.traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

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

Report Date: August 14, 2012

FAX 806+794+1298

FAX 915+585+4944

FAX 432-689-6313

Work Order: 12080318

806+794+1296

915-585-3443

432-689-6301

972-242-7750

Project Location:Lea Co., NMProject Name:COG/BC Federal #10Project Number:114-6401453

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
305783	AH-1 0-1'	soil	2012-08-01	00:00	2012-08-02
305784	AH-1 1-1.5'	soil	2012-08-01	00:00	2012-08-02
305785	AH-1 2-2.5'	soil	2012-08-01	00:00	2012-08-02
305786	AH-1 3-3.5'	soil	2012-08-01	00:00	2012-08-02
305787	AH-1 4-4.5'	soil	2012-08-01	00:00	2012-08-02
305788	AH-2 0-1'	soil	2012-08-01	00:00	2012-08-02
305789	AH-2 1-1.5'	soil	2012-08-01	00:00	2012-08-02
305790	AH-2 2-2.5'	soil	2012-08-01	00:00	2012-08-02
305791	AH-2 3-3.5'	soil	2012-08-01	00:00	2012-08-02
305792	AH-2 4-4.5'	soil	2012-08-01	00:00	2012-08-02
305793	AH-3 0-1'	soil	2012-08-01	00:00	2012-08-02
305794	AH-3 1-1.5'	soil	2012-08-01	00:00	2012-08-02
305795	AH-3 2-2.5'	soil	2012-08-01	00:00	2012-08-02
305796	AH-3 3-3.5'	soil	2012-08-01	00:00	2012-08-02
305797	AH-3 4-4.5'	soil	2012-08-01	00:00	2012-08-02

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

Blain Lepturch

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

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Sample 305786 (AH-1 3-3.5')	8
Sample 305787 (AH-1 4-4.5')	8
Sample 305788 (AH-2 0-1')	8
Sample 305789 (AH-2 1-1.5')	10
Sample 305790 (AH-2 2-2.5')	10
Sample 305791 (AH-2 3-3.5')	10
Sample 305792 (AH-2 4-4.5')	11
Sample 305793 (AH-3 0-1') (11
Sample 305794 (AH-3 1-1.5')	12
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Case Narrative

Samples for project COG/BC Federal #10 were received by TraceAnalysis, Inc. on 2012-08-02 and assigned to work order 12080318. Samples for work order 12080318 were received intact at a temperature of 4.7 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	79441	2012-08-07 at 15:57	93714	2012-08-07 at 15:57
Chloride (Titration)	SM 4500-Cl B	79384	2012-08-05 at 10:03	93641	2012-08-05 at 20:28
Chloride (Titration)	SM 4500-Cl B	79384	2012-08-05 at 10:03	93642	2012-08-05 at 20:37
Chloride (Titration)	SM 4500-Cl B	79384	2012-08-05 at 10:03	93643	2012-08-05 at 20:42
TPH DRO - NEW	S 8015 D	79515	2012-08-10 at 08:00	93797	2012-08-10 at 13:40
TPH GRO	S 8015 D	79441	2012-08-07 at 15:57	93715	2012-08-07 at 15:57

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 12080318 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: August 14, 2012 114-6401453 Work Order: 12080318 COG/BC Federal #10 Page Number: 6 of 27 Lea Co., NM

50.0

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Analytical Report

Sample: 305783 - AH-1 0-1'

Laboratory: Lubbock					_			
Analysis: BTEX		Analytica		S 802			Prep Method	
QC Batch: 93714		Date Ana			-08-07		Analyzed By	
Prep Batch: 79441		Sample P	reparation:	: 2012-	08-07		Prepared By:	ZLM
				\mathbf{RL}				
Parameter	Flag	Cert]	Result	Units		Dilution	RL
Benzene	U	1	<	<0.100	mg/Kg		5	0.0200
Toluene	U	1	<	<0.100	mg/Kg		5	0.0200
Ethylbenzene	U	1	<	<0.100	mg/Kg		5	0.0200
Xylene	<u> </u>	1		0.112	mg/Kg		5	0.0200
						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units		Amount		Limits
Trifluorotoluene (TFT)			1.84	mg/K		2.00	92	70 - 130
4-Bromofluorobenzene (4-BFB)			2.46	mg/Kg	g 5	2.00	123	70 - 130
Analysis: Chloride (Titratic QC Batch: 93641 Prep Batch: 79384	sn)	Date	ytical Met Analyzed: ple Prepara	:	SM 4500-Cl B 2012-08-05 2012-08-05		Prep Metho Analyzed E Prepared B	By: AR
				\mathbf{RL}				
Parameter	Flag	Cert	F	Result	Units		Dilution	RL
Chloride				139	mg/Kg		5	4.00
Sample: 305783 - AH-1 0-1 Laboratory: Lubbock	,							
Analysis: TPH DRO - NEV	v	4 60	lytical Me	thod	S 8015 D		Prep Metho	od: N/A
QC Batch: 93797	Ŧ		e Analyzeo		2012-08-10		Analyzed E	
Prep Batch: 79515			ple Prepa		2012-08-10		Prepared B	•
				RL				
Parameter	Flag	Cert	F	Result	Units		Dilution	RL
<u>DD</u>					(17		4	50.0

457

mg/Kg

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Q#

1

DRO

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Surrogate	Flag	Cert	B	esult	Units	Diluti		pike	Percent Recovery	Recovery Limits		
1-Tricosane				139	mg/Kg	1		.00	139	59.9 - 168		
Sample: 305783 Laboratory: Lubbo		,										
Analysis: TPH (RO			-	al Method:	S 8015			Prep Metho			
QC Batch: 93715 Prep Batch: 79441				Date Ana		2012-08 2012-08			Analyzed B	•		
Prep Batch: 79441			2	sample r	Preparation	2012-00	o-07		Prepared B	y: Zilim		
						\mathbf{RL}						
Parameter		Flag		Cert	Re	sult	Unit	S	Dilution	\mathbf{RL}		
GRO		Q.		1		102	mg/K	g	5	4.00		
								Spike	Percent	Recovery		
Surrogate			Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits		
Trifluorotoluene (TF												

Sample: 305784 - AH-1 1-1.5'

4-Bromofluorobenzene (4-BFB)

Qar

Qar

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 93642 79384	Date An	al Method: alyzed: Preparation:	SM 4500-Cl B 2012-08-05 2012-08-05	Prep Method Analyzed By Prepared By	: AR
			\mathbf{RL}			
Parameter	Flag	Cert	Result	Units	Dilution	\mathbf{RL}
Chloride			91.8	mg/Kg	5	4.00

2.81

mg/Kg

5

2.00

140

70 - 130

Sample: 305785 - AH-1 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method: N	I/A
QC Batch:	93642	Date Analyzed:	2012-08-05	Analyzed By: A	R
Prep Batch:	79384	Sample Preparation:	2012-08-05	Prepared By: A	R

continued ...

Report Date 114-6401453	e: August 14, 2012 3		rk Order: 120 G/BC Feder		Page Number: Lea Co	
sample 305?	85 continued					
			\mathbf{RL}			
Parameter	Flag	Cert	Result	Units	Dilution	RI
			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			266	mg/Kg	5	4.00
Sample: 30 Laboratory: Analysis:		Ancheti	al Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	Chloride (Titration) 93642	Date An		2012-08-05	Analyzed By:	AR
Prep Batch:			Preparation:	2012-08-05	Prepared By:	AR
-		•	-			
Parameter	Flag	Cert	RL Result	Units	Dilution	\mathbf{RL}
Chloride			207	mg/Kg	5	4.00
Sample: 30 Laboratory:	9 5787 - AH-1 4-4.5' Midland Chloride (Titration)	Analytic Date An		SM 4500-Cl B 2012-08-05 2012-08-05	Prep Method: Analyzed By: Prepared By:	N/A AR
Analysis: QC Batch:	93642 79384		Preparation:	2012-00-00	richared Dy.	AR
Analysis: QC Batch: Prep Batch:			Preparation: RL	2012-00-00	i tepateu by.	AR
Analysis: QC Batch:			-	Units mg/Kg	Dilution	AR <u>RL</u> 4.00

Sample: 305788 - AH-2 0-1'

•	BTEX	Analytical Method:	S 8021B	Prep Method:	
QC Batch:	•••	Date Analyzed:	2012-08-07	Analyzed By:	
Prep Batch:	79441	Sample Preparation:	2012-08-07	Prepared By:	ZLM

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					\mathbf{RL}				
Parameter		Fla	ug Ce:	rt	Result	Units		Dilution	RI
Benzene	2	U			<0.100	mg/Kg		5	0.020
Toluene		υ	1		<0.100	mg/Kg		5	0.0200
Ethylbenzen	e	U	1		<0.100	mg/Kg		5	0.020
Kylene			1		<0.100	mg/Kg		5	0.020
							Spike	Percent	Recovery
Surrogate			Flag Cert	Result	Units	Dilution	Amount		Limits
Trifluorotolu	ene (TFT)		0	1.91	mg/Kg	5	2.00	96	70 - 130
	obenzene (4-	BFB)		2.00	mg/Kg		2.00	100	70 - 130
Analysis: QC Batch: Prep Batch:	Chloride (T 93642 79384	itration)	Da	alytical Me te Analyze mple Prepa	d: 2	6M 4500-Cl B 2012-08-05 2012-08-05		Prep Met Analyzed Prepared	By: AR
Parameter		Flag	Cert	i	Result	Units		Dilution	RI
Chloride					872	mg/Kg		5	4.00
Sample: 30	5788 - AH-	2 0-1'		1				Prop Mat	
Analysis: QC Batch:	Lubbock TPH DRO 93797 79515	- NEW	D	nalytical M ate Analyz ample Prep	ed:	S 8015 D 2012-08-10 2012-08-10		Prep Metl Analyzed Prepared	By: CM
Laboratory: Analysis: QC Batch: Prep Batch:	TPH DRO 93797	- NEW	Di Sa	ate Analyz ample Prep	ed: aration: RL	2012-08-10 2012-08-10		Analyzed Prepared	By: CM By: CM
Analysis: QC Batch: Prep Batch: Parameter	TPH DRO 93797	- NEW Flag	D	ate Analyz ample Prep	ed: aration: RL Result	2012-08-10 2012-08-10 Units		Analyzed Prepared Dilution	By: CM By: CM RI
Analysis: QC Batch: Prep Batch: Parameter	TPH DRO 93797		Di Sa	ate Analyz ample Prep	ed: aration: RL	2012-08-10 2012-08-10		Analyzed Prepared	By: CM By: CM
Analysis: QC Batch:	TPH DRO 93797 79515	Flag	D. Sa Cert	ate Analyz ample Prep	ed: aration: RL Result 1590 s Dil	2012-08-10 2012-08-10 Units	unt	Analyzed Prepared Dilution	By: CM By: CM RI

Sample: 305788 - AH-2 0-1'

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	93715	Date Analyzed:	2012-08-07	Analyzed By:	ZLM
Prep Batch:	79441	Sample Preparation:	2012-08-07	Prepared By:	ZLM

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		RL Out Dick Hitt						-		RL
Flag		Cert		Result		Units		Dilution		
Qı		I		44.0	I	ng/Kg		5		4.00
							Spike	Percent		covery
	Flag	Cert								mits
										- 130
robenzene (4-BFB)			1.79	mg/M	ig 5		2.00	90	70	- 130
5789 - AH-2 1-1.5' Midland Chloride (Titration)										N/A
93642									•	AR
79384		Samj	ple Prepa	ration:	2012-08-0	5		Prepared	By:	AR
				пт						
Flag		Cert				Units		Dilution		RI
<u>-</u>					r					4.00
5790 - AH-2 2-2.5' Midland						~ ~		-		
•								-		N/A
93642			Analyzed		2012-08-0			Analyzed	-	AR
		Samp	ole Prepar	ation:	2012-08-0	5		Prepared	By:	AR.
79384										
79384 Flag		Cert	;	RL Result		Units		Dilution		RL
	ene (TFT) robenzene (4-BFB) 5789 - AH-2 1-1.5' Midland Chloride (Titration) 93642 79384 Flag 5790 - AH-2 2-2.5'	Flag ene (TFT) robenzene (4-BFB) 5789 - AH-2 1-1.5' Midland Chloride (Titration) 93642 79384 Flag 5790 - AH-2 2-2.5' Midland	Flag Cert ene (TFT) robenzene (4-BFB) 5789 - AH-2 1-1.5' Midland Chloride (Titration) Anal 93642 Date 79384 Samj Flag Cert 5790 - AH-2 2-2.5' Midland	Flag Cert Result ene (TFT) 1.67 robenzene (4-BFB) 1.79 5789 - AH-2 1-1.5' Midland Chloride (Titration) 93642 Date Analyzed 79384 Sample Prepar Flag Cert 5790 - AH-2 2-2.5' Midland	Flag Cert Result Unit ene (TFT) 1.67 mg/K robenzene (4-BFB) 1.79 mg/K 5789 - AH-2 1-1.5' 1.79 mg/K 5789 - AH-2 1-1.5' Analytical Method: 93642 Date Analyzed: 79384 79384 Sample Preparation: RL Flag Cert Result 335 335 5790 - AH-2 2-2.5' Midland	Flag Cert Result Units Dilut ene (TFT) 1.67 mg/Kg 5 sobenzene (4-BFB) 1.79 mg/Kg 5 5789 - AH-2 1-1.5' Midland . . Chloride (Titration) Analytical Method: SM 4500- 93642 Date Analyzed: 2012-08-0 79384 Sample Preparation: 2012-08-0 RL Flag Cert Result 335 5790 - AH-2 2-2.5' Midland .	Flag Cert Result Units Dilution ene (TFT) 1.67 mg/Kg 5 robenzene (4-BFB) 1.79 mg/Kg 5 5789 - AH-2 1-1.5' Midland Analytical Method: SM 4500-Cl B 93642 Date Analyzed: 2012-08-05 79384 Sample Preparation: 2012-08-05 RL Flag Cert Result Units 335 mg/Kg 5790 - AH-2 2-2.5' Midland	Flag Cert Result Units Dilution Amount ene (TFT) 1.67 mg/Kg 5 2.00 robenzene (4-BFB) 1.79 mg/Kg 5 2.00 5789 - AH-2 1-1.5' Midland . . Chloride (Titration) Analytical Method: SM 4500-Cl B 93642 93642 Date Analyzed: 2012-08-05 79384 Sample Preparation: 2012-08-05 RL Flag Cert Result Units Stress mg/Kg	Flag Cert Result Units Dilution Amount Recovery ene (TFT) 1.67 mg/Kg 5 2.00 84 robenzene (4-BFB) 1.79 mg/Kg 5 2.00 90 5789 - AH-2 1-1.5' 1.79 mg/Kg 5 2.00 90 5789 - AH-2 1-1.5' Midland Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Met 93642 Date Analyzed: 2012-08-05 Analyzed 79384 Sample Preparation: 2012-08-05 Prepared RL Flag Cert Result Units Dilution 335 mg/Kg 5 5790 - AH-2 2-2.5' Midland .	Flag Cert Result Units Dilution Amount Recovery Li ene (TFT) 1.67 mg/Kg 5 2.00 84 70 robenzene (4-BFB) 1.79 mg/Kg 5 2.00 90 70 5789 - AH-2 1-1.5' 1.79 mg/Kg 5 2.00 90 70 5789 - AH-2 1-1.5' .

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			\mathbf{RL}			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			395	mg/Kg	5	4.00

Sample: 305792 - AH-2 4-4.5'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 93642 79384	Date An	al Method: alyzed: Preparation:	SM 4500-Cl B 2012-08-05 2012-08-05	Prep Method: Analyzed By: Prepared By:	ÁŔ
Decementer	171	0	RL Basult	Tinita	Dilution	τά
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			422	mg/Kg	5	4.00

Sample: 305793 - AH-3 0-1'

Laboratory: Lubbock Analysis: BTEX QC Batch: 93714 Prep Batch: 79441		Date Ana	l Method: lyzed: reparation:	S 80211 2012-08 2012-08	3-07		Prep Method Analyzed By: Prepared By:	ZLM
				\mathbf{RL}				
Parameter	Flag	Cert	I	Result	Units	l	Dilution	\mathbf{RL}
Benzene	υ	1	<{	0.0200	mg/Kg		1	0.0200
Toluene	υ	1	<{	0.0200	mg/Kg		1	0.0200
Ethylbenzene	U	1	<(0.0200	mg/Kg		1	0.0200
Xylene	U	1	<{).0200	mg/Kg		1	0.0200
						Spike	Percent	Recovery
Surrogate	Flag	g Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			1.77	mg/Kg	1	2.00	88	70 - 130
4-Bromofluorobenzene (4-BFB)			2.01	mg/Kg	1	2.00	100	70 - 130

Sample: 305793 - AH-3 0-1'

Laboratory:	Midland Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method: N/A
Analysis: QC Batch:	93642	Date Analyzed:	2012-08-05	Analyzed By: AR
Prep Batch:		Sample Preparation:		Prepared By: AR

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Parameter		Flag	Cert	RL Result	Units	Dilution	\mathbf{RL}
Chloride		o		2890	mg/Kg	10	4.00
Sample: 30	5793 - AH-3 0-1'						
Laboratory: Analysis: QC Batch: Prep Batch:	Lubbock TPH DRO - NEV 93797 79515	V	Date A	cal Method: nalyzed: Preparation:	S 8015 D 2012-08-10 2012-08-10	Prep Method: Analyzed By: Prepared By:	N/A CM CM

					\mathbf{RL}			
Parameter		Flag	Cert	Re	sult	Units	Dilution	\mathbf{RL}
DRO		Qs	1	<	50.0	mg/Kg	1	50.0
						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
n-Tricosane			107	mg/Kg	1	100	107	59.9 - 168

Sample: 305793 - AH-3 0-1'

4-Bromofluorobenzene (4-BFB)				1.97	mg/Kg	1	2.00	98	70 - 130
Trifluorotoluene (TFT)				1.71	mg/Kg	1	2.00	86	70 - 130
Surrogate]	Flag	\mathbf{Cert}	Result	Units	Dilution	Amount	Recovery	Limits
							Spike	Percent	Recovery
GRO	Q.		1		<4.00	mg/K	g	1	4.00
Parameter	Flag		Cert]	Result	Uni	ts	Dilution	RL
					RL				
Prep Batch: 79441		2	Sample l	Preparatio	n: 2012-0	8-07		Prepared By	y: ZLM
QC Batch: 93715]	Date An	alyzed:	2012-0	8-07		Analyzed B	y: ZLM
Laboratory: Lubbock Analysis: TPH GRO			Analytic	al Method	: S 8015	5 D		Prep Metho	d: S 5035

Sample: 305794 - AH-3 1-1.5'

Laboratory: Analysis:	Midland Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch: Prep Batch:	93643	Date Analyzed: Sample Preparation:	2012-08-05 2012-08-05	Analyzed By: Prepared By:	

1

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			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			1320	mg/Kg	10	4.00

Sample: 305795 - AH-3 2-2.5'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 93643 79384	Date An	al Method: alyzed: Preparation:	SM 4500-Cl B 2012-08-05 2012-08-05	Prep Method: Analyzed By: Prepared By:	•
D.		a .	RL	TT 14		Dr
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			905	mg/Kg	. 10	4.00

Sample: 305796 - AH-3 3-3.5'

Laboratory:	Midland					
Analysis:	Chloride (Titration)	Analytic	al Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	93643	Date An	alyzed:	2012-08-05	Analyzed By:	AR
Prep Batch:	79384	Sample I	Preparation:	2012-08-05	Prepared By:	AR
			RL			
Parameter	Flag	Cert	Result	Units	Dilution	\mathbf{RL}
Chloride			653	mg/Kg	10	4.00

Sample: 305797 - AH-3 4-4.5'

Laboratory:	Midland					
Analysis:	Chloride (Titration)	Analytic	al Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	93643	Date An	alyzed:	2012-08-05	Analyzed By:	AR
Prep Batch:	79384	Sample I	Preparation:	2012-08-05	Prepared By:	AR
			RL			
Parameter	Flag	Cert	Result	Units	Dilution	\mathbf{RL}
Chloride			690	mg/Kg	5	4.00

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Method B	lanks					
Method Blank (1)	QC Batch: 93641					
QC Batch: 93641 Prep Batch: 79384		Date Analyzed: QC Preparation:	2012-08-05 2012-08-05		Analyzed By: Prepared By:	AR AR
Parameter	Flag	Cert		MDL Result	Units	RI
Chloride	1 105		· · · · · · · · · · · · · · · · · · ·	<3.85	mg/Kg	4
Method Blank (1)	QC Batch: 93642					
QC Batch: 93642 Prep Batch: 79384		Date Analyzed: QC Preparation:	2012-08-05 2012-08-05		Analyzed By: Prepared By:	AR AR
Parameter	Flag	Cert		MDL Result	Units	RI
Chloride	r iag			<3.85	mg/Kg	4
Method Blank (1)	QC Batch: 93643					
QC Batch: 93643 Prep Batch: 79384		Date Analyzed: QC Preparation:	2012-08-05 2012-08-05		Analyzed By: Prepared By:	AR AR
Deve et en	Flor	Cert		MDL Result	Units	RI
Parameter Chloride	Flag	Cert		<3.85	mg/Kg	4
Method Blank (1)	QC Batch: 93714					
QC Batch: 93714 Prep Batch: 79441		Date Analyzed: QC Preparation:	2012-08-07 2012-08-07			ZLM ZLM

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Decementar	121		Gut		MDL Result		Units	RL
Parameter Benzene	Flag		Cert		<0.00365		mg/Kg	0.02
Toluene			1		< 0.00303		mg/Kg	0.02
Ethylbenzene			1		< 0.00560		mg/Kg	0.02
Xylene			1		<0.00460		mg/Kg	0.02
						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			1.74	mg/Kg	1	2.00	87	70 - 130
4-Bromofluorobenzene (4-BFB)			1.79	mg/Kg	1	2.00	90	70 - 130
Method Blank (1) QC Batch	n: 93715	Doto Ar	alwadı	2012 08 01	7		Analyzad	Bw 7IM
Method Blank (1) QC Batch QC Batch: 93715 Prep Batch: 79441	n: 93715	Date Ar QC Prej	nalyzed: paration:	2012-08-07 2012-08-07			Analyzed Prepared	
QC Batch: 93715	n: 93715 Flag				7			2
QC Batch: 93715 Prep Batch: 79441			paration:		7 MDL		Prepared	By: ZLM
QC Batch: 93715 Prep Batch: 79441 Parameter			Cert		7 MDL Result	Spike	Prepared D	By: ZLM
QC Batch: 93715 Prep Batch: 79441 Parameter GRO Surrogate			Cert	2012-08-03	7 MDL Result	Spike Amount	Prepared Units mg/Kg	By: ZLM RL 4 Recovery Limits
QC Batch: 93715 Prep Batch: 79441 Parameter GRO	Flag	QC Prej	Cert	2012-08-03	7 MDL Result <0.359	Spike Amount 2.00	Prepared Units mg/Kg Percent Recovery 88	By: ZLM RL 4 Recovery Limits 70 - 130
QC Batch: 93715 Prep Batch: 79441 Parameter GRO Surrogate	Flag	QC Prej	Cert 1 Result	2012-08-03	7 MDL Result <0.359 Dilution	Spike Amount	Prepared Units mg/Kg Percent Recovery	By: ZLM RL 4 Recovery Limits

					M	IDL		
Parameter		\mathbf{Fl}	ag	Cert	Re	sult	Units	\mathbf{RL}
DRO				1	<	6.50	mg/Kg	50
						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
n-Tricosane			108	mg/Kg	1	100	108	59.9 - 168

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Laboratory Control Spike (1 QC Batch: 93641 Prep Batch: 79384 Param Chloride				pikes	3						
QC Batch: 93641 Prep Batch: 79384 Param	LCS-1)	.)	Dat								
Prep Batch: 79384 Param			D-1								
				e Analyzed Preparatio		2-08-05 2-08-05				lyzed By pared By	-
				LCS			Spike	Mat			Rec.
Chloride		F	C	Result	Units	Dil.	Amount	Res		lec.	Limit
				2480	mg/Kg	1	2500	<3.	.85	99	85 - 11
Percent recovery is based on the	e spike	resul	lt. RPI) is based o	on the sp	oike and sp	oike duplica	ate resul	lt.		
			LCSD			Spike	Matrix		Rec.		RPI
Param	F	С	Result		Dil.	Amount	Result	Rec.	Limit	RPD	Limi
Chloride			2530	mg/Kg	1	2500	<3.85	101	85 - 115	2	20
Laboratory Control Spike (i	LCS-1))			-		nke dupnez	ate resul			
QC Batch: 93642	LCS-1))		e Analyzed Preparation	: 2012	2-08-05 2-08-05		te resul	Ana	lyzed By pared By	
QC Batch: 93642	LCS-1))			: 2012	2-08-05		te resul	Ana		
QC Batch: 93642 Prep Batch: 79384			QC	Preparation LCS	: 2012 n: 2012	2-08-05 2-08-05	Spike	Mat	Ana Prep orix	bared By	r: AR Rec.
QC Batch: 93642 Prep Batch: 79384 Param) F		Preparation LCS Result	: 2012 n: 2012 Units	2-08-05 2-08-05 Dil.	Spike Amount	Mat Res	Ana Prep trix ult F	bared By	r: AR Rec. Limit
QC Batch: 93642 Prep Batch: 79384 Param Chloride		F	QC C	Preparation LCS Result 2400	: 2012 n: 2012 Units mg/Kg	2-08-05 2-08-05 Dil. 1	Spike Amount 2500	Mat Res <3.	Ana Prep crix ult F 85	bared By	r: AR Rec. Limit
QC Batch: 93642 Prep Batch: 79384 Param Chloride		F	QC C lt. RPD	Preparation LCS Result 2400 D is based o	: 2012 n: 2012 Units mg/Kg	2-08-05 2-08-05 Dil. 1 sike and sp	Spike Amount 2500 ike duplica	Mat Res <3.	Ana Prep crix ult F 85 t.	bared By	r: AR Rec. Limit 35 - 11
QC Batch: 93642 Prep Batch: 79384 Param Chloride Percent recovery is based on the	e spike 1	F	QC C It. RPD LCSD	Preparation LCS Result 2400 D is based o	: 2012 n: 2012 Units mg/Kg	2-08-05 2-08-05 Dil. 1 vike and sp Spike	Spike Amount 2500 ike duplica Matrix	Mat Res <3 ute result	Ana Prep rix ult F 85 t. Rec.	bared By Rec. 96 {	r: AR Rec. Limit 35 - 113 RPD
		F	QC C lt. RPD	Preparation LCS Result 2400 D is based o	: 2012 n: 2012 Units mg/Kg	2-08-05 2-08-05 Dil. 1 sike and sp	Spike Amount 2500 ike duplica	Mat Rest <3 te result Rec.	Ana Prep crix ult F 85 t.	bared By	r: AR Rec.

ļ

С	LCSE Result 2600 it. RPI) t Unit mg/K) is based	s Dil. (g 1	pike and s Spike Amount 2500	Spike Amount 2500 spike duplic: Matrix Result <3.85 spike duplic:	Res <3 ate resu Rec. 104	Rec. Limit 85 - 11		Rec. Limit 85 - 113 RPL Limi 20
C resul	LCSE Result 2600 it. RPI	D is based t Unit mg/K D is based	l on the s s Dil.	pike and s Spike Amount 2500	spike duplic: Matrix Result <3.85	ate resu Rec. 104	lt. Rec. Limit 85 - 11	RPI	RPE) Limi
C resul	LCSE Result 2600 it. RPI) t Unit mg/K) is based	s Dil. (g 1	Spike Amount 2500	Matrix Result <3.85	Rec.	Rec. Limit 85 - 11) Limi
resul	Resul 2600 t. RPI	t Unit mg/K D is based	(g 1	Amount 2500	. Result <3.85	104	Limit 85 - 11) Limi
resul	Resul 2600 t. RPI	t Unit mg/K D is based	(g 1	Amount 2500	<3.85	104	85 - 11) Limi
	t. RPI) is based						5 4	20
			l on the s	pike and s	spike duplic:	ate resu	lt.		
		e Analyze Preparati		2-08-07 2-08-07				dyzed By pared By	
		LCS			Spike	Matri	x		Rec.
r.			Units	Dil.	-			Rec.	Limit
				1	2.00				5.4 - 12
	1	1.82	mg/Kg	1	2.00	<0.008	16	91 7	4.9 - 12
	1	1.82	mg/Kg	1	2.00	< 0.005	60	91 7	8.1 - 12
	1	5.50	mg/Kg	1	6.00	< 0.004	60	92 7	7.3 - 12
resul	t. RPI) is based	on the s	pike and s	pike duplica	te resul	lt.		
1	LCSD			Spike	Matrix		Rec.		RPL
C I	Result	Units	Dil. A	-	Result	Rec.	Limit	RPI) Limi
1	1.78	mg/Kg	1	2.00	< 0.00365	89 7	75.4 - 1	20 4	20
1	1.78	mg/Kg	1	2.00	<0.00816	89 7	7 4.9 - 11	20 2	20
1	1.80	mg/Kg	1				-		20
1	5.44	mg/Kg	1	6.00	< 0.00460	91 7	7.3 - 1	20 1	20
resul	t. RPI) is based	on the s	pike and s	pike duplica	ate resul	lt.		
	\mathbf{L}	CS L	CSD		Spi	ke I	CS	LCSD	Rec.
	Re	sult R					Rec.	Rec.	Limit
	1.	78 1	l.70 n	ng/Kg	1 2.0	0	89	85	70 - 13
	1.	84 1	.87 n	ng/Kg	1 2.0	0	92	94	70 - 130
	resul C] 1 1 1 1 1	C F 1 1 1 1 result. RPI LCSD C Result 1 1.78 1 1.78 1 1.78 1 1.80 1 5.44 result. RPI L 1 5.44 1 1.80 1 5.44 1 1.80 1 1.81 1 1.80 1 1.80 1 1.80 1 1.80 1 1.80 1 1.80 1 1.80 1 1.80 1 1.80 1 1.80 1 1.80 1 1.80 1 1.80 1 1.80 1 1.80 1 1.80 1 1.80 1	C Result 1 1.86 1 1.82 1 1.82 1 1.82 1 1.82 1 1.82 1 1.82 1 5.50 result. RPD is based LCSD C Result Units 1 1.78 mg/Kg 1 1.78 mg/Kg 1 5.44 mg/Kg result. RPD is based LCS L Result R 1.78 1.78	C Result Units 1 1.86 mg/Kg 1 1.82 mg/Kg 1 1.82 mg/Kg 1 1.82 mg/Kg 1 1.82 mg/Kg 1 5.50 mg/Kg result RPD is based on the spectrum LCSD C Result C Result Units Dil. 1 1.78 mg/Kg 1 1 1.78 mg/Kg 1 1 5.44 mg/Kg 1 result. RPD is based on the spectrum 1 LCS LCSD Result LCS LCSD 1 1.78 1.70 m <td>C Result Units Dil. 1 1.86 mg/Kg 1 1 1.82 mg/Kg 1 1 5.50 mg/Kg 1 result. RPD is based on the spike and s LCSD Spike C Result Units Dil. Amount 1 1.78 mg/Kg 1 2.00 1 1.80 mg/Kg 1 2.00 1 1.80 mg/Kg 1 6.00 result. RPD is based on the spike and s LCS LCSD Result Result Result Units 1.78 1.70 mg/Kg 1</td> <td>C Result Units Dil. Amount 1 1.86 mg/Kg 1 2.00 1 1.82 mg/Kg 1 2.00 1 5.50 mg/Kg 1 6.00 result. RPD is based on the spike and spike duplica LCSD Spike Matrix C Result Units Dil. Amount Result 1 1.78 mg/Kg 1 2.00 <0.00365</td> 1 1.80 mg/Kg 1 2.00 <0.00816	C Result Units Dil. 1 1.86 mg/Kg 1 1 1.82 mg/Kg 1 1 5.50 mg/Kg 1 result. RPD is based on the spike and s LCSD Spike C Result Units Dil. Amount 1 1.78 mg/Kg 1 2.00 1 1.80 mg/Kg 1 2.00 1 1.80 mg/Kg 1 6.00 result. RPD is based on the spike and s LCS LCSD Result Result Result Units 1.78 1.70 mg/Kg 1	C Result Units Dil. Amount 1 1.86 mg/Kg 1 2.00 1 1.82 mg/Kg 1 2.00 1 5.50 mg/Kg 1 6.00 result. RPD is based on the spike and spike duplica LCSD Spike Matrix C Result Units Dil. Amount Result 1 1.78 mg/Kg 1 2.00 <0.00365	C Result Units Dil. Amount Result 1 1.86 mg/Kg 1 2.00 <0.003	F C Result Units Dil. Amount Result I 1 1.86 mg/Kg 1 2.00 <0.00365	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$

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Report Date: August 14, 2012 114-6401453			-		rk Order: G/BC Fe				P	age Nu		18 of 2' Co., NM
				LCS			Spike	М	atrix			Rec.
Param		F	С	Result	Units	Dil.	Amoun		esult	Rec.		Limit
GRO			1	16.9	mg/K		20.0		0.359	84		.9 - 120
Percent recovery is based on the	spike	e resi	ılt. RP			-	spike dupl	••	·			
			LCSI)		Spike	Matrix		R	ec.		RPD
Param	\mathbf{F}	С	Resul	lt Uni	its Dil.	Amount	Result	Rec.	Li	mit	RPD	Limi
GRO		1	17.1	mg/	Kg 1	20.0	< 0.359	86	68.9	- 120	1	20
Percent recovery is based on the	spike	e resu	ılt. RP	D is bas	ed on the	spike and	spike dupl	icate re	esult.			
				LCS	LCSD			pike	LCS	\mathbf{LC}	SD	Rec.
Surrogate				esult	Result	Units		nount	Rec.	Re		Limit
Trifluorotoluene (TFT)				1.89		mg/Kg		2.00	94	95		70 - 130
4-Bromofluorobenzene (4-BFB)			<u></u>	1.85	1.87	mg/Kg	1 2	2.00	92	94	4 7	70 - 130
QC Batch: 93797		ŗ		te Analy Prepar)12-08-10)12-08-10					zed By red By:	
QC Batch: 93797 Prep Batch: 79515			QC	-	ation: 20	12-08-10	Spike		atrix		red By:	CM Rec.
QC Batch: 93797 Prep Batch: 79515 Param		F		C Prepar LCS Result	ation: 20 Units	12-08-10 Dil.	Amount	R	esult	Prepar Rec.	red By:	CM Rec. Limit
QC Batch: 93797 Prep Batch: 79515 Param			QC	Prepar	ation: 20	12-08-10 Dil.	-	R		Ргерал	red By:	CM Rec. Limit
QC Batch: 93797 Prep Batch: 79515 Param DRO	spike	F	QC C	LCS Result 230	ation: 20 Units mg/K	112-08-10 Dil. g 1	Amount 250	: R <	esult 6.50	Prepar Rec.	red By:	CM Rec. Limit
QC Batch: 93797 Prep Batch: 79515 Param DRO Percent recovery is based on the	-	F	QC C ilt. RP LCSI	Prepar LCS Result 230 D is bas	ation: 20 Units mg/Kj ed on the	Dil. g 1 spike and s Spike	Amount 250 spike dupl Matrix	icate re	esult 6.50 sult. Re	Prepar Rec. 92	red By:	CM Rec. Limit 7 - 120 RPD
QC Batch: 93797 Prep Batch: 79515 Param DRO Percent recovery is based on the Param	spike F	F	QC <u>C</u> ilt. RP LCSI Resul	C Prepar LCS Result 230 D is bas D is bas	ation: 20 Units mg/Ki ed on the ts Dil.	Dil. g 1 spike and s Spike Amount	Amount 250 spike dupl Matrix Result	t R < icate re Rec.	esult 6.50 sult. Re Lir	Prepar Rec. 92 ec. nit	red By: 72. RPD	CM Rec. Limit 7 - 120 RPD Limit
QC Batch: 93797 Prep Batch: 79515 Param DRO Percent recovery is based on the Param DRO	F	F e resu	C I I LCSI Resul 204	Prepar LCS Result 230 D is bas t Uni mg/	ation: 20 Units mg/Kj ed on the ts Dil. Kg 1	Dil. g 1 spike and s Spike Amount 250	Amount 250 spike dupl Matrix Result <6.50	icate re Rec. 82	esult 6.50 sult. Re Lir 72.7	Prepar Rec. 92 ec. nit	red By:	CM Rec. Limit 7 - 120 RPD
QC Batch: 93797 Prep Batch: 79515 Param DRO Percent recovery is based on the Param DRO	F	F c resu c	C I I LCSI Resul 204 I L. RP	Prepar LCS Result 230 D is bas t Uni mg/ D is bas	ation: 20 Units mg/Kj ed on the ts Dil. Kg 1	Dil. g 1 spike and s Spike Amount 250	Amound 250 spike dupl Matrix Result <6.50 spike dupl	icate re Rec. 82 icate re	esult 6.50 sult. Re Lir 72.7 sult.	Prepar Rec. 92 ec. nit - 120	red By: 72. RPD 12	CM Rec. Limit 7 - 120 RPD Limit 20
QC Batch: 93797 Prep Batch: 79515 Param DRO Percent recovery is based on the Param DRO Percent recovery is based on the	F spike L(F C c c c c c c c c c c c c c c c c c c	C I I LCSI Resul 204 It. RP LC	Prepar LCS Result 230 D is bas t Uni mg/ D is bas SD	ation: 20 Units mg/Ki ed on the ts Dil. Kg 1 ed on the	Dil. g 1 Spike and s Spike Amount 250 spike and s	Amound 250 spike dupl Matrix Result <6.50 spike dupl Spike	icate re Rec. 82 icate re	esult 6.50 sult. Re Lir 72.7 sult.	Prepar Rec. 92 ec. nit - 120 LCSD	red By: 72. RPD 12	CM Rec. Limit 7 - 120 Limit 20 Rec.
QC Batch: 93797 Prep Batch: 79515 Param DRO Percent recovery is based on the Param DRO Percent recovery is based on the Surrogate	F spike L(Res	F e resu c y e resu	C I I LCSI Resul 204 It. RP LC Res	Prepar LCS Result 230 D is bas t Uni mg/ D is bas SD sult	ation: 20 Units mg/Ki ed on the ts Dil. Kg 1 ed on the Units	Dil. <u>g 1</u> spike and s Spike <u>Amount</u> 250 spike and s Dil.	Amound 250 spike dupl Matrix Result <6.50 spike dupl Spike Amount	Rec. Rec. 82 icate re LC Rec	esult 6.50 sult. Re Lir 72.7 sult. Sult.	Prepar Rec. 92 ec. nit - 120 LCSD Rec.	red By: 72. RPD 12	CM Rec. <u>Limit</u> 7 - 120 RPD Limi 20 Rec.
Prep Batch: 79515 Param DRO Percent recovery is based on the Param DRO Percent recovery is based on the Surrogate n-Tricosane	F spike L(Res 1(F e resu C v e resu CS sult	C i lt. RP LCSI Resul 204 lt. RP LC Res 94	Prepar LCS Result 230 D is bas t Uni mg/ D is bas SD sult .3	ation: 20 Units mg/Ki ed on the ts Dil. Kg 1 ed on the	Dil. g 1 Spike and s Spike Amount 250 spike and s	Amound 250 spike dupl Matrix Result <6.50 spike dupl Spike	icate re Rec. 82 icate re	esult 6.50 sult. Re Lir 72.7 sult. Sult.	Prepar Rec. 92 ec. nit - 120 LCSD	red By: 72. RPD 12	CM Rec. Limit 7 - 120 Limit 20 Rec.
QC Batch: 93797 Prep Batch: 79515 Param DRO Percent recovery is based on the Param DRO Percent recovery is based on the Surrogate n-Tricosane Matrix Spike (MS-1) Spike	F spike L(Res 1(F e resu C v e resu CS sult	C I LCSI Resul 204 It. RP LC Res 94 : 30578	Prepar LCS Result 230 D is bas t Uni mg/ D is bas SD sult .3	ation: 20 Units mg/Kj ed on the ts Dil. Kg 1 ed on the Units mg/Kg	Dil. g 1 spike and s Spike Amount 250 spike and s Dil. 1	Amound 250 spike dupl Matrix Result <6.50 spike dupl Spike Amount	Rec. Rec. 82 icate re LC Rec	esult 6.50 sult. Re Lir 72.7 sult. Sult.	Prepar Rec. 92 ec. nit - 120 LCSD Rec. 94	RPD 12 1 59.	CM Rec. <u>Limit</u> 7 - 120 <u>RPD</u> <u>Limit</u> 20 Rec. <u>Jimit</u> 9 - 168
QC Batch: 93797 Prep Batch: 79515 Param DRO Percent recovery is based on the Param DRO Percent recovery is based on the Surrogate n-Tricosane	F spike L(Res 1(F e resu C v e resu CS sult	C i lt. RP LCSI Resul 204 lt. RP LC Res 94 : 30578 Da	Prepar LCS Result 230 D is bas t Uni mg/ D is bas SD sult .3	ation: 20 Units mg/Kj ed on the ts Dil. Kg 1 ed on the Units mg/Kg	Dil. <u>g 1</u> spike and s Spike <u>Amount</u> 250 spike and s Dil.	Amound 250 spike dupl Matrix Result <6.50 spike dupl Spike Amount	Rec. Rec. 82 icate re LC Rec	esult 6.50 sult. Re Lir 72.7 sult. Sult.	Prepar Rec. 92 ec. nit - 120 LCSD Rec. 94	red By: 72. RPD 12	CM Rec. Limit 7 - 120 RPD Limit 20 Rec. Jimit 9 - 168

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matrix spikes continued						a				-	
Param	F	С	MS Result	Units	Dil.	Spike Amount		ıtrix sult	Rec.		Rec. imit
	^	<u> </u>		omu			100	ouro	1000		
_		_	MS			Spike		trix	_		lec.
Param	F	C	Result	Units	Dil.	Amount		sult	Rec.		imit
Chloride			2380	mg/Kg		2500		39	90		- 120.6
Percent recovery is based of	n the spike r	esult. 1	RPD is based	d on the	spike and	spike dup	licate r	esult.			
		MS	SD		Spike	Matrix		R	ec.		RPI
Param	FO			Dil.	Amount	Result	Rec.	Li	mit	RPD	Limi
Chloride		23	90 mg/Kg	; 5	2500	139	90	79.4 -	- 120.6	0	20
	Spiked Sam			1 ~	10 00 05					. 1 D	
QC Batch: 93642	Spritter Gran		Date Analyza QC Preparat MS)12-08-05)12-08-05	Spike	Ма	trix		yzed By ared By: F	
QC Batch: 93642 Prep Batch: 79384	F		Date Analyz QC Preparat MS Result	tion: 20 Units)12-08-05 Dil.	Amount	Res	sult		ared By F	: AR Rec. imit
QC Batch: 93642 Prep Batch: 79384 Param			Date Analyz QC Preparat MS	tion: 20)12-08-05 Dil.		Res		Prepa	ared By F	: AR Rec. imit
QC Batch: 93642 Prep Batch: 79384 Param Chloride	<u>ع</u>	С	Date Analyz QC Preparat MS Result 5030	tion: 20 Units mg/Kg)12-08-05 Dil. 10	Amount 2500	Res 28	sult 90	Prepa Rec.	ared By F	: AR Rec. imit
QC Batch: 93642 Prep Batch: 79384 Param Chloride	<u>ع</u>	С	Date Analyz QC Preparat MS Result 5030 RPD is based	tion: 20 Units mg/Kg)12-08-05 Dil. 10	Amount 2500	Res 28	sult 90 esult.	Prepa Rec.	ared By F	: AR Rec. imit - 120.6
QC Batch: 93642 Prep Batch: 79384 Param Chloride Percent recovery is based of	<u>ع</u>	C esult. I MS	Date Analyz QC Preparat MS Result 5030 RPD is based SD ult Units	Units Units mg/Kg I on the Dil.	Dil. 10 spike and Spike Amount	Amount 2500 spike dupl Matrix Result	Res 28	sult 90 esult. R	Prepa Rec. 86	ared By F	AR Rec. imit - 120.6 RPD
QC Batch: 93642 Prep Batch: 79384 Param Chloride Percent recovery is based of Param Chloride	F n the spike r F (C esult. I MS Res 52	Date Analyz QC Preparat MS Result 5030 RPD is based SD ult Units 10 mg/Kg	Units mg/Kg l on the Dil.	Dil. Dil. 10 spike and Spike Amount 2500	Amount 2500 spike dupl Matrix Result 2890	Res 28 licate re Rec. 93	sult 90 esult. Ri Lin 79.4 -	Prepa Rec. 86 ec.	F L 79.4	: AI Rec. - 120 RPI Lim
Prep Batch: 79384 Param Chloride Percent recovery is based of Param Chloride Percent recovery is based of Matrix Spike (MS-1) QC Batch: 93643	F n the spike r F (C esult. I MS S S S S S S S S S S S S S S S S S S	Date Analyze QC Preparat MS Result 5030 RPD is based SD ult Units 10 mg/Kg RPD is based 5797 Date Analyze	Units mg/Kg I on the Dil. 10 I on the	Dil. 10 spike and Spike Amount 2500 spike and	Amount 2500 spike dupl Matrix Result 2890	Res 28 licate re Rec. 93	sult 90 esult. Ri Lin 79.4 -	Prepa Rec. 86 ec. mit 120.6	F L 79.4 RPD 4	AR Acc. imit - 120. RPI Limi 20
QC Batch: 93642 Prep Batch: 79384 Param Chloride Percent recovery is based of Param Chloride Percent recovery is based of Matrix Spike (MS-1) QC Batch: 93643 Prep Batch: 79384	F n the spike r F (n the spike r Spiked Sam	C esult. I MS Second Se	Date Analyza QC Preparat MS Result 5030 RPD is based SD ult Units 10 mg/Kg RPD is based 5797 Date Analyza QC Preparat MS	Units mg/Kg I on the Dil. 10 I on the ed: 20	Dil. 10 spike and Spike Amount 2500 spike and 012-08-05 012-08-05	Amount 2500 spike dupl Matrix Result 2890 spike dupl Spike	Res 28 licate re 93 licate re	sult 90 esult. R. Lin 79.4 - esult.	Prepa Rec. 86 ec. mit 120.6 Analy Prepa	F P L 79.4 RPD 4 rzed By: rzed By:	RPD Limit 20
QC Batch: 93642 Prep Batch: 79384 Param Chloride Percent recovery is based of Param Chloride Percent recovery is based of Matrix Spike (MS-1) QC Batch: 93643	F n the spike r F (n the spike r	C esult. I MS S S S S S S S S S S S S S S S S S S	Date Analyzz QC Preparat MS Result 5030 RPD is based SD ult Units 10 mg/Kg RPD is based 5797 Date Analyzz QC Preparat	Units mg/Kg I on the Dil. 10 I on the	Dil. 10 spike and Spike Amount 2500 spike and	Amount 2500 spike dupl Matrix Result 2890 spike dupl	Res 28 licate re 93 licate re	sult 90 esult. 79.4 - esult.	Prepa Rec. 86 ec. mit 120.6	red By F L 79.4 RPD 4 vzed By: red By:	AR AR - 120.6 RPD Limit 20

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Report Date: August 14, 20 114-6401453	12						12080318 deral #10			Page Nu		20 of 27 Co., NM
Param		F	С	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		_	-	3170	mg/Kg	5	2500	690	99	79.4 - 120.6	1	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: 305772

QC Batch:	93714	Date Analyzed:	2012-08-07	Analyzed By:	ZLM
Prep Batch:	79441	QC Preparation:	2012-08-07	Prepared By:	ZLM

			MS			Spike	Matrix		Rec.
Param	\mathbf{F}	С	Result	Units	Dil.	Amount	\mathbf{Result}	Rec.	Limit
Benzene		· 1	1.70	mg/Kg	1	2.00	< 0.00365	85	37.6 - 142
Toluene		1	1.83	mg/Kg	1	2.00	< 0.00816	92	38.6 - 153
Ethylbenzene		ı	1.92	mg/Kg	1	2.00	<0.00560	96	36.7 - 172
Xylene		1	5.80	mg/Kg	1	6.00	< 0.00460	97	36.7 - 173

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	1.73	mg/Kg	1	2.00	< 0.00365	86	37.6 - 142	2	20
Toluene		1	1.86	mg/Kg	1	2.00	<0.00816	93	38.6 - 153	2	20
Ethylbenzene		1	1.95	mg/Kg	1	2.00	< 0.00560	98	36.7 - 172	2	20
Xylene		1	5.89	mg/Kg	1	6.00	< 0.00460	98	36.7 - 173	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)	1.89	1.88	mg/Kg	1	2	94	94	70 - 130
4-Bromofluorobenzene (4-BFB)	1.90	1.90	mg/Kg	1	2	95	95	70 - 130

Matrix Spike (MS-1) Spiked Sample: 305772

QC Batch:	93715		D	ate Analyz	ed: 2012-	08-07		L. L	Analyzed	By: ZLM
Prep Batch:	79441		Q	C Preparat	ion: 2012-	08-07]	Prepared	By: ZLM
				MS			Spike	Matrix		Rec.
Param		F	С	Result	Units	Dil.	Amount	Result	Rec.	Limit
GRO	· · · · ·		1	15.5	mg/Kg	1	20.0	1.14	72	68.9 - 120

