		SI		ATION								
	, <u>an an</u> 10 - 11 - <u>11 - 12 - 13 - 14 - 14 - 14 - 14 - 14 - 14 - 14</u>		Type: Clo									
General Site Info	ormation:											
Site:		SRO 102 SM										
Company:		COG Operat	ting LLC									
Section, Townsl	hip and Range	Unit G	Sec 16	T26S	R28E							
Lease Number:		API-30-015-2	21398									
County:		Eddy Count	у									
GPS:			32.04381° N			104.09047° W						
Surface Owner:		State										
Mineral Owner:												
Directions:						(White City Rd.) travel west on CR travel 0.1 miles to site.						
Belease Data:												
Date Released:		anter and a second and a second	12/31/2013			2/21/2013						
Type Release:			Produced Wate	r	· · · · · · · · · · · · · · · · · · ·	Produced Water						
Source of Contan	mination [.]		Header	· · · · · · · · ·		Purco Pump Discharge						
Fluid Released:			320 bbls			20 bbls						
Fluids Recovered	4.	+	280 bbls			15 bbls						
					Company and							
Name:	Robert McNeill				lke Tavarez							
Company:	COG Operating, LL	.C			Tetra Tech							
Address:	One Concho Cente	r			4000 N. Big S	Spring						
	600 W. Illinois Ave.				Suite 401							
City:	Midland Texas, 797	701	1		38							
Phone number:	(432) 686-3023				Midland, Texas							
					(432) 682-4559							
Fax:	(432) 684-7137											
Email:	rmcneill@concho	resources.con	<u>1</u>	<u></u>	like.tavarez@	tetratech.com						
Ranking Criteria Depth to Groundw	vater:		Ranking Score			Site Data						
<50 ft			20									
50-99 ft			10		<u> </u>	10						
>100 ft.			0									
WellHead Protecti			Ranking Score			Site Data						
	000 ft., Private <200 ft		20									
Water Source >1,0	000 ft., Private >200 ft	t.	0			0						
Surface Body of W	Vater:	··· <u></u> ·· <u></u> ·· ,	Ranking Score			Site Data						
<200 ft.		20										
200 ft - 1,000 ft.		10										
>1,000 ft.			0			0						
Tot	al Ranking Score:	Accepta	ble Soil RRAL	(mg/kg)		RECEIVED						
		Benzene	Total BTEX	ТРН		MAR 05 2014						
		10	50	1,000								
	a anna a ann an taraigeach ann an an an ann an ann an ann an ann an a	میں اور اور میں میں میں میں اور				NMOCD ARTESIA						



November 20, 2013

Mr. Mike Bratcher Environmental Engineer Specialist Oil Conservation Division, District 2 811S. First Street Artesia, New Mexico 88210

Re: Work Plan for the COG Operating LLC., SRO 102 SWD, Unit G, Section 16, Township 26 South, Range 28 East, Eddy County, New Mexico.

Mr. Bratcher:

Tetra Tech, Inc. (Tetra Tech) was contacted by COG Operating LLC. (COG) to assess two (2) spills from the SRO 102 SWD located in Unit G, Section 16, Township 26 South, Range 28 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.04381°, W 104.09047°. The site location is shown on Figures 1 and 2.

Background

Spill #1

According to the State of New Mexico C-141 Initial Report, the leak was discovered on December 31, 2012, and released approximately three hundred and twenty (320) barrels of produced water from a the header. To alleviate the problem, COG personnel repaired the header. Two hundred and eighty (280) barrels of standing fluids were recovered. The spill initiated on the backside of the SWD in the secondary containment firewall, affecting an area approximately 10' X 340' around the SWD. The release then migrated south out into the pasture affecting an area approximately 35' x 100' and 5' x 180'.



Spill #2

According to the State of New Mexico C-141 Initial Report, on February 21, 2013, a leak was discovered from a Durco pump discharge 3X2 swage that released twenty (20) barrels of produced water. Fifteen (15) barrels of fluid were recovered with a vacuum truck. The majority of the release remained inside the lined facility. However, the release breached the fire wall and affected an area measuring approximately 60' X 15' on the pad. The initial C-141 forms are enclosed in Appendix A.

Hydrogeology and Groundwater

According to the Geology and Groundwater Resources of Eddy County, New Mexico (Report 3), the Rustler and Castile formation (Ochoa Series) is present west and east of the Pecos River. The Salado formation overlies the Castile formation east of the Pecos River and was removed by solution west of the river. The Rustler and Castile formations consist of anhydrite, gypsum, inter-bedded sandy clay and beds of dolomite. Groundwater from the Castile and Rustler formations west of the Pecos River is historically high in chloride and sulfate concentrations which increase towards the river.

According to the USGS, no water wells are listed in Section 16. One water well is reported in Section 18, with a depth to groundwater of 25' bgs. According to the NMOCD groundwater map the reported depth to groundwater in this area is approximately 80.0' below surface. The groundwater data is shown in Appendix B

Regulatory

A risk-based evaluation was performed for the Site in accordance with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and Releases, dated August 13, 1993. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene and xylene (collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) in soil. The proposed RRAL for benzene was determined to be 10 parts per million (ppm) or milligrams per kilogram (mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene, and xylene). Based upon the depth to groundwater, the proposed RRAL for TPH is 1,000 mg/kg.



Spill Assessment and Analytical Results

On January 24, 2013, Tetra Tech personnel inspected and sampled the spill area. Due to a previous excavation and liners being installed, only three (3) trenches (T-1, T-2, and T-3) were installed behind the SWD battery using a backhoe to assess the impacted soils at depths from 3.0' to 6.0' below surface. Selected samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0.

Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The results of the sampling are summarized in Table 1. The trench locations are shown on Figure 3.

Referring to Table 1, none of the samples exceeded the TPH or Total BTEX RRAL. Elevated chloride concentrations were detected in T-1 and T-2, with chloride highs of 5,690 mg/kg at 1.0', and 1,170 mg/kg at 1.0', respectively. The chloride concentrations declined to a depth of 2.0' below surface and were vertically defined. The area of T-3 had elevated chloride concentrations from 0 to 4.0' below surface with a chloride high of 11,400 mg/kg at 1.0'. The impact was vertically defined at a depth of 5.0' below surface.

Site Remediation and Conclusion

On May 28, 2013, Tetra Tech personnel supervised the excavation of the impacted soils. At Spill #1, the areas of T-1 and T-2 were excavated to 1.0' below surface, and T-3 was excavated to a depth of 5.0' below surface. The excavated areas and depths are highlighted in Table 1 and shown on Figure 4.

Using a backhoe, a trench was installed in the Spill #2 area in front of the SWD to vertically define the spill. Elevated chloride concentrations were detected from 1.0' to 8.0' below surface with concentrations ranging from 5,000 mg/kg to 1,140 mg/kg. The chloride concentration declined with depth to 944 mg/kg at 9.0' below surface. Based on the results, the area was excavated to a depth of approximately 8.0' below surface. The excavated depths are highlighted in Table 2 and show on Figure 4.

Once excavated to appropriate depths, all areas were backfilled with clean material and brought to surface grade. 400 yards of excavated soil were transported to the proper disposal.



Based on the remedial actions taken, COG requests closure of this site. The Final C-141s are enclosed in Appendix A. If you have any questions or comments concerning the assessment or the remediation activities for this site, please call me at (432) 682-4559.

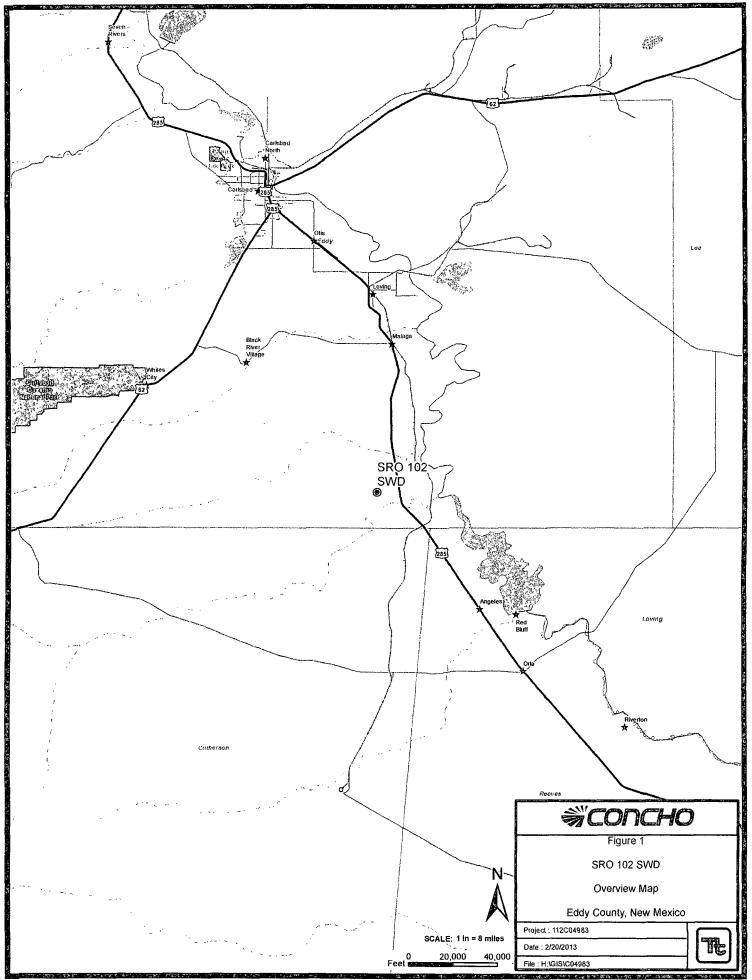
Respectfully submitted,

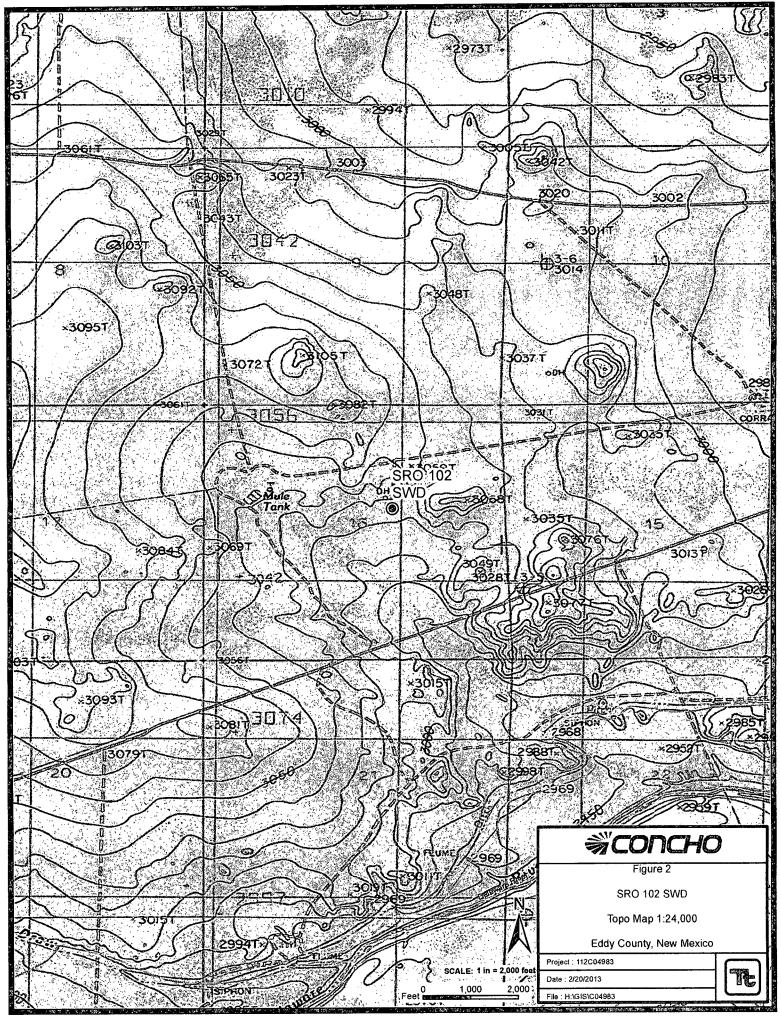
Man Kjl.

Marcus Kujawski Staff Scientist

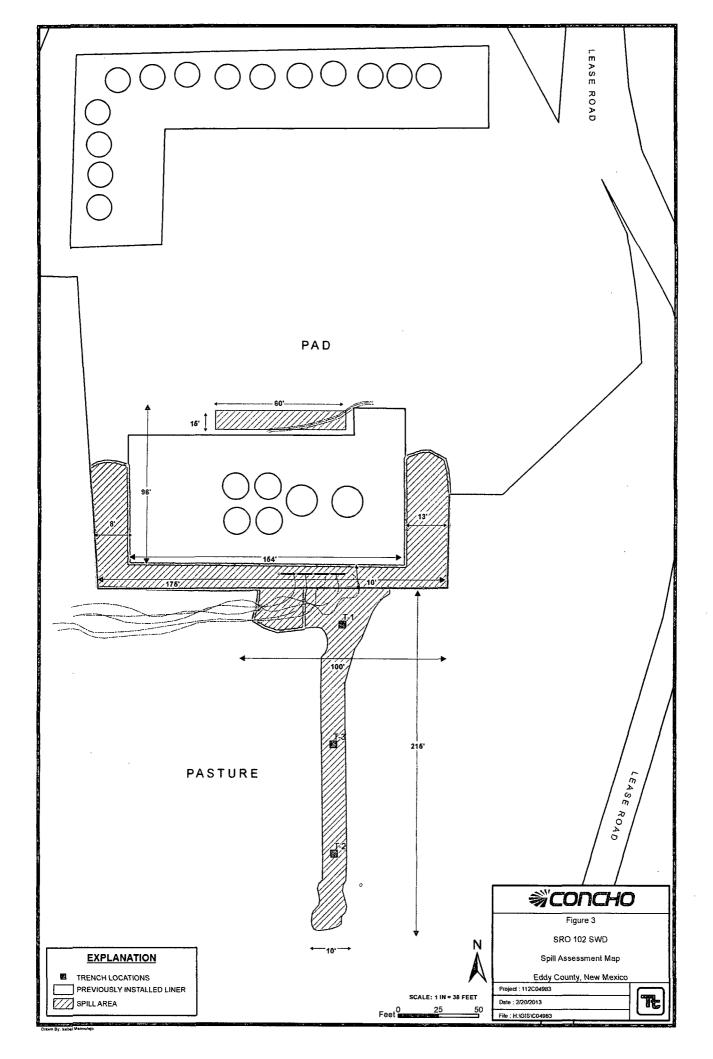
cc: Robert McNeill - COG

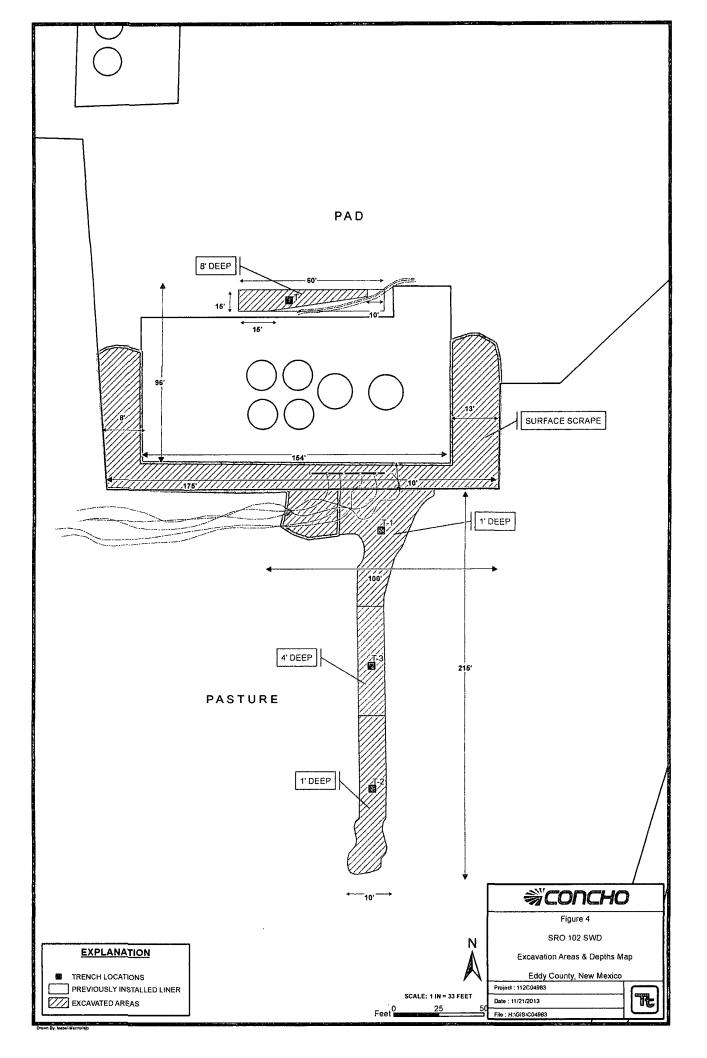
Figures





Drawn By: Isabel Marmolejo





Tables

Table 1

COG Operating LLC.

