SITE INFORMATION

		Report	Type: Clo	sure Re	eport		
General Site Info	ormation:						
Site:		Jenkins B Fe	ederal # 17				
Company:		COG Operati	ing LLC				
Section, Towns	hip and Range	Unit N	Sec 17	T17S	R30E		
Lease Number:		API-30-015-3	4138				
County:		Eddy County	/				
GPS:			32.82648º N			103.99	9734º W
Surface Owner:		Federal					
Mineral Owner:							
Directions:			section of Hwy 82 el 0.6 miles, turn				travel 0.6 miles, turn left ion.
Delas a Defe							
Release Data:		10/29/2010					
Date Released:		1					
Type Release:	Type Release: Produced W Source of Contamination: Steel Flowlin						
	Fluid Released: 20 bbls						
Fluids Recovered: 0 bbls							
	Official Communication:						
Name:	Pat Ellis				Ike Tavarez	Z	
Company:	COG Operating, LL	С			Tetra Tech		
Address:	550 W. Texas Ave.	Ste. 1300			1910 N. Big	g Spring	
P.O. Box							
City:	Midland Texas, 797	01			Midland, Te	exas	
Phone number:	(432) 686-3023				(432) 425-3	3878	
Fax:	(432) 684-7137						
Email:	pellis@conchoreso	urces.com			ike.tavare	z@tetratech	.com
Ranking Criteria	l						
Depth to Groundw	water:		Ranking Score			Site Data	
<50 ft			20				
50-99 ft			10				
>100 ft.			0			0	
WellHead Protect	ion:	Ranking Score		Site Data			
Water Source <1,000 ft., Private <200 ft.			20				
Water Source >1,000 ft., Private >200 ft.			0			0	
Surface Body of	Surface Body of Water:			Site Data			
<200 ft.			Ranking Score 20				
200 ft - 1,000 ft.			10				
>1,000 ft.			0			0	

Total Ranking Score:

Accepta	ble Soil RRAL (n	ng/kg)
Benzene	Total BTEX	TPH
10	50	5,000

0



February 2, 2012

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 # 17 Flow Line, Unit N, Section 17, 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 # 17 Flow Line located in Unit N, Section 17, Township 17 South, Range 30 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.82648°, W 103.99734°. 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 October 29, 2010, and released approximately twenty (20) barrels of produced fluid from a steel flow line. None of the standing fluids were recovered. The spill measured approximately 10' x 100' and initiated in the pasture east of the well site. The initial C-141 form is enclosed in Appendix A.

Groundwater

No water wells were listed within Section 17. According to the NMOCD groundwater map, the average depth to groundwater in this area is greater than 200' below surface. The average depth to groundwater map 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 December 6, 2010, Tetra Tech personnel inspected and sampled the spill area. Three (3) auger holes (AH-1, AH-2 and AH-3) were installed using a stainless steel hand auger to assess the impacted soils. 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 auger holes were below the RRAL for TPH and BTEX. The chloride impact was not vertically defined in auger holes (AH-1 and AH-3), with bottom auger hole samples of 11,800 mg/kg and 2,770 mg/kg, respectively. The area of AH-2 did not show an impact to the subsurface soils. As a result, the spill was not vertically defined.

On February 16, 2011, Tetra Tech personnel supervised the installation of soil borings (SB-1 and SB-2) utilizing an air rotary drilling rig. Soil samples were collected to a depth of 60.0' to define the impact of the chloride concentrations. Referring to Table 1, chloride concentrations significantly declined to 295 mg/kg at 20.0' (SB-1) and 383 mg/kg at 10.0' (SB-2) and then increased with depth before declining at approximately 25.0' to 50.0' below surface. The deeper impact appears to be from a historical spill in the area. The soil boring locations are shown on Figure 3.



Closure Activities

Based on the approved work plan, Tetra Tech personnel supervised the excavation of the site. The final excavation depths of the soil remediation were met as stated in the approved work plan. The spill area around AH-1 was excavated to approximately 7.0' below surface, and the spill area by AH-3 was excavated to approximately 5.0' below surface. A total of 220 cubic yards of soil were excavated and hauled to Controlled Recovery, Inc. (CRI) for proper disposal. The excavation depths are highlighted in Table 1 and shown on Figure 4.

As requested by the BLM, confirmation samples were collected from the excavation bottom holes and sidewalls. The confirmation samples results are shown in Table 1. Once excavated to the appropriate depths, a liner was installed in both excavations and was then backfilled with clean soil to grade.

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

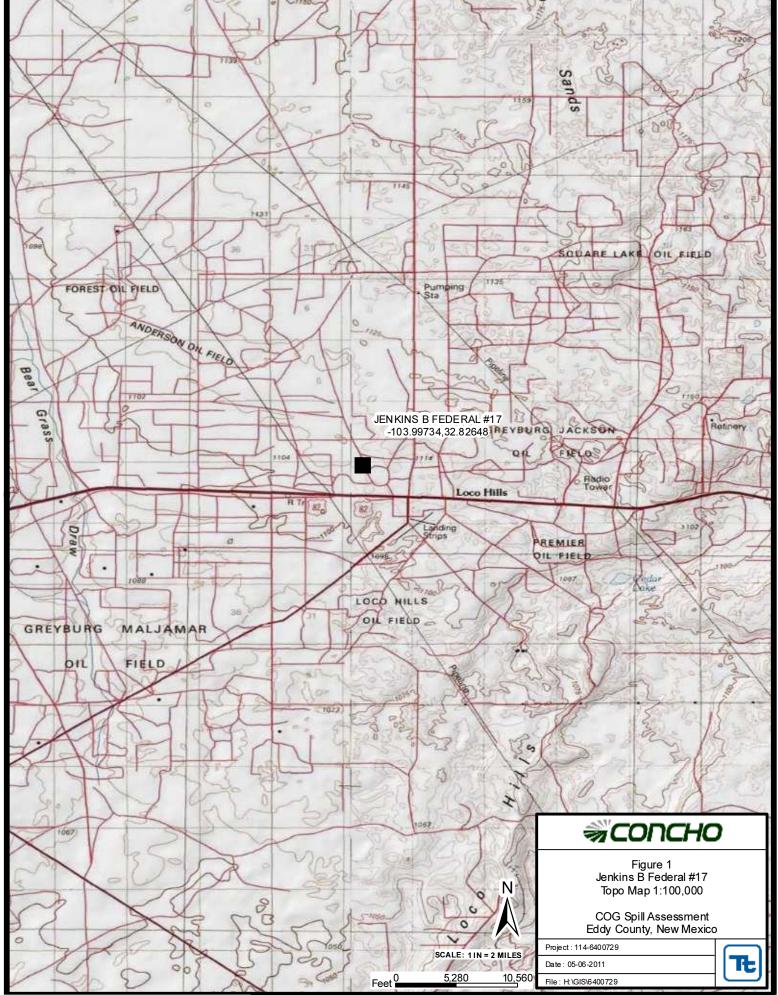
Respectfully submitted, TETRA TECH

Ike Tavarez. PG Senior Project Manager

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

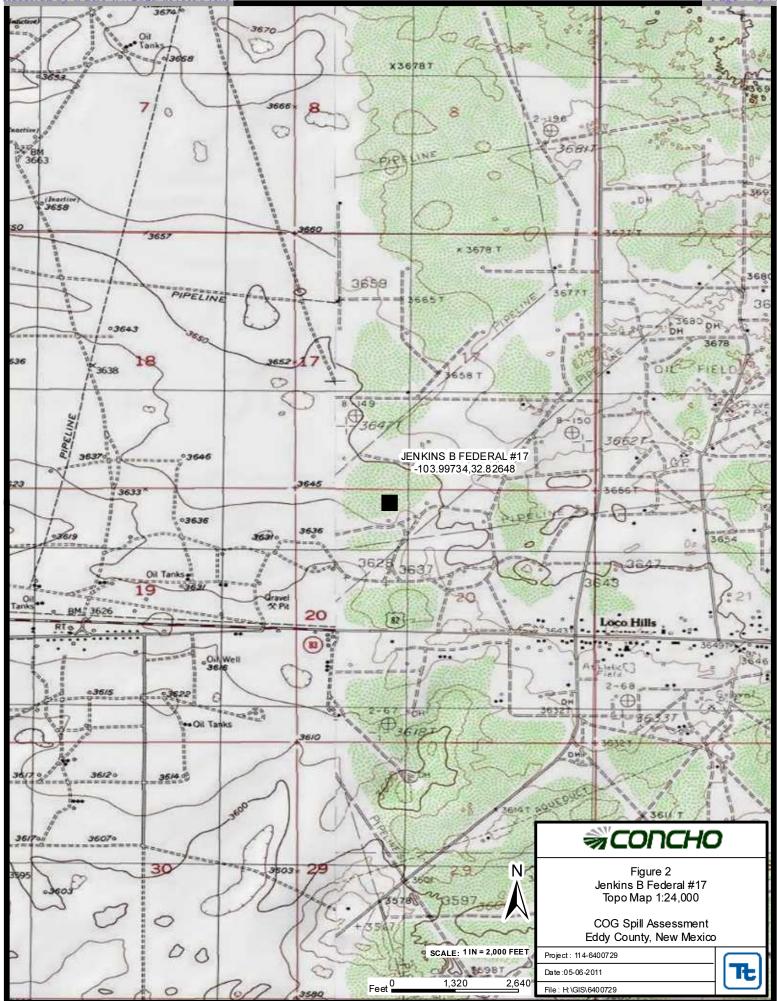
Figures

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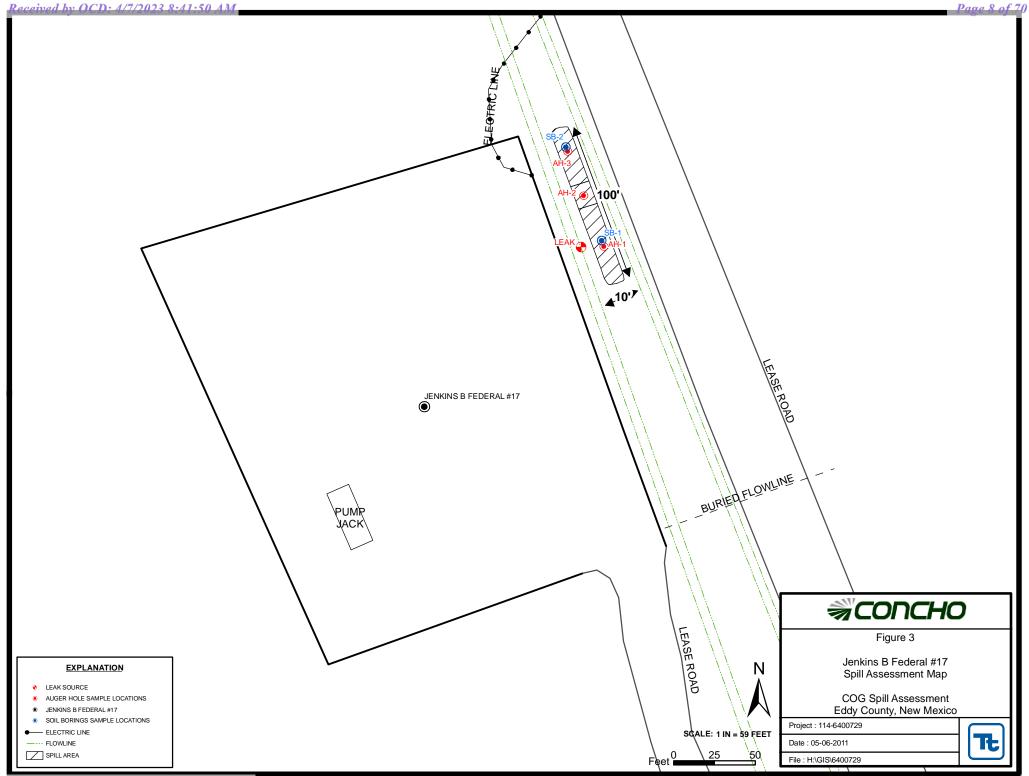


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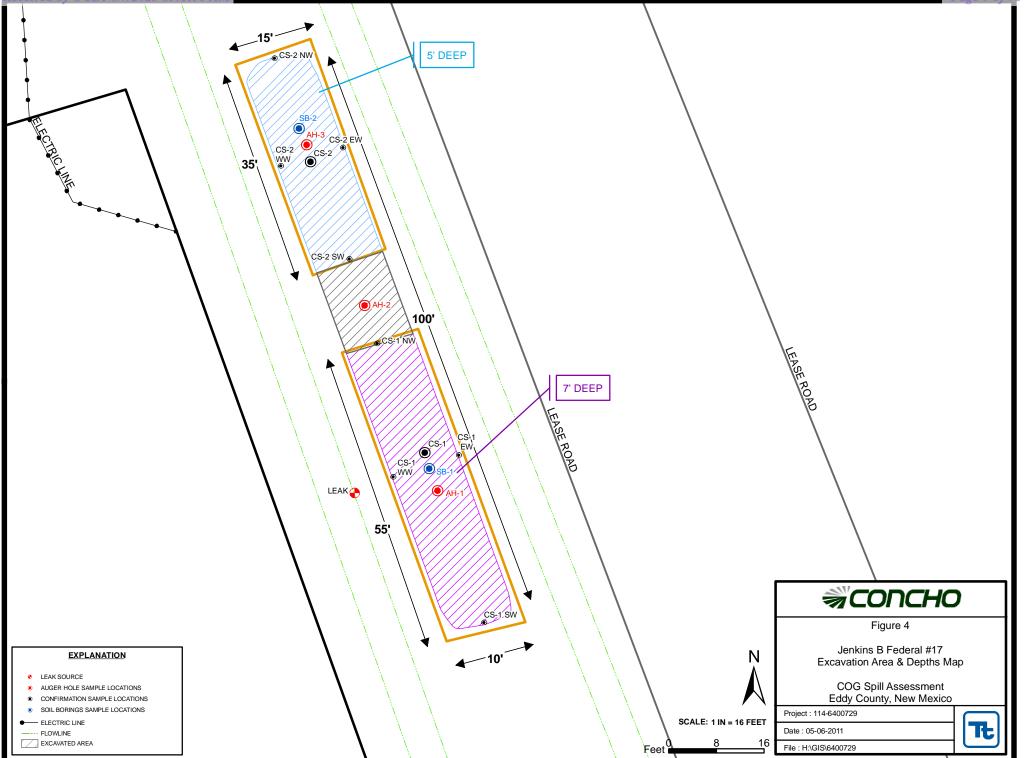
Received by OCD: 4/7/2023 8:41:50 AM



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Tables

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Table 1 COG Operating LLC. Jenkins B Federal #17 EDDY COUNTY, NEW MEXICO

A 1 1 5	Sample	Sample	Depth	Soi	I Status	TF	PH (mg/l	kg)	Benzene	Toluene	Ethlybenzene	Xylene	BTEX	Chloride
Sample ID	Date	Depth (ft)		In-Situ	Removed	DRO	GRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	Total	(mg/kg)
AH-1	12/6/10	0-1'			Х	54.3	<2.00	54.3	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	389
		1-1.5'			Х	-	-	-	-	-	-	-	-	1,080
		2-2.5'			Х	-	-	-	-	-	-	-	-	9,450
		3-3.5'			Х	-	-	-	-	-	-	-	-	15,400
		4-4.5'			Х	-	-	-	-	-	-	-	-	11,800
	T													
SB-1	2/16/11	0-1'			Х	-	-	-	-	-	-	-	-	<200
		3'			Х	-	-	-	-	-	-	-	-	1,570
		5'			Х	-	-	-	-	-	-	-	-	6,640
		7'			Х	-	-	-	-	-	-	-	-	13,400
		10'		Х		-	-	-	-	-	-	-	-	1,780
		15'		Х		-	-	-	-	-	-	-	-	3,310
		20'		Х		-	-	-	-	-	-	-	-	295
		25'		Х		-	-	-	-	-	-	-	-	1,060
		30'		Х		-	-	-	-	-	-	-	-	1,220
		40'		Х		-	-	-	-	-	-	-	-	2,170
		50'		Х		-	-	-	-	-	-	-	-	<200
		60'		Х		-	-	-	-	-	-	-	-	<200
										1				
CS-1 Bottom	6/28/11	7'		Х		-	-	-	-	-	-	-	-	12,500
N. Sidewall				Х		-	-	-	-	-	-	-	-	12,900
E. Sidewall				Х		-	-	-	-	-	-	-	-	13,000
S. Sidewall				Х		-	-	-	-	-	-	-	-	13,100
W. Sidewall				Х		-	-	-	-	-	-	-	-	4,920

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Table 1 COG Operating LLC. Jenkins B Federal #17 EDDY COUNTY, NEW MEXICO

Sample ID Sample	ample ID Sample Date	Sample Depth (ft)	Sample	Sample	Sample	Sample	Depth	Soi	l Status	TPH (mg/kg)		kg)	Benzene	Toluene	Ethlybenzene	Xylene	BTEX	Chloride
Sample ID					Removed	DRO	GRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	Total	(mg/kg)				
AH-2	12/6/10	0-1'		Х		<50.0	<2.00	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<200				
		1-1.5'		Х		-	-	-	-	-	-	-	-	<200				
		2-2.5'		Х		-	-	-	-	-	-	-	-	<200				
		3-3.5'		Х		-	-	-	-	-	-	-	-	<200				
		4-4.5'		Х		-	-	-	-	-	-	-	-	<200				
		5-5.5'		Х		-	-	-	-	-	-	-	-	410				

Table 1 COG Operating LLC. Jenkins B Federal #17 EDDY COUNTY, NEW MEXICO

	Sample	Sample	Depth	Soi	I Status	TF	PH (mg/	kg)	Benzene	Toluene	Ethlybenzene	Xylene	BTEX	Chlorid
Sample ID	Date	Depth (ft)		In-Situ	Removed	DRO	GRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	Total	(mg/kg)
AH-3	12/6/10	0-1'			Х	<50.0	<2.00	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	307
		1-1.5'			Х	-	-	-	-	-	-	-	-	394
		2-2.5'			Х	-	-	-	-	-	-	-	-	569
		3-3.5'			Х	-	-	-	-	-	-	-	-	1,150
		4-4.5'			Х	-	-	-	-	-	-	-	-	2,770
SB-2	2/16/11	0-1'			Х	-	-	-	-	-	-	-	-	<200
		3'			Х	-	-	-	-	-	-	-	-	<200
		5'			Х	-	-	-	-	-	-	-	-	<200
		7'		Х		-	-	-	-	-	-	-	-	2,040
		10'		Х		-	-	-	-	-	-	-	-	383
		15'		Х		-	-	-	-	-	-	-	-	2,700
		20'		Х		-	-	-	-	-	-	-	-	8,080
		25'		Х		-	-	-	-	-	-	-	-	206
		30'		Х		-	-	-	-	-	-	-	-	249
		40'		Х		-	-	-	-	-	-	-	-	<200
CS-2 Bottom	6/28/11	5'		Х		_	-	_	-	-	-	-	-	963
N. Sidewall	0,20,11	Ŭ		X		-	-	-	_	-	-	-	_	4,540
E. Sidewall				X		-	-	-	_	_	-	_	_	2,520
S. Sidewall				X		-	-	-	-	-	-	-	-	<200
W. Sidewall				Х		-	-	-	-	-	-	-	-	1,940

Not Analyzed

Liner Installation



(--)

Excavated Depths

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Appendix A

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District I	•	
1625 N. Fr	ench Dr., Hobbs, NM 88240	
District II		Ene
1301 W. G	rand Avenue, Artesia, NM 88210	
District III		
1000 Rio B	razos Road, Aztec, NM 87410	
District IV		
1220 S. St.	Francis Dr., Santa Fe, NM 87505	
	A REAL PROPERTY AND ADDRESS OF THE OWNER OF THE	

State of New Mexico rgy 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

			Rel	ease Notifi	catio	n and Co	orrective A	ctio	n			
						OPERA				ial Report		Final Repor
Name of Co Address		COG OP	ERATIN	NG LLC		Contact		Pat Ellis	3			т нат херот
Facility Na	 me	Jenkins	B Feder	idland, TX 7970	_	Telephone]		-230-00	77			
Surface Ow					_	Facility Typ	96	Well				
_ Durrace Ow	lier red			Mineral C	wner				Lease	No. (API#)	30-01	5-34138
T Init I allow						N OF RE	LEASE					
Unit Letter N	Section 17	Township 17S	Range 30E	Feet from the	North	South Line	Feet from the	East/	West Line	County	Eddy	
				Latitude 32 4	9.815	Longitu	de 103 59.804	4		1		
Type of Relea	Drodu			NAT	URE	OF RELI						
Source of Rel	ease Steel	flowline					Release 20bbls			Recovered O		
						Date and H 10/29/2010	our of Occurrenc	æ	Date and 10/29/201	Hour of Disc 0 9:00		
Was Immedia	te Notice G		Van M	No. 57 March		If YES, To			10/20/201	9.00	a.m.	•
By Whom?				No 🛛 Not Rea	quired							
Was a Waterc	ourse Reac	hed?			<u> </u>	Date and H	our lume Impacting t	ho Wet-				
			Yes 🛛	No			unie mipacing u	ne wate	rcourse.			
If a Watercour	se was Imp	acted, Describ	e Fully.*									
escribe Caus	e of Proble	m and Remedi	al Action	Takan #								
DK Federal #3, contamination	of produce ured 10' x 1 , N-17-17S- from the rel	d water was ro 100' in the pas 30E, 660' FS ease and we w	eleased fro ture to the L 1980' F vill presen	om the steel flowl e west of our Nort WL, API# 30-015 at a remediation w	-04186 ork plan	Tetra Tech to the NMO	will sample the sp CD/BLM for app	est well pill site proval pr	location to area to deli ior to any s	the release is neate any pos significant re	s the M ssible mediati	cIntyre on work.
I hereby certify regulations all of public health or should their ope	that the information of the environerations have the environerations have the the environerations have the the the the the the the the the th	formation give e required to r ment. The ac e failed to ade lition, NMOC	n above is eport and ceptance quately in D accepta	s true and complet /or file certain rele of a C-141 report nvestigate and rem nce of a C-141 rep	te to the case not by the l	best of my ki ifications and NMOCD mar	nowledge and un perform correcti ked as "Final Rep	derstand ive actio port" doe	l that pursu ns for relea es not relie	ant to NMOC ses which ma ve the operate	CD rule ay enda or of lia	s and Inger Ibility
Signature:	2-	. 17					OIL CONSI	ERVA	TION E	IVISION		:21 AN
Printed Name:	• 	Josh Ru	ISSO		Ap	proved by Di	strict Supervisor:	-				3 9:11:21
fitle:		HSE Coor	dinator		Ap	proval Date:	·····	Ex	piration Da	te:		5/202
E-mail Address:	jn	usso@conchor	esources.	com	Co	nditions of A	pproval:				_	: 5
ate: 11/02/2 ach Addition		Phone: If Necessary	432-2	12-2399						Attached]	naging
								4		4		Released to Imaging: 5/5/202

Surface Owner: Federal

State of New Mexico Energy Minerals and Natural Resources

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

Form C-141 Revised October 10, 2003

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

Lease No. (API#) 30-015-34138

Release Notification and Corrective Action

	OPERATOR	Initial Report	Final Report
Name of Company COG Operating LLC	Contact Pat Ellis		
Address 550 W. Texas, Suite 1300 Midland, Texas 79701	Telephone No. (432) 230-0077		
Facility Name Jenkins B Federal #17	Facility Type Well		

LOCATION OF RELEASE

Mineral Owner

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
Ν	17	17S	30E					Eddy

Latitude 32 49.815 Longitude 103 59.804

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release 20 bbls	Volume Recovere	d 0 bbls
Source of Release: Steel Flowline	Date and Hour of Occurrence 10/29/2010	Date and Hour of 10/29/2010 9:00	
Was Immediate Notice Given?	If YES, To Whom?		
\Box Yes \boxtimes No \boxtimes Not Required			
By Whom?	Date and		
Was a Watercourse Reached?	If YES, Volume Impacting the Wa	ercourse.	
🗌 Yes 🖾 No	N/A		
If a Watercourse was Impacted, Describe Fully.*			
N/A			
Describe Cause of Problem and Remedial Action Taken.*			
The steel flowline from the Jenkins B Federal #17 well developed a hole	in it causing the release. The section	of the pipe that had the	he hole was replaced
with new pipe.	-		-
Describe Area Affected and Cleanup Action Taken.*			
Tetra Tech personal inspected the site and collected samples to define the	spills extent. Soil that exceeded RRA	L was removed and	hauled away for proper
disposal. Confirmation samples were taken and liners were installed, the	site was then brought up to surface gr	de with clean backf	ill material. Tetra Tech
prepared a closure report and submitted it to the NMOCD for review.			
I hereby certify that the information given above is true and complete to t	he best of my knowledge and understa	nd that pursuant to I	MOCD rules and
regulations all operators are required to report and/or file certain release r			
public health or the environment. The acceptance of a C-141 report by th			
should their operations have failed to adequately investigate and remedia			
or the environment. In addition, NMOCD acceptance of a C-141 report of	loes not relieve the operator of response	ibility for compliand	ce with any other
federal, state, or local laws and/or regulations.			
Ch -	OIL CONSERV	ATION DIVIS	SION
14 K			
Signature:			
Printed Name: Ike Tavarez	Approved by District Supervisor:	Ashley W.	Taxwell
	_ / _ /	0	
Title: Senior HSE Supervisor	Approval Date: 5/5/2023	Expiration Date:	
E-mail Address: ITavarez@concho.com	Conditions of Approval:		🗖
		Attac	hed
Date: January 25, 2019 Phone: (432) 685-2573			

* Attach Additional Sheets If Necessary

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Appendix B

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Water Well Data Average Depth to Groundwater (ft) COG - Jenkins B Federal # 17 Eddy County, New Mexico

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

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 21 22 23 24 26 25		16 Sc	outh	30	East	
18 17 16 15 14 13 19 20 21 22 23 24 30 29 28 27 26 25	6	5	4	3	2	1
19 20 21 22 23 24 30 29 28 27 26 25	7	8	9	10	11	12
30 29 28 27 26 25	18	17	16	15	14	13
	19	20	21	22	23	24
21 22 22 24 25 26	30	29	28	27	26	25
51 52 55 54 55 50	31	32	33	34	35	36

	16 Sc	31	East	
6	5	4	3	2
7	8	9	10	11
18	17	16	15	14
19	20	21	22	23
30	29	28	27	26
31 290	32	33	34	35

17 South 29 East

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	35 153	36

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

	17 South			East
6	5	4	3	2
7	8	9	10	11
18	17	16	15	14
19	20	21	22	23
30	29	28	27	26
31	32	33	34 271	35

	18 Sc	outh	29	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 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 South			East
6	5	4	3	2
7	8	9	10	11
18	17	16	15	14 317
19	20	21	22	23
30	29	28	27	26
31	32	33	34	35 261

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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Appendix C

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200 East Sunset Road, Suite E 5002 Basin Street, Suite A1 6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132

El Paso, Texas 79922 Midland, Texas 79703

888 • 588 • 3443 915•585•3443 432 • 689 • 6301 817 • 201 • 5260 E-Mail: lab@traceanalysis.com

FAX 915•585•4944 FAX 432 • 689 • 6313

Certifications

NELAP DoD LELAP WBE HUB NCTRCA DBE Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

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

Report Date: July 12, 2011

Work Order: 11070523

Project Location: Eddy Co., NM Project Name: COG/Jenkins B Federal #17 Project Number: 114-6400729

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

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
271194	CS-1 Bottom 7'	soil	2011-06-28	00:00	2011-07-05
271195	CS-1 North Sidewall	soil	2011-06-28	00:00	2011-07-05
271196	CS-1 East Sidewall	soil	2011-06-28	00:00	2011-07-05
271197	CS-1 South Sidewall	soil	2011-06-28	00:00	2011-07-05
271198	CS-1 West Sidewall	soil	2011-06-28	00:00	2011-07-05
271199	CS-2 Bottom 5'	soil	2011-06-28	00:00	2011-07-05
271200	CS-2 North Sidewall	soil	2011-06-28	00:00	2011-07-05
271201	CS-2 East Sidewall	soil	2011-06-28	00:00	2011-07-05
271202	CS-2 South Sidewall	soil	2011-06-28	00:00	2011-07-05
271203	CS-2 West Sidewall	soil	2011-06-28	00:00	2011-07-05

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

Michael abel

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

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Case Narrative

Samples for project COG/Jenkins B Federal #17 were received by TraceAnalysis, Inc. on 2011-07-05 and assigned to work order 11070523. Samples for work order 11070523 were received intact at a temperature of 10.4 C.

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

		Prep	Prep	QC	Analysis
Test	Method	Batch	Date	Batch	Date
Chloride (Titration)	SM 4500-Cl B $$	70311	2011-07-06 at 08:36	82930	2011-07-11 at 14:07
Chloride (Titration)	SM 4500-Cl B $$	70311	2011-07-06 at $08:36$	82931	2011-07-11 at 14:08 $$

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 11070523 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: July 12, 2011	Work Order: 11070523	Page Number: 5 of 12
114-6400729	COG/Jenkins B Federal #17	Eddy Co., NM

Analytical Report

Sample: 271194 - CS-1 Bottom 7'

Laboratory:	Midland					
Analysis:	Chloride (Titration)	Analy	tical Method:	SM 4500-Cl B $$	Prep Method	l: N/A
QC Batch:	82930	Date	Analyzed:	2011-07-11	Analyzed By	: AR
Prep Batch:	70311	Samp	le Preparation:	2011-07-06	Prepared By	: AR
			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			12500	m mg/Kg	100	4.00

Sample: 271195 - CS-1 North Sidewall

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 82930 70311	Date An	Preparation:	SM 4500-Cl B 2011-07-11 2011-07-06	Prep Method: Analyzed By: Prepared By:	AR
D		a .	RL	TT •.		DI
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			12900	m mg/Kg	100	4.00

Sample: 271196 - CS-1 East Sidewall

Laboratory:	Midland					
Analysis:	Chloride (Titration)	Analy	tical Method:	SM 4500-Cl B $$	Prep Method:	N/A
QC Batch:	82930	Date .	Analyzed:	2011-07-11	Analyzed By:	\mathbf{AR}
Prep Batch:	70311	Sampl	le Preparation:	2011-07-06	Prepared By:	AR
			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			13000	m mg/Kg	100	4.00

.

Report Date 114-6400729	: July 12, 2011	Work Order: 110' COG/Jenkins B Fed		Page Number: 6 of Eddy Co., N	
Sample: 27	1197 - CS-1 South Sidewall	l			
Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 82930 70311	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2011-07-11 2011-07-06	Prep Method: Analyzed By: Prepared By:	N/A AR AR
Parameter	Flag	RL Cert Result		Dilution	RL
Chloride	~	13100	m mg/Kg	100	4.00
Analysis: QC Batch: Prep Batch:	Chloride (Titration) 82930 70311	Analytical Method: Date Analyzed: Sample Preparation:		Prep Method: Analyzed By: Prepared By:	N/A AR AR
	Flag	RL Cert Result	Units	Dilution	RL
Parameter Chloride	Flag		Units	Dilution 100	RL 4.00
	Flag 1199 - CS-2 Bottom 5'	Cert Result	Units		

ParameterFlagCertResultUnitsDilutionChloride963mg/Kg100				RL		
Chloride 963 mg/Kg 100	RL		Inita	Result	Cert	Parameter
	4.00	100	m mg/Kg	963		Chloride

Sample: 271200 - CS-2 North Sidewall

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	82931	Date Analyzed:	2011-07-11	Analyzed By:	AR
Prep Batch:	70311	Sample Preparation:	2011-07-06	Prepared By:	\mathbf{AR}

	Work Order: 11070523 COG/Jenkins B Federal #17			0	er: 7 of 12 v Co., NM
Flag	Cort	RL Bogult	Unita	Dilution	RL
Flag	Cert		0 0		
		4540	m mg/Kg	100	4.00
	Flag	COG/Je	COG/Jenkins B Federal ≠ RL	COG/Jenkins B Federal #17 RL Flag Cert Result Units	COG/Jenkins B Federal #17 Eddy RL Flag Cert Result Units Dilution

Sample: 271201 - CS-2 East Sidewall

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 82931 70311	Date An	al Method: alyzed: Preparation:	SM 4500-Cl B 2011-07-11 2011-07-06	Prep Method: Analyzed By: Prepared By:	AR
Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			2520	m mg/Kg	100	4.00

Sample: 271202 - CS-2 South Sidewall

Laboratory:	Midland					
Analysis:	Chloride (Titration)	Analy	tical Method:	SM 4500-Cl B $$	Prep Method:	N/A
QC Batch:	82931	Date A	Analyzed:	2011-07-11	Analyzed By:	AR
Prep Batch:	70311	Sampl	e Preparation:	2011-07-06	Prepared By:	\mathbf{AR}
			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			<200	mg/Kg	50	4.00

Sample: 271203 - CS-2 West Sidewall

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 82931 70311	Date An	al Method: alyzed: Preparation:	SM 4500-Cl B 2011-07-11 2011-07-06	Prep Method: Analyzed By: Prepared By:	AR
			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			1940	mg/Kg	100	4.00

Report Date: July 12, 2011

114-6400729

Parameter

Chloride

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Units

mg/Kg

Result

< 3.85

 RL

4

Eddy Co., NM

Method B	lanks					
Method Blank (1)	QC Batch: 82930					
QC Batch: 82930 Prep Batch: 70311		Date Analyzed: QC Preparation:	2011-07-11 2011-07-06		Analyzed By: Prepared By:	AR AR
Parameter	Flag	Cert		MDL Result	Units	RI
Chloride				<3.85	mg/Kg	4
Method Blank (1)	QC Batch: 82931					
QC Batch: 82931 Prep Batch: 70311		Date Analyzed: QC Preparation:	2011-07-11 2011-07-06		Analyzed By: Prepared By:	AR AR
				MDL		

 Cert

Flag

Work Order: 11070523

COG/Jenkins B Federal #17

Report Date: July 12, 2011	Work Order: 11070523	Page Number: 9 of 12
114-6400729	COG/Jenkins B Federal #17	Eddy Co., NM

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: Prep Batch:	82930 70311	Date Analyzed:2011-07-11Analyzed By:ARQC Preparation:2011-07-06Prepared By:AR									
-		_	~	LCS			Spike		atrix		Rec.
Param		F	С	Result	Units	Dil.	Amount	Re	esult R	.ec.	Limit
Chloride				95.3	mg/Kg	1	100	<	3.85 9	95 8	85 - 115
Percent recov	very is based on the	spike re	sult. R	PD is based	on the sp	oike and sp	oike duplic	ate resi	ult.		
			LC	SD		Spike	Matrix		Rec.		RPD
Param		F (C Res	ult Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride			10	6 mg/K	g 1	100	< 3.85	106	85 - 115	11	20
Percent recov	very is based on the	spike re	sult. R	PD is based	on the sp	oike and sp	oike duplic	ate resi	ult.		

Laboratory Control Spike (LCS-1)

QC Batch: Prep Batch:	82931 70311	Date Analyzed: 2011-07-11 QC Preparation: 2011-07-06								By: AR By: AR
Param		F	С	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride				96.3	mg/Kg	1	100	< 3.85	96	85 - 115
Percent recov	very is based on the spi	ke resu	ılt. RF	PD is based	on the spil	ke and sp	pike duplicat	e result.		

			LCSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride			102	mg/Kg	1	100	< 3.85	102	85 - 115	6	20

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

Matrix Spike (MS-1) Spiked Sample: 271199

QC Batch:	82930	Date Analyzed:	2011-07-11	Analyzed By:	\mathbf{AR}
Prep Batch:	70311	QC Preparation:	2011-07-06	Prepared By:	\mathbf{AR}

Report Date: July 12, 2011 Work Order: 11070523 114-6400729 COG/Jenkins B Federal #17									Page N		10 of 12 Co., NM
Param		F	С	MS Result	Units	Dil.	Spike Amount		atrix esult I	Rec.	Rec. Limit
Chloride				11400	mg/Kg	100	10000	9	963 :	104	80 - 120
Percent recovery is based on th	ne spike	resu	lt. RPD	is based	on the sp	oike and sp	ike duplica	ate res	ult.		
Param	F	С	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			11700	mg/Kg	100	10000	963	107	80 - 120	3	20
Percent recovery is based on th											
Matrix Spike (MS-1) Spi	iked Saı	mple	: 271203 Date		4. 201	1 07 11			Ano	luzod B	A D
	iked Sar	mple	Date	e Analyzeo Preparatio		1-07-11 1-07-06	Spiko	М	Prej	lyzed B pared By	v: AR
Matrix Spike (MS-1) Spi QC Batch: 82931 Prep Batch: 70311		-	Date QC	e Analyzec Preparatic MS	on: 201	1-07-06	Spike Amount		Prej atrix	pared By	v: AR Rec.
Matrix Spike (MS-1) Spi QC Batch: 82931 Prep Batch: 70311 Param		mple: F	Date QC	e Analyzec Preparatic MS Result	on: 201 Units	1-07-06 Dil.	Amount	R	Prep atrix esult F	pared By Rec.	7: AR Rec. Limit
Matrix Spike (MS-1) Spi QC Batch: 82931 Prep Batch: 70311		F	Date QC C	e Analyzeo Preparatio MS Result 12100	on: 201 Units mg/Kg	Dil. 100 100 Dike and sp	Amount 10000 ike duplica	R 1	Prep atrix esult F 940 ult.	pared By Rec.	7: AR Rec. Limit 80 - 120
Matrix Spike (MS-1) Spi QC Batch: 82931 Prep Batch: 70311 Param Chloride		F	Date QC C	e Analyzed Preparatio MS Result 12100 is based of	on: 201 Units mg/Kg	Dil.	Amount 10000	R 1	Prep atrix esult F 940	pared By Rec.	7: AR Rec. Limit

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

Report Date: July 12, 2011	Work Order: 11070523	Page Number: 11 of 12
114-6400729	COG/Jenkins B Federal #17	Eddy Co., NM

Calibration Standards

Standard (ICV-1)

QC Batch:	82930			Date A	nalyzed:	2011-07-11		Analy	zed By: AR
					ICVs	ICVs	ICVs	Percent	
					True	Found	Percent	Recovery	Date
Param		Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride				mg/Kg	100	96.5	96	85 - 115	2011-07-11

Standard (CCV-1)

QC Batch:	82930		Date Analyzed: 2011-07-11					Analyzed By: AR		
					CCVs	CCVs	CCVs	Percent		
					True	Found	Percent	Recovery	Date	
Param		Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed	
Chloride				mg/Kg	100	104	104	85 - 115	2011-07-11	

Standard (ICV-1)

QC Batch:	82931			Date A	nalyzed:	2011-07-11		Analy	Analyzed By: AR		
					ICVs	ICVs	ICVs	Percent			
					True	Found	Percent	Recovery	Date		
Param		Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed		
Chloride				m mg/Kg	100	100	100	85 - 115	2011-07-11		

Standard (CCV-1)

QC Batch: 82	2931	Date Analyzed: 2011-07-11						Analy	zed By: AR
					CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	I	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride				mg/Kg	100	100	100	85 - 115	2011-07-11

Report Date: July 12, 2011 114-6400729

Page Number: 12 of 12 Eddy Co., NM

Appendix

Laboratory Certifications

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

Standard Flags

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

Attachments

The scanned attachments will follow this page.

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

	PAGE: 1 OF: 1	ANALYSIS REQUEST (Circle or Specify Method No.)	а Ль Бо Нg Se З Сг Рр Нg Se	520/625	MOD, s Ag As es s Ag As es i. Vol. 8: 608 8 608 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	PAH 8270 RCRA Metal											7.6.11. SAMPLED BY: (Print & Initial) Date: Date: Time:	SAMPLE SHIPPED BY: (Circle) AIRBILL #: FEDEX BUS	HAND DELIVERED UPS OTHER: TETHATECH CONTACT PERSON: I Results hv:		L K lovare Authorized: Yes No	
ς.	dv Reco				_	HINO3 HCT LILTERED (V NOMBER OF											Date:	Date: Time:	Date:		TIME:	0000 o Tetra Tech - Projec
XWO #: 1107 05 23	Request of Chain of Custody Record		FETRA TECH 1910 N. Big Spring St. Midland, Texas 79705 (432) 682-4559 • Fax (432) 682-3946	SITE MANAGER: IK1 Tarairz	E Jenkins B Federal #17	Eddy Co. Nun SAMPLE IDENTIFICATION	Borton 7'	المامد المراجع	East Sidewall	Serth Sidwall	Wrst Sudrwall	Bertow 5'		East Side wall	Parth Shirt Provident	(Mist Sidersell		RECEVED BY: (Stanature)	RECEIVED BY: (Signature)	RECEIVED BY: (Signature)	DATE:	iks: XUI +6S+5-Midlowd stains Yellow copy - Return Orginal copy to Tetra Tech
1:# 000	equiest (₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽		PROJECT NAME:	XIATAM 9MOD 8ARĐ	5 × 65-1	(cs-1	65-1	l 65~ (65-1	1-50	65-2	2 - 50	2-50	A 4 05-2		Date: Time:	Date: Time:		TY ZIP: PHONE: ZIP:	REMARKS:
\bigcirc	Analveis R			CLIENT NAME: ငို <i>ဝင်</i> ရ	:	TIME	92/1, HUILE	195 / 1	196 .	tb1	198	199	guo 1	Q01	QQ /	``	RELINQUISHED BY: (Signature)	RELINQUISHED BY: (Signature)	RELINQUISHED BY: (Signature)	ECEIVING LABORATORY: 7/4/7	CITY: AN ALLAN STATE	SAMPLE CONDITION WHEN RECEIVED: REMARKS: O.4C 1 MOC F Please fill out all copies - Laboratory retains Yellow copy

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WBENC: 237019

HUB:1752439743100-86536NCTRCAWFWB38444Y0909

Certifications

DBE: VN 20657

NELAP Certifications

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

Midland: T104704392-08-TX

Analytical and Quality Control Report

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

Report Date: December 15, 2010

Work Order: 10121024

Project Location:Eddy Co., NMProject Name:COG/Jenkins B Federal #17Project Number:114-6400729

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

			Date	Time	Date
\mathbf{Sample}	Description	Matrix	Taken	Taken	Received
252880	AH-1 0-1'	soil	2010-12-06	00:00	2010-12-10
252881	AH-1 1-1.5'	soil	2010 - 12 - 06	00:00	2010 - 12 - 10
252882	AH-1 2-2.5'	soil	2010 - 12 - 06	00:00	2010 - 12 - 10
252883	AH-1 3-3.5'	soil	2010 - 12 - 06	00:00	2010 - 12 - 10
252884	AH-1 4-4.5'	soil	2010 - 12 - 06	00:00	2010 - 12 - 10
252885	AH-2 0-1'	soil	2010 - 12 - 06	00:00	2010 - 12 - 10
252886	AH-2 1-1.5'	soil	2010-12-06	00:00	2010-12-10
252887	AH-2 2-2.5'	soil	2010-12-06	00:00	2010-12-10
252888	AH-2 3-3.5'	soil	2010-12-06	00:00	2010-12-10
252889	AH-2 4-4.5'	soil	2010-12-06	00:00	2010-12-10

			Date	Time	Date
\mathbf{Sample}	Description	Matrix	Taken	Taken	$\operatorname{Received}$
252890	AH-2 5-5.5'	soil	2010-12-06	00:00	2010-12-10
252891	AH-3 0-1'	soil	2010-12-06	00:00	2010-12-10
252892	AH-3 1-1.5'	soil	2010-12-06	00:00	2010-12-10
252893	AH-3 2-2.5'	soil	2010-12-06	00:00	2010-12-10
252894	AH-3 3-3.5'	soil	2010-12-06	00:00	2010-12-10
252895	AH-3 4-4.5'	soil	2010-12-06	00:00	2010-12-10

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

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

Michael abul

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.

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Case Narrative

Samples for project COG/Jenkins B Federal #17 were received by TraceAnalysis, Inc. on 2010-12-10 and assigned to work order 10121024. Samples for work order 10121024 were received intact at a temperature of 3.6 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	65313	2010-12-14 at $10:54$	76151	2010-12-14 at 12:48
Chloride (Titration)	SM 4500-Cl B $$	65250	2010-12-13 at $10:17$	76123	2010-12-14 at $12:56$
Chloride (Titration)	SM 4500-Cl B $$	65250	2010-12-13 at $10:17$	76124	2010-12-14 at $12:57$
TPH DRO - NEW	S 8015 D	65320	2010-12-14 at $09:15$	76161	2010-12-14 at $09:15$
TPH GRO	S 8015 D	65313	2010-12-14 at $10:54$	76152	2010-12-14 at 12:48

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 10121024 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:	December 15, 2010	V
114 - 6400729		COO

Page Number: 4 of 19 Eddy Co., NM

Analytical Report

Sample: 252880 - AH-1 0-1'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland BTEX 76151 65313		Analytical 1 Date Analy Sample Pre	zed:	S 8021B 2010-12-14 2010-12-14		Prep Met Analyzed Prepared	By: ME
			RL					
Parameter	Fla	ıg	Result		Units	Ι	Dilution	RL
Benzene			< 0.0200		m mg/Kg		1	0.0200
Toluene			< 0.0200		m mg/Kg		1	0.0200
Ethylbenzene	ġ		< 0.0200		m mg/Kg		1	0.0200
Xylene			< 0.0200		m mg/Kg		1	0.0200
						Spike	Percent	Recovery
$\operatorname{Surrogate}$		Flag	Result	Units	Dilution	Amount	$\operatorname{Recovery}$	Limits
Trifluorotolu	ene (TFT)		2.43	mg/Kg	1	2.00	122	52.8 - 137
4-Bromofluor	obenzene (4-BFB)		2.52	$\mathrm{mg/Kg}$	1	2.00	126	38.4 - 157

Sample: 252880 - AH-1 0-1'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 76123 65250	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2010-12-14 2010-12-13	Prep Method: Analyzed By: Prepared By:	'
		RL			
Parameter	Flag	\mathbf{Result}	Units	Dilution	RL
Chloride		389	mg/Kg	50	4.00

Sample: 252880 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical M	ethod: S 8015 D	Prep Method:	N/A
QC Batch:	76161	Date Analyz	ed: 2010-12-14	Analyzed By:	kg
Prep Batch:	65320	Sample Prep	aration: 2010-12-14	Prepared By:	kg
		RL			
Parameter	Flag	Result	Units	Dilution	RL
DRO		54.3	m mg/Kg	1	50.0

.

Report Date: December 15, 2010 114-6400729			Work Order: 10121024 COG/Jenkins B Federal #17			Page Number: 5 of 19 Eddy Co., NM	
Flag	Result	Units		on		Percent Recovery	Recover Limits
	130	mg/Kg	1		100	130	70 - 13
880 - AH-1 0	-1'						
Midland TPH GRO 76152 65313		Date Anal	yzed:	2010-12-14		Analyzed	By: ME
		RL					_
Fla	ag						<u> </u>
		<2.00		mg/ Kg		1	2.0
	Flag	Result	Units	Dilution			$egin{array}{c} { m Recover} \\ { m Limits} \end{array}$
· · · · · ·		2.60		1			48.5 - 15
benzene (4-BF.	B)	2.50	mg/Kg	1	2.00	125	42 - 159
Midland		Date	Analyzed:	2010-12	2-14	Analyze	ed By: AR
Fl	ອດ	RL Besult		Units		Dilution	R
	~8	1080		mg/Kg		100	4.0
	880 - AH-1 0 Midland TPH GRO 76152 65313 Fl. ne (TFT) benzene (4-BF) 881 - AH-1 1 Midland Chloride (Titra 76123 65250	130 880 - AH-1 0-1' Midland TPH GRO 76152 65313 Flag Flag Flag flag he (TFT) benzene (4-BFB) 881 - AH-1 1-1.5' Midland Chloride (Titration) 76123	130 mg/Kg 880 - AH-1 0-1' Midland TPH GRO Analytical 76152 Date Anal 65313 Sample Pi RL Result Flag Result <2.00	130 mg/Kg 1 130 mg/Kg 1 880 - AH-1 0-1' Midland TPH GRO Analytical Method: 76152 Date Analyzed: 65313 65313 Sample Preparation: RL Flag Result Flag Result Flag Result Virial Sample Preparation: RL Flag Result Units Result Units Note: Colspan="2">Colspan="2">Colspan="2">Midland Colspan="2">Colspan="2">Colspan="2">Method Midland Chloride (Titration) Analytical Method 76123 Date Analyzed: Sample Preparation 65250 Sample Preparation RL Flag Result	130 mg/Kg 1 880 - AH-1 0-1' Midland TPH GRO Analytical Method: S 8015 D 76152 Date Analyzed: 2010-12-14 65313 Sample Preparation: 2010-12-14 RL Result Units Flag Result Units 2.00 mg/Kg 2.00 mg/Kg 2.00 mg/Kg 881 - AH-1 1-1.5' 2.50 mg/Kg 881 - AH-1 1-1.5' Analytical Method: SM 450 Midland Chloride (Titration) Analytical Method: SM 450 76123 Date Analyzed: 2010-12 65250 Sample Preparation: 2010-12 RL Flag Result Units	Flag Result Units Dilution Amount 130 mg/Kg 1 100 880 - AH-1 0-1' Midland 100 TPH GRO Analytical Method: S 8015 D 76152 Date Analyzed: 2010-12-14 65313 Sample Preparation: 2010-12-14 RL Flag Result Units 2.00 mg/Kg Spike Flag Result Units Dilution Amount he (TFT) 2.60 mg/Kg 1 2.00 benzene (4-BFB) 2.50 mg/Kg 1 2.00 State Analytical Method: SM 4500-Cl B 0 Date Analyzed: 2010-12-14 Sample Preparation: 2010-12-14 Sample Preparation: SM 4500-Cl B Date Analyzed: 2010-12-13 RL Flag RL Flag RL Flag RL Site Analyzed: 2010-12-14 <tr< td=""><td>FlagResultUnitsDilutionAmountRecovery130mg/Kg1100130880 - AH-1 0-1'880 - AH-1 0-1'880 - AH-1 0-1'Midland TPH GROAnalytical Method:S 8015 DPrep Met.76152Date Analyzed:2010-12-14Analyzed65313Sample Preparation:2010-12-14PreparedRL FlagResultUnitsDilution2.00mg/Kg1FlagResultUnitsDilutionFlagResultUnitsDilutionFlagResultUnitsDilutionAmountRecoveryre (TFT)2.60mg/Kg12.00130benzene (4-BFB)2.50mg/Kg12.00125881 - AH-1 1-1.5'Midland Chloride (Titration) 76123Analytical Method:SM 4500-Cl B 2010-12-14Prep M Analyzed65250Sample Preparation:2010-12-14AnalyzeGRL FlagResultUnitsDilution</td></tr<>	FlagResultUnitsDilutionAmountRecovery130mg/Kg1100130880 - AH-1 0-1'880 - AH-1 0-1'880 - AH-1 0-1'Midland TPH GROAnalytical Method:S 8015 DPrep Met.76152Date Analyzed:2010-12-14Analyzed65313Sample Preparation:2010-12-14PreparedRL FlagResultUnitsDilution2.00mg/Kg1FlagResultUnitsDilutionFlagResultUnitsDilutionFlagResultUnitsDilutionAmountRecoveryre (TFT)2.60mg/Kg12.00130benzene (4-BFB)2.50mg/Kg12.00125881 - AH-1 1-1.5'Midland Chloride (Titration) 76123Analytical Method:SM 4500-Cl B 2010-12-14Prep M Analyzed65250Sample Preparation:2010-12-14AnalyzeGRL FlagResultUnitsDilution

		RL			
Parameter	Flag	Result	\mathbf{Units}	Dilution	RL
Chloride		9450	m mg/Kg	100	4.00

.

Report Date 114-6400729	2 December 15, 2010		Work Order: 10121024 COG/Jenkins B Federal #17		6 of 19 o., NM
Sample: 25	2883 - AH-1 3-3.5'				
Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	76123	Date Analyzed:	2010-12-14	Analyzed By:	AR
Prep Batch:	65250	Sample Preparation:	2010-12-13	Prepared By:	\mathbf{AR}
		RL			
Parameter	Flag	Result	Units	Dilution	RL
Chloride	<u>v</u>	15400	mg/Kg	100	4.00
Semenles 25	9004 AU 1 4 4 5				
Sample: 25	2884 - AH-1 4-4.5'				
Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	76123	Date Analyzed:	2010-12-14	Analyzed By:	AR
Prep Batch:	65250	Sample Preparation:	2010-12-13	Prepared By:	\mathbf{AR}
		RL			
Parameter	Flag	Result	Units	Dilution	RL
Chloride		11800	mg/Kg	100	4.00

Sample: 252885 - AH-2 0-1'

Analysis:BTEXAnalytical Method:S $8021B$ Prep MethodQC Batch:76151Date Analyzed: $2010-12-14$ Analyzed By:Prep Batch:65313Sample Preparation: $2010-12-14$ Prepared By:RLParameterFlagResultUnitsDilutionBenzene <0.0200 mg/Kg1Toluene <0.0200 mg/Kg1Ethylbenzene <0.0200 mg/Kg1Xylene <0.0200 mg/Kg1	ME
Prep Batch:65313Sample Preparation:2010-12-14Prepared By:RLRLParameterFlagResultUnitsDilutionBenzene<0.0200mg/Kg1Toluene<0.0200mg/Kg1Ethylbenzene<0.0200mg/Kg1	
RLParameterFlagResultUnitsDilutionBenzene<0.0200	ME
ParameterFlagResultUnitsDilutionBenzene<0.0200	
Benzene <0.0200 mg/Kg 1 Toluene <0.0200	
Toluene <0.0200 mg/Kg 1 Ethylbenzene <0.0200	RL
Ethylbenzene <0.0200 mg/Kg 1	0.0200
	0.0200
Xylene <0.0200 mg/Kg 1	0.0200
	0.0200
Spike Percent	Recovery
Surrogate Flag Result Units Dilution Amount Recovery	Limits
Trifluorotoluene (TFT)2.40 mg/Kg12.00120	52.8 - 137
4-Bromofluorobenzene (4-BFB) 2.58 mg/Kg 1 2.00 129	38.4 - 157

Report Date: December 15, 2010 114-6400729		Work Order: 10 COG/Jenkins B F	Page Number: 7 of 19 Eddy Co., NM		
Sample: 2528	385 - AH-2 0-1'				
Analysis: C QC Batch: 7	Midland Chloride (Titration) 76123 55250	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2010-12-14 2010-12-13	Prep Method: Analyzed By: Prepared By:	N/A AR AR
Parameter Chloride	Flag	RL Result <200 r	Units ng/Kg	Dilution 50	RL 4.00
Laboratory: M Analysis: 7 QC Batch: 7	8 85 - AH-2 0-1' Midland FPH DRO - NEW 76161 35320	Analytical Method: Date Analyzed: Sample Preparation: RL	S 8015 D 2010-12-14 2010-12-14	Prep Method: Analyzed By: Prepared By:	N/A kg kg

Parameter	\mathbf{F}	lag	Result	Un	its	$\operatorname{Dilution}$	RL
DRO			<50.0	mg/I	Kg	1	50.0
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	$egin{array}{c} { m Recovery} \\ { m Limits} \end{array}$
n-Tricosane		116	m mg/Kg	1	100	116	70 - 130

Sample: 252885 - AH-2 0-1'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland TPH GRO 76152 65313		Analytical Date Anal Sample Pr		S 8015 D 2010-12-14 2010-12-14		Prep Meth Analyzed I Prepared I	By: ME
			RL					
Parameter	Flag		Result		Units	D	ilution	RL
GRO			<2.00		m mg/Kg		1	2.00
Surrogate		Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotolu	ene (TFT)		2.62	m mg/Kg	1	2.00	131	48.5 - 152
4-Bromofluor	obenzene (4-BFB)		2.57	$\mathrm{mg/Kg}$	1	2.00	128	42 - 159

Report Date 114-6400729	e: December 15, 2010		Work Order: 10121024 COG/Jenkins B Federal #17		
Sample: 25	2886 - AH-2 1-1.5'				
Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B $$	Prep Method:	N/A
QC Batch:	76123	Date Analyzed:	2010 - 12 - 14	Analyzed By:	\mathbf{AR}
Prep Batch:	65250	Sample Preparation:	2010-12-13	Prepared By:	\mathbf{AR}
		RL			
Parameter	Flag	\mathbf{Result}	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00
Laboratory: Analysis: QC Batch: Prep Batch: Parameter Chloride	Midland Chloride (Titration) 76123 65250 Flag	Analytical Method: Date Analyzed: Sample Preparation: RL Result <200	SM 4500-Cl B 2010-12-14 2010-12-13 Units mg/Kg	Prep Method: Analyzed By: Prepared By: Dilution 50	N/A AR AR RL 4.00
Sample: 25 Laboratory: Analysis: QC Batch: Prep Batch:	2888 - AH-2 3-3.5' Midland Chloride (Titration) 76123 65250	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2010-12-14 2010-12-13	Prep Method: Analyzed By: Prepared By:	m N/A $ m AR$ $ m AR$
-		RL			
Parameter	Flag	Result <200	Units mg/Kg	Dilution 50	RL 4.00
Chloride					/1 1 11 1

Sample: 252889 - AH-2 4-4.5'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 76123 65250	Analytical Method: Date Analyzed: Sample Preparation:	2010-12-14	Prep Method: Analyzed By: Prepared By:	\overline{AR}
		RL			
Parameter	Flag	Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Report Date: December 15, 2010 114-6400729			Work Order: 10121024 COG/Jenkins B Federal #17		
Sample: 25	2890 - AH-2 5-5.5'				
Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	76124	Date Analyzed:	2010-12-14	Analyzed By:	AR
Prep Batch:	65250	Sample Preparation:	2010-12-13	Prepared By:	\mathbf{AR}
		RL			
Parameter	Flag	Result	Units	Dilution	RL
Chloride		410	mg/Kg	50	4.00

Sample: 252891 - AH-3 0-1'

Laboratory: Analysis: QC Batch:	Midland BTEX 76151 65212		Analytical I Date Analy	zed:	S 8021B 2010-12-14		Prep Metl Analyzed	By: ME
Prep Batch:	65313		Sample Pre	paration:	2010-12-14		Prepared	By: ME
			RL					
Parameter	Flag		Result		Units	Di	ilution	RL
Benzene			< 0.0200		m mg/Kg		1	0.0200
Toluene			< 0.0200		m mg/Kg		1	0.0200
Ethylbenzene)		< 0.0200		$\mathrm{mg/Kg}$		1	0.0200
Xylene			< 0.0200		m mg/Kg		1	0.0200
						${ m Spike}$	Percent	Recovery
$\mathbf{Surrogate}$		Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotolu	ene (TFT)		1.71	mg/Kg	1	2.00	86	52.8 - 137
4-Bromofluor	obenzene (4-BFB)		1.90	mg/Kg	1	2.00	95	38.4 - 157

Sample: 252891 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	76124	Date Analyzed:	2010 - 12 - 14	Analyzed By:	\overline{AR}
Prep Batch:	65250	Sample Preparation	: 2010-12-13	Prepared By:	\mathbf{AR}
		RL			
Parameter	Flag	Result	Units	Dilution	RL
Chloride		307	mg/Kg	50	4.00

Report Date 114-6400729	e: December 15, 2)			r: 10121024 B Federal #	17	Page Number: 10 of 19 Eddy Co., NM			
Sample: 25	52891 - AH-3 0-	-1'							
Laboratory: Analysis: QC Batch: Prep Batch:	Midland TPH DRO - NI 76161 65320	Date	ytical Meth Analyzed: ble Prepara	2010-	12-14	Prep Method: N _/ Analyzed By: kg Prepared By: kg			
Parameter	Fla	ıg	${ m RL} { m Result}$		Units		Dilution	RL	
DRO			< 50.0 mg/Kg				1	50.0	
Surrogate	Flag	Result	Units	Dilu	ition	Spike Amount	$egin{array}{c} \operatorname{Percent} \\ \operatorname{Recovery} \end{array}$	$egin{array}{c} { m Recovery} \\ { m Limits} \end{array}$	
n-Tricosane	-	110	m mg/Kg		1	100	110	70 - 130	
Laboratory: Analysis: QC Batch: Prep Batch:	Midland TPH GRO 76152 65313		-		S 8015 D 2010-12-14 2010-12-14		Prep Met Analyzed Prepared	By: ME	
Parameter	Fla	l Q.	${ m RL} { m Result}$		Units		Dilution	RL	
GRO		.0	<2.00		mg/Kg		1	2.00	
Surrogate Trifluorotolu		Flag	Result 1.87	Units mg/Kg	Dilution 1	2.00	94	Recovery Limits 48.5 - 152	
4-Bromofluo	robenzene (4-BFI	3)	1.90	m mg/Kg	1	2.00	95	42 - 159	
Sample: 25	52892 - AH-3 1-	1.5'							
Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titra 76124 65250	tion)	Date	tical Metho Analyzed: le Preparat	2010-1		Prep M Analyze Prepare	d By: AR	

		RL			
Parameter	Flag	Result	Units	Dilution	RL
Chloride		394	m mg/Kg	50	4.00

3 - AH-3 2-2.5'		Work Order: 10121024 COG/Jenkins B Federal #17				
J = A11-0 4-4.0						
dland loride (Titration) 124 250	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2010-12-14 2010-12-13	Prep Method: Analyzed By: Prepared By:	N/A AR AR		
	RL					
Flag	Result	Units	Dilution	RL		
	569	mg/Kg	50	4.00		
loride (Titration) 124 250	1 1	SM 4500-Cl B 2010-12-14 2010-12-13	Prep Method: Analyzed By: Prepared By:	N/A AR AR		
Flag		Units	Dilution	RL		
0			100	4.00		
5 - AH-3 4-4.5' dland loride (Titration) 124 250	RL		Prep Method: Analyzed By: Prepared By:	N/A AR AR		
Flag		Units		RL		
	2770	mg/Kg	100	4.00		
(1) QC Batch: 7612.	3					
123			Analyzed By:	AR		
250	QC Preparation: 2010	-12-13	Prepared By:	AR		
	Flag 4 - AH-3 3-3.5' dland loride (Titration) 124 250 Flag 5 - AH-3 4-4.5' dland loride (Titration) 124 250 Flag (1) QC Batch: 7612	124 Date Analyzed: 250 Sample Preparation: RL Flag Result 569 4 - AH-3 3-3.5' dland Analytical Method: loride (Titration) Analytical Method: l24 Date Analyzed: 250 Sample Preparation: RL Flag Flag Result 1150 1150 5 - AH-3 4-4.5' dland dloride (Titration) Analytical Method: 124 Date Analyzed: 250 Sample Preparation: RL Flag Result Date Analyzed: 250 Sample Preparation: RL Flag Result Date Analyzed: 250 Sample Preparation: RL Flag Flag Result 2770 2770 (1) QC Batch: 76123 123 Date Analyzed: 2010	124 250Date Analyzed: Sample Preparation: 2010-12-132010-12-14 Sample Preparation: 2010-12-13RL FlagA - AH-3 3-3.5'dland loride (Titration)Analytical Method: Date Analyzed: 2010-12-142010-12-14 Date Analyzed: 2010-12-13RL FlagRL FlagRL FlagRL Date Analyzed: 2010-12-13RL FlagRL Date Analyzed: 2010-12-14SoRL FlagRL Date Analyzed: 2010-12-13RL FlagRL FlagResult UnitsUnitsRL To mg/Kg(1) QC Batch: 76123Date Analyzed: 2010-12-132010-12-14 200Colspan="2">2010-12-14 200Colspan="2">C	124 250Date Analyzed: Sample Preparation:2010-12-14 2010-12-13Analyzed By: Prepared By:RL FlagFlagResultUnitsDilution569mg/Kg50Analyzei: 1010-12-13Optimized Method: SM 4500-C1 B Date Analyzed: 2010-12-14Analyzei: 2010-12-14Analyzed By: 2010-12-14Analyzed By: 2010-12-13Prep Method: Sample Preparation: 2010-12-13Prepared By: RL FlagResult UnitsDilutionThe Analyzed: 2010-12-13Prep Method: Sample Preparation: 2010-12-13Prep Method: Sample Preparation: 2010-12-13Prep Method: Sample Preparation: 2010-12-14Analyzed By: 2010-12-14Analyzed By: 2010-12-13Prep Method: Sample Preparation: 2010-12-13Prep Method: Sample Preparation: 2010-12-13Prep Method: 2010-12-14Analyzed By: 2010-12-13Prepared By:RL Flag ResultUnitsDilutionQC Preparation: 2010-12-13Prepared By: 2010-12-13Prepared By: 		

		MDL		
Parameter	Flag	Result	Units	RL
Chloride		<2.18	m mg/Kg	4

Report Date: December 114-6400729	15, 2010		Work Order: G/Jenkins B	10121024 Federal #17		0	ber: 12 of 19 ddy Co., NM
Method Blank (1)	QC Batch: 76124						
QC Batch: 76124		Date Ana	-	10-12-14		Analyz	
Prep Batch: 65250		QC Prepa	aration: 20	10-12-13		Prepar	ed By: AR
			MDL				
Parameter	Flag		Result		Units		RL
Chloride			<2.18		mg/K	g	4
Method Blank (1)	QC Batch: 76151						
QC Batch: 76151		Date Ana	lyzed: 20	10-12-14		Analyz	ed By: ME
Prep Batch: 65313		QC Prepa		10-12-14		Prepare	ed By: ME
			MD				
Parameter	Flag		Resu		Unit		RL
Benzene Toluene			< 0.015 < 0.0095		mg/ł	-	$\begin{array}{c} 0.02 \\ 0.02 \end{array}$
Ethylbenzene			<0.0095		${ m mg/H} { m mg/H}$		0.02
Xylene			< 0.0093		mg/ł	-	0.02
	D 1	Descalt	TT:+-	Dilution	Spike	Percent	Recovery
Surrogate Trifluorotoluene (TFT)	Flag	Result 1.94	Units mg/Kg	Dilution 1	Amount 2.00	Recovery 97	Limits 66.6 - 122
4-Bromofluorobenzene (4	4-BFB)	2.02	mg/Kg	1	2.00	101	55.4 - 132
Method Blank (1)	QC Batch: 76152						
QC Batch: 76152 Prep Batch: 65313		Date Ana QC Prepa	lyzed: 20 aration: 20	10-12-14 10-12-14			ed By: ME ed By: ME
Parameter	Flag		$egin{array}{c} \mathrm{MDL} \ \mathrm{Result} \end{array}$		Units	2	RL
GRO	1 1005		<1.65		mg/K		2
					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		2.12	mg/Kg	1	2.00	106	67.6 - 150
4-Bromofluorobenzene (4	I-BFB)	2.03	m mg/Kg	1	2.00	102	52.4 - 130

Report Date: December 1- 114-6400729	5, 2010		ork Or /Jenkin	Page Number: 13 of 19 Eddy Co., NM					
Method Blank (1)	QC Batch: 76161								
QC Batch: 76161		Date Anal	yzed:	2010-12-14			A	analyzed 1	By: kg
Prep Batch: 65320		QC Prepa	ration:	2010-12-14			F	repared 1	By: kg
			MI	DL					
Parameter	Flag		Res			Unit			RI
DRO			<14	4.6		mg/k	бg		50
					${ m Spike}$		Percent	J	Recover
urrogate Flag	Result	Units	D	oilution	Amount		Recovery		Limits
-Tricosane	91.6	mg/Kg		1	100		92		70 - 130
aboratory Control Spi C Batch: 76123 rep Batch: 65250	ike (LCS-1)	Date Analy QC Prepar		2010-12-14 2010-12-13				nalyzed B repared B	-
aram	LC Res	ult Ui	nits	Dil.	Spike Amount	Mat Res	ult]	Rec.	Rec.
Chloride Percent recovery is based o	96	0	/Kg od.op.t	1 he gribe and	100	<2		97	85 - 11
ercent recovery is based of	-	TALD IS DAS	eu on i	-		licate It			
aram	LCSD Begylt	Unita	Dil	Spike	Matrix Desult	Dee	Rec.	חחח	RPI Limi
Chloride	Result 103	Units mg/Kg	Dil.	Amount 100	Result <2.18	Rec. 103	Limit 85 - 115	RPD 6	Limi 20
Percent recovery is based of	-	RPD is bas	ed on t	he spike and	spike dup	licate re	${ m esult.}$		
2C Batch: 76124	ike (LUS-1)	Date Analy QC Prepar		2010-12-14 2010-12-13				nalyzed B repared B	-
rep Batch: 65250	Ĺ	QC Prepar	ation:	2010-12-13	Spike	Mat	Pı	repared B	y: AR Rec.
2C Batch: 76124 Prep Batch: 65250 Param	LC Res	QC Prepar S ult Ui	ation: nits		Amount	Res	Pi trix sult]	repared B Rec.	y: AR Rec. Limit
QC Batch: 76124 Prep Batch: 65250 Param Chloride	LC Res 96	QC Prepar S ult U1 5 mg	ation: nits /Kg	2010-12-13 Dil. 1	Amount 100	Res <2	Pr trix sult 1 .18	repared B	y: AR Rec. Limit
QC Batch: 76124	LC Res 96 on the spike result.	QC Prepar S ult U1 5 mg	ation: nits /Kg	2010-12-13 Dil. 1 .he spike and	Amount 100 spike dup	Res <2	Proventional Province of Provi	repared B Rec.	y: AR Rec. Limit 85 - 11
QC Batch: 76124 Prep Batch: 65250 Param Chloride	LC Res 96	QC Prepar S ult U1 5 mg	ation: nits /Kg	2010-12-13 Dil. 1	Amount 100	Res <2	Pr trix sult 1 .18	repared B Rec.	y: AR Rec.

Report Date: December 15, 2010	Work Order: 10121024	Page Number: 14 of 19
114-6400729	COG/Jenkins B Federal #17	Eddy Co., NM

Laboratory Control Spike (LCS-1)

QC Batch: 76151 Prep Batch: 65313		e Analyzed: Preparation:	2010-1 2010-1		Analyzed By: ME Prepared By: ME		
Param	$egin{array}{c} { m LCS} \\ { m Result} \end{array}$	Units	Dil.	Spike Amount	Matrix Result	Rec.	${ m Rec.}\ { m Limit}$
Benzene	1.82	mg/Kg	1	2.00	< 0.0150	91	81.9 - 108
Toluene	1.80	mg/Kg	1	2.00	< 0.00950	90	81.9 - 107
${ m Ethylbenzene}$	1.82	m mg/Kg	1	2.00	< 0.0106	91	78.4 - 107
Xylene	5.50	m mg/Kg	1	6.00	< 0.00930	92	79.1 - 107

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

	LCSD			${ m Spike}$	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene	1.98	mg/Kg	1	2.00	< 0.0150	99	81.9 - 108	8	20
Toluene	1.96	$\mathrm{mg/Kg}$	1	2.00	< 0.00950	98	81.9 - 107	8	20
${ m Ethylbenzene}$	2.00	$\mathrm{mg/Kg}$	1	2.00	< 0.0106	100	78.4 - 107	9	20
Xylene	6.03	m mg/Kg	1	6.00	< 0.00930	100	79.1 - 107	9	20

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

	LCS	LCSD			${ m Spike}$	LCS	LCSD	Rec.
$\mathbf{Surrogate}$	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	1.76	1.76	$\mathrm{mg/Kg}$	1	2.00	88	88	70.2 - 114
4-Bromofluorobenzene (4-BFB)	1.94	1.89	m mg/Kg	1	2.00	97	94	69.8 - 121

Laboratory Control Spike (LCS-1)

QC Batch: Prep Batch:	$76152 \\ 65313$		Date Analyzed: 2010-12-14 QC Preparation: 2010-12-14					Analyzed By: ME Prepared By: ME			
Param		${ m LCS} { m Resul}$		Units	Dil.	${ m Spike} \ { m Amount}$	Matrix Result		-	Rec. Limit	
GRO		16.7	n	ng/Kg	1	20.0	<1.65	84	69.	9 - 95.4	
Percent recov	very is based on the	spike result. I	RPD is l	based on	the spike a Spike	and spike du Matrix	iplicate res	sult. Rec.		RPD	
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit	

Result Amount Result Rec. Limit RPD GRO 16.7mg/Kg 1 20.0< 1.6584 69.9 - 95.40 20Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	$\begin{array}{c} \mathrm{LCS} \\ \mathrm{Result} \end{array}$	LCSD Result	Units	Dil.	Spike Amount	$\begin{array}{c} \mathrm{LCS} \\ \mathrm{Rec.} \end{array}$	LCSD Rec.	${ m Rec.}\ { m Limit}$
Trifluorotoluene (TFT)	2.03	2.04	mg/Kg	1	2.00	102	102	61.9 - 142
4-Bromofluorobenzene (4-BFB)	2.02	2.00	$\mathrm{mg/Kg}$	1	2.00	101	100	65.2 - 132

114-6400729	2010			der: 10121 ns B Feder			Page		15 of 19 Co., NM
Laboratory Control Spike	(LCS-1)								
QC Batch: 76161 Prep Batch: 65320		Date Ana QC Prep	-	2010-12- 2010-12-				nalyzed i repared i	
Param	LCS Resu 192	lt Ui	nits	Dil.	Spike Amount 250	Matrix Result	Rec.		Rec. Limit 5 - 144.1
DRO Percent recovery is based on a		0	;/Kg ased on t	1 he spike a		<14.6 uplicate re		47.	9 - 144.1
refeelt feedvery is based on	-	I(I D 15 08	ascu on t	-	-	upileate re			
Param DRO	LCSD Result 214	Units mg/Kg	Dil.	Spike Amount 250	Matrix Result <14.6	Rec.	Rec. Limit 7.5 - 144.1	RPD 11	RPD Limit 20
Percent recovery is based on ·								11	20
LC	LCSD			-	Spike	LCS	LCS		Rec.
Surrogate Res n-Tricosane 11		Uni mg/		Dil. 1	Amount 100	Rec. 110			Limit 70 - 130
Matrix Spike (MS-1) S QC Batch: 76123	piked Sample: 25	52889 Date Ana	lyzed:	2010-12-2	14			alyzed B	
Matrix Spike (MS-1) S QC Batch: 76123		52889 Date Ana QC Prepa	lyzed:	2010-12- 2010-12-1	14 13	Mat	Pr	alyzed E epared B	y: AR
Matrix Spike (MS-1) S QC Batch: 76123 Prep Batch: 65250	MS	52889 Date Ana QC Prepa	lyzed:		14 13 Spike	Mat Res	Pr	epared B	
Matrix Spike (MS-1) S QC Batch: 76123 Prep Batch: 65250 Param		52889 Date Ana QC Prepa S 1lt U	lyzed: aration:	2010-12-3	14 13		Pr trix sult F		y: AR Rec. Limit
Matrix Spike (MS-1) S QC Batch: 76123 Prep Batch: 65250 Param Chloride	MS Rest 999	52889 Date Ana QC Prepa 5 1lt U 10 m	lyzed: aration: Jnits g/Kg	2010-12-2 Dil. 100	14 13 Spike Amount 10000	Res <2	Pr trix sult F 18 1	epared B tec.	y: AR Rec. Limit
Matrix Spike (MS-1) S QC Batch: 76123 Prep Batch: 65250 Param Chloride	MS Rest 999	52889 Date Ana QC Prepa 5 1lt U 10 m	lyzed: aration: Jnits g/Kg	2010-12-2 Dil. 100	14 13 Spike Amount 10000	Res <2	Pr trix sult F 18 1	epared B tec.	y: AR Rec. Limit
Matrix Spike (MS-1) S QC Batch: 76123 Prep Batch: 65250 Param Chloride Percent recovery is based on T Param	MS Resu 999 the spike result. MSD Result	52889 Date Ana QC Prepa S 1lt U RPD is ba Units	lyzed: aration: Jnits g/Kg ased on t Dil.	2010-12-3 Dil. 100 the spike a Spike Amount	14 13 Amount 10000 nd spike du Matrix Result	Res <2 uplicate re Rec.	Protection	epared B Lec. 00 RPD	y: AR Rec. Limit 85 - 115 RPD Limit
Matrix Spike (MS-1) S QC Batch: 76123 Prep Batch: 65250 Param Chloride Percent recovery is based on T Param Chloride	MS Resu 999 the spike result. MSD Result 10300	52889 Date Ana QC Prepa It U RPD is ba Units mg/Kg	lyzed: aration: Jnits g/Kg ased on t Dil. 100	2010-12- Dil. 100 The spike a Spike Amount 10000	14 13 Spike <u>Amount</u> 10000 nd spike dr Matrix Result <218	Res <2 uplicate re Rec. 103	Protection of the sector of th	epared B lec. 00	y: AR Rec. <u>Limit</u> <u>85 - 115</u> RPD
Matrix Spike (MS-1) S QC Batch: 76123 Prep Batch: 65250 Param Chloride Percent recovery is based on T Param Chloride	MS Resu 999 the spike result. MSD Result 10300	52889 Date Ana QC Prepa Ilt U RPD is ba Units mg/Kg	lyzed: aration: Jnits g/Kg ased on t Dil. 100	2010-12- Dil. 100 The spike a Spike Amount 10000	14 13 Spike <u>Amount</u> 10000 nd spike dr Matrix Result <218	Res <2 uplicate re Rec. 103	Protection of the sector of th	epared B Lec. 00 RPD	y: AR Rec. Limit 85 - 115 RPD Limit
Matrix Spike (MS-1) S QC Batch: 76123 Prep Batch: 65250 Param Chloride Percent recovery is based on • Param Chloride Percent recovery is based on •	MS Resu 999 the spike result. MSD Result 10300	52889 Date Ana QC Prepa Ilt U 10 m RPD is ba Units mg/Kg RPD is ba	lyzed: aration: Jnits g/Kg ased on t Dil. 100	2010-12- Dil. 100 The spike a Spike Amount 10000	14 13 Spike <u>Amount</u> 10000 nd spike dr Matrix Result <218	Res <2 uplicate re Rec. 103	Protection of the sector of th	epared B Lec. 00 RPD	y: AR Rec. Limit 85 - 115 RPD Limit
Matrix Spike (MS-1) S QC Batch: 76123 Prep Batch: 65250 Param Chloride Percent recovery is based on a Param Chloride Percent recovery is based on a	MS Resu 999 the spike result. MSD Result 10300 the spike result. piked Sample: 25	52889 Date Ana QC Prepa Ilt U 10 m RPD is ba Units mg/Kg RPD is ba	lyzed: aration: Jnits g/Kg ased on t Dil. 100 ased on t	2010-12- Dil. 100 The spike a Spike Amount 10000	14 13 Spike Amount 10000 nd spike du Matrix Result <218 nd spike du	Res <2 uplicate re Rec. 103	Protection of the sector of th	epared B Lec. 00 RPD	y: AR Rec. Limit 85 - 115 RPD Limit 20
Matrix Spike (MS-1) Si QC Batch: 76123 Prep Batch: 65250 Param Chloride Percent recovery is based on recovery is based	MS Resu 999 the spike result. MSD Result 10300 the spike result. piked Sample: 25	52889 Date Ana QC Prepa Contemposed Int Units Mg/Kg RPD is ba 52903 Date Ana QC Prepa	lyzed: aration: Jnits g/Kg ased on t Dil. 100 ased on t	2010-12-3 Dil. 100 the spike a Spike Amount 10000 the spike a 2010-12-3	14 13 Spike Amount 10000 nd spike du Matrix Result <218 nd spike du	Res <2 uplicate re <u>Rec.</u> 103 uplicate re	Protection of the sector of th	epared B <u>cec.</u> 00 <u>RPD</u> <u>3</u> .alyzed B	y: AR Rec. Limit 85 - 115 RPD Limit 20

Report Date: December 15, 2010 114-6400729		С		Order: 1012 kins B Fede				Page Nı		16 of 19 Co., NM
Param	$egin{array}{c} \mathrm{MSD} \ \mathrm{Result} \end{array}$	Units	Dil.	Spike Amount	Matı t Resi			lec. imit	RPD	RPD Limit
Chloride	11300	mg/K			630			- 115	4	20
Percent recovery is based on the s									-	
Matrix Spike (MS-1) Spiked	d Sample: 2	252958								
QC Batch: 76151		Date A	nalyzed:	2010-12-	-14			Analy	zed By	: ME
Prep Batch: 65313			eparation					-	ared By	
	MS	S			${ m Spike}$	М	[atrix			Rec.
Param	Rest		Units	Dil.	Amount		esult	Rec.		Limit
Benzene	1.9		ng/Kg	1	2.00		0.0150	96 07).5 - 112
Toluene Ethylbenzene	1.9 2.0		ng/Kg	1 1	$2.00 \\ 2.00$.00950).0106	$\begin{array}{c} 97 \\ 101 \end{array}$		2.4 - 113 3.9 - 114
Xylene	2.0 6.1		ng/Kg ng/Kg	1	$\frac{2.00}{6.00}$.00930	$101 \\ 102$.9 - 114 4 - 114
Percent recovery is based on the s									0	- 11-
Percent recovery is based on the s	spike result.	. RPD IS	based of	n the spike	and spike	e duplica	te result.			
	MSD			${ m Spike}$	Matri	х	F	lec.		RPD
Param	Result	Units	Dil.	Amount	Resul			imit	RPD	Limit
Benzene	2.00	mg/Kg	1	2.00	< 0.015			- 112	4	20
Toluene	2.03	mg/Kg	1	2.00	< 0.009			- 113	4	20
Ethylbenzene	$\begin{array}{c} 2.10 \\ 6.38 \end{array}$	mg/Kg		2.00	< 0.010			- 114	4	$\frac{20}{20}$
Xylene		mg/Kg	1	6.00	< 0.009			- 114	4	20
Percent recovery is based on the s	spike result.	. RPD is	based of	n the spike	and spike	e duplica	te result.			
	Μ	S N	4SD			Spike	MS	MSI)	Rec.
Surrogate	Res		esult	Units	Dil.	Amount	Rec.	Rec		Limit
Trifluorotoluene (TFT)	2.1			mg/Kg	1	2	108	108		.3 - 117
4-Bromofluorobenzene (4-BFB)	2.3	<u>81 2</u>	2.29	mg/Kg	1	2	116	114	35	5.5 - 129
Matrix Spike (MS-1) Spiked	d Sample: 2	253025								
QC Batch: 76152		Date A	nalyzed:	2010-12-	-14			Anals	zed By	: ME
Prep Batch: 65313			eparation						ared By	
·		v	· ·					r	5	-
	М				Spike		<i>I</i> atrix			Rec.
Param	Res		Units	Dil.	Amou		Result	Rec.		Limit
GRO	17		mg/Kg	1	20.0		< 1.65	88	61	8 - 114
Percent recovery is based on the s	pike result.	. RPD is	based or	n the spike	and spike	e duplica [.]	te result.			
	MSD			Spike	Matri	х	R	ec.		RPD
				-					DDD	
Param	Result	Units	Dil.	Amount	Resul	lt Rec	. Li:	mit	RPD	Limit

114-6400729	December 15,	2010				Order: 1012 kins B Fede				Page Nu		17 of 19 Co., NM
Percent recov	ery is based on	the spike r	esult. F	RPD is ba	ased o	n the spike	and spike	e duplica	te result			
			MS	MS	SD			Spike	M	S MS	SD	Rec.
$\operatorname{Surrogate}$			$\operatorname{Resul}^{\circ}$			Units	Dil.	Amount				Limit
Trifluorotolue	· /		2.40	2.4		mg/Kg	1	2	12			50 - 162
4-Bromofluor	obenzene (4-BF	B)	2.43	2.4	44	mg/Kg	1	2	12	2 12	22	50 - 162
Matrix Spik	ke (MS-1) S	piked Sam	ple: 252	2939								
QC Batch:	76161			Date Ana	alyzed	: 2010-12	2-14			Ana	lyzed I	By: kg
Prep Batch:	65320			QC Prep	•		2-14				pared I	
			MO				0 1					D
Param			MS Result	. II.	$_{ m nits}$	Dil.	Spike Amount		atrix esult	Rec.		Rec. Limit
DRO			231		$\frac{1115}{\text{g/Kg}}$	<u> </u>	250		14.6	<u>92</u>		$\frac{111111}{7 - 152.3}$
	ery is based on	the spike r									11.	1 102.0
		MS	SD			${ m Spike}$	Matrix		R	.ec.		RPD
Param		Res		Units	Dil.	Amount	Result	Rec.		mit	RPD	Limit
DRO		22	24 r.	ng/Kg	1	250	<14.6	90	11.7 -	- 152.3	3	20
Percent recov	erv is based on	the snike r	L T									
	J	the spike i	esuit. F	RPD is ba	ased o	n the spike	and spike	e duplica	te result			
	M	_	esult. F MSD	ξPD is ba	ased o	n the spike	and spike Spik	-	te result MS	MSD		Rec.
Surrogate	-	S	MSD Result	Un	nits	n the spike Dil.	_	e			I	Rec. Limit
-	M	S sult I	MSD		nits	_	Spik	e .nt	${ m MS}$	MSD		
Surrogate n-Tricosane Standard (I	M Res 12	S sult I	MSD Result	Un	nits	Dil.	Spik Amou	e .nt	MS Rec.	MSD Rec.		Limit
n-Tricosane Standard (I	M Res 12	S sult I	MSD Result 125	Un	nits /Kg	Dil.	Spik Amou 100	e .nt	MS Rec.	MSD Rec. 125	yzed B	Limit 70 - 130
n-Tricosane Standard (I	M Res 12 CV-1)	S sult I	MSD Result 125 I	Un mg/ Date Ana	iits /Kg alyzed:	Dil. 1 2010-12-	Spik Amou 100	e nt	MS Rec. 124	MSD Rec. 125 Anal		Limit 70 - 130
n-Tricosane Standard (I	M Res 12 CV-1)	S sult I	MSD Result 125 I	Un mg,	hits /Kg alyzed:	Dil. 1 2010-12-1 ICVs	Spik Amou 100	e nt s	MS Rec.	MSD Rec. 125 Anal		Limit 70 - 130
n-Tricosane Standard (I QC Batch: 7	M Res 12 CV-1)	S sult I	MSD Result 125	Un mg, Date Ana ICVs	nits /Kg alyzed: I	Dil. 1 2010-12-	Spik Amou 100 14 ICV	e nt s nt	MS Rec. 124	MSD Rec. 125 Anal cent very	yzed B	Limit 70 - 130 y: AR
n-Tricosane Standard (I	M Res 12 CV-1) 76123	S S sult I 24	MSD Result 125	Un mg, Date Ana ICVs True	nits /Kg alyzed: I	Dil. 1 2010-12- ICVs Found	Spik Amou 100 14 ICV Perce	e nt s nt	MS <u>Rec.</u> 124 Perc Reco	MSD Rec. 125 Anal cent very iits	yzed B A	Limit 70 - 130 y: AR Date
n-Tricosane Standard (I QC Batch: 7 Param	M Res 12 CV-1) 76123 Flag	S International Science of Scienc	MSD Result 125	Un mg, Date Ana ICVs True Conc.	nits /Kg alyzed: I	Dil. 1 2010-12- ICVs Found Conc.	Spik Amou 100 14 ICV Perce Recov	e nt s nt	MS <u>Rec.</u> 124 Perc Reco Lim	MSD Rec. 125 Anal cent very iits	yzed B A	Limit 70 - 130 y: AR Date nalyzed
n-Tricosane Standard (I QC Batch: 7 Param Chloride Standard (C	M Res 12 CV-1) 76123 Flag	S International Science of Scienc	MSD Result 125 I	Un mg, Date Ana ICVs True Conc.	iits /Kg alyzed: 	Dil. 1 2010-12- ICVs Found Conc. 98.3	Spik Amou 100 14 ICV Perce Recove 98	e nt s nt	MS <u>Rec.</u> 124 Perc Reco Lim	MSD Rec. 125 Anal cent very nits 115	yzed B A 20	Limit 70 - 130 y: AR Date nalyzed
n-Tricosane Standard (I QC Batch: 7 Param Chloride Standard (C	M Res 12 CV-1) 76123 Flag CCV-1)	S International Science of Scienc	MSD Result 125 I	Un mg/ Date Ana ICVs True Conc. 100 Date Ana CCVs	iits /Kg alyzed: H	Dil. 1 2010-12- ICVs Found Conc. 98.3 2010-12- CCVs	Spik Amou 100 14 14 ICV Perce Recov 98 14 CCV	e nt s nt ery	MS <u>Rec.</u> 124 Perc Reco Lim 85 -	MSD Rec. 125 Anal cent very hits 115 Anal cent	yzed B A 20	Limit 70 - 130 y: AR Date nalyzed 10-12-14 y: AR
n-Tricosane Standard (I QC Batch: 7 Param Chloride Standard (C QC Batch: 7	M Res 12 CV-1) 76123 Flag CCV-1) 76123	S for the second	MSD Result 125 I	Un mg, Date Ana ICVs True Conc. 100 Date Ana CCVs True	hits /Kg alyzed: Alyzed: Alyzed:	Dil. 1 2010-12- ICVs Found Conc. 98.3 2010-12- CCVs Found	Spik Amou 100 14 14 ICV Perce Recove 98 14 CCV Perce	e nt s nt ery	MS Rec. 124 Perc Reco Lim 85 -	MSD Rec. 125 Anal cent very hits 115 Anal cent very	yzed B <u>A</u> 20 yzed B	Limit 70 - 130 y: AR Date nalyzed 10-12-14 y: AR Date
n-Tricosane Standard (I QC Batch: 7 Param Chloride Standard (C	M Res 12 CV-1) 76123 Flag CCV-1)	S International Science of Scienc	MSD Result 125 I	Un mg/ Date Ana ICVs True Conc. 100 Date Ana CCVs	iits /Kg alyzed: I alyzed:	Dil. 1 2010-12- ICVs Found Conc. 98.3 2010-12- CCVs	Spik Amou 100 14 14 ICV Perce Recov 98 14 CCV	e nt s nt ery 7 s nt ery	MS <u>Rec.</u> 124 Perc Reco Lim 85 -	MSD Rec. 125 Analy cent very hits 115 Analy cent very hits	yzed B A 20 yzed B A	Limit 70 - 130 y: AR Date nalyzed 10-12-14 y: AR

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Standard (I	CV-1)						
QC Batch:	76124		Date Analy	zed: 2010-12-	14	Anal	yzed By: AR
Param Chloride	Flag	Units mg/Kg	ICVs True Conc. 100	ICVs Found Conc. 101	ICVs Percent Recovery 101	Percent Recovery Limits 85 - 115	Date Analyzed 2010-12-14
		0, 0					
Standard (O	CCV-1)						
QC Batch:	76124		Date Analy	zed: 2010-12-	14	Anal	yzed By: AR
Param	$\mathbf{F}\mathbf{lag}$	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	$egin{array}{c} \operatorname{Percent} & \\ \operatorname{Recovery} & \\ \operatorname{Limits} & \end{array}$	${f Date} {f Analyzed}$
Chloride	0	mg/Kg	100	99.5	100	85 - 115	2010-12-14
QC Batch:	76151		Date Analy CCVs	zed: 2010-12- CCVs	14 CCVs	$\operatorname{Anal}_{}$	yzed By: ME
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene Toluene		mg/Kg	0.100	0.0965	$\frac{96}{97}$	80 - 120 80 - 120	2010-12-14 2010-12-14
Ethylbenzene		m mg/Kg $ m mg/Kg$	$\begin{array}{c} 0.100 \\ 0.100 \end{array}$	$0.0970 \\ 0.0967$	97 97	80 - 120 80 - 120	2010-12-14
Xylene	<u>,</u>	mg/Kg	0.100 0.300	0.295	98	80 - 120	2010-12-14
Standard (C QC Batch:	CCV-2) 76151		Date Analy	zed: 2010-12-	14	Anal	yzed By: ME
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		m mg/Kg	0.100	0.0941	94	80 - 120	2010-12-14
$\operatorname{Toluene}$		mg/Kg	0.100	0.0923	92	80 - 120	2010 - 12 - 14
Ethylbenzene)	m mg/Kg	0.100	0.0889	89	80 - 120	2010 - 12 - 14
Xylene		m mg/Kg	0.300	0.274	91	80 - 120	2010-12-14

Standard (CCV-1)

QC Batch: 76152

Date Analyzed: 2010-12-14

Analyzed By: ME

Report Da 114-640072	te: December ?9	15, 2010		Work Order: 10 G/Jenkins B Fe	Page Number: 19 of 19 Eddy Co., NM			
Param GRO	Flag	Units mg/Kg	CCVs True Conc. 1.00	CCVs Found Conc. 1.07	CCVs Percent Recovery 107	Percent Recovery Limits 80 - 120	Date Analyzed 2010-12-14	
0.000		0/0						
$\mathbf{S} \mathbf{t} \mathbf{a} \mathbf{n} \mathbf{d} \mathbf{a} \mathbf{r} \mathbf{d}$	(CCV-2)							
QC Batch:	76152		Date Ana	alyzed: 2010-1	2-14	Anal	yzed By: ME	
Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	${f Date} \ {f Analyzed}$	
GRO	0	m mg/Kg	1.00	1.02	102	80 - 120	2010-12-14	
Standard QC Batch:	(CCV-2) 76161		Date An	alyzed: 2010-1	2-14	Ana	alyzed By: kg	
			CCVs True	CCVs Found	$\begin{array}{c} \mathrm{CCVs} \\ \mathrm{Percent} \end{array}$	${f Percent} {f Recovery}$	Date	
Param DRO	Flag	Units mg/Kg	Conc. 250	Conc. 260	Recovery 104	Limits 80 - 120	Analyzed 2010-12-14	
Standard QC Batch:	````	0/ 0		alyzed: 2010-1			alyzed By: kg	
C Daten.	10101			·			m, zou b y, ng	
Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	$egin{array}{c} { m CCVs} \\ { m Percent} \\ { m Recovery} \end{array}$	$egin{array}{c} \operatorname{Percent} & \\ \operatorname{Recovery} & \\ \operatorname{Limits} & \end{array}$	${f Date } {f Analyzed}$	
DRO	Liag	mg/Kg	250	253	101	80 - 120	2010-12-14	

	PAGE: / Or. Z	ANALYSIS REQUEST (Circle or Specify Method No.)	1 AL DA Hg Se	2270/626	5 MOD: 20 M 2 A 2 A 2 A 2 A 2 A 2 A 2 A 2 A 2 A 2	ВТЕХ 8021 РАН 8270 РАН 8270 ВСЯА Мей	XM					>	>		10 SAMPLED BY Print & Initial Date: 12/6/10	2 8 1	TETRA TECH CONTACT PERSON: Results by:	The Ke		TPH Oxcerds 1,000 mg/19	nager retains Pink copy - Accounting receives Gold copy/ Sen rene-DNCOLLA [0 mg/19 +
	anin of Custody Boond	5	FETRA TECH 1910 N. Big Spring St. Midland, Texas 79705 (432) 682-4559 • Fax (432) 682-3946		for 1 + 17	Carde Co, N.A. SAMPLE IDENTIFICATION RUMBER OF HUCE	× / / ×		, , , , , , , , , , , , , , , , , , ,	1-11°S'		2'20-'	3,3,5	لانعر ال	PECEVEDBY: Segnatural Date: 1.2.1		RECEIVED BY: (Signature) Date: Date: Time:	RECEIVED BY: (Signature)	DATE:TIME:TIME:T	HUN LEPUR Renter of	
HZ012101 # 0M		Nilaiyaia nequesi vi vi	HETRA 1910 N. Big Midland, Tey (432) 682-4559	CLIENT NAME: SITE MANAGER:	PROJECT NAME:	TIME XIMTAM SOMP BARAB	252860 13/1 S X 2H -1	ан-				887 Au-2	B84-70	-MO 1 1	Chilly	RELINQUISHED BY: (Signature)	RELINQUISHED BY: (Signature) Date: Time:	466	CITE: And March STATE: TX ZIP. CONTACT: And March STATE: PHONE ZIP.	SAMPLE CONDITION WHEN RECEIVED: S. (o' C i N-FC (- T - N/) 7C -	Plea

	PAGE: Z Or. Z	ANALYSIS REQUEST (Circle or Specify Method No.)	es 6H pd JV b es 6H bd JV b	2570/625 260/624 3270/624 3270/624	015 MOD. 0 0 0 0 0 0 0 0 0 0 0 0 0	PAH 827 PPAH 827 PPAH 827 PPAH 82 PPAH			%	9					TETRA TECH CONTACT PERSON: Results by:	I avore & RUSH Charges	Ves No	and the second
(ain of Custody Bacord		FETRA TECH 1910 N. Big Spring St. Midland, Texas 79705 (432) 682-4559 • Fax (432) 682-3946	1	rdere/ # 17 000		+:<<.	1-1×-,	, , , , , , , , , , , , , , , , , , ,				RECEMED BY (Segnature)	Received By (signature)	(A)	RECEIVED BY: (Signature)	DATE: TIME:	
() woth 10121024	And the Designed of Chain	Alialysis nequest of off	HETRATECH 1910 N. Big Spring St. Midland, Texas 79705 (432) 682-4559 • Fax (432) 66		PROJECT NAME:	LABID. DATE TIME IX NUMBER 2011	757890 1211 5 X ALL				×			DET INFO INCLUED BY (Simmerical) Date: 1050	(auto	LABORATORY:	PHONE	SAMPLE CONDITION WHEN RECEIVED: 31 6 C INTECUT

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6701 Aberdeen Avenue, Suite 9L200 East Sunset Road, Suite EE5002 Basin Street, Suite A1M6015 Harris Parkway, Suite 110Ft.

Lubbock, Texas 79424 800 • 378 • 1296 El Paso, Texas 79922 888 • 588 • 3443 Midland, Texas 79703 Ft. Worth, Texas 76132 E-Mail: lab@traceanalysis.com

800•378•1296 888•588•3443 915•585•3443 432•689•6301 817•201•5260 aceanalysis.com FAX 806 • 794 • 1298 FAX 915 • 585 • 4944 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

Tim Reed Tetra Tech 1910 N. Big Spring Street Midland, TX, 79705

Report Date: February 24, 2011

Work Order: 11022107

Project Location:Eddy Co., NMProject Name:COG/Jenkins B Federal #17Project Number:114-6400729

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

			Date	Time	Date
\mathbf{Sample}	Description	Matrix	Taken	Taken	Received
258079	SB-1 0-1'	soil	2011-02-16	00:00	2011-02-21
258080	SB-1 3'	soil	2011-02-16	00:00	2011 - 02 - 21
258081	SB-1 5'	soil	2011-02-16	00:00	2011 - 02 - 21
258082	SB-1 7'	soil	2011-02-16	00:00	2011 - 02 - 21
258083	SB-1 10'	soil	2011-02-16	00:00	2011 - 02 - 21
258084	SB-1 15'	soil	2011-02-16	00:00	2011 - 02 - 21
258085	SB-1 20'	soil	2011-02-16	00:00	2011 - 02 - 21
258086	SB-1 25'	soil	2011-02-16	00:00	2011 - 02 - 21
258087	SB-1 30'	soil	2011-02-16	00:00	2011 - 02 - 21
258088	SB-1 40'	soil	2011-02-16	00:00	2011 - 02 - 21

			Date	Time	Date
\mathbf{Sample}	Description	Matrix	Taken	Taken	$\operatorname{Received}$
258089	SB-1 50'	soil	2011-02-16	00:00	2011-02-21
258090	SB-1 60'	soil	2011-02-16	00:00	2011 - 02 - 21
258091	SB-2 0-1'	soil	2011-02-16	00:00	2011 - 02 - 21
258092	SB-2 3'	soil	2011-02-16	00:00	2011 - 02 - 21
258093	SB-2 5'	soil	2011-02-16	00:00	2011 - 02 - 21
258094	SB-2 7'	soil	2011-02-16	00:00	2011 - 02 - 21
258095	SB-2 10'	soil	2011-02-16	00:00	2011 - 02 - 21
258096	SB-2 15'	soil	2011-02-16	00:00	2011 - 02 - 21
258097	SB-2 20'	soil	2011-02-16	00:00	2011 - 02 - 21
258098	SB-2 25'	soil	2011-02-16	00:00	2011 - 02 - 21
258099	SB-2 30'	soil	2011-02-16	00:00	2011 - 02 - 21
258100	SB-2 40'	soil	2011-02-16	00:00	2011-02-21

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

Michael about

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

Standard Flags

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

Samples for project COG/Jenkins B Federal #17 were received by TraceAnalysis, Inc. on 2011-02-21 and assigned to work order 11022107. Samples for work order 11022107 were received intact at a temperature of 0.7 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	66730	2011-02-22 at $09:19$	77848	2011-02-23 at $14:39$
Chloride (Titration)	SM 4500-Cl B $$	66730	2011-02-22 at $09:19$	77849	2011-02-23 at $14:40$
Chloride (Titration)	SM 4500-Cl B $$	66730	2011-02-22 at $09:19$	77850	2011-02-23 at $14:41$

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 11022107 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.

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114-6400729	COG/Jenkins B Federal #17	Eddy Co., NM

Analytical Report

Sample: 258079 - SB-1 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77848	Date Analyzed:	2011 - 02 - 23	Analyzed By:	\mathbf{AR}
Prep Batch:	66730	Sample Preparation:	2011 - 02 - 22	Prepared By:	\mathbf{AR}
		RL			
Parameter	Flag	Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 258080 - SB-1 3'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 77848 66730	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2011-02-23 2011-02-22	Prep Method: Analyzed By: Prepared By:	'
		RL			
Parameter	Flag	\mathbf{Result}	Units	Dilution	RL
Chloride		1570	mg/Kg	100	4.00

Sample: 258081 - SB-1 5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77848	Date Analyzed:	2011 - 02 - 23	Analyzed By:	\overline{AR}
Prep Batch:	66730	Sample Preparation	: 2011-02-22	Prepared By:	\mathbf{AR}
		RL			
Parameter	Flag	\mathbf{Result}	Units	Dilution	RL
Chloride		6640	mg/Kg	100	4.00

Sample: 258082 - SB-1 7'

Laboratory: N	Midland				
Analysis: (Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch: 7	77849	Date Analyzed:	2011-02-23	Analyzed By:	\overline{AR}
Prep Batch: 6	66730	Sample Preparation:	2011-02-22	Prepared By:	AR

continued . . .

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sample 2580	82 continued					
		RL				
Parameter	Flag	Result	Units	Dilution	RL	
		RL				
Parameter	Flag	Result	Units	Dilution	RL	
Chloride		13400	mg/Kg	100	4.00	
Sample: 25	8083 - SB-1 10'					
Laboratory:	Midland					
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B $$	Prep Method:	N/A	
QC Batch:	77849	Date Analyzed:	2011-02-23	Analyzed By:	AR	
Prep Batch:	66730	Sample Preparation:	2011-02-22	Prepared By:	\mathbf{AR}	
		RL				
Parameter Chloride	Flag	Result 1780	Units mg/Kg	Dilution 100	RL 4.00	
Sample: 25 Laboratory: Analysis: QC Batch:	8084 - SB-1 15' Midland Chloride (Titration) 77849	Analytical Method: Date Analyzed:	SM 4500-Cl B 2011-02-23	Prep Method: Analyzed By:	m N/A AR	
Prep Batch:	66730	Sample Preparation		Prepared By:	\mathbf{AR}	
		RL				
Parameter Chloride	Flag	Result 3310	Units	Dilution 100	RL 4.00	
	8085 - SB-1 20'		mg/Kg	100	4.00	
Laboratory:	Midland					
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B $$	Prep Method:	N/A	
QC Batch:	77849	Date Analyzed:	2011-02-23	Analyzed By:	AR	
Prep Batch:	66730	Sample Preparation:	2011-02-22	Prepared By:	\mathbf{AR}	
		RL				
Parameter	Flag	Result	Units	Dilution	RL	
Chloride		295	mg/Kg	50	4.00	

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Sample: 25	58086 - SB-1 25'				
Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 77849 66730	Analytical Method: Date Analyzed: Sample Preparation	SM 4500-Cl B 2011-02-23 : 2011-02-22	Prep Method: Analyzed By: Prepared By:	N/A AR AR
D		RL	TT 1.		DI
Parameter Chloride	Flag	Result 1060	Units mg/Kg	Dilution 100	RL 4.00
Sample: 25	58087 - SB-1 30'				
Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 77849 66730	Analytical Method: Date Analyzed: Sample Preparation	SM 4500-Cl B 2011-02-23 : 2011-02-22	Prep Method: Analyzed By: Prepared By:	N/A AR AR
		RL			
Parameter Chloride	Flag	Result 1220	Units mg/Kg	Dilution 100	RL 4.00
- Laboratory: Analysis: QC Batch:	8088 - SB-1 40' Midland Chloride (Titration) 77849 66730	Analytical Method: Date Analyzed: Sample Preparation	SM 4500-Cl B 2011-02-23 : 2011-02-22	Prep Method: Analyzed By: Prepared By:	N/A AR AR
Sample: 25 Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration)		2011 - 02 - 23		,
Laboratory: Analysis: QC Batch: Prep Batch: Parameter	Midland Chloride (Titration) 77849	Date Analyzed: Sample Preparation RL Result	2011-02-23 : 2011-02-22 Units	Analyzed By: Prepared By: Dilution	AR AR RL
Laboratory: Analysis: QC Batch: Prep Batch: Parameter Chloride	Midland Chloride (Titration) 77849 66730 Flag	Date Analyzed: Sample Preparation RL	2011-02-23 : 2011-02-22	Analyzed By: Prepared By:	AR AR RL
Laboratory: Analysis: QC Batch: Prep Batch: Parameter Chloride Sample: 25	Midland Chloride (Titration) 77849 66730 Flag 58089 - SB-1 50'	Date Analyzed: Sample Preparation RL Result	2011-02-23 : 2011-02-22 Units	Analyzed By: Prepared By: Dilution	AR AR RL
Laboratory: Analysis: QC Batch: Prep Batch: Prep Batch: <u>Parameter</u> <u>Chloride</u> Sample: 25 Laboratory: Analysis: QC Batch:	Midland Chloride (Titration) 77849 66730 Flag	Date Analyzed: Sample Preparation RL Result	2011-02-23 : 2011-02-22 Units mg/Kg SM 4500-Cl B 2011-02-23	Analyzed By: Prepared By: Dilution	AR AR RL
Laboratory: Analysis: QC Batch: Prep Batch: Parameter Chloride	Midland Chloride (Titration) 77849 66730 Flag 58089 - SB-1 50' Midland Chloride (Titration) 77849	Date Analyzed: Sample Preparation RL Result 2170 Analytical Method: Date Analyzed:	2011-02-23 : 2011-02-22 Units mg/Kg SM 4500-Cl B 2011-02-23	Analyzed By: Prepared By: Dilution 100 Prep Method: Analyzed By:	AR AR RL 4.00

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Sample: 25	8090 - SB-1 60'					
Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 77849 66730	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2011-02-23 2011-02-22	Prep Method: Analyzed By: Prepared By:	m N/A $ m AR$ $ m AR$	
Parameter	Flag	RL Result	Units	Dilution	RL	
Chloride	r iag		mg/Kg	50	4.00	
Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 77849 66730	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2011-02-23 2011-02-22	Prep Method: Analyzed By: Prepared By:	N/A AR AR	
Parameter	Flag	RL Result	Units	Dilution	RL	
Chloride		<200	mg/Kg	50	4.00	
Laboratory: Analysis: QC Batch:	8092 - SB-2 3' Midland Chloride (Titration) 77850 66730	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2011-02-23 2011-02-22	Prep Method: Analyzed By: Prepared By:	N/A AR AR	
Prep Batch:	00100					
Prep Batch:		RL	Unite	Dilution	ы	
Prep Batch: Parameter Chloride	Flag	Result	Units mg/Kg	Dilution 50	RL 4.00	
Parameter Chloride Sample: 25 Laboratory: Analysis: QC Batch:	Flag 8093 - SB-2 5' Midland Chloride (Titration) 77850	Result <200 Analytical Method: Date Analyzed:	mg/Kg SM 4500-Cl B 2011-02-23	50 Prep Method: Analyzed By:	4.00 N/A AR	
Parameter Chloride	Flag 8093 - SB-2 5' Midland Chloride (Titration)	Result <200 Analytical Method: Date Analyzed: Sample Preparation:	mg/Kg SM 4500-Cl B 2011-02-23	50 Prep Method:	4.00	
Parameter Chloride Sample: 25 Laboratory: Analysis: QC Batch:	Flag 8093 - SB-2 5' Midland Chloride (Titration) 77850	Result <200 Analytical Method: Date Analyzed:	mg/Kg SM 4500-Cl B 2011-02-23	50 Prep Method: Analyzed By:	4.00 N/A AR	

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Sample: 25	8094 - SB-2 7'				
Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 77850 66730	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2011-02-23 2011-02-22	Prep Method: Analyzed By: Prepared By:	m N/A $ m AR$ $ m AR$
		RL	T T 1.		DI
Parameter Chloride	Flag	Result 2040	Units mg/Kg	Dilution 100	RL 4.00
Sample: 25	8095 - SB-2 10'				
Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 77850 66730	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2011-02-23 2011-02-22	Prep Method: Analyzed By: Prepared By:	N/A AR AR
Parameter	Flag	$\operatorname{RL}_{\operatorname{Result}}$	Units	Dilution	RL
Chloride	1 1005		mg/Kg	50	4.00
Laboratory: Analysis: QC Batch:	Midland Chloride (Titration) 77850 66730	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2011-02-23 2011-02-22	Prep Method: Analyzed By: Prepared By:	m N/A $ m AR$ $ m AR$
Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 77850 66730	Date Analyzed: Sample Preparation: RL	2011-02-23 2011-02-22	Analyzed By: Prepared By:	AR AR
Laboratory: Analysis: QC Batch: Prep Batch: Parameter	Midland Chloride (Titration) 77850	Date Analyzed: Sample Preparation: RL Result	2011 - 02 - 23	Analyzed By:	\overline{AR}
Laboratory: Analysis: QC Batch: Prep Batch: Parameter Chloride Sample: 25	Midland Chloride (Titration) 77850 66730 Flag 8097 - SB-2 20'	Date Analyzed: Sample Preparation: RL Result	2011-02-23 2011-02-22 Units	Analyzed By: Prepared By: Dilution	AR AR RL
Laboratory: Analysis: QC Batch: Prep Batch: Parameter Chloride Sample: 25 Laboratory:	Midland Chloride (Titration) 77850 66730 Flag 8097 - SB-2 20' Midland	Date Analyzed: Sample Preparation: RL Result 2700	2011-02-23 2011-02-22 Units	Analyzed By: Prepared By: Dilution 100	AR AR RL 4.00
Laboratory: Analysis: QC Batch: Prep Batch: Parameter Chloride Sample: 25 Laboratory: Analysis:	Midland Chloride (Titration) 77850 66730 Flag 8097 - SB-2 20'	Date Analyzed: Sample Preparation: RL Result	2011-02-23 2011-02-22 Units mg/Kg	Analyzed By: Prepared By: Dilution	AR AR RL
Laboratory: Analysis: QC Batch: Prep Batch: Parameter Chloride Sample: 25 Laboratory: Analysis: QC Batch:	Midland Chloride (Titration) 77850 66730 Flag 8097 - SB-2 20' Midland Chloride (Titration)	Date Analyzed: Sample Preparation: RL Result 2700 Analytical Method:	2011-02-23 2011-02-22 Units mg/Kg SM 4500-Cl B 2011-02-23	Analyzed By: Prepared By: Dilution 100 Prep Method:	AR AR RL 4.00
Sample: 25 Laboratory: Analysis: QC Batch: Prep Batch: Prep Batch: Chloride Sample: 25 Laboratory: Analysis: QC Batch: Prep Batch: Prep Batch:	Midland Chloride (Titration) 77850 66730 Flag 8097 - SB-2 20' Midland Chloride (Titration) 77850	Date Analyzed: Sample Preparation: RL Result 2700 Analytical Method: Date Analyzed:	2011-02-23 2011-02-22 Units mg/Kg SM 4500-Cl B 2011-02-23	Analyzed By: Prepared By: Dilution 100 Prep Method: Analyzed By:	AR AR RL 4.00

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Sample: 25	8098 - SB-2 25'					
Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 77850 66730	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2011-02-23 2011-02-22	Prep Method: Analyzed By: Prepared By:	N/A AR AR	
Parameter	Flag	RL Result	Units	Dilution	RL	
Chloride		206	mg/Kg	50	4.00	
Sample: 25	8099 - SB-2 30'					
Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 77850 66730	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2011-02-23 2011-02-22	Prep Method: Analyzed By: Prepared By:	N/A AR AR	
Parameter Chloride	Flag	RL Result 249	Units mg/Kg	Dilution 50	RL 4.00	
Sample: 25 Laboratory: Analysis: QC Batch:	8100 - SB-2 40' Midland Chloride (Titration) 77850	Analytical Method: Date Analyzed:	SM 4500-Cl B 2011-02-23	Prep Method: Analyzed By:	$_{ m AR}^{ m N/A}$	
Prep Batch:	66730	Sample Preparation:		Prepared By:	\mathbf{AR}	
Parameter	Flag	RL Result	Units	Dilution	RL	
Chloride		<200	mg/Kg	50	4.00	
Method Bla	ank (1) QC Batch: 77848					
QC Batch: Prep Batch:	77848 66730	e e	-02-23 -02-22	Analyzed By: Prepared By:	$\begin{array}{c} \mathrm{AR} \\ \mathrm{AR} \end{array}$	
	Flag	$egin{array}{c} \mathrm{MDL} \ \mathrm{Result} \end{array}$		Units	RL	
Parameter Chloride	Flag	<2.18		mg/Kg		

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Method Blank (1)	QC Batch: 77849								
QC Batch: 77849 Prep Batch: 66730		Date Analyzed: QC Preparation:	2011-02-23 2011-02-22				lyzed By pared By		
			DL						
Parameter Chloride	Flag	Res <2	sult 2.18		Units mg/Kg			RL 4	
Method Blank (1)	QC Batch: 77850								
QC Batch: 77850	ge Daten. 11050	Date Analyzed:	2011-02-23			Ano	lyzed By	v: AR	
QC Batch: 77850 Prep Batch: 66730		QC Preparation:	2011-02-23				pared By		
			DL		TT '/			ы	
Parameter Chloride	Flag	Res	suit 2.18		Units mg/Kg			$\frac{\text{RL}}{4}$	
Laboratory Control	Spike (LCS-1)	Date Analyzed:	2011-02-23				lyzed By		
Laboratory Control QC Batch: 77848		Date Analyzed: QC Preparation:				Ana Prej	llyzed Bj pared By	y: AR 7: AR	
Laboratory Control QC Batch: 77848 Prep Batch: 66730	L	Date Analyzed:	2011-02-23		Matri Resul	Ana Prej x	pared By	y: AR	
Laboratory Control QC Batch: 77848 Prep Batch: 66730 Param	LO Res	Date Analyzed: QC Preparation: CS	2011-02-23 2011-02-22	Spike	Matri	Ana Prej x t Re	pared By	y: AR γ : AR Rec. Limit	
Laboratory Control QC Batch: 77848 Prep Batch: 66730 Param Chloride	L(Res 97	Date Analyzed: QC Preparation: CS sult Units 7.9 mg/Kg	2011-02-23 2011-02-22 Dil. 1	Spike Amount 100	Matri Resul <2.18	Ana Prej x t Re 8 9	pared By	y: AR γ : AR Rec. Limit	
Laboratory Control QC Batch: 77848 Prep Batch: 66730 Param Chloride Percent recovery is bas	LO Res 97 sed on the spike result. LCSD	Date Analyzed: QC Preparation: CS sult Units 7.9 mg/Kg . RPD is based on	2011-02-23 2011-02-22 Dil. 1 the spike and Spike	Spike Amount 100 l spike du Matrix	Matri Resul <2.18 plicate resu	Ana Prej t Re <u>8 9</u> ılt. Rec.	pared By ec. 8	y: AR 7: AR Rec. Limit 85 - 115 RPD	
Laboratory Control QC Batch: 77848 Prep Batch: 66730 Param Chloride Percent recovery is bas Param	LO Res 97 sed on the spike result. LCSD Result	Date Analyzed: QC Preparation: CS sult Units 7.9 mg/Kg . RPD is based on Units Dil.	2011-02-23 2011-02-22 Dil. 1 the spike and Spike Amount	Spike Amount 100 I spike duj Matrix Result	Matri Resul <2.18 plicate resu Rec.	Ana Prej t Re 8 9 ılt. Limit	pared By ec. 8 RPD	y: AR 7: AR Limit 85 - 115 RPD Limit	
Laboratory Control QC Batch: 77848 Prep Batch: 66730 Param Chloride Percent recovery is bas Param Chloride	LC Res 97 sed on the spike result. LCSD Result 103	Date Analyzed: QC Preparation: CS sult Units 7.9 mg/Kg . RPD is based on Units Dil. mg/Kg 1	2011-02-23 2011-02-22 Dil. 1 the spike and Spike Amount 100	Spike Amount 100 l spike du Matrix Result <2.18	Matri Resul <2.18 plicate resu Rec. 103 8	Ana Prej x t Re 8 9 ılt. Rec. Limit 85 - 115	pared By ec. 8	y: AR 7: AR Rec. Limit 85 - 115 RPD	
Laboratory Control QC Batch: 77848 Prep Batch: 66730 Param Chloride Percent recovery is bas Param Chloride Percent recovery is bas	LO Res 97 sed on the spike result. LCSD Result 103 sed on the spike result.	Date Analyzed: QC Preparation: CS sult Units 7.9 mg/Kg . RPD is based on Units Dil. mg/Kg 1	2011-02-23 2011-02-22 Dil. 1 the spike and Spike Amount 100	Spike Amount 100 l spike du Matrix Result <2.18	Matri Resul <2.18 plicate resu Rec. 103 8	Ana Prej x t Re 8 9 ılt. Rec. Limit 85 - 115	pared By ec. 8 RPD	y: AR 7: AR Limit 85 - 113 RPD Limi	
Laboratory Control QC Batch: 77848 Prep Batch: 66730 Param Chloride Percent recovery is bas Param Chloride Percent recovery is bas Laboratory Control QC Batch: 77849	LO Res 97 sed on the spike result. LCSD Result 103 sed on the spike result.	Date Analyzed: QC Preparation: CS sult Units 7.9 mg/Kg . RPD is based on Units Dil. mg/Kg 1	2011-02-23 2011-02-22 Dil. 1 the spike and Spike Amount 100	Spike Amount 100 I spike duj Matrix Result <2.18 I spike duj	Matri Resul <2.18 plicate resu Rec. 103 8	Ana Prej x t Re 8 9 ilt. Rec. Limit 85 - 115 ilt. Ana	pared By ec. 8 RPD	y: AR 7: AR Rec. Limit 85 - 115 RPD Limit 20	
Laboratory Control QC Batch: 77848 Prep Batch: 66730 Param Chloride Percent recovery is bas Param Chloride Percent recovery is bas Laboratory Control QC Batch: 77849	L(Res 97 sed on the spike result. LCSD Result 103 sed on the spike result. Spike (LCS-1)	Date Analyzed: QC Preparation: CS sult Units 7.9 mg/Kg . RPD is based on Units Dil. mg/Kg 1 . RPD is based on Date Analyzed:	2011-02-23 2011-02-22 Dil. 1 the spike and Spike Amount 100 the spike and 2011-02-23	Spike Amount 100 I spike duj Matrix Result <2.18 I spike duj	Matri Resul <2.18 plicate resu Rec. 103 8	Ana Prej x t Re 8 9 ılt. Limit 85 - 115 ılt. Ana Prej x	pared By ec. 8 RPD 5	y: AR 7: AR Rec. Limit 85 - 115 RPD Limit 20	

Prepared By: AR

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Percent recovery is based on the s	pike result.	RPD is ba	ased on t	the spike an	d spike du	plicate r	esult .			
	LCSD			$\mathbf{S}\mathbf{pike}$	Matrix		Rec.		RPD	
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit	
Chloride	103	m mg/Kg	1	100	<2.18	103	85 - 115	7	20	
Percent recovery is based on the sp	pike result.	RPD is ba	ased on t	the spike an	d spike du	plicate r	esult .			
Laboratory Control Spike (LC	CS-1)									
QC Batch: 77850		Date Ana	lvzed:	2011-02-23	3		An	alyzed By	v: AR	
Prep Batch: 66730		QC Prepa	•	2011-02-22				epared By		
-		• •								
	L	CS			Spike	Ma	trix		Rec.	
Param			Jnits	Dil.	Amount			lec.	Limit	
Chloride	96		g/Kg	1	100				85 - 115	
Percent recovery is based on the s	pike result.			he spike an	d spike du	plicate r	esult.			
	LCSD			Spike	Matrix		Rec.		RPD	
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit	
Chloride	105	mg/Kg	1	100	<2.18	105	85 - 115	9	20	
Percent recovery is based on the s	nike result		ased on t	the spike an		plicate r				
referre receivery is based on the s	pike result.			me spike an	u spike uu	plicate i	court.			
Matrix Spike (MS-1) Spiked	Sample: 2	58081								
- 、 , -	. Sampie. 2									
QC Batch: 77848		Date Ana	e	2011-02-23				alyzed By		
Prep Batch: 66730		QC Prepa	aration:	2011-02-22	2		Pre	epared By	: AR	
	Μ				Spike	Ma	trix		Rec.	
Param	Res		Jnits	Dil.	Amount			Lec.	Limit	
	162	200 m	g/Kg	100	10000	66	640	96 8	85 - 115	
Chloride						1	ocult			
		RPD is ba	ased on t	the spike an	d spike du	plicate r	esun.			
	pike result.	RPD is ba	ased on t	_	-	plicate r			RPD	
Percent recovery is based on the sp	pike result. MSD		ased on t Dil.	Spike	Matrix	-	Rec. Limit	RPD	RPD Limit	
Percent recovery is based on the sp Param	pike result.	RPD is ba Units mg/Kg		_	-	Rec.	Rec.	RPD 4	RPD Limit 20	
Chloride Percent recovery is based on the sp Param Chloride Percent recovery is based on the sp	pike result. MSD Result 16800	Units mg/Kg	Dil. 100	Spike Amount 10000	Matrix Result 6640	Rec.	Rec. Limit 85 - 115		Limit	
Percent recovery is based on the sp Param Chloride Percent recovery is based on the sp	pike result. MSD Result 16800 pike result.	Units mg/Kg RPD is ba	Dil. 100	Spike Amount 10000	Matrix Result 6640	Rec.	Rec. Limit 85 - 115		Limit	
Percent recovery is based on the sp Param Chloride Percent recovery is based on the sp	pike result. MSD Result 16800	Units mg/Kg RPD is ba	Dil. 100 ased on t	Spike Amount 10000	Matrix Result 6640 d spike du	Rec.	Rec. Limit 85 - 115 esult.		Limit 20	

QC Preparation: 2011-02-22

Prep Batch: 66730

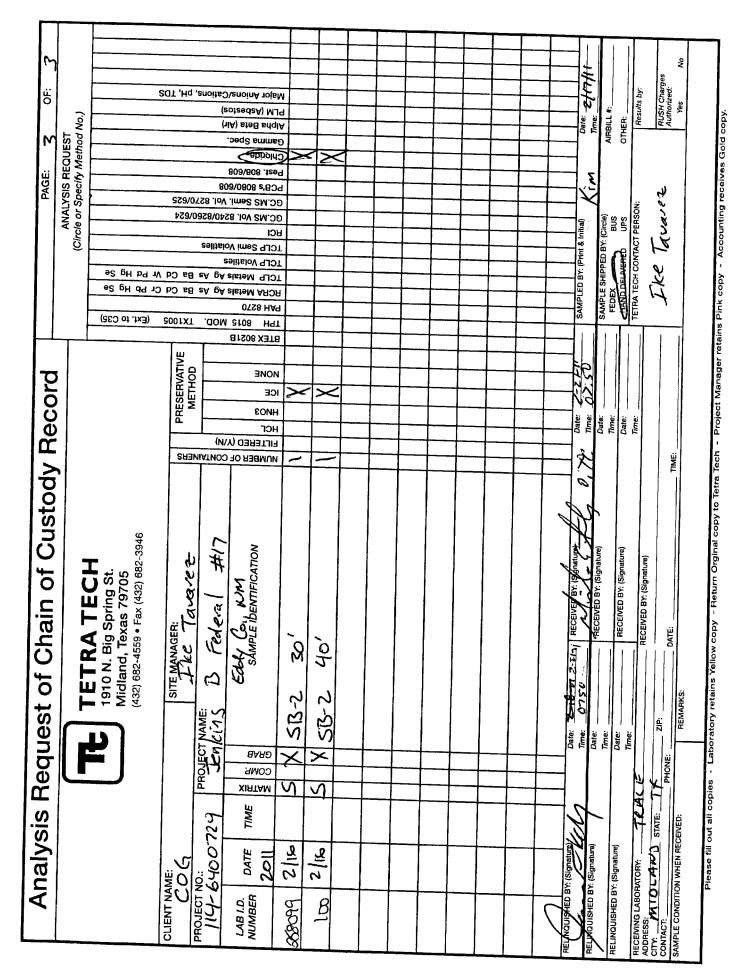
114-6400729	February 24	4, 2011	Work Order: 11022107 COG/Jenkins B Federal #17					Page Number: 12 of 13 Eddy Co., NM			
Param		N Res		Units	Dil.	Spike Amount		trix sult	Rec.	Rec. Limit	
Chloride		102	200 r.	ng/Kg	100	10000	<2	218	101	85 - 115	
Percent recove	ery is based	on the spike result.	RPD is b	based on \uparrow	the spike ar	nd spike du	plicate r	esult .			
		MSD			Spike	Matrix		Rec.		RPD	
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit	
Chloride		10500	mg/Kg		10000	<218	104	85 - 115		20	
	ery is based	on the spike result.									
Matrix Spik	e (MS-1)	Spiked Sample: 2	58143								
QC Batch:	77850		Date An	alvzed:	2011-02-2	3		А	nalyzed E	By: AR	
-	66730			paration:	2011-02-2				repared B	-	
-									-	-	
		Ν	S			Spike	Ma	trix		Rec.	
Param		Res		Units	Dil.	Amount			Rec.	Limit	
Chloride		109		ng/Kg	100	10000		40	<u>99</u>	85 - 115	
	erv is based	on the spike result.									
i creent recove	ery is based	-	10 10 10 0		one spike ai	ia spine au	pheater	court.			
_		MSD			Spike	Matrix	_	Rec.		RPD	
		Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit	
Chloride		Result 11400	m mg/Kg	100	Amount 10000	Result 1040	104	Limit 85 - 115			
Chloride	ery is based	Result	m mg/Kg	100	Amount 10000	Result 1040	104	Limit 85 - 115		Limit	
Chloride	ery is based	Result 11400	m mg/Kg	100	Amount 10000	Result 1040	104	Limit 85 - 115		Limit	
Chloride Percent recove	-	Result 11400	m mg/Kg	100	Amount 10000	Result 1040	104	Limit 85 - 115		Limit	
Chloride Percent recove Standard (IC	CV-1)	Result 11400	mg/Kg RPD is b	100 based on t	Amount 10000 the spike ar	Result 1040	104	Limit 85 - 115 esult.	4	Limit 20	
Chloride Percent recove Standard (IC	-	Result 11400	m mg/Kg	100 based on t	Amount 10000	Result 1040	104	Limit 85 - 115 esult.		Limit 20	
Chloride Percent recove Standard (IO	CV-1)	Result 11400	mg/Kg RPD is b	100 pased on t alyzed:	Amount 10000 the spike ar	Result 1040	104 plicate r	Limit 85 - 115 esult.	4	Limit 20	
Chloride Percent recove Standard (IC QC Batch: 7	CV-1) 77848	Result 11400 on the spike result.	mg/Kg RPD is b Date An ICVs True	100 based on t alyzed: IC Fot	Amount 10000 the spike ar 2011-02-23 Vs und	Result 1040 ad spike du ICVs Percent	104 plicate r	Limit 85 - 115 esult. A Percent Recovery	4 nalyzed E	Limit 20 By: AR Date	
Chloride Percent recove Standard (I4 QC Batch: 7 Param	CV-1)	Result 11400 on the spike result. Units	mg/Kg RPD is b Date An ICVs True Conc.	100 based on t alyzed: IC Fot Co	Amount 10000 the spike ar 2011-02-23 Ws und nc.	Result 1040 nd spike du ICVs Percent Recovery	104 plicate r	Limit 85 - 115 esult. A Percent Recovery Limits	4 nalyzed E A	Limit 20 By: AR Date nalyzed	
Chloride Percent recove Standard (IC QC Batch: 7	CV-1) 77848	Result 11400 on the spike result.	mg/Kg RPD is b Date An ICVs True	100 based on t alyzed: IC Fot Co	Amount 10000 the spike ar 2011-02-23 Vs und	Result 1040 ad spike du ICVs Percent	104 plicate r	Limit 85 - 115 esult. A Percent Recovery	4 nalyzed E A	Limit 20 By: AR Date	
Percent recove Standard (IO QC Batch: 7 Param Chloride	CV-1) 77848 Flag	Result 11400 on the spike result. Units	mg/Kg RPD is b Date An ICVs True Conc.	100 based on t alyzed: IC Fot Co	Amount 10000 the spike ar 2011-02-23 Ws und nc.	Result 1040 nd spike du ICVs Percent Recovery	104 plicate r	Limit 85 - 115 esult. A Percent Recovery Limits	4 nalyzed E A	Limit 20 By: AR Date nalyzed	
Chloride Percent recove Standard (IO QC Batch: 7 Param Chloride Standard (C	CV-1) 77848 Flag CCV-1)	Result 11400 on the spike result. Units	mg/Kg RPD is b Date An ICVs True Conc. 100	100 pased on t alyzed: IC Fot Co 10	Amount 10000 the spike ar 2011-02-23 Ws und nc.	Result 1040 nd spike du ICVs Percent Recovery	104 plicate r	Limit 85 - 115 esult. A Percent Recovery Limits 85 - 115	4 nalyzed E A	Limit 20 By: AR Date analyzed 011-02-23	
Chloride Percent recove Standard (IO QC Batch: 7 Param Chloride Standard (C	CV-1) 77848 Flag CCV-1)	Result 11400 on the spike result. Units	mg/Kg RPD is b Date An ICVs True Conc. 100 Date An	100 based on t alyzed: IC Fot Co 10 alyzed:	Amount 10000 the spike an 2011-02-23 Vs und onc. 00 2011-02-23	Result 1040 ad spike dup ICVs Percent Recovery 100	104 plicate r]	Limit 85 - 115 esult. A Percent Recovery Limits 85 - 115 A	4 nalyzed E <u>A</u> 20	Limit 20 By: AR Date analyzed 011-02-23	
Chloride Percent recove Standard (IO QC Batch: 7 Param Chloride Standard (C	CV-1) 77848 Flag CCV-1)	Result 11400 on the spike result. Units	mg/Kg RPD is b Date An ICVs True Conc. 100 Date An CCVs	100 Dased on t alyzed: Fot Co 10 alyzed: CC	Amount 10000 the spike an 2011-02-23 Vs und onc. 200 2011-02-23 CVs	Result 1040 ad spike du ICVs Percent Recovery 100 CCVs	104 plicate r]	Limit 85 - 115 esult. A Percent Recovery Limits 85 - 115 A Percent	4 nalyzed E <u>A</u> 20	Limit 20 By: AR Date analyzed 111-02-23 By: AR	
Chloride Percent recove Standard (I4 QC Batch: 7 Param	CV-1) 77848 Flag CCV-1)	Result 11400 on the spike result. Units	mg/Kg RPD is b Date An ICVs True Conc. 100 Date An	100 pased on t alyzed: Fot Co 10 alyzed: CC Fot	Amount 10000 the spike an 2011-02-23 Vs und onc. 00 2011-02-23	Result 1040 ad spike dup ICVs Percent Recovery 100	104 plicate r]	Limit 85 - 115 esult. A Percent Recovery Limits 85 - 115 A	4 nalyzed E <u>A</u> 20 nalyzed E	Limit 20 By: AR Date analyzed 011-02-23	

Report Dat 114-6400729	e: February 2- 9	4, 2011		Work Order: 11022107 COG/Jenkins B Federal #17			umber: 13 of 13 Eddy Co., NM
Standard ((ICV-1)						
QC Batch: 77849			Date Anal	lyzed: 2011-02	Analyzed By: AR		
Param Chloride	Flag	Units	ICVs True Conc. 100	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		m mg/Kg	100	101	101	85 - 115	2011-02-23
Standard ((CCV-1)						
QC Batch: 77849			Date Anal	lyzed: 2011-02	2-23	Anal	yzed By: AR
Param	Flore	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent	Percent Recovery Limits	Date
Chloride	Flag	mg/Kg	100	<u>99.2</u>	Recovery 99	85 - 115	Analyzed 2011-02-23
Standard (QC Batch:	(ICV-1) 77850		Date Anal	Date Analyzed: 2011-02-23		Anal	yzed By: AR
Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride	Tag	mg/Kg	100	98.1	<u>98</u>	85 - 115	2011-02-23
Standard ((CCV-1)						
QC Batch:	77850		Date Anal	lyzed: 2011-02	2-23	Anal	yzed By: AR
Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	${f Date } {f Analyzed}$
Chloride	0	mg/Kg	100	102	102	85 - 115	2011-02-23

1 of: 3	ST od No.)	ظهر کې														Date: 2/17/11	AIRBILL #:	OTHER: Results by:	RUSH Charges	Authorized: Yes No	
PAGE:	ANALYSIS REQUEST (Circle or Specify Method No.)	Vr Pd Hg Se	PAH 8270 RCRA Metals Ag As Ba Cd Vr TCLP Volatiles TCLP Semi Volatiles GC.MS Vol. 8240/8260/624 RCI Pest 8080/608 Pest 8080/608				Х 				X	X		×	X	SAMPLED BY: (Print & Initial)	SAMPLE SHIPPED BY: (Circle) FEDEX BUS	TETRA TECH CONTACT PERSON		- + Kc larare	
odv Record					NONE ICE HAC3 HCC NOMBEB (L NOMBEB (L	X	X	X 1	X	i X	X	X		-X		0, > Date: 221-11	Date: Time:	Date:	ime:	TIME:	-
vsis Request of Chain of Custody		TETRA TECH 1910 N. Big Spring St. Midland, Texas 79705 (432) 682-4559 • Fax (432) 682-3946	SITE MANAGER: L/CC Tavare 2	3 Federa	ß	58-1 0-1'	ŕ	SD-1 5'	SB-1 7'	SB-1 10'	SB-1 15'	513-1 20'	SB-1 25'	SB-1 30'	SB-1 40' , , ,	: Z-15 C-21 , RECEVED BY (Signal yest)		RECEIVED BY: (Signature)	RECEIVED BY: (Signature)	ZIP: DATE:	REMARKS:
	1	۲		727 PROJECT NAME		<u>ک</u> کر					2 			i2 Si		11	ature) / Date: Time:		Perce -	D STATE: T A PHONE:	
Analysis			CLIENT NAME:	PROJECT NO .:	LAB I.D. NUMBER 201	25555 2/10	S.	180	දීර	C\$30	csy	Cêr Cêr	CSLo	687	850	RELINGUISHED BY: (Signame)	RELINCUISHED BY: (Signature)	RELINQUISHED BY: (Signature)	RECEIVING LABORATORY	CITY: MUCTIVE STATE CONTACT:	

PAGE: Z OF: S ANALYSIS REQUEST (Circle or Specify Method No.)	1 AL bP H ³ 29	520/625 60/624 5 Ba Co 5 Ba Co 7	. (COM) 2 A gA s 2 A	PAH 8270 PAH 8270											20 SAMPLED BY: (Print & Initial) 2 Date: 2/17/14	SAMPLE SHIPPED BY: (Circle) AIRBILL #:	DELIVERED		LEC ARTE ANTONIES
Custody Record				ICE ICE HИОЗ HCГ LITLEBED (J ИЛИВЕВ ОЕ	X	X							X v		0,7% Time: 7.	Date: Time:	Date:		TIME:
ot Chain of	TETRA TECH 1910 N. Big Spring St. Midland, Texas 79705 (432) 682-4559 • Fax (432) 682-3946	SITE MANAGER: Ike Taure	B Federal #17		1 50'	1 60	-2 0-1'	2 3'	2 5	2 7'	2 10'	2 15'	2 20'	25'	0752 2 -21 - (recepted BY (signauro)	RECEIVED BY: (Signature)	RECEIVED BY: (Signature)	RECEIVED BY: (Signature)	DATE: BKS-
Hequest	F		PROJECT NAME: Jenkins		5 X 53-1	1-82-I	53-2	53-2	SD-2	53-2	SB-2	5-22-2	-213-	5	47	Date: Time:	Date: Time:	165	PHONE: ZIP:
Analysis Hequest		CLIENT NAME: COG	реголест NO: 114-6400729	LABI.D. DATE TIME NUMBER 2011	238089 Z/16	99	160	cho L	O13	Giy	05%	096	50J7	238	RELANDORED BY, FROMAND	HED BY: (Signature)	RELINQUISHED BY: (Signature)		CONTACT: CONTACT: SAMPLE CONDITION WHEN RECEIVED:

.



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

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

District III

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

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

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

CONDITIONS

Operator:	OGRID:
COG OPERATING LLC	229137
600 W Illinois Ave	Action Number:
Midland, TX 79701	205099
	Action Type:
	[IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By		Condition Date
amaxwell	None	5/5/2023

Action 205099