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

Report Date: August 14, 20 114-6401453	12				rk Order: G/BC Fee	12080318 leral #10			Pa	ge Nur		21 of 27 Co., NM
D	F	r C	MSD Result		uts Dil.	Spike Amount	Matrix Result		Rec Lim		RPD	RPD
Param GRO			14.3			20.0	1.14	66	- 68.9	· ·	8	Limit 20
	Q. Q			mg/						120		
Percent recovery is based on	the spik	e resu	II. RPL	J IS Das	ed on the	spike and s	spike aup	incate re	suit.			
			N	٨S	MSD			Spike	MS	MS	D	Rec.
Surrogate			Re	esult	Result	Units	Dil. A	Amount	Rec.	Rec	c	Limit
Trifluorotoluene (TFT)				.72	1.64	mg/Kg	1	2	86	82		70 - 130
4-Bromofluorobenzene (4-BF	B)		2	.06	2.00	mg/Kg	1	2	103	100	0 7	70 - 130
Matrix Spike (MS-1) S QC Batch: 93797 Prep Batch: 79515	piked S	ample:	Date	e Analy Prepar		12-08-10 12-08-10				Analyz Prepare	*	
QC Batch: 93797 Prep Batch: 79515	piked S	·	Date QC	e Analy Prepar MS	ation: 20	12-08-10	Spike		I atrix	Prepare	ed By:	CM
QC Batch: 93797 Prep Batch: 79515 Param		F	Date QC C	e Analy Prepar MS Result	ation: 20 Units	12-08-10 Dil.	Amou	nt Re	I atrix esult	Prepare Rec.	ed By	: CM Rec. Limit
QC Batch: 93797 Prep Batch: 79515 Param DRO	Qe	F	Date QC C	e Analy Prepar MS Result 1470	ation: 20 Unit: mg/K	12-08-10 5 Dil. 5 1	Amour 250	nt Re	I atrix esult 157	Prepare	ed By	: CM Rec. Limit
QC Batch: 93797 Prep Batch: 79515 Param DRO	Qe	F	Date QC C	e Analy Prepar MS Result 1470	ation: 20 Unit: mg/K	12-08-10 5 Dil. 5 1	Amour 250	nt Re	I atrix esult 157	Prepare Rec.	ed By	: CM Rec. Limit
QC Batch: 93797 Prep Batch: 79515	Qe	F	Date QC C	e Analy Prepar MS Result 1470	ation: 20 Unit: mg/K	12-08-10 5 Dil. 5 1	Amour 250	nt Re 4 licate res	I atrix esult 157	Rec.	ed By	CM
QC Batch: 93797 Prep Batch: 79515 Param DRO Percent recovery is based on	Qe	F Q. e resu	Date QC <u>1</u> lt. RPD	e Analy Prepar MS Result 1470) is bas	ation: 20 Units mg/K red on the	12-08-10 <u> </u>	Amour 250 spike dup	nt Re 4 licate res	I atrix esult 157 sult.	Rec. 405	ed By	: CM Rec. Limit 3 - 139
QC Batch: 93797 Prep Batch: 79515 Param DRO Percent recovery is based on Param	Q. the spik	F Q. e resu	Date QC 1 lt. RPD MSD	e Analy Prepar MS Result 1470) is bas	units Dil.	12-08-10 g 1 spike and s Spike	Amour 250 spike dup Matrix	nt Re 4 licate res	I estrix esult 157 sult. Rec	Rec. 405	ed By:	CM Rec. Limit <u>3 - 139</u> RPD
QC Batch: 93797 Prep Batch: 79515 Param DRO	q. the spik F q. q	F e resu	Date QC 1 It. RPD MSD Result 1310	e Analy Prepar MS Result 1470) is bas t Un mg/	units Units mg/K red on the its Dil. /Kg 1	12-08-10 g 1 spike and s Spike Amount 250	Amour 250 spike dup Matrix Result 457	nt Re dicate res Rec. 341	I atrix esult 157 sult. Rec Lim 45.3 -	Rec. 405	ed By 45 RPD	CM Rec. Limit <u>3 - 139</u> RPD Limit
QC Batch: 93797 Prep Batch: 79515 Param DRO Percent recovery is based on Param DRO	q. the spik F q. q	F Q. e resu C 1 e resu	Date QC 1 It. RPD Result 1310 It. RPD	e Analy Prepar MS Result 1470) is bas t Un mg/) is bas	units Units mg/K red on the its Dil. /Kg 1	12-08-10 g 1 spike and s Spike Amount 250	Amou 250 spike dup Matrix Result 457 spike dup	nt Re dicate res Rec. 341 dicate res	atrix esult 57 sult. Rec Lim 45.3 - sult.	Rec. 405	ed By 45 <u>RPD</u> 12	CM Rec. <u>Limit</u> <u>3 - 139</u> RPD Limit <u>20</u>
QC Batch: 93797 Prep Batch: 79515 Param DRO Percent recovery is based on Param DRO	the spik	F e resu	Date QC 1 It. RPD MSD Result 1310 It. RPD	e Analy Prepar MS Result 1470) is bas t Un mg/	units Units mg/K red on the its Dil. /Kg 1	12-08-10 g 1 spike and s Spike Amount 250	Amour 250 spike dup Matrix Result 457	nt Re 4 licate res Rec. 341 licate res M	atrix esult 57 sult. Rec Lim 45.3 - sult.	Rec. 405	ed By 45 <u>RPD</u> 12	CM Rec. <u>Limit</u> <u>3 - 139</u> RPD Limit

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114-6401453	COG/BC Federal #10	Lea Co., NM

Calibration Standards

Standard (CCV-1)

QC Batch:	93641			Date A	nalyzed:	2012-08-05		Analy	zed By: AR
					CCVs	CCVs	CCVs	Percent	
					True	Found	Percent	Recovery	Date
Param		Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride				mg/Kg	100	100	100	85 - 115	2012-08-05

Standard (CCV-2)

QC Batch:	93641			Date Analyzed: 2012-08-05							
					CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date		
Param		Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed		
Chloride				mg/Kg	100	99.6	100	85 - 115	2012-08-05		

Standard (CCV-1)

QC Batch:	93642			Date A	Analyzed:	2012-08-05		Analy	zed By: AR
					CCVs	CCVs	CCVs	Percent	
					True	Found	Percent	Recovery	Date
Param		Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride				mg/Kg	100	99.0	99	85 - 115	2012-08-05

Standard (CCV-2)

QC Batch:	93642			Date A	Analyzed: 2	012-08-05	Analyzed By: AR			
					CCVs	CCVs	CCVs	Percent		
					True	Found	Percent	Recovery	Date	
Param		Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed	
Chloride				mg/Kg	100	101	101	85 - 115	2012-08-05	

Report Date: August 14, 2012 114-6401453					r: 12080318 Federal #10		Page Nu	mber: 23 of 27 Lea Co., NM	
Standard (CO	CV-1)								
QC Batch: 93	643		Date A	nalyzed: 2	2012-08-05		Analyzed By: AR		
				CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date	
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed	
Chloride			mg/Kg	100	102	102	85 - 115	2012-08-05	

Standard (CCV-2)

QC Batch:	93643			Date A	Analyzed:	2012-08-05		Analyzed By: AR		
					CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date	
Param		Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed	
Chloride				mg/Kg	100	98.5	98	85 - 115	2012-08-05	

Standard (CCV-1)

QC Batch: 93714			Analyzed By: ZLM					
				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene	.	1	mg/kg	0.100	0.0890	89	80 - 120	2012-08-07
Toluene		1	mg/kg	0.100	0.0882	88	80 - 120	2012-08-07
Ethylbenzene		1	mg/kg	0.100	0.0893	89	80 - 120	2012-08-07
Xylene		1	mg/kg	0.300	0.269	90	80 - 120	2012-08-07

Standard (CCV-2)

QC Batch: 93714			Analyzed By: ZLM					
			•	CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		1	mg/kg	0.100	0.0900	90	80 - 120	2012-08-07
Toluene		1	mg/kg	0.100	0.0895	90	80 - 120	2012-08-07
Ethylbenzene		1	mg/kg	0.100	0.0880	88	80 - 120	2012-08-07
Xylene		1	mg/kg	0.300	0.264	88	80 - 120	2012-08-07

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114-6401453	te: August 14 3	, 2012			Work Order COG/BC F		Page Number: 24 of 27 Lea Co., NM		
Standard ((CCV-3)								
QC Batch:	93714			Date Ar	nalyzed: 20	112-08-07		Analyz	ed By: ZLM
					CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param		Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		Ÿ	1	mg/kg	0.100	0.0849	85	80 - 120	2012-08-0
Toluene			1	mg/kg	0.100	0.0835	84	80 - 120	2012-08-0
Ethylbenzer	ne		1	mg/kg	0.100	0.0822	82	80 - 120	2012-08-0
Xylene			1	mg/kg	0.300	0.246	82	80 - 120	2012-08-0
Standard (QC Batch:				Date Ar	alyzed: 20	12-08-07		Analyz	ed By: ZLM
					CCVs	CCVs	\mathbf{CCVs}	Percent	
					True	Found	Percent	Recovery	Date
Param	Flag		Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
			1	mg/Kg	1.00	0.842	84	80 - 120	2012-08-07
GRO Standard (QC Batch: Param	(CCV-2)		Cert	Date An Units	1.00	0.842 12-08-07 CCVs Found Conc. 0.847	84 CCVs Percent Recovery 85	80 - 120 Analyze Percent Recovery Limits 80 - 120	ed By: ZLM Date Analyzed
GRO Standard (QC Batch: Param GRO Standard ((CCV-2) 93715 Flag		Cert	Date An	1.00 nalyzed: 20 CCVs True Conc.	12-08-07 CCVs Found Conc.	CCVs Percent Recovery	Analyze Percent Recovery Limits	ed By: ZLM Date
GRO Standard (QC Batch: Param GRO Standard ((CCV-2) 93715 Flag (CCV-3)		Cert	Date An Units	1.00 nalyzed: 20 CCVs True Conc. 1.00	12-08-07 CCVs Found Conc.	CCVs Percent Recovery	Analyze Percent Recovery Limits 80 - 120	ed By: ZLM Date Analyzed
GRO Standard (QC Batch: Param GRO	(CCV-2) 93715 Flag (CCV-3)		Cert	Date An Units mg/Kg	1.00 nalyzed: 20 CCVs True Conc. 1.00	12-08-07 CCVs Found Conc. 0.847 12-08-07	CCVs Percent Recovery 85	Analyze Percent Recovery Limits 80 - 120 Analyze	ed By: ZLM Date Analyzed 2012-08-07
GRO Standard (QC Batch: Param GRO Standard ((CCV-2) 93715 Flag (CCV-3)		Cert	Date An Units mg/Kg	1.00 nalyzed: 20 CCVs True Conc. 1.00 alyzed: 20 CCVs	12-08-07 CCVs Found Conc. 0.847 12-08-07 CCVs	CCVs Percent Recovery	Analyze Percent Recovery Limits 80 - 120 Analyze Percent	ed By: ZLM Date Analyzed 2012-08-07
GRO Standard (QC Batch: Param GRO Standard ((CCV-2) 93715 Flag (CCV-3)		Cert	Date An Units mg/Kg	1.00 nalyzed: 20 CCVs True Conc. 1.00	12-08-07 CCVs Found Conc. 0.847 12-08-07	CCVs Percent Recovery 85 CCVs	Analyze Percent Recovery Limits 80 - 120 Analyze	ed By: ZLM Date Analyzed 2012-08-07

Report Date: 114-6401453	August 14, 2	012		Work Or COG/B		Page Nu	mber: 25 of 27 Lea Co., NM	
Standard (C	CCV-1)							
QC Batch: 93797			Date Analyzed: 2012-08-10			Analyzed By: CM		
				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		1	mg/Kg	250	225	90	80 - 120	2012-08-10
Standard (C QC Batch: 9	CCV-2) 93797		Dete	Analyzed:	2012-08-10		Analy	zed By: CM
QC Daten: 5	0191		Date	Anaryzeu:	2012-00-10		Analy	zeu by. CM
				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		1	mg/Kg	250	228	91	80 - 120	2012-08-10
Standard (C	CV-3)							
QC Batch: 9	3797		Date	Analyzed:	2012-08-10		Analy	zed By: CM
				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		1	mg/Kg	250	217	87	80 - 120	2012-08-10

Report Date: August 14, 2012 114-6401453 Work Order: 12080318 COG/BC Federal #10 Page Number: 26 of 27 Lea Co., NM

Appendix

Report Definitions

NameDefinitionMDLMethod Detection LimitMQLMinimum Quantitation LimitSDLSample Detection Limit

Laboratory Certifications

	Certifying	Certification	Laboratory
С	Authority	Number	Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704219-12-8	Lubbock

Standard Flags

- F Description
- B Analyte detected in the corresponding method blank above the method detection limit
- H Analyzed out of hold time
- J Estimated concentration
- Jb The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
- Je Estimated concentration exceeding calibration range.
- Qc Calibration check outside of laboratory limits.
- Qr RPD outside of laboratory limits
- Qs Spike recovery outside of laboratory limits.
- Qsr Surrogate recovery outside of laboratory limits.
- U The analyte is not detected above the SDL

Result Comments

- 1 Dilution due to excessive hydrocarbons.
- 2 Dilution due to excessive hydrocarbons.

Attachments

Released to Imaging: 9/12/2023 8:54:01 AM

Report Date: August 14, 2012 114-6401453 Work Order: 12080318 COG/BC Federal #10 Page Number: 27 of 27 Lea Co., NM

The scanned attachments will follow this page.

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

Page 60 of 62 Received by OCD: 9/12/2023 8:51:51 AM 13 Ŷ LANZ # TIBUN いいてん Date: 8/1/12 N RUSH Charges Authorized: Results by: Rejor Anions/Cations, pH, TDS Yes ü OTHER: (solsedaA) MJ9 (Circle or Specify Method No.) (niA) steB eddM ads emmed ANALYSIS REQUEST 9 2 CUIOLOG 5 ţ Pest. 806/608 Accounting rece PAGE 2 PCB's 8080/608 Ì The ready sont GC.MS Semi, Vol. 8270/625 TETRA TECH CONTACT PERSON SUB SUB SAMPLED BY: (Print & Initial) SAMPLE SHIPPED BY: (Circle GC.MS Vol. 8240/8260/624 IJЯ HAND DELIVERED TCLP Semi Volatiles łα TCLP Volatiles ins Pink copy ź Metals Ag As Ba Cd Vr Pd Hg Se 4TO1 FEDEX RCRA Metals Ag As Ba Cd Cr Pb Hg Se 0728 HA9 9 hai (Ext. to C35) 9001XT 60W 9108 C 000 m. WC L 01208 X318 「こうちょう PRESERVATIVE METHOD BNON 0.8 Analysis Request of Chain of Custody Record ß × ~ ICE × × 34 EONH Date: 71me: Date: Ilme: Date: Sur Line нсг EILTERED (Y/N) TIME REAL OF CONTAINERS - Return Orginal copy to Tetra boncon accedi come sarphis if TPH Onced 1 208 0318 (432) 682-4559 • Fax (432) 682-3946 (ED BY: (Signature) **IDENTIFICATION** 2.1-(*FETRA TECH* 2-2.5 2-2.5 3-3.5 3-3.5 JH-H s:'-' Midland, Texas 79705 1910 N. Big Spring St. 510-4 -0 SITE MANAGER: IKC TANANA 0 2 # in deep style CODV БА ТЕ Federa JAMPS 2 Le A Con 44 AH2 Ä Dante: 0 Time: Ě. ie ei Date 20/--Z PHONE BARD \prec awoo Please fill out all copi XIFTAM \sim STATE: TIME WHEN RECEIVED Ń (ELMOUISHED BY: (Signature) 211/181 212 DATE RECEIVING LABORATORY: ADDRESS: Û DUISHED BY: (3) 0829-2-21 NOLLION õ CLIENT NAME REUNQUISHED BY PROJECT NO. 792 (Y 85-18J 185 15% LAB I.D. NUMBER 125 189 *GH* æ 288 100 CONTACT È

PAGE: 2 OF: 2	ANALYSIS REQUEST (Circle or Specify Method No.)	RCRA Metals Ag As Ba Cd Cr Pb Hg Se TCLP Metals Ag As Ba Cd Vr Pd Hg Se TCLP Volatiles TCLP Volatiles GC,MS Vol. 8240/8260/624 GC,MS Vol. 8240/8260/624 GC,MS Vol. 8240/8260/624 GC,MS Semir Vol. 8270/625 GC,MS Vol. 8240/8260/624 GC,MS Vol. 8240/8260 GC,MS Vol. 8240/8260/624 GC,MS Vol. 8240/8260/624 GC,MS Vol. 8240/8260/624 GC,MS Vol. 8240/8260/624 GC,MS Vol. 8240/8260/624 GC,MS Vol. 8240/8260/624 GC,MS Vol. 8240/8260 GC,MS Vol. 8240/8260 GC,MS Vol. 8240/8260/624 GC,MS Vol. 8240/8260 GC,MS Vol. 8240/8260 GC,MS Vol. 82				× ×	95	5					SAMPLED BY: (Prim & Initial) Date: 8/1/12		HAND DELIVERED UPS OTHER.			
ld		(Ext. to C35)	PRESERVATIVE METHOD TX1005	LEEX 80349 HOME NOME	XXX	×	X	X	×				L L L	2/2/10 54	SAU F			
of Custody Record			()											Date: Time:	Date: Time:	Date: Time:	TH Q.7	
	1.	FETRA TECH 1910 N. Big Spring St. Midland, Texas 79705 (432) 682-4559 • Fax (432) 682-3946	Q	NOS	1-0	1-1.5	2-2.5	3-2.5	4-45				19 RECEIVED BY (Signature) (BECEIVED BY: (Signature) RECEIVED BY: (Signature) RECEIVED BY: (Signature)	RECEIPEDEN Extrangel	IONE DATE DATE DATE DATE			
Request of Chain		1516 N. 1 1910 N. 1 Midland, (432) 682-4	PROJECT NAME:	a a a	X AH3									Date: - 8/2/12	Time: 42 H	Date: Time:	PHONE: ZIP: REMARKS:	
				TIME MATRIX	5										6	6	STATE PH	ر بر
Analysis			CLIENT NAME: COG PROJECT NO/US	LAB I.D. NUMBER DATE	118 84	1 hbl	795	196	191	•				LINUUISHED BY: (Signer of the second		RELINØUISHED BY: (Signature)	RECENNIG LABORATORY: ADDRESS: ADORATORY: STATE PH CONTACT: STATE PH SAMPLE CONDITION WHEN RECEIVED:	с С

District I 1625 N. French Dr., Hobbs, NM 88240 Phone:(575) 393-6161 Fax:(575) 393-0720 District II

811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division 1220 S. St Francis Dr. Santa Fe, NM 87505

CONDITIONS

Operator:	OGRID:
Spur Energy Partners LLC	328947
9655 Katy Freeway	Action Number:
Houston, TX 77024	264238
	Action Type:
	[IM-SD] Incident File Support Doc (ENV) (IM-BNE)

CONDITIONS

Created By	Condition	Condition Date
jharimon	Final remediation and reclamation shall take place in accordance with 19.15.29.12 and 19.15.29.13 NMAC once the site is no longer being used for oil and gas operations.	9/12/2023

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Action 264238