		SI		RMATIC	DN		Normalis et al. 1997 anno 1997 fei lines	
2RP-452		Repor	t Type: (Closure	Rep	ort		
General Site Info	rmation:							
Site:		Skelly Unit #	611					
Company:		COG Operat	ing LLC	•				
Section, Townsh	ip and Range	Unit I	Sec 22	T17S	R	31E		
Lease Number:		API-30-015-3	6887					·····
County:		Eddy County	/					
GPS:	······································		32.81944°	N			103.85	217° W
Surface Owner:		Federal			L.			
Mineral Owner:				· · · · · · · · · · · · · · · · · · ·			····	
Directions [,]		From the inters	section of Hwy	/ 529 and Hv	vy 82 tra	vel west or	n Hwy 82 for	1.5 miles, turn left an
		travel 400' to lo	ocation.					
L								
Release Data:			法全学和产业代	Kasets	Station and state			a se an the second second second
Date Released:		7/20/2010						
Type Release:		Produced Flu	id					
Source of Contam	nination:	Wellhead						
Fluid Released:		15 bbls						
Fluids Recovered	•	13 bbls					·····	<u> </u>
Official Commun	lication:			CAN LAND A	11.772		RC EX SAM	
Namo	Pat Ellic	n al na filmanna a shanna a shina na shina	Contras areas topological and an			o Tovoroz		
Name.		~						
Company:	COG Operating, LL	C			<u> </u> [e	etra Lech		
Address:	550 W. Texas Ave.	Ste. 1300	l		19	010 N. Big	Spring	
P.O. Box				-				
City:	Midland Texas, 797	01			Mi	idland, Tex	as	
Phone number:	(432) 686-3023				(4	32) 662-45	59	· · · · · · · · · · · · · · · · · · ·
Fav:	(132) 684-7137	······			<u> </u>			
Fmail:					ika	o tavarazí	@totratoab	
Email.	[peins@conchoreso	Inces.com				e.lavarez	wielfalech.	<u>com</u>
Ranking Criteria Depth to Groundwa	ater:		Ranking Sco	ore			Site Data	
<50 ft			20					
50-99 ft			10					
>100 ft.			0				0	
WellHead Protection	on:		Ranking Sco	ore			Site Data	
Water Source <1,0	00 ft., Private <200 ft	· · · · · · · · · · · · · · · · · · ·	20					
water Source >1,00	00 ft., Private >200 ft	•	0				0	
Surface Body of W	ater:		Ranking Sco	ore			Site Data	
<200 ft.			20					
200 ft - 1,000 ft.			10				~	
>1,000 ft.	, 		0				U	
Tota	al Ranking Score:	() 	<u></u> 0			Γ	RECI	EIVED
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January 25, 2010

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., Skelly Unit #611, Unit I, Section 22, Township 17 South, Range 31 East, Eddy County, New Mexico. 2RP-452

Mr. Bratcher:

Tetra Tech, Inc. (Tetra Tech) was contacted by COG Operating LLC. (COG) to assess a spill from the Skelly Unit #611, Unit I, Section 22, Township 17 South, Range 31 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.81944°, W 103.85217°. 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 July 20, 2010, and released approximately fifteen (15) barrels of produced fluids from a faulty nipple off the pumping tee. To alleviate the problem, COG personnel replaced the nipple. Thirteen (13) barrels of standing fluids were recovered. The spill initiated from the well's pumping tee and migrated west approximately 120', ranging in width from 35' to approximately 60'. The majority of the spill remained on the caliche pad. The initial C-141 form is enclosed in Appendix A.

Groundwater

No water wells were listed within Section 22. According to the NMOCD groundwater map, the average depth to groundwater in this area is greater than 300' below surface. The water well data is shown in Appendix B.

Tetra Tech



Regulatory

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

Soil Assessment and Analytical Results

On August 11, 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 of the submitted samples were below the RRAL for TPH and BTEX. A shallow chloride impact was detected at each of the three auger holes to a depth of 0-1' below surface and significantly declined with depth at 1-1.5' below surface.

Closure Activities

On November 9, 2010, Tetra Tech supervised removal of the impacted soils. Based upon the limited chloride impact, the spill was excavated to a depth of approximately 1.0' below surface. Approximately 280 cubic yards of soil were excavated and transported to CRI Inc. for proper disposal. Once excavated, four (4) confirmation samples were collected from the bottom of the excavation. The sample locations are shown on Figure 4. The confirmation sample results are shown in Table 2. Referring to Table 2, all the samples showed chloride concentrations of <200 mg/kg. Based on the results, the excavated areas have been backfilled with clean soil to grade. The final C-141 form is enclosed in Appendix A.



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Based on the results and closure activities, COG request closure of the site. If you have any questions or comments concerning the corrective activities performed at the site, please call me at (432) 682-4559.

Respectfully submitted, TETRA TECH

Ike Tavarez

Project Manager

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













Table 1COG Operating LLC.SKELLY UNIT #611EDDY COUNTY, NEW MEXICO

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Sample	Sample	Sample	Depth	Soil	Status	TI	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	8/11/2010	0-1			X	<2.00	.; < 50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	5590
	a	1-1.5'		Х		-	-	-	-	-	-	-	297
	u	2-2.5'		Х		-	-	-	-	-	-	-	<200
	u	3-3.5'		Х		-	-	-	-	-	-		208
	II	4-4.5'		Х		-	-	-	-	-	-	-	<200
	0/11/00/10	885 2 36 (5)		Barton Maria		an en anteres		a si	N. 1. KL/24147/M		antonet secondaria	್ರಾ ಆ ಎಲ್ ಕ್ರಾಗ	107 1 N. 16 2.4 11
AH-2	8/11/2010	0-1			X	6.92	156	162.92	<0.0200	<0.0200	<0.0200	<0.0200	8,160
	11	1-1.5'		X		· -	-	-	-	-	-	-	251
	ĸ	2-2.5'		Х			-	-		-	-	-	<200
:	11	3-3.5'		Х		-	-	-	-	-	-	-	236
	18	4-4.5'		Х		-	-	-	-	-	-	-	<200
	18	5-5.5'		Х		-	-	-	-	-		-	220
			1.2. (<u>5.</u> 2.4.	Prin 100 Ca	Lizesvin marine	C.V. A.V. S.M. S.			Addated to the second				
AH-3	8/11/2010	0-1'		4936 and a 1	X	<2.00	<50.0	<50.0					6,630
	14	1-1.5'		Х		-	-	-	-	-	-		487
	18	2-2.5'		Х		-	-	-	-	-	-	-	<200
	11	3-3.5'		Х		-	-	-	-	-	-	-	<200
	19	4-4.5'		Х		-	-	-	-	-	-	-	230

BEB Below Excavation Bottom

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Excavated Depths

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Table 2 COG Operating LLC. SKELLY UNIT #611 EDDY COUNTY, NEW MEXICO

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Comple ID	Comula Doto	Sample		Soil	Status	Chloride
	Sample Date	Depth (ft)		In-Situ	Removed	(mg/kg)
CS-1	11/9/2010	0-1'	1' BEB	X		<200
CS-2	11/9/2010	0-1'	1' BEB	х		<200
CS-3	11/9/2010	0-1'	1' BEB	х		<200
	····					
CS-4	11/9/2010	0-1'	1' BEB	х		<200

BEB Below Excavation Bottom

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APPENDIX A

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District 1 1625 N. French Dr., Hobbs, NM 88240 <u>District 11</u> 1301 W. Grand Avenue, Attosia, NM 88210 <u>District 111</u> 1000 Rio Brazos Road, Aztec, NM 87410 District 111

State of New Mexico Energy Minerals and Natural Resources Oil Conservation Division

Form C-141 Revised October 10, 2003

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

District IV 1220 S. St. Francis Dr., Sonto Fe, NM 87505	1220 San	iouth ia Fe,	St. Franc NM 875	15 Dr. 05			,	vith Rule : s	116 on back side of form
	Release Notifica	tion	and Co	rrective A	ction	ي المنظلية المنظلية الم			
			OPERA'	FOR		🕅 Initi	al Report		inal Report
Name of Company COG OPER.	ATING LLC	C	onfact	P	at Ellis				P
Address 550 W. Texas, Suite 10	0, Midland, TX 79701	Т	elephone i	No. 432-	230-00	17			
Facility Name Skelly Ur	nit #611	F	acility Typ	e	Well				
Surface Owner Federal	Mineral Ov	me):				Lease h	No. (APU) 30-015	-36887
	LOCAT	FION	OF RE	LEASE					
Unit Letter Section Township Re 1 22 178 3	inge Feel from the 11 11E 2380	North/S SO	outh Line UTH	Feel from the 990	East/W	est Line AST	County	Eddy	
	Latitude 32 49	.165	Longit	nte 103 51.129					
	NATU	JRE (OF REL	EASE					
Type of Release Produced Fluid			Volume of	Reiense 15bbla		Volume I	Recovered	13bbis	····
Somee of Release Weinican			07/20/2010			07/20/20	10 5	:00 a.m.	
Was Immediate Notice Given?	is 🛛 No 🖾 Not Req	nired	IFYES, To	Whom?					
By Whom?			Date and I	iour					
Was a Watercourse Reached?	es 🖾 No	l	If YES, Ve	lume Impacting	the Wate	rcourse.			
If a Watercourse was Impacted, Describe I Describe Cause of Problem and Remedial	Action Taken.*	•							
There was a small hole in the 1x4 inch nip	ple coming off of the pun	uping te	e. The defe	ctive nipple has b	ocen repl	Accd with	a new siain	lass steel r	tipple.
Describe Area Affected and Cleanup Actio	m Taken.*	*****							
Initially the small piphole in the 1x4 inch to to recover 13bbls with a vacuum truck. The my possible contamination from the release remediation work.	tipple released 15 bits of the dimensions of the spill as and the will present a re	produce area we conediat	ed fluid aron are 20 yards ion work pl	nd the well. All x 30 yards. Teu in to the NMOCI	fluid stay ra Tech v D/BLM f	red on the rill sample or approve	pad locatio 1 the spill s 1 prior to a	n and we y ite area to o ny signific	vore able delineato ani
I hereby certify that the information given regulations all operators are required to rep public health or the environment. The accu- should their operations have failed to aden or the environment. In addition, NMOCD federal, state, or local laws and/or regulation	above is true and completent net and/or file certain rele- cptance of a C-141 report nately investigate and ren acceptance of a C-141 re- ms.	le to the ease not by the i rediate port doe	best of my flications at NMOCD m contaminati as not reliev	knowledge and n id perform correct arked as "Final R on that pose a the c flic operator of	inderstan ative actio eport" de cat to gro responsil	d that purs ons for reli- ons not reli- oned water offity for e-	cases which eases which eve the opt r, surface w ompliance	fOCD rule t may enda wator of lis ater, huma with any of	s and inger ability in beatth ther
	~			<u>OIL CON</u>	SERV.	ATION	DIVISI	<u> NC</u>	
Signoture: Josh Rus	50		pproved by	District Supervis	or:				
Title: HSR Coord	inator	1	eptoval Dat	e:		zpiration	Date:		
B-meil Address: jrusso@conchore	sources.com	C	onditions of	Approval:			Attached	. []	

