SITE INFORMATION Report Type: Closure Report General Site Information: site: Foster Eddy #14 Well Site Company: COG Operating LLC Section, Township and Range Unit F Sec 17 T17S **R31E** Lease Number: API-30-015-37136 County: **Eddy County** GPS: 32.83719° N 103.89308° W Surface Owner: Federal Mineral Owner: From the intersection of CR 529 and Hwy 82 east of Loco Hills, travel west of Hwy 82 for 1.0 Directions: mile, turn right onto lease road and travel 1.0 mile, stay to the left and travel 0.4 miles to the site. Release Data: Date Released: 9/16/2011 Type Release: Produced Fluid Source of Contamination: Gauge on the top of the wellhead Fluid Released: 15 bbls 14 bbls Fluids Recovered: Official Communication: Name: Pat Ellis lke Tavarez Company: COG Operating, LLC Tetra Tech Address: 550 W. Texas Ave. Ste. 1300 1910 N. Big Spring P.O. Box City: Midland Texas, 79701 Midland, Texas Phone number: (432) 686-3023 (432) 682-4559 Fax: (432) 684-7137 ike.tavarez@tetratech.com Email: pellis@conchoresources.com

20	<u> </u>
20	
10	
0	0
Ranking Score	Site Data
20	
0	0
Ranking Score	Site Data
20	
10	
0	0
	Ranking Score 20 0 Ranking Score 20 10

Total BTEX

50

TPH

5,000

Benzene

10



RECEIVED
SEP 0 6 2012
NMOCD ARTESIA

August 15, 2012

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

Re: Closure Report for the COG Operating LLC., Foster Eddy #14 Well Site, Unit F, Section 17, Township 17 South, Range 31 East, Eddy County, New Mexico.

Mr. Bratcher:

Tetra Tech, Inc. (Tetra Tech) was contacted by COG Operating LLC. (COG) to assess a spill from Foster Eddy #14 located in Unit F, Section 17, Township 17 South, Range 31 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.83719 °, W 103.89308 °. The site location is shown on Figures 1 and 2.

Background

According to the State of New Mexico C-141 Initial Report, the leak was discovered on September 16, 2011 and released approximately fifteen (15) barrels of produced fluid from the top of the wellhead. To alleviate the problem, COG personnel replaced the faulty gauge on the well head. Fourteen (14) barrels of standing fluids were recovered. The spill initiated on the pad and ran into the pasture affecting an area approximately 25' X 55'. The initial C-141 form is enclosed in Appendix A.



Groundwater

No water wells were listed within Section 17. According to the NMOCD groundwater map, the average depth to groundwater in this area is approximately 325' below surface. The groundwater data is shown in Appendix B.

Regulatory

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

Soil Assessment and Analytical Results

On October 31, 2011, Tetra Tech personnel inspected and sampled the spill area. Three (3) auger holes (AH-1 and AH-3) were installed using a stainless steel hand auger to assess the impacted soils. Selected samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The sampling results are summarized in Table 1. The auger hole locations are shown on Figure 3.

Referring to Table 1, none of the samples exceeded the TPH and BTEX RRAL. Auger holes (AH-1 and AH-2) did not show a chloride impact to the soils. However, the area of AH-3 showed a shallow impact with a chloride high of 2,920 mg/kg at 0-1.0' and declined to 216 mg/kg at 1-1.5' below surface.



Closure Activities

Based on the approved work plan, Tetra Tech personnel supervised the excavation of the site. The final excavation depth of the soil remediation was met as stated in the approved work plan. The spill area (AH-3) measured approximately 5' x 15' at a depth of approximately 1.0' below surface. Once completed, confirmation samples were collected from the excavation. Based on the results, the excavation was backfilled with clean soil to grade. A total of 20 cubic yards of soil were excavated and transported to proper disposal. The confirmation samples are shown in Table 1.

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

Respectfully submitted,

TETRA/TECH

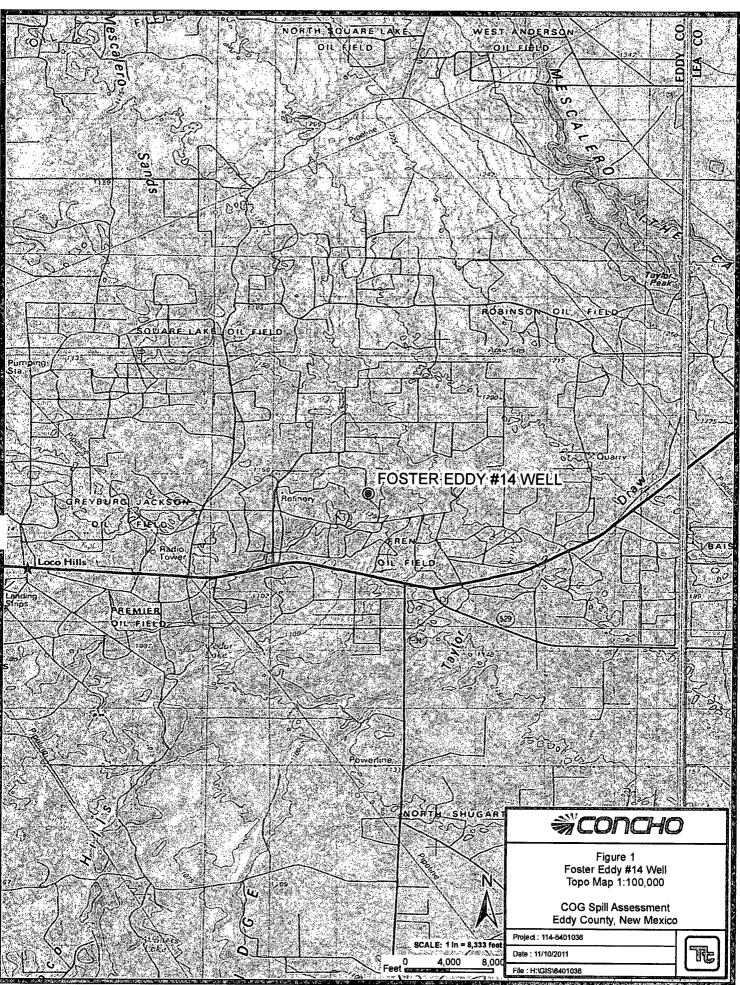
ike Távarez

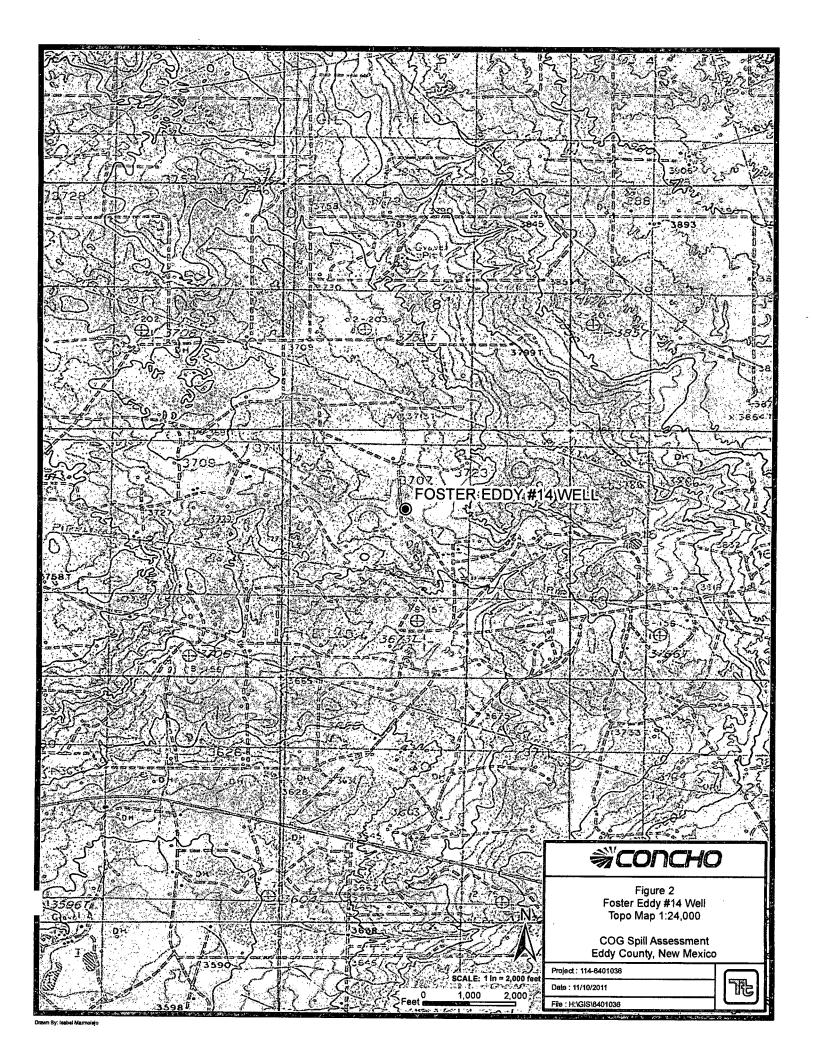
Senior Project Manager

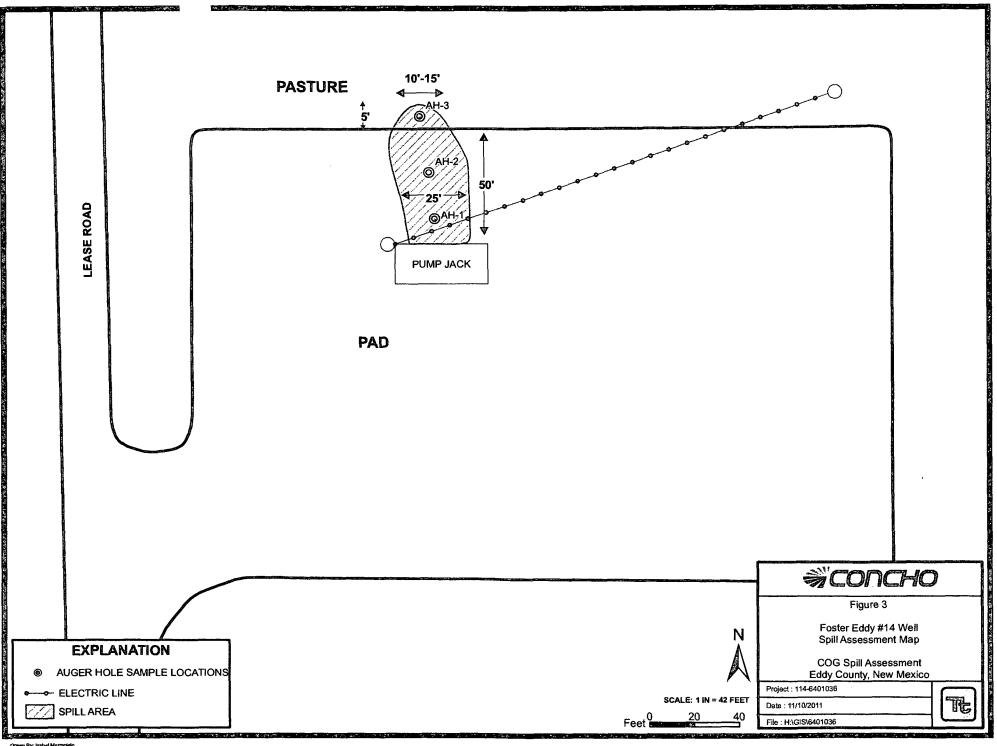
cc: Pat Ellis - COG

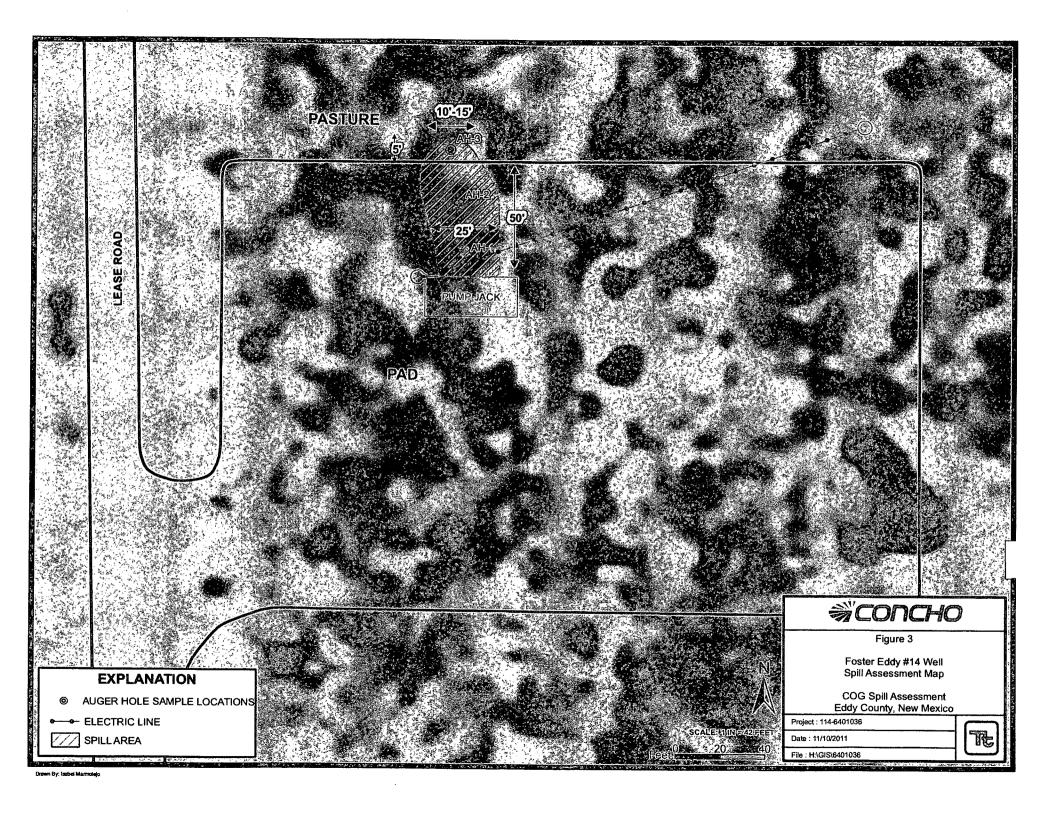
cc: Terry Gregston - BLM

Figures









Tables

Table 1 COG Operating LLC Foster Eddy #14 Well Eddy County, New Mexico

		Sample	Depth	Soil	Status	T	PH (mg/k	(g)	Benzene	Toluene	Ethlybenzene	Xylene	Total BTEX	Chloride
Sample ID	Sample Date	Depth (ft)	(BEB)	In-Situ	Removed	GRO	DRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
AH-1	10/31/2011	0-1'	-	Х		3.53	<50.0	3.53	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	280
	н	1-1.5'	-	Х		-	-	-	-	_	-	-	-	<200
	11	2-2.5'		Х		-	-	•	-	•	-	-	-	286
AH-2	10/31/2011	0-1'	-	Х		3.30	<50.0	3.30	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<200
	II	1-1.5'	-	Х		-	-	-	-	-	-	-	-	<200
	п	2-2.5'	-	Х		-	-	•	-	-	-	-	-	<200
AH-3	10/31/2011	0-1			, X	3.68	<50.0	્રે3:68	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	2,920
	II	1-1.5'	-	Х		-	-	-	-	-	-	-	-	216
	и	2-2.5'	-	Х		-	-	-	-	-	-	-	-	<200
North Sidewall	4/17/2012	_	-	Х		-	-	-	-	-	<u>-</u>	-	-	<20.0
South Sidewall	4/17/2012	-	-	Х		-	-	-	-	-	-	-	-	<20.0
East Sidewall	4/17/2012	-	_	Х		_	-	-	-	-	-	-	-	<20.0
West Sidewall	4/17/2012	-	•	Х		-		-	-	-	-	-	-	<20.0
Bottom Hole	4/17/2012	1	-	Х		-	-	-	-	-	-	-	-	<20.0
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(--) Not Analyzed

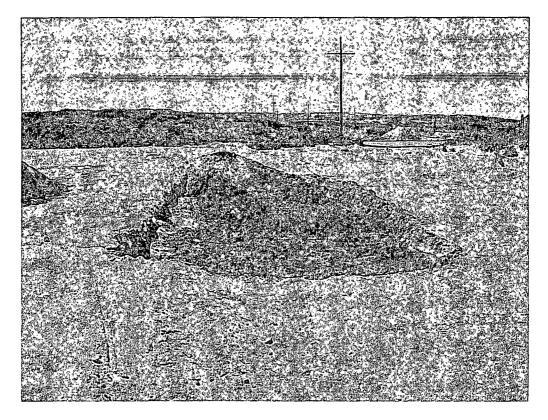


Excavation Depths

Photos

COG Operating LLC Foster Eddy #14 Eddy County, New Mexico





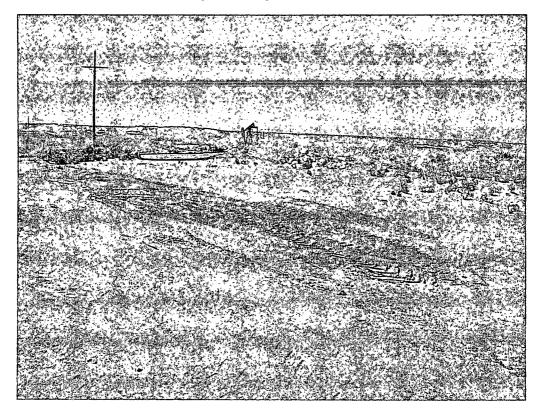
View West - Area of AH-3



View North West - Area of AH-3

COG Operating LLC Foster Eddy #14 Eddy County, New Mexico





View West - Backfill

Appendix A

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

State of New Mexico **Energy Minerals and Natural Resources**

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

Form C-141 Revised October 10, 2003

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

Release Notification and Corrective Action

						OPERA'	TOR		⊠ Initia	al Report		Final Report
Name of Co		COG OP				Contact	Pa	at Ellis				
Address				dland, TX 79701		Telephone l		230-00	77			
Facility Nar	ne	Foster	Eddy #1	4		Facility Typ	e 1	Well				
Surface Ow	ner Fede	ral		Mineral O	wner			~~~	Lease N	lo. (API#)	30-0	15-37136
				LOCA	TION	OF RE	LEASE					
Unit Letter F	Section 17	Township 17S					th South Line Feet from the East			County	Eddy	
<u> </u>				Latitude 32 5		_	ide 103 53.583	I		<u> </u>		
Toma of Balan	Dradu			NAI	UKL	OF REL	Release 15bbls		Maluma I		46610	- ' '
Type of Relea			llboad				lour of Occurrence	<u> </u>		Recovered 1 Hour of Disc		,
Source of Release Gauge on top of wellhead						09:16:2011		~		1 9:15 a.m		
Was Immedia	ite Notice C		Yes 🛭	No ⊠ Not Re	quired	If YES, To	Whom?					
By Whom?			·			Date and I-	lour					
Was a Water	Was a Watercourse Reached? ☐ Yes ☒ No						olume Impacting t	he Wat	ercourse.			
If a Watercou	rse was Imp	pacted, Descri	be Fully.*			l						
Describe Cau	se of Proble	m and Remod	lial Action	Taken.*								
Fluid was rek	eased from	the faulty gau	ge on top	of the wellhead. T	he gaug	ge has been n	eplaced.					:
Describe Area	Affected a	nd Cleanup A	ction Tak	en.*								
area around the location. Ten	ie wellhead ra Tech will	. All free flui sample the sp	d has beer oill site an	from the faulty gau a picked up and the a to delineate any afficant remediation	e locatio possibl	on has been s e contaminat	craped; contamina	ated soil	l has been r	emoved and	haule	d off the
regulations all public health should their or or the environ	I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.											
Signature:		2	1	2			OIL CONS	SERV	ATION	DIVISIO	<u>N</u>	
Printed Name: Josh Russo						Approved by District Supervisor:						
Title:	· · · · · · · · · · · · · · · · · · ·	HSE Co	ordinator		A	pproval Date	e:		Expiration I	Date:		
E-mail Addres		irusso@conct			c	Conditions of	Approval:			Attached		
Date: 00/7	6/201 I	Phone:	432-2	12-2300	- 1					1		(

^{*} Attach Additional Sheets If Necessary

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

Attach Additional Sheets If Necessary

State of New Mexico Energy Minerals and Natural Resources

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

Submit 2 Copies to appropriate
District Office in accordance

Form C-141

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

Release Notification and Corrective Action

						OPERA	FOR	i	🔲 Initia	al Report	⊠ Fina	al Report
Name of Co	mpany C	OG Operat	ing LLC		(Contact Pat	t Ellis					
Address 55	0 W. Texa	s, Suite 130	0 Midlaı	id, Texas 79701	г	Telephone N	No. (432) 230-0	077				
Facility Nan	ne Foster	Eddy #14				Facility Typ	e Well					
Surface Ow	ner: Federa	al		Mineral O	wner				Lease N	lo. (API)30	-015-3713	6
						I OE DEI	PACE		<u> </u>		•	
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Unit Letter F	Section 17	Township 17S	Range 31E	Feet from the	North/	South Line	Feet from the	East/W	est Line	County	Eddy	
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				NAT	URE	OF RELI						
Type of Relea							Release 15 bbls			ecovered 1		
Source of Rel	lease: Gaug	e on top of we	llhead			Date and H 09/16/2011	our of Occurrence	1	Date and 1 09/16/201	Hour of Disc 1 9:15 a.	-	
Was Immedia	nte Notice C		Yes 🛚	No 🛛 Not Re	quired	If YES, To	Whom?					
By Whom?						Date and H	our				****	
Was a Watero	course Reac		Yes 🛚	No		If YES, Vo N/A	lume Impacting the	he Water	course.			
If a Watercou	irse was Imj	pacted, Descri	be Fully.*	:		l						
N/A												
Describe Cau								<u></u>	,			
Fluid was rele	eased from t	the faulty gaug	ge on top o	of the wellhead. T	he gaug	ge has been re	eplaced.					
Describe Area	a Affected a	and Cleanup A	ction Tak	en.*								
Tetra Tech in disposal. The	spected the ne site was t	site and collect hen brought u	cted sample p to surface	es to define the sp ce grade with clear	ills exte ı backfi	ent. The elev Il material. T	ated chloride imp Tetra Tech prepare	act was i ed a clos	removed a ure report	nd transporte for NMOCE	ed to proper).	
regulations al public health should their o	I operators a or the envir perations ha ament. In ac	are required to onment. The ave failed to a ddition, NMO	report an acceptanc dequately CD accept	is true and comple d/or file certain re e of a C-141 repor investigate and re ance of a C-141 re	lease no t by the mediate	tifications an NMOCD maccontamination	d perform correct arked as "Final Re on that pose a thre	tive action eport" do eat to gro	ons for rele es not reli- ound water	eases which a eve the oper , surface was	may endang ator of liabi er, human l	er lity nealth
Signature:		9	7				OIL CONS	SERVA	ATION	<u>DIVISIO</u>	<u>N</u>	
Printed Name	: Ike Tavare	ez (agent for	COG)		A	Approved by	District Superviso	or:				
Title: Project	Manager				A	Approval Date	e:	Е	xpiration I	Date:		
E-mail Addre	ss: Ike.Tava	arez@TetraTe	ch.com		c	Conditions of	Approval:			Attached		
Date: \$	1151	12	Phone:	(432) 682-4559								

Appendix B

Water Well Data Average Depth to Groundwater (ft) COG - Foster Eddy #14 Eddy County, New Mexico

a	16 9	South	-	30 East			16 5	outh		1 Eas	 		16	South		2 East	
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1	New Mexico State Engineers Well Reports
	USGS Well Reports
	Geology and Groundwater Conditions in Southern Eddy, County, NM
18.5	NMOCD - Groundwater Data
in wi	Field water level
10 10 10 10 10 10 10 10 10 10 10 10 10 1	New Mexico Water and Infrastructure Data System
	SITE - Foster Eddy #14

Appendix C

Report Date: November 10, 2011 Work Order: 11110410

Summary Report

Ike Tavarez Tetra Tech 1910 N. Big Spring Stree

1910 N. Big Spring Street Midland, TX 79705 Report Date: November 10, 2011

Page Number: 1 of 2

Work Order: 11110410

Project Location: Eddy Co., NM

Project Name: Foster Eddy #14 Well

Project Number: 114-6401036

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
281549	AH-1 0-1'	soil	2011-10-31	00:00	2011-11-03
281550	AH-1 1-1.5'	soil	2011-10-31	00:00	2011-11-03
281551	AH-1 2-2.5'	soil	2011-10-31	00:00	2011-11-03
281552	AH-2 0-1'	soil	2011-10-31	00:00	2011-11-03
281553	AH-2 1-1.5'	soil	2011-10-31	00:00	2011-11-03
281554	AH-2 2-2.5'	soil	2011-10-31	00:00	2011-11-03
281555	AH-3 0-1'	soil	2011-10-31	00:00	2011-11-03
281556	AH-3 1-1.5'	soil	2011-10-31	00:00	2011-11-03
281557	AH-3 2-2.5'	soil	2011-10-31	00:00	2011-11-03

		В	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)
281549 - AH-1 0-1'	<0.0200 Qr	<0.0200 Qr	<0.0200 Qr	<0.0200 Qr	<50.0	3.53
281552 - AH-2 0-1'	$< 0.0200 \; Qr$	$< 0.0200 \; Q_{\rm r}$	$< 0.0200 \; Qr$	<0.0200 Qr	< 50.0	3.30
281555 - AH-3 0-1'	$< 0.0200 \; Q_r$	$< 0.0200 \; _{Qr}$	$< 0.0200 \; Qr$	<0.0200 Qr	< 50.0	3.68

Sample: 281549 - AH-1 0-1'

Param	Flag	Result	Units	RL_
Chloride		280	mg/Kg	4

Sample: 281550 - AH-1 1-1.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Report Date: Nove	mber 10, 2011	Work Order: 11110410	Page	Number: 2 of 2
Sample: 281551	- AH-1 2-2.5'			
Param	Flag	Result	Units	RL
Chloride		286	mg/Kg	4
Sample: 281552	- AH-2 0-1'			
Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4
Sample: 281553	- AH-2 1-1.5'			
Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4
Sample: 281554	- AH-2 2-2.5'			
Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4
Sample: 281555	- AH-3 0-1'			
Param	Flag	Result	Units	RL
Chloride		2920	mg/Kg	4
Sample: 281556	- AH-3 1-1.5'			
Param	Flag	Result	Units	RL
Chloride		216	mg/Kg	4
Sample: 281557	- AH-3 2-2.5'			
Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4



6701 Aberdeen Avenue, Suite 9 200 East Sunset Road, Suite E

5002 Basin Street, Suite A1 6015 Harris Parkway, Suite 110 - Ft Worth, Texas 76132

El Paso, Texas 79922 Midland, lexas 79703

888 • 588 • 3443

915 • 585 • 3443 432 • 689 • 6301

FAX 806 • 794 • 1298 FAX 915 • 585 • 4944 FAX 432 • 689 • 6313

817 • 201 • 5260

E-Mail: lab@traceanalysis.com

Certifications

NELAP DoD LELAP WBE HUB \mathbf{DBE} Oklahoma ISO 17025 NCTRCA Kansas

Analytical and Quality Control Report

Ike Tavarez Tetra Tech

1910 N. Big Spring Street Midland, TX, 79705

Report Date: November 10, 2011

Work Order: 11110410

Project Location: Eddy Co., NM

Project Name:

Foster Eddy #14 Well

Project Number:

114-6401036

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
281549	AH-1 0-1'	soil	2011-10-31	00:00	2011-11-03
281550	AH-1 1-1.5'	soil	2011-10-31	00:00	2011-11-03
281551	AH-1 2-2.5'	soil	2011-10-31	00:00	2011-11-03
281552	AH-2 0-1'	soil	2011-10-31	00:00	2011-11-03
281553	AH-2 1-1.5'	soil	2011-10-31	00:00	2011-11-03
281554	AH-2 2-2.5'	soil	2011-10-31	00:00	2011-11-03
281555	AH-3 0-1'	soil	2011-10-31	00:00	2011-11-03
281556	AH-3 1-1.5'	soil	2011-10-31	00:00	2011-11-03
281557	AH-3 2-2.5'	soil	2011-10-31	00:00	2011-11-03

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 23 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

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Case Narrative

Samples for project Foster Eddy #14 Well were received by TraceAnalysis, Inc. on 2011-11-03 and assigned to work order 11110410. Samples for work order 11110410 were received intact at a temperature of 4.3 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	73143	2011-11-04 at 12:45	86134	2011-11-05 at 02:47
Chloride (Titration)	SM 4500-Cl B	73222	2011-11-07 at 09:37	86236	2011-11-09 at 10:59
Chloride (Titration)	SM 4500-Cl B	73222	2011-11-07 at 09:37	86237	2011-11-09 at 11:01
TPH DRO - NEW	S 8015 D	73148	2011-11-04 at 13:42	86138	2011-11-04 at 13:42
TPH GRO	S 8015 D	73143	2011-11-04 at 12:45	86135	2011-11-05 at 03:14

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 11110410 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

 Report Date: November 10, 2011
 Work Order: 11110410
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 114-6401036
 Foster Eddy #14 Well
 Eddy Co., NM

Analytical Report

Sample: 281549 - AH-1 0-1'

Laboratory: Midland

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035 QC Batch: 86134 Date Analyzed: 2011-11-05 Analyzed By: AG Prep Batch: 73143 Sample Preparation: Prepared By: 2011-11-04 AG

RLParameter Flag Cert Units Dilution RLResult Benzene Qr,U< 0.0200 mg/Kg 1 0.0200 Qr,U Toluene Qr,U mg/Kg 0.0200 < 0.0200 1 Qr,U Ethylbenzene Qr,U < 0.0200 mg/Kg 1 0.0200 $Q_{\mathbf{r}}, U$ mg/Kg Xylene Qr,U < 0.0200 1 0.0200Qr,U

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			1.96	mg/Kg	1	2.00	98	82.8 - 143.1
4-Bromofluorobenzene (4-BFB)			1.98	mg/Kg	1	2.00	99	70.6 - 179

Sample: 281549 - AH-1 0-1'

Laboratory: Midland

Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A QC Batch: 86236 Date Analyzed: 2011-11-09 Analyzed By: ARPrep Batch: 73222 Sample Preparation: 2011-11-07 Prepared By: AR

Sample: 281549 - AH-1 0-1'

Laboratory: Midland

TPH DRO - NEW Analysis: Analytical Method: Prep Method: S 8015 D N/A QC Batch: 86138 Date Analyzed: 2011-11-04 Analyzed By: kg Prep Batch: 73148 Sample Preparation: Prepared By: 2011-11-04 kg

RLFlag Parameter Cert Result Dilution RLUnits DRO U < 50.0 50.0 υ 1 mg/Kg 1

114-6401036

Work Order: 11110410

Foster Eddy #14 Well

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
n-Tricosane			123	mg/Kg	1	100	123	67.5 - 147.1

Sample: 281549 - AH-1 0-1'

Laboratory:

Prep Batch:

Midland

73143

Analysis: QC Batch:

TPH GRO 86135

Analytical Method: Date Analyzed:

S 8015 D

2011-11-05 Sample Preparation: 2011-11-04 Prep Method: S 5035

Analyzed By: AG Prepared By: AG

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Eddy Co., NM

RL

Parameter	Flag	Cert	Result	Units	Dilution	RL
GRO		1	3.53	mg/Kg	1	2.00

						$\mathbf{S}_{\mathbf{pike}}$	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			1.96	mg/Kg	1	2.00	98	30 - 134.6
4-Bromofluorobenzene (4-BFB)	_		1.87	mg/Kg	1	2.00	94	22.4 - 149

Sample: 281550 - AH-1 1-1.5'

73222

Laboratory:

Prep Batch:

Midland

Analysis: Chloride (Titration) QC Batch: 86237

Analytical Method: Date Analyzed:

SM 4500-Cl B 2011-11-09

Prep Method: N/A Analyzed By: AR

Sample Preparation: 2011-11-07 Prepared By: AR

RLParameter Flag Cert Result Units Dilution RLChloride U <200 4.00 mg/Kg 50 U

Sample: 281551 - AH-1 2-2.5'

Laboratory:

Prep Batch:

Midland

73222

Analysis: QC Batch: 86237

Chloride (Titration)

Analytical Method: Date Analyzed:

SM 4500-Cl B 2011-11-09

Prep Method: N/A Analyzed By: AR Prepared By: AR

Sample Preparation: 2011-11-07 continued ...

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Work Order: 11110410 Foster Eddy #14 Well

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sample 281551 continued ...

			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			286	mg/Kg	50	4.00

Sample: 281552 - AH-2 0-1'

Laboratory:

Midland

Analysis: BTEX QC Batch: 86134 Prep Batch: 73143

Analytical Method: Date Analyzed:

S 8021B 2011-11-05 Sample Preparation: 2011-11-04

Prep Method: S 5035

Analyzed By: AGPrepared By: AG

				RL			
Parameter		Flag	Cert	Result	Units	Dilution	RL
Benzene	Qr,U	Qr,U	1	< 0.0200	mg/Kg	1	0.0200
Toluene	$Q_{r_i}U$	Qr,U	1	< 0.0200	mg/Kg	1	0.0200
Ethylbenzene	Qr,U	$_{ m Qr,U}$	1	< 0.0200	mg/Kg	1	0.0200
Xylene	Qr,U	Qr,U	1	< 0.0200	mg/Kg	1	0.0200

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			1.95	mg/Kg	1	2.00	98	82.8 - 143.1
4-Bromofluorobenzene (4-BFB)			2.00	mg/Kg	1	2.00	100	70.6 - 179

Sample: 281552 - AH-2 0-1'

Laboratory:

Midland

Analysis: Chloride (Titration) QC Batch: 86237 Prep Batch: 73222

Analytical Method: Date Analyzed:

SM 4500-Cl B 2011-11-09 Sample Preparation: 2011-11-07

Prep Method: N/A Analyzed By: AR Prepared By: AR

RLParameter Flag Cert Dilution Result Units RLChloride < 200 mg/Kg 50 4.00 Report Date: November 10, 2011 Work Order: 11110410 Page Number: 9 of 23 114-6401036 Foster Eddy #14 Well Eddy Co., NM

Sample: 281552 - AH-2 0-1' Laboratory: Midland TPH DRO - NEW Analytical Method: Prep Method: Analysis: S 8015 D N/A Date Analyzed: Analyzed By: QC Batch: 86138 2011-11-04 kg · Prep Batch: 73148 Sample Preparation: 2011-11-04 Prepared By: kg RLCert Result Units Dilution RLParameter Flag

DRO <50.0 mg/Kg 50.0 1 Spike Percent Recovery Surrogate Flag Cert Result Units Dilution Amount Recovery Limits n-Tricosane 132 mg/Kg 100 132 67.5 - 147.1 1

Sample: 281552 - AH-2 0-1'

Midland Laboratory:

Analysis: TPH GRO Analytical Method: S 8015 D Date Analyzed: QC Batch: 86135 2011-11-05 Prep Batch: 73143 Sample Preparation: 2011-11-04

RLFlag Cert Result Dilution Parameter Units RLGRO 3.30 mg/Kg 2.00

Prep Method: S 5035

AG

AG

Analyzed By:

Prepared By:

Prep Method:

Analyzed By:

Prepared By:

N/A

AR

AR

Spike Percent Recovery Surrogate Flag Cert Result Units Dilution Amount Limits Recovery Trifluorotoluene (TFT) 1.96 mg/Kg 2.00 98 30 - 134.6 1 4-Bromofluorobenzene (4-BFB) 1.87 mg/Kg 1 2.00 94 22.4 - 149

Sample: 281553 - AH-2 1-1.5'

Laboratory: Midland

Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B QC Batch: 86237 Date Analyzed: 2011-11-09 Prep Batch: 73222 Sample Preparation: 2011-11-07

RLCert Flag Result Units Dilution RL

Parameter Chloride Ū <200 mg/Kg 4.00 50 U

 Report Date: November 10, 2011
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 Foster Eddy #14 Well
 Eddy Co., NM

Sample: 281554 - AH-2 2-2.5'

Laboratory: Midland

Analysis: Chloride (Titration)

Analytical Method: SM 4500-Cl B

Prep Method: N/A

OC Batch: 86237

Date Analyzed: 2011-11-09

Analyzed By: AR

QC Batch: 86237 Date Analyzed: 2011-11-09 Analyzed By: AR
Prep Batch: 73222 Sample Preparation: 2011-11-07 Prepared By: AR

Sample: 281555 - AH-3 0-1'

Laboratory: Midland

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035 QC Batch: 86134 Date Analyzed: 2011-11-05 Analyzed By: AGPrep Batch: 73143 Sample Preparation: 2011-11-04 Prepared By: AG

RLFlag Parameter Cert Result Units Dilution RLBenzene Qr,U < 0.0200 mg/Kg 0.0200 1 Qr,U Toluene Qr,U < 0.0200 mg/Kg 1 0.0200 Qr,UEthylbenzene 0.0200 Qr,U< 0.0200 mg/Kg 1 Qr,UXylene 0.0200 < 0.0200 mg/Kg $\mathbf{Qr}_{\mathbf{I}}\mathbf{U}$ Qr,U 1

Spike Percent Recovery Surrogate Flag CertResult Units Dilution Amount Recovery Limits Trifluorotoluene (TFT) 1.96 mg/Kg 2.00 98 82.8 - 143.1 1 4-Bromofluorobenzene (4-BFB) 2.00 mg/Kg 1 2.00 100 70.6 - 179

Sample: 281555 - AH-3 0-1'

Laboratory: Midland

Chloride (Titration) Analