	n - y	SI	FE INFORMA	TION	
2RP-390		Repor	t Type: Clos	ure	
General Site Info	ormation:		argent and a further are and	يوني ويوني المراجع الم المراجع المراجع	an a
Site:	anta di seconda di secola di s	Jenkins B Fe	deral #7		
Company:		COG Operati	ng LLC		· · · · · · · · · · · · · · · · · · ·
Section. Townsh	hip and Range	Section 20, T	17S, R30 E Unit I	_etter - E	
Lease Number:	<u></u>	(API#) 30-015	-29451		
County:		Eddy County			
GPS:		32.822824° N	. 103.999198° W		
Surface Owner:		Federal	,		
Mineral Owner:					
Directions: From the interview of the optimized of the interview of the in			rsection of Hwy 82 n left side of lease r	and Hwy 2 oad.	17 go north on 217 for 0.6m, turn left and go
Release Data: 👝			Sec. S.		
Date Released:	nemente de la constante de la c Constante de la constante de la Constante de la constante de la	2/5/2010		V. 1995. V. Herri	nan an ann ann ann ann an ann an ann an
Type Release:		Produced wate	ər		
Source of Contan	nination:	Split in flowline	9		
Fluid Released:		100 barrels			
Fluids Recovered	1:	80 barrels	·····		
Official Commun		Ale to est a state of	87. S. F. S. S. S. S.	t the only set of	
Aleme:			30 (A) 16 76 16 17 17 17 17 17 17 17 17 17 17 17 17 17		
Name:	Patellis				
Company:	COG Operating, LLC				Tetra Tech
Address:	550 W. Texas Ave. Ste. 1300				1910 N. Big Spring
P.O. Box					
Citv:	Midland Texas, 7	9701			Midland, Texas
Phone number:	(432) 686-3023	·····			(432) 425-3878
	(400) 004 7407				(+02) +20-0070
Fax:	(432) 004-7137		- <u> </u>		
Email	[pellis@conchore	sources.com		a ala da sa a a a	ike.tavarez@tetratecn.com
Ranking Criteria			an the standard stand The standard standard Standard standard stan	and a subject of the	
Depth to Ground	lwater:		Ranking Score		Site Data
<50 ft			20		
50-99 ft			10		
>100 ft.			0		0
					Office Destre
WellHead Protec	NOO ft Drivete 2	00 #			Site Data
Water Source <1	,000 II., PIIVale <2 000 ft Private >2	00 II.	20		0
Water Oburce >1	,000 n., 1 mate 22	00 11.			U
Surface Body of	Water:		Ranking Score		Site Data
<200 ft.			20	· · · · · · · · · · · · · · · · · · ·	
200 ft - 1,000 ft.			10		
>1,000 ft.		····	0		0
	tal Ranking Scor	e Accepta	ble Soil RRAL (mg	ī/kg)	BECEIVED
		Benzene	Total BTEX	TPH	I THE ER WE FEST
		10	50	5,000	CD ARIL
nan formen dette som en and	an a	an a	· " - · · ·		NIN



August 22, 2011

Mr. Mike Bratcher Environmental Engineer Specialist Oil Conservation Division, District 2 1301 West Grand Avenue Artesia, New Mexico 88210

Re: Closure Report for the COG Operating LLC., Jenkins B Federal #7, Unit E, Section 20, Township 17 South, Range 30 East, Eddy County, New Mexico.

Mr. Bratcher:

Tetra Tech, Inc. (Tetra Tech) was contacted by COG Operating LLC. (COG) to assess a spill from the Jenkins B Federal #7 located in Unit E, Section 20, Township 17 South, Range 30 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.82282°, W 103.99919°. 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 February 5, 2010, and released approximately one hundred (100) barrels of produced water from a flow line. To alleviate the problem, COG personnel replaced the flow line. Eighty (80) barrels of standing fluids were recovered. The spill originated from a split flow line affecting a 150' by 40' wide (tapering to 20') area that migrated west parallel to the lease road. The initial C-141 form is enclosed in Appendix C.



Groundwater

No water wells were listed within Section 20. According to the NMOCD groundwater map, the average depth to groundwater in this area is greater than 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 March 10, 2010, Tetra Tech personnel inspected and sampled the spill area. A total of three (3) auger holes (AH-1 through AH-3) 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. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The results of the sampling are summarized in Table 1. The auger hole locations are shown on Figure 3.

Referring to Table 1, all the submitted samples were below the RRAL for TPH and BTEX. Elevated chloride concentrations were detected for AH-2 and AH-3 of 10,600 mg/kg (1-1.5') and 10,100 mg/kg (0-.5') respectively.

In order to delineate the impact of the spill, on March 18, 2010, Tetra Tech personnel supervised the installation of three soil borings (SB-1 through SB-3) utilizing an air rotary drilling rig. SB-3 was re-drilled on April 12, 2010 to confirm delineation. Samples were collected for laboratory analysis. All elevated chloride concentrations declined <200 mg/kg.



Remediation Activities and Closure Request

Based on the approved work plan, Tetra Tech personnel supervised the excavation of the site. The excavation measured approximately 40' X 100' tapering to 20', with depths ranging from 3.0' to 10.0' below surface. The proposed depths of the soil remediation for the entire spill met or exceeded the depths of the approved work plan. In the area of SB-2, a 40 mil liner was installed at 4.0' bgs. The excavation depths are highlighted in Table 1 and shown on Figure 4. Once excavated, the site was backfilled with clean material.

Based on the results, COG requests closure of the site. The C-141 (Final) is included in Appendix C. If you have any questions or comments concerning the assessment or the remediation activities performed at the site, please call me at (432) 682-4559.

Respectfully submitted,

TETRA TECH lke Tavatez

Tetra Tech

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

FIGURES





Topo USA® 8







PHOTOGRAPHS

COG Operating LLC Jenkins B Federal #7 Eddy County, New Mexico





View West – SB-2,1



View West - Backfill for liner

COG Operating LLC Jenkins B Federal #7 Eddy County, New Mexico



TETRA TECH



View West - Liner



View South West - Backfill on liner

COG Operating LLC Jenkins B Federal #7 Eddy County, New Mexico



TETRA TECH



View East - Backfill

Site info and picture details

TABLES

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Table 1 COG Operating LLC. Jenkins B Federal #7 EDDY COUNTY, NEW MEXICO

Sample Sample		Sample	Sample I Depth (ft)	Depth	Soi	I Status	TP	PH (mg/k	g)	Benzene	Toluene	Ethlybenzene	Xylene	Chloride
ID	Date	Depth (ft)	(BEB)	In-Situ	Removed	GRO	DRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
AH-1	3/10/2010	0-1'	1'	Х		<1.00	<50.0	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	<200	
		1-1.5'	1'	Х		-	-	-	-	-	-	-	<200	
SB-1	3/18/2010	0-1'	-	Х		<1.00	<50.0	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	<200	
		2'-3'	-	Х		-	-	-	-	-	_	-	<200	
		4'-5'	-	Х		-	-	-	-	-	-	-	1,020	
		6'-7'	-	Х		-	-	-	-	-	-	-	525	
		10'-11'	-	X		-	-	-	-	-	-	-	<200	
		15'-16'	-	Х		-	-	-	-	-	-	-	<200	
		20'-21'	-	Х		-	-	-	-	-	-	-	<200	
		30'-31'	-	X		-	-	-	-	-	-	-	363	

Table 1COG Operating LLC.Jenkins B Federal #7EDDY COUNTY, NEW MEXICO

Sample Sample		Sample	Depth	Soi	I Status	TF	PH (mg/k	(g)	Benzene	Toluene	Ethlybenzene	Xylene	Chloride
ID	Date	Depth (ft)	(BEB)	In-Situ	Removed	GRO	DRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
						·····		· · · · · · · · · · · · · · · · · · ·					
AH-2	3/10/2010	0-1'	1'	X		<1.00	<50.0	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	9,500
		1-1.5'	1'	Х		-	-	-	-	-	-	-	10,600
SB-2	3/18/2010	0-1'			, X	<1.00	<50.0	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	9,860
		2'-3'				-	-	• • •	. * -	-	-	-	12,200
		4'-5'	-		X	-	-	-	-	-	-	· · -	15,400
		6'-7'	-		X	-	-	-	· -	-	-	-	15,800
		10'-11'	-		X		·-	-	-		-		8,570
		15'-16'	-	Х		-	-	-	-	-	-	-	1,210
		20'-21'	-	Х		-	-	-	-	-	-	-	2,030
								-	· · · · · · · · · · · · · · · · · · ·	-			
	4/12/2010	10'	-	Х		-	-	-	-	-	-	-	466
		15'	-	Х		-	-	-	-	-	-	-	<200
		20'	-	X		-	-	-	-	-	-	-	<200
		25'	-	X		-	-	-	-	-	-	-	<200
:		30'	-	X		-	-	-	-	-	-	-	<200
		35'	-	X		-	-	-	-	-	-	-	<200
		40'	-	X		-		-	-	-	-	-	<200

Table 1COG Operating LLC.Jenkins B Federal #7EDDY COUNTY, NEW MEXICO

Sample	Sample Sample		Depth	Soi	I Status	TF	PH (mg/k	(g)	Benzene	Toluene	Ethlybenzene	Xylene	Chloride
ID	Date	Depth (ft)	(BEB)	In-Situ	Removed	GRO	DRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
AH-3	3/10/2010	05'	1.5'	X		<1.00	<50.0	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	10,100
SB-3	3/18/2010	0-1'			X	<1.00	<50.0	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	10,000
		2'-3'		-	X	-		-	-	-		14 <u>1</u>	13,200
		4'-5'	-	X		-	-	-	-	-	-	-	<200
		6'-7'	-	X		-	-	-	-	-	-	-	<200
		10'-11'	-	X		-	-	-	-	-	_	-	<200
		15'-16'	-	Х		-	-	-	-	-	-	-	<200
		20'-21'	-	X		-	-	-	-	-	-	-	<200
		30'-31'	-	X		-	-	-	-	-	-		<200

BEB Below Excavation Bottom

(--) Not Analyzed

Excavated material

40 mil liner

APPENDIX A

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MECEIVED FEB 1 2 2010

.

<u>District I</u> 1625 N. French <u>District II</u>	Dr., Hobbs, 1	NM 88240		È Sta Energy Mi	ate of I nerals a	New Mexi and Natura	co Resources			Re	wised O	Form C-141 tober 10, 2003
130) W. Grand J <u>District III</u> 1000 R to Brazos <u>District IV</u> 1220 S. St. Fran	District IN Oil Conse 000 Rio Brazos Road, Aztec, NM 87410 1220 Sout District IV 1220 Sout 220 S St. Francis Dr., Santa Fc, NM 87505 Santa F					rvation Division lh St. Fráncis Dr. Fe. NM 87505				Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form		
			Rele	ease Notific	cation	and Co	orrective A	ction				
MUBINDA	731009					OPERAT	FOR		🛛 Initia	al Report		Final Rep
Name of Co	unpany	COG	Operating	, LLC 22913	7 0	Contact	Pat Elli	s				
Address Facility Nar	<u>550 W</u>	. Texas, Suit	e 100 Mi s B Fede	dland TX, 7970 ral #7		Felephone N Facility Typ	<u>Vo. 432-230-0</u> vc. Well	077				
Surface Out		- Jonkin			!'	acinty typ					20.01	5 20451
Surface Ow	ner i	rederal		Mineral C	Jwner				Lease r	NO. (AP1#) 30-01	3-29431
1 but Lattar	Castron	Tuanshin	[Danga	LOCA	ATION	V OF REI	LEASE	Cost/1	Vart Line	County		
E	20	17S	30E	1650	Norun	ORTH	1090	V	VEST Line	County	EDD	Y
				Latitude 32.8	322824	Longit	ude 103.999198					
				NAT	URE	OF REL	EASE					
Type of Rele Source of Re	ase 1 lease	Produced Wat Flowline	er	<u> </u>		Volume of Date and F	Release 100bb	e	Volume Date and	Recovered	80bbl	
						02/05/2010) 1:00 p.m.		02/05/20	10 2.00 p.	m.	
Was Immedi	ate Notice (Given?	Yes [] No 🗌 Not R	equired	If YES, To	Whom?	Jim A Mike	unos – Bl Bratcher -	M OCD		
By Whom?	By Whom? Josh Russo					Date and Hour 02/05/2010 2:30 p m.						
Was a Water	course Rea	ched?	Yes 🛙] No		If YES. Vo	olume Impacting t	he Wat	ercourse.			
16			<u> </u>					·			1	1
in a watercou	irse was mi	ipacted, Deser	ibe runy.						DE	CEN	JEL	
Describe Cau	ise of Probl	lem and Reme	dial Actio	n Taken.*					1 4.80	-0 2.7	2011	
There was a	split in the	flowtine. The	flowline	has been repaired.				,		SEP	ART	ESIA
Describe Are	a Affected	and Cleanup	Action Tal	ken.*					N	MOCO		
Produced wa hy a vacuum removing any 990 FSL 99 and we will p	ter was rele truck. One y saturated 90 FWL 3 present a rel	eased into the e-call protocol soils prior to s 2 81558379 : mediation wo	area imme will be m soil sampli 103 99955 rk plan to	ediately next to the àde by dirt contra ing by Tetra Tech 5142) Tetra Tech the NMOCD/BLN	e split flo actor who (The cl a will san M for you	owline. A tot o will then wi losest well to nple the spill ar approval p	al of 100bbls of f iit for archeologic the leak is the M site area to deline rior to any signifi	luid wa al/wild CINTY ate any cant rer	s released. ife sensitiv RE DK FE possible conciliation.	80bbls of fi ity clearanc DERAL #8 ontaminatio	uid was e from M-20-1 n from	s recovered BLM before 7S-30E the release
I hereby certa regulations a public health should their or the enviro federal, state	ify that the ll operators or the envi- operations l nment. In a , or local la	information g are required to pronment. The have failed to addition. NMC ws and/or reg	iven above to report a c acceptan adequately OCD accept ulations.	c is true and comp nd/or file certain cc of a C-141 rep y investigate and i plance of a C-141	olete to the release mort ort by the remediate report de	ne best of my otifications a e NMOCD m e contaminat oes not reliev	knowledge and u nd perform correc arked as "Final R ion that pose a thu e the operator of	indersta ctive act cport" (eat to g respons	nd that pur ions for re- loes not re- round wate ibility for c	suant to NM leases which ieve the ope r, surface w compliance	10CD r 1 may e erator o vater, hu with an	ules and ndanger f liability man health y other
		1	\square	·			<u>OIL CON</u>	SER1	ATION	DIVISI	<u>on</u>	
Signature	/		·(-	<u></u>		Approved b	igned Burger	1/4	Bran	un_		
Printed Nam	e:	Josh R	usso			Approval Da			Evpiration	Date:		
E-mail Addr	ess: jr	usso@conche	presources	.com		Conditions o	f Approval:	<u>, 10 [</u>	expiration	Attract	1 127	<u></u>
	2/2010		Dhar	123 212 220						Attached	. /	
1 60 61 (1271)	2/2010		Phone	452-212-239						1		

State of New Mexico Energy Minerals and Natural Resources

Form C-141 Revised October 10, 2003

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

				Sa	inta Fe	e, NM 875	05					
			Rele	ease Notific	atior	n and Co	orrective A	ction				
						OPERA	ГOR	🗍 Initia	al Report	\boxtimes	Final Report	
Name of Co	mpany (COG Opera	ting LLC	1 /		Contact Pat Ellis						
Address 55	0 W. Texa	as, Suite 13(00 Midla	nd, Texas 7970	1 '	Telephone 1	No. (432) 230-0	077				
Facility Na	ne Jenki i	ns B Federa	1 #7			Facility Typ	e Well					
Surface Ow	ner: Feder	al		Mineral C)wner	· · · · · · · · · · · · · · · · · · ·		Lease N	lo. (API#)	30-015	-29451	
				LOCA	TIO	N OF REI	FASE					
Unit Letter	Section	Township	Range	Feet from the	North	South Line	Feet from the	East/West Line	County			
E	20	175	30E	1650	N	ORTH	1090	WEST		EDDY	7	
L	1	I	τ.	4444 do N 20 00	00040	T	- W 102 00010		L			
			Li	NAT	URE	OF REL	e W 103.99918 E ASE	98-				
Type of Rele	ase: Produc	ed Water			01110	Volume of	Release 100 bbls	S Volume F	Recovered 8	30 bbls		
Source of Re	lease: Flow	line				Date and H	lour of Occurrenc	e Date and	Hour of Dis	covery		
Was Immedi	te Notice (Siven?				02/05/2010) 1:00p.m.	02/05/201	0 2:00p.n	n		
was minicul			Yes 🗌	No 🗌 Not Re	equired	11 125, 10	whom:	Jim Amos—BL!	M			
By Whom? I	By Whom? Josh Russo						Jour 02/05/2010	Mike BratcherO	CD			
Was a Water	Was a Watercourse Reached?					If YES, Vo	lume Impacting t	he Watercourse.				
			Yes 🛛	No		N/A						
If a Watercou	irse was Im	pacted, Descr	ibe Fully.*	:			//			-1	, <u>, , , , , , , , , , , , , , , , , , </u>	
N/A									ENE	D'		
								TRE(JEIN	- 11	\	
Describe Cau	se of Probl	em and Reme	dial Action	n Taken.*					P 2 2 - 2	011	<u> </u>	
		~ ~	a					/ 5	- AF	TES	A	
There was a s	split in the f	lowline. The	e flowline i	has been repaired) ALAN	OCD M			
						······	······································	LINE.				
Describe Are	a Affected	and Cleanup A	Action Tak	ten.*								
Tetra Tech in	spected site	e and collected	i samples	to define spills ex	tent. Soi	I that exceed	ed RRAL was rem	noved and hauled a	way for pro	per disp	osal. Site	
was then brow	ight up to s	urface grade v	with clean	backfill material.	Tetra Te	ech prepared	closure report and	submitted to NM	OCD for rev	iew.		
I hereby certi	fy that the i	nformation gi	ven above	is true and comp	lete to th	e best of my	knowledge and u	nderstand that purs	uant to NM	OCD ru	les and	
regulations a	l operators	are required t	o report an	d/or file certain r	elease no	otifications a	nd perform correct	tive actions for rele	eases which	may en	danger	
should their of	or the environment	ave failed to a	acceptance	investigate and r	emediate	e contaminati	on that pose a three	eport does not reli	eve the oper	rator or ater, hun	nan health	
or the environ	iment. In a	ddition, NMC	OCD accep	tance of a C-141	report do	oes not reliev	e the operator of r	esponsibility for co	ompliance w	vith any	other	
federal, state,	or local lav	ws and/or regu	ilations.						DUUGIC		·····	
	/ N	1,1	/				UIL CONS	BERVATION	DIVISIC	JIN		
Signature: /	14		\mathcal{D}									
Printed Name	: Ike Tavar	ez Alge	at H	- COG		Approved by	District Supervise	or:				
Title Desis	Margar	J						Translation of the				
nue: Project	wanager		<u>.</u>			Approval Dat	e:	Expiration I	Jate:			
E-mail Addre	ss: Ike.Tav	arez@TetraTe	ech.com		(Conditions of	Approval:		Attached	П		
Date: 8-	22-1	7	Phone:	(432) 682-4559								

* Attach Additional Sheets If Necessary

APPENDIX B

.