Phone: 08/01/2010 Phone: * Attach Additional Sheets If Necessary



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	District I 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505	State of gy Minerals Oil Conser 1220 South Santa Fo	New Mex and Natura vation Div St. Franc e, NM 875	ico 1 Resources vision is Dr. 05	RE FE NMO	CEIV B 14 20 CD ART	ED Submit 2 Distric ESIA	Form C-141 evised October 10, 2003 Copies to appropriate t Office in accordance with Rule 116 on back side of form
	Release N	otificatio	n and Co	orrective	Action	1		
	Name of CompanyCOG Operating LLCAddress550 W. Texas, Suite 1300 Midland, TexaFacility NameSkelly Unit #611	s 79701	OPERA Contact Pa Telephone I Facility Typ	FOR t Ellis No. (432) 23 e Well	0-0077		al Report	Final Repor
	Surface Owner: Federal Mi	neral Owner				Lease N	lo. (API#	<i>t</i>) 30-015-36887
85	Ĭ	OCATIO	N OF REI	EASE	- 1740 - br - ar			
	Unit LetterSectionTownshipRangeFeet froI2217S31E238	m the North	/South Line SOUTH	Feet from th 990	e East/ I	West Line EAST	County	Eddy
124	Latitude N	1 32.853001°	[°] Longitud	e W 103.95	9150°			
		NATURE	OF REL	EASE				
	Type of Release: Produced Fluid Source of Release: Wellhead		Volume of Date and H 07/20/2010	Release 15 bl	ols ence	Volume F Date and 07/20/201	Recovered Hour of D .0	13 bbls iscovery 5:00a.m.
	Was Immediate Notice Given?	Not Required	If YES, To	Whom?				
	By Whom? Josh Russo		Date and H	our 3/15/10	4:59 p.m.			
	Was a Watercourse Reached?		If YES, Vo N/A	lume Impactii	ig the Wat	ercourse.		
1764) 1764)	If a Watercourse was Impacted, Describe Fully.*				8.1812			
	Describe Cause of Problem and Remedial Action Taken.* There was a small hole in the ¼ inch nipple coming off the	e pumping tee.	The defective	nipple has be	en replaced	d with a new	v stainless	steel nipple.
60	Describe Area Affected and Cleanup Action Taken.*							
S. C. M.	Majority of the spill stayed on the pad location and measur and submitted a work plan for approval. Tetra Tech super- excavations have been backfilled with clean soil. A closur	red approximate vised the remed re report was pre-	ely 60' x 110' liation of the separed and su	yards. Tetra ite and hauled bmitted to the	fech collect the impact NMOCD in the second	cted soil san ted soil to p and BLM fo	nples to de roper disp or review.	lineate the spill area osal. The open
	I hereby certify that the information given above is true and regulations all operators are required to report and/or file c public health or the environment. The acceptance of a C-1 should their operations have failed to adequately investigat or the environment. In addition, NMOCD acceptance of a federal, state, or local laws and/or regulations.	d complete to the ertain release no 41 report by the te and remediate C-141 report de	ne best of my otifications ar e NMOCD ma e contaminations of the second oes not relieve	knowledge and d perform cor arked as "Fina on that pose a e the operator	d understan rective act Report" d threat to gr of responsi	nd that purs ions for rele loes not reli round water ibility for co	uant to NM eases which eve the op , surface w ompliance	OCD rules and n may endanger erator of liability vater, human health with any other
	Signature:			<u>OIL CO</u>	NSERV	ATION	DIVISI	ON
	Printed Name: Ike Tavarez (Agent for Coc	\mathbf{i}	Approved by	District Super	visor:			
	Title: Project Manager		Approval Dat	2:		Expiration I	Date:	
50 M 20	E-mail Address: Ike.Tavarez@TetraTech.com Date: /- 2.5 - 11 Phone: (432) 682	2-4559	Conditions of	Approval:	Maya kilan yang		Attached	i 🔲
*	Attach Additional Sheets If Necessary							

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APPENDIX B

Water Well Data Average Depth to Groundwater (ft) COG - Skelly Unit #611 Eddy County, New Mexico

16 \$	South		30 Eas	t		16	South	3	31 East	t		16	South	32	2 East
	4	3	2	1	6	5	4	3	2	1	6	5	4	3 65	2
	9	10	11	12	7	8	9	10	11	12	7	8	9	10	11
7	16	15	14	13	18	17	16	15	14	13	18	17	16	15	14
0	21	22	23	24	19	20	21	22	23	24	19	20	21	22	23
9	28	27	26	25	30	29	28	27	26	25	30	29	28	27	26
2	33	34	35	36	31 290	32	33	34	35	36	31	32	33	34	35
17 \$	South		30 Eas	t		17	South	3	81 East	t		17	South	32	2 East
	4	3	2	1	6	5	4	3	2	1	6	5	4 82 Maliam	3 5175	2 60
	9	10	11	12	7	8	9	10	11	12	7	8	9	10	1170 88
7	16	15	14	13	18	17	16	15	14	13	18	17	16	15	14
0	21	22	23	24	19	20	21	22	23	24	19	20	21	22	23
9	28	27	26.	25	30	29	28	27	26	25	30 180 drv	29	28	27	26
2	33	34	35	36 .	31	32	33	34 271	35	36	31	32	33	34	35
18 \$	South		30 Eas	<u>.</u>		18	South	3	1 East			18 :	South	32	2 East
	4	3	2	1	6	5	4	3	2	1	6	5	4 65	3	2
	9	10	11	12	7	8	9	10	11	12 400	7 460	8	9	10	11
7	16	15	14	13	18	17	16	15	14 317	13	18	17	16 84	15	14
0	21	22	23	24	19	20	21	22	23	24	19	20 164	21	22 429	23
9	28	27	26	25	30	29	28	27	26	25	30	29	28	27	26
2	33	34	35	36	31	32	33	34	35	36	31	32	33	34	35

New Mexico State Engineers Well Reports

USGS Well Reports

Geology and Groundwater Conditions in Southern Eddy, County, NM

NMOCD - Groundwater Data

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Summary Report

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

Report Date: August 24, 2010

Work Order: 10081647

Project Location:	Eddy County, NM
Project Name:	COG/Skelly Unit #611
Project Number:	114-6400631

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
241366	AH-1 0-1'	soil	2010-08-11	00:00	2010-08-13
241367	AH-1 1-1.5'	soil	2010-08-11	00:00	2010-08-13
241368	AH-1 2-2.5'	soil	2010-08-11	00:00	2010-08-13
241369	AH-1 3-3.5'	soil	2010-08-11	00:00	2010-08-13
241370	AH-1 4-4.5'	soil	2010-08-11	00:00	2010-08-13
241371	AH-2 0-1'	soil	2010-08-11	00:00	2010-08-13
241372	AH-2 1-1.5'	soil	2010-08-11	00:00	2010-08-13
241373	AH-2 2-2.5'	soil	2010-08-11	00:00	2010-08-13
241374	AH-2 3-3.5'	soil	2010-08-11	00:00	2010-08-13
241375	AH-3 0-1'	soil	2010-08-11	00:00	2010-08-13
241376	AH-3 1-1.5'	soil	2010-08-11	00:00	2010-08-13
241377	AH-3 2-2.5'	soil	2010-08-11	00:00	2010-08-13
241378	AH-3 3-3.5'	soil	2010-08-11	00:00	2010-08-13
241379	AH-2 4-4.5'	soil	2010-08-11	00:00	2010-08-13
241380	AH-2 5-5.5'	soil	2010-08-11	00:00	2010-08-13
241381	AH-3 4-4.5'	soil	2010-08-11	00:00	2010-08-13
		B	ſEX	TPH DRO - NEW	TPH GRO
	Benzene	Toluene	Ethylbenzene Xylene	DRO	GRO

		1	DIEA		IFH DRO-NEW (IFRGRO
	Benzene	Toluene	Ethylbenzene	Xylene	DRO	GRO
Sample - Field Code	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
241366 - AH-1 0-1'	< 0.0200	< 0.0200	< 0.0200	< 0.0200	<50.0	<2.00
241371 - AH-2 0-1'	< 0.0200	< 0.0200	< 0.0200	< 0.0200	156	6.92
241375 - AH-3 0-1'		•			<50.0	<2.00

Sample: 241366 - AH-1 0-1'

Param	Flag	Result	Units	RL
Chloride		5590	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.

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Report Date: Augus	t 24, 2010	Work Order: 10081647	Page	Number: 2 of 3
Sample: 241367 -	AH-1 1-1.5'			
Param	Flag	Result	Units	RL
Chloride		297	mg/Kg	4.00
Sample: 241368 -	AH-1 2-2.5'			
Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00
Sample: 241369 -	AH-1 3-3.5'			
Param	Flag	Result	Units	RL
Chloride		208	mg/Kg	4.00
Chloride Sample: 241371 -	AH-2 0-1'	<200	mg/Kg	4.00
Param	Flag	Result	Units	RL
Chloride	-	8160	mg/Kg	4.00
Sample: 241372 -	AH-2 1-1.5'			
Param	Flag	Result	Units	RL
Chloride		251	mg/Kg	4.00
Sample: 241373 -	AH-2 2-2.5'		,	
Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00
Sample: 241374 -	AH-2 3-3.5'			
Param	Flag	Result	Units	RL

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

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Report Date: Augu	st 24, 2010	Work Order: 10081647	Page	Number: 3 of 3
Sample: 241375 -	- AH-3 0-1'			
Param	Flag	Result	Units	RL
Chloride		6630	mg/Kg	4.00
Sample: 241376 -	- AH-3 1-1.5'			
Param	Flag	Result	Units	RL
Chloride	······	487	mg/Kg	4.00
Sample: 241377 -	· AH-3 2-2.5'			
Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00
Sample: 241378 -	· AH-3 3-3.5'			
Sample: 241378 -	· AH-3 3-3.5'			
Sample: 241378 - Param Chloride	• AH-3 3-3.5' Flag	Result <200	Units mg/Kg	RL 4.00
Sample: 241378 - Param Chloride Sample: 241379 -	• AH-3 3-3.5' Flag • AH-2 4-4.5'	Result <200	Units mg/Kg	RL 4.00
Sample: 241378 - Param Chloride Sample: 241379 - Param	• AH-3 3-3.5 ' Flag • AH-2 4-4.5' Flag	Result <200 Result	Units mg/Kg Units	RL 4.00 RL
Sample: 241378 - Param Chloride Sample: 241379 - Param Chloride	• AH-3 3-3.5' Flag • AH-2 4-4.5' Flag	Result <200 Result <200	Units mg/Kg Units mg/Kg	RL 4.00 RL 4.00
Sample: 241378 - Param Chloride Sample: 241379 - Param Chloride Sample: 241380 -	• AH-3 3-3.5' Flag • AH-2 4-4.5' Flag • AH-2 5-5.5'	Result <200 Result <200	Units mg/Kg Units mg/Kg	RL 4.00 RL 4.00
Sample: 241378 - Param Chloride Sample: 241379 - Param Chloride Sample: 241380 - Param	• AH-3 3-3.5' Flag • AH-2 4-4.5' Flag • AH-2 5-5.5' Flag	Result <200 Result <200	Units mg/Kg Units mg/Kg Units	RL 4.00 RL 4.00
Sample: 241378 - Param Chloride Sample: 241379 - Param Chloride Sample: 241380 - Param Chloride	• AH-3 3-3.5' Flag • AH-2 4-4.5' Flag • AH-2 5-5.5' Flag	Result <200 Result <200 Result 220	Units mg/Kg Units mg/Kg Units mg/Kg	RL 4.00 RL 4.00 RL 4.00
Sample: 241378 - Param Chloride Sample: 241379 - Param Chloride Sample: 241380 - Param Chloride Sample: 241381 -	• AH-3 3-3.5' Flag • AH-2 4-4.5' Flag • AH-2 5-5.5' Flag • AH-3 4-4.5'	Result <200 Result <200 Result 220	Units mg/Kg Units mg/Kg Units mg/Kg	RL 4.00 RL 4.00 RL 4.00
Sample: 241378 - Param Chloride Sample: 241379 - Param Chloride Sample: 241380 - Param Chloride Sample: 241381 - Param	AH-3 3-3.5' Flag AH-2 4-4.5' Flag AH-2 5-5.5' Flag AH-3 4-4.5' Flag	Result <200 Result <200 Result 220	Units mg/Kg Units mg/Kg Units mg/Kg	RL 4.00 RL 4.00 RL 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.