SRO State Unit Commingle 102 Salt Water Disposal

Spill #1

Eddy County, New Mexico

Sample (D	Comple Date	Sample	Soil S	Status		ГРН (mg/k	g)	Benzene	Toluene	Ethlybenzene	Xylene	Total BTEX	Chloride
Sample ID	Sample Date	Depth (ft)	In-Situ	Removed	GRO	DRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Trench-1	1/21/2013	0-1		X	⇒<4.00	<50.0	l<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	5,690-
	11	2	Х		-	-	-	-	-	-	-	-	169
	п	3	Х		-	-	-	-	-	-	-	-	284
	n	4	X		-	-	-	-	-	-	-	-	448
Trench-2	1/21/2013	0-0.5		X	<4.00	<50.0	<50.0 ∽	<0.0200	<0.0200	<0.0200	<0.0200	⊲<0.0200	3,220
				X							S. C. M. S.		11,400
	II	2		X									8,700
	0	3		X									7,560
	1	4		X									3,210
	It	5	X		-	-	-	-	-	-	-	-	688
	li	6	X		-	-	-	-	-	-	-	-	278
Trench-3	1/21/2013	0-1		X .	<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	1,170
	"	1	Х		-	-	-	-	-	-	-	-	655
	11	2	Х		-	-	<u> </u>	-	-	-	-	-	1,090
	16	3	Х		-	-	-	-	-	-	-	-	368



Excavated Depths

(-) Not Analyzed

Table 2

COG Operating LLC. SRO State Unit Commingle 102 Salt Water Disposal

Spill #2

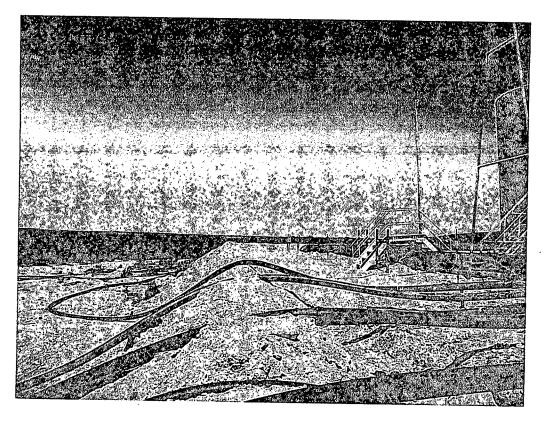
Eddy County, New Mexico

Sample ID	Sample Date		Excavation Bottom	Soil	Status		「PH (mg/k	g)	Benzene	Toluene	Ethlybenzene	Xylene	Total	Chloride
Sample ID		Sample Depth (ft)	Depth (ft)	In-Situ	Removed	GRO	DRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	BTEX (mg/kg)	(mg/kg)
Trench-1	5/29/2013	0-1	0		X			•	•					5,000
	11	2	.		X									2,630
		3	= *		X									2,460
	U	4	11 S		X	\$4 								2,830
	U	5	Ŧ		X		a sector and			La Al-Star A - Games				3,070
	4	6	I	1	X									2,880
	з й	7	.∎ ≯		X									2,390
	23	8' Bottom Hole	u	Х		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	1,140
	88	9	U	Х		_	-	-	-	-		-	_	944
	11	10	u	Х		-	-	-	-	-	_	-	-	261
	u	11	11	Х		-	-	-	-	-	-	-	-	35.1
	11	12		Х		-	-	-	-	-		-	-	140

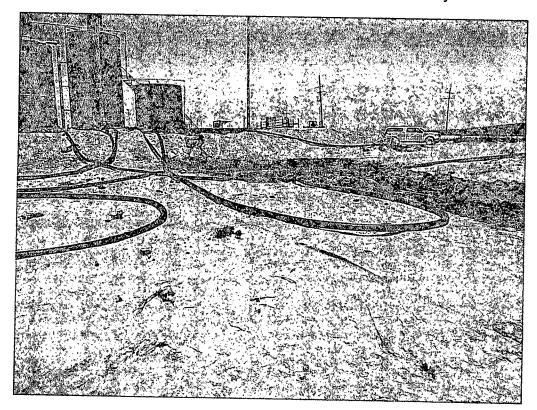


Photos

COG Operating LLC SRO 102 SWD Eddy County, New Mexico

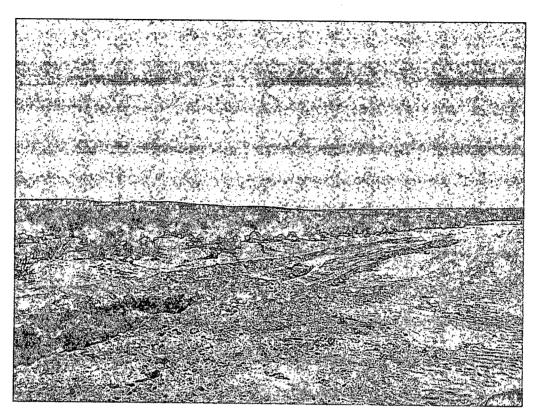


View West – Surface scrape behind battery

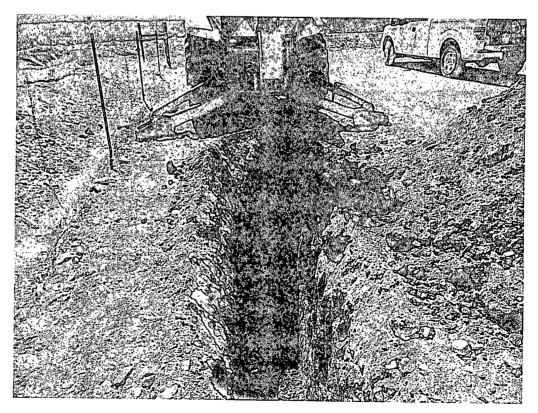


View North - T-1 area at 1.0'

COG Operating LLC SRO 102 SWD Eddy County, New Mexico



View South - T-2 area at 4.0' and T-3 area at 1.0'

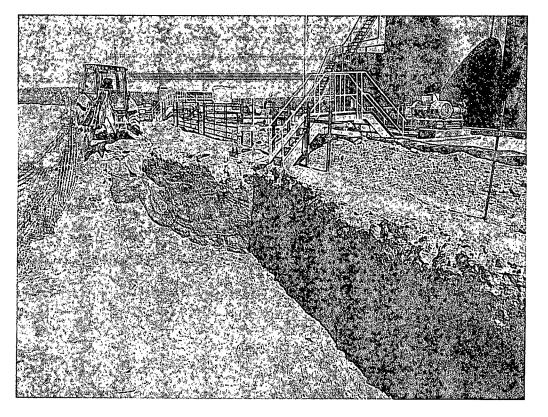


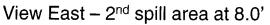
View West – Trench for 2nd spill

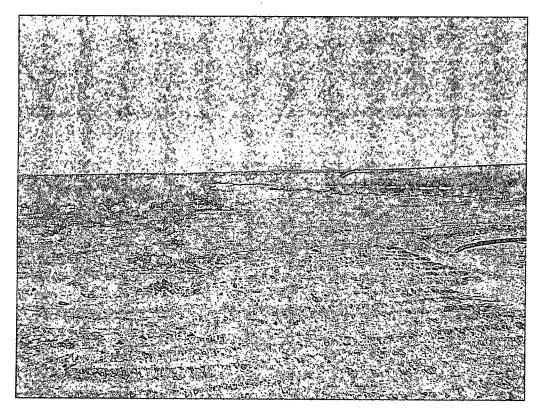
COG Operating LLC SRO 102 SWD Eddy County, New Mexico



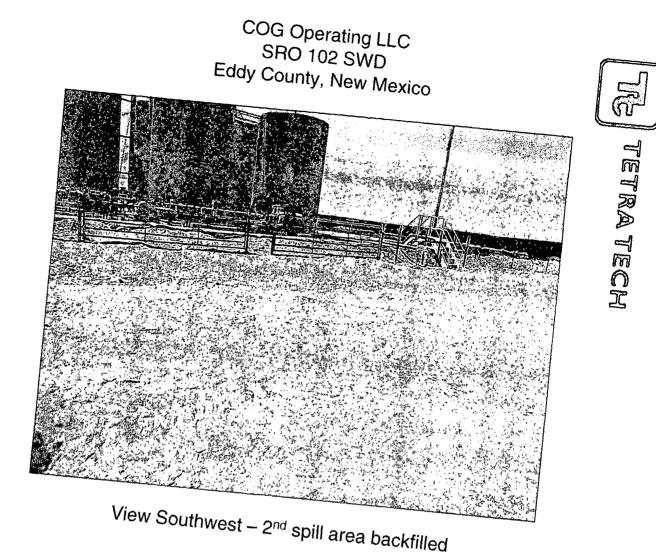
TETRA TECH







View South – T-1, T-2, and T-3 areas backfilled



Appendix A

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

			Rele	ase Notific	ation	and Co	orrective A	ction						
						OPERA	FOR		🗌 Initi	al Report	\boxtimes	Final Repor		
Name of Co							bert McNeill							
Address 60			l, Texas	79701		Telephone No. (432) 685-4332								
Facility Nar	ne SRO 1	02 SWD				Facility Typ	e Tank Batte	ry						
Surface Ow	ner: State			Mineral C)wner				Lease M	No. (API#)	30-01	5-21398		
				LOCA		N OF REI	LEASE							
Unit Letter G	Section 16	Township 26S	Range 28E	Feet from the	North/	South Line	Feet from the	East/W	Vest Line	County				
			Ι	atitude N 32.	14430°	Longitud	e W 104.0903	1°		·				
				NAT	URE	OF RELI		···	<u></u>					
Type of Rele			21/2	en			Release 20 bbls			Recovered				
Source of Re	lease: Durco	o pump discha	rge 3X2 s	wage		Date and H	lour of Occurrence	ce		Hour of Dis 3 5:30 am	scovery			
Was Immedia	nte Notice C		Yes 🗌	No 🖾 Not Re	equired	If YES, To	Whom?	I	2/21/201	<u>5 5.50 am</u>				
By Whom?				····		Date and H	lour			<u> </u>				
Was a Water	Was a Watercourse Reached?						lume Impacting	the Wate]		
If a Watercou	irse was Im	pacted, Descr	ibe Fully.*	ι					R	ECEI	VEE)		
N/A									[n	MAR 05	2014			
Describe Cau	<u> </u>								- I NINA	<u>)CD Al</u>	<u> PTES</u>			
		_		en the pump kick	ted on. R	eplaced with	new plastic coat	ed parts						
inside the fac to define spil surface grade	ols of produ ility. The co is extent out with clean	ced fluid were ontaminated g tside of the fir backfill mater	e released ravel was ewall. Soi rial. Tetra	en.* into the lined faci removed from the l that exceeded R Tech prepared clo is true and comp	e facility RAL wa osure rep	and replaced s removed an ort and subm	with new gravel d hauled away fo itted to NMOCD	. Tetra T or proper) for revie	Yech inspe disposal. W.	cted site and Site was the	i collect n broug	ed samples tht up to		
regulations al public health should their o	l operators a or the envir operations ha nment. In a	are required to conment. The ave failed to a ddition, NMC	o report an acceptanc dequately CD accep	d/or file certain r e of a C-141 repo investigate and r tance of a C-141	elease no ort by the emediate	otifications and NMOCD mage contamination	nd perform correct arked as "Final R on that pose a thr	ctive action eport" do reat to gro	ons for rel bes not rel bund wate	eases which ieve the ope , surface wa	n may er grator of ater, hur	ndanger liability man health		
Signature:		14	\sum				OIL CON	SERV	ATION	DIVISIO	<u>NC</u>			
Printed Name	: Ike Tavar	ez (4	Gan	T fu a	56/	Approved by	District Supervis	or:						
Title: Project	Manager				/	Approval Date:			Expiration Date:					
E-mail Addre	E-mail Address: Ike.Tavarez@TetraTech.com Date: 11-14-13 Phone: (432) 682-4559						Conditions of Approval:			Attached				
Attach Addi														

State of New Mexico Energy Minerals and Natural Resources

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

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

Release Notification and Corrective Action

	OPERATOR	Initial Report	Final Report
Name of Company COG Operating LLC	Contact Robert McNeill		
Address 600 W. Illinois Ave, Midland, Texas 79701	Telephone No. (432) 685-4332		
Facility Name SRO 102 SWD	Facility Type Tank Battery		

Surface Owner: State

Lease No. (API#) 30-015-21398

LOCATION OF RELEASE

Mineral Owner

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	16	26S	28E					Eddy

Latitude N 32.14430° Longitude W 104.09031°

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release 320 bbls	Volume Recovered 280 bbls
Source of Release: Equalizer	Date and Hour of Occurrence	Date and Hour of Discovery
	12/31/212	12/31/2013 11:00 am
Was Immediate Notice Given?	If YES, To Whom?	
🗌 Yes 🗌 No 🖾 Not Required		
By Whom? Josh Russo	Date and Hour 3/15/10 4:59 p.m.	
Was a Watercourse Reached?	If YES, Volume Impacting the Wa	tercourse.
🔲 Yes 🖾 No	N/A	
If a Watercourse was Impacted, Describe Fully.*		
		RECEIVED
N/A		
		MAR 05 2014
Describe Cause of Problem and Remedial Action Taken.*		NMOCD ARTESIA
The Inlet heade4r at the facility malfunctioned allowing the release of flu	id. The header is located on the backsi	de of the facility. The header has been
repaired.		
	······································	
Describe Area Affected and Cleanup Action Taken.*		
Initially 320 bbls were released from the inlet header, but 280 bbls were r	ecovered with a vacuum truck. The sr	ill area is located on the backside of the
facility. Tetra Tech inspected site and collected samples to define spills ex		
disposal. Site was then brought up to surface grade with clean backfill ma		
•		
I hereby certify that the information given above is true and complete to t		
regulations all operators are required to report and/or file certain release n		
public health or the environment. The acceptance of a C-141 report by the		
should their operations have failed to adequately investigate and remediat or the environment. In addition, NMOCD acceptance of a C-141 report d	e contamination that pose a threat to g	found water, surface water, numan nealth
federal, state, or local laws and/or fegulations.	des not reneve the operator of respons	some of compliance with any other
	OIL CONSERV	VATION DIVISION
	<u>OIL CONGLIC</u>	ATTOM DIVISION
Signature:		
Printed Name: Ike Tavarez (Myent In COG)	Approved by District Supervisor:	
Time Turne, the furner of the second		
Title: Project Manager	Approval Date:	Expiration Date:
E-mail Address: Ike.Tavarez@TetraTech.com	Conditions of Approval:	Attached
Date: 11/14/2013 Phone: (432) 682-4559		

* Attach Additional Sheets If Necessary

Appendix B

Water Well Data Average Depth to Groundwater (ft) COG - SRO 102 SWD Eddy County, New Mexico

	24	1 S (outh	:	27 East	t			24 S	out	n	2	8 Ea	ast					24 \$	South	2	9 East	:
6	5		4	3	2	1	6 70	5	30	4	30 3		2	65	1	60	6	ł	5	4	3	2	1
7	8	26		10	11	12	7	8	50	9	1	-	11		12		7	- 1	8	9	10	11	12
18	17		43 16	15	14	27	18	3 1	7	16	1		20		73 13		160 18		17	16	15	14	13
10 34	17		10	15	14	13 31		4		10 29	1	-	52		34		10	\neg	<u></u>	18)	15	14	13
19	20		21	22	23	24	19			21	2		23		24		19	-	20	121	22	23	24
	20			70				4		1-1	-	-	_					ľ	~~ (_	
0	29		28	27	26	25	30			28	2	7	26		25		30		29	28	27	26	25
1	32	_	33	34	35	36	31	3	2	33	3	4	35		36		31		32	33_	<u>}</u> 34	35	36
							L			<u> </u>			1						س				
	25	5 S	outh		27 East	t			25 S	out			8 Ea	st			_			South	2	29 East	
5	5		4	3	2	1	6	5 6	9	4	35 3	32	2		1		6 40	イ	5	4	3	2	1
,	8		9	10	11	12	7	8		9	1)	11		12	-1	Ē	-	8	9	10	11	12
					_	92							_					-ff			40	_	_
8	17		16	15	14	13	18		7	16	1	-	14		13	1	18	ות	17	16	15 60	14	13
9	20	-	21	22	23	24	19		<u>, </u>	21	2		23		24	\leftarrow	19	-	20	21	22	23	24
			- 1		20	24		9			-	-				\sum		ľ	20	<i>L.</i> 1	~~		~
0	29		28	27	26	25	30	2		28 90	2	7	26 30		25	$\langle \neg \rangle$	30 30		29	28	27	26	25
11	32		33	34	35	36	31			33	34	1	35		36	\rightarrow	31	-	32	33	34	35	36
<u> </u>	<u> </u>		19	54		00	Ľ		-	00	Ĭ		00		40				02	<u> </u>			
	26	S So	outh		27 East	1			26 S	out	า	28	8 Ea	ıst					26 5	South	2	9 East	
5	5 12	_	4	3	2	1	6	5	علاقتهميمي	4	3		2 1 20		1	~	6	أمر	5	4	3	2	1
,	8		9	10	11	12	7	8		9)	11		12		7	-	8)	9	10	11	12
8			40	45		- 40		3 1	7	16			14		100		10	-		40			
0	17		16	15	14	13 35	18 25		1	SITE)	14		13 56		18	ſ	17	16	15	14	13
19	20		21	22	23	24	20 19		<u> </u>	21	= 22	,	23		24		19	<u>}</u>	20	21	22 67	23	24
3	20		21	50	20	24		′ ² '	,	 ² '	12		23		24		19	~ `	20	21	22 67 69	23	24
30	29		28	27	26	25	30	2	9	28	27		26		25		30	र्जः	29	28	27	26	25
31	32		33	34	35	36	31	3:	2	33	34		35		36		31	+	32	33	34	35	36
										<u> </u>						1		ſ		1	IS –		

New Mexico State Engineers Well Reports

USGS Well Reports

Geology and Groundwater Conditions in Southern Eddy, County, NM

NMOCD - Groundwater Data

Field water level

New Mexico Water and Infrastructure Data System

Appendix C

.