Water Well Data Average Depth to Groundwater (ft) COG - Jenkins B Federal #7 Eddy County, New Mexico

	16 :	South		1	
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19 110	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

	17 Sc	outh				
6	5	4	3		2	1
7	8	9	10		11	12
18	17	16	15		14	13
19	20	21	22	80	23	24
30	29 210 208'	28	27		26	25
31	32	33	34		35	36

	16 :	South	;	30 East	t
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	26	25
31	32	33	34	35	36

	17 Sc	outh	30	East	
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20 SITE	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

	16	South		31 East	ł
6	5	4	3	2	1
7	8	9	10	11	12 288
18	17	16	15	14	13 113
19	20	21	22	23	24
30	29	28	27	26	25
31 290	32	33	34	35	36

	17 Sc	outh	31		
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	26	25
31	32	33	34 271	35	36

	18	South		29 East	t
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	26	25
31	32	33	34	35	36

	18 So	outh	30	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	26	25
31	32	33	34	35	36

-			_		
	18 S	outh		31 East	
6	5	4	3	2	1
7	8	9	10	11	12 400
18	17	16	15	14 317	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35 261	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

New Mexico Water and Infrastructure Data System

APPENDIX C

`

Summary Report

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

Report Date: March 22, 2010

Work Order: 10031509

Project Location:Eddy County, NMProject Name:COG/Jenkins B Federal #7Project Number:114-6400435

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
225641	AH-1 0-1' 1' BEB	soil	2010-03-10	00:00	2010-03-12
225642	AH-1 1-1.5' 1' BEB	soil	2010-03-10	00:00	2010-03-12
225643	AH-2 0-1' 1' BEB	soil	2010-03-10	00:00	2010-03-12
225644	AH-2 1-1.5' 1' BEB	soil	2010-03-10	00:00	2010-03-12
225645	AH-3 05' 1.5' BEB	soil	2010-03-10	00:00	2010-03-12

]	BTEX	TPH DRO - NEW	TPH GRO	
	Benzene	Benzene Toluene Ethylbenzene Xylene				GRO
Sample - Field Code	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
225641 - AH-1 0-1' 1' BEB	< 0.0100	< 0.0100	< 0.0100	< 0.0100	<50.0	<1.00
225643 - AH-2 0-1' 1' BEB	< 0.0100	< 0.0100	< 0.0100	< 0.0100	<50.0	<1.00
225645 - AH-3 05' 1.5' BEB	< 0.0100	< 0.0100	< 0.0100	< 0.0100	<50.0	<1.00

Sample: 225641 - AH-1 0-1' 1' BEB

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

Sample: 225642 - AH-1 1-1.5' 1' BEB

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

Sample: 225643 - AH-2 0-1' 1' BEB

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Report Date: March 22, 2010		Work Order: 10031509	Page	Page Number: 2 of 2		
Param	Flag	Result	Units	RL		
Chloride	· · · · · · · · · · · · · · · · · · ·	9500	mg/Kg	4.00		
Param	Flag	Result	Units	RL		
Chloride	······	10600	mg/Kg	4.00		
Sample: 225645	- AH-3 05' 1.5' BEE	3				

Param	Flag	Result	Units	RL
Chloride		10100	mg/Kg	4.00

~

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WBENC: 237019

HUB: 1752439743100-86536 NCTRCA WFWB38444Y0909

Certifications

DBE: VN 20657

NELAP Certifications

Lubbock: T104704219-08-TX LELAP-02003 Kansas E-10317

T104704221-08-TX El Paso: 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: March 22, 2010

Work Order: 10031509

Project Location: Eddy County, NM Project Name: COG/Jenkins B Federal #7 **Project Number:** 114-6400435

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
225641	AH-1 0-1' 1' BEB	soil	2010-03-10	00:00	2010-03-12
225642	AH-1 1-1.5' 1' BEB	soil	2010-03-10	00:00	2010-03-12
225643	AH-2 0-1' 1' BEB	soil	2010-03-10	00:00	2010-03-12
225644	AH-2 1-1.5' 1' BEB	soil	2010-03-10	00:00	2010-03-12
225645	AH-3 05' 1.5' BEB	soil	2010-03-10	00:00	2010-03-12

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

TraceAnalysis, Inc.

Michael april

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

Standard Flags

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

Case Narrative

Samples for project COG/Jenkins B Federal #7 were received by TraceAnalysis, Inc. on 2010-03-12 and assigned to work order 10031509. Samples for work order 10031509 were received intact at a temperature of 6.0 C.

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

		Prep	Prep	\mathbf{QC}	Analysis
Test	Method	Batch	Date	Batch	Date
BTEX	S 8021B	58507	2010-03-17 at 11:00	68370	2010-03-17 at 13:22
Chloride (Titration)	SM 4500-Cl B	58451	2010-03-16 at 12:46	68375	2010-03-18 at 15:19
TPH DRO - NEW	Mod. 8015B	58454	2010-03-16 at 15:15	68314	2010-03-16 at 15:15
TPH DRO - NEW	Mod. 8015B	58487	2010-03-17 at 14:37	68350	2010-03-17 at 14:37
TPH GRO	S 8015B	58507	2010-03-17 at 11:00	68371	2010-03-17 at 13:51

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 10031509 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: 225641 - AH-1 0-1' 1' BEB

Laboratory:	Midland									
Analysis:	BTEX			Analytical	Method:	S 8021B		Prep Me	ethod:	S 5035
QC Batch:	68370			Date Anal	yzed:	2010-03-17		Analyze	d By:	\mathbf{AG}
Prep Batch:	58507			Sample Pr	eparation:	2010-03-17		Prepare	d By:	AG
				RI						
Parameter		Flag		Resul	t	Units		Dilution		RL
Benzene				< 0.010	0	mg/Kg		1		0.0100
Toluene				< 0.010	0	mg/Kg		1		0.0100
Ethylbenzene	1			< 0.010	C	mg/Kg		1		0.0100
Xylene				< 0.010	0	mg/Kg		1		0.0100
							Spike	Percent	Re	ecovery
Surrogate			Flag	Result	Units	Dilution	Amount	Recovery	L	imits
Trifluorotolue	ene (TFT)			1.87	mg/Kg	1	2.00	94	60.4	1 - 141.2
4-Bromofluor	obenzene (4-B	FB)		2.04	mg/Kg	1	2.00	102	43.1	- 158.4

Sample: 225641 - AH-1 0-1' 1' BEB

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 68375 58451	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2010-03-18 2010-03-16	Prep Method: Analyzed By: Prepared By:	N/A AR AR
Paramotor	Flag	RL Bosult	Unite	Dilution	RI.
Chloride	Гад	<200	mg/Kg	50	4.00

Sample: 225641 - AH-1 0-1' 1' BEB

DRO	Гад	<50.0	mg/Kg	1	50.0
Parameter	Flag	RL Besult	Units	Dilution	ΒŢ.
Prep Batch:	58454	Sample Preparation	n: 2010-03-16	Prepared By:	kg
Laboratory: Analysis: QC Batch:	Midland TPH DRO - NEW 68314	Analytical Method: Date Analyzed:	Mod. 8015B 2010-03-16	Prep Method: Analyzed By:	N/A kg

Report Date: March 22, 2010 114-6400435			Work Order: 10031509 COG/Jenkins B Federal #7				Page Number: 5 of 16 Eddy County, NM		
Surrogate	Flag	Result	Units	Dilu	tion	Spike Amount	Percent Recovery	Recovery Limits	
n-Tricosane		87.0	mg/Kg		1	100	87	70 - 130	
Sample: 22	5641 - AH-1 0-	1' 1' BEB							
Laboratory:	Midland								
Analysis:	TPH GRO		Analytica	l Method:	S 8015B		Prep Me	thod: S 5035	
QC Batch:	68371		Date Ana	lyzed:	2010-03-17	,	Analyzed	l By: AG	
Prep Batch:	58507		Sample P	reparation:	2010-03-17		Preparec	l By: AG	
			RL						
Parameter	Fla	g	Result		Units		Dilution	RL	
GRO			<1.00	······	mg/Kg		1	1.00	
						Spike	Percent	Recovery	
Surrogate		Flag	Result	Units	Dilution	Amount	Recovery	Limits	
Trifluorotolu	ene (TFT)		2.80	mg/Kg	1	2.00	140	65.3 - 155	
4-Bromofluor	obenzene (4-BFI	3)	2.57	mg/Kg	1	2.00	128	61.7 - 131.1	

Sample: 225642 - AH-1 1-1.5' 1' BEB

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 68375 58451	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2010-03-18 2010-03-16	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: 225643 - AH-2 0-1' 1' BEB

Laboratory: Analysis: QC Batch: Prep Batch:	Midland BTEX 68370 58507		Analytical Method: Date Analyzed: Sample Preparation:	S 8021B 2010-03-17 2010-03-17	Prep Method: Analyzed By: Prepared By:	S 5035 AG AG
			RL			
Parameter		Flag	\mathbf{Result}	Units	Dilution	RL
Benzene			< 0.0100	mg/Kg	.1	0.0100
Toluene			< 0.0100	mg/Kg	1	0.0100
Ethylbenzene	;		< 0.0100	mg/Kg	1	0.0100
Xylene			<0.0100	mg/Kg	1	0.0100

Report Date: March 22, 2010 114-6400435			Work Order: 10031509 COG/Jenkins B Federal #7				Page Number: 6 of 16 Eddy County, NM		
Surrogate		Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Reco Lir	overy nits
Trifluorotolu	ene (TFT)		1.84	mg/Kg	1	2.00	92	60.4 -	-141.2
4-Bromofluor	robenzene (4-BFB)		1.98	mg/Kg	1	2.00	99	43.1 -	158.4
Laboratory:	Midland								
Analysis:	Chloride (Titration)		Analy	ytical Method:	SM 4500	0-Cl B	Prep	Method:	N/A
QC Batch:	68375		Date	Analyzed:	2010-03-	-18	Analy	zed By:	\mathbf{AR}
Prep Batch:	58451		Samp	ole Preparation	: 2010-03-	-16	Prepa	red By:	AR
			RL						
Parameter	Flag		\mathbf{Result}		Units		Dilution		\mathbf{RL}

9500

mg/Kg

100

4.00

Sample: 225643 - AH-2 0-1' 1' BEB

Chloride

Laboratory: Midland Analysis: TPH DRO - NE QC Batch: 68350 Prep Batch: 58487		IEW	Analytical Method: M Date Analyzed: 2 Sample Preparation: 2		Mod. 8015B 2010-03-17 2010-03-17	Prep M Analyz Prepar	fethod: N/A ed By: kg ed By: kg
			RL				
Parameter	F	lag	Result	Result		Dilution	RL
DRO			<50.0	n	ng/Kg	1	50.0
					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
n-Tricosane		91.6	mg/Kg	1	100	92	70 - 130

Sample: 225643 - AH-2 0-1' 1' BEB

Laboratory: Analysis: QC Batch: Prep Batch:	Midland TPH GRO 68371 58507	Analytical Method: Date Analyzed: Sample Preparation:	S 8015B 2010-03-17 2010-03-17	Prep Method: Analyzed By: Prepared By:	S 5035 AG AG
		RL			
Parameter	Flag	Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

.

Report Date: March 22, 2010 114-6400435	Work Order: 10031509 COG/Jenkins B Federal #7					Page N Edd	umber: 7 of 16 ly County, NM
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB)		$2.75 \\ 2.51$	mg/Kg mg/Kg	1 1	2.00 2.00	138 126	65.3 - 155 61.7 - 131.1

Sample: 225644 - AH-2 1-1.5' 1' BEB

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 68375 58451	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2010-03-18 2010-03-16	Prep Method: Analyzed By: Prepared By:	N/A AR AR
		RL			
Parameter	Flag	Result	Units	Dilution	RL
Chloride		10600	mg/Kg	100	4.00

Sample: 225645 - AH-3 0-.5' 1.5' BEB

Laboratory: Analysis: QC Batch: Prep Batch:	Midland BTEX 68370 58507		Analytical Date Analy Sample Pr	Method: yzed: eparation:	S 8021B 2010-03-17 2010-03-17	Prep Method Analyzed By Prepared By:		ethod: d By: d By:	S 5035 AG AG
			RI	-					
Parameter	Flag		Resul	t	Units		Dilution		\mathbf{RL}
Benzene			< 0.010	0	mg/Kg		1		0.0100
Toluene			< 0.010	0	mg/Kg		1		0.0100
Ethylbenzene			< 0.010	0	mg/Kg		1		0.0100
Xylene			< 0.010	00	mg/Kg		1		0.0100
						Spike	Percent	Re	covery
Surrogate		Flag	Result	Units	Dilution	Amount	Recovery	L	imits
Trifluorotolue	me (TFT)		1.33	mg/Kg	1	2.00	66	60.4	- 141.2
4-Bromofluor	obenzene (4-BFB)		1.45	mg/Kg	1	2.00	72	43.1	- 158.4

Sample: 225645 - AH-3 0-.5' 1.5' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68375	Date Analyzed:	2010-03-18	Analyzed By:	AR
Prep Batch:	58451	Sample Preparation:	2010-03-16	Prepared By:	AR

Report Date: 114-6400435	March 22, 20	10	Wor COG/.	k Order: 100315 Jenkins B Federa	Page Number: 8 of 16 Eddy County, NM		
Parameter	Flag		RL Result	Un	its	Dilution	RL
Chloride			10100	mg/	100	4.00	
Sample: 22	5645 - AH-3 (05' 1.5' BEI	3				
Laboratory:	Midland						
Analysis:	TPH DRO - N	NEW	Analytic	al Method: Method: Method	od. 8015B	Prep M	Iethod: N/A
QC Batch:	68314		Date An	alyzed: 20	10-03-16	Analyz	ed By: kg
Prep Batch: 58454			Sample 1	Preparation: 20	Prepared By: kg		
			\mathbf{RL}				
Parameter	\mathbf{F}	lag	Result	Un	its	Dilution	RL
DRO		····	<50.0	mg/I	Kg	1	50.0
					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
n-Tricosane 83.3			mg/Kg	1	100	83	70 - 130

Sample: 225645 - AH-3 0-.5' 1.5' BEB

Laboratory:	Midland									
Analysis:	s: TPH GRO		Analytica	l Method:	S 8015B		Prep Me	thod: S 5035		
QC Batch:	ı: 68371		Date Ana	lyzed:	2010-03-17		Analyze	d By: AG		
Prep Batch:	Batch: 58507		Sample P	reparation:	2010-03-17		Prepareo	l By: AG		
			RL							
Parameter	I	lag	Result		Units		Dilution	RL		
GRO			<1.00		mg/Kg		1	1.00		
						Spike	Percent	Recovery		
Surrogate		Flag	Result	Units	Dilution	Amount	Recovery	Limits		
Trifluorotoluo	ene (TFT)		2.00	mg/Kg	1	2.00	100	65.3 - 155		
4-Bromofluor	obenzene (4-B	FB)	1.86	mg/Kg	1	2.00	93	61.7 - 131.1		
Method Bla	ank (1) 🦷 Ç	C Batch: 68314								
QC Batch:	68314		Date An	alyzed: 2	010-03-16		Anal	yzed By: kg		
Prep Batch: 58454		QC Preparation: 2010-03-16				Prepared By: 1				
				MDL						
Parameter		Flag		Result		Uni	nits			
DRO				< 5.86		mg/Kg				

Report Date: 114-6400435	V CO	Vork Orde G/Jenkin	er: 10031509 s B Federal #	7	Page Number: 9 of 16 Eddy County, NM						
Surrogate	Flag	Result	Units	D	ilution	Spike Amount	Percent Recovery	Recovery Limits			
n-Tricosane		71.9	mg/Kg		1	100	72	70 - 130			
Method Blar	nk (1)	QC Batch: 68350									
QC Batch: 68350 Prep Batch: 58487			Date An QC Prep	alyzed: paration:	2010-03-17 2010-03-17		Analyzed By: kg Prepared By: kg				
Devenator		Floor		ME)L	T I.	ÐI				
DRO		riag		<5.8	/Kg	50					
Surrogate	Surrogate Flag Besul		Units Dilution		Spike Percent Amount Recovery		Recovery Limits				
n-Tricosane		77.7	mg/Kg		1	100	78	70 - 130			
Prep Batch:	58507		QC Prep	aration: N	2010-03-17 ADL		Prepa	ared By: AG			
Parameter	n	Flag		Re	esult	U	RL				
Toluene				<0.0	0410	me	0.01				
Ethylbenzene				<0.0	0240	mg	0.01				
Xylene		·····		<0.0	0650	mg	ç/Kg	0.01			
Surrogate		Flag	Result	Units	Dilution	Spike Amount	Percent Recoverv	Recovery Limits			
Trifluorotoluen	e (TFT)	<u>v</u>	1.79	mg/Kg	1	2.00	90	64.9 - 142.7			
4-Bromofluoro	benzene (4-E	BFB)	1.74	mg/Kg	1	2.00	87	43.9 - 141.9			
	1 (1)										
Method Blar	ik (1) (QU Batch: 68371									
QC Batch: 6 Prep Batch: 8	58371 58507		Date Ana QC Prepa	lyzed: aration:	2010-03-17 2010-03-17		Analy Prepa	Analyzed By: kg Prepared By: kg RL 50 t Recovery y Limits 70 - 130 t Recovery y Limits 70 - 130 t Recovery AG Prepared By: AG Prepared By: AG RL 0.01 0.			
				MD	L						
Parameter		Flag		Resu	lt	Ur	lits	RL			
GRO				< 0.39	1 6	mg	mg/Kg 1				

Report Date: March 22, 201 114-6400435	0	COC	Vork Ord G/Jenkin	er: 10031 Is B Feder	509 ral #7		Page N Ee	Page Number: 10 of 16 Eddy County, NM			
Surrogate	Flag	Result	Unit	s D	ilution	Spike Amount	Percent Recovery	Re / L	covery Jimits		
Trifluorotoluene (TFT)		2.67	mg/H	٢g	1	2.00	134	66.	2 - 145		
<u>4-Bromofluorobenzene (4-BF</u>	В)	2.22	mg/ł	Kg	1	2.00	111	62	- 120.5		
Method Blank (1) QC	C Batch: 68375										
QC Batch: 68375 Prep Batch: 58451		Date An QC Prep	alyzed: paration:	2010-03 2010-03	-18 -16		Ana Preț	lyzed By: bared By:	AR AR		
D	~		M	DL		~~ .					
Parameter	Flag		Res	ult		Unit	35		RL		
Chloride			<2	.18		mg/ł	٢g		4		
Laboratory Control Spike	e (LCS-1)										
QC Batch: 68314		Date An	alyzed:	2010-03	3-16		Ana	Analyzed By: kg			
Prep Batch: 58454		QC Prei	paration:	2010-03	3-16		Pre	pared By	r: kg		
Daman	LC	S	f	Dil	Spike	Matriz	x	R	ec.		
DRO	Kes	$\frac{\text{unt}}{0}$ m	nits	<u>1</u>	Amount	Kesun	$\frac{1}{100}$	57 A	$\frac{\text{mit}}{192.4}$		
Percent recovery is based on	the spike result	BPD is h	ased on a	the spike	and spike d	unlicate re	90 	01.4	- 155.4		
	I COD	101 10 10 0	abou on	G. I.	M.	upneate re	D		DDD		
Param	LCSD	Unito	Dil	Spike	Matrix	Poo	Rec.	חסס	RPD Limit		
DRO	221	mg/Kg	<u>1</u>	250	< 5.86	88 5	74-1334	<u> </u>	20		
Percent recovery is based on	the spike result.	RPD is b	ased on	the spike	and spike d	uplicate re	esult.		20		
LC	S LCSD				Spike	LCS	LCST)	Rec		
Surrogate Res	ult Result	. Un	its	Dil.	Amount	Rec.	Rec.]	Limit		
n-Tricosane 10	08 100	mg	/Kg	1	100	108	100	7() - 130		
Laboratory Control Spike	e (LCS-1)										
QC Batch: 68350 Prep Batch: 58487		Date An QC Prep	alyzed: paration:	2010-03 2010-03	1-17 1-17		Ana Prej	lyzed By pared By	: kg : kg		
	LC	S			Spike	Matrix	ζ.	R	ec.		
n	Deer	ilt II	nits	Dil.	Amount	Result	Rec.	Liı	mit		
Param	nesi	<u> </u>									
DRO	180	5 mg	g/Kg	1	250	< 5.86	74	57.4 -	133.4		