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	6701 Aberdeen Avenue, Suite 9 200 East Sunset Road, Suite E 5002 Basin Street, Suite A1 6015 Harris Parkway, Suite 110	Lubbock, Texas 79424 El Paso, Texas 79922 Midland, Texas 79703 Ft, Worth, Texas 76132 E-Mail: lab@t	800 • 378 • 1296 888 • 588 • 3443 traceanalysis.com	806 • 794 • 1296 915 • 585 • 3443 432 • 689 • 6301 817 • 201 • 5260	FAX 806•794•1298 FAX 915•585•4944 FAX 432•689•6313	
		Cer	tificatio	ons		
WE	BENC: 237019	HUB: NCTRCA	175243974 WFWB38	3100-86536 444Y0909	DBE:	VN 20657
		NELAP	Certif	ications	3	. · · ·
Lubbock:	T104704219-08-TX LELAP-02003 Kansas E-10317	El Paso:	T104704 LELAP-	221-08-TX 02002	Midlar	nd: T104704392-08-TX

Analytical and Quality Control Report

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

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Report Date: August 24, 2010

Work Order: 10081647

Project Location:Eddy County, NMProject Name:COG/Skelly Unit #611Project Number:114-6400631

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
241366	AH-1 0-1'	soil	2010-08-11	00:00	2010-08-13
241367	AH-1 1-1.5'	soil	2010-08-11	00:00	2010-08-13
241368	AH-1 2-2.5'	soil	2010-08-11	00:00	2010-08-13
241369	AH-1 3-3.5'	soil	2010-08-11	00:00	2010-08-13
241370	AH-1 4-4.5'	soil	2010-08-11	00:00	2010-08-13
241371	AH-2 0-1'	soil	2010-08-11	00:00	2010-08-13
241372	AH-2 1-1.5'	soil	2010-08-11	00:00	2010-08-13
241373	AH-2 2-2.5'	soil	2010-08-11	00:00	2010-08-13
241374	AH-2 3-3.5'	soil	2010-08-11	00:00	2010-08-13
241375	AH-3 0-1'	soil	2010-08-11	00:00	2010-08-13

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
241376	AH-3 1-1.5'	soil	2010-08-11	00:00	2010-08-13
241377	AH-3 2-2.5'	soil	2010-08-11	00:00	2010-08-13
241378	AH-3 3-3.5'	soil	2010-08-11	00:00	2010-08-13
241379	AH-2 4-4.5'	soil	2010-08-11	00:00	2010-08-13
241380	AH-2 5-5.5'	soil	2010-08-11	00:00	2010-08-13
241381	AH-3 4-4.5'	soil	2010-08-11	00:00	2010-08-13

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

Michael Alp

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

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

Page 2 of 20

Case Narrative

Samples for project COG/Skelly Unit #611 were received by TraceAnalysis, Inc. on 2010-08-13 and assigned to work order 10081647. Samples for work order 10081647 were received intact at a temperature of 18.0 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	62422	2010-08-20 at 12:00	72835	2010-08-21 at 17:17
Chloride (Titration)	SM 4500-Cl B	62339	2010-08-18 at 08:51	72750	2010-08-19 at 15:56
Chloride (Titration)	SM 4500-Cl B	62374	2010-08-19 at 08:52	72751	2010-08-19 at 15:57
Chloride (Titration)	SM 4500-Cl B	62375	2010-08-19 at 08:53	72752	2010-08-19 at 15:57
TPH DRO - NEW	S 8015 D	62398	2010-08-19 at 10:46	72775	2010-08-19 at 10:46
TPH GRO	S 8015 D	62422	2010-08-20 at 12:00	72808	2010-08-21 at 17:46

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

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 10081647 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.

Samples received on ice.

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

Report Date: August 24, 2010 114-6400631

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Analytical Report

Sample: 241366 - AH-1 0-1'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland BTEX 72835 62422		Analytical Date Analy Sample Pre	Method: zed: paration:	S 8021B 2010-08-21 2010-08-20		Prep Met Analyzed Prepared	hod: S 5035 By: AG By: AG
			RL					
Parameter	Fla	g	Result	,	Units	Γ	Dilution	RL
Benzene			< 0.0200)	mg/Kg		1	0.0200
Toluene			< 0.0200) .	mg/Kg		1	0.0200
Ethylbenzene	;		< 0.0200	1	mg/Kg		1	0.0200
Xylene			< 0.0200)	mg/Kg		. 1	0.0200
Surrogate		Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotolue	ene (TFT)		1.26	mg/Kg	1	2.00	63	52.8 - 137
4-Bromofluor	obenzene (4-BFB)		1.12	mg/Kg	1	2.00	56	38.4 - 157

Sample: 241366 - AH-1 0-1'

Chloride		5590	mg/Kg	100	4.00
Parameter	Flag	RL Result	Units	Dilution	RL
Prep Batch:	62339	Sample Preparation:	2010-08-19	Prepared By:	AR
QC Batch:	72750	Date Analyzed:	2010-08-19	Analyzed By:	AR
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Laboratory:	Midland				

Sample: 241366 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical I	Method: S 8015 D	Prep Method:	N/A
QC Batch:	72775	Date Analy	zed: 2010-08-19	Analyzed By:	kg
Prep Batch:	62398	Sample Pre	paration: 2010-08-19	Prepared By:	kg
		RL			
Parameter	Flag	Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Report Date 114-6400631 	Report Date: August 24, 2010 14-6400631			Work Order: 10081647 COG/Skelly Unit #611				Page Number: 5 of 20 Eddy County, NM		
Surrogate	Flag	Result	Units	Dilut	ion	Spike Amount	Percent Recovery	Recov Limi	/ery its	
n-Tricosane		98.6	mg/Kg	1		100	99	70 - 1	130	
Sample: 24	1366 - AH-1 ()-1'								
Laboratory:	Midland									
Analysis:	TPH GRO		Analytical	l Method:	S 8015 D		Prep Met	hod: S 5	035	
QC Batch:	72808		Date Ana	lyzed:	2010-08-21		Analyzed	By: AG	t T	
Prep Batch:	62422		Sample P	reparation:	2010-08-20)	Prepared	By: AG	; ;	
			RL							
Parameter	F	lag	Result		Units		Dilution		RL	
GRO			<2.00		mg/Kg		1	2	2.00	
						Spike	Percent	Recov	ery	
Surrogate		Flag	Result	Units	Dilution	Amount	Recovery	Limi	\mathbf{ts}	
Trifluorotolu	ene (TFT)		1.40	mg/Kg	1	2.00	70	48.5 -	152	
4-Bromofluor	robenzene (4-BF	Έ)	1.22	mg/Kg	1	2.00	61	42 - 1	59	
Sample: 24 Laboratory: Analysis: QC Batch: Prep Batch:	1367 - AH-1 Midland Chloride (Titr 72750 62339	-1.5' ation)	Analy Date J Sampl	tical Method Analyzed: le Preparatio	: SM 45 2010-0 n: 2010-0	00-Cl B 8-19 8-19	Prep M Analyza Prepare	ethod: N ed By: A ed By: A	V/A AR AR	
			RL							
Parameter	F	ag	Result		Units		Dilution		RL	
Chloride		······································	297		mg/Kg		50	4	1.00	
Sample: 24 Laboratory: Analysis: QC Batch:	1368 - AH-1 2 Midland Chloride (Titr 72750	2-2.5' ation)	Analy Date 4	tical Method Analyzed:	: SM 45 2010-0	00-Cl B 8-19	Prep M Analyze	ethod: N 2d By: A	I/A AR	
Prep Batch:	62339		Sampl	e Preparatio	n: 2010-0	8-19	Prepare	ed By: A	R	
-			RL		.				~ ~	
Parameter	Fl	ag	Result		Units		Dilution		RL	
Chloride			$<\!200$		mg/Kg		50	4	1.00	

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114-6400631		COG/Skelly Uni	Page Number: 6 of 20 Eddy County, NM		
Sample: 24	1369 - AH-1 3-3.5'		x		
Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	72750	Date Analyzed:	2010-08-19	Analyzed By:	\mathbf{AR}
Prep Batch:	62339	Sample Preparation:	2010-08-19	Prepared By:	AR
		RL			
	Floor	Result	Units	Dilution	\mathbf{RL}
Parameter	Tiag	roobtiit	-		
Parameter Chloride	Tiag	208	ng/Kg	50	4.00
Parameter Chloride Sample: 24 Laboratory:	1370 - AH-1 4-4.5' Midland	208	ng/Kg	50	4.00
Parameter Chloride Sample: 24 Laboratory: Analysis:	1370 - AH-1 4-4.5' Midland Chloride (Titration)	208 Analytical Method:	ng/Kg SM 4500-Cl B	50 Prep Method:	4.00 N/A
Parameter Chloride Sample: 24 Laboratory: Analysis: QC Batch:	1370 - AH-1 4-4.5' Midland Chloride (Titration) 72751	208 Analytical Method: Date Analyzed:	ng/Kg SM 4500-Cl B 2010-08-19	50 Prep Method: Analyzed By:	4.00 N/A AR
Parameter Chloride Sample: 24 Laboratory: Analysis: QC Batch: Prep Batch:	1370 - AH-1 4-4.5' Midland Chloride (Titration) 72751 62374	208 Analytical Method: Date Analyzed: Sample Preparation:	Mg/Kg SM 4500-Cl B 2010-08-19 2010-08-19	50 Prep Method: Analyzed By: Prepared By:	4.00 N/A AR AR
Parameter Chloride Sample: 24 Laboratory: Analysis: QC Batch: Prep Batch:	1370 - AH-1 4-4.5' Midland Chloride (Titration) 72751 62374	208 Analytical Method: Date Analyzed: Sample Preparation: RL	M 4500-Cl B 2010-08-19 2010-08-19	50 Prep Method: Analyzed By: Prepared By:	4.00 N/A AR AR
Parameter Chloride Sample: 24 Laboratory: Analysis: QC Batch: Prep Batch: Parameter	1370 - AH-1 4-4.5' Midland Chloride (Titration) 72751 62374 Flag	208 Analytical Method: Date Analyzed: Sample Preparation: RL Result	mg/Kg SM 4500-Cl B 2010-08-19 2010-08-19 Units	50 Prep Method: Analyzed By: Prepared By: Dilution	4.00 N/A AR AR RL

Sample: 241371 - AH-2 0-1'

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Laboratory: Midland							
Analysis: BTEX		Analytical	Method:	S 8021B		Prep Meth	nod: S 5035
QC Batch: 72835		Date Analy	/zed:	2010-08-21		Analyzed	By: AG
Prep Batch: 62422		Sample Pre	eparation:	2010-08-20		Prepared	By: AG
		RI	J				
Parameter	Flag	Result	Ŀ	Units	D	ilution	RL
Benzene		< 0.0200)	mg/Kg		1	0.0200
Toluene		< 0.0200)	mg/Kg		1	0.0200
Ethylbenzene		< 0.0200)	mg/Kg		1	0.0200
Xylene	······	< 0.0200)	mg/Kg		1	0.0200
					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)	· · · · · · · · · · · · · · · · · · ·	1.07	mg/Kg	1	2.00	54	52.8 - 137
4-Bromofluorobenzene (4-B	FB)	0.947	mg/Kg	1	2.00	47	38.4 - 157

Report Date 114-6400631	:: August 24, 20	010	Work Order: 100816 COG/Skelly Unit #6			Page Number: 7 of 20 Eddy County, NM		
Sample: 24	1371 - AH-2	0-1'						
Laboratory:	Midland							
Analysis:	Chloride (Titi	ation)	Analytica	al Method: Sl	M 4500-Cl B	Prep M	ethod: N/A	
QC Batch:	C Batch: 72751		Date Ana	alyzed: 20	010-08-19	Analyze	ed By: AR	
Prep Batch:	62374		Sample F	Preparation: 20	010-08-19	Prepare	d By: AR	
			RL					
Parameter	Flag		Result Units		Dilution	RL		
Chloride			8160	mg/	′Kg	100	4.00	
Sample: 24	1371 - AH-2	0-1'						
Laboratory	Midland							
Analysis	TPH DRO - N	JEW	Analytic	al Method	5 8015 D	Prep M	ethod N/A	
OC Batch	72775		Date Analyzed: 2010-08-19			Analyzed By: kg		
Prep Batch:	62398		Sample	Preparation: 2	2010-08-19	Prepare	d By: kg	
1			F	r		1	<i>,</i> 0	
			\mathbf{RL}					
Parameter	F	lag	Result	Ui	nits	Dilution	RL	
DRO			156	mg/	/Kg	1	50.0	
					Spike	Percent	Recovery	
Surrogate	\mathbf{Flag}	\mathbf{Result}	Units	Dilution	Amount	Recovery	Limits	
n-Tricosane		109	mg/Kg	1	100	109	70 - 130	
Sample: 24	1371 - AH-2	0-1'						
Laboratory:	Midland			·				
Analysis:	TPH GRO		Analytical M	ethod: S 801	5 D	Prep Met	hod: S 5035	
QC Batch:	72808		Date Analyze	ed: 2010-	08-21	Analyzed	By: AG	
Prep Batch:	62422		Sample Prep	aration: 2010-	08-20	Prepared	By: AG	
			RL					
Parameter	F	lag	Result	U	nits	Dilution	RL	
GRO			6.92	mg/	′Kg	1	2.00	

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.15	mg/Kg	1	2.00	58	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.39	mg/Kg	1	2.00	70	42 - 159

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Report Date 114-6400631	e: August 24, 2010	Work Order: 1 COG/Skelly Un	0081647 it #611	Page Number: Eddy Count	8 of 20 ty, NM
Sample: 24	1372 - AH-2 1-1.5'				
Laboratory:	Midland			×	
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	72751	Date Analyzed:	2010-08-19	Analyzed By:	\mathbf{AR}
Prep Batch:	62374	Sample Preparation	: 2010-08-19	Prepared By:	AR
		RL			
Parameter	Flag	Result	Units	Dilution	RL
Chloride		251	mg/Kg	50	4.00
Samples 24	1979 ALI 9 9 9 K)				
Sample: 24	1373 - An-2 2-2.5				
Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	72751	Date Analyzed:	2010-08-19	Analyzed By:	AR
Prep Batch:	62374	Sample Preparation	: 2010-08-19	Prepared By:	AR
		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00
Sample: 24 Laboratory: Analysis: OC Batabi	1374 - AH-2 3-3.5' Midland Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Datch: Prop Batch:	62374	Sample Preparation	· 2010-08-19	Prepared By:	AR
r iep Daten.	02074	pample i reparation	. 2010-08-19	r repated by.	AIL
	ורו	RL	Tinita	Dilution	זס
Devenenter		nesuu	Units	DITUTION	nL
Parameter Chlorida	Flag	226	mg/Kg	50	4.00