Summary Report

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

Report Date: January 30, 2013

Work Order: 13012301

Project Location:Eddy Co., NMProject Name:COG/SRO State Unit Com. 102 SWDProject Number:112C04983

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
319014	Trench-1 0-1'	soil	2013-01-21	00:00	2013-01-22
319015	Trench-1 2'	soil	2013-01-21	00:00	2013-01-22
319016	Trench-1 3'	soil	2013-01-21	00:00	2013-01-22
319017	Trench-1 4'	soil	2013-01-21	00:00	2013-01-22
319018	Trench-2 0-0.5'	soil	2013-01-21	00:00	2013-01-22
319019	Trench-2 1'	soil	2013-01-21	00:00	2013-01-22
319020	Trench-2 2'	soil	2013-01-21	00:00	2013-01-22
319021	Trench-2 3'	soil	2013-01-21	00:00	2013-01-22
319022	Trench-2 4'	soil	2013-01-21	00:00	2013-01-22
319023	Trench-2 5'	soil	2013-01-21	00:00	2013-01-22
319024	Trench-2 6'	soil	2013-01-21	00:00	2013-01-22
319025	Trench-3 0-0.5'	soil	2013-01-21	00:00	2013-01-22
319026	Trench-3 1'	soil	2013-01-21	00:00	2013-01-22
319027	Trench-3 2'	soil	2013-01-21	00:00	2013-01-22
319028	Trench-3 3'	soil	2013-01-21	00:00	2013-01-22

			BTEX		TPH DRO - NEW	TPH GRO
	Benzene	Toluene	Ethylbenzene	Xylene	DRO	GRO
Sample - Field Code	(ing/Kg)	(mg/Kg)	(ing/Kg)	(mg/Kg)	(ing/Kg)	(mg/Kg)
319014 - Trench-1 0-1'	< 0.0200	< 0.0200	< 0.0200	< 0.0200	<50.0 Qs	<4.00
319018 - Trench-2 0-0.5'	< 0.0200	< 0.0200	< 0.0200	< 0.0200	<50.0	<4.00
319025 - Trench-3 0-0.5'	< 0.0200	< 0.0200	< 0.0200	< 0.0200	<50.0	<4.00

Sample: 319014 - Trench-1 0-1'

Param	Flag	Result	Units	\mathbf{RL}
Chloride		5690	mg/Kg	4

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

Report Date: Janua	ury 30, 2013	Work Order: 13012301	Page	Number: 2 of 3
Sample: 319015 -	Trench-1 2'			
Param	Flag	Result	Units	RL
Chloride		169	mg/Kg	4
Sample: 319016 -	Trench-1 3'			
Param	Flag	Result	Units	RL
Chloride		284	mg/Kg	4
Sample: 319017 -	Trench-1 4'			
Param	Flag	Result	Units	RL
Chloride		448	mg/Kg	4
Sample: 319018 -	Trench-2 0-0.5'			
Param	Flag	Result	Units	RL
Chloride		3220	mg/Kg	4
Sample: 319019 -	Trench-2 1'			
Param	Flag	Result	Units	RL
Chloride		11400	mg/Kg	4
Sample: 319020 -	Trench-2 2'			
Param	Flag	Result	Units	\mathbf{RL}
Chloride		8700	mg/Kg	4
Sample: 319021 -	Trench-2 3'			
Param	Flag	Result	Units	RL
Chloride		7560	mg/Kg	4
Sample: 319022 -	Trench-2 4'			
Param	Flag	Result	Units	RL
Chloride		3210	mg/Kg	4

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

Report Date: January 30, 2013		Work Order: 13012301	Page	Number: 3 of 3
Sample: 319023 -	Trench-2 5'			
Param	Flag	Result	Units	RL
Chloride	۵۵۱	688	mg/Kg	4
Sample: 319024 -	Trench-2 6'			
Param	Flag	Result	Units	RL
Chloride		278	mg/Kg	4
Sample: 319025 -	Trench-3 0-0.5'			
Param	Flag	Result	Units	\mathbf{RL}
Chloride		1170	mg/Kg	4
Sample: 319026 -	Trench-3 1'			
Param	Flag	Result	Units	RL
Chloride	1 105	655	mg/Kg	4
Sample: 319027 -	Trench-3 2'			
Param	Flag	Result	Units	\mathbf{RL}
Chloride		1090	mg/Kg	4
Sample: 319028 - '	Trench-3 3'			
Param	Flag	Result	Units	RL
Chloride		368	mg/Kg	4

.



6701 Aberdeen Avenue: Suite 9 200 East Sunset Road, Suite E 5002 Basin Street, Suite A1 (BioAquatic) 2501 Mayes Rd., Suite 100

) Lubbock, Texas 79424 6 El Paso, Texas 79922 Midland, Texas 79703 Suite 100 Carroliton, Texas 75006 E-Mail: lab@traceanalysis.com, WEB, w

Texas 75006 972sis.com WEB: www.traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

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

Report Date: January 30, 2013

FAX 915:585 4944

FAX 432 - 689 - 6313

Work Order: 13012301

915-585-3443

432-689-6301

972-242-7750

Project Location:Eddy Co., NMProject Name:COG/SRO State Unit Com. 102 SWDProject Number:112C04983

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

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
319014	Trench-1 0-1'	soil	2013-01-21	00:00	2013-01-22
319015	Trench-1 2'	soil	2013-01-21	00:00	2013-01-22
319016	Trench-1 3'	soil	2013-01-21	00:00	2013-01-22
319017	Trench-1 4'	soil	2013-01-21	00:00	2013-01-22
319018	Trench-2 0-0.5'	soil	2013-01-21	00:00	2013-01-22
319019	Trench-2 1'	soil	2013-01-21	00:00	2013-01-22
319020	Trench-2 2'	soil	2013-01-21	00:00	2013-01-22
319021	Trench-2 3'	soil	2013-01-21	00:00	2013-01-22
319022	Trench-2 4'	soil	2013-01-21	00:00	2013-01-22
319023	Trench-2 5'	soil	2013-01-21	00:00	2013-01-22
319024	Trench-2 6'	soil	2013-01-21	00:00	2013-01-22
319025	Trench-3 0-0.5'	soil	2013-01-21	00:00	2013-01-22
319026	Trench-3 1'	soil	2013-01-21	00:00	2013-01-22
319027	Trench-3 2'	soil	2013-01-21	00:00	2013-01-22
319028	Trench-3 3'	soil	2013-01-21	00:00	2013-01-22

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

This report consists of a total of 29 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Michael april

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

Report Contents

-

,

Case Narrative	5
Analytical Report	6
Sample 319014 (Trench-1 0-1')	6
Sample 319015 (Trench-1 2')	7
Sample 319016 (Trench-1 3 ['])	7
Sample 319017 (Trench-1 4')	8
Sample 319018 (Trench-2 0-0.5')	8
Sample 319019 (Trench-2 1')	9
Sample 319020 (Trench-2 2')	10
Sample 319021 (Trench-2 3')	10
Sample 319022 (Trench-2 4')	10
Sample 319023 (Trench-2 5')	11
Sample 319024 (Trench-2 6)	11
Sample 319025 (Trench-3 0-0.5')	11
Sample 319026 (Trench-3 1')	13
Sample 319027 (Trench-3 2')	13
Sample 319028 (Trench-3 3')	13
	15
	15
	15
	15
$\mathbf{v}_{\mathbf{v}}$	16
	16
QC Batch 98486 - Method Blank (1)	16
Labourter Control Soiles	17
	17
•	17
•	$17 \\ 18$
•	$10 \\ 18$
•	$\frac{10}{19}$
	19
	19
	20
	21
•	21
	22
	$\frac{22}{22}$
Calibration Standards	23
	23
QC Batch 98395 - CCV (2)	23
QC Batch 98395 - CCV (3)	23
QC Batch 98408 - CCV (1)	23

Page 3 of 29

QC Batch 98408 - CCV (2)	 			24
QC Batch 98408 - CCV (3)	 			24
QC Batch 98413 - CCV (1)	 			24
QC Batch 98413 - CCV (2)	 			24
QC Batch 98413 - CCV (3)	 			25
QC Batch 98413 - CCV (4)	 			25
QC Batch 98418 - CCV (1)	 			25
QC Batch 98418 - CCV (2)	 			25
QC Batch 98418 - CCV (3)	 			26
QC Batch 98485 - CCV (1)	 			26
QC Batch 98485 - CCV (2)	 			26
QC Batch 98486 - CCV (1)	 			26
QC Batch 98486 - CCV (2)	 •		 	27
Appendix				28
Report Definitions			 	28
Laboratory Certifications	 		 	28
Standard Flags	 		 	28
Attachments	 		 	28

Case Narrative

Samples for project COG/SRO State Unit Com. 102 SWD were received by TraceAnalysis, Inc. on 2013-01-22 and assigned to work order 13012301. Samples for work order 13012301 were received intact at a temperature of 1.3 C.

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

		Prep	Prep	QC	Analysis
Test	Method	Batch	Date	Batch	Date
BTEX	S 8021B	83373	2013-01-24 at 12:00	98395	2013-01-24 at 12:00
Chloride (Titration)	SM 4500-Cl B	83354	2013-01-24 at 08:05	98485	2013-01-29 at 14:27
Chloride (Titration)	SM 4500-Cl B	83354	2013-01-24 at 08:05	98486	2013-01-29 at 14:28
TPH DRO - NEW	S 8015 D	83389	2013-01-24 at 13:00	98413	2013-01-25 at 15:45
TPH DRO - NEW	S 8015 D	83395	2013-01-24 at 11:00	98418	2013-01-28 at 08:25
TPH GRO	S 8015 D	83375	2013-01-24 at 12:00	98408	2013-01-24 at 12:00

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 13012301 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: January 30, 2013 112C04983 Work Order: 13012301 COG/SRO State Unit Com. 102 SWD Page Number: 6 of 29 Eddy Co., NM

Analytical Report

Sample: 319014 - Trench-1 0-1'

Laboratory: Midland Analysis: BTEX QC Batch: 98395 Prep Batch: 83373		Da	te Anal	Method: yzed: eparation:	S 8021B 2013-01- 2013-01-	-24		Prep Methoo Analyzed By Prepared By	r: YG
					\mathbf{RL}				
Parameter	Flag		Cert]	Result	Units	5	Dilution	\mathbf{RL}
Benzene	U		1	<	0.0200	mg/Kg		1	0.0200
Toluene	U		I.	<(0.0200	mg/Kg		1	0.0200
Ethylbenzene	U		1	<	0.0200	mg/Kg		1	0.0200
Xylene	U		1	<	0.0200	mg/Kg		1	0.0200
							Spike	Percent	Recovery
Surrogate		Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)	Qar	Qar		2.39	mg/Kg	1	2.00	120	79.5 - 108
4-Bromofluorobenzene (4-BFB)	·			2.14	mg/Kg	1	2.00	107	71.4 - 108

Sample: 319014 - Trench-1 0-1'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 98485 83354	Date An	al Method: alyzed: Preparation:	SM 4500-Cl B 2013-01-29 2013-01-24	Prep Method: Analyzed By: Prepared By:	AR.
			RL			
Parameter	Flag	Cert	Result	Units	Dilution	\mathbf{RL}
Chloride			5690	mg/Kg	10	4.00

Sample: 319014 - Trench-1 0-1'

Laboratory: Analysis: QC Batch: Prep Batch:	rsis: TPH DRO - NEW atch: 98418		Date A	cal Method: nalyzed: Preparation:	S 8015 D 2013-01-28 2013-01-24	Prep Method: Analyzed By: Prepared By:	N/A CW CW
				RL			
Parameter		Flag	Cert	Result	Units	Dilution	RL
DRO		Jb,Qs	1	<50.0	mg/Kg	1	50.0

Report Date: Jai 112C04983	COG/S	Work Order SRO State U1	Page Number: 7 of 29 Eddy Co., NM					
Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			102	mg/Kg	1	100	102	70 - 130

Sample: 319014 - Trench-1 0-1'

Laboratory: Midland Analysis: TPH GRO QC Batch: 98408 Prep Batch: 83375			Date An	al Method alyzed: Preparatic	2013-0	1-24		Prep Metho Analyzed B Prepared B	y: YG
					RL	ν.			
Parameter	Flag		Cert		Result	Uni	ts	Dilution	\mathbf{RL}
GRO	U		1		<4.00	mg/K	g	1	4.00
		T	a i				Spike	Percent	Recovery
Surrogate		Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)				2.37	mg/Kg	1	2.00	118	70 - 130
4-Bromofluorobenzene (4-BFB)				2.05	mg/Kg	1	2.00	102	70 - 130

Sample: 319015 - Trench-1 2'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 98485 83354	Date An	al Method: alyzed: Preparation:	SM 4500-Cl B 2013-01-29 2013-01-24	Prep Method: Analyzed By: Prepared By:	ÁR.
			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			169	mg/Kg	5	4.00

Sample: 319016 - Trench-1 3'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	98485	Date Analyzed:	2013-01-29	Analyzed By:	ÁR
Prep Batch:	83354	Sample Preparation:	2013-01-24	Prepared By:	AR

continued ...

112C04983	uary 30, 2013		rk Order: 13 State Unit C	Page Number: 8 of 29 Eddy Co., NM		
sample 319016 con	tinued					
			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			284	mg/Kg	5	4.00
Sample: 319017	- Trench-1 4'					
-						
Laboratory: Mid Analysis: Chlo			al Method:	SM 4500-Cl B	Prep Method:	N/A
Laboratory: Midl Analysis: Chle QC Batch: 9848	and oride (Titration) 5	Date An	alyzed:	2013-01-29	Analyzed By:	AR
Laboratory: Midl Analysis: Chle QC Batch: 9848	and oride (Titration) 5	Date An				•
Analysis: Chlo QC Batch: 9848	and oride (Titration) 5	Date An	alyzed:	2013-01-29	Analyzed By:	AR
Laboratory: Midl Analysis: Chle QC Batch: 9848	and oride (Titration) 5	Date An	alyzed: Preparation:	2013-01-29	Analyzed By:	AR

Sample: 319018 - Trench-2 0-0.5'

•

Laboratory: Midlaud Analysis: BTEX QC Batch: 98395 Prep Batch: 83373	Analytical Method:S 8021BDate Analyzed:2013-01-Sample Preparation:2013-01-								By: YG
					RL				
Parameter	Flag		Cert		Result	Unit	s	Dilution	RL
Benzene	υ		1	< 0.0200		mg/K	g	1	0.0200
Toluene	υ		1	- <0.0		mg/Kg		1	0.0200
Ethylbenzene	υ		1	< 0.0200		mg/Kg		1	0.0200
Xylene	U		1	< 0.0200		mg/Kg		1	0.0200
							Spike	Percent	Recovery
Surrogate		Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)	Qsr	Qsr		2.34	mg/Kg	1	2.00	117	79.5 - 108
4-Bromofluorobenzene (4-BFB)				2.03	mg/Kg	1	2.00	102	71.4 - 108

Report Date 112C04983	: January 30, 2013			Work Order: RO State Un	Page Number: 9 of 29 Eddy Co., NM			
Sample: 31	9018 - Trench-2 0	-0.5'						
Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration 98485 83354	1)	Date	ytical Metho Analyzed: ble Preparatio	2013-0		Prep Meth Analyzed Prepared 1	By: AR
					RL			
Parameter Chloride		Flag	Cert	Res 32	ult 20	Units mg/Kg	Dilution 10	RL 4.00
Sample: 31	9018 - Trench-2 0	-0.5'						
Laboratory: Midland Analysis: TPH DRO - NEW QC Batch: 98413			Dat	lytical Metho e Analyzed:	Prep Metl Analyzed	By: CW		
Prep Batch:	83389		San	ple Preparat	ion: 2013-	01-24	Prepared 1	By: CW
					RL			
Parameter		Flag	Cert	Res		Units	Dilution	RL
DRO			1	<5	0.0	mg/Kg	1	50.0
Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			114	mg/Kg	1	100	114	70 - 130
Sample: 31 Laboratory:	9018 - Trench-2 0 Midland	-0.5'						
Analysis:	TPH GRO		Analytica	al Method:	S 8015 D		Prep Metho	d: S 5035
QC Batch:	98408		Date Ana	alyzed:	2013-01-24	L	Analyzed By	: YG
Prep Batch:	83375		Sample F	reparation:	2013-01-24	L	Prepared By	v: YG
				j	RL			
Parameter		Flag	Cert	Res		Units	Dilution	\mathbf{RL}
GRO		v	1	<4	2.2	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Triffuorotoluene (TFT)			2.11	mg/Kg	1	2.00	106	70 - 130
4-Bromofluorobenzene (4-BFB)			1.96	mg/Kg	1	2.00	98	70 - 130

:: 319019 - Trench-2 1' ory: Midland :: Chloride (Titration) ch: 98485 ttch: 83354	Analytical Method:			
s: Chloride (Titration) ch: 98485	Analytical Method:			
	Date Analyzed: Sample Preparation:	SM 4500-Cl B 2013-01-29 2013-01-24	Prep Method: Analyzed By: Prepared By:	N/A AR. AR.
	RL			
ter Flag	Cert Result	Units	Dilution	RL
}	11400	mg/Kg	10	4.00
: 319020 - Trench-2 2'				
e: 319020 - Trench-2 2' ory: Midland s: Chloride (Titration) ch: 98485 stch: 83354	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2013-01-29 2013-01-24	Prep Method: Analyzed By: Prepared By:	N/A AR AR
ory: Midland s: Chloride (Titration) ch: 98485	Date Analyzed:	2013-01-29	Analyzed By:	
ter e	Flag	Flag Cert Result	Flag Cert Result Units	Flag Cert Result Units Dilution

Analysis:Chloride (Titration)QC Batch:98485Prep Batch:83354		Date An	al Method: alyzed: Preparation:	SM 4500-Cl B 2013-01-29 2013-01-24	Prep Method: Analyzed By: Prepared By:	ÁR
Parameter	Flag	Cert	RL Result	Units	Dilution	\mathbf{RL}
Chloride	1 ag		7560	mg/Kg	10	4.00

Sample: 319022 - Trench-2 4'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	98485	Date Analyzed:	2013-01-29	Analyzed By:	AR
Prep Batch:	83354	Sample Preparation:	2013-01-24	Prepared By:	AR

Report Date: Januar 112C04983	y 30, 2013	••••	rk Order: 1301230 State Unit Com.	Page Number: 11 of 29 Eddy Co., NM		
			\mathbf{RL}			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			3210	mg/Kg	10	4.00

Sample: 319023 - Trench-2 5'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 98485 83354	Date An	al Method: alyzed: Preparation:	SM 4500-Cl B 2013-01-29 2013-01-24	Prep Method: Analyzed By: Prepared By:	ÁR
Parameter	Flag	Cert	RL Result	Units	Dilution	\mathbf{RL}
Chloride			688	mg/Kg	5	4.00

Sample: 319024 - Trench-2 6'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 98486 83354	Date An	al Method: alyzed: Preparation:	SM 4500-Cl B 2013-01-29 2013-01-24	Prep Method: Analyzed By: Prepared By:	ÁR.
Parameter	Flag	Cert	RL Result	Units	Dilution	\mathbf{RL}
Chloride	r iag		278	mg/Kg	5	4.00

Sample: 319025 - Trench-3 0-0.5'

Analysis:	Midland BTEX		Analytical M			Prep Method:	
·••	98395		Date Analyze			Analyzed By:	YG
Prep Batch:	83373		Sample Prepa	uration: 2013-01-2	4	Prepared By:	m YG
D			a .	RL	** *.		DI
Parameter		Flag	Cert	Result	Units	Dilution	RL
Benzene		υ	1	< 0.0200	mg/Kg	1	0.0200
Toluene		υ	1	< 0.0200	m mg/Kg	1	0.0200
Ethylbenzene		υ	1	< 0.0200	mg/Kg	1	0.0200

continued ...

Report Date 112C04983	: January 30, 2013		CO	Work Order: 13012301 COG/SRO State Unit Com. 102 SWD							Page Number: 12 of 29 Eddy Co., NM		
sample 3190	25 continued												
						RL							
Parameter		Flag	C	lert		Result		Unit		Dilution		RL	
Xylene		U		1	<	0.0200		mg/K	5	1		0.0200	
									Spike	Percent	Rec	overy	
Surrogate			Flag (Cert	Result	Unit	s I	Dilution	Amount	Recovery		mits	
Trifluorotolu	ene (TFT)	Qsr	Qsr		2.31	mg/F		1	2.00	116	79.5	5 - 108	
4-Bromofluor	robenzene (4-BFB)				1.95	mg/ŀ	Σg	1	2.00	98	71.4	- 108	
Sample: 31 Laboratory: Analysis: QC Batch: Prep Batch:	9025 - Trench-3 Midland Chloride (Titratic 98486 83354			Date	ytical Met Analyzed ple Prepar	:	SM 4 2013- 2013-			Prep Me Analyzec Prepared	l By:	N/A AR AR	
Parameter		Flag	C	lert	I	RL Result		Unit	S	Dilution		\mathbf{RL}	
Chloride		1 100				1170		nig/K		10		4.00	
Sample: 31 Laboratory: Analysis:	9025 - Trench-3 Midland TPH DRO - NEV			Ano	lytical Mc	thad.	S 80:	15 D		Prep Me	be de	N/A	
DC Batch:	98413	v			e Analyze			-01-25		Analyzed		CW	
Prep Batch:	83389				iple Prepa			-01-24		Prepared		CW	
-					·						5		
Parameter		Flag	C	ert	т	RL Result		Unit		Dilution		DT	
DRO		Tug		1		$\frac{1}{< 50.0}$		mg/K				$\frac{\text{RL}}{50.0}$	
					······	200.0				·			
		Cert	Resu	14	T T ! # .	~	:]	-	oike	Percent		covery	
3	E		Keen	IC .	Units	D	ilution	ı An	ount	Recovery	Li	mits	
Surrogate n-Tricosane	Flag	Cert	11		ng/Kg		1		.00	111		- 130	

.

Sample: 319025 - Trench-3 0-0.5'

Laboratory:	Midland			
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method: S 5035
QC Batch:	98408	Date Analyzed:	2013-01-24	Analyzed By: YG
Prep Batch:	83375	Sample Preparation:	2013-01-24	Prepared By: YG

Report Date: January 30, 2013 112C04983			Work Order: 13012301 COG/SRO State Unit Com. 102 SWD					Page Number: 13 of 29 Eddy Co., NM		
Parameter	Flag		Cert		RL Result	Uni	ts	Dilution	\mathbf{RL}	
GRO			1		<4.00	mg/K	g	1	4.00	
Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits	
Triffuorotoluene (TFT) 4-Bromofluorobenzene (4-BFB)				$\begin{array}{c} 2.10 \\ 1.90 \end{array}$	mg/Kg mg/Kg	1 1	$\begin{array}{c} 2.00 \\ 2.00 \end{array}$	$\frac{105}{95}$	70 - 130 70 - 130	

Sample: 319026 - Trench-3 1'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 98486 83354	Date [®] An	al Method: alyzed: Preparation:	SM 4500-Cl B 2013-01-29 2013-01-24	Prep Method: Analyzed By: Prepared By:	AR
			\mathbf{RL}			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			655	mg/Kg	5	4.00

Sample: 319027 - Trench-3 2'

Laboratory:	Midland					
Analysis:	Chloride (Titration)	Analytic	al Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	98486	Date Analyzed:		2013-01-29	Analyzed By:	AR
Prep Batch:	83354	Sample Preparation:		2013-01-24	Prepared By:	\mathbf{AR}
			RL			
Parameter	Flag	Cert	Result	Units	Dilution	\mathbf{RL}
Chloride			1090	mg/Kg	5	4.00

Sample: 319028 - Trench-3 3'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	98486	Date Analyzed:	2013-01-29	Analyzed By:	AR
Prep Batch:	83354	Sample Preparation:	2013-01-24	Prepared By:	\mathbf{AR}

Report Date: January 112C04983	30, 2013		rk Order: 1301230 State Unit Com.		Page Numbe Edd	r: 14 of 29 y Co., NM
Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			368	mg/Kg	5	4.00

Report Date: January 30, 2013 112C04983

Method Blank (1)

Method Blanks

QC Batch: 98395

QC Batch: 98395 Prep Batch: 83373		Date A1 QC Pre	nalyzed: paration:	2013-01-2 2013-01-2			Analyze Preparec	
Parameter	Flag		Cert		MDL Result		Units	RL
Benzene	1'185		Cert		<0.00810		mg/Kg	0.02
Toluene			1		<0.00750		mg/Kg	0.02
Ethylbenzene					< 0.00730		mg/Kg	0.02
Xylene			1		< 0.00700		mg/Kg	0.02
						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Triffuorotoluene (TFT)	Qar Qar		2.32	mg/Kg	1	2.00	116	79.5 - 108
4-Bromofluorobenzene (4-BFB)			1.93	mg/Kg	1	2.00	96	71.4 - 108

Method Blank (1) QC Batch: 98408

QC Batch: 98408 Prep Batch: 83375			nalyzed: eparation:	2013-01-24 2013-01-24			Analyzec Prepared	
Parameter	Flag		Cert		MDL Result		Units	RL
GRO			1		<2.32		mg/Kg	4
Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Triffuorotoluene (TFT) 4-Bromoffuorobenzene (4-BFB)			$\frac{1.77}{1.88}$	mg/Kg mg/Kg	1 1	2.00 2.00	88 94	70 - 130 70 - 130

Method Blank (1)	QC Batch: 98413	
QC Batch: 98413	Date Analyzed:	Analyzed By: CW
Prep Batch: 83389	QC Preparation:	Prepared By: CW

Report Date: January 112C04983	7 30, 2013	}			ler: 13012301 Unit Com. 1)	Page Numb Ede		i of 29 5., NM
Parameter DRO		Flag		Cert.		MDL Result <6.88		Units mg/Kg		RL 50
Surrogate n-Tricosane	Flag	Cert	Result 96.0	Units mg/Kg	Dilutio)11	Spike Amount 100	Percent Recovery 96	Li	covery mits - 130
Method Blank (1) QC Batch: 98418 Prep Batch: 83395	QC I	3atch: 98418	Date An QC Prej		2013-01-28 2013-01-24			Analyzed Prepared		CW CW
Parameter		Flag		Cert	2010 01 21	MDL Result 31.0		Units mg/Kg		RL 50
Surrogate n-Tricosane	Flag	Cert	Result 123	Units Mg/Kg	Dilutic	sn a	Spike Amount 100	Percent Recovery 123	Li	covery mits - 130
Method Blank (1) QC Batch: 98485 Prep Batch: 83354	QC I	Batch: 98485	Date Ar QC Prej	alyzed: paration:	2013-01-29 2013-01-24			Analyzed Prepared		AR AR
Parameter Chloride		Flag		Cert		MDL Result <3.85		Units mg/Kg		RL 4
Method Blank (1)	QC I	3atch: 98486	Data Ar	alune l	9019-01-00			A 1	1 D	4.0
QC Batch: 98486 Prep Batch: 83354 Parameter		Flag		alyzed: paration: Cert	2013-01-29 2013-01-24	MDL Result		Analyzed Prepared Units		AR AR RL
Chloride						<3.85		mg/Kg		4

Report Date: January 30, 2013 112C04983

,

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch:	98395	Date Analyzed:	2013-01-24	Analyzed By:	YG
Prep Batch:	83373	QC Preparation:	2013-01-24	Prepared By:	$\mathbf{Y}\mathbf{G}$

			LCS			Spike	Matrix		Rec.
Param	F	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
Benzene			1.82	mg/Kg	1	2.00	< 0.00810	91	72.4 - 120
Toluene		1	1.87	mg/Kg	1	2.00	< 0.00750	94	77 - 120
Ethylbenzene		1	2.01	mg/Kg	1	2.00	< 0.00730	100	71.8 - 120
Xylene		ı	6.21	mg/Kg	1	6.00	< 0.00700	104	78.3 - 120

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

			LCSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene		1	1.76	mg/Kg	1	2.00	< 0.00810	88	72.4 - 120	3	20
Toluene		١	1.82	mg/Kg	1	2.00	< 0.00750	91	77 - 120	3	20
Ethylbenzene		1	1.95	mg/Kg	1	2.00	< 0.00730	98	71.8 - 120	3	20
Xylene		1	6.08	mg/Kg	1	6.00	< 0.00700	101	78.3 - 120	2	20

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

			LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate			Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Triffuorotoluene (TFT)	Qar	Qar	2.36	2.38	mg/Kg	1	2.00	118	119	79.5 - 108
4-Bromofluorobenzene (4-BFB)	Qar	Qst	2.16	2.10	mg/Kg	1	2.00	108	105	71.4 - 108

Laboratory Control Spike (LCS-1)

1

1

QC Batch: Prep Batch:	98408 83375			ate Analyze C Preparat	ed: 2013- ion: 2013-				•	By: YG By: YG
				LCS			Spike	Matrix		Rec.
Param		\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
GRO	· · · · · · · · · · · · · · · · · · ·		1	17.5	mg/Kg	1	20.0	<2.32	88	70 - 130
Duration		+1	-14 DT	ו ו -: רדר		,	-1 1 1	1,		

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

nits Dil. A g/Kg 1 used on the spil LCSD Result U1 1.90 mg 2.02 mg lyzed: 2013-0 ration: 2013-0	AmountReSpikeMaAmountRe20.0<2ke and spike dnitsDil.g/Kg1g/Kg1	Amount I 2.00	LCS LCSD Rec. Rec. 84 95	RPD
nits Dil. A g/Kg 1 used on the spil LCSD Result U1 1.90 mg 2.02 mg lyzed: 2013-0 ration: 2013-0	AmountReSpikeMaAmountRe20.0<2ke and spike dnitsDil.g/Kg1g/Kg1	Result Rec. Aatrix Rec. <2.32 73 > duplicate result Spike Spike I Amount I 2.00	Limit RPD Rec. Limit RPD 70 - 130 18 lt. LCS LCSD Rec. Rec. 84 84 95 88 101	Limit RPD Limit 20 Rec. Limit 70 - 130
nits Dil. A g/Kg 1 used on the spil LCSD Result U1 1.90 mg 2.02 mg lyzed: 2013-0 ration: 2013-0	Spike Ma Amount Re 20.0 <2 ke and spike d nits Dil. 5/Kg 1 5/Kg 1 5/Kg 1	Aatrix Result Rec. <2.32 73 a duplicate resu. Spike I Amount I 2.00	Rec. Limit RPD 70 - 130 18 lt. 18 LCS LCSD Rec. Rec. 84 95 88 101	RPD Limit 20 Rec. Limit 70 - 130
g/Kg 1 Ised on the spil LCSD Result Un 1.90 mg 2.02 mg 2.02 mg lyzed: 2013-0 ration: 2013-0	Amount Re 20.0 <2	Result Rec. <2.32 73 e duplicate result Spike I Amount I 2.00	Limit RPD 70 - 130 18 lt. 18 LCS LCSD Rec. Rec. 84 95 88 101	Limit 20 Rec. Limit 70 - 130
g/Kg 1 Ised on the spil LCSD Result Un 1.90 mg 2.02 mg 2.02 mg lyzed: 2013-0 ration: 2013-0	Amount Re 20.0 <2	Result Rec. <2.32 73 e duplicate result Spike I Amount I 2.00	Limit RPD 70 - 130 18 lt. 18 LCS LCSD Rec. Rec. 84 95 88 101	Limit 20 Rec. Limit 70 - 130
g/Kg 1 Ised on the spil LCSD Result Un 1.90 mg 2.02 mg 2.02 mg lyzed: 2013-0 ration: 2013-0	20.0 <2 ke and spike d nits Dil. g/Kg 1 g/Kg 1	<2.32 73 e duplicate resul Spike I Amount I 2.00	70 - 130 18 lt. LCS LCSD Rec. Rec. 84 95 88 101	20 Rec. Limit 70 - 130
LCSD Result U1 1.90 mg 2.02 mg lyzed: 2013-0 ration: 2013-0	nits Dil. 5/Kg 1 5/Kg 1	Spike I Amount I 2.00	LCS LCSD Rec. Rec. 84 95 88 101	Limit 70 - 130
LCSD Result Un 1.90 mg 2.02 mg lyzed: 2013-0 ration: 2013-0	nits Dil. 5/Kg 1 5/Kg 1	Spike I Amount I 2.00	LCS LCSD Rec. Rec. 84 95 88 101	Limit 70 - 130
Result U1 1.90 mg 2.02 mg lyzed: 2013-0 ration: 2013-0	g/Kg 1 g/Kg 1	Amount I 2.00	Rec. Rec. 84 95 88 101	Limit 70 - 130
1.90 mg 2.02 mg lyzed: 2013-0 ration: 2013-0	g/Kg 1 g/Kg 1	2.00	84 95 88 101	70 - 130
2.02 mg lyzed: 2013-0 ration: 2013-0	9/Kg 1 -01-25		88 101	
lyzed: 2013-(ration: 2013-(.01-25	2.00		70 - 130
ration: 2013-0				
1		Spike Ma	Prepared By trix	r: CW Rec.
lt Units	Dil. An	Amount Res	sult Rec.	Limit
mg/Kg	1 1	250 <6	.88 96	70 - 130
sed on the spik	ke and spike d	e duplicate resul	lt.	
	Spike Ma	Aatrix	Rec	RPD
nits Dil. 4	-			Limit
				20
	-	-		
TT. •	-	-		Rec.
				Limit
mg/Kg	1 10	100 122		70 - 130
	nits Dil. ;/Kg 1	sed on the spike and spike Spike M nits Dil. Amount F 5/Kg 1 250 sed on the spike and spike S Units Dil. Ar	sed on the spike and spike duplicate resu Spike Matrix nits Dil. Amount Result Rec. Sylve 1 250 <6.88 95 sed on the spike and spike duplicate resu Spike LCS Units Dil. Amount Rec.	sed on the spike and spike duplicate result. Spike Matrix Rec. nits Dil. Amount Result Rec. Limit RPD 5/Kg 1 250 <6.88 95 70 - 130 1 sed on the spike and spike duplicate result. Spike LCS LCSD Units Dil. Amount Rec. Rec.

~

.

112C04983), 2013 Work Order: 13012301 Page Number: 19 of 29 COG/SRO State Unit Com. 102 SWD Eddy Co., NM										
Percent recovery is based on the	spike	resu	lt. RPD	is based	on the s _l	oike and sp	oike duplica	nte resu	lt.		
			LCSD			Spike	Matrix		Rec.		RPI
Param	F	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limi
DRO		I	250	mg/Kg	; 1	250	31	88	70 - 130	8	20
Percent recovery is based on the	spike	resu	lt. RPD	is based	on the sp	oike and sp	oike duplica	ate resu	lt.		
	L	\mathbf{CS}	LCS	SD			Spike	LCS	S LCS	SD	R.ec.
Surrogate	Re	sult	Res	ult U	Inits	Dil.	Amount	Rec.			Limit
ı-Tricosane	1	08	10	6 n	g/Kg	1	100	108	100	6	70 - 13
QC Batch: 98485 Prep Batch: 83354				e Analyzeo Preparatio LCS		3-01-29 3-01-24	0-3	Ъ.f	Prep	lyzed B pared By	y: AR
				LUS			Spike		trix		Rec.
Daram		Г	C		Thuita	151	American	D			
		F	С	Result 2510	Units mg/Kg	Dil1	Amount 2500	Re:		lec. 00	Limit 85 - 11
Chloride	spike			Result 2510	mg/Kg	1	2500	<3	3.85 1		
Chloride	spike		lt. RPD	Result 2510	mg/Kg	1 bike and sp	2500 pike duplica	<3	3.85 1 lt.		85 - 11
Chloride Percent recovery is based on the		resu	lt. RPD LCSD	Result 2510 is based	mg/Kg on the sp	1 pike and sp Spike	2500 pike duplica Matrix	<3 ate resu	8.85 1 lt. Rec.	00	85 - 11 RPI
Chloride Percent recovery is based on the Param Chloride	F	resu C	lt. RPD LCSD Result 2640	Result 2510 is based Units mg/Kg	mg/Kg on the sp Dil. 1	1 pike and sp Spike Amount 2500	2500 pike duplica Matrix Result <3.85	<3 ate resu Rec. 106	3.85 1 lt. Rec. Limit 85 - 115		85 - 11 RPI
Chloride Percent recovery is based on the Param Chloride Percent recovery is based on the Laboratory Control Spike (I QC Batch: 98486	F spike	resu C resu	lt. RPD LCSD Result 2640 lt. RPD	Result 2510 is based Units mg/Kg	mg/Kg on the sp Dil. 1 on the sp 1: 2013	1 pike and sp Spike Amount 2500	2500 pike duplica Matrix Result <3.85	<3 ate resu Rec. 106	8.85 1 It. Limit 85 - 115 It. Anal	00 RPD	85 - 11 RPI Limi 20 y: AR
Prep Batch: 83354	F spike	C C resu.	lt. RPD LCSD Result 2640 lt. RPD Date QC 1	Result 2510 is based Units mg/Kg is based Analyzec Preparatio LCS	mg/Kg on the sp Dil. 1 on the sp l: 2013	1 sike and sp Amount 2500 sike and sp sike and sp 3-01-29 3-01-24	2500 pike duplica Matrix Result <3.85 pike duplica	<3 Rec. 106 tte resu Ma	8.85 1 It. <u>Limit</u> 85 - 115 It. Anal Prep	00 RPD 5	85 - 11 RPI Limi 20 y: AR 7: AR Rec.
Chloride Percent recovery is based on the Param Chloride Percent recovery is based on the Caboratory Control Spike (I QC Batch: 98486 Prep Batch: 83354	F spike	resu C resu	lt. RPD LCSD Result 2640 lt. RPD Date QC 1	Result 2510 is based Units mg/Kg is based a Analyzec Preparation LCS Result	mg/Kg on the sp Dil. 1 on the sp d: 2013 on: 2013	1 sike and sp Amount 2500 sike and sp sike and sp 3-01-29 3-01-24 Dil.	2500 pike duplica Matrix Result <3.85 pike duplica Spike Amount	<3 Rec. 106 tte resu Ma Res	8.85 1 It. <u>Limit</u> 85 - 115 It. Anal Prep trix sult R	00 RPD 5 yzed B ared B	85 - 11 RPI Limi 20 y: AR 7: AR Rec. Limit
Chloride Percent recovery is based on the Param Chloride Percent recovery is based on the Laboratory Control Spike (I DC Batch: 98486 Prep Batch: 83354 Param Chloride	F spike	C C result	lt. RPD Result 2640 lt. RPD Date QC 1 C	Result 2510 is based Units mg/Kg is based e Analyzec Preparation LCS Result 2700	mg/Kg on the sp Dil. 1 on the sp l: 2013 on: 2013 Units mg/Kg	1 bike and sp Amount 2500 bike and sp bike and sp 3-01-29 3-01-24 Dil. 1	2500 pike duplica Matrix Result <3.85 pike duplica pike duplica Spike Amount 2500	<3 Rec. 106 tte resu Ma Res <3	8.85 1 It. Rec. Limit 85 - 115 It. Anal Prep trix sult R .85 1	00 RPD 5 yzed B ared B	85 - 11 RPI Limi 20 y: AR 7: AR Rec. Limit
Chloride Percent recovery is based on the Param Chloride Percent recovery is based on the Laboratory Control Spike (I QC Batch: 98486 Prep Batch: 83354 Param Chloride	F spike	C C result	lt. RPD Result 2640 lt. RPD Date QC I C	Result 2510 is based Units mg/Kg is based e Analyzec Preparation LCS Result 2700	mg/Kg on the sp Dil. 1 on the sp l: 2013 on: 2013 Units mg/Kg	1 bike and sp Amount 2500 bike and sp bike and sp 3-01-29 3-01-24 Dil. 1	2500 pike duplica Matrix Result <3.85 pike duplica pike duplica Spike Amount 2500	<3 Rec. 106 tte resu Ma Res <3	8.85 1 It. Rec. Limit 85 - 115 It. Anal Prep trix sult R .85 1	00 RPD 5 yzed B ared B	85 - 11 RPI Limi 20 y: AR 7: AR Rec. Limit
Chloride Percent recovery is based on the Param Chloride Percent recovery is based on the Laboratory Control Spike (I QC Batch: 98486 Prep Batch: 83354 Param Chloride Percent recovery is based on the	F spike	C C result)	lt. RPD Result 2640 lt. RPD Date QC I C lt. RPD LCSD	Result 2510 is based Units mg/Kg is based Analyzec Preparation LCS Result 2700 is based of State of State of	mg/Kg on the sp Dil. 1 on the sp l: 2013 units mg/Kg on the sp	1 bike and sp Amount 2500 bike and sp 3-01-29 3-01-24 Dil. 1 ike and sp Spike	2500 pike duplica Matrix Result <3.85 pike duplica pike duplica Amount 2500 pike duplica Matrix	<3 Rec. 106 tte resu Ma Res <3 te resu	8.85 1 It. Rec. Limit 85 - 115 It. Anal Prep trix sult R i.85 1 It. Rec.	RPD 5 yzed B ared By ec. 08	85 - 11 RPI Limi 20 y: AR y: AR r: AR Rec. Limit 85 - 11 RPI
Chloride Percent recovery is based on the Param Chloride Percent recovery is based on the Caboratory Control Spike (I QC Batch: 98486 Prep Batch: 83354 Param Chloride	F spike	C C result	lt. RPD Result 2640 lt. RPD Date QC I C	Result 2510 is based Units mg/Kg is based e Analyzec Preparation LCS Result 2700	mg/Kg on the sp Dil. 1 on the sp d: 2013 di: 2013 units mg/Kg on the sp Dil.	1 pike and sp. Amount. 2500 ike and sp. 3-01-29 3-01-24 Dil. 1 ike and sp.	2500 pike duplica Matrix Result <3.85 pike duplica Spike Amount 2500 pike duplica	<3 Rec. 106 tte resu Ma Res <3	8.85 1 It. Rec. Limit 85 - 115 It. Anal Prep trix sult R 85 1 It.	00 RPD 5 yzed B ared B	85 - 11 RPI Limi 20 y: AR y: AR r: AR Rec. Limit 85 - 11

Report Date: January 30, 2013 112C04983				Work Order: 13012301 COG/SRO State Unit Com. 102 SWD						Page Number: 20 of 29 Eddy Co., NM			
Matrix Spike (MS-1)	Spiked Sa	mple	: 31901	8									
QC Batch: 98395 Prep Batch: 83373				te Analyz Prepara)13-01-24)13-01-24				Analyze Prepare			
				MS			Spike	Mat	trix			Rec.	
Param		F	C I	Result	Units	Dil.	Amount	Res		Rec.		imit	
Benzene				2.28	mg/Kg	1	2.00		0810	114		3 - 138	
Foluene			3	2.30	nig/Kg	1	2.00		0750	115		8 - 142	
Ethylbenzene				2.50	mg/Kg	1	2.00	< 0.0		125		- 132	
Xylene			1	7.67	mg/Kg	1	6.00	-	0700	128		8 - 148	
										120			
Percent recovery is based o	on the spike	resi	nt. RP.	D is based	1 on the	spike and	spike dupi	cate re	suit.				
			MSD			Spike	Matrix		R	ec.		RPD	
Param	F	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.			RPD	Limit	
Benzene		1	2.26	mg/Kg		2.00	< 0.00810	113		- 138	1	20	
Foluene		1	2.32	mg/Kg		2.00	< 0.00750	116		- 142	1	20	
Ethylbenzene		1	2.46	mg/Kg		2.00	< 0.00730	123		132	$\overline{2}$	20	
Kylene		1	7.72	mg/Kg		6.00	< 0.00700	129		- 148	1	20	
Percent recovery is based o	n the spike												
creent recovery is based of	m and spike	1 Cot	110, 101.	0 15 00600	a on one	spike and	spike dupi	6666 16	50110.				
				MS	MSD		S	pike	MS	MSD	-	Rec.	
				Result	Result	Units	Dil. An	nount	Rec.	Rec.	Ι	imit	
Surrogate						mg/Kg	1	2	118	116	70	5 - 108	
	Qsr	Qar		2.35	2.32	mg/ng	1	4	110	110	19.		
Triffuorotoluene (TFT)		Qaı		2.35 2.04	2.32 2.01	mg/Kg	1	2	102	100_		4 - 108	
Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-B Matrix Spike (MS-1) QC Batch: 98408 Prep Batch: 83375			: 31901; Dat	2.04	2.01 ed: 20						71.	4 - 108 YG	
Triffuorotoluene (TFT) 4-Bromoffuorobenzene (4-B Matrix Spike (MS-1) QC Batch: 98408	3FB)		: 31901 Dat QC	2.04 3 e Analyz	2.01 ed: 20 ion: 20	mg/Kg 913-01-24 13-01-24	1 Spike	2 M	102 latrix	100 Analyze Prepare	71. ed By: ed By:	4 - 108 YG	
Friffuorotoluene (TFT) I-Bromoffuorobenzene (4-B Matrix Spike (MS-1) QC Batch: 98408 Prep Batch: 83375 Param	3FB)	mple	: 31901; Dat	2.04 3 e Analyz Preparat MS	2.01 ed: 20 ion: 20 Unit:	mg/Kg 913-01-24 13-01-24 s Dil.	1	2 t R	102	100 Analyze	71. ed By: ed By:	4 - 108 YG YG Rec.	
Triffuorotoluene (TFT) I-Bromoffuorobenzene (4-B Matrix Spike (MS-1) QC Batch: 98408 Prep Batch: 83375	3FB) Spiked Sar	mple F	: 31901; Dat QC <u>C</u>	2.04 8 e Analyz Preparat MS Result 22.0	2.01 ed: 20 ion: 20 Unit: mg/K	mg/Kg 13-01-24 13-01-24 s Dil. g 1	1 Spike Amoum 20.0	2 t	102 latrix esult (2.32	100 Analyze Prepare Rec.	71. ed By: ed By:	4 - 108 YG YG Rec. Limit	
Friffuorotoluene (TFT) I-Bromoffuorobenzene (4-B Matrix Spike (MS-1) QC Batch: 98408 Prep Batch: 83375 Param BRO	3FB) Spiked Sar	mple F	: 31901 Dat QC <u>C</u>	2.04 8 e Analyz Preparat MS Result 22.0 D is based	2.01 ed: 20 ion: 20 Unit: mg/K	mg/Kg 13-01-24 13-01-24 s Dil. g 1 spike and	1 Spike Amoun 20.0 spike duplie	2 t	102 latrix esult 2.32 sult.	100 Analyze Prepare Rec. 110	71. ed By: ed By:	4 - 108 YG YG Limit 0 - 130	
Friffuorotoluene (TFT) I-Bromoffuorobenzene (4-B Matrix Spike (MS-1) QC Batch: 98408 Prep Batch: 83375 Param BRO	3FB) Spiked Sar	mple F	: 31901; Dat QC <u>C</u>	2.04 8 e Analyz Preparat MS Result 22.0 D is based	2.01 ed: 20 ion: 20 Units mg/K l on the	mg/Kg 13-01-24 13-01-24 s Dil. g 1	1 Spike Amoum 20.0 spike duplie Matrix	2 t	102 latrix esult 2.32 sult.	100 Analyze Prepare Rec. 110	71. ed By: ed By:	4 - 108 YG YG Rec. Limit	

.

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

Report Date: January 30, 2013 112C04983	W COG/SR0	/ork Ordei O State U	Page Number: 21 of 29 Eddy Co., NM					
matrix spikes continued								_
	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Triffuorotoluene (TFT)	2.07	2.42	mg/Kg	1	2	104	121	70 - 130
4-Bromofluorobenzene (4-BFB)	1.98	2.00	mg/Kg	1	2	99	100	70 - 130

Matrix Spike (MS-1) Spiked Sample: 319018

QC Batch:	98413	Date Analyzed:	2013-01-25	Analyzed By:	CW
Prep Batch:	83389	QC Preparation:	2013-01-24	Prepared By:	CW

			MS			Spike	Matrix		Rec.
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	$\mathbf{A}\mathbf{m}\mathbf{o}\mathbf{u}\mathbf{n}\mathbf{t}$	Result	Rec.	Limit
DRO		1	249	mg/Kg	1	250	11.4	95	70 - 130

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

			MSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
DRO		1	273	mg/Kg	1	250	11.4	105	70 - 130	9	20

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

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
n-Tricosane	100	110	mg/Kg	1	100	100	110	70 - 130

Matrix Spike (MS-1) Spiked Sample: 319164

QC Batch: Prep Batch:	98418 Date Analyzed: 2013-01-28 83395 QC Preparation: 2013-01-24									Analyzed By: CW Prepared By: CW			
Param			F	С	MS Result	Units	Dil.	Spike Amount		latrix .esult 1	Rec.	Rec. Limit	
DRO		Qs	Qs	1	389	nıg/Kg		250		223	66	70 - 130	
Percent recov	very is based on th	e spike	e resu	lt. RPD	is based o	on the sp	oike and sp	ike duplic	ate res	ult.			
				MSD			Spike	Matrix		Rec.		RPD	
Param		\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit	
DRO			1	438	mg/Kg	1	250	223	86	70 - 130	12	20	

Report Date: January 30, 2013	Work Order: 13012301	Page Number: 22 of 29
112C04983	COG/SRO State Unit Com. 102 SWD	Eddy Co., NM

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

			\mathbf{MS}	MSD			Spike	MS	MSD	Rec.
Surrogate			Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
n-Tricosane	Qsr	Qsr	139	151	mg/Kg	5	100	139	151	70 - 130

Matrix Spike (MS-1) Spiked Sample: 319023

QC Batch:	98485	Date Analyzed:	2013-01-29	Analyzed By:	\mathbf{AR}
Prep Batch:	83354	QC Preparation:	2013-01-24	Prepared By:	AR

			MS			Spike	Matrix		Rec.
Param	\mathbf{F}	С	Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride			3280	mg/Kg	5	2500	688	104	78.9 - 121
Percent recovery is based on the spik	te res	ult. R	PD is base	d on the spi	ike and	spike duplica	te result.		

			MSD			Spike	Matrix		Rec.		RPD
Param	F	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride			3080	mg/Kg	5	2500	688	96	78.9 - 121	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: 319039

QC Batch: Prep Batch:	98486 83354			ate Analy;)C Prepara		Analyzed By: AR Prepared By: AR				
Param		F	С	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride				2430	mg/Kg	5	2500	<19.2	97	78.9 - 121

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

			MSD			Spike	Matrix		Rec.		RPD
Param	F	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride			2570	mg/Kg	5	2500	<19.2	103	78.9 - 121	6	20

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

Calibration Standards

Standard (CCV-1)

QC Batch: 98395			Date Ana	alyzed: 201	Analyzed By: YG			
				CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	Flag	Cert	\mathbf{Units}	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		i	mg/kg	0.100	0.107	107	80 - 120	2013-01-24
Toluene		1	mg/kg	0.100	0.108	108	80 - 120	2013-01-24
Ethylbenzene		I	mg/kg	0.100	0.112	112	80 - 120	2013-01-24
Xylene		1	mg/kg	0.300	0.355	118	80 - 120	2013-01-24

Standard (CCV-2)

QC Batch: 98395	QC Batch: 98395				Date Analyzed: 2013-01-24					
				CCVs	CCVs	CCVs	Percent			
				True	Found	Percent	Recovery	Date		
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed		
Benzene		1	mg/kg	0.100	0.106	106	80 - 120	2013-01-24		
Toluene		1	mg/kg	0.100	0.106	106	80 - 120	2013-01-24		
Ethylbenzene		1	mg/kg	0.100	0.108	108	80 - 120	2013 - 01 - 24		
Xylene		1	mg/kg	0.300	0.331	110	80 - 120	2013-01-24		

Standard (CCV-3)

QC Batch: 98395	Date Ana	alyzed: 201	Analy	Analyzed By: YG				
				CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		1	mg/kg	0.100	0.100	100	80 - 120	2013-01-24
Toluene		1	mg/kg	0.100	0.101	101	80 - 120	2013 - 01 - 24
Ethylbenzene		1	mg/kg	0.100	0.100	100	80 - 120	2013-01-24
Xylene		1	mg/kg	0.300	0.311	104	80 - 120	2013-01-24

Report Date: 112C04983	January 30, 2	2013	COG		der: 13012301 9 Unit Com. 10	2 SWD		mber: 24 of 29 Eddy Co., NM
Standard (C	CV-1)							
QC Batch: 9	8408		Date	Analyzed:	2013-01-24		Analy	zed By: YG
_				CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param GRO	Flag	Cert	Units mg/Kg	<u>Conc.</u> 1.00	Conc. 1.17	Recovery 117	Limits 80 - 120	Analyzed 2013-01-24
	·····							
Standard (C	CV-2)							
QC Batch: 9	8408		Date	Analyzed:	2013-01-24		Analy	zed By: YG
				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		3	mg/Kg	1.00	1.02	102	80 - 120	2013-01-24
Standard (C	CV-3)							
QC Batch: 98	8408		Date .	Analyzed:	2013-01-24		Analy	zed By: YG
Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
								J
GRO		l	mg/Kg	1.00	1.15	115	80 - 120	2013-01-24
	CV-1)	l	mg/Kg	1.00	1.15	115	80 - 120	2013-01-24
GRO	-	ι		1.00 Analyzed:		115		2013-01-24 zed By: CW
GRO Standard (C QC Batch: 9	8413		Date 4	Analyzed: CCVs True	2013-01-25 CCVs Found	CCVs Percent	Analy: Percent Recovery	zed By: CW Date
GRO Standard (C	-	L Cert		Analyzed: CCVs	2013-01-25 CCVs	CCVs	Analy: Percent	zed By: CW

Standard (CCV-2)

QC Batch: 98413

Date Analyzed: 2013-01-25

Analyzed By: CW

.

Report Date: January 30, 2013 112C04983			COG	Work Orc /SRO State	Page Number: 25 of 29 Eddy Co., NM			
Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	294	118	80 - 120	2013-01-25
Standard (CV 3)							
	C CV-3) 08413		Date .	Analyzed:	2013-01-25		Analy	zed By: CW
Standard (C QC Batch: 9			Date .	Analyzed: CCVs	2013-01-25 CCVs	CCVs	Analy: Percent	zed By: CW
			Date .	•7		CCVs Percent		zed By: CW Date
		Cert	Date . Units	ccvs	CCVs		Percent	v

Standard (CCV-4)

QC Batch:	QC Batch: 98413		Date	Analyzed:	2013-01-25		Analy	zed By: CW
				CCVs	CCVs	CCVs	Percent	Data
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		ι	mg/Kg	250	264	106	80 - 120	2013-01-25

Standard (CCV-1)

QC Batch:	98418		Date 1	Analyzed:	2013-01-28		Analyz	zed By: CW
				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		1	mg/Kg	250	244	98	80 - 120	2013-01-28

Standard (CCV-2)

QC Batch: 98418

Date Analyzed: 2013-01-28

Analyzed By: CW

Report Date: 112C04983	January 30, 2	013	COG/	Work Orde 'SRO State U	er: 13012301 Jnit Com. 10	2 SWD		Page Number: 26 of 29 Eddy Co., NM			
Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed			
DRO		1	mg/Kg	250	291	116	80 - 120	2013-01-28			
Standard (C	CV-3)										
QC Batch: 9	C Batch: 98418			Analyzed: 2	013-01-28		Analyz	zed By: CW			
				CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date			
Param	Flag	Cert	Units	Cone	Cone	Recovery	Limits	Analyzed			
Param DRO Standard (C	Flag	<u>Cert</u>	Units mg/Kg	Conc. 250	Conc. 239	Recovery 96	Limits 80 - 120	Analyzed 2013-01-28			
	2CV-1)		mg/Kg	250			80 - 120	2013-01-28			
DRO Standard (C	2CV-1)		mg/Kg	250	239		80 - 120	2013-01-28			
DRO Standard (C QC Batch: 9 Param	2CV-1)		mg/Kg Date 4 Units	250 Analyzed: 2 CCVs True Conc.	239 2013-01-29 CCVs Found Conc.	96 CCVs Percent Recovery	80 - 120 Analy Percent Recovery Limits	2013-01-28 zed By: AR Date Analyzed			
DRO Standard (C	2 CV-1) 8485	1	mg/Kg Date 4	250 Analyzed: 2 CCVs True	239 2013-01-29 CCVs Found	96 CCVs Percent	80 - 120 Analy Percent Recovery	2013-01-28 zed By: AR Date			
DRO Standard (C QC Batch: 9 Param	2 CV-1) 8485 Flag	1	mg/Kg Date 4 Units	250 Analyzed: 2 CCVs True Conc.	239 2013-01-29 CCVs Found Conc.	96 CCVs Percent Recovery	80 - 120 Analy Percent Recovery Limits	2013-01-28 zed By: AR Date Analyzed			
DRO Standard (C QC Batch: 9 Param Chloride	CV-1) 8485 Flag CV-2)	1	mg/Kg Date A Units mg/Kg	250 Analyzed: 2 CCVs True Conc. 100	239 2013-01-29 CCVs Found Conc.	96 CCVs Percent Recovery	80 - 120 Analy Percent Recovery Limits 85 - 115	2013-01-28 zed By: AR Date Analyzed			
DRO Standard (C QC Batch: 9 Param Chloride Standard (C	CV-1) 8485 Flag CV-2)	1	mg/Kg Date A Units mg/Kg	250 Analyzed: 2 CCVs True Conc. 100 Analyzed: 2 CCVs	239 2013-01-29 CCVs Found Conc. 98.2 013-01-29 CCVs	96 CCVs Percent Recovery 98 CCVs	80 - 120 Analy Percent Recovery Limits 85 - 115 Analy Percent	2013-01-28 zed By: AR Date Analyzed 2013-01-29 zed By: AR			
DRO Standard (C QC Batch: 9 Param Chloride Standard (C	CV-1) 8485 Flag CV-2)	1	mg/Kg Date A Units mg/Kg	250 Analyzed: 2 CCVs True Conc. 100 Analyzed: 2	239 2013-01-29 CCVs Found Conc. 98.2 013-01-29	96 CCVs Percent Recovery 98	80 - 120 Analy Percent Recovery Limits 85 - 115 Analy	2013-01-28 zed By: AR Date Analyzed 2013-01-29			

Standard (CCV-1)

QC Batch: 98486

Date Analyzed: 2013-01-29

Analyzed By: AR.

Report Date: January 30, 2013 112C04983			COG/S	Work Orde SRO State U	Page Number: 27 of 29 Eddy Co., NM			
Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.7	100	85 - 115	2013-01-29
Standard (C	CV-2)							
QC Batch: 98	3486		Date A	analyzed: 2	013-01-29		Analy	zed By: AR
				CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2013-01-29

Report Date: January 30, 2013 112C04983 Work Order: 13012301 COG/SRO State Unit Com. 102 SWD Page Number: 28 of 29 Eddy Co., NM

Appendix

Report Definitions

NameDefinitionMDLMethod Detection LimitMQLMinimum Quantitation LimitSDLSample Detection Limit

Laboratory Certifications

	Certifying	Certification	Laboratory
С	Authority	Number	Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704392-12-4	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.
- MI1 Split peak or shoulder peak
- MI2 Instrument software did not integrate
- MI3 Instrument software misidentified the peak
- MI4 Instrument software integrated improperly
- MI5 Baseline correction
- 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

Report Date: January 30, 2013 112C04983 Work Order: 13012301 COG/SRO State Unit Com. 102 SWD Page Number: 29 of 29 Eddy Co., NM

÷

The scanned attachments will follow this page.

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

An	Analysis Request of Chain of Custody Record										d		PAGE: OF: 2															
2/ %0 B								J "	а С	_								(Cire			SIS F becif)			
	TETRA TECH 1910 N. Big Spring St. Midland, Texas 79705 (432) 682-4559 • Fax (432) 682-3946												Evt to C36)		Cr Pb Hg	d Vr Pd Hg Se									IDS			
CLIENT NAM	CLIENT NAME: SITE MANAGER: COLA Ike Towarez										MET		VE	MOIT TY1005		B	a Ba Cd			60/624	670/017					ns, pH		
PROJECT N	PROJECT NO.: HI- 6401478 SRO State Unit Com 102 SWO							CONTAI	(N)			Τ	\Box			s Ag As	s Ag As es	Volatiles		8240/82	608	8		Air)	tos)	s/Catio		
LAB I.D. NUMBER	date 9013	TIME	MATRIX	COMP	GRAB	Edd SAMPL		NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HN03	NONE		BTEX 8021B	PAH 8270	RCRA Metals Ag /	TCLP Metals / TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	PCB's 8080/608	Pest. 808/608	Chloride Gamma Shor	Alpha Beta	PLM (Asbestos)	Major Anions/Cations, pH, TDS		
319014			5		K	Trench - 1	0-1	1			k	(ĸK									Ŕ					
019					\square		<u> </u>	1				P								_			4					
016							3`																4					
c.M						· ·	4'				Λ											1	K					\perp
018			1	 		Trench - 2	0-0.5							XK									K					\perp
019			Ц	ļ	\prod		<u>ı`</u>													\square		/	<u>\</u>					
020				L			2`			_												A						\bot
C21			Į/		Ш		3				\parallel											X	(
622						·	4`															K	1					
C23	V.	O A			\downarrow	Date: 1-22-15	5	\checkmark			V,	Ja	2 Å									X						
RELINQUISHED		<u>Lel</u>				Time: 1645	RECEIVED BY (Signature)		p. 100.	Dat Tim Dat	e:	16.0				F		(Print)						Π	me: _		1-1:	<u>ک</u> ـــد
Time:					RECEIVED BY: (Signature)			Tim Dat	e:				15	EDEX	_	ERED	_ E	BUS				AIRE OTH	31LL # ER: _	:				
RECEIVING LAB						Time:	RECEIVED BY: (Signature)			Tim							-	ONTA		_)N:				Resu	its by:		
ADDRESS: CITY: M. H.	and	STATE:	75	P	HONE	ZIP:	ATE:	TIN	IE:		~	=				II	Le								Auth	H Chai orized. 'es	ges N	
SAMPLE CONDIT				<u> </u>		REMARKS: IF TPH exc.	eds 1,000 mg/kg	TOP Ber	s) rze	<u> </u>	→ ⊱_`	exce	eds	and in column		19/1	the second se	6		<u>d</u>	ħ	ara.	A	BI	Z	' e	rce	7
	Please f	nii out all	сор	nes	- L.	aboratory retains Yellow 50 mg/kg	copy - Return Orginal copy to To Man classer 50	etra Te	ch -	• Pn	oject	Mana						γ- Ac				ceive	s G	oldic	юру	•		

	. 13								1001					-								F	AGE	: _	<u>,</u>		OF	: 0	
An	aly	/S	IS F	46	96	qu	est of Ch	ain of	Custody	' R	e	CO	orc	1	┢						AN			2	UES1	 Г		<u> </u>	
							1910 N. Bi Midland, T	A TECH 9 Spring St. 9 • Fax (432) 68					<u>,,,,,</u>			i (Ext. to C35)		Cr Pb Hg Se	Vr Pa Hg Se							i No.		3	
	ME:						SITE MANAG	SER: Towarer	<u> </u>	ITAINERS	T		SER\ ETH		Ξ	4X1005		Ba Cd	FF I		.000	0/624	6300					слі, на ,	
PROJECT N	10.:						NAME: State Un	+ Com	102 500	F CONTAIN		T					. N	als Ag As	tiles	i Volatiles		GC.MS Vol. 8240/8260/624 GC.MS Semi. Vol. 8270/625	0/608	608		a (Air)	PLM (Asbestos)	MS/Cation	
LAB I.D. NUMBER	DA1 201		TIME	MATRIX	COMP	GRAB		day Co PLE IDENTIFICA	NW	NUMBER OF CON	HCL	HNO3	ICE	NONE		TPH/ RU15	PAH 8270	RCRA Metals Ag	TCLP Vola	TCLP Semi Volatiles	RCI	GC.MS %	PCB's 8080/608	Pest. 808/	Chloride Gamma Shor	Alpha Beta (Air)	PLM (Asb	major Ani	
024	1/2	\Box		k		K	Trench - 2		ف`	N			K			\Box				\prod					K				
025				1		/	Trench - 3		0-0.5				2)										K				
026									1																K				
527									2`																K				
C28		·		ŀ		K			3'																X				
029									4."				\mathbf{n}												H				
030									5'																fo V				
031				V		V			6	V			\checkmark												40/1				
($\frac{1}{2}$	ΔI	4									1	24												Ц			
RELINQUISHED	A I		AU	<i>V</i> •			Date:	RECEIVED BY: (S	<u> </u>			Date: Time: Date:	16	45												Ti	ne:		-73
							Time:					Time:					F			-	8	IUS IPS				OTH	ili.#:, ER:		
RELINQUISHED			•				Date: Time:	RECEIVED BY: (S				Date: Time:						TRA TI	_		A		N:				Resul	ts by:	
ADDRESS: 4	lan	4	STATE:	7		PHON	ZIP:	HECEIVED B1: (3)g										Ik	e								RUSH Autho Ye	l Charg prized: es	res No
SAMPLE CONDITION WHEN RECEIVED: REMARKS:																													

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

13012301

Summary Report

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

Report Date: June 11, 2013

Work Order: 13060337

Project Location:Eddy Co., NMProject Name:COG/SRO State Unit Com. 102 SWDProject Number:112C04983

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
330876	T-1 1'	soil	2013-05-29	00:00	2013-06-03
330877	T-1 2'	soil	2013-05-29	00:00	2013-06-03
330878	T-1 3'	soil	2013-05-29	00:00	2013-06-03
330879	T-1 4'	soil	2013-05-29	00:00	2013-06-03
330880	T-1 5'	soil	2013-05-29	00:00	2013-06-03
330881	T-1 6'	soil	2013-05-29	00:00	2013-06-03
330882	T-1 7'	soil	2013-05-29	00:00	2013-06-03
330883	T-1 8' Bottom Hole	soil	2013-05-29	00:00	2013-06-03
330884	T-1 9'	soil	2013-05-29	00:00	2013-06-03
330885	T-1 10'	soil	2013-05-29	00:00	2013-06-03
330886	T-1 11'	soil	2013-05-29	00:00	2013-06-03
330887	T-1 12'	soil	2013-05-29	00:00	2013-06-03

]	BTEX	TPH DRO - NEW	TPH GRO	
	Benzene	Toluene	Ethylbenzene	Xylene	DRO	GRO
Sample - Field Code	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
330883 - T-1 8' Bottom Hole	<0.0200	< 0.0200	< 0.0200	< 0.0200	<50.0	<4.00

Sample: 330876 - T-1 1'

Param	Flag	Result	Units	RL
Chloride		5000	mg/Kg	4

Sample: 330877 - T-1 2'

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

Report Date: June 11, 2013	Work Order: 13060337	Page 1	Number: 2 of 3
Param Flag Chloride	Result 2630	Units mg/Kg	RL 4
Sample: 330878 - T-1 3'			
Param Flag	Result	Units	\mathbf{RL}
Chloride	2460	mg/Kg	4
Sample: 330879 - T-1 4'			
Param Flag	Result	Units	RL
Chloride	2830	mg/Kg	4
Sample: 330880 - T-1 5'			
Param Flag	Result	Units	RL
Chloride	3070	mg/Kg	4
Sample: 330881 - T-1 6'			
Param Flag	Result	Units	RL
Chloride	2880	mg/Kg	4
Sample: 330882 - T-1 7'			
Param Flag	Result	Units	RL
Chloride	2390	mg/Kg	4
Sample: 330883 - T-1 8' Bottom Hole			
Param Flag	Result	Units	RL
Chloride	1140	mg/Kg	4
Sample: 330884 - T-1 9'			
Param Flag	Result	Units	RL
Chloride	944	mg/Kg	4

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

Report Date: June 11,	2013	Work Order: 13060337	Page Number: 3 of 3			
Sample: 330885 - T-	1 10'					
Param	Flag	Result	Units	\mathbf{RL}		
Chloride		261	nıg/Kg	4		
Sample: 330886 - T - Param	1 11' Flag	Result	Units	RL		
Chloride	riag	35.1	mg/Kg	4		
Sample: 330887 - T-	1 12'					
Param	Flag	Result	Units	RL		
Chloride		140	mg/Kg	4		



6701 Aberdeen Avenue, Suite 9 200 East Sunset Road, Suite E 5002 Basin Street, Suite A1 (BioAquatic) 2501 Mayes Rd., Suite 100

Lubbock. Texas 79424 El Paso Texas 79922 Midland. Texas 79703 Carroliton. Texas 75006 E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

FAX 915 - 585 - 4944 915-585-3443 432-689-6301 972-242-7750

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: June 11, 2013

Work Order: 13060337 ສ່າກເຮັກແລ້ວ ແລ້ວ ເຮັກແລ້ວ ເຮັກແລ້ວ ແລ້ວ ແລ້ວ ເຮັກແລ້ວ

Project Location: Eddy Co., NM COG/SRO State Unit Com. 102 SWD Project Name: Project Number: 112C04983

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

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
330876	T-1 1'	soil	2013-05-29	00:00	2013-06-03
330877	T-1 2'	soil	2013-05-29	00:00	2013-06-03
330878	T-1 3'	soil	2013-05-29	00:00	2013-06-03
330879	T-1 4'	soil	2013-05-29	00:00	2013-06-03
330880	T-1 5'	soil	2013-05-29	00:00	2013-06-03
330881	T-1 6'	soil	2013-05-29	00:00	2013-06-03
330882	T-1 7'	soil	2013-05-29	00:00	2013-06-03
330883	T-1 8' Bottom Hole	soil	2013-05-29	00:00	2013-06-03
330884	T-1 9'	soil	2013-05-29	00:00	2013-06-03
330885	T-1 10'	soil	2013-05-29	00:00	2013-06-03
330886	T-1 11'	soil	2013-05-29	00:00	2013-06-03
330887	T-1 12'	soil	2013-05-29	00:00	2013-06-03

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

This report consists of a total of 22 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Michael april

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

Report Contents

, 1

i

Case Narrative 5
Analytical Report
Sample 330876 (T-1 1')
Sample 330877 (T-1 2')
Sample 330878 (T-1 3')
Sample 330879 (T-1 4')
Sample 330880 (T-1 5')
Sample 330881 (T-1 6')
Sample 330882 (T-1 7')
Sample 330883 (T-1 8' Bottom Hole)
Sample 330884 (T-1 9')
Sample 330885 (T-1 10')
Sample 330886 (T-1 11')
Sample 330887 (T-1 12')
Method Blanks
QC Batch 102081 - Method Blank (1)
QC Batch 102101 - Method Blank (1)
QC Batch 102130 - Method Blank (1)
QC Batch 102135 - Method Blank (1)
QC Batch 102164 - Method Blank (1)
Laboratory Control Spikes 13
QC Batch 102101 - LCS (1) 13 QC Batch 102130 - LCS (1) 14
$QC Batch 102135 - LCS (1) \dots 14$
$\begin{array}{c} \text{QC Batch 102163 - LCS (1)} & \dots & $
$\begin{array}{c} \text{QC Batch 102104 - BCS (1) } & & & \text{III } \\ \text{QC Batch 102081 - xMS (1) } & & & & \text{III } \\ \end{array} $
QC Batch 102001 - MS (1)
QC Batch 102130 - MS (1)
QC Batch 102135 - MS (1) 16
QC Batch 102164 - MS (1)
$\mathbf{Q} \subset \mathbf{D}_{\mathbf{M}} (\mathbf{M}) = \mathbf{M} (1) \dots \dots \mathbf{M} \mathbf{M} $
Calibration Standards
QC Batch 102081 - CCV (1)
QC Batch 102081 - CCV (2)
QC Batch 102081 - CCV (3)
QC Batch 102101 - CCV (1)
QC Batch 102101 - CCV (2)
QC Batch 102101 - CCV (3)
QC Batch 102130 - CCV (1)
QC Batch 102130 - CCV (2)
QC Batch 102135 - CCV (1)
QC Batch 102135 - CCV (2)

Page 3 of 22

QC Batch 102164 - CCV (1)	
Appendix	21
Report Definitions	. 21
Laboratory Certifications	. 21
Standard Flags	. 21
Attachments	21

1

Case Narrative

Samples for project COG/SRO State Unit Com. 102 SWD were received by TraceAnalysis, Inc. on 2013-06-03 and assigned to work order 13060337. Samples for work order 13060337 were received intact at a temperature of 2.4 C.

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

		Prep	Prep	\mathbf{QC}	Analysis
Test	Method	Batch	Date	Batch	Date
BTEX	S 8021B	86555	2013-06-09 at 21:00	102164	2013-06-11 at 10:59
Chloride (Titration)	SM 4500-Cl B	86493	2013-06-07 at 09:02	102130	2013-06-10 at 11:24
Chloride (Titration)	SM 4500-Cl B	86493	2013-06-07 at 09:02	102135	2013-06-10 at 12:52
TPH DRO - NEW	S 8015 D	86484	2013-06-06 at 08:00	102081	2013-06-07 at 09:16
TPH GRO	S 8015 D	86503	2013-06-06 at 10:30	102101	2013-06-07 at 14:40

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 13060337 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: June 11, 2013 112C04983

Analytical Report

Sample: 330876 - T-1 1'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 102130 86493	Analytical Method: Date Analyzed: Sample Preparation:		SM 4500-Cl B 2013-06-10 2013-06-07	Prep Method: Analyzed By: Prepared By:	,
Parameter	Flag	Cert	RL Result	Units	Dilution	\mathbf{RL}
Chloride			5000	mg/Kg	10	4.00

Sample: 330877 - T-1 2'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 102130 86493	Date An	al Method: alyzed: Preparation:	SM 4500-Cl B 2013-06-10 2013-06-07	Prep Method: Analyzed By: Prepared By:	AR.
Parameter	Flag	Cert	RL Result	Units	Dilution	\mathbf{RL}
Chloride			2630	mg/Kg	10	4.00

Sample: 330878 - T-1 3'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 102130 86493	Analytical Method: Date Analyzed: Sample Preparation:		SM 4500-Cl B 2013-06-10 2013-06-07	Prep Method: Analyzed By: Prepared By:	ÁR.
			RL		3	
Parameter	Flag	Cert	Result	Units	Dilution	\mathbf{RL}
Chloride			2460	mg/Kg	10	4.00

Report Date 112C04983	: June 11, 2013	Work Order: 130 COG/SRO State Unit C		Page Number: 7 of 2 Eddy Co., NN		
Sample: 33	0879 - T-1 4'					
aboratory: Midland Analysis: Chloride (Titration) QC Batch: 102130 Prep Batch: 86493		Analytical Method: Date Analyzed: Sample Preparation	SM 4500-Cl B 2013-06-10 2013-06-07	Prep Method: Analyzed By: Prepared By:	N/A AR AR	
		RI				
Parameter	Flag	Cert Result		Dilution	RL	
Chloride		2830	mg/Kg	10	4.00	
Laboratory: Analysis: QC Batch: Prep Batch:	Chloride (Titration) 102130 86493	Analytical Method: Date Analyzed: Sample Preparation	SM 4500-Cl B 2013-06-10 2013-06-07	Prep Method: Analyzed By: Prepared By:	N/A AR AR	
		RI				
Parameter	Flag	Cert Result		Dilution	RL	
Chloride		3070	mg/Kg	10	4.00	
-	0881 - T-1 6'					
Laboratory: Analysis:	Midland Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:		

Analysis:	Chloride (Titration)	Analytic	al Method:	SM 4500-Cl B	Prep Method:	N/A	
QC Batch: 102130		Date An	Date Analyzed:		Analyzed By:	AR	
Prep Batch:	86493	Sample 1	Preparation:	2013-06-07	Prepared By:	AR.	
			RL				
Parameter	Flag	Cert	Result	Units	Dilution	\mathbf{RL}	
Chloride			2880	mg/Kg	10	4.00	

Sample: 330882 - T-1 7'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	102130	Date Analyzed:	2013-06-10	Analyzed By:	AR
Prep Batch:	86493	Sample Preparation:	2013-06-07	Prepared By:	\mathbf{AR}

Report Date: June 11, 2013 112C04983			x Order: 1306033' State Unit Com. 1	Page Number: 8 of 22 Eddy Co., NM		
Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		<u></u>	2390	mg/Kg	10	4.00

Sample: 330883 - T-1 8' Bottom Hole

Laboratory: Midland								
Analysis: BTEX		Analytica	l Method:	S 8021E	3		Prep Method	: S 5035
QC Batch: 102164		Date Ana	lyzed:	2013-06	-11		Analyzed By:	KC
Prep Batch: 86555		Sample P	reparation:	2013-06	-09		Prepared By:	KC
				\mathbf{RL}				
Parameter	Flag	Cert]	Result	Unit	3	Dilution	RL
Benzene	U	1	<().0200	mg/Kg	5	1	0.0200
Toluene	U	1	<().0200	$\mathrm{mg}/\mathrm{K}_{k}$	S	1	0.0200
Ethylbenzene	IJ	1	<().0200	mg/Kg	5	1	0.0200
Xylene	1)	1	<().0200	mg/Kg	S	1	0.0200
						Spike	Percent	Recovery
Surrogate	Flag	g Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			1.72	mg/Kg	1	2.00	86	70 - 130
4-Bromofluorobenzene (4-BFB)			1.76	mg/Kg	1	2.00	88	70 - 130

Sample: 330883 - T-1 8' Bottom Hole

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 102130 86493	Date An	al Method: alyzed: Preparation:	SM 4500-Cl B 2013-06-10 2013-06-07	Prep Method: Analyzed By: Prepared By:	ÁR
			RL			
Parameter	\mathbf{Flag}	Cert	Result	Units	Dilution	RL
Chloride			1140	mg/Kg	10	4.00

Sample: 330883 - T-1 8' Bottom Hole

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	102081	Date Analyzed:	2013-06-07	Analyzed By:	ĊW
Prep Batch:	86484	Sample Preparation:	2013-06-06	Prepared By:	CW

Report Date: June 11, 112C04983			Work Order O State Ui	Page Number: 9 of 22 Eddy Co., NM				
Parameter		Flag	Cert	R	RL Result	Units	Dilution	RL
DRO		U	I	<50.0		mg/Kg	1	50.0
Surrogate	Flag	Cert	Result	Units	Dilution	${f Spike} \ {f Amount}$	Percent Recovery	Recovery Limits
n-Tricosane			90.7	mg/Kg	1	100	91	55.1 - 135.7

Sample: 330883 - T-1 8' Bottom Hole

Laboratory: Midland Analysis: TPH GRO QC Batch: 102101 Prep Batch: 86503	Date A	Analytical Method:S 8015 DDate Analyzed:2013-06-07Sample Preparation:2013-06-06				Prep Method: S 5035 Analyzed By: KC Prepared By: KC		
				\mathbf{RL}				
Parameter	Flag	Cert		Result	Uni	ts	Dilution	RL
GRO		1		<4.00	mg/K	^l g	1	4.00
Surrogate	Fla	ıg Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.82	mg/Kg	1	2.00	91	70 - 130
4-Bromofluorobenzene (4-BFB)			1.89	mg/Kg	1	2.00	94	70 - 130

Sample: 330884 - T-1 9'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 102130 86493	Date An	al Method: alyzed: Preparation:	SM 4500-Cl B 2013-06-10 2013-06-07	Prep Method: Analyzed By: Prepared By:	,
Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	1 ng	- Certi	944	mg/Kg	5	4.00

Sample: 330885 - T-1 10'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	102130	Date Analyzed:	2013-06-10	Analyzed By:	AR
Prep Batch:	86493	Sample Preparation:	2013-06-07	Prepared By:	\mathbf{AR}

-

,

Report Date: June 11, 2013 112C04983			Order: 13060337 tate Unit Com, 1	Page Number: 10 of 22 Eddy Co., NM		
D. /	ות	C .	RL	1 1 ·.		DI
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			261	mg/Kg	5	4.00

Sample: 330886 - T-1 11'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 102135 86493	Date An	al Method: alyzed: ² reparation:	SM 4500-Cl B 2013-06-10 2013-06-07	Prep Method: Analyzed By: Prepared By:	AR.
Parameter	Flag	Cert	RL Result	Units	Dilution	\mathbf{RL}
Chloride			35.1	mg/Kg	5	4.00

Sample: 330887 - T-1 12'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 102135 86493	Date An	al Method: alyzed: Preparation:	SM 4500-Cl B 2013-06-10 2013-06-07	Prep Method: Analyzed By: Prepared By:	'
			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			140	mg/Kg	5	4.00

Report Date: June 11, 2013 112C04983

Method Blank (1)

Method Blanks

QC Batch: 102081

QC Batch: 102081 Prep Batch: 86484				.nalyzed: eparation:	2013-06-07 2013-06-06			Analyzec Preparec		CW CW
Parameter		Flag		Cert		MDL Result		Units		RL
DRO				1		<10.2		mg/Kg		50
Surrogate	Flag Cer	t Re	sult	Units	Dilutior	Spi 1 Ame		Percent Recovery	Recove Limit	•
n-Tricosane			85.0	mg/Kg	1	10	0	85	55.1 - 1	35.7
Prep Batch: 86503 Parameter		Flag	QC Pr	eparation: Cert	2013-06-06	5 MDL Result		Prepare Units	d By: 1	KC RL
GRO		rnag				6.99		mg/Kg		4
Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Reco Lim	very nits
				1.80	mg/Kg	1	2.00	90 86	70 -	
Trifluorotoluene (TFT) 4-Bromofluorobenzene ((1.73	mg/Kg	1	2.00			130

QC Batch: Prep Batch:		Date Analyzed: QC Preparation:		Analyzed By: Prepared By:	
			MDL		
Parameter	Flag	Cert	Result	Units	\mathbf{RL}
Chloride			<3.85	mg/Kg	4

Report Date: June 11, 112C04983	2013			: 13060337 nit Com. 10		- <u>-</u>	Page Numb Ede	er: 12 ly Co.	
Method Blank (1)	QC Batch: 10213	5							
QC Batch: 102135 Prep Batch: 86493			nalyzed: eparation:	2013-06-1 2013-06-0			Analyzed Prepared	U.	AR AR
Parameter	Flag	-	Cert		MDL Result		Units		RL
Chloride	riag				<3.85		mg/Kg		4
Method Blank (1) QC Batch: 102164 Prep Batch: 86555	QC Batch: 102164	Date A	nalyzed: eparation:	2013-06-1 2013-06-0			Analyzed Prepared		KC KC
D	Flag	r	Cert		MDL				
Parameter Beuzene	F 18}	<u>, , , , , , , , , , , , , , , , , , , </u>			Result <0.00810		Units mg/Kg		RL
Parameter Benzene Toluene Ethylbenzene Xylene	L 199	3	i i i i		Result <0.00810		Units mg/Kg mg/Kg mg/Kg mg/Kg		

Report Date: June 11, 2013 112C04983

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 102081 Prep Batch: 86484			Analyzed: reparation:	2013-06-07 2013-06-06				zed By: ared By:	
		L	CS		Spike	Mat	trix	I	Rec.
Param	F		sult Unit	s Dil.	Amount	Res			imit
DRO		ı 24	47 mg/ŀ	Kg 1	250	<1	0.2 99	66.9	- 119.9
Percent recovery is based on the	spike res	ılt. RPD i	s based on th	e spike and	l spike dup	licate re	sult.		
u u	•								000
Demous	FC	LCSD Result	Units Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Param DRO	<u> </u>		$\frac{0 \text{ ms}}{\text{mg/Kg}} = 1$	250	<10.2		66.9 - 119.9	<u>4</u>	20
								······	20
Percent recovery is based on the	spike res	ut. RPD i	s based on ti	е зріке апо	і зріке ацр	ncate re	SHIT.		
	LCS	LCSD			Spike	LCS	LCSD		Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.		imit
n-Tricosane	99.9	104	mg/Kg	1	100	100	104	76.8	- 140.2
Laboratory Control Spike (I QC Batch: 102101 Prep Batch: 86503	CS-1)		Analyzed: reparation:	2013-06-07 2013-06-06				yzed By ared By	
			LCS	_	Spik		Matrix		Rec.
Param	F			its Dil.					Limit
GRO				/Kg 1	20.0			02 7	0 - 130
Percent recovery is based on the	spike res	ult. RPD i	s based on th	e spike and	spike dup	licate re	sult.		
		LCSD		Spike	e Matrix	۲.	Rec.		RPD
Param	F C	Result	Units D	-		Rec.	Limit	RPD	Limit
GRO	1	20.3	mg/Kg	1 20.0	<2.32	102	70 - 130	0	20
Percent recovery is based on the	spike res	ult. RPD i	s based on th	e spike and	spike dup	licate re	sult.		
		LCS	5 LCSD		ç	Spike	LCS LO	CSD	Rec.
Surrogate		Resu		Units		nount		ec.	
									Limit
Trifluorotoluene (TFT)		$1.83 \\ 1.94$		mg/Kg	1 :	2.00	92 9)2 7	Limit 0 - 130

Report Date: June 11, 2013 112C04983			COG	Work O /SRO Stat	order: 130 se Unit C		WD	P		er: 14 of 22 ly Co., NM
Laboratory Control Spike (I	LCS-1	L)								
QC Batch: 102130 Prep Batch: 86493				ite Analyze C Preparati		3-06-10 3-06-07			Analyzed Prepared	
Duran		F	С	LCS	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Param Chloride				Result 2630	mg/Kg	<u>D</u> II1	2500	<3.85	105	85 - 115
Percent recovery is based on the	mileo								100	
rencent recovery is based on the	: spike	resu	n. nr	D is based	on the sp	nke and sp	ике сприса	ue resuit.		
			LCSI			Spike	Matrix		lec.	RPD
Param	F	C	Resu		Dil.	Amount	Result		imit RF	
Chloride Percent recovery is based on the			2510			2500	< 3.85		- 115 5	20
Laboratory Control Spike (I QC Batch: 102135 Prep Batch: 86493	709-1	-)		te Analyze C Preparati		3-06-10 3-06-07			Analyzed Prepared	v
Daman		Ð	C	LCS	Units	Dil	Spike	Matrix		Rec. Limit
Param Chloride		F	C	Result 2460	mg/Kg	Dil1	Amount 2500	$\frac{\text{Result}}{< 3.85}$	<u>Rec.</u> 98	85 - 115
Percent recovery is based on the		regu	lt BP							
	spine	read			on one op	-	_			
Demonstra	-	a	LCSI		ניכד	Spike	Matrix		lec.	RPD
Param Chloride	F	C	Resul	lt Units	Dil.	Amount	Result	Rec. Li	mit RF	'D Limit
			-2556) mg/Kg					- 115 4	20
Percent recovery is based on the	-		2550 lt. RPI		g 1	2500	<3.85	102 85	- 115 4	20
Percent recovery is based on the Laboratory Control Spike (I	-		······	n aite a	g 1	2500	<3.85	102 85	- 115 4	20
	-		lt. RPI	n aite a	<u>s 1</u> on the sp	2500	<3.85	102 85	- 115 4 Analyzed	
Laboratory Control Spike (I	-		lt. RPI Da	D is based	g <u>1</u> on the sp ed: 201	2500 Dike and sp	<3.85	102 85		By: KC
Laboratory Control Spike (I QC Batch: 102164 Prep Batch: 86555	LCS-1	L)	lt. RPI Da QC	D is based te Analyze C Preparati LCS	<u>g 1</u> on the sp ed: 201 ion: 201	2500 bike and sp 3-06-11 3-06-09	<3.85 jike duplica Spike	102 85 ate result. Matrix	Analyzed Prepared	By: KC By: KC Rec.
Laboratory Control Spike (I QC Batch: 102164 Prep Batch: 86555 Param	LCS-1		lt. RPI Da QC	D is based te Analyze C Preparati LCS Result	g 1 on the sp ed: 201 ion: 201 Units	2500 bike and sp 3-06-11 3-06-09 Dil.	<3.85 iike duplica Spike Amount	102 85 ate result. Matrix Result	Analyzed Prepared Rec.	By: KC By: KC Rec. Limit
Laboratory Control Spike (I QC Batch: 102164 Prep Batch: 86555 Param Benzene	LCS-1	L)	lt. RPI Da QC C	D is based te Analyze C Preparati LCS Result 1.72	g 1 on the sp ed: 201 ion: 201 Units mg/Kg	2500 pike and sp 3-06-11 3-06-09 Dil. 1	<3.85 iike duplica Spike Amount 2.00	102 85 ate result. Matrix Result <0.00810	Analyzed Prepared Rec. 86	By: KC By: KC Rec. Limit 70 - 130
Laboratory Control Spike (I QC Batch: 102164 Prep Batch: 86555 Param	LCS-1	L)	lt. RPI Da QC	D is based te Analyze C Preparati LCS Result 1.72 1.84	g 1 on the sp ed: 201 ion: 201 Units	2500 bike and sp 3-06-11 3-06-09 Dil.	<3.85 iike duplica Spike Amount	102 85 ate result. Matrix Result	Analyzed Prepared Rec. 86 92	By: KC By: KC Rec. Limit

Report Date: June 11, 2013	Work Order: 13060337	Page Number: 15 of 22
112C04983	COG/SRO State Unit Com. 102 SWD	Eddy Co., NM

control spikes continued ...

			LCS			Spike	Matrix		Rec.
Param	F	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
Xylene		1	5.47	mg/Kg	1	6.00	<0.00700	91	70 - 130

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

			LCSD			Spike	Matrix		Rec.		RPD
Param	F	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene		1	1.76	mg/Kg	1	2.00	< 0.00810	88	70 - 130	2	20
Toluene		1	1.86	mg/Kg	1	2.00	< 0.00750	93	70 - 130	1	20
Ethylbenzene		ł	1.90	mg/Kg	1	2.00	< 0.00730	95	70 - 130	1	20
Xylene		1	5.56	mg/Kg	1	6.00	< 0.00700	93	70 - 130	2	20

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

	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	1.77	1.69	mg/Kg	1	2.00	88	84	70 - 130
4-Bromofluorobenzene (4-BFB)	1.83	1.72	mg/Kg	1	2.00	92	86	70 - 130

Matrix Spike (xMS-1) Spiked Sample: 330714

QC Batch:	102081	Date Analyzed:	2013-06-07	Analyzed By:	CW
Prep Batch:	86484	QC Preparation:	2013-06-06	Prepared By:	CW

			MS			Spike	Matrix		Rec.
Param	F	С	Result	Units	Dil.	Amount	Result	Rec.	Limit
DRO		1	222	mg/Kg	1	250	88.8	53	36.1 - 147.2

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

Param	FC	MSD Result	Units D	Spike il. Amoun		Rec.	Rec. Limit	RPD	RPD Limit
DRO	ł	249	mg/Kg	l 250	88.8	64	36.1 - 147.2	12	20
Percent recovery is based	on the spike res	ılt. RPD	is based on	the spike ar	nd spike dup	olicate 1	result.		
	MS	MSD			Spike	М	S MSD	1	Rec.
Surrogate	Result	Result	. Units	Dil.	Amount	Re	c. Rec.	L	imit
n-Tricosane	91.3	104	mg/K	g 1	100	91	l 104	78.3	- 131.6

Matrix Spike (MS-1) Spiked Sample: 330830

QC Batch:	102101	Date Analyzed:	2013-06-07	Analyzed By:	\mathbf{KC}
Prep Batch:	86503	QC Preparation:	2013-06-06	Prepared By:	\mathbf{KC}

Report Date: June 11, 2013 112C04983			Work Order: 13060337 COG/SRO State Unit Com. 102 SWD						Page		: 16 of 22 Co., NM
Param		F	С	MS Result	Units	Dil.	Spike Amount		atrix esult	Rec.	Rec. Limit
GRO		<u> </u>		$\frac{18.2}{18.2}$	mg/K		20.0		2.32	91	70 - 130
Percent recovery is based on the	e spike	e resu									10 100
			MSD			Spike	Matrix		Rec		RPD
Param	F	С	Result	: Unit	ts Dil.	Amount	Result	Rec.	Limi	t RPI) Limit
GRO		1	17.4	mg/I	Kg 1	20.0	<2.32	87	70 - 1	30 4	20
Percent recovery is based on the	e spike	e resu	lt. RPD) is base	d on the	spike and s	pike duplic	ate res	ult.		
			N	мS	MSD		$\mathbf{S}_{\mathbf{j}}$	pike	MS	MSD	Rec.
Surrogate			Re	esult 1	Result		Dil. An	ount	_Rec.	Rec.	Limit
Triffuorotoluene (TFT)				.80		mg/Kg	1	2	90	92	70 - 130
4-Bromofluorobenzene (4-BFB)			1	.92	1.95	mg/Kg		2	96	98	70 - 130
Param		F	CI	MS Result	Units	Dil.	Spike Amount		trix sult	Rec.	Rec. Limit
Chloride		<u> </u>		2620	mg/Kg		2500	20			78.9 - 121
Percent recovery is based on the	spike	resu									10.0 121
	1					Transfer of the second	france of the second				
			MSD			Spiko	Motrix				RPD
Param	न	С	MSD Result	Units	s Dil.	Spike Amount	Matrix Result	Rec.	Rec.		RPD D Limit
	F	С	Result	Units mg/K		Amount	Result	Rec. 98	Rec. Limit	t RPI	D Limit
Param Chloride Percent recovery is based on the			Result 2720	mg/K	g 5	Amount 2500	Result 261	98	Rec. Limit 78.9 - 1	t RPI	
Chloride Percent recovery is based on the Matrix Spike (MS-1) Spik	e spike	e resu	Result 2720 lt. RPD : 331257	mg/K) is base	$\frac{5}{2}$ g $\frac{5}{2}$ d on the s	Amount 2500 spike and s	Result 261	98	Rec. Limit 78.9 - 1 ult.	t <u>RPI</u> 21 4	D Limit 20
Chloride Percent recovery is based on the	e spike	e resu	Result 2720 lt. RPD : 331257 Dat	mg/K) is base , e Analy Prepara	g 5 d on the s zed: 20	Amount 2500	Result 261 pike duplic	98 ate res	Rec. Limit 78.9 - 1 ult. A P	t RPI	D Limit 20 By: AR By: AR
Chloride Percent recovery is based on the Matrix Spike (MS-1) Spik QC Batch: 102135 Prep Batch: 86493	e spike æd Sa	e resu mple:	Result 2720 lt. RPD : 331257 Dat QC	mg/K) is base : e Analy Preparz MS	g 5 d on the s zed: 20 ation: 20	Amount 2500 spike and s 013-06-10 013-06-07	Result 261 pike duplic Spike	98 ate res	Rec. Limit 78.9 - 1 ult. A P	t RPI 21 4 analyzed I repared I	D Limit 20 By: AR By: AR Rec.
Chloride Percent recovery is based on the Matrix Spike (MS-1) Spik QC Batch: 102135	e spike æd Sa	e resu	Result 2720 lt. RPD : 331257 Dat QC	mg/K) is base , e Analy Prepara	g 5 d on the s zed: 20	Amount 2500 spike and s 013-06-10 013-06-07 Dil.	Result 261 pike duplic	98 cate res Ma Res	Rec. Limit 78.9 - 1 ult. A P	t RPI 21 4 analyzed I repared I Rec.	D Limit 20 By: AR By: AR

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

Report Date: June 11, 2013 112C04983		Work Order: 13060337 COG/SRO State Unit Com. 102 SWD								Page Number: 17 of 22 Eddy Co., NM			
Param	F	С	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit		
Chloride			4470	mg/Kg	10	2500	1780	108	78.9 - 121	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: 330883

QC Batch:	102164	Date Analyzed:	2013-06-11	Analyzed By:	\mathbf{KC}
Prep Batch:	86555	QC Preparation:	2013-06-09	Prepared By:	\mathbf{KC}

			MS			Spike	Matrix		Rec.
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
Benzene		1	1.85	mg/Kg	1	2.00	< 0.00810	92	70 - 130
Toluene		i	1.97	mg/Kg	1	2.00	< 0.00750	98	70 - 130
Ethylbenzene		ł	2.00	mg/Kg	1	2.00	< 0.00730	100	70 - 130
Xylene		1	5.84	mg/Kg	1	6.00	< 0.00700	97	70 - 130

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

			MSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	С	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzenc		1	1.70	mg/Kg	1	2.00	< 0.00810	85	70 - 130	8	20
Toluene		3	1.80	mg/Kg	1	2.00	< 0.00750	90	70 - 130	9	20
Ethylbenzene		ı	1.84	mg/Kg	1	2.00	< 0.00730	92	70 - 130	8	20
Xylene		1	5.37	mg/Kg	1	6.00	< 0.00700	90	70 - 130	8	20

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

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	1.65	1.75	mg/Kg	1	2	82	88	70 - 130
4-Bromofluorobenzene (4-BFB)	1.91	1.80	mg/Kg	1	2	96	90	70 - 130

Report Date: June 11, 2013 112C04983

Calibration Standards

Standard (CCV-1)

QC Batch:	102081	81 Date Analyzed:					Analy	Analyzed By: CW		
				CCVs	CCVs	CCVs	Percent			
				True	Found	Percent	Recovery	Date		
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed		
DRO		1	mg/Kg	250	256	102	80 - 120	2013-06-07		

Standard (CCV-2)

QC Batch:	QC Batch: 102081			Analyzed:	2013-06-07		Analyz	Analyzed By: CW		
				CCVs	CCVs	CCVs	Percent			
				True	Found	Percent	Recovery	Date		
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed		
DRO		1	mg/Kg	250	229	92	80 - 120	2013-06-07		

Standard (CCV-3)

QC Batch:	102081	Date Analyzed:			2013-06-07		Analyz	Analyzed By: CW		
				CCVs	CCVs	CCVs	Percent			
				True	Found	Percent	Recovery	Date		
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed		
DRO		1	mg/Kg	250	284	114	80 - 120	2013-06-07		

Standard (CCV-1)

QC Batch:	102101	2101 Date Analy					Analyzed By: KC		
				CCVs	CCVs From 1	CCVs	Percent	Data	
		- .		True	Found	Percent	Recovery	Date	
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed	
GRO		1	mg/Kg	1.00	1.15	115	80 - 120	2013-06-07	

112C04983	lune 11, 2013		COG/SI	Page Number: 19 of 22 Eddy Co., NM				
Standard (CC	CV-2)							
QC Batch: 10	2101		Date	Analyzed:	2013-06-07		Analy	zed By: KC
D		(1)	TT. 11	CCVs True	CCVs Found	CCVs Percent	Percent Recovery Limits	Date
Param GRO	Flag	Lert 1	Units mg/Kg	Conc. 1.00	<u>Conc.</u> 1.04	Recovery 104	80 - 120	Analyzed 2013-06-07
Standard (CC	CV-3)							
QC Batch: 10	2101		Date	Analyzed:	2013-06-07		Analy	zed By: KC
D		() at	TT 14.	CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param GRO	Flag	Cert	Units mg/Kg	<u>Conc.</u> 1.00	<u>Conc.</u> 1.11	Recovery 111	Limits 80 - 120	Analyzed 2013-06-07
Standard (CC	-		Date	Analyzed:	2013-06-10		Analy	vzed By: AR
QC Batch: 10	2130							
QC Batch: 10	2130			CCVs	CCVs	CCVs	Percent	
		~		True	Found	Percent	Recovery	Date
Param	2130 Flag	Cert	Units mg/Kg	True Conc.	Found Conc.	Percent Recovery	Recovery Limits	Analyzed
Param Chloride	Flag	Cert	Units mg/Kg	True	Found	Percent	Recovery	Analyzed
Param Chloride Standard (CC	Flag CV-2)	Cert	mg/Kg	True Conc.	Found Conc.	Percent Recovery	Recovery Limits 85 - 115	Analyzed 2013-06-10
QC Batch: 10 Param Chloride Standard (CC QC Batch: 10 Param	Flag CV-2)	Cert	mg/Kg	True Conc. 100	Found Conc. 101	Percent Recovery	Recovery Limits 85 - 115	

Standard (CCV-1)

QC Batch: 102135

Date Analyzed: 2013-06-10

Analyzed By: AR

Report Date: 112C04983	June 11, 2013			Work Order: RO State Un	Page Number: 20 of 22 Eddy Co., NM			
Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2013-06-10
Standard (C	CV-2)							

QC Batch:	Batch: 102135			Date A	Analyzed:	2013-06-10		Analy	Analyzed By: AR.		
					CCVs	CCVs	CCVs	Percent			
					True	Found	Percent	Recovery	Date		
Param		Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed		
Chloride				$\mathrm{mg/Kg}$	100	99.5	100	85 - 115	2013-06-10		

Standard (CCV-1)

QC Batch: 102164			Date An	alyzed: 20	13-06-11		Analy	zed By: KC
				CCVs	CCVs	CCVs	Percent	
Param Benzene				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		1	mg/kg	0.100	0.0858	86	80 - 120	2013-06-11
Toluene		ı	mg/kg	0.100	0.0890	89	80 - 120	2013-06-11
Ethylbenzene		1	mg/kg	0.100	0.0879	88	80 - 120	2013-06-11
Xylene		1	mg/kg	0.300	0.256	85	80 - 120	2013-06-11

Standard (CCV-2)

QC Batch: 102164			Date An	alyzed: 20	13-06-11		Analy	zed By: KC
				CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		1	mg/kg	0.100	0.0930	93	80 - 120	2013-06-11
Toluene		1	mg/kg	0.100	0.0960	96	80 - 120	2013-06-11
Ethylbenzene		1	mg/kg	0.100	0.0930	93	80 - 120	2013-06-11
Xylene		1	mg/kg	0.300	0.269	90	80 - 120	2013-06-11

Report Date: June 11, 2013 112C04983

Work Order: 13060337 COG/SRO State Unit Com. 102 SWD Page Number: 21 of 22 Eddy Co., NM

Appendix

Report Definitions

NameDefinitionMDLMethod Detection LimitMQLMinimum Quantitation LimitSDLSample Detection Limit

Laboratory Certifications

	Certifying	Certification	Laboratory
С	Authority	Number	Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704392-12-4	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.
- MI1 Split peak or shoulder peak
- MI2 Instrument software did not integrate
- MI3 Instrument software misidentified the peak
- MI4 Instrument software integrated improperly
- MI5 Baseline correction
- 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

Report Date: June 11, 2013 112C04983 Work Order: 13060337 COG/SRO State Unit Com. 102 SWD Page Number: 22 of 22 Eddy Co., NM

The scanned attachments will follow this page.

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

CONTACT:	RECEIVING LABORATORY: ADDRESS:	REANGUISHED BY: (Signature)	RELINQUISHED BY: (Signaturg)	RELINQUISHED	58	488	5 83	882	188	698	H8	818	rr8	913060	LAB I.D. NUMBER	112 Coyas	CLIENT NAME:			
ANO	ORATORY:	BY: (Signatun	BY: (Signatur)	BY: (Signature)	e								+	5/29	DATE	1983	n≞ Coc		y	Analysis
STATE	TCAL		ちち	5											TIME					
19 19	1				T T									N	MATRIX COMP.	C				D
PHONE:					4								-	×	GRAB	ROJECT N				
		Date:	Date:	Date: Time:	さ	た	+	7	1-1-	<u>-</u> ,-	-	ナニ	ナー	7-1		PROJECT NAME:				D S T C
			1007		10,	مہ `	8' 1	,L	6,	کر	Ч'	ŝ	2	1,	Earchy	102 5	SITE MANAGER:	TETRA TECH 1910 N. Big Spring St. Midland, Texas 79705 (432) 682-4559 • Fax (432) 682-3946		Request of Chain
DATE:	RECEN	1 H					Sottom								SAMPLE IDENTIFICATION	Suro	GER: Ikc	A TECH Big Spring St. , Texas 79705 4559 • Fax (432) 66	S	อี
	RECEIVED BY: (Signature)	RECEIVED BY: (Signature)		RECEIVED BY: (Signature)											ENTIFIC			TECH Spring St. (as 79705) Fax (432) 682		Q
	(Signatu	Y: (Signa	f: (Signature)	Y: (Signa			Hole								CATIO		Taxaccre	08 01 :+ 5		
	-ē)	ature)	ature)	anna -											Ž			946		Ċ
				Ë																с Б
				ſ																Custody
TIME							-			-	-		~	-	NUMBER O		AINERS			Recor
		Da	2 5	걸 문											HCL		- P			(U) O
		Date:	Date: Time:	Date: Time:		-	-	c	<	<	2	6	5	-	HNO3		MET		9	Q
				J.		╞╧			\vdash					\vdash	NONE		PRESERVATIVE			Q
			E-0	0													T ≦			
			IΥ			┨	¥							<u> </u>	BTEX 8021 TPH 801	5 MOI) TX100	5 (Ext. to C35)		
	N	al:	E II Å						ļ						PAH 8270				1	
	The	TETRA TECH CONTACT PERSON:	AMPLE SHIPPEDS FEDEX HAND DEI IVERED	ARCUS KURDER DY (Print & Initia)		+												CrPbHgSe VrPdHgSe		
	51	CH CO						<u> </u>							TCLP Vola			·····		
	AVAREZ	NTAC		Signal & Initial			<u> </u>						 		TCLP Sem RCI	i Volati	es		ANALYSIS REQUEST (Circle or Specify Method No.)	
ļ	?		BUS	Initial			.	+						+	GC.MS Vo	. 8240/	8260/624		ANALYSIS REQUEST	
		ISON:	ოთე	ĥ.											GC.MS Se		8270/625	·····	Spec	
				JX X		+		<u> </u>		+			<u> </u>	_──	PCB's 808 Pest. 808/				NY A	li
		ĺ		l^	卜	卞		\mathbf{x}	大	X	$\overline{\times}$	×	X	>	Chloride					
			0 >											1	Gamma S					
┝	₽₽	2	AIRBILL #:	Time:	-			+	+	 			<u> </u>		Alpha Beta PLM (Asbe				<u></u>	
Yes	HSH C	Results by:			` 										Major Anio		tions, pH, 1	rds	1	
	RUSH Charges Authorized:	by:]	ł
	S (+					 							······································	-	
No	1	- 1																		

						\$77 TANKS - KOMMON MAN					060-				7° 4 4																	
Ar	nalys	sis F	Re	qu	iest	t of	Ch	air	n of	f Cu	sto	dy	R	le	CC	oro	d	F								GE:		2	<u> </u>	DF:	2	
			ſ																			I					QUE		o.)			
						1910 I Midlar	N. Big nd, Te	j Spri exas ∶	Fing St 79705 × (432) 6										05 (Ext. to C35)		Cd Cr Pb Hg Se Cd Vr Pd Ha Se	0								TDS		
CLIENT NA	<u> </u>	G					MANAG	ER: 1	[ke	TAVAR	٤.		VINERS			SER\ IETH	VATIN IOD	/E	TX1005		As Ba C		S	260/624	8270/625					,Hq, sno		
PROJECTN // ZC044	10.:				TNAME		6.0						NO	Ê					MOD		6 V	2	olatile	240/8	To Yo	80		. 1	i î	Cat		
LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.		<u>102</u> J	Eddy SAMP	م می PLE IDI	NA DENTIFIC	ATION			NUMBER OF CONTAINERS	FILTERED (Y/N) HCL	HNO3	ICE	NONE	RTEY 80010	TPH 8015 MOD. TX10	PAH 8270	TCLP Metals	TCLP Volatile	TCLP Semi V	GC.MS Vol. 8	GC.MS Semi	PCB's 8080/608	Chloride	Gamma Spe	PLM (Asbestos)	Major Anions/Cations, pH, TDS		
886	5/29		٦	X	T-1	<i>u'</i>			•			1				1											X					
887	5/29		5	٨	T-1	n'.							1			2											X					
						<u> e</u>																\uparrow		T								
			╞┼	╈									╉	+-				+				+		+		╈			\uparrow		+	
			╞┼╋	+					<u></u>				╈						+		+			+-		+	┼┦		+	┠╌╂	+	
<u></u>			$\uparrow \uparrow$										╉	-				+	+		-			+-	┝╌╁				╋	┝┼		
				+									╉					+					+	┼─	-+			╉	+			
			\uparrow	╉									+	+			-	╈			+	╉┤	+	+-		╀	┼╌┦				+	
<u></u>			┟╴┼										+	+							╉	╀╌┤	-			+	┼╂	╈				
			┝┼			·····			······			-+	╉	+					╁┦	╉	╉	╞┤	+			+	╁╂					+
RELINQUISHED	BY: (Signatur	e)	<u> </u>		Date: _ Time: _		•	RECI	EIVED BY:	(Signature)	1:1				Date: Time:			-13		SAM	PLED	BY: (F	rint &	Initial)					Dete: Time:]
	BY: (Signatur	e)	sch		Date:	1607	3	RECI	XUS	(Signature)	<u>e 71</u> +	<u> ~</u>		1	Date: Time:		$T \supset$	11 - 5 -	5	SAM	<u>rle</u> S Dex	HIPPE	D BY	(Circle BUS	2)	2.01	<u> </u>	AIF	BILL	#:		
ELINQUISHED				,	Date: Time:					(Signature)				(Date: Time:					HA	ND DE			UPS T PER				от	HER: Res	ults by	y:	
RECEIVING LAE	BORATORY: _	STATE:	1	C PHONE	ZII	×		RECEIV	VED BY: (Si	ignature)		1	IME							1	Ke	1,	ÂUA	RE Z	2					SH Cha horized Yes	arges d:	

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