•

Report Date: 114-6400435	March 22, 2010		CC	Work C)G/Jen	order: 1003 kins B Fed	81509 eral #7		Page Number: 11 o Eddy County,					
Param DRO		LCSD Result 207	Units mg/Kg		Spike Amoun 250	$\frac{Mat}{t Res}$	rix ult .86	Rec.	ا L 57.4	Rec. Jimit - 133.4	RPD 11	RPD Limit 20	
Percent recove	erv is based on the s	pike result.	RPD is	based o	on the spik	e and sr	oike di	uplicat	te resu	lt.			
Surrogate n-Tricosane	LCS te Result ane 81.7		LCSD Result Unit 91.6 mg/K		Dil.	Spike Amount 100		LCS Rec. 82		LCSD Rec. 92		Rec. Limit 70 - 130	
Laboratory (Control Spike (LC	CS-1)											
QC Batch: 68370 Prep Batch: 58507		Date Analyzed: 2010-03-17 QC Preparation: 2010-03-17							Analyzed By: AG Prepared By: AG				
Param		LCS Resul	t U	Jnits	Dil.	Spike Amount		Matrix Result		Rec.	Rec. Limit		
Benzene		1.87	m	g/Kg	1	1 2.00		< 0.00410		94	75.4 - 115.7		
Toluene	Toluene		$.88 mg/K_{\rm I}$		1	2.00		< 0.00310		94	78.4 - 113.6		
Etnylbenzene Xylene		1.89	m m	g/Kg g/Kg	1	2.00		<0.00240		94 04	10 - 114.2 76 0 112 6		
D				<u>6/18</u>		0.00	:1	<u></u>	0000		10.5	- 110.0	
Percent recove	ery is based on the s	pike result.	RPD IS	based o	on the spik	e and sp	ыке ат	iplicat	e resul	t.			
					Spike	Spike Matrix				Rec.		RPD	
Param		Result	Units	Dil.	Amount	Rest	ult	Rec.	I	imit	RPD	Limit	
Benzene		1.88	mg/Kg	1	2.00	< 0.00)410	94	75.4	- 115.7	0	20	
Toluene		1.88	mg/Kg	1	2.00	< 0.00)310	94	78.4	- 113.6	0	20	
Ethylbenzene		1.87	mg/Kg	1	2.00	<0.00)240	94	76	- 114.2	1	20	
Xylene		5.66	mg/Kg	1	6.00	<0.00	1650	94	76.9	- 113.6	0	20	
Percent recove	ery is based on the sp	pike result.	RPD is	based o	on the spik	e and sp	oike du	ıplicat	e resul	t.			
		LCS	LC	$^{\mathrm{SD}}$			Spil	æ	LCS	LCSD	J	Rec.	
Surrogate		Resul	ult Result		Units	Dil. Amo		ount Rec.		Rec.	. Limit		
Trifluorotolue	ne (TFT)	1.73	1.'	77	mg/Kg	1	1 2.00		86	88	65 -	- 142.9	
4-bromonuoro	benzene (4-DFD)	2.00	2.0	00	mg/Kg		2.0	0	100	102	43.8	- 144.9	
Laboratory (Control Spike (LC	CS-1)											
QC Batch: 68371		Date Analyzed: 2010-03-17							Analy	zed By	: AG		
Prep Batch:	58507		QC Pre	paratio	n: 2010-0	: 2010-03-17				Prepa	red By	: AG	
		LCS	5			Spil	ĸe	Ma	trix		I	Rec.	
Param		Resu	lt 1	Units	Dil.	Amo	unt	Re	sult	Rec.	L	imit	
GRO		18.0) n	ng/Kg	1	20.	0	<0	.396	90	52.5	- 114.3	

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	Report Date: March 22, 2010 114-6400435	Work Order: 10031509 COG/Jenkins B Federal #7							Page N Ed	umber: dy Cou	12 of 16 mty, NM	
Percent recovery is based on the spike result.Spike duplicate result.LCSLCSLCSLCSLCSLCSRec.Rec.LCSLCSRec.Rec.Rec.LimitTiffuorotoluene (IFT)2.452.36mg/Kg12.0012211866.2 - 148.7Laboratory Control Spike (LCS-1)QC Batch:68375Date Analyzed:2010-03-18Analyzed By:ARPrep Batch:58451QC Preparation:2010-03-16Prepared By:ARParamResultUnitsDil.AmountResultRec.LimitChoride98.8mg/Kg1100<2.18985 - 115Percent recovery is based on the spike result.RPDis based on the spike duplicate result.Rec.RepParamResultUnitsDil.AmountRes.RefLimitChoride100mg/Kg1100<2.181020ParamResultUnitsDil.AmountResultRec.RefChoride100mg/Kg1100<2.81085- 115ParamResultUnitsDil.AmountRec.LimitRPDLimitChoride100mg/Kg1100<2.810085- 115120ParamResultUnitsDil.AmountRec.LimitRPDLimitRP	Param GRO	LCSD Result 17.6	Units I mg/Kg	Dil.	Spike Amount 20.0	Ма с Re <0	trix sult	Rec.	52	Rec. Limit 5 - 114.3	RPD 2	RPD Limit 20
LCS LCSDLCSD ResultSpike ResultLCS AmountLCS Rec.LCSD LimitRec. LimitRec. Rec.Limit LimitTriflorotoluce (TFT)2.452.36mg/Kg12.0012211866.2 - 148.74-Bromofluorobenzene (4-BFB)2.302.20mg/Kg12.0011511064.1 - 127.4Laboratory Control Spike (LCS-1)QC Batch:68375Date Analyzed: QC Preparation:2010-03-18Analyzed By: Prepared By: ARParamLCSSpike MatrixMatrix Rec.Rec. LimitParamResultUnitsDil. AmountAmount ResultRec. LimitChloride98.8mg/Kg1100<2.18	Percent recovery is based on the s	pike result. F	RPD is bas	ed on	the spike	e and s	pike d	uplica	te res	ult.		
LCSLCSLCSLCSLCSLCSRec.BurrogateResultUnitsDiltAnountRec.Rec.InitiTrifhorotoluene (TFT)2.452.36mg/Kg12.0012211866.2 - 148.74-Bromofluorobenzene (4-BFB)2.302.20mg/Kg12.0011511064.1 - 127.4Laboratory Control Spike (LCS-1)QC Batch:68375Date Analyzod:2010-03-18Analyzod By:ARPrep Batch:58451QC Preparation:2010-03-16Prepared By:ARParamResultUnitsDil.AmountResultRec.LimitChoride98.8mg/Kg1100<2.18		Inter Conceror 1	01 20 10 Olla				P					
burgateResultres	C	LCS	LCSD	т	T : 4	D:1	Spi	ke	LCS	LCSD		Rec.
	Triffuorotoluono (TET)		2 36		a/Ka	<u>DII.</u> 1	AIII0	unt M	122	<u> </u>	66	$\frac{1487}{2-1487}$
Laboratory Control Spike (LCS-1)QC Batch:68375 Prep Batch:Date Analyzed:2010-03-18 2010-03-16Analyzed By:ARPrep Batch:58451QC Preparation:2010-03-16Prepared By:ARParamLCS ResultSpikeMatrix MatrixRec.LimitChloride98.8mg/Kg1100<2.18	4-Bromofluorobenzene (4-BFB)	2.40	2.30 2.20	m	g/Kg	1	2.0	0	115	110	64.	1 - 127.4
Laboratory Control Spike (LCS-1)QC Batch:68375 QC Preparation:Date Analyzed:2010-03-16Analyzed By:ARPrep Batch:58451QC Preparation:2010-03-16Prepared By:ARParamResultUnitsDil.AmountResultRec.LimitChloride98.8mg/Kg1100<2.18					0/0							
QC Batch:68375 Prep Batch:Date Analyzed: $2010-03-18$ QC Preparation:Analyzed By:AR Prepared By:AR Prepared By:AR Prepared By:AR ARParamCSSpikeMatrixRec.Limit Chloride98.8 mg/Kg 1100 < 2.18 9985 - 115Percent recovery is based on the spike result.RPD is based on the spike and spike duplicate result.RPDLimit Chloride100 mg/Kg 1100 < 2.18 9985 - 115120ParamResultUnitsDil.AmountResultRec.Limit RPDLimit20ParamResultUnitsDil.AmountResultRec.Limit RPD1Chloride100mg/Kg1100 < 2.18 10085 - 115120Percent recovery is based on the spike result.RPD is based on the spike and spike duplicate result.HarixRec.Rec.Rec.MatrixSpikeMatrixQC Preparation:2010-03-16Analyzed By:kgPrepared By:kgNSDQC Preparation:2010-03-16Prepared By:kgParamResultUnitsDil.AmountResultRec.LimitDRO203mg/Kg1250 < 5.86 8135.2 - 167.12ParamResultUnitsDil.AmountResultRec.LimitRPDLimitDRO200mg/Kg <t< td=""><td>Laboratory Control Spike (LC</td><td>CS-1)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Laboratory Control Spike (LC	CS-1)										
Prep Batch:58451QC Preparation:2010-03-16Prepared By:ARParamLCSSpikeMatrixRec.LimitChloride98.8mg/Kg1100<2.18	QC Batch: 68375	1	Date Analy	zed:	2010-0	3-18				Anal	vzed B	v: AR
LCS ParamSpike ResultMatrix UnitsRcc. LimitChloride98.8 mg/Kg 1100<2.18	Prep Batch: 58451	(QC Prepara	ation:	2010-0	3-16				Prep	ared B	y: AR
LCS ParamSpike ResultMatrix Nect.Rec. LimitChloride98.8mg/Kg1100<2.18	-		• •									
ParamResultUnitsDil.AmountResultRec.LimitChloride98.8mg/Kg1100<2.18		LCS	!				Snike		Matr	ix		Bec
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Param	Besul	' lt Un	its	Dil.	А	mount		Resu	lt Red		Limit
Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.ParamLCSDSpike ResultMatrix UnitsRec. DilLimit 	Chloride	98.8	mg	/Kg	1		100		<2.1	8 99		85 - 115
LCSDSpikeMatrixRec.RPDParamResultUnitsDil.AmountResultRec.LimitRPDLimitChloride100mg/Kg1100<2.18	Percent recovery is based on the s	pike result. F	RPD is has	nd on	the spike	e and s	nike d	uplica	te res	ult.		
LCSDSpike NesultMatrix ResultRec.RPD LimitParamResultUnitsDil.AmountResultRec.LimitRPDLimitChloride100mg/Kg1100<2.18	recent recovery is subce on the s	pine result.			one opin		pine a	aprica	00 100			
ParamResultUnitsDil.AmountResultRec.LimitRPDLimitChloride100mg/Kg1100<2.18	2	LCSD	TT T .	D .1	Spike	e l	Matrix	n		Rec.	DDD	RPD
Childle100 ing/kg 1100 (2.18) 100 $63 - 113$ 120Percent recovery is based on the spike result.RPD is based on the spike and spike duplicate result.Matrix Spike (MS-1)Spiked Sample: 225699QC Batch: 68314 Date Analyzed:2010-03-16Analyzed By: kgPrep Batch: 58454 QC Preparation:2010-03-16Prepared By: kgParamResultUnitsDil.AmountResultRec.DRO203mg/Kg1250<5.86	Param	Result	Units	$\frac{DII}{1}$	Amou	nt	Kesult		<u>c.</u>	$\frac{\text{Limit}}{95 + 115}$	$\frac{\text{RPD}}{1}$	Limit
Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.Matrix Spike (MS-1)Spiked Sample: 225699QC Batch:68314Date Analyzed:2010-03-16Analyzed By:kgPrep Batch:58454QC Preparation:2010-03-16Prepared By:kgMatrixResultUnitsDil.AmountResultRec.LimitDRO203mg/Kg1250<5.86		100	mg/Kg	<u> </u>	100		< 2.10		0	00 - 110	1	20
Matrix Spike (MS-1)Spiked Sample: 225699QC Batch: 68314 Date Analyzed: $2010-03-16$ Analyzed By:kgPrep Batch: 58454 QC Preparation: $2010-03-16$ Prepared By:kgParamMSSpikeMatrixRec.LimitDRO203mg/Kg1250 < 5.86 81 $35.2 - 167.1$ Percent recovery is based on the spike result.RPD is based on the spike and spike duplicate result.RPDLimitDRO200mg/Kg1 250 < 5.86 80 $35.2 - 167.1$ 2 Percent recovery is based on the spike result.RPD is based on the spike and spike duplicate result.RPDLimitDRO200mg/Kg1 250 < 5.86 80 $35.2 - 167.1$ 2 20 Percent recovery is based on the spike result.RPD is based on the spike and spike duplicate result.RPDLimitDRO200mg/Kg1 250 < 5.86 80 $35.2 - 167.1$ 2 20 Percent recovery is based on the spike result.RPD is based on the spike and spike duplicate result. 200 mg/Kg 1 250 < 5.86 80 $35.2 - 167.1$ 2 20 Percent recovery is based on the spike result.RPD is based on the spike and spike duplicate result. 200 mg/Kg 1 250 < 5.86 80 $35.2 - 167.1$ 2 2 Percent recovery is based on the spike result.RPD is based on the spike and spike duplicate result. </td <td>Percent recovery is based on the s</td> <td>pike result. F</td> <td>RPD is base</td> <td>ed on</td> <td>the spike</td> <td>e and s</td> <td>pike d</td> <td>uplica</td> <td>te resi</td> <td>ult.</td> <td></td> <td></td>	Percent recovery is based on the s	pike result. F	RPD is base	ed on	the spike	e and s	pike d	uplica	te resi	ult.		
QC Batch: 68314 Prep Batch:Date Analyzed: $2010-03-16$ Analyzed By:kg Prepared By:kgParamMSQC Preparation: $2010-03-16$ MatrixRec.LimitDRO 203 mg/Kg1 250 <5.86 81 $35.2 - 167.1$ Percent recovery is based on the spike result.RPD is based on the spike and spike duplicate result.RPDLimitParamResultUnitsDil.AmountRec.RPDParamResultUnitsDil.AmountRec.RPDParamResultUnitsDil.AmountRec.LimitDRO 200 mg/Kg1 250 <5.86 80 $35.2 - 167.1$ ParamResultUnitsDil.AmountRec.LimitRPDDRO 200 mg/Kg1 250 <5.86 80 $35.2 - 167.1$ 2 ParamResultUnitsDil.AmountRec.LimitRPDLimitDRO 200 mg/Kg1 250 <5.86 80 $35.2 - 167.1$ 2 20 Percent recovery is based on the spike result.RPD is based on the spike and spike duplicate result. $Rec.$ Limit $Rec.$ SurrogateResultResultUnitsDil.AmountRec.Rec.Limitn-Tricosane103105mg/Kg110010310570 - 130	Matrix Spike (MS-1) Spiked	l Sample: 225	5699									
Prep Batch:58454Date Analyzet:2010-03-10Analyzet:Prepared By:kgParamMSQC Preparation:2010-03-16Prepared By:kgDRO203mg/Kg1250<5.86	OC Batch: 68314		Data Analy	rad	2010-0	13-16				۸na	lyzod F	Rv. ka
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Prep Batch: 58454		OC Prepar	ation:	2010-0)3-16				Prei	pared F	ly: kg
$\begin{array}{c c c c c c c c c c c c c c c c c c c $			QC 1 Topar									-J0
MSSpikeMatrixRec.ParamResultUnitsDil.AmountResultRec.LimitDRO203mg/Kg1250<5.86		2.60				G	•1		, .			n
ParamResultOnitsDif.AnnountResultRec.Diff.DRO203mg/Kg1250<5.86	Darom	MS	Tin;f		Dil	Sp	ount	Ma		Dee	1	Rec.
BiteDotImpring1DotConcCitDotTottiPercent recovery is based on the spike result.MSDSpikeMatrixRec.RPDParamResultUnitsDil.AmountResultRec.LimitRPDLimitDRO200mg/Kg1250<5.86	DRO	203	mø/k	.5 (σ	1	2	50		5.86	81	35.2	$\frac{11111}{2} - 167.1$
MSDSpikeMatrixRec.RPDParamResultUnitsDil.AmountResultRec.LimitDRO200mg/Kg1250<5.86	Parcent recovery is based on the s	piko rogult E		-o nd on	the enike		nika d		to roo	,]t		
MSDSpikeMatrixRec.RPDParamResultUnitsDil.AmountResultRec.LimitRPDLimitDRO200mg/Kg1250<5.86	recent recovery is based on the s	pike result. r	ULD IS Dasi	sa on	the spike	e and s	рике и	upnca	le resi	116.		
ParamResultUnitsDil.AmountResultRec.LimitRPDLimitDRO200mg/Kg1250<5.86	_	MSD			Spike	Ma	trix	_		Rec.		RPD
DRO 200 mg/Kg 1 250 <5.86 80 35.2 - 167.1 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. Limit n-Tricosane 103 105 mg/Kg 1 100 103 105 70 - 130	Param	Result	Units I	Dil.	Amount	Re	sult	Rec.		Limit	RPD	Limit
Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.MSMSDSpikeMSMSDRec.SurrogateResultResultUnitsDil.AmountRec.Limitn-Tricosane103105mg/Kg110010310570 - 130	DRO	200 r.	ng/Kg	1	250	<:	0.80	80	35.	2 - 107.1	2	20
MSMSDSpikeMSMSDRec.SurrogateResultResultUnitsDil.AmountRec.Rec.Limitn-Tricosane103105mg/Kg110010310570 - 130	Percent recovery is based on the s	pike result. F	RPD is base	ed on	the spike	e and s	pike d	uplicat	te resi	ılt.		
SurrogateResultResultUnitsDil.AmountRec.Rec.Limitn-Tricosane103105mg/Kg110010310570 - 130	MS	MSD				S	Spike		MS	MSD		Rec.
n-Tricosane 103 105 mg/Kg 1 100 103 105 70 - 130	Surrogate Result	Result	Units	5	Dil.	A	mount		Rec.	Rec.		Limit
	n-Tricosane 103	105	mg/K	g	1		100		103	105		70 - 130

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Matrix Spike (MS-1)	Spiked	Sample: 2	25164									
QC Batch: 68350			Date	Analyze	ed: 2010-	03-17				Ana	lyzed E	By: kg
Prep Batch: 58487			QC I	Preparat	ion: 2010-	03-17				Pre	pared B	y: kg
D.		MS	5	TT •.	ויס	Sp	oike	Ma	atrix	r.		Rec.
Param		Kesu		Units		Am	ount	Ke		Rec.	1	Jimit
		10.) 	mg/ng	1	2	<u></u>	< .	0.00	00	30.2	- 107.1
Percent recovery is based of	on the sp	ike result.	RPD	is based	on the spik	e and s	spike d	uplicat	te resu	ılt.		
		MSD			Spike	Ma	atrix			Rec.		RPD
Param		Result	Units	s Dil.	Amoun	t Re	sult	Rec.	I	Limit	RPD	Limit
DRO		167	mg/K	.g 1	250	<5	5.86	67	35.2	2 - 167.1	2	20
Percent recovery is based of	on the sp	ike result.	RPD	is based	on the spik	e and s	spike d	uplicat	e resu	ılt.		
	MS	MSD				ç	Snike		MS	MSD		Bec
Surrogate H	Result	Result		Units	Dil.	A	mount		Rec.	Rec.		Limit
n-Tricosane	87.1	88.6		mg/Kg	1		100		87	89	!	70 - 130
QC Batch: 68370 Prep Batch: 58507			Date QC P	Analyze reparati	d: 2010-0 on: 2010-0)3-17)3-17				Anal Prep	yzed By ared By	7: AG 7: AG
Prep Batch: 58507			QC P	reparati	on: 2010-0)3-17				Prep	ared By	: AG
		MS				Spił	ĸe	Ma	trix			Rec.
Param		Resu	lt	Units	Dil.	Amou	unt	Res	sult	Rec.	I	imit
Benzene		1.84		mg/Kg	1	2.0	0	<0.0	0410	92	57.7	- 140.7
Toluene		1.87		mg/Kg	1	2.0	0	<0.0	0310	94	53.4	- 146.6
Ethylbenzene		1.89) :	mg/Kg	1	2.00	0	< 0.0	0240	94	62.1	- 141.6
Xylene		5.05		mg/Kg	<u> </u>	6.00	0	<0.0	0650	94	61.2	- 142.7
Percent recovery is based of	on the sp	ike result.	RPD i	is based	on the spik	e and s	pike d	uplicat	e resu	lt.		
		MSD			Spike	Ma	trix			Rec.		RPD
Param		Result	Units	Dil.	Amount	Res	sult	Rec.]	Limit	RPD	Limit
Benzene		1.86	mg/Kg	g 1	2.00	< 0.0	0410	93	57.7	7 - 140.7	1	20
Toluene		1.90	mg/Kg	g 1	2.00	< 0.0	0310	95	53.4	4 - 146.6	2	20
Ethylbenzene		1.92	mg/Kg	gʻ 1	2.00	<0.0	0240	96	62.1	1 - 141.6	2	20
Xylene		5.76	mg/Kg	g 1	6.00	< 0.0	0650	96	61.2	2 - 142.7	2	20
Percent recovery is based of	on the sp	ike result.	RPD i	is based	on the spik	e and s	pike d	uplicat	e resu	lt.		
		MS	. 1	MSD			Sn	ike	MS	MSD	1	Rec.
Surrogate		Resu	lt F	Result	Units	Dil.	Amo	ount	Rec.	Rec.	Ţ	imit
Trifluorotoluene (TFT)	· · · · · · · · · · · · · · · · · · ·	1.47	7	1.40	mg/Kg	1		2	74	70	61.7	- 139.6
4-Bromofluorobenzene (4-I	BFB)	1.62	2	1.56	mg/Kg	1	4	2	81	78	49.6	- 146.7