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Chloride		6630	mg/Kg	100	4.00
Parameter	Flag	RL Result	Units	Dilution	RL
Prep Batch:	62374	Sample Prepar	ration: 2010-08-19	Prepared By:	AR
QC Batch:	72751	Date Analyzed	l: 2010-08-19	Analyzed By:	AR
Amplusio	Chlastida (Titastian)	Applution Mo	thad SM 4500 CI D	Prop Mathad	NI/A

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Report Date: 114-6400631	August 24, 20	10	W CC	/ork Order: DG/Skelly U	10081647 Jnit #611		Page Nu Eddy	mber: 9 of 2 7 County, NM
Sample: 241	375 - AH-3 0	-1'						
Laboratory: Analysis: QC Batch: Prep Batch:	Midland TPH DRO - N 72775 62398	EW	Analy Date Samp	vtical Metho Analyzed: le Preparat	od: S 8015 2010-08 ion: 2010-08	D 19 19	Prep M Analyze Prepare	ethod: N/A ed By: kg ed By: kg
			\mathbf{RL}					
Parameter	Fl	ag	Result		Units		Dilution	RI
DRO			<50.0		mg/Kg		1	50.0
Sumorete	Flor	Popult	Ilnita	Dilut	ion A	Spike	Percent	Recovery
n Tricosano	r iag		 ma/Ka	1		100		70 130
Analysis: QC Batch: Prep Batch:	TPH GRO 72808 62422		Analytical Date Anal Sample Pr	Method: yzed: eparation:	S 8015 D 2010-08-21 2010-08-20		Prep Met Analyzed Prepared	hod: S 5033 By: AG By: AG
1			DI	X			ľ	U
Parameter	FL	ag	Result		Units		Dilution	RI
GRO			<2.00		mg/Kg		1	2.00
a ,		T. I.		TT •,		Spike	Percent	Recovery
Surrogate		Flag	Result	Units	Dilution	Amount	Recovery	
4-Bromofluor	benzene (4-BF	B)	2.17	mg/Kg mg/Kg	1	2.00 2.00	108 94	40.0 - 102 42 - 159
Sample: 241 Laboratory: Analysis: QC Batch: Prep Batch:	376 - AH-3 1 Midland Chloride (Titra 72751 62374	-1.5' ation)	Analyt Date A Sample	ical Methoc Analyzed: e Preparatic	l: SM 4500 2010-08- on: 2010-08-	-Cl B 19 19	Prep M Analyze Prepare	ethod: N/A ed By: AR d By: AR
Parameter	កា	2.0	RL Bosult		Unite		Dilution	ъ
Chlorido	F I	ag	1005011		mg/Vg		50	
omoride			401		1116/ 1X8			4.00

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1377 - AH-3 2-2.5' Midland Chloride (Titration) 72751 62274	Analytical Method:			
Midland Chloride (Titration) 72751 60274	Analytical Method:			
02374	Date Analyzed: Sample Preparation:	SM 4500-Cl B 2010-08-19 2010-08-19	Prep Method: Analyzed By: Prepared By:	N/A AR AR
Flag	RL Besult	Units	Dilution	RL
0	<200	mg/Kg	50	4.00
72751 62374	Date Analyzed: Sample Preparation:	2010-08-19 2010-08-19	Analyzed By: Prepared By:	AR AR
62374	Sample Preparation:	2010-08-19	Prepared By:	AR
Flag	RL Result	Units	Dilution	RL
1379 - AH-2 4-4.5'				
1379 - AH-2 4-4.5' Midland Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
1379 - AH-2 4-4.5' Midland Chloride (Titration) 72751	Analytical Method: Date Analyzed:	SM 4500-Cl B 2010-08-19 2010-08-10	Prep Method: Analyzed By:	N/A AR
1379 - AH-2 4-4.5' Midland Chloride (Titration) 72751 62374	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2010-08-19 2010-08-19	Prep Method: Analyzed By: Prepared By:	N/A AR AR
1379 - AH-2 4-4.5' Midland Chloride (Titration) 72751 62374 Flag	Analytical Method: Date Analyzed: Sample Preparation: RL Result	SM 4500-Cl B 2010-08-19 2010-08-19 Units	Prep Method: Analyzed By: Prepared By: Dilution	N/A AR AR RL
	Flag 1378 - AH-3 3-3.5' Midland Chloride (Titration) 72751 62374 Flag	FlagResult<200	FlagResultUnits<200	FlagResultUnitsDilution<200

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Report Date: 114-6400631	August 2	4, 2010	Work Ord COG/Skell	ler: 10081647 ly Unit #611	F	age Number: 11 Eddy Count	1 of 20 y, NM
Sample: 241	1381 - AH	I-3 4-4.5'					
Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride 72752 62375	(Titration)	Analytical Me Date Analyzec Sample Prepa:	thod: SM 4500-Cl l d: 2010-08-19 ration: 2010-08-19	В	Prep Method: Analyzed By: Prepared By:	N/A AR AR
Danamatan		Flore	RL	Unita	Dilutio	n	рī
Chloride		r lag	230	mg/Kg	5	0	4.00
Method Bla QC Batch: Prep Batch:	nnk (1) 72750 62339	QC Batch: 72750	Date Analyzed: QC Preparation:	2010-08-19 2010-08-18		Analyzed By: Prepared By:	AR AR
Parameter		Flag	M	DL ult	Units		RL
Chloride			<2	.18	mg/Kg	· · · · · · · · · · · · · · · · · · ·	4
Method Bla	ank (1)	QC Batch: 72751					
QC Batch: Prep Batch:	72751 62374		Date Analyzed: QC Preparation:	2010-08-19 2010-08-19		Analyzed By: Prepared By:	AR AR
			M	DL			
Parameter		Flag	Res	ult	Units		RL
Chloride			<2	.18	mg/Kg		4
Method Bla	ank (1)	QC Batch: 72752					
QC Batch: Prep Batch:	72752 62375		Date Analyzed: QC Preparation:	2010-08-19 2010-08-19		Analyzed By: Prepared By:	AR AR
Downworten		Ele a	M	DL	Unita		τq
r arameter Chlorido		r iag		18	Umts		

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Report Date: August 114-6400631	24, 2010	W CC	ork Ord DG/Skell	er: 10081647 y Unit #611		Page Nu Edd	mber: 12 of 20 ly County, NM	
Method Blank (1)	QC Batch: 72775							
QC Batch: 72775 Prep Batch: 62398		Date Ana QC Prep	alyzed: aration:	2010-08-19 2010-08-19		Anal Prep	yzed By: kg ared By: kg	
			M	DL				
Parameter	Flag	Result				Units		
			<u></u>	1.0	11	ig/ itg	50	
Surrogate Fla	ag Result	Units	Γ	Dilution	Spike Amount	Percent Recovery	Recovery Limits	
n-Tricosane	96.4	mg/Kg		1	100	96	70 - 130	
Method Blank (1) QC Batch: 72808 Prep Batch: 62422	QC Batch: 72808	Date Ana QC Prepa	lyzed: aration:	2010-08-21 2010-08-20		Analy Prepa	zed By: AG red By: AG	
Parameter	Flag		M] Res	DL ult	Т	Inits	RL.	
GRO	1 mg		<1	.65	m	ng/Kg	2	
Surrogate	Flag	Result	Unit	s Diluti	Spike on Amou	e Percent nt Recovery	Recovery Limits	
Trifluorotoluene (TFT 4-Bromofluorobenzene) (4-BFB)	2.00 1.70	mg/K mg/K	.g 1 .g 1	2.00 2.00	100 85	67.6 - 150 52.4 - 130	
Method Blank (1) QC Batch: 72835 Prep Batch: 62422	QC Batch: 72835	Date Ana QC Prepa	lyzed: aration:	2010-08-21 2010-08-20		Analy Prepa	rzed By: AG ared By: AG	
Paramotor	Flag		R	MDL		Unite	BL	
Benzene	<u> </u>		<0	.0150	r	ng/Kg	0.02	
Toluene Ethylbenzene Xylene			<0.0 <0 <0.0	00950 .0106 00930	r r r	ng/Kg ng/Kg ng/Kg	0.02 0.02 0.02	
Surrogate	Flag	Result	Unit	s Diluti	Spike on Amour	e Percent nt Recovery	Recovery Limits	
Trifluorotoluene (TFT 4-Bromofluorobenzene) (4-BFB)	1.74 1.50	mg/K	g 1	2.00	87 75	66.6 - 122 55.4 - 132	

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Report Date: August 24, 201 114-6400631	10	C	Vork Ord OG/Skel	er: 1008164 ly Unit #61	7 1		Page]	Number: Eddy Co	13 of 2 unty, NM
Laboratory Control Spike	e (LCS-1)								
QC Batch: 72750 Prep Batch: 62339		Date An QC Prep	alyzed: paration:	2010-08-19 2010-08-18	1		Ar Pr	alyzed E epared B	y: AR y: AR
Param	LA	CS	Unito	Dil	Spike	Ma	trix	Dog	Rec.
Chloride	95	3.4 r	ng/Kg	1	.100		<u>sun 1</u> 2.18	$\frac{100.}{93}$	85 - 11
Percent recovery is based on	the spike result.	. RPD is t	based on	the spike and	d spike duj	plicate r	esult.		
D	LCSD	T T •/	D.1	Spike	Matrix	D	Rec.		RPI
Param Chlorida	Result	Units		Amount	Result	$\frac{\text{Rec.}}{102}$	Limit		
Percent recovery is based on	the spike result.	$\frac{\text{mg/Kg}}{\text{RPD is } t}$	based on	the spike and	d spike du	olicate r	esult.	9	20
Prep Batch: 62374		QC Prep	aration:	2010-08-19			Pr	epared B	y: AF
D	LO		Tinita	וית	Spike	Ma	trix	· ·	Rec.
Chloride		$\frac{5010}{72}$ r	Units	<u>1</u>	Amount		$\frac{\text{suit}}{18}$	07	$\frac{\text{Limit}}{85 - 11}$
Percent recovery is based on	the spike result.	RPD is t	based on	the spike and	d spike du	olicate r	esult.		00 11
	LCSD			Spike	Matrix		Rec.		RPI
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limi
Chloride Percent recovery is based on t	102 the spike result	mg/Kg RPD is b	l ased on t	100	$\frac{<2.18}{1}$	<u> </u>	85 - 115	5	20
recent recovery is based on	the spike result.		aseu on	the spike and	i spike duj	Jicate I	coure.		
Laboratory Control Spike	(LCS-1)								
QC Batch: 72752 Prep Batch: 62375		Date An QC Prep	alyzed: aration:	2010-08-19 2010-08-19			An Pre	alyzed B epared B	y: AR y: AR
_		CS	~~~		Spike	Ma	trix		Rec.
Param	Res	sult	Units	$\frac{\text{Dil.}}{1}$	Amount	Rei	sult R	ec.	Limit
Percent recovery is based on t	the spike result.	RPD is b	ased on t	the spike and	1 spike dut	 olicate r	esult.	91	00 - 11
-	LCSD			Spike	Matrix		Rec.		RPE
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limi
	101	172	-1	100	.0 10	104	05 115	-	00