Report Dat 114-640043 	e: March 22, 2 5	2010	Work Order: 10031509 COG/Jenkins B Federal #7						age Nu Edo	mber: ly Cou	14 of 16 nty, NM
Matrix Sp	ike (MS-1)	Spiked Sample: 2	225701								
QC Batch: Prep Batch:	68371 : 58507		Date A QC Pre	nalyzed: eparation:	2010-03 2010-03	-17 -17			Analy Prepa	zed By red By	v: AG v: AG
		М	S			Spike	Mat	trix			Rec.
Param		Res	ult	Units	Dil.	Amount	Res	ult	Rec.		Limit
GRO		19	.1 1	mg/Kg	1	20.0	<0.	396	96	10	- 198.3
Percent reco	overy is based	on the spike result	. RPD is	based on	the spike	and spike du	plicate	result.			
		MSD			Spike	Matrix		Rec			RPD
Param		Result	Units	Dil.	Amount	Result	Rec.	Lim	it	RPD	Limit
GRO		19.4	mg/Kg	1	20.0	< 0.396	97	10 - 19	98.3	2	20
Percent reco	overy is based	on the spike result	. RPD is	based on	the spike	and spike du	plicate	result.			
		М	S M	ISD		Sp	oike	\mathbf{MS}	MSD		Rec.
Surrogate		Res	ult Ro	esult	Units	Dil. Am	ount	Rec.	Rec.		Limit
Trifluorotol	uene (TFT)	2.0	0 2	.05 r	ng/Kg	1	2	100	102	65	.5 - 143
4-Bromoflue	probenzene (4-	BFB) 2.0	$\frac{1}{2}$.15 r	ng/Kg	1	2	104	108	58	.6 - 140
QC Batch: Prep Batch:	68375 58451	Spiked Sample: 2	Date A QC Pre	nalyzed: paration:	2010-03 2010-03	-18 -16			Analy Prepa	zed By red By	r: AR : AR
Ð		M	IS	TT 1 .	Dil	Spike	M	atrix	ħ		Rec.
Param Chlanida		Re	sult	Units	Dil.	Amount	Re	esult	Rec.		Limit
		12	100	mg/Kg	100	10000	2	080	100		55 - 115
Percent reco	overy is based	on the spike result	. RPD is	based on	the spike	and spike du	plicate	result.			
		MSD			Spike	Matrix		Ree	с.		RPD
Param		Result	Units	Dil.	Amount	t Result	Rec.	Lim	nit	RPD	Limit
Chloride		12800	mg/Ka	g 100	10000	2680	101	85 -	115	1	20
Percent reco	overy is based	on the spike result	. RPD is	based on	the spike	and spike du	plicate	result.			
Standard ((CCV-1)										
QC Batch:	68314		Date A	nalyzed:	2010-03-	16			Anal	yzed B	y: kg
			CCVs	CC	Vs	CCVs		Percen	t		
			True	Foi	ınd	Percent		Recover	.y]	Date
Param	Flag	Units	Conc.	Co	nc.	Recovery		Limits	-	An	alyzed
DRO		mg/Kg	250	24	19	100		80 - 12	0	201	0-03-16

Report Date: 114-6400435	: March 22, 20)10	Wor COG/	ck Order: 1003 Jenkins B Fede	1509 ral #7	Page N Ec	umber: 15 of 16 ldy County, NM
Standard (C	CCV-2)						
QC Batch:	68314		Date Anal	yzed: 2010-03	-16	Ana	alyzed By: kg
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		mg/Kg	250	206	82	80 - 120	2010-03-16
Standard ((CCV-2)						
QC Batch:	68350		Date Anal	yzed: 2010-03	-17	Ana	alyzed By: kg
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		mg/Kg	250	219	88	80 - 120	2010-03-17
			CCVs	CCVs	CCVs	Percent	_
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		mg/Kg	250	204	82	80 - 120	2010-03-17
Standard (C	CCV-1)						
QC Batch:	68370		Date Analy	/zed: 2010-03-	17	Anal	yzed By: AG
			$\rm CCVs$	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		mg/Kg	0.100	0.0911	91	80 - 120	2010-03-17
Toluene		mg/Kg	0.100	0.0920	92	80 - 120	2010-03-17
Ethylbenzene	9	mg/Kg	0.100	0.0913	91	80 - 120	2010-03-17
Xylene	u	mg/Kg	0.300	0.276	92	80 - 120	2010-03-17
Standard (C	CCV-2)						
QC Batch: (68370		Date Analy	/zed: 2010-03-	17	Anal	vzed By: AG

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0925	92	80 - 120	2010-03-17
Toluene		mg/Kg	0.100	0.0919	92	80 - 120	2010-03-17
Ethylbenzen	ne	mg/Kg	0.100	0.0902	90	80 - 120	2010-03-17
Xylene		mg/Kg	0.300	0.272	91	80 - 120	2010-03-17
Standard ((CCV-1)						
QC Batch:	68371		Date Analy	yzed: 2010-03	-17	Anal	yzed By: AG
			CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		mg/Kg	1.00	1.12	112	80 - 120	2010-03-17
Standard ((CCV-2)						
QC Batch:	68371		Date Analy	zed: 2010-03	-17	Anal	yzed By: AG
			CCVs	CCVs Found	CCVs Percent	Percent	Data
Param	Flag	Unite	Conc	Conc	Recovery	Limits	Analyzed
GRO	1 145	mg/Kg	1.00	1.10	110	80 - 120	2010-03-17
Standard ((ICV-1)						
QC Batch:	68375		Date Analy	zed: 2010-03	-18	Anal	yzed By: AR
			ICVs	ICVs	ICVs	Percent	
5	-	TT •.	True	Found	Percent	Recovery	Date
Param	Flag		Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		mg/Kg	100	99.4		89 - 119	2010-03-16
Standard ((CCV-1)						
QC Batch:	68375		Date Analy	/zed: 2010-03-	-18	Anal	yzed By: AR
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Uhloride		mg/Kg	100	101	101	85 - 115	2010-03-18

MPLE CONDITION WHEN RECEIVED	REZINQUISHED BY: (Signature) RELINQUISHED BY: (Signature)	REYNOUSHED BY (Signatury	2		645 4	644	(643)	1042	22641 31 10	ROJECT NO.: 11년 - 6월00년35 LAB I.D. NUMBER DATE TIME	CLIENT NAME: じつム			Analysis F	
PHONE ZIP: RECEIVED BY: (Signature)	Date: ABCEIVED BY: (Signature) Date: RECEIVED BY: (Signature) Time:	Date: <u>3-13-10</u> PECEPENEN, Segmenture)			V VAH-3 0-15 1.5 BEB	AH-2 1'-1.5' 1'BEB	11 AH-2 0-1' 1' BEB	AH-1 1-1.5' 1' BEB	S X AH-1 O-1' 1' BEB	PROJECT NAME: COG/ Jenly's B Federal # 7 Eddy Co, NT MATRIX COMP GRAB SAMPLE IDENTIFICATION	SITE MANAGER: I Ke Tavarez	TETRATECH 1910 N. Big Spring St. Midland, Texas 79705 (432) 682-4559 • Fax (432) 682-3946		Request of Chain of Custo	len #:10031509
TME: TPF JACLAL	Darte:	Date: 31/2/ Time: 15:3							i X	NUMBER OF CONT, FILTERED (Y/N) HCL HNO3 ICE NONE	AINERS PRESERVATIVE			dy Record	
I The Taxarer Rush	SAMPLE SHIPPED BY. (Circle) AJRBILL #: FEDEX ENDEX OTHER: CHAND DELIVERED UPS OTHER: TETRA TECH CONTACT PERSON: Result	10 subjects BY (Print & Initial) 5 Thomas & Franklin TRF Time:					X X			BTEX 80218 TPH 8015 MOD PAH 8270 RCRA Metals Ag TCLP Metals Ag TCLP Volatiles TCLP Semi Volatile RCI GC.MS Vol. 8240/4 GC.MS Semi. Vol. PCB's 8080/608 Pest. 808/608 Chloride Gamma Spec. Alpha Beta (Air) PLM (Asbestos) Major Apjons/Cati	As Ba Co As Ba Co As Ba Co es B260/624 8270/625	IS (Ext. to C35) d Cr Pb Hg Se d Vr Pd Hg Se	Circle or Specify Method No.)	PAGE:	state of the second

Summary Report

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

Report Date: March 26, 2010

Work Order: 10032225

Project Location:Eddy County, NMProject Name:COG/Jenkins B Federal #7Project Number:114-6400435

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
226228	SB-1 0-1' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226229	SB-1 2-3' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226230	SB-1 4-5' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226231	SB-1 6-7' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226232	SB-1 10-11' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226233	SB-1 15-16' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226234	SB-1 20-21' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226235	SB-1 30-31' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226236	SB-2 0-1' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226237	SB-2 2-3' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226238	SB-2 4-5' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226239	SB-2 6-7' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226240	SB-2 10-11' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226241	SB-2 15-16' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226242	SB-2 20-21' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226243	SB-3 0-1' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226244	SB-3 2-3' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226245	SB-3 4-5' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226246	SB-3 6-7' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226247	SB-3 10-11' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226248	SB-3 15-16' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226249	SB-3 20-21' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226250	SB-3 30-31' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22

]	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)
226228 - SB-1 0-1' (6 in. BEB)	< 0.0100	<0.0100	< 0.0100	<0.0100	<50.0	<1.00

continued ...

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]	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)
226236 - SB-2 0-1' (6 in. BEB)	< 0.0100	< 0.0100	< 0.0100	< 0.0100	<50.0	<1.00
226243 - SB-3 0-1' (6 in. BEB)	< 0.0100	< 0.0100	< 0.0100	< 0.0100	<50.0	<1.00

Sample: 226228 - SB-1 0-1' (6 in. BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 226229 - SB-1 2-3' (6 in. BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 226230 - SB-1 4-5' (6 in. BEB)

Param	Flag	Result	Units	RL
Chloride		1020	mg/Kg	4.00

Sample: 226231 - SB-1 6-7' (6 in. BEB)

Param	Flag	Result	Units	RL
Chloride		525	mg/Kg	4.00

Sample: 226232 - SB-1 10-11' (6 in. BEB)

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

Sample: 226233 - SB-1 15-16' (6 in. BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 226234 - SB-1 20-21' (6 in. BEB)

Report Date: March 26, 2010		Work Order: 10032225	Page Number: 3 of 5		
Param	Flag	Result	Units	RL	
Chloride		<200	mg/Kg	4.00	
Sample: 226235	- SB-1 30-31' (6 in. B	EB)			
Param	Flag	Result	Units	RL	
Chloride		363	mg/Kg	4.00	
Sample: 226236	- SB-2 0-1' (6 in. BEI	B)			
Param	Flag	Result	Units	RL	
Chloride		9860	mg/Kg	4.00	
Sample: 226237	- SB-2 2-3' (6 in. BEI	3)			
Param	Flag	Result	Units	RL	
Chloride		12200	mg/Kg	4.00	
G 1 004000					
Sample: 226238	- SB-2 4-5' (6 in. BEI	3)			
Sample: 226238 Param	- SB-2 4-5' (6 in. BEI Flag	3) Result	Units	RL	
Sample: 226238 Param Chloride	- SB-2 4-5' (6 in. BEI Flag	Result 15400	Units mg/Kg	RL 4.00	
Sample: 226238 Param Chloride Sample: 226239	- SB-2 4-5' (6 in. BEI Flag - SB-2 6-7' (6 in. BEI	3) Result 15400 3)	Units mg/Kg	RL 4.00	
Sample: 226238 Param Chloride Sample: 226239 Param	- SB-2 4-5' (6 in. BEI Flag - SB-2 6-7' (6 in. BEI Flag	3) <u>Result</u> 15400 3) Result	Units mg/Kg Units	RL 4.00 RL	
Sample: 226238 Param Chloride Sample: 226239 Param Chloride	- SB-2 4-5' (6 in. BEI Flag - SB-2 6-7' (6 in. BEI Flag	3) Result 15400 3) Result 15800	Units mg/Kg Units mg/Kg	RL 4.00 RL 4.00	
Sample: 226238 Param Chloride Sample: 226239 Param Chloride Sample: 226240	- SB-2 4-5' (6 in. BEI Flag - SB-2 6-7' (6 in. BEI Flag - SB-2 10-11' (6 in. B	EB)	Units mg/Kg Units mg/Kg	RL 4.00 RL 4.00	
Sample: 226238 Param Chloride Sample: 226239 Param Chloride Sample: 226240 Param	- SB-2 4-5' (6 in. BEI Flag - SB-2 6-7' (6 in. BEI Flag - SB-2 10-11' (6 in. B Flag	EB) Result Result 15800 Result	Units mg/Kg Units mg/Kg Units	RL 4.00 RL 4.00	
Sample: 226238 Param Chloride Sample: 226239 Param Chloride Sample: 226240 Param Chloride	- SB-2 4-5' (6 in. BEI Flag - SB-2 6-7' (6 in. BEI Flag - SB-2 10-11' (6 in. B Flag	Result 15400 3) Result 15800 EB) Result 8570	Units mg/Kg Units mg/Kg Units mg/Kg	RL 4.00 RL 4.00 RL 4.00	
Sample: 226238 Param Chloride Sample: 226239 Param Chloride Sample: 226240 Param Chloride Sample: 226241	- SB-2 4-5' (6 in. BEI Flag - SB-2 6-7' (6 in. BEI Flag - SB-2 10-11' (6 in. B Flag - SB-2 15-16' (6 in. B	Result 15400 3) Result 15800 EB) Result 8570	Units mg/Kg Units mg/Kg Units mg/Kg	RL 4.00 RL 4.00 RL 4.00	
Sample: 226238 Param Chloride Sample: 226239 Param Chloride Sample: 226240 Param Chloride Sample: 226241 Param	- SB-2 4-5' (6 in. BEI Flag - SB-2 6-7' (6 in. BEI Flag - SB-2 10-11' (6 in. B Flag - SB-2 15-16' (6 in. B Flag	Result 15400 3) Result 15800 EB) Result 8570 EB) Result	Units mg/Kg Units mg/Kg Units mg/Kg	RL 4.00 RL 4.00 RL 4.00	

Report Date: March 26, 2010

Sample: 226242 - SB-2 20-21' (6 in. BEB)

Param	Flag	Result	Units	RL
Chloride		2030	mg/Kg	4.00

Sample: 226243 - SB-3 0-1' (6 in. BEB)

Param	Flag Re	esult	Units RL
Chloride	10	0000 m	g/Kg 4.00

Sample: 226244 - SB-3 2-3' (6 in. BEB)

Param	Flag	Result	Units	RL
Chloride		13200	mg/Kg	4.00

Sample: 226245 - SB-3 4-5' (6 in. BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 226246 - SB-3 6-7' (6 in. BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 226247 - SB-3 10-11' (6 in. BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 226248 - SB-3 15-16' (6 in. BEB)

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

Sample: 226249 - SB-3 20-21' (6 in. BEB)

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

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Sample: 226250 - SB-3 30-31' (6 in. BEB)

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00



 6701 Aberdeen Avenue, Suite 9
 Lubbock, Texas 79424

 200 East Sunset Road, Suite E
 El Paso, Texas 79922

 5002 Basin Street, Suite A1
 Midland, Texas 79703

 6015 Harris Parkway, Suite 110
 Ft. Worth, Texas 76132

Lubbock, Texas 79424 800 • 378 • 1296 Et Paso, Texas 79922 888 • 588 • 3443 Midland, Texas 79703 t. Worth, Texas 76132 E-Mail; tab@traceanalysis.com
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 432 • 689 • 6301
 FAX 432 • 689 • 6313

 817 • 201 • 5260
 FAX 432 • 689 • 6313

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: March 26, 2010

Work Order: 10032225

Project Location:Eddy County, NMProject Name:COG/Jenkins B Federal #7Project Number:114-6400435

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
226228	SB-1 0-1' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226229	SB-1 2-3' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226230	SB-1 4-5' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226231	SB-1 6-7' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226232	SB-1 10-11' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226233	SB-1 15-16' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226234	SB-1 20-21' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226235	SB-1 30-31' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226236	SB-2 0-1' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226237	SB-2 2-3' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
226238	SB-2 4-5' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226239	SB-2 6-7' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226240	SB-2 10-11' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226241	SB-2 15-16' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226242	SB-2 20-21' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226243	SB-3 0-1' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226244	SB-3 2-3' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226245	SB-3 4-5' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226246	SB-3 6-7' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226247	SB-3 10-11' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226248	SB-3 15-16' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226249	SB-3 20-21' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226250	SB-3 30-31' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22

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

Blain Leg roh ts

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

Standard Flags

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

Case Narrative

Samples for project COG/Jenkins B Federal #7 were received by TraceAnalysis, Inc. on 2010-03-22 and assigned to work order 10032225. Samples for work order 10032225 were received intact at a temperature of 3.4 C.

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

		Prep	Prep	\mathbf{QC}	Analysis
Test	Method	Batch	Date	Batch	Date
BTEX	S 8021B	58601	2010-03-22 at 17:00	68489	2010-03-22 at 17:51
Chloride (Titration)	SM 4500-Cl B	58644	2010-03-24 at 08:56	68622	2010-03-26 at 14:57
Chloride (Titration)	SM 4500-Cl B	58645	2010-03-24 at 08:56	68623	2010-03-26 at 14:58
Chloride (Titration)	SM 4500-Cl B	58646	2010-03-24 at 08:57	68624	2010-03-26 at 14:59
TPH DRO - NEW	Mod. 8015B	58574	2010-03-22 at 10:12	68458	2010-03-22 at 10:12
TPH GRO	S 8015B	58601	2010-03-22 at 17:00	68490	2010-03-22 at 18:19

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 10032225 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: 226228 - SB-1 0-1' (6 in. BEB)

Laboratory: Analysis: QC Batch: Prep Batch:	Midland BTEX 68489 58601			Analytical Date Anal Sample Pr	Method: yzed: eparation:	S 8021B 2010-03-22 2010-03-22		Prep Me Analyze Prepare	ethod: ed By: ed By:	S 5035 AG AG
				RI	L					
Parameter		Flag		Resul	t	Units		Dilution		RL
Benzene				< 0.010	0	mg/Kg		1		0.0100
Toluene				< 0.010	0	mg/Kg		1		0.0100
Ethylbenzenc				< 0.010	0	mg/Kg		1		0.0100
Xylene				< 0.010	0	mg/Kg		1		0.0100
			•				Spike	Percent	Re	ecovery
Surrogate			Flag	Result	Units	Dilution	Amount	Recovery	L	imits
Trifluorotolue	ene (TFT)			1.64	mg/Kg	1	2.00	82	60.4	- 141.2
4-Bromofluor	obenzene (4-BF	FB)		1.65	mg/Kg	1	2.00	82	43.1	- 158.4

Sample: 226228 - SB-1 0-1' (6 in. BEB)

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 68622 58644	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2010-03-26 2010-03-24	Prep Method: Analyzed By: Prepared By:	N/A AR AR
		RL			
Parameter	Flag	Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 226228 - SB-1 0-1' (6 in. BEB)

DRO		<50.0	mg/Kg	1	50.0
Parameter	Flag	RL Result	Units	Dilution	RL
Prep Batch:	58574	Sample Preparatio	n: 2010-03-22	Prepared By:	kg
QC Batch:	68458	Date Analyzed:	2010-03-22	Analyzed By:	$\mathbf{k}\mathbf{g}$
Analysis:	TPH DRO - NEW	Analytical Method	l: Mod. 8015B	Prep Method:	N/A
Laboratory:	Midland				

Report Date: March 26, 2010 114-6400435			COC	/ork Order: G/Jenkins I	10032225 3 Federal #	7	Page Number: 5 of 2 Eddy County, NM		
Surrogate	Flag	Result	Units	Dilu	tion	Spike Amount	Percent Recovery	Recovery Limits	
n-Tricosane		92.7	mg/Kg		1	100	93	70 - 130	
Sample: 22	6228 - SB-1 0-	1' (6 in. BE	B)						
Laboratory:	Midland								
Analysis:	TPH GRO		Analytical	l Method:	S 8015B		Prep Me	thod: S 5035	
QC Batch:	68490		Date Anal	lyzed:	2010-03-2	2	Analyzed	d By: AG	
Prep Batch:	58601		Sample Pr	reparation:	2010-03-2	2	Prepareo	By: AG	
			RL						
Parameter	Fl	ag	Result		Units		Dilution	RL	
GRO			<1.00		mg/Kg		1	1.00	
						Spike	Percent	Recovery	
Surrogate		Flag	Result	Units	Dilution	Amount	Recovery	Limits	
Trifluorotolu	ene (TFT)	······································	2.00	mg/Kg	1	2.00	100	65.3 - 155	
4-Bromofluo	robenzene (4-BF	B)	1.84	mg/Kg	1	2.00	92	61.7 - 131.1	

Sample: 226229 - SB-1 2-3' (6 in. BEB)

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 68622 58644	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2010-03-26 2010-03-24	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: 226230 - SB-1 4-5' (6 in. BEB)

Chloride		1020	mg/Kg	50	4.00
Parameter	Flag	RL Result	Units	Dilution	RL
Prep Batch:	58644	Sample Preparation:	2010-03-24	Prepared By:	AR
QC Batch:	68622	Date Analyzed:	2010-03-26	Analyzed By:	AR
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Laboratory:	Midland				

.

Sample: 226231 - SB-1 6-7' (6 in. BEB)

Chloride		525	mg/Kg	50	4.00
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
		DI			
Prep Batch:	58644	Sample Preparation:	2010-03-24	Prepared By:	AR
QC Batch:	68622	Date Analyzed:	2010-03-26	Analyzed By:	\mathbf{AR}
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Laboratory:	Midland				

Sample: 226232 - SB-1 10-11' (6 in. BEB)

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 68622 58644	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2010-03-26 2010-03-24	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: 226233 - SB-1 15-16' (6 in. BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68622	Date Analyzed:	2010-03-26	Analyzed By:	AR
Prep Batch:	58644	Sample Preparation:	2010-03-24	Prepared By:	AR
		RL			
Parameter	\mathbf{Flag}	Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 226234 - SB-1 20-21' (6 in. BEB)

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 68622 58644	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2010-03-26 2010-03-24	Prep Method: Analyzed By: Prepared By:	N/A AR AR
		RL			
Parameter	Flag	Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Report Date: March 26, 2010	Work Order: 10032225	Page Number: 7 of 22
114-6400435	COG/Jenkins B Federal #7	Eddy County, NM

Sample: 226235 - SB-1 30-31' (6 in. BEB)

Chloride	1 105	363	mg/Kg	50	4.00
Parameter	Flag	RL Besult	Units	Dilution	RL
Prep Batch:	58644	Sample Preparation:	2010-03-24	Prepared By:	\mathbf{AR}
QC Batch:	68622	Date Analyzed:	2010-03-26	Analyzed By:	\mathbf{AR}
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Laboratory:	Midland				

Sample: 226236 - SB-2 0-1' (6 in. BEB)

Laboratory: Analysis: QC Batch: Prep Batch:	Midland BTEX 68489 58601			Analytical Date Anal Sample Pr	Method: yzed: eparation:	S 8021B 2010-03-22 2010-03-22		Prep M Analyze Prepare	ethod: ed By: ed By:	S 5035 AG AG
				RI	J					
Parameter		Flag		Resul	t	Units		Dilution		\mathbf{RL}
Benzene				< 0.010	0	mg/Kg		1		0.0100
Toluene				< 0.010	0	mg/Kg		1		0.0100
Ethylbenzene	1			< 0.010	0	mg/Kg		1		0.0100
Xylene				< 0.010	0	mg/Kg		1		0.0100
							Spike	Percent	Re	covery
Surrogate			Flag	Result	Units	Dilution	Amount	Recovery	\mathbf{L}	imits
Trifluorotolue	ene (TFT)			2.24	mg/Kg	1	2.00	112	60.4	- 141.2
4-Bromofluor	obenzene (4-B	FB)		2.27	mg/Kg	1	2.00	114	43.1	- 158.4

Sample: 226236 - SB-2 0-1' (6 in. BEB)

Chloride		9860	mg/Kg	100	4.00
Parameter	Flag	RL Result	Units	Dilution	RL
Prep Batch:	58644	Sample Preparation:	2010-03-24	Prepared By:	AR
QC Batch:	68622	Date Analyzed:	2010-03-26	Analyzed By:	\mathbf{AR}
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Laboratory:	Midland				

Sample: 226236 - SB-2 0-1' (6 in. BEB)

Laboratory: Analysis: QC Batch: Prep Batch:	Midland TPH DRO - N 68458 58574	IEW	Analytic Date An Sample I	al Method: alyzed: Preparation:	Mod. 8015B 2010-03-22 2010-03-22	Prep M Analyz Prepar	Aethod: N/A zed By: kg red By: kg
Parameter	F	ag	RL Result		Units	Dilution	RL
DRO			<50.0	n	ng/Kg	1	50.0
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		77.6	mg/Kg	1	100	78	70 - 130

Sample: 226236 - SB-2 0-1' (6 in. BEB)

Laboratory: Analysis: QC Batch: Prep Batch:	Midland TPH GRO 68490 58601		Analytical Date Anal Sample Pr	l Method: lyzed: reparation:	S 8015B 2010-03-22 2010-03-22		Prep Me Analyzec Preparec	thod: S 5035 l By: AG l By: AG
			\mathbf{RL}					
Parameter	Flag		Result		Units		Dilution	\mathbf{RL}
GRO	······································		<1.00	······································	mg/Kg		1	1.00
Surrogate		Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotolue	ene (TFT)		2.73	mg/Kg	1	2.00	136	65.3 - 155
4-Bromofluor	obenzene (4-BFB)		2.49	mg/Kg	1	2.00	124	61.7 - 131.1

ł

Sample: 226237 - SB-2 2-3' (6 in. BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68622	Date Analyzed:	2010-03-26	Analyzed By:	AR
Prep Batch:	58644	Sample Preparation:	2010-03-24	Prepared By:	AR
		RL			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		12200	ng/Kg	100	4.00

Sample: 226238 - SB-2 4-5' (6 in. BEB)

Chloride		15400	mg/Kg	100	4.00
Parameter	Flag	RL Result	Units	Dilution	RL
Prep Batch:	58645	Sample Preparation	1: 2010-03-24	Prepared By:	AR
QC Batch:	68623	Date Analyzed:	2010-03-26	Analyzed By:	AR
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Laboratory:	Midland				

Sample: 226239 - SB-2 6-7' (6 in. BEB)

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 68623 58645	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2010-03-26 2010-03-24	Prep Method: Analyzed By: Prepared By:	N/A AR AR
		RL			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		15800	mg/Kg	100	4.00

Sample: 226240 - SB-2 10-11' (6 in. BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68623	Date Analyzed:	2010-03-26	Analyzed By:	\mathbf{AR}
Prep Batch:	58645	Sample Preparation:	2010-03-24	Prepared By:	AR
		RL			
Parameter	Flag	Result	Units	Dilution	RL
Chloride		8570	ng/Kg	100	4.00

Sample: 226241 - SB-2 15-16' (6 in. BEB)

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 68623 58645	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2010-03-26 2010-03-24	Prep Method: Analyzed By: Prepared By:	N/A AR AR
-		RL	TT I .		D .7
Parameter	Flag	Result	Units	Dilution	RL
Chloride		1210	mg/Kg	50	4.00

Sample: 226242 - SB-2 20-21' (6 in. BEB)

Chloride		2030	mg/Kg	100	4.00
Parameter	Flag	Result	Units	Dilution	RL
		RL			
Prep Batch:	58645	Sample Preparation:	2010-03-24	Prepared By:	AR
QC Batch:	68623	Date Analyzed:	2010-03-26	Analyzed By:	AR
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Laboratory:	Midland				

Sample: 226243 - SB-3 0-1' (6 in. BEB)

Laboratory: Analysis: QC Batch: Prep Batch:	Midland BTEX 68489 58601			Analytical Date Analy Sample Pre	Method: yzed: eparation:	S 8021B 2010-03-22 2010-03-22		Prep M Analyze Prepare	ethod: ed By: ed By:	S 5035 AG AG
				RI						
Parameter		Flag		Resul	t	Units		Dilution		RL
Benzene				< 0.010	0	mg/Kg	<u></u>	1		0.0100
Toluene				< 0.0100	0	mg/Kg		1		0.0100
Ethylbenzene)			< 0.010	0	mg/Kg		1		0.0100
Xylene				< 0.010	00	mg/Kg		1		0.0100
							Spike	Percent	$\mathbf{R}\mathbf{\epsilon}$	covery
Surrogate			Flag	Result	Units	Dilution	Amount	Recovery	L	imits
Trifluorotolue	ene (TFT)			2.30	mg/Kg	1	2.00	115	60.4	- 141.2
4-Bromofluor	obenzene (4-1	BFB)		2.35	mg/Kg	1	2.00	118	43.1	- 158.4

Sample: 226243 - SB-3 0-1' (6 in. BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68623	Date Analyzed:	2010-03-26	Analyzed By:	AR
Prep Batch:	58645	Sample Preparation:	2010-03-24	Prepared By:	AR
		RL			
Parameter	Flag	Result	Units	Dilution	RL
Chloride		10000	mg/Kg	100	4.00

Sample: 226243 - SB-3 0-1' (6 in. BEB)

Laboratory: Analysis: QC Batch: Prep Batch:	Midland TPH DRO - N 68458 58574	IEW	Analytic Date An Sample I	al Method: alyzed: Preparation:	Mod. 8015B 2010-03-22 2010-03-22	Prep M Analyz Prepare	lethod: N/A ed By: kg ed By: kg
			\mathbf{RL}				
Parameter	F	lag	Result	τ	Units	Dilution	RL
DRO			<50.0	mį	g/Kg	1	50.0
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		82.7	mg/Kg	1	100	83	70 - 130
Sample: 22	6243 - SB-3 0	-1' (6 in. BE	В)				

Laboratory: Analysis: QC Batch: Prep Batch:	Midland TPH GRO 68490 58601		Analytica Date Ana Sample P	l Method: lyzed: reparation:	S 8015B 2010-03-22 2010-03-22		Prep Me Analyze Preparec	ethod: S 5035 d By: AG d By: AG
			RL					
Parameter	\mathbf{F}	ag	\mathbf{Result}		Units		Dilution	\mathbf{RL}
GRO	·		<1.00		mg/Kg		1	1.00
C		Die e	Danult	T In ite	Dilution	Spike	Percent	Recovery
Surrogate		Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotolu	ene (TFT)		2.76	mg/Kg	1	2.00	138	65.3 - 155
4-Bromofluor	obenzene (4-BF	`B)	2.56	mg/Kg	1	2.00	128	61.7 - 131.1

Sample: 226244 - SB-3 2-3' (6 in. BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68623	Date Analyzed:	2010-03-26	Analyzed By:	AR
Prep Batch:	58645	Sample Preparation:	2010-03-24	Prepared By:	AR
		RL			
Parameter	Flag	Result	Units	Dilution	RL
Chloride		13200	mg/Kg	100	4.00

Sample: 226245 - SB-3 4-5' (6 in. BEB)

Chloride		<200	mg/Kg	50	4.00
Parameter	Flag	RL Result	Units	Dilution	RL
Prep Batch:	58645	Sample Preparation:	2010-03-24	Prepared By:	AR
QC Batch:	68623	Date Analyzed:	2010-03-26	Analyzed By:	AR
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Laboratory:	Midland				

Sample: 226246 - SB-3 6-7' (6 in. BEB)

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 68623 58645	Analytical Method: Date Analyzed: Sample Preparation	SM 4500-Cl B 2010-03-26 : 2010-03-24	Prep Method: Analyzed By: Prepared By:	N/A AR AR
		\mathbf{RL}			
Parameter	\mathbf{Flag}	Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 226247 - SB-3 10-11' (6 in. BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68623	Date Analyzed:	2010-03-26	Analyzed By:	AR
Prep Batch:	58645	Sample Preparation:	2010-03-24	Prepared By:	AR
		RL			
Parameter	Flag	Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 226248 - SB-3 15-16' (6 in. BEB)

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 68624 58646	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2010-03-26 2010-03-26	Prep Method: Analyzed By: Prepared By:	N/A AR AR
		RL			
Parameter	Flag	Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 226249 - SB-3 20-21' (6 in. BEB)

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 68624 58646	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2010-03-26 2010-03-26	Prep Method: Analyzed By: Prepared By:	N/A AR AR
		RL			
Parameter	Flag	Result	Units	Dilution	RL
Chloride	· · · · · · · · · · · · · · · · · · ·	<200 1	ng/Kg	50	4.00

Sample: 226250 - SB-3 30-31' (6 in. BEB)

Chloride	······································	<200	mg/Kg	50	4.00
Parameter	Flag	RL Result	Units	Dilution	RL
Prep Batch:	58646	Sample Preparation:	2010-03-26	Prepared By:	AR
Laboratory: Analysis: QC Batch:	Midland Chloride (Titration) 68624	Analytical Method: Date Analyzed:	SM 4500-Cl B 2010-03-26	Prep Method: Analyzed By:	N/A AR

.

Method Blank (1) QC Batch: 68458

QC Batch:	68458	Date Analyzed:	2010-03-22	Analyzed By:	kg
Prep Batch:	58574	QC Preparation:	2010-03-22	Prepared By:	kg

				MDL			
Parameter		Flag	-	Result	U	Jnits	RL
DRO				<5.86	m	g/Kg	50
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		72.8	mg/Kg	1	100	73	70 - 130
Method Blan	ak (1) Q	C Batch: 68489					
OC Batch: f	38480		Date Analyzer	1. 2010-03-22		4 nahy	red By: AC

Benzene			<0.0	00410	mg/Kg		0.01
Parameter		Flag	F	lesult	Units		RL
				MDL			
Prep Batch:	58601		QC Preparation:	2010-03-22		Prepared By:	AG
QU Daten.	00405		Date maryzea.	2010-03-22		Analyzed Dy.	лu

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Report Date: March 26, 20 114-6400435	10	W COC	ork Orden Jenkins	r: 10032225 B Federal #7	7	Page Nu Edd	mber: 14 of ly County, l	f 22 NM
method blank continued				1DI				
Danamatan	Flor		N D	/IDL	Unit	2	т	рт
Toluono	r lag			0210		s 	1	$\frac{nL}{101}$
Ethylbonzopo				0310	mg/F	re Gr	0	1.01
Xvlene			< 0.0	0240	mg/k	с Сог	0	01
						-8		
					Spike	Percent	Recover	ry
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits	3
Trifluorotoluene (TFT)		2.30	mg/Kg	1	2.00	115	64.9 - 14	2.7
4-Bromofluorobenzene (4-B	FB)	1.84	mg/Kg	1	2.00	92	43.9 - 14	1.9
Method Blank (1) G QC Batch: 68490	C Batch: 68490	Date Ana	alyzed:	2010-03-22		Analy	zed By: A	٨G
Prep Batch: 58601		QC Prep	aration:	2010-03-22		Prepa	red By: A	١G
•						-		
_			ME	DL				
Parameter	Flag		Resu	ılt	Units	· · · · · · · · · · · · · · · · · · ·		RL
GRO			< 0.3	96	mg/K	g		1
Surrogate	Flag	Result	Units	Dilution	Spike n Amount	Percent Recovery	Recove Limit	ery ts
Trifluorotoluene (TFT)	<u></u>	2.82	mg/Kg	g 1	2.00	141	66.2 - 1	145
4-Bromofluorobenzene (4-B	FB)	2.04	mg/Kg	g 1	2.00	102	62 - 12	0.5
Method Blank (1)	2C Batch: 68622							
QC Batch: 68622		Date Ana	alyzed:	2010-03-26		Analy	zed By: A	R
Prep Batch: 58644		QC Prepa	aration:	2010-03-24		Prepa	red By: A	R
			MD	Τ.				
Parameter	Flåg		Resu	lt	Units]	\mathbf{RL}
Chloride	Ÿ		<2.1	18	mg/K	g		4
						~		
Method Blank (1)	C Batch: 68623							
QC Batch: 68623		Date Ana	alyzed:	2010-03-26		Analv	zed Bv: A	R
Prep Batch: 58645		QC Prep	aration:	2010-03-24		Prepa	red By: A	R
			MD	L				
Parameter	Flag		Resu	lt	Units			RL
Chloride			<2.1	.8	mg/K	g		4