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Report Date: August 114-6400631	24, 2010		(Work C COG/SI	order: 1008 celly Unit #	1647 ¢611	•		Page Nu Ed	umber: dy Cou	14 of 20 nty, NM
Laboratory Contro	l Spike (LC	CS-1)									
QC Batch: 72775 Prep Batch: 62398			Date A QC Pr	analyzec eparatic	l: 2010-0 on: 2010-0	8-19 8-19			Ana Prej	lyzed E pared B	By: kg By: kg
Descent			5	TT *4	D.1	Spike	Mat	trix	D	·	Rec.
Param DRO				$\frac{\text{Onits}}{n\sigma/K\sigma}$	<u> </u>	Amount 250	Res	$\frac{1}{45}$	$\frac{\text{Rec.}}{104}$	57.4	Jimit
Dancont recovery is hu	and on the a	miles nogult		hood o	n the spile	200	<u></u>	1.0	104	01.4	- 155.4
Percent recovery is ba	sed on the s	pike result.	RPD IS	based o	n the spike	and spike d	uplicate	e result.			
_		LCSD			Spike	Matrix		Re	ec.		RPD
Param		Result	Units	Dil.	Amount	Result	Rec.	Lir	nit	RPD	Limit
DRO		281	mg/Kg	1	250	<14.5	112	57.4 -	133.4	7	20
Percent recovery is ba	sed on the s	pike result.	RPD is	based o	n the spike	and spike d	uplicate	e result.			
	LCS	LCSD				Spike	\mathbf{L}	\mathbf{CS}	LCSD	I	Rec.
Surrogate	Result	Result	U	nits	Dil.	Amount	R	ec.	Rec.		Limit
					-4	100					THE REAL PROPERTY OF THE REAL PROPERTY OF THE REAL PROPERTY OF
n-Tricosane Laboratory Contro QC Batch: 72808	116 I Spike (LC	125 CS-1)	m Date A	g/Kg nalyzed:	2010-08	100	1	16	125 Analy	vzed By	70 - 130 /: AG
n-Tricosane Laboratory Contro QC Batch: 72808 Prep Batch: 62422	116 l Spike (LC	125 CS-1)	m Date A QC Pre	g/Kg nalyzed: paratio	1 2010-08 n: 2010-08	100 3-21 3-20	1	16	125 Analy Prepa	yzed By ared By	70 - 130 7: AG 7: AG
n-Tricosane Laboratory Contro QC Batch: 72808 Prep Batch: 62422	116 l Spike (LC	125 CS-1)	m Date A QC Pre	g/Kg nalyzed paration	1 2010-08 n: 2010-08	-21 -20 Spike	Ma	16 trix	125 Analy Prepa	yzed By ared By	70 - 130 /: AG /: AG Bec
n-Tricosane Laboratory Contro QC Batch: 72808 Prep Batch: 62422 Param	116 I Spike (LC	125 CS-1) LCS Resu	m Date A QC Pre	g/Kg nalyzed: paration Units	1 2010-08 n: 2010-08 Dil.	-21 -20 Spike Amount	1 Ma Re	trix sult	125 Analy Prepa Rec.	yzed By ared By	70 - 130 7: AG 7: AG Rec. Limit
n-Tricosane Laboratory Contro QC Batch: 72808 Prep Batch: 62422 Param GRO	116 l Spike (LC	125 CS-1) LCS Resu 16.0	m Date A QC Pre	g/Kg nalyzed: paration Units ng/Kg	1 2010-08 n: 2010-08 Dil. 1	100 3-21 3-20 Spike <u>Amount</u> 20.0	Ma Re <1	trix sult .65	125 Analy Prepa Rec. 80	yzed By ared By	70 - 130 7: AG 7: AG Rec. Limit 9 - 95.4
n-Tricosane Laboratory Contro QC Batch: 72808 Prep Batch: 62422 Param GRO Percent recovery is ba	116 I Spike (LC sed on the s	125 CS-1) LCS Resu 16.0 pike result.	m Date A QC Pre S Ilt P r RPD is	g/Kg nalyzed paration Units ng/Kg based o	1 2010-08 n: 2010-08 Dil. 1 n the spike	Spike Amount 20.0 and spike d	1 Ma Re <1 uplicate	trix sult 65 result.	125 Analy Prepa Rec. 80	yzed By ared By 1 69.	70 - 130 7: AG 7: AG Rec. Limit 9 - 95.4
n-Tricosane Laboratory Contro QC Batch: 72808 Prep Batch: 62422 Param GRO Percent recovery is ba	116 I Spike (LC sed on the s	125 CS-1) LCS Resu 16.0 pike result.	m Date A QC Pre S Ilt RPD is	g/Kg nalyzed paration Units ng/Kg based o	1 2010-08 n: 2010-08 Dil. 1 n the spike	3-21 Spike Amount 20.0 and spike d	Ma Re <1 uplicate	trix sult .65 result.	125 Analy Prepa Rec. 80	yzed By ared By 1 69.	70 - 130 7: AG 7: AG Rec. Limit 9 - 95.4
n-Tricosane Laboratory Control QC Batch: 72808 Prep Batch: 62422 Param GRO Percent recovery is ba Param	116 I Spike (LC sed on the s	125 CS-1) LCS Resu 16.0 pike result. LCSD Result	m Date A QC Pre dlt RPD is Units	g/Kg nalyzed paration Units ng/Kg based o Dil	1 2010-08 n: 2010-08 Dil. 1 n the spike Spike Amount	100 Spike Amount 20.0 and spike d Matrix Result	Ma Re <1 uplicate	trix sult .65 result. Re	Analy Prepa Rec. 80 ec. nit	yzed By ared By 69.	70 - 130 7: AG 7: AG Rec. Limit 9 - 95.4 RPD Limit
n-Tricosane Laboratory Contro QC Batch: 72808 Prep Batch: 62422 Param GRO Percent recovery is ba Param GRO	116 I Spike (LC sed on the s	125 CS-1) LCS Resu 16.0 pike result. LCSD Result 16.7	m Date A QC Pre S Ilt PD is Units mg/Kg	g/Kg nalyzed paration ng/Kg based o Dil. 1	1 2010-08 n: 2010-08 Dil. 1 n the spike Spike Amount 20.0	Spike Amount 20.0 and spike d Matrix Result <1.65	Ma Re: <1 uplicate Rec. 84	trix sult 65 result. Re Lin 69.9	Analy Prepa Rec. 80 ec. nit - 95.4	yzed By ared By 69. RPD 4	70 - 130 7: AG 7: AG Rec. Limit 9 - 95.4 RPD Limit 20
n-Tricosane Laboratory Control QC Batch: 72808 Prep Batch: 62422 Param GRO Percent recovery is ba Param GRO Percent recovery is ba	116 I Spike (LC sed on the s	125 CS-1) LCS Resu 16.0 pike result. LCSD Result 16.7 pike result.	Date At QC Pre dilt RPD is <u>Units</u> RPD is	g/Kg nalyzed paration Units ng/Kg based o Dil. 1 based o	1 2010-08 n: 2010-08 Dil. 1 n the spike Spike Amount 20.0 n the spike	Spike Amount 20.0 and spike d Matrix Result <1.65 and spike d	Ma Re <1 uplicate Rec. 84 uplicate	trix sult 65 result. Re Lin 69.9 - result.	Analy Prepa Rec. 80 ec. nit - 95.4	yzed By ared By 69. RPD 4	70 - 130 7: AG 7: AG Rec. Limit 9 - 95.4 RPD Limit 20
n-Tricosane Laboratory Contro QC Batch: 72808 Prep Batch: 62422 Param GRO Percent recovery is ba Param GRO Percent recovery is ba	116 I Spike (LC sed on the s	125 CS-1) LCS Resu 16.0 pike result. LCSD Result 16.7 pike result. LCS	m Date A QC Pre S Ilt PD is Units mg/Kg RPD is	g/Kg nalyzed paration ng/Kg based o Dil. 1 based o	1 2010-08 n: 2010-08 Dil. 1 n the spike Amount 20.0 n the spike	100 Spike Amount 20.0 and spike d Matrix Result <1.65 and spike d	Ma Re <1 uplicate Rec. 84 uplicate	trix sult 65 result. Re Lin 69.9 result.	Analy Prepa Rec. 80 ec. nit - 95.4	yzed By ared By 69. <u>RPD</u> 4	70 - 130 7: AG 7: AG Rec. Limit 9 - 95.4 RPD Limit 20 Bac
n-Tricosane Laboratory Control QC Batch: 72808 Prep Batch: 62422 Param GRO Percent recovery is ba Param GRO Percent recovery is ba	116 I Spike (LC sed on the s	125 CS-1) LCS Resu 16.0 pike result. LCSD Result 16.7 pike result. LCS Result	Date A QC Pre dilt D r RPD is <u>Units</u> <u>mg/Kg</u> RPD is LC t Re	g/Kg nalyzed: paration Units ng/Kg based o Dil. 1 based o CSD sult	1 2010-08 n: 2010-08 Dil. 1 n the spike Spike Amount 20.0 n the spike Units	Spike Amount 20.0 and spike d Matrix Result <1.65 and spike d Sp Dil. Am	Ma Re <1 uplicate <u>Rec.</u> <u>84</u> uplicate oike ount	trix sult .65 result. 69.9 result. LCS Rec.	Analy Prepa Rec. 80 ec. nit - 95.4 LCSE Rec.	yzed By ared By 69. RPD 4	70 - 130 7: AG 7: AG Rec. Limit 9 - 95.4 RPD Limit 20 Rec. Limit
n-Tricosane Laboratory Control QC Batch: 72808 Prep Batch: 62422 Param GRO Percent recovery is ba Param GRO Percent recovery is ba Surrogate Trifluorotoluene (TFT	116 I Spike (LC sed on the s sed on the s	125 CS-1) LCS Resu 16.0 pike result. LCSD Result 16.7 pike result. LCS Result 2.05	Date A QC Pre dilt PD is Units mg/Kg RPD is LC t Re 2.	g/Kg nalyzed paration Units ng/Kg based o Dil. 1 based o SD sult 01	1 2010-08 n: 2010-08 Dil. 1 n the spike Spike Amount 20.0 n the spike Units mg/Kg	100 Spike Amount 20.0 and spike d Matrix Result <1.65 and spike d Sp Dil. Am 1 2.	Ma Re- <1 uplicate Rec. 84 uplicate oike ount 00	trix sult 65 result. Re Lin 69.9 - result. LCS Rec. 102	Analy Prepa Rec. 80 ec. nit - 95.4 LCSE Rec. 100	yzed By ared By 69. <u>RPD</u> 4	70 - 130 7: AG 7: AG Rec. Limit 9 - 95.4 RPD Limit 20 Rec. Limit .9 - 142
n-Tricosane Laboratory Control QC Batch: 72808 Prep Batch: 62422 Param GRO Percent recovery is ba Param GRO Percent recovery is ba Surrogate Trifluorotoluene (TFT 4-Bromofluorobenzene	116 I Spike (LC sed on the s sed on the s	125 CS-1) LCS Resu 16.0 pike result. LCSD Result 16.7 pike result. LCS Resul 2.05 1.80	m Date A QC Pre dilt D r RPD is Units mg/Kg RPD is LC t Re 2. 1.	g/Kg nalyzed paration Units ng/Kg based o Dil. 1 based o CSD sult 01 75	1 2010-08 n: 2010-08 Dil. 1 n the spike Spike Amount 20.0 n the spike Units mg/Kg mg/Kg	S-21 Spike Amount 20.0 and spike d Matrix Result <1.65 and spike d Sp Dil. Am 1 2. 1 2.	Ma Re <1 uplicate Rec. 84 uplicate oike ount 00 00	trix sult .65 result. G9.9 result. LCS Rec. 102 90	125 Analy Prepa Rec. 80 ec. nit - 95.4 LCSE Rec. 100 88	yzed By ared By 69. RPD 4	70 - 130 7: AG 7: AG Rec. Limit 9 - 95.4 RPD Limit 20 Rec. Limit .9 - 142 .2 - 132
n-Tricosane Laboratory Control QC Batch: 72808 Prep Batch: 62422 Param GRO Percent recovery is ba Param GRO Percent recovery is ba Surrogate Trifluorotoluene (TFT 4-Bromofluorobenzene Laboratory Control	116 I Spike (LC sed on the s sed on the s :) : (4-BFB)	125 CS-1) LCS Resu 16.0 pike result. LCSD Result 16.7 pike result. LCS Result 2.05 1.80 CS-1)	Date A QC Press (It RPD is Units mg/Kg RPD is LC t Re 2. 1.	g/Kg nalyzed paration Units ng/Kg based o Dil. 1 based o SD sult 01 75	1 2010-08 n: 2010-08 Dil. 1 n the spike Spike Amount 20.0 n the spike Units mg/Kg mg/Kg	100 S-21 Spike Amount 20.0 and spike d Matrix Result <1.65 and spike d Sp Dil. Am 1 2. 1 2.	Ma Re: <1 uplicate Rec. 84 uplicate oike ount 00 00	trix sult 65 result. Lir 69.9 result. LCS Rec. 102 90	125 Analy Prepa Rec. 80 ec. mit - 95.4 LCSE Rec. 100 88	yzed By ared By 69. RPD 4	70 - 130 7: AG 7: AG Rec. Limit 9 - 95.4 RPD Limit 20 Rec. Limit .9 - 142 .2 - 132
n-Tricosane Laboratory Control QC Batch: 72808 Prep Batch: 62422 Param GRO Percent recovery is ba Surrogate Trifluorotoluene (TFT 4-Bromofluorobenzene Laboratory Control QC Batch: 72835	116 I Spike (LC sed on the s sed on the s (4-BFB) Spike (LC	125 CS-1) LCS Resul 16.0 pike result. LCSD Result 16.7 pike result. LCS Result 2.05 1.80 CS-1)	Date A QC Pres dilt PD is Units mg/Kg RPD is LC t Re 2. 1.	g/Kg nalyzed paration Units ng/Kg based o Dil. 1 based o SD sult 01 75	1 2010-08 n: 2010-08 Dil. 1 n the spike Spike Amount 20.0 n the spike Units mg/Kg mg/Kg mg/Kg	3-21 20 Spike Amount 20.0 and spike d Matrix Result <1.65 and spike d Sp Dil. Am 1 2. 1 2.	Ma Re <1 uplicate Rec. 84 uplicate oike ount 00 00	trix sult 65 result. Re Lin 69.9 result. LCS Rec. 102 90	Analy Prepa Rec. 80 ec. nit - 95.4 LCSE Rec. 100 88	yzed By ared By 69. RPD 4	70 - 130 7: AG 7: AG Rec. Limit 9 - 95.4 RPD Limit 20 Rec. Limit .9 - 142 .2 - 132 7: AG

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Report Date: August 24, 2010 114-6400631		(Work O COG/Sk	order: 1008 celly Unit #	1647 ¢611			l 	Page Nu Ed	ımber: dy Cou	nty, NN
_	LCS	5			Sp	ike	Mat	rix			Rec.
Param	Resu	lt	Units	Dil.	Amo	ount	Res	ult	Rec.		Limit
Benzene	2.15	5 n	ng/Kg	1	2.	00	< 0.0	150	108	81	.9 - 10
Toluene	2.06) n	ng/Kg	1	2.	00	< 0.00	0950	103	81	.9 - 10
Ethylbenzene	1.90) n	ng/Kg	1	2.	00	< 0.0	106	95	78	.4 - 10
Xylene	5.73		ng/Kg	1	6.	00	<0.00	0930	96	79	0.1 - 10
Percent recovery is based on the s	spike result.	RPD is	based o	n the spike	and s	spike dup	olicate	result.			
	LCSD			Spike	Μ	atrix		Re	ec.		RPI
Param	Result	Units	Dil.	Amount	R	esult	Rec.	Lir	nit	RPD	Limi
Benzene	2.12	mg/Kg	1	2.00	<0	0.0150	106	81.9	- 108	1	20
Toluene	2.02	mg/Kg	1	2.00	< 0.	.00950	101	81.9	- 107	2	20
Ethylbenzene	1.87	mg/Kg	1	2.00	<0	.0106	94	78.4	- 107	2	20
Xylene	5.67	mg/Kg	1	6.00	<0.	.00930	94	79.1	- 107	1	20
Percent recovery is based on the s	spike result.	RPD is	based o	n the spike	and s	pike dup	olicate	result.			
	LCS	LC	CSD			Spik	æ	LCS	LCSI)	Rec.
~	Resu	lt Re	sult	Units	Dil.	Amou	int	Rec.	Rec.		Limit
Surrogate	-			177	-	9.00	2	100	00	70	2 - 11
Surrogate Trifluorotoluene (TFT)	2.00) 1.	.76	mg/Kg	Ŧ	2.00)	100	00	n	
Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB) Matrix Spike (MS-1) Spiked QC Batch: 72750	2.00 1.90 d Sample: 24	1. 1. 1369 Date An	.76 .66 nalyzed:	mg/Kg mg/Kg : 2010-08	1 1 3-19	2.00)	95	Analy	69 yzed By	7: AR
Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB) Matrix Spike (MS-1) Spiked QC Batch: 72750 Prep Batch: 62339	2.00 1.90 d Sample: 24	1. 1. 1369 Date An QC Pre	.76 .66 nalyzed: paration	mg/Kg mg/Kg : 2010-08 n: 2010-08	1 1 3-19 3-18	2.00)	95	83 Analy Prepa	yzed By	7: AR
Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB) Matrix Spike (MS-1) Spiked QC Batch: 72750 Prep Batch: 62339	2.00 1.90 d Sample: 24 MS	1 1. 1.1369 Date Ar QC Pre	.76 .66 nalyzed: paration	mg/Kg mg/Kg : 2010-08 n: 2010-08	1 1 3-19 3-18	2.00 2.00)) M	100 95 atrix	83 Analy Prepa	yzed By	7: AR 7: AR 7: AR
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Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB) Matrix Spike (MS-1) Spiked QC Batch: 72750 Prep Batch: 62339 Param Chloride	2.00 1.90 d Sample: 24 MS Resu 943	1 1. 1.1369 Date Ar QC Pre Gult 0	.76 .66 nalyzed: paration <u>Units</u> mg/Kg	mg/Kg mg/Kg : 2010-08 n: 2010-08 Dil. 100	1 1 3-19 3-18 A	2.00 2.00 Spike mount 10000)) 	atrix esult 218	Analy Prepa Rec 92	yzed By ared By	7: AR 7: AR 7: AR 7: AR 8: AR 8: AR 8: AR
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Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB) Matrix Spike (MS-1) Spiked QC Batch: 72750 Prep Batch: 62339 Param Chloride Percent recovery is based on the s	2.00 1.90 d Sample: 24 MS spike result. MSD	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	.76 .66 nalyzed: paration <u>Units</u> <u>mg/Kg</u> based o	mg/Kg mg/Kg : 2010-08 n: 2010-08 Dil. 100 n the spike Spike	1 1 3-19 3-18 A and s	Spike mount 10000 pike dup Aatrix	M Ri colicate	atrix esult 218 result. Re	Analy Prepa Rec 92	yzed By ared By	 2 - 11 2 - 11 2 - 12 2 - 12
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Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB) Matrix Spike (MS-1) Spiked QC Batch: 72750 Prep Batch: 62339 Param Chloride Percent recovery is based on the s Param Chloride	2.00 1.90 d Sample: 24 MS Resu 943 spike result. MSD Result 9710	1 1 1 1 1 1 1 1 1 1 1 1 1 1	Units mg/Kg based o Dil. 100	mg/Kg mg/Kg : 2010-08 n: 2010-08 Dil. 100 n the spike Spike Amoun 10000	1 1 3-19 3-18 A and s nt H	Spike mount 10000 pike dup Aatrix Result <218	M R/ olicate <u>Rec.</u> 95	atrix esult c218 result. Re Lir 85 -	Analy Prepa Rec 92 ec. nit 115	yzed By ared By	22 - 11 28 - 12 20
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Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB) Matrix Spike (MS-1) Spiked QC Batch: 72750 Prep Batch: 62339 Param Chloride Percent recovery is based on the s Param Chloride Percent recovery is based on the s Matrix Spike (MS-1) Spiked QC Batch: 72751 Prep Batch: 62374	2.00 1.90 d Sample: 24 MS Result 943 spike result. MSD Result 9710 spike result. d Sample: 24	1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	.76 .66 .66 .01 .02 .02 .02 .02 .02 .02 .02 .02 .02 .02	mg/Kg mg/Kg : 2010-08 n: 2010-08 Dil. 100 n the spike Amoun 10000 n the spike 2010-08 n: 2010-08	1 1 3-19 3-18 A and s and s and s 3-19 3-19	2.00 2.00 2.00 pike dup 10000 pike dup Aatrix Result <218 pike dup	M RJ < olicate <u>Rec.</u> <u>95</u> olicate	atrix esult 218 result. Re Lir 85 - result.	Analy Prepa Rec 92 ec. nit 115 Analy Prepa	rt 69 yzed By ared By	$\frac{12}{20} = 11$ $\frac{12}{20}$ $\frac{12}{20}$ $\frac{12}{20}$ $\frac{12}{20}$ $\frac{12}{20}$ $\frac{12}{20}$ $\frac{12}{20}$ $\frac{12}{20}$ $\frac{12}{20}$
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Percent recovery is bas	sed on the s	pike result.	RPD is b	ased on	the spike a	nd spike d	uplicate	result			
		MSD			Spike	Matrix		F	lec.		RPD
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Chloride		10400	mg/Kg	100	10000	<218	102	85	- 115	2	20
Percent recovery is bas	sed on the s	pike result.	RPD is b	ased on	the spike a	nd spike d	uplicate	result	•		
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QC Batch: 72752			Date An	alvzed:	2010-08-1	9			Ana	lvzed B	: AR
Prep Batch: 62375			QC Prep	aration:	2010-08-1	.9			Pre	pared By	: AR
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		MS	3			Snike	N	latrix			Rec
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		MSD			Spike	Matrix		F	lec.		RPD
Param		Result	Units	Dil.	Amount	Result	Rec.	$\mathbf{L}_{\mathbf{i}}$	imit	RPD	Limit
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	1 /1	1 1	DDD : 1	1							
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Percent recovery is bas	sed on the s	pike result.	RPD is b	ased on	the spike a	nd spike di	uplicate	result.			
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GRO Percent recove	ery is based o	on the spike	35.9 n result. R	ng/Kg PD is ba	1 sed on	20.0	6.92	145	61.8 - 11	4 99	<u></u>
Percent recove	ery is based o	on the spike	result. R	PD is ba	sed on					4 33	20
						the spike a	nd spike	duplicate	result.		
			MS	MS	D			Spike	MS	MSD	Rec.
Surrogate			Result	Resi	ult	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotolue	ne (TFT)		1.70	1.8	6	mg/Kg	1	2	85	93	50 - 162
4-Bromofluoro	obenzene (4-I	3FB)	1.69	1.7	2	mg/Kg	1	2	84	86	50 - 162
Standard (IO QC Batch: 7	CV-1) 72750		D	ate Anal	lyzed:	2010-08-1	9		A	Analyzed I	3y: AR
			I	$_{\rm CVs}$	I	CVs	ICVs		Percent		
_			l	frue	Fo	ound	Percent	t	Recovery		Date
Param	Filag	Units	<u> </u>	conc.	<u> </u>	onc.	Recover	у	Limits		Analyzed
Chloride		mg/Kg		100		105	105		85 - 115	2	010-08-19
Standard (C	CV-1)										
QC Batch: 7	2750		D	ate Anal	yzed:	2010-08-1	•		A	Analyzed I	3y: AR
			С	CVs	С	CVs	CCVs		Percent		
			Г	True	Fo	ound	Percent	;	Recovery		Date
Param	Flag	Units	<u> </u>	onc.	C	onc.	Recover	у	Limits		Analyzed
Chloride		mg/Kg	1	100	9)5.1	95		85 - 115	2	010-08-19
Standard (I	CV-1)										

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¹Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

²Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

Report Date 114-6400631	e: August 24,	, 2010	W CC	ork Order: 100 OG/Skelly Unit	81647 #611	Page Number: 18 of 2 Eddy County, NI			
Duram	Flag	U nite	ICVs True	ICVs Found	ICVs Percent	Percent Recovery	Date		
Chloride	r lag	mg/Kg	<u> </u>	<u> </u>	101	<u>85 - 115</u>	2010-08-19		
		6/ ***8					2010 00 1		
Standard (CCV-1)								
QC Batch:	72751		Date Ana	lyzed: 2010-08	8-19	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	99.3	99	85 ~ 115	2010-08-1		
Standard (1	ICV-1)								
QC Batch:	72752		Date Ana	lyzed: 2010-08	8-19	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	99.3	99	85 - 115	2010-08-19		
Standard (CCV-1)								
QC Batch:	72752		Date Ana	lyzed: 2010-08	3-19	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	101	101	85 - 115	2010-08-19		
Standard (CCV-2)								
QC Batch:	72775		Date Ana	alyzed: 2010-0	8-19	Ana	alyzed By: kg		
			CCVs	CCVs	$\rm CCVs$	Percent			
			True	Found	Percent	Recovery	Date		
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed		
DRO		mg/Kg	250	232	93	80 - 120	2010-08-19		
Standard ((CCV-3)								
			Data Au	l	9.10		1 10 1		

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114-640063	1	2010	We CO	ork Order: 1008 G/Skelly Unit 7	\$1647 #611	Page N Ec	umber: 19 of 2 ldy County, NM
			CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		mg/Kg	250	239	96	80 - 120	2010-08-1
Standard -	(CCV-1)						
QC Batch:	72808		Date Anal	yzed: 2010-08	-21	Anal	lyzed By: AG
			$\rm CCVs$	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		mg/Kg	1.00	1.03	103	80 - 120	2010-08-2
Standard	(CCV-2)						
QC Batch:	72808		Date Anal	yzed: 2010-08-	-21	Anal	yzed By: AG
			CCVs	CCVs	\mathbf{CCVs}	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
1 aram	0						
GRO		mg/Kg	1.00	0.988	99	80 - 120	2010-08-2
GRO Standard	(CCV-1)	mg/Kg	1.00	0.988	99	80 - 120	2010-08-2
GRO Standard (QC Batch:	(CCV-1) 72835	mg/Kg	1.00 Date Anal	0.988 yzed: 2010-08-	99 -21	80 - 120 Anal	2010-08-2 yzed By: AG
GRO Standard (QC Batch:	(CCV-1) 72835	mg/Kg	1.00 Date Anal CCVs	0.988 yzed: 2010-08- CCVs	99 -21 CCVs	80 - 120 Anal Percent	2010-08-2
GRO Standard (QC Batch:	(CCV-1) 72835	mg/Kg	1.00 Date Anal CCVs True	0.988 yzed: 2010-08- CCVs Found	99 -21 CCVs Percent	80 - 120 Anal Percent Recovery	2010-08-2 yzed By: AG Date
GRO Standard QC Batch: Param	(CCV-1) 72835 Flag	mg/Kg Units	1.00 Date Anal CCVs True Conc.	0.988 yzed: 2010-08- CCVs Found Conc.	99 -21 CCVs Percent Recovery	80 - 120 Anal Percent Recovery Limits	2010-08-2 yzed By: AG Date Analyzed
GRO Standard QC Batch: Param Benzene	(CCV-1) 72835 Flag	mg/Kg Units mg/Kg	1.00 Date Anal CCVs True Conc. 0.100	0.988 yzed: 2010-08- CCVs Found Conc. 0.105	99 -21 CCVs Percent Recovery 105	80 - 120 Anal Percent Recovery Limits 80 - 120	2010-08-2 yzed By: AG Date Analyzed 2010-08-2
GRO Standard QC Batch: Param Benzene Toluene	(CCV-1) 72835 Flag	mg/Kg Units mg/Kg mg/Kg	1.00 Date Anal CCVs True Conc. 0.100 0.100	0.988 yzed: 2010-08- CCVs Found Conc. 0.105 0.101	99 -21 CCVs Percent Recovery 105 101	80 - 120 Anal Percent Recovery Limits 80 - 120 80 - 120	2010-08-2 yzed By: AG Date Analyzed 2010-08-2 2010-08-2
GRO Standard QC Batch: Param Benzene Toluene Ethylbenzer	(CCV-1) 72835 Flag	mg/Kg Units mg/Kg mg/Kg mg/Kg	1.00 Date Anal CCVs True Conc. 0.100 0.100 0.100	0.988 yzed: 2010-08- CCVs Found Conc. 0.105 0.101 0.0927	99 -21 CCVs Percent Recovery 105 101 93	80 - 120 Anal Percent Recovery Limits 80 - 120 80 - 120 80 - 120	2010-08-2 yzed By: AG Date Analyzed 2010-08-21 2010-08-21 2010-08-21
GRO Standard QC Batch: Param Benzene Toluene Ethylbenzer Xylene	(CCV-1) 72835 Flag	mg/Kg Units mg/Kg mg/Kg mg/Kg mg/Kg	1.00 Date Anal CCVs True Conc. 0.100 0.100 0.100 0.300	0.988 yzed: 2010-08- CCVs Found Conc. 0.105 0.101 0.0927 0.281	99 -21 -21 -21 -21 -21 	80 - 120 Anal Percent Recovery Limits 80 - 120 80 - 120 80 - 120 80 - 120	2010-08-2 yzed By: AG Date Analyzed 2010-08-21 2010-08-21 2010-08-21 2010-08-21
GRO Standard QC Batch: Param Benzene Toluene Ethylbenzer Xylene Standard	(CCV-1) 72835 Flag ne (CCV-2)	mg/Kg Units mg/Kg mg/Kg mg/Kg mg/Kg	1.00 Date Anal CCVs True Conc. 0.100 0.100 0.100 0.300	0.988 yzed: 2010-08- CCVs Found Conc. 0.105 0.101 0.0927 0.281	99 -21 CCVs Percent Recovery 105 101 93 94	80 - 120 Anal Percent Recovery Limits 80 - 120 80 - 120 80 - 120 80 - 120	2010-08-2 yzed By: AG Date Analyzed 2010-08-2 2010-08-2 2010-08-2
GRO Standard QC Batch: Param Benzene Toluene Ethylbenzer Xylene Standard QC Batch:	(CCV-1) 72835 Flag ne (CCV-2) 72835	mg/Kg Units mg/Kg mg/Kg mg/Kg mg/Kg	1.00 Date Anal CCVs True Conc. 0.100 0.100 0.100 0.300 Date Anal	0.988 yzed: 2010-08- CCVs Found Conc. 0.105 0.101 0.0927 0.281 yzed: 2010-08-	99 -21 -21 -21 -21 -21	80 - 120 Anal Percent Recovery Limits 80 - 120 80 - 120 80 - 120 80 - 120 80 - 120 80 - 120	2010-08-2 yzed By: AG Date Analyzed 2010-08-2 2010-08-2 2010-08-2 2010-08-2 2010-08-2
GRO Standard QC Batch: Param Benzene Toluene Ethylbenzer Xylene Standard QC Batch:	(CCV-1) 72835 Flag ne (CCV-2) 72835	mg/Kg Units mg/Kg mg/Kg mg/Kg mg/Kg	1.00 Date Anal CCVs True Conc. 0.100 0.100 0.100 0.300 Date Anal CCVs	0.988 yzed: 2010-08- CCVs Found Conc. 0.105 0.101 0.0927 0.281 yzed: 2010-08- CCVs	99 -21 CCVs Percent Recovery 105 101 93 94 -21 -21 CCVs	80 - 120 Anal Percent Recovery Limits 80 - 120 80 - 120 80 - 120 80 - 120 80 - 120 Anal Percent	2010-08-2 yzed By: AG Date Analyzed 2010-08-2 2010-08-2 2010-08-2 2010-08-2 2010-08-2
GRO Standard QC Batch: Param Benzene Toluene Ethylbenzer Xylene Standard QC Batch:	(CCV-1) 72835 Flag ne (CCV-2) 72835	Units mg/Kg mg/Kg mg/Kg mg/Kg	1.00 Date Anal CCVs True Conc. 0.100 0.100 0.100 0.300 Date Anal CCVs True	0.988 yzed: 2010-08- CCVs Found Conc. 0.105 0.101 0.0927 0.281 yzed: 2010-08- CCVs Found	99 -21 CCVs Percent Recovery 105 101 93 94 -21 -21 -21 CCVs Percent	80 - 120 Anal Percent Recovery Limits 80 - 120 80 - 120 80 - 120 80 - 120 80 - 120 Anal Percent Recovery	2010-08-2 yzed By: AG Date Analyzed 2010-08-2 2010-08-2 2010-08-2 2010-08-2 2010-08-2 2010-08-2
GRO Standard QC Batch: Param Benzene Toluene Ethylbenzer Xylene Standard QC Batch: Param	(CCV-1) 72835 Flag ne (CCV-2) 72835 Flag	mg/Kg Units mg/Kg mg/Kg mg/Kg mg/Kg	1.00 Date Anal CCVs True Conc. 0.100 0.100 0.100 0.300 Date Anal CCVs True Conc.	0.988 yzed: 2010-08- CCVs Found Conc. 0.105 0.101 0.0927 0.281 yzed: 2010-08- CCVs Found Conc.	99 -21 CCVs Percent Recovery 105 101 93 94 -21 -21 -21 CCVs Percent Recovery	80 - 120 Anal Percent Recovery Limits 80 - 120 80 - 120 80 - 120 80 - 120 80 - 120 80 - 120 Recovery Limits	2010-08-2 yzed By: AG Date Analyzed 2010-08-2 2010-08-2 2010-08-2 2010-08-2 2010-08-2 yzed By: AG Date Analyzed
GRO Standard QC Batch: Param Benzene Toluene Ethylbenzer Xylene Standard QC Batch: Param Benzene	(CCV-1) 72835 Flag ne (CCV-2) 72835 Flag	Units mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	1.00 Date Anal CCVs True Conc. 0.100 0.100 0.100 0.300 Date Anal CCVs True Conc. 0.100	0.988 yzed: 2010-08- CCVs Found Conc. 0.105 0.101 0.0927 0.281 yzed: 2010-08- CCVs Found Conc. 0.102 0.2027	99 -21 CCVs Percent Recovery 105 101 93 94 -21 -21 -21 -21 -21 -21 -21 -21 -21 -21	80 - 120 Anal Percent Recovery Limits 80 - 120 80 - 120 80 - 120 80 - 120 80 - 120 Anal Percent Recovery Limits 80 - 120	2010-08-2 yzed By: AG Date Analyzed 2010-08-2 2010-08-2 2010-08-2 2010-08-2 2010-08-2 2010-08-2 2010-08-2
GRO GRO Standard (QC Batch: Param Benzene Toluene Ethylbenzer Xylene Standard (QC Batch: Param Benzene Toluene	(CCV-1) 72835 Flag ne (CCV-2) 72835 Flag	Units mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	1.00 Date Anal CCVs True Conc. 0.100 0.100 0.100 0.300 Date Anal CCVs True Conc. 0.100 0.100	0.988 yzed: 2010-08- CCVs Found Conc. 0.105 0.101 0.0927 0.281 yzed: 2010-08- CCVs Found Conc. 0.102 0.0973 0.2027	99 -21 CCVs Percent Recovery 105 101 93 94 -21 -21 -21 -21 -21 -21 -21 -21 -21 -21	80 - 120 Anal Percent Recovery Limits 80 - 120 80 - 120 80 - 120 80 - 120 80 - 120 Anal Percent Recovery Limits 80 - 120 80 - 120 80 - 120	2010-08-2 yzed By: AG Date Analyzed 2010-08-2 2010-08-2 2010-08-2 2010-08-2 2010-08-2 2010-08-2 2010-08-2 2010-08-2 2010-08-2

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Report Date: August 24, 2010 114-6400631			Work Order: 10081647 COG/Skelly Unit #611			Page Number: 20 of 20 Eddy County, NM		
standard contr	inued		CCVs	CCVs	CCVs	Percent	,	
			True	Found	Percent	Recovery	Date	
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed	
Xylene		mg/Kg	0.300	0.270	90	80 - 120	2010-08-21	

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Analveie F	Request of Chain	of Custody B	ecord			PAG	E:	OF: ၂
Analysis		of ouslouy fi				ANALYSIS (Circle or Speci	REQUEST ty Method No).)
	TETRATE 1910 N. Big Sprin Midland, Texas 7 (432) 682-4559 • Fax (ECH 1g St. 9705 432) 682-3946		5 (Ext. to C35)	l Cr Pb Hg Se I Vr Pd Hg Se			SC
CLIENT NAME:	SITE MANAGER:	SE .	PRESERVATIVE	1X100	88 88 80 00)/624 0/625		H, T
PROJECT NO.:	PROJECT NAME:			ģ	88 88 73	tiles 0/826(ations
114-6400631	COG/SKelly unit# 611			IS MC	tiles Af	1 Vola 4. 8241 mi. Vc	608 608 614	estos) ons/C
LAB I.D. NUMBER DATE TIME	COMP COMP SAMPLE IDE COMP	NTIFICATION	HLI EHEU HNO3 ICE ICE NONE	BTEX 802 TPH 801	PAH 8270 RCRA Mel TCLP Mel	TCLP Ser RCi GC.MS Se GC.MS Se	Pest. 808/ Chioride Gamma S	PLM (Asb Major Ani
241366811-10	S X AH-1 O-1	•]	χ	χX			X	
367	AH-1 1-1.5							
368	AH-1 2-2.5					┋┋	\downarrow	
369	/ AH-1 3-3.5	[]					╧╢╧	
370 /	/ AH-1 4-4.5							
371/				ЖX			<mark>┾┈╽┤┤</mark> ┝	
372	AH2 1-1.5							
373	AH-2 2-2.5							
374	/ / AH-2 3-3.5							
375 8-11-10	S X AH3 O-1	. 4		\$XX				
RELINQUISHED BY: (Signature)	Date: <u>B-15-70</u> RECE	VED BY: (Signature)	Date:		SAMPLED BY:			Time:
RELINQUISHED BY: (Signature)	Date: RECE	VED BY: (Signature)	Time:		FEDEX	BUS AERED UPS	All 01	(BILL #:
	Time:		Time:		TETRA TECH	CONTACT PERSON:		Results by:

Rim	7	highest	TPH	for	RTYY
-----	---	---------	-----	-----	------

Analysis	Request of Chain of Custo	dv Record	PAGE:	J OF: J
			ANALYSIS RE (Circle or Specify fi	QUEST Aethod No.)
	TETRATECH 1910 N. Big Spring St. Midland, Texas 79705 (432) 682-4559 • Fax (432) 682-3946		S (Ext to C35) I Cr Pb Hg Se I Vr Pd Hg Se	S
	SITE MANAGER:	PRESERVATIVE METHOD	TX100 Ba Cc 0/624 70/625	1,Hq.8
2005 PROJECT NO.: 114-6400631	PROJECT NAME: COG/Skelly unit #611	(V/N)	B MOD. 5 MOD. alls Ag As alls Ag As alls Ag As alls Ag As As As As As As As As As As As As As A	ec. ec. atos) ns/Cation
LAB I.D. NUMBER DATE TIN	IE SAMPLE IDENTIFICATION	HITERED HITERED HCL HO3 ICE NONE	BTEX 8021 TPH 801 PAH 8270 RCFA Met TCLP Vola TCLP Vola RCI GC.MS Vol GC.MS See PCB's 808	Chloride Gamma Sr Alpha Beta PLM (Asbe Major Anio
2413768-11-10	S X AH-3 1-1.5			X
37218-11-10	S X AH-3 2-2.5			
378 8-11-10	S XAH-3 3-3.5			
379	S XAH-2 4-4,5 (pm 1m)			
380	5 XAH-2 5-5.5	I X		
381	5 X AH-3 4-4,5 +	I X		3
RELINQUISHED BY: (Signature)	Date: 8-13-40 RECEIVED BY: (Signature)	Date: Time:	SAMPLED BY: (Print & Initial) Grint Prine	Date:
ELINQUISHED BY: (Signature)	Date: RECEIVED BY: (Signature) Time:	Date: Time:	SAMPLE SHIPPED BY: (Circle) FEDEX BUS	AIRBILL #:
ELINQUISHED BY: (Signature)	Date: RECEIVED BY: (Signature) Time:	Date: Time:	TETRA TECH CONTACT PERSON:	Results by:
ECEIVING LABORATORY:	RECEIVED BY: (Signature)	2 mg	- TKE TASWER	RUSH Charges Authorized:

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

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Report Date: November 23, 2010

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Summary Report

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

Report Date: November 23, 2010

Work Order: 10111927

Project Location:Eddy County, NMProject Name:COG/Skelly Unit #611Project Number:114-6400631

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
251013	CS-1 0-1 (1' BEB)	soil	2010-11-09	00:00	2010-11-19
251014	CS-2 0-1 (1' BEB)	soil	2010-11-09	00:00	2010-11-19
251015	CS-3 0-1 (1' BEB)	soil	2010-11-09	00:00	2010-11-19
251016	CS-4 0-1 (1' BEB)	soil	2010-11-09	00:00	2010-11-19

Sample: 251013 - CS-1 0-1 (1' BEB)

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

Sample: 251014 - CS-2 0-1 (1' BEB)

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

Sample: 251015 - CS-3 0-1 (1' BEB)

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

Sample: 251016 - CS-4 0-1 (1' BEB)

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: November 23, 2010		Work Order: 10111927		Page Number: 2 of 2	
Param	Flag	Result	Units	RL	
Chloride		<200	mg/Kg	4.00	

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Mulium		RACEANA	ALYSIS	, INC.		
	6701 Aberdeen Avenue, Suite 9 200 East Sunset Road, Suite E 5002 Basin Street, Suite A1 6015 Harris Parkway, Suite 110	Lubbock, Texas 79424 El Paso, Texas 79922 Midland, Texas 79703 Ft. Worth, Texas 76132 E-Mail: lab@r	800 • 378 • 1296 888 • 588 • 3443 traceanalysis.com	806 • 794 • 1296 915 • 585 • 3443 432 • 689 • 6301 817 • 201 • 5260	FAX 806•794•1298 FAX 915•585•4944 FAX 432•689•6313	
		\mathbf{Cer}	tificatio	ons		
WE	BENC: 237019	HUB: NCTRCA	175243974 WFWB38	3100-86536 444Y0909	DBE:	VN 20657
		NELAP	Certifi	ications	5	
Lubbock:	T104704219-08-TX LELAP-02003 Kansas E-10317	El Paso:	: T104704 LELAP-	221-08-TX 02002	Midla	ad: T104704392-08-TX

Analytical and Quality Control Report

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

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Project Location:Eddy County, NMProject Name:COG/Skelly Unit #611Project Number:114-6400631

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
251013	CS-1 0-1 (1' BEB)	soil	2010-11-09	00:00	2010-11-19
251014	CS-2 0-1 (1' BEB)	soil	2010-11-09	00:00	2010-11-19
251015	CS-3 0-1 (1' BEB)	soil	2010-11-09	00:00	2010 - 11 - 19
251016	CS-4 0-1 (1' BEB)	soil	2010-11-09	00:00	2010-11-19

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

This report consists of a total of 6 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Report Date: November 23, 2010

Work Order: 10111927

Michael april

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

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

Page 2 of 6

Case Narrative

Samples for project COG/Skelly Unit #611 were received by TraceAnalysis, Inc. on 2010-11-19 and assigned to work order 10111927. Samples for work order 10111927 were received intact at a temperature of 3.2 C.

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

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		Prep	Prep	\mathbf{QC}	Analysis
Test	Method	Batch	Date	Batch	Date
Chloride (Titration)	SM 4500-Cl B	64825	2010-11-22 at 09:23	75586	2010-11-23 at 09:16

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 10111927 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

Report Date: November 23, 2010 114-6400631 Work Order: 10111927 COG/Skelly Unit #611 Page Number: 4 of 6 Eddy County, NM

Analytical Report

Sample: 251013 - CS-1 0-1 (1' BEB)

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 75586 64825	Analytical Method: Date Analyzed: Sample Preparation	SM 4500-Cl B 2010-11-23 : 2010-11-22	Prep Method: Analyzed By: Prepared By:	N/A AR AR
		\mathbf{RL}			
Parameter	Flag	\mathbf{Result}	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 251014 - CS-2 0-1 (1' BEB)

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Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 75586 64825	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2010-11-23 2010-11-22	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: 251015 - CS-3 0-1 (1' BEB)

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 75586 64825	Analytical Method: Date Analyzed: Sample Preparation	SM 4500-Cl B 2010-11-23 : 2010-11-22	Prep Method: Analyzed By: Prepared By:	N/A AR AR
Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 251016 - CS-4 0-1 (1' BEB)

Laboratory: Analysis:	Midland Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75586	Date Analyzed:	2010-11-23	Analyzed By:	AR
Prep Batch:	64825	Sample Preparation:	2010-11-22	Prepared By:	AR

114-6400631	Work Order: 10111927 COG/Skelly Unit #611 F RL meter Flag Result Units Dilution ride Result Units Dilution ride Result Units Dilution meter Flag Colspan="2">Colspan="2">Colspan="2">Othod Blank (1) QC Batch: 75586 Batch: 75586 Date Analyzed: 2010-11-23 MDL meter Flag MEL MDL Units mg/Kg Oratory Control Spike (LCS-1) Batch: 75586 Date Analyzed: 2010-11-23 # LCS Spike Matrix Result Units Dil Amount Result LCS Spike Matrix Result ME LCS Spike Matrix <th co<="" th=""><th>Pa:</th><th>Eddy Cou</th><th>r: 5 of nty, NI</th></th>						<th>Pa:</th> <th>Eddy Cou</th> <th>r: 5 of nty, NI</th>	Pa:	Eddy Cou	r: 5 of nty, NI				
			R	L										
Parameter		Flag	Resul	t	Un	its]	Dilution		R				
Chloride			<20	0	mg/l	Kg		50		4.0				
Method Bl	ank (1)	QC Batch: 755	86 Date 4	analwzed.	2010-11-2	4		Δn	aluzed B	- ΔR				
Prep Batch:	64825 [.]		QC Pr	reparation:	2010-11-2	2		Pr	epared By	: AR				
				M	DL									
Parameter		Flag		Res	ult		Unit	S	Page Number: 5 c Eddy County, N ttion 1 50 4. Analyzed By: A Prepared By: A Prepared By: A Prepared By: A Rec. Limi 98 85 - 1 t. Rec. RP Limit RPD Lim 5 - 115 5 20 t. Analyzed By: Al Prepared By: Al Rec. RP Limit RPD Lim 5 - 115 5 10 t. Rec. RP Limit RPD Lim Rec. RP					
Chloride		······································		<2	.18		mg/I	Kg		4				
Param			LCS Result	Units	Dil.	Spike Amount	Ma Res	trix sultR	lec.	Rec. Limit				
Chloride		5586 4825 y is based on the spike res		mg/Kg	1	100	<2	.18	98 8	35 - 11				
Percent recov	very is based	on the spike res	ult. RPD is	based on t	the spike an	nd spike duj	olicate re	esult.						
		LCS	D		Spike	Matrix		Rec.		RPE				
Param	· · · · · · · · · · · · · · · · · · ·	Resi	ilt Unit	s Dil.	Amount	Result	Rec.	Limit	RPD	Limi				
Chloride		103	3 mg/K	<u>g 1</u>	100	<2.18	103	85 - 115	5	20				
D /		on the spike res	uit. RPD is	s based on t	the spike an	id spike duj	plicate re	esult.						
Percent recov	very is based	a a												
Percent recov Matrix Spi	ke (MS-1)	Spiked Sample	e: 251022			-								
Percent recon Matrix Spil QC Batch:	very 18 based ke (MS-1) 75586	Spiked Sample	e: 251022 Date A	analyzed:	2010-11-23	3		An	alyzed By	: AR				
Percent recov Matrix Spil QC Batch: Prep Batch:	very 1s based ke (MS-1) 75586 64825	Spiked Sample	e: 251022 Date A QC Pr	analyzed: eparation:	2010-11-23 2010-11-23	3 2		An Pre	alyzed By epared By	: AR : AR				
Percent recov Matrix Spil QC Batch: Prep Batch:	very 1s based ke (MS-1) 75586 64825	Spiked Sampl	e: 251022 Date A QC Pr MS	analyzed: eparation:	2010-11-23 2010-11-25	3 2 Spike	Mat	An Pre crix	alyzed By epared By	: AR : AR Rec.				
Percent recov Matrix Spil QC Batch: Prep Batch: Param	very 1s based ke (MS-1) 75586 64825	Spiked Sampl	e: 251022 Date A QC Pr MS Result	analyzed: eparation: Units	2010-11-2; 2010-11-2; Dil.	3 2 Spike Amount	Mat	An Pre trix ultR	alyzed By epared By ec.	r: 5 of nty, NM RI 4.00 7: AR 7: AR 7: AR 7: AR 8: AR 8: AR 8: AR 8: AR 1: AR 2: AR 1: AR				
Percent recon Matrix Spil QC Batch: Prep Batch: Param Chloride	very 1s based ke (MS-1) 75586 64825	Spiked Sample	e: 251022 Date A QC Pr MS Result 10400	analyzed: eparation: Units mg/Kg	2010-11-2; 2010-11-2; Dil. 100	3 2 Spike Amount 10000	Mat Res 36	An Pre trix ult R 18 1	alyzed By epared By ec. 00 8	: AR AR Rec. Limit 5 - 115				
Percent recov Matrix Spil QC Batch: Prep Batch: Param Chloride Percent recov	very is based ke (MS-1) 75586 64825 very is based	Spiked Samplo	e: 251022 Date A QC Pr MS Result 10400 ult. RPD is	unalyzed: eparation: Units mg/Kg based on t	2010-11-2; 2010-11-2; Dil. 100 he spike an	3 2 Amount 10000 Id spike dup	Mat Res 36 Dlicate re	An Pre ult R 8 1 esult.	alyzed By epared By ec. 00 8	: AR : AR Rec. Limit 5 - 115				
Percent recov Matrix Spil QC Batch: Prep Batch: Param Chloride Percent recov	ke (MS-1) 75586 64825 very is based	Spiked Sample on the spike res	e: 251022 Date A QC Pr MS Result 10400 ult. RPD is	unalyzed: eparation: Units mg/Kg based on t	2010-11-2; 2010-11-2; Dil. 100 he spike an Spike	3 2 Spike Amount 10000 Id spike dup Matrix	Mat Res 36 blicate re	An Pre ult R 8 1 sult. Rec.	alyzed By epared By .ec. 00 8	By: AR By: AR By: AR By: AR By: AR By: AR By: AR By: AR Rec. Limit 85 - 115 NPD Limit 20 By: AR By: AR Rec. Limit 20 By: AR				
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Standard ((ICV-1)						
QC Batch:	75586		Date Ana	lyzed: 2010-11	1-23	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	102	102	85 - 115	2010-11-23
Standard ((CCV-1)						
QC Batch:	75586		Date Ana	lyzed: 2010-11	1-23	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	97.9	98	85 - 115	2010-11-23

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