Report Date: March 26 114-6400435	cc	Page Number: 15 of 22 Eddy County, NM									
Method Blank (1)	QC Batch	: 68624									
QC Batch: 68624			Date A	nalyzed:	2010-03	-26			Analy	yzed By	AR
Prep Batch: 58646			QC Pre	eparation:	2010-03	-24			Prepa	ared By:	AR
Damamatan	Fla	æ		M	DL		Ť I,	aite			RI.
Chloride	I'la	8		<2	2.18		mg	$\frac{1103}{Kg}$			4
								/ 0			
Laboratory Control S	Spike (LCS	-1)									
QC Batch: 68458			Date A	nalyzed:	2010-0	3-22			Ana	lyzed By	y: kg
Prep Batch: 58574			QC Pr	eparation	2010-0	3-22			Prep	pared By	: kg
		TO	a			Q., 11.,	Mat			r	
Daram		LU Ros	ið ult	Unite	Dil	Spike A mount	Ros	nlt	Rec	r Li	imit
DRO		19	8 r	ng/Kg	1	250	<5.	86	79	57.4	- 133.4
				hand on	the gnilie	and onitio d	unlianto	rocui		0.112	
Densent necessary is hore		ce resuit.	RPD IS	based on	the spike	and spike d	uplicate	resu	16.		
Percent recovery is base	a on the spir										
Percent recovery is base	a on the spik	LCSD			Spike	Matrix	-]	Rec.		RPD
Percent recovery is base Param	a on the spir	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.] [Rec. Jimit	RPD	RPD Limit
Percent recovery is base Param DRO	a on the spir	LCSD Result 178	Units mg/Kg	Dil.	Spike Amount 250	Matrix Result <5.86	Rec. 71] L 57.4	Rec. Jimit - 133.4	RPD 11	RPD Limit 20
Percent recovery is base Param DRO Percent recovery is base	d on the spik	LCSD Result 178 ke result.	Units mg/Kg RPD is	Dil. 1 based on	Spike Amount 250 the spike	Matrix Result <5.86 and spike d	Rec. 71 uplicate	I 57.4 resu	Rec. Jimit - 133.4 It.	RPD 11	RPD Limit 20
Percent recovery is base Param DRO Percent recovery is base	d on the spik d on the spik LCS	LCSD Result 178 ke result. LCSD	Units mg/Kg RPD is	Dil. 1 based on	Spike Amount 250 the spike	Matrix Result <5.86 and spike d Spike	Rec. 71 uplicate L0	I 57.4 resu	Rec. .imit - 133.4 It. LCSD	RPD 11	RPD Limit 20 Rec.
Percent recovery is base Param DRO Percent recovery is base Surrogate	d on the spir d on the spir LCS Result	LCSD Result 178 ke result.LCSDResult	Units mg/Kg RPD is	Dil. 1 based on Jnits	Spike <u>Amount</u> 250 the spike Dil.	Matrix Result <5.86 and spike d Spike Amount	Rec. 71 uplicate L ⁰ R	I 57.4 resu CS ec.	Rec. .imit - 133.4 It. LCSD Rec.	RPD 11	RPD Limit 20 Rec. Limit
Percent recovery is base Param DRO Percent recovery is base Surrogate n-Tricosane	d on the spik d on the spik LCS Result 86.4	LCSD Result 178 (e result. LCSD Result 78.0	Units mg/Kg RPD is	Dil. 1 based on Jnits g/Kg	Spike Amount 250 the spike Dil. 1	Matrix Result <5.86 and spike d Spike Amount 100	Rec. 71 uplicate Le R 8	I 57.4 resu CS ec. 36	Rec. .imit - 133.4 It. LCSD Rec. 78	RPD 11 7	RPD Limit 20 Rec. Limit 0 - 130
Percent recovery is base Param DRO Percent recovery is base Surrogate n-Tricosane Laboratory Control S QC Batch: 68489 Prep Batch: 58601	d on the spik LCS Result 86.4 Spike (LCS	LCSD Result 178 (e result. LCSD Result 78.0	Units mg/Kg RPD is U m Date A QC Pre	Dil. 1 based on Inits g/Kg nalyzed: eparation:	Spike <u>Amount</u> 250 the spike <u>Dil.</u> 1 2010-03 2010-03	Matrix Result <5.86 and spike d Spike Amount 100	Rec. 71 uplicate R 8	E 57.4 resu CS ec. 36	Rec. .imit - 133.4 It. LCSD Rec. 78 Analy Prepa	RPD 11 7 yzed By: ared By:	RPD Limit 20 Rec. Limit 0 - 130 : AG AG
Percent recovery is base Param DRO Percent recovery is base Surrogate n-Tricosane Laboratory Control S QC Batch: 68489 Prep Batch: 58601	d on the spik LCS Result 86.4 Spike (LCS	LCSD Result 178 (ce result. LCSD Result 78.0	Units mg/Kg RPD is U m Date A QC Pre	Dil. 1 based on Jnits g/Kg nalyzed: eparation:	Spike <u>Amount</u> 250 the spike <u>Dil.</u> 1 2010-03 2010-03	Matrix Result <5.86 and spike d Spike Amount 100 3-22 3-22 Spike	Rec. 71 uplicate R 8	I 57.4 resu CS ec. 36	Rec. .imit - 133.4 It. LCSD Rec. 78 Analy Prepa	RPD 11 7 vzed By: ared By: F	RPD Limit 20 Rec. Limit 0 - 130 : AG AG Rec.
Percent recovery is base Param DRO Percent recovery is base Surrogate n-Tricosane Laboratory Control \$ QC Batch: 68489 Prep Batch: 58601 Param Param	d on the spik LCS Result 86.4 Spike (LCS	LCSD Result 178 (ce result. LCSD Result 78.0 -1)	Units mg/Kg RPD is U Date A QC Pre	Dil. 1 based on Jnits g/Kg nalyzed: eparation: Jnits	Spike Amount 250 the spike Dil. 1 2010-03 2010-03 Dil.	Matrix Result <5.86 and spike d Spike Amount 100 -22 -22 Spike Amount	Rec. 71 uplicate R 8 8	L 57.4 resu CS ec. 36	Rec. <u>imit</u> <u>- 133.4</u> It. LCSD Rec. 78 Analy Prepa Rec.	RPD 11 7 vzed By: ared By: EL	RPD Limit 20 Rec. Limit 0 - 130 : AG AG tec. imit
Percent recovery is base Param DRO Percent recovery is base Surrogate n-Tricosane Laboratory Control \$ QC Batch: 68489 Prep Batch: 58601 Param Benzene Toluona	d on the spik LCS Result 86.4 Spike (LCS	LCSD Result 178 (ce result. LCSD Result 78.0 -1) LCS Result 1.79	Units mg/Kg RPD is U Date A QC Pre	Dil. 1 based on Jnits g/Kg nalyzed: eparation: Jnits g/Kg g/Kg	Spike <u>Amount</u> 250 the spike <u>Dil.</u> 1 2010-03 2010-03 Dil. 1	Matrix Result <5.86 and spike d Spike Amount 100 3-22 Spike Amount 2.00 2.00	Rec. 71 uplicate R 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	L 57.4 resu CS ec. 36	Rec. <u>imit</u> - 133.4 It. LCSD Rec. 78 Analy Prepa Rec. 90 00	RPD 11 7 yzed By: ared By: F Li 75.4 75.4	RPD Limit 20 Rec. Limit 0 - 130 : AG AG tec. imit - 115.7 113.6
Percent recovery is base Param DRO Percent recovery is base Surrogate n-Tricosane Laboratory Control \$ QC Batch: 68489 Prep Batch: 58601 Param Benzene Foluene Ethylbenzene	d on the spik LCS Result 86.4	LCSD Result 178 (c result. LCSD Result 78.0 -1) LCS Result 1.75 1.80 1.80	Units mg/Kg RPD is U Date A QC Pre	Dil. 1 based on Jnits g/Kg nalyzed: paration: Jnits g/Kg g/Kg g/Kg g/Kg	Spike <u>Amount</u> 250 the spike <u>Dil.</u> 1 2010-03 2010-03 2010-03 Dil. 1 1	Matrix Result <5.86 and spike d Spike Amount 100 3-22 3-22 Spike Amount 2.00 2.00 2.00	Rec. 71 uplicate R. 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	L 57.4 resu CS ec. 36	Rec. <u>imit</u> - 133.4 It. LCSD Rec. 78 Analy Prepa Rec. 90 90 90 90	RPD 11 7 yzed By: ared By: F Li 75.4 78.4 78.4 76 -	RPD Limit 20 Rec. Limit 0 - 130 * AG AG tec. imit - 115.7 - 113.6 114.2
Percent recovery is base Param DRO Percent recovery is base Surrogate n-Tricosane Laboratory Control \$ QC Batch: 68489 Prep Batch: 58601 Param Benzene Toluene Ethylbenzene Xylene	d on the spik LCS Result 86.4	LCSD <u>Result</u> 178 (c result. LCSD <u>Result</u> 78.0 -1) LCS <u>Result</u> 1.80 1.80 5.38	Units mg/Kg RPD is U Date A QC Pro	Dil. 1 based on Jnits g/Kg paration: Jnits g/Kg g/Kg g/Kg g/Kg g/Kg	Spike <u>Amount</u> 250 the spike <u>Dil.</u> 1 2010-03 2010-03 Dil. 1 1 1 1	Matrix Result <5.86 and spike d Spike Amount 100 -22 -22 -22 Spike Amount 2.00 2.00 2.00 2.00 6.00	Rec. 71 uplicate R R 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	L 57.4 resu CS ec. 36	Rec. <u>imit</u> - 133.4 It. LCSD Rec. 78 Analy Prepa Rec. 90 90 90 90 90	RPD 11 7 vzed By: ared By: Ei 75.4 78.4 78.4 76.9	RPD Limit 20 Rec. Limit 0 - 130 - 136 - 13
Percent recovery is base Param DRO Percent recovery is base Surrogate n-Tricosane Laboratory Control \$ QC Batch: 68489 Prep Batch: 58601 Param Benzene Toluene Ethylbenzene Xylene Percent recovery is base	d on the spir LCS Result 86.4 Spike (LCS	LCSD <u>Result</u> 178 (c result. LCSD <u>Result</u> 78.0 -1) LCS <u>Result</u> 1.7(1.8(1.8(5.38 (c result.	Units mg/Kg RPD is U Date A QC Pre G U U m D m D m M D m M D m M D m M D m	Dil. 1 based on Inits g/Kg nalyzed: eparation: Jnits g/Kg g/Kg g/Kg g/Kg g/Kg g/Kg	Spike Amount 250 the spike Dil. 1 2010-03 2010-03 Dil. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Matrix Result <5.86 and spike d Spike Amount 100 -22 -22 -22 Spike Amount 2.00 2.00 2.00 6.00 and spike d	Rec. 71 uplicate L0 R. 8 Mata Result <0.00	L 57.4 resu CS ec. 36 cix 1lt 410 310 240 650 resu	Rec. <u>imit</u> - 133.4 It. LCSD Rec. 78 Analy Prepa Rec. 90 90 90 90 90 1t.	RPD 11 7 yzed By: ared By: F Li 75.4 76.4 76.9	RPD Limit 20 Rec. Limit 0 - 130 : AG AG tec. imit - 115.7 - 113.6 - 113.6
Percent recovery is base Param DRO Percent recovery is base Surrogate n-Tricosane Laboratory Control \$ QC Batch: 68489 Prep Batch: 58601 Param Benzene Toluene Ethylbenzene Xylene Percent recovery is base	d on the spik LCS Result 86.4 Spike (LCS d on the spik	LCSD Result 178 (ce result. LCSD Result 78.0 -1) -1) LCS Result 1.7(1.8(1.8(5.38) (ce result.	Units mg/Kg RPD is U Date A QC Pre C C It U m D m M D m M D m S m RPD is	Dil. 1 based on Inits g/Kg nalyzed: paration: Jnits g/Kg g/Kg g/Kg g/Kg g/Kg g/Kg g/Kg	Spike Amount 250 the spike Dil. 1 2010-03 2010-03 Dil. 1 1 1 1 1 1 1	Matrix Result <5.86 and spike d Spike Amount 100 -22 -22 -22 Spike Amount 2.00 2.00 2.00 2.00 2.00 6.00 and spike d	Rec. 71 uplicate L0 R. 8 4 8 8	L 57.4 resu CS ec. 36 cix 11t 410 310 240 650 resu	Rec. <u>imit</u> - 133.4 It. LCSD Rec. 78 Analy Prepa Rec. 90 90 90 90 90 90	RPD 11 7 vzed By: ared By: Fi Li 75.4 75.4 78.4 76.9	RPD Limit 20 Rec. Limit 0 - 130 - 10
Percent recovery is base Param DRO Percent recovery is base Surrogate n-Tricosane Laboratory Control S QC Batch: 68489 Prep Batch: 58601 Param Benzene Toluene Ethylbenzene Xylene Percent recovery is base Baram	d on the spik LCS Result 86.4 Spike (LCS	LCSD Result 178 (ce result. LCSD Result 78.0 -1) -1) LCS Result 1.8(1.8(5.38 (ce result. LCSD Result	Units mg/Kg RPD is Units Units	Dil. 1 based on Units g/Kg nalyzed: eparation: Units g/Kg g/Kg g/Kg g/Kg g/Kg based on	Spike Amount 250 the spike Dil. 1 2010-03 2010-03 Dil. 1 1 1 1 1 1 2010-03 Spike	Matrix Result <5.86 and spike d Spike Amount 100 -22 -22 -22 Spike Amount 2.00 2.00 2.00 2.00 6.00 and spike d Matrix Pacult	Rec. 71 uplicate Ra 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	L 57.4 resu CS ec. 36 36 36 310 240 650 resu	Rec. <u>imit</u> - 133.4 It. LCSD Rec. 78 Analy Prepa Rec. 90 90 90 90 90 90 90 90 90 90	RPD 11 7 yzed By: ared By: F Li 75.4 75.4 76.9 PPD	RPD Limit 20 Rec. Limit 0 - 130 : AG AG : AG AG : acc. imit - 115.7 - 113.6 114.2 - 113.6 Limit

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control spikes continued

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Toluene	1.77	mg/Kg	1	2.00	< 0.00310	88	78.4 - 113.6	2	20
Ethylbenzene	1.78	mg/Kg	1	2.00	< 0.00240	89	76 - 114.2	1	20
Xylene	5.33	mg/Kg	1	6.00	< 0.00650	89	76.9 - 113.6	1	20

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

	\mathbf{LCS}	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	2.21	1.96	mg/Kg	1	2.00	110	98	65 - 142.9
4-Bromofluorobenzene (4-BFB)	2.30	2.06	mg/Kg	1	2.00	115	103	43.8 - 144.9

Laboratory Control Spike (LCS-1)

QC Batch:	68490	Date Analyzed:	2010-03-22	Analyzed By:	\mathbf{AG}
Prep Batch:	58601	QC Preparation:	2010-03-22	Prepared By:	$\mathbf{A}\mathbf{G}$

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	\mathbf{Limit}
GRO	16.6	mg/Kg	1	20.0	< 0.396	83	52.5 - 114.3

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

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
GRO	17.6	mg/Kg	1	20.0	< 0.396	88	52.5 - 114.3	6	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)	2.65	2.44	mg/Kg	1	2.00	132	122	66.2 - 148.7
4-Bromofluorobenzene (4-BFB)	2.39	2.19	mg/Kg	1	2.00	120	110	64.1 - 127.4

Laboratory Control Spike (LCS-1)

QC Batch: Prep Batch:	$68622 \\ 58644$	I Q	Date Analyzed: QC Preparation	2010-03- : 2010-03-	2010-03-26 2010-03-24			d By: AR d By: AR
		LCS			Spike	Matrix		Rec.
Param		Resul	t Units	Dil.	Amount	Result	Rec.	Limit
Chloride		98.8	mg/Kg	1	100	<2.18	99	85 - 115

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

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Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec.	RPD	RPD Limit
Chloride	100	mg/K	<u>g 1</u>	100	<2.18	100	85 - 115	1	20
Percent recovery is based on the s	pike result.	KPD IS	based on	the spike an	a spike aup	incate re	esuit.		
Laboratory Control Spike (LC	CS-1)								
QC Batch: 68623 Prep Batch: 58645		Date Ar QC Pre	nalyzed: paration:	2010-03-26 2010-03-24	6 4		Ana Pre	alyzed B pared B	y: AR y: AR
Param	L(Res	CS sult	Units	Dil.	Spike Amount	Ma Res	trix sult Re	ec.	Rec. Limit
Chloride	99).1	mg/Kg	1	100	<2	2.18 9	9	85 - 115
Percent recovery is based on the s	pike result.	RPD is	based on	the spike an	d spike dur	olicate r	esult.		
	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	100	mg/Kg	g 1	100	$<\!2.18$	100	85 - 115	1	20
Percent recovery is based on the s	pike result.	RPD is	based on	the spike an	d spike dur	olicate r	esult.		
Laboratory Control Spike (LC	CS-1)								
QC Batch: 68624 Prep Batch: 58646		Date Ar QC Pre	nalyzed: paration:	2010-03-26 2010-03-24	5 1		Ana Pre	alyzed B pared B	y: AR y: AR
	LO	CS			Spike	Ma	trix		Rec.
Param	Res	sult	Units	Dil.	Amount	Rea	sult Re	ec.	Limit
Chloride	1(00	mg/Kg	1	100	<2	.18 10	00	85 - 115
Percent recovery is based on the s	pike result.	RPD is	based on t	the spike an	d spike dup	olicate r	esult.		
	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	102	mg/Kg	g 1	100	<2.18	102	85 - 115	2	20
Percent recovery is based on the s Matrix Spike (MS-1) Spiked	pike result. Sample: 2	RPD is 26243	based on t	the spike an	d spike dur	olicate ro	esult.		

QC Batch:	68489	Date Analyzed:	2010-03-22	Analyzed By:	\mathbf{AG}
Prep Batch:	58601	QC Preparation:	2010-03-22	Prepared By:	\mathbf{AG}

continued ...

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matrix spikes continued

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	\mathbf{Amount}	Result	Rec.	Limit
Benzene	2.00	mg/Kg	1	2.00	< 0.00410	100	57.7 - 140.7
Toluene	2.03	mg/Kg	1	2.00	< 0.00310	102	53.4 - 146.6
Ethylbenzene	2.06	mg/Kg	1	2.00	< 0.00240	103	62.1 - 141.6
Xylene	6.16	mg/Kg	1	6.00	< 0.00650	103	61.2 - 142.7

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

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	\mathbf{Result}	Rec.	Limit	RPD	Limit
Benzene	1.80	mg/Kg	1	2.00	< 0.00410	90	57.7 - 140.7	10	20
Toluene	1.83	mg/Kg	1	2.00	< 0.00310	92	53.4 - 146.6	10	20
Ethylbenzene	1.86	mg/Kg	1	2.00	< 0.00240	93	62.1 - 141.6	10	20
Xylene	5.60	mg/Kg	1	6.00	< 0.00650	93	61.2 - 142.7	10	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	\mathbf{Result}	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	1.48	2.02	mg/Kg	. 1	2	74	101	61.7 - 139.6
4-Bromofluorobenzene (4-BFB)	1.55	2.09	mg/Kg	1	2	78	104	49.6 - 146.7

Matrix Spike (MS-1) Spiked Sample: 226243

QC Batch:	68490	Date Analyzed:	2010-03-22	Analyzed By:	\mathbf{AG}
Prep Batch:	58601	QC Preparation:	2010-03-22	Prepared By:	\mathbf{AG}

	\mathbf{MS}			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
GRO	18.1	mg/Kg	1	20.0	< 0.396	90	10 - 198.3

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

			Announo	TOGUID	LLCC.	1.411111	0.112	3.1111116
GRO 18.6 m	ng/Kg	1	20.0	< 0.396	93	10 - 198.3	3	20

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

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	2.58	2.76	mg/Kg	1	2	129	138	65.5 - 143
4-Bromofluorobenzene (4-BFB)	2.48	2.65	mg/Kg	1	2	124	132	58.6 - 140

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Matrix Spike (MS-1)	Spiked Sample: 2	26237								
QC Batch: 68622		Date A	nalvzed:	2010-03-26	3		Ar	nalvzed B	v: AR	
Prep Batch: 58644		QC Pre	paration:	2010-03-24	ł		Pr	epared B	y: AR	
	М	S			Spike	Ма	trix		Rec.	
Param	Res	ult	Units	Dil.	Amount	Re	sult H	Rec.	Limit	
Chloride	223	00	mg/Kg	100	10000	12	200	101	85 - 115	
Percent recovery is based of	on the spike result.	RPD is	based on	the spike an	d spike du	plicate r	esult.			
	MSD			Spike	Matrix		Rec.		RPD	
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit	
Chloride	22500	mg/Kg	g 100	10000	12200	103	85 - 115	1	20	
Percent recovery is based of	on the spike result.	RPD is	based on	the spike an	d spike duj	olicate r	esult.			
Matrix Spike (MS-1)	Spiked Sample: 2	26247								
OC Databa 69692		Data A		2010 02 26			A	- I		
QU Batten: 08023 Prop Batch: 58645		Date Al	nalyzed:	2010-03-20)		Ar Dr	alyzed B	y: AR	
Trep Daten. 30045		QUITE	paration.	2010-05-24	t		F I	epared b	y: An	
		~								
Demana	M	S	TT	וית	Spike	Ma	trix	•	Rec.	
Chloride	102	<u>00</u>	$\frac{0 \text{ ms}}{\text{mg}/\text{Kg}}$	100	10000	Rei	$\frac{5010}{218}$	$\frac{102}{102}$	25 115	
Parcent recovery is based	n the spike result		hand on i	the enilie on	d apiles due			102	00 - 110	
I cicclit recovery is based of	on the spike result.	101 1/ 15	Daseu on	me spike an	u spike duj	Jucate 1	esunt.			
_	MSD			Spike	Matrix		Rec.		RPD	
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit	
Chloride	10400	mg/Kg	; 100	10000	<218	104	85 - 115	2	20	
Percent recovery is based of	on the spike result.	RPD is	based on t	the spike and	d spike duj	olicate r	esult.			
Matrix Spike (MS-1)	Spiked Sample: 2	26250								
		D		0010 00						
QC Batch: 68624		Date Ar	nalyzed:	2010-03-26	i		Ar	nalyzed B	y: AR	
QC Batch: 68624 Prep Batch: 58646		Date Ar QC Pre	nalyzed: paration:	2010-03-26 2010-03-24			Ar Pr	alyzed B epared B	y: AR y: AR	
QC Batch: 68624 Prep Batch: 58646	M	Date An QC Pre	nalyzed: paration:	2010-03-26 2010-03-24	Spike	Ma	Ar Pr trix	aalyzed B epared B	y: AR y: AR Rec.	
QC Batch: 68624 Prep Batch: 58646 Param	Mi Res	Date An QC Pre	nalyzed: paration: Units	2010-03-26 2010-03-24 Dil.	Spike Amount	Ma Res	Ar Pr trix sult F	aalyzed B epared B Rec.	y: AR y: AR Rec. Limit	
QC Batch: 68624 Prep Batch: 58646 Param Chloride	M Res 999	Date Ar QC Pre 5 11t	nalyzed: paration: Units mg/Kg	2010-03-26 2010-03-24 Dil. 100	Spike Amount 10000	Ma Res <2	Ar Pr trix sult F 218	aalyzed B epared B Rec. 100	y: AR y: AR Rec. Limit 85 - 115	
QC Batch: 68624 Prep Batch: 58646 Param Chloride Percent recovery is based of	M Res 999 on the spike result.	Date An QC Pre S alt RPD is	nalyzed: paration: <u>Units</u> mg/Kg based on t	2010-03-26 2010-03-24 Dil. 100 the spike and	Spike Amount 10000 d spike duj	Ma Res <2 blicate re	Ar Pr trix sult F 218 - esult.	nalyzed B epared B Rec. 100	y: AR y: AR Rec. Limit 85 - 115	
QC Batch: 68624 Prep Batch: 58646 Param Chloride Percent recovery is based of	M: Res 999 on the spike result. MSD	Date An QC Pre S alt RPD is 1	nalyzed: paration: Units mg/Kg based on t	2010-03-26 2010-03-24 Dil. 100 the spike and Spike	Spike Amount 10000 d spike dup Matrix	Ma Res <2 Dicate re	Ar Pr trix sult F 218 - esult. Rec.	nalyzed B epared B Rec. 100	y: AR y: AR Rec. Limit 85 - 115 RPD	
QC Batch: 68624 Prep Batch: 58646 Param Chloride Percent recovery is based of Param	M Res 999 on the spike result. MSD Result	Date Ar QC Pres Sult RPD is Units	nalyzed: paration: <u>Units</u> mg/Kg based on t Dil.	2010-03-26 2010-03-24 Dil. 100 the spike and Spike Amount	Spike Amount 10000 d spike du Matrix Result	Ma Res <2 Dicate re Rec.	Ar Pr sult F 218 - esult. Rec. Limit	nalyzed B epared B Rec. 100 RPD	y: AR y: AR Rec. Limit 85 - 115 RPD Limit	

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Standard	(CCV-3)											
QC Batch:	68458		Date Ana	lyzed: 2010-03	3-22	Ana	alyzed By: kg					
			CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date					
Param DRO	Flag	Units mg/Kg	Conc. 250	<u>Conc.</u> 249	Recovery 100	80 - 120	Analyzed 2010-03-22					
Standard OC Batch:	(CCV-4)		Date Ana	lvzed: 2010-03	-22	Ana	alvzed Bv: kg					
Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Becovery	Percent Recovery Limits	Date Analyzed					
DRO		mg/Kg	250	247	99	80 - 120	2010-03-22					
Standard	(CCV-1)											
QC Batch:	68489		Date Anal	yzed: 2010-03	-22	Anal	yzed By: AG					
			CCVs	CCVs	CCVs	Percent	D .					

			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		mg/Kg	0.100	0.0868	87	80 - 120	2010-03-22
Toluene		mg/Kg	0.100	0.0870	87	80 - 120	2010-03-22
Ethylbenzene		mg/Kg	0.100	0.0841	84	80 - 120	2010-03-22
Xylene		mg/Kg	0.300	0.254	85	80 - 120	2010-03-22

Standard (CCV-2)

QC Batch:	68489		Date Analyz	ed: 2010-03-2	Analyzed By: AG							
			CCVs	CCVs	CCVs	Percent						
			True	Found	Percent	Recovery	Date					
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed					
Benzene		mg/Kg	0.100	0.0893	89	80 - 120	2010-03-22					
Toluene		mg/Kg	0.100	0.0889	89	80 - 120	2010-03-22					
Ethylbenzer	ie	mg/Kg	0.100	0.0875	88	80 - 120	2010-03-22					
Xylene		mg/Kg	0.300	0.264	88	80 - 120	2010-03-22					

Standard (CCV-1)

QC Batch: 68490

Date Analyzed: 2010-03-22

Analyzed By: AG

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Param GRO	Flag	Units mg/Kg	CCVs True Conc. 1.00	CCVs Found Conc. 1.05	CCVs Percent Recovery 105	Percent Recovery Limits 80 - 120	Date Analyzed 2010-03-22
Standard	(CCV-2)						
QC Batch:	68490		Date Ana	lyzed: 2010-0	3-22	Ana	lyzed By: AG
Param GRO	Flag	Units mg/Kg	CCVs True Conc. 1.00	CCVs Found Conc. 1.16	CCVs Percent Recovery 116	Percent Recovery Limits 80 - 120	Date Analyzed 2010-03-22
Standard	(ICV-1)						
QC Batch:	68622		Date Ana	lyzed: 2010-03	3-26	Anal	lyzed By: AR
Param Chloride	Flag	Units mg/Kg	ICVs True Conc. 100	ICVs Found Conc. 98.3	ICVs Percent Recovery 98	Percent Recovery Limits 85 - 115	Date Analyzed 2010-03-26
Standard	(CCV-1)						
QC Batch:	68622		Date Ana	lyzed: 2010-03	3-26	Anal	lyzed By: AR
Param Chloride	Flag	Units mg/Kg	CCVs True Conc. 100	CCVs Found Conc. 102	CCVs Percent Recovery 102	Percent Recovery Limits 85 - 115	Date Analyzed 2010-03-26
Standard	(ICV-1)						
QC Batch:	68623		Date Ana	lyzed: 2010-03	3-26	Anal	yzed By: AR
Param Chloride	Flag	Units mg/Kg	ICVs True Conc. 100	ICVs Found Conc. 102	ICVs Percent Recovery 102	Percent Recovery Limits 85 - 115	Date Analyzed 2010-03-26
Standard	(CCV-1)						
QC Batch:	68623		Date Ana	lyzed: 2010-03	3-26	Anal	yzed By: AR

Report Date: March 114-6400435 Param Fla Chloride Standard (ICV-1) QC Batch: 68624 Param Fla Chloride Standard (CCV-1) QC Batch: 68624	e: March 26, 5	2010	Wo COG,	ork Order: 1003 /Jenkins B Fed	Page Number: 22 of 22 Eddy County, NM									
Report Date: 114-6400435 Param Chloride Standard (IC QC Batch: 6 Param Chloride Standard (C QC Batch: 6 Standard (C QC Batch: 6 Standard (C			CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date							
Param Chlorido	Flag	Units mg/Kg	<u>Conc.</u>	Conc.	Recovery	Limits	Analyzed							
		mg/Kg	100	91.0	90		2010-03-20							
Standard (ICV-1)													
QC Batch:	68624		Date Anal	yzed: 2010-03	-26	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	98.3	98	85 - 115	2010-03-26							
Standard (CCV-1)													
QC Batch:	68624		Date Anal	yzed: 2010-03	-26	Anal	yzed By: AR							
			CCVs	CCVs	CCVs	Percent								
			True	Found	Percent	Recovery	Date							
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed							
Chloride		mg/Kg	100	102	102	85 - 115	2010-03-26							

Order #	= 10032225					
Analysis Re	equest of Chain of Custody	/ Record			PAGE:	0F: 3
			-	"	ANALYSIS REQUES	ST od No)
	TETRA TECH 1910 N. Big Spring St. Midland, Texas 79705 (432) 682-4559 • Fax (432) 682-3946		15 (Ext. to C35)	d Cr Pb Hg Se d Vr Pd Hg Se		
CLIENT NAME:	SITE MANAGER:	PRESERVATIVE		U U U)/624 0/625	ΒH
PROJECT NO.: 0435 114-640 2000 KD	ROJECT NAME: COG/Jenking #7		MOD	ls Ag As ls Ag As les	Volatiles 8240/8260 1i. Vol. 827 /608 08	BC. (AIr) stos) is/Cations
LAB I.D. NUMBER DATE TIME	Eddy G, NM SAMPLE IDENTIFICATION	NUMBER OF FILTERED (HLCL HNO3 ICE NONE	BTEX 80211 TPH 801: PAH 8070	PAR 62/0 RCRA Meta TCLP Meta TCLP Volati	TCLP Semi RCI GC.MS Vol. GC.MS Sen GC.MS Sen PCB's 808/6 Pest. 808/6 Chloride	Gamma Sp Alpha Beta PLM (Asbe Major Anior Major Anior
22/02/03/18	5 X SB-1 0-1' (6" BEB)	1 X	XX			
229 1 1	(SB-1 Z-3' (6" BEB)	1 X				
230	SB-1 4-5' (6" BED)	1 X				
231	SB-1 6-7' (6" BEB)	N X			X	
232	SD-1 10-11' (6" BED)	1 1			X	
233	SB-1 15-16' (6" BED)	1 X			X	
234	SB-1 20-21' (6" BED				X	
235	SB-1 30-31' (6" BEB)	1 X				
236	SB-2 0-1' (6" BEB)	IIIXXX	Ϋ́			
237	· SB-2 , 2-3' (6" BED)					
RELINQUISTED BY: (Signature)	Time: 13.50 RECEIVED BY Righture)	Date:07674 Time:1675	40 s	SAMPLED BY: (P	rint & Initial) Kim	Date: Time:
RELINQUISHED BY: (Signature)	Date: RECEIVED BY: (Signature)	Date: Time:	[s	FEDEX	ED BY: (Circle) BUS	AIRBILL #:
RELINQUISHED BY: (Signature)	Date: RECEIVED BY: (Signature) Time:	Date:	f	CHAND DELIVER	INTACT PERSON:	Results by:
RECEIVING LABORATORY:	RECEIVED BY: (Signature) 7 X ZIP: PHONE: DATE:	TIME:		Ike	Tararez	RUSH Charges Authorized: Yes No
SAMPLE CONDITION WHEN RECEIVED: 3.4°C intot	REMARKS: IF TPH >5,000 ~9/kg run dee	eper sumpts				

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

Order #: 1003225					
Analysis Request of Chain of Custo	dy Record			PAGE: Z	OF: 3
		-	A	NALYSIS REQUES	T d No.)
TETRATECH 1910 N. Big Spring St. Midland, Texas 79705 (432) 682-4559 • Fax (432) 682-3946		15 (Ext. to C35)	d Cr Pb Hg Se d Vr Pd Hg Se		
CLIENT NAME: COG SITE MANAGER: Ilee Tavare Z	PRESERVATIVE		BI BI BI CO	60/624	, Hq
PROJECT NO.: 114-6400435 COG/Jenkins #7	CONTAI	A A	is Ag Av Is Ag Av Is Ag Av Ies Votatiles	8240/82 ii. Vol. 8 /608 38	c. (Air) is/Catio
LAB I.D. NUMBER DATE TIME TIME ANNOUNCE BUT SAMPLE IDENTIFICATION	NUMBER OF FILTERED (HCL HNO3 ICE NONE	BTEX 80218 TPH 8015 PAH 8270	TCLP Meta TCLP Meta TCLP Volati TCLP Semi RCI	GC.MS Vol. GC.MS Serr PCB's 8080 Pest. 808/6	Gamma Spe Alpha Beta PLM (Asbes Major Anior
22(023) 3/18 S X SB-2 4-5' (6" BEB)	t X			K	
239 / / SB-2 6-7' (6" BEB)	N K			X	
240 SB-2 10-11' (6" BEB)	1 X				
QUI SB-2 15-16 (6" BEB)	<u> </u>				
242 SB-2 20-21' (6" BEB)					
243 SB-3 0-1' (6" BEB)		XX			
244 SB-3 2-3' (6" BED)	X _				
245 SB-3 4-5' (6" BEB)					
244 / SB-3 6-7 (G"BED)					
247 - SB-3 10-11' (6" BEB)					
HELINGUISHEATT: (Signature)			AMPLED BY: (PRM & I	Kim	Time:
RELINQUISHED BY: (Signature) Date: RECEIVED BY: (Signature) Time:	Date: Time:	\$/	FEDEX	(Circle) BUS	AIRBILL #:
RELINQUISHED BY: (Signature) Date: RECEIVED BY: (Signature) Time:	Date: Time:		ETRA TECH CONTACT	PERSON:	Results by:
RECEIVING LABORATORY: TEPACE RECEIVED BY: (Signature) ADDRESS:			The T	andre to	RUSH Charges Authorized: Yes No
SAMPLE CONDITION WHEN RECEIVED: 3. 4°C iNtact	n deper samples				

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	\bigcirc	de	_ k	+	F:10	03	222	25										_							_					
An	alys	sis F	le	qu	lest d	of C	hai	n of	Custo	dy	R	e	CC	orc	1	L							PAC	GE:		3		OF:	3	.
		<u>_</u>	ſ						<u> </u>											(0	A Dircle	NAL or S	YSIS Spec	S RE	QUE Viet/	EST 10d i	No.)			
					19 Mi (43)	ETR 10 N. E dland, 2) 682-45	AT Big Spi Texas 59 • Fa	'ECH ring St. 79705 x (432) 68	3 2-3946								15 (Ext. to C35)	d Cr Pb Ha Se	d Vr Pd Hg Se									TDS		
CLIENT NA					S		AGER:	- -	22		ERS	F	PRES	SER\ ETH	ATIVE	Ξ	TX10(Bac	Ba			0/624	70/625					, Hq ,		
PROJECT N 114-64	10.: 10043	5	PR	OJEC	G J	enki.	<u>, , , , , , , , , , , , , , , , , , , </u>	#7			CONTAIN						MOD.	s Ag As	ls Ag As	les	Volatiles	8240/826	ni. Vol. 82	/608 08	3		(Air)	stos) Is/Cation		
LAB I.D. NUMBER	DATE この	TIME	MATRIX	COMP. GRAB	· e	Eddy (SA	G, A MPLE II	√ M DENTIFIC∕	ATION		NUMBER OF	HCL	HN03	ICE	NONE	RTEX R021	TPH 8015	PAH 8270 RCRA Meta	TCLP Meta	TCLP Volati	TCLP Semi RCI	GC.MS Vol.	GC.MS Sen	PCB's 8080 Pest 808/6	Chloride	Gamma Sp	Alpha Beta	PLM (Asbes Major Anior		
226248	3/18		5	Х	SB-3	5 15	5-16'	16	" BED)		1			X											R					
249	3/18		S	X	SB-3	2	5-21	(6'	" BEB)		1			$\left \mathbf{X} \right $											X					
250	3/18		S	X	SB-3	3	0-31	[6"	BEB)		1			Х											X					
									L																Í					
																													\square	
	\angle																													
RELINQUISHER	BX: (Signatur	e)	\sum)	Date:	1350	RE	CEIVED BY:	(Signature)				Date: Time:	<u> </u>	0	*		SAMF	LED	BY: (P	R	Initial)					Da Tin	te: _3 пө:	:48	<u>/p</u>
RELINQUISHED	BY: (Signatu)	6)			Date: Time:		RE	CEIVERBY	(Signature)				Date: Time:				-	SAMP	EX	HIPPE	D BY:	(Circle BUS	e) S				AIRB	ILL #: _		
RELINQUISHED	BY: (Signatur	e)			Date:		RE	CEIVED BY:	(Signature)				Date:	_			=	TETR	A TEC	LIVE H CO	NTAC		SON:					R: Result	by:	
RECEIVING LAE	BORATORY:	TR	4 7	e X	11(me:		RECE	EIVED BY: (SI	Ignature)										I	ke	Т	au	o'(• Z_	-			RUSH Author	Charg	9 5
		SIALE:		PHON	21P; _			·			тімі	:			7		_]											Yes	:	No
3.4%	- IU Non Mhén	Ha(t		REMA	The second se	TPH	7 <i>5,0</i>	w my/kg ,	'n a	109	<i>701</i>	Sa		رمع															

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Order =	#: 10032225								
Analysis R	Request of Chain of Custod	v Record	PAGE: OF: 3						
		<u> </u>	ANALYSIS REQUEST (Circle or Specify Method No.)						
	TETRATECH 1910 N. Big Spring St. Midland, Texas 79705 (432) 682-4559 • Fax (432) 682-3946		10S 10S 10S						
CLIENT NAME:	SITE MANAGER:	PRESERVATIVE	TX100						
PROJECT NO .: 0435 114-640	PROJECT NAME: COG/Jenkins #7		5 MOD 5 MOD 5 MOD 5 MOD 5 MOD 1 Volatiles 1 Volatiles 0/608 0/608 0/608 0/608 0/608 0/608						
LAB I.D. NUMBER 2010	Eddy Co., NM SAMPLE IDENTIFICATION	NUMBER O FILTERED HCL HUO3 ICE NONE	BTEX 8021 TPH 801 PAH 8270 RCFA Met TCLP Vola TCLP Vola TCLP Sem TCLP Sem RCI GC.MS Vol GC.MS Vol GC.MS Vol GC.MS Vol GC.MS Vol GC.MS Vol Alpha Beta Alpha Beta Alpha Beta Alpha Beta						
22(0208 3/18	S X SB-1 0-1' (6" BEB)	1 X							
229 1	(/ SB-1 Z-3' (6" BEB)	1							
230	SB-1 4-5' (6" BED)	N X							
231	SB-1 6-7' (6" BEB)	N X							
232	SD-1 10-11' (6" BED)	K	X						
233	SB-1 15-16' (6" BED)	1 X							
234	SB-1 20-21' (6" BED)	1 X							
235	SB-1 30-31' (6" BEB)	1 X							
236	SB-2 0-1' (6" BEB)	I X X							
237	6 SB-2, 2-3' (6" BED)								
RELINQUISHED BY: (Signature)	Date: <u>JILUIN</u> RECEIVED BY Tiggnature)	Date: Time:3.	SAMPLED BY: (Primt & Initial) Kim Dare:						
RELINQUISHED BY: (Signature)	Date: REGETVED BY: (Signature)	Date:	SAMPLE SHIPPED BY: (Circle) AIRBILL #:						
RELINQUISHED BY: (Signature)	Date: RECEIVED BY: (Signature)	Date: Time:	TETRA TECH CONTACT PERSON: Results by:						
RECEIVING LABORATORY:	A RECEIVED BY: (Signature) A RECEIVED BY: (Signature	тімғ.	- Ike Tararez RUSH Charges Authorized: Yan						
AMPLE CONDITION WHEN RECEIVED: 3. 4°C intalt									

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Order #	-: 1003225																		
Analysis Reque	st of Chain of Custody	Re		ord								٩	PAGE	:	<u>Z</u>		OF:	3	
						{				(Cir	AN cie e	ALYS	SIS R becify	IEQU / Met	EST hod l	Vo.)			
	TETRA TECH 1910 N. Big Spring St. Midland, Texas 79705 (432) 682-4559 • Fax (432) 682-3946						05 (Ext. to C35)	d Cr Pb Hg Se	d Vr Pd Hg Se								DS		
CLIENT NAME:	SITE MANAGER: Ilce Tanare Z	PRESERVATIVE			ATIVE D]	Ĕ	88	Bac			60/624					18, pH,		
PROJECT NO.: PROJECT N 114-6400435	AME: /Jenkins #7	CONTAIL Y/N)		Π		2	MOM	IA BA BI	a Ag Ag	Volatiles		8240/82	/608	8	ų	(AIr)	av/Catio		
LAB I.D. NUMBER DATE TIME XILLING 2010 COWN:	Eddy Co., NM SAMPLE IDENTIFICATION	NUMBER OF	HCL. HNO3	ICE	NONE	BTEX 8021	PAH 8270	RCRA Meta	TCLP Meta	TCLP Semi	RCI	GC.MS Vol.	PCB's 8080	Pest. 808/6	Gamma Spi	Alpha Beta Pi M (Asber	Major Anior		
22(023) 3/18 S X	SB-2 4-5' (6" DEB)	I		X			1							L M					
239 / / /	SB-2 6-7' (6" BEB)	1		K												Ц			
240	SB-2 10-11' (6" DED)	1		X												Ц			
au	SB-2 15-16 (6" BFB)	1		K										$ \rangle$					
242	SB-2 20-21' (6" BEB)	1		X										X	<u>′</u>				
243	58-3 0-1' (6" BFB)	n		X		X	X	Ш						\downarrow				\square	
244	SB-3 2-3' (6" BED)	h		X											\square				
245	SB-3 4-5' (6" BEB)	١		X										$ \rangle$					
246	SB-3 6-7 (G"BED)			X										$\lfloor \rangle$					
247	SB-3 10-11' (6" BEB)	1		X															
HELINUUISING OT: Signature)	Ane 1350 HECELUSO BY (Signature)	-	Date: Time:	 	व र द	40	S/		ED BY	: (Prin		itial)	<u>Kir</u>	<u>~ '</u>		Date	» — 3	/ <i>18</i> /	<u></u>
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RELINQUISHED BY: (Signature) Date: RECEIVED BY: (Signature) Time:			Date: Time:				- 	ETRA 1	TECH	CONT	ACT	PERSO	ON:			R	esuits	by:	
RECEIVING LABORATORY: TEPRCE ADDRESS CITY: Milled STATE: TE CONTACT: PHONE: PHONE:	ZIP: DATE:						-		Ik	e T	Ta	e va	/e.=	t		R	USH C Wthorlz Yes	harges red:	
SAMPLE CONDITION WHEN RECEIVED:	REMARKS: IF TPH > 5,000 mg/kg run d	esper	sam	oles			<u> </u>									l			

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	Or	de		4		10)3	22	<u>12</u>	5					كبيسي																			
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			ſ	ł	L)	TE 1910	TR N.I			IC 1g St. 9705											to C35)	Hg Se	в В		T	or S	Spec	ify N	Aeth	od I	No.)		T	
	-					(432)	682-4	559 •	Fax (4	432) 68	B2-394	46									005 (Ext.	cd Cr Pb	Cd Vr Pd			4	25					I. TDS		
	NE: G					SIT	e man Tki		". Ta	1a A	еZ			NEAS		PRE	ISEI VIET	rvat Hod	IVE		ž	8 Ba	8 Ba			260/62	270/6					ns, ph		
PROJECT N 114-64	0.: 0043	5	PRO	DJEC D	t nai G	¹ /Je	nki	ns	#	7				CONTA	(N/)	Τ			Τ		5 MOD.	A gA eb	la Ag A	Volatile		8240/8	ni. Vol. 8	/608 08			(Air)	stos) ns/Catio		
LAB I.D. NUMBER	DATE 2010	TIME	MATRIX	COMP. GRAB		Ea	ldy Si	G, AMPLI		M NTIFIC;	ATION	ı		NUMBER OF	FILTERED (HO3	ц	NONE		BTEX 8021	TPH 801: PAH 8270	RCRA Mets	TCLP Met	TCLP Semi	RCI	GC.MS Vol.	GC.MS Ser	PCB's 808(Pest. 808/6	Chionide	Gamma Sp	Alpha Beta	PLM (Asbe Major Anio		
226248	3/18		4	X		5B-3	1	5-1(<u>'</u>	16	<u>" B</u>	EB)		1				X											K					
જેવુલ	3/18		S	X	5	<u>B-3</u>	2	0-2	<u>''</u>	<u>(6'</u>	<u>" B</u>	,EB)		1			Þ	<u> </u>											X					
250	3/18		5	X	5	B-3	3	0-3	1	<u>[6"</u>	<u>' B</u>	EB)		1			X												X					
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RECEIVING	DI: USIGINALI		A-1 1		Time	9:			FCENA	FD 8% (9	Jongrad					Time					╤┤	ETRA	TECH	CON	TACT	PER	SON:				Τ	Result	s by:	
ADDRESS: CITY:	aland	STATE:		PHON	IE:				DATE:					TIN	AE:							1	Γk	e	Т	au	» ^ (~~				RUSH Author Ye	Charge ized: s	No
SAMPLE CONDI 3.4°C		AECEIVED:	Ŧ			REMAR	^{(S:} F	TF	7	> 5, a	w r	™J/kg	rm	de	<i>qpo</i> .	< S	a -7	ر <i>ما م</i>																

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Summary Report

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

Report Date: April 21, 2010

Work Order: 10041409

Project Location:Eddy County, NMProject Name:COG/Jenkins B Federal #7Project Number:114-6400435

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
228467	SB-2 10'	soil	2010-04-12	00:00	2010-04-13
228468	SB-2 15'	soil	2010-04-12	00:00	2010-04-13
228469	SB-2 20'	soil	2010-04-12	00:00	2010-04-13
228470	SB-2 25'	soil	2010-04-12	00:00	2010-04-13
228471	SB-2 30'	soil	2010-04-12	00:00	2010-04-13
228472	SB-2 35'	soil	2010-04-12	00:00	2010-04-13
228473	SB-2 40'	soil	2010-04-12	00:00	2010-04-13

Sample: 228467 - SB-2 10'

Param	Flag	Result	Units	RL
Chloride		466	mg/Kg	4.00

Sample: 228468 - SB-2 15'

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

Sample: 228469 - SB-2 20'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

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: April 21, 2010

Sample: 228470 - SB-2 25'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00
Sample: 228471	- SB-2 30'			
Param	Flag	Result	Units	\mathbf{RL}
Chloride		<200	mg/Kg	4.00
Param	- 5D-2 55 Flag	Result	Units	RL
Sample: 228472 Param	- SB-2 35' Flag	Result	Units	\mathbf{RL}
Chloride		<200	mg/Kg	4.00
Sample: 228473	- SB-2 40'			
Param	Flag	Result	Units	\mathbf{RL}
Chloride		<200	mg/Kg	4.00



 6701 Aberdeen Avenue, Suite 9
 Lubbock, Texas 79424

 200 East Sunset Road, Suite E
 El Paso, Texas 79922

 5002 Basin Street, Suite A1
 Midland, Texas 79703

 6015 Harris Parkway, Suite 110
 Ft, Worth, Texas 76132

237019

Lubbock, Texas 79424 800•378•1296 El Paso, Texas 79922 888•598•3443 Midland, Texas 79703 t. Worth, Texas 76132 E-Mail; lab@traceanalysis.com

HUB:

NCTRCA

 806 • 794 • 1296
 FAX 806 • 794 • 1298

 915 • 585 • 3443
 FAX 915 • 585 • 4944

 432 • 669 • 6301
 FAX 432 • 669 • 6313

 817 • 201 • 5260
 FAX 432 • 669 • 6313

DBE: VN 20657

NELAP Certifications

Certifications

Lubbock: T104704219-08-TX LELAP-02003 Kansas E-10317

WBENC:

El Paso: T104704221-08-TX LELAP-02002

1752439743100-86536

WFWB38444Y0909

Midland: T104704392-08-TX

Analytical and Quality Control Report

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

Report Date: April 21, 2010

Work Order: 10041409

Project Location:Eddy County, NMProject Name:COG/Jenkins B Federal #7Project Number:114-6400435

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
228467	SB-2 10'	soil	2010-04-12	00:00	2010-04-13
228468	SB-2 15'	soil	2010-04-12	00:00	2010-04-13
228469	SB-2 20'	soil	2010-04-12	00:00	2010-04-13
228470	SB-2 25'	soil	2010-04-12	00:00	2010-04-13
228471	SB-2 30'	soil	2010-04-12	00:00	2010-04-13
228472	SB-2 35'	soil	2010-04-12	00:00	2010-04-13
228473	SB-2 40'	soil	2010-04-12	00:00	2010-04-13

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

Michael ayes

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

Standard Flags

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

Case Narrative

Samples for project COG/Jenkins B Federal #7 were received by TraceAnalysis, Inc. on 2010-04-13 and assigned to work order 10041409. Samples for work order 10041409 were received intact at a temperature of 7.5 C.

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

		Prep	Prep	\mathbf{QC}	Analysis
Test	Method	Batch	Date	Batch	Date
Chloride (Titration)	SM 4500-Cl B	59238	2010-04-19 at 11:46	69269	2010-04-20 at 15:22

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 10041409 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: 228467 - SB-2 10'

Chloride		466	mg/Kg	50	4.00
Parameter	Flag	RL Result	Units	Dilution	RL
Prep Batch:	59238	Sample Preparation:	2010-04-19	Prepared By:	AR
QC Batch:	69269	Date Analyzed:	2010-04-20	Analyzed By:	\mathbf{AR}
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Laboratory:	Midland				

Sample: 228468 - SB-2 15'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	69269	Date Analyzed:	2010-04-20	Analyzed By:	AR
Prep Batch:	59238	Sample Preparation:	2010-04-19	Prepared By:	AR
		RL			
Parameter	\mathbf{Flag}	Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 228469 - SB-2 20'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 69269 59238	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2010-04-20 2010-04-19	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: 228470 - SB-2 25'

.

Analysis:	69269	Analytical Method:	SM 4500-CI B	Prep Method:	N/A
QC Batch:		Date Analyzed:	2010-04-20	Analyzed By:	AR
Prep Batch:	59238	Sample Preparation:	2010-04-19	Prepared By:	AR

continued ...

Report Date: April 21, 2010	Work Order: 10041409	Page Number: 5 of 7
114-6400435	COG/Jenkins B Federal #7	Eddy County, NM

sample 228470 continued ...

		RL			
Parameter	Flag	Result	Units	Dilution	RL
		RL			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		<200	mg/Kg	50	4.00

Sample: 228471 - SB-2 30'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 69269 59238	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2010-04-20 2010-04-19	Prep Method: Analyzed By: Prepared By:	N/A AR AR
		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 228472 - SB-2 35'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 69269 59238	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2010-04-20 2010-04-19	Prep Method: Analyzed By: Prepared By:	N/A AR AR
		RL			
Parameter	\mathbf{Flag}	Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 228473 - SB-2 40'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical I	Method: SM 4500-Cl B	Prep Method:	N/A
QC Batch:	69269	Date Analy	zed: 2010-04-20	Analyzed By:	AR
Prep Batch:	59238	Sample Pre	paration: 2010-04-19	Prepared By:	AR
		RL			
Parameter	Flag	\mathbf{Result}	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Report Date: April 21 114-6400435	, 2010	COC	/ork Ord J/Jenkin	er: 10041409 is B Federal) #7		Page E	e Numbe ddy Cou	er: 6 of 7 inty, NM
Method Blank (1)	QC Batch: 69269								
QC Batch: 69269 Prep Batch: 59238		Date Ana QC Prepa	alyzed: aration:	2010-04-20 2010-04-19			Ana Pre	ulyzed B pared B	y: AR y: AR
			M	DL					
Parameter	Flag		Res	ult		Unit	S		RL
Chloride			<2	.18		mg/ŀ	ζg		4
Laboratory Control	Spike (LCS-1)								
QC Batch: 69269		Date Ana	alyzed:	2010-04-20			Ana	alyzed B	y: AR
Prep Batch: 59238		QC Prep	aration:	2010-04-19			\mathbf{Pre}	pared B	y: AR
	LO	CS			Spike	Ma	trix		Rec.
Param	Res	sult	Units	Dil.	Amount	Res	sult Re	ec.	Limit
Chloride	98	.6 n	ng/Kg	1	100	<2	.18 9	9	85 - 115
Percent recovery is bas	ed on the spike result.	RPD is b	ased on	the spike and	l spike dup	licate re	esult.		
	T CCD			Cuiles	Mothing		Pag		חסס
Param	LCSD Bosult	Unite	Dil	Amount	Result	Rec	Limit	RPD	Limit
Chloride		mg/Kg	1	100	<2.18	100	85 - 115	1	20
Percent reservory is bar	and on the spile result	PDD in h	need on i	the spike and	Lepiko dur	licato re			
Percent recovery is bas	sed on the spike result.		ased on	the spike and	i spike dut	meate n	sun.		
	() <u>G. 1. 1. G</u>	00400							
Matrix Spike (MS-)	1) Spiked Sample: 2	28498							
QC Batch: 69269		Date Ana	alyzed:	2010-04-20			Ana	alyzed B	y: AR
Prep Batch: 59238		QC Prep	aration:	2010-04-19			Pre	pared By	y: AR
	Μ	S			Spike	Mai	trix		Rec.
Param	Res	sult I	Units	Dil.	Amount	Res	ult Re	ec.	Limit
Chloride	247	700 m	ng/Kg	100	10000	151	00 9	6	85 - 115
Percent recovery is bas	sed on the spike result.	RPD is b	ased on	the spike and	l spike dur	licate re	esult.		
-	MCD			(Juil.o	Matuin		Dee		חחח
Param	MSD	Unite	Dil	Spike Amount	Result	Rec	rtec. Limit	RPD	KPD Limit
Chloride	25200	mg/Kg	100	10000	15100	101	85 - 115	$\frac{10}{2}$	20
Donaont noaccom is here	ad on the chile post	<u>היי וסק</u>	and on i	the gnike and	l apileo dur	diento m	oult		
rercent recovery is bas	sed on the spike result.	RED IS D	ased on 1	the spike and	i spike dup	mcate re	sun.		
Standard (ICV-1)									

QC Batch: 69269

Date Analyzed: 2010-04-20

Analyzed By: AR

Report Dat 114-640043	e: April 21, 20 5)10	We COG	Page Number: 7 of 7 Eddy County, NN					
Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed		
Chloride		mg/Kg	100	100	100	85 - 115	2010-04-20		
Standard ((CCV-1)								
QC Batch:	69269		Date Anal	yzed: 2010-04	-20	Anal	yzed By: AR		
			CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date		
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed		
Chloride		mg/Kg	100	99.8	100	85 - 115	2010-04-20		

Order #: 10041409			_																				
Analysis Request of Ch	ain of Custody	' R	le	CC	or	d									PA	GE:				OF	•	I	
							\neg					(A Circle	NAI e or	YSI Spe	S RE cify	EQU Mei	IES1 thod	No.	J			
TETRA 1910 N. Big Midland, Te: (432) 682-4559	TECH Spring St. (as 79705 • Fax (432) 682-3946								bs (Ext. to C35)	d Cr Pb Hg Se	d Vr Pd Hg Se										TOS		
CLIENT NAME: SITE MANAGE COG7 Ike 7	R: G-14-8 &	NEAS		PRE N	SER	VATIV	E		Š.	Ba C	s Ba C			60/624	270/825						H B		
PROJECT NO.: PROJECT NAME: 114-640 0435 COG7 - Jenkins Fe	denal #7 Flowline	CONTAL	ŝ		Γ				MOD	Is Ag A	A gA sh	88	Volatiles	8240/82	nl. Vol. 8	/608	g	l g	(Air)	itos)	19/Catio		
LAB I.D. NUMBER DATE TIME TIME AND SAMP	G, NM LE IDENTIFICATION	NUMBER OF	FILTERED (EONH	ICE	NONE		BTEX 8021	PAH 8270	RCRA Meta	TCLP Meta	TCLP Volati	TCLP Semi RCI	GC.MS Vol.	GC.MS Sen	PCB's 8080	Pest. BUBUS	Gamma Sp	Alpha Beta	PLM (Asbe	Major Anio		
22841074/12 S X SB-Z 10'		1															h	4					
468 4112 S X SB-2 15'		1																K					
469 4/12 S X SB-2 20		11																					
470 4/12 S X SB-2 25'	· · · · · · · · · · · · · · · · · · ·																þ	4					
471 4/12 S X SB-2 30'		١											_					4					
472 4/12 S X SB-2 35'		$ \mathbf{V} $															<u>}</u>	<u> </u>					
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7/me: RELINOUISHED BY: (Signature) Date:	RECEIVED 8Y: (Signature)			Time: Date:					4	FEDE	X D DE	LIVE		BU	s S				OTH	ER:			
Time: RECEINING LABORATORY:	RECEIVED BY: (Signature)			Time:						II	TEC (C	н ос 7	AVC	T PEF	2 2	:				Rosu RUSI Auth	its by: 4 Char prized:	yes	
CONTACT:PHONE: SAMPLE CONDITION WHEN RECEIVED: REMARKS: 7,5 c i ~ tact XALL 4	DATE	TIM I	£				<u> </u>								<u></u>					Y	es		ю

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State of New Mexico Energy Minerals and Natural Resources

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

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

1440 S. St. Fran	<u></u>	a i 0, 1551 67202	·	Sa	inta I	<u>Fe, NM 875</u>	05					SIGC OF IOTH
			Rel	ease Notific	catio	on and Co	orrective A	ction	te anna an Anna an Anna anna			<u>un de la composition de la composition</u>
						OPERA	FOR		🕅 Initia	al Report		Final Repor
Name of Co	mpany	COG	Duerating	I. LLC		Contact	Pat Elli	s	¥	I		
Address	550 W	. Texas, Suite	e 100 Mi	dland TX, 7970	1	Telephone 1	No. 432-230-0	077				
Facility Nar	ne	Jenkin	s B Fede	ral #7		Facility Typ	be Well	<u> </u>				
Surface Ow	ner	Federal		Mineral C	Dwner	· · · · · · · · · · · · · · · · · · ·			Lease N	No. (API#) 30-0	15-29451
				LOC		N OF DE	LEASE		1 20100 1		/	
Elinit Letter	Section	Townshin	Range	EUCE Feet from the	Nor	th/South Line	Eeet from the	Fast/A	Vest Line	County		
E	20	178	30E	1650		NORTH	1090	V	VEST	County	EDD)Υ
				Latitude 32.8	322824	Longit	ude 103.999198					
			·	NAT	UR	E OF REL	EASE					
Type of Rele	ase	Produced Wat	cr			Volume of	Release 100bb	1	Volume I	Recovered	80bb1	·
Source of Re	lease	Flowline				Date and I 02/05/201	lour of Occurrenc 0 1:00 p.m.	же	Date and 02/05/20	Hour of Di 10 <u>2:</u> 00 p.	scovery .m.	y
Was Immedi	ate Notice	Given?				IF YES, To	Whom?					
		×	I Yes L	J NO LJ NOLR	equire	a		Jim / Mike	Amos – BL Bratcher -	.M OCD		
By Whom?	Josh I	Russo				Date and I	lour 02/0)5/2010		2:30 p.r	າ.	
Was a Water	course Rea	ched?] Yes [2	No No		If YES, V	olume Impacting	the Wat	ercourse.			
If a Waterco	urse was in	macted, Descr	ibe Fully.	*								
		•										
Describe Ca	use of Prob	lem and Reme	dial Actio	on Taken.*								
The same states of	and in the	Douting The	flowling	has been repaired								
There was a	spint in the	nowing, the	nowine	nas been repaired.	•							
Describe An	ea Affected	and Cleanup	Action Ta	ken *								
		unu onounujo i										
Produced wa	ter was rele	eased into the	area imm	ediately next to th	e split	flowline. A to	al of 100bbls of f	luid wa	s released.	80bbls of f	luid wa	is recovered
by a vacuum	i truck. On av enturated	e-call protocol	will be in	ade by dirt contra	icior w	the will then will to	if for archeologic	al/wildl	DE DV EE	vity clearand	re from	BLM before
990 FSL 9	90 FWL 3	3013 prior 10 : 32.81558379 :	103.9995	5142). Tetra Tech	i will s	sample the spill	site area to deline	cate any	possible c	ontaminatio	n from	the release
and we will	present a re	mediation wo	rk plan to	the NMOCD/BLN	M for y	your approval p	rior to any signifi	cant ren	nediation.			
J hereby cert	ify that the	information g	iven abov	e is true and comp	olete to	the best of my	knowledge and u	indersta	nd that pur	suant to NN	40CD	rules and
regulations a	all operator:	s are required t	to report a	nd/or file certain	release	e notifications a	nd perform correct	ctive act	ions for rel	leases which	h may e	endanger
public health	n or the env	ironment. The	e acceptan	ice of a C-141 rep	ort by	the NMOCD n	narked as "Final R	teport" of	loes not rel	lieve the op	erator o	of liability
should their	operations	have failed to	adequates	y investigate and i	remedi	ate contaminat	ion that pose a thi	eat to g	round wate	r, surface w	ater, h	uman health
federal, state	e, or local la	iws and/or reg	ulations.	plance of a C-141	repon	t does not renev	e me operator or	respons	ionity for c	compnance	with ar	iy other
			\sim	7			OIL CON	SERV	ATION	DIVISI	ON	
C ¹ .	_		1/	7			<u> </u>				<u>~~</u>	
Signature:		/	·(~	<u> </u>		4.						
Printed Nam	ne:	Jush R	lusso			Approved by	District Supervis	sor: 				
Title:		HSE Coc	ordinator			Approval Da	te:		Expiration	Date:		. <u></u>
E-mail Add	ress: j	russo@conche	oresources	.com		Conditions o	f Approval:			Attache	d 🕅	
Date 02/	12/2010		Phone	432-212-2399)						-	
* Attach Add	itional She	eets If Neces	sary		********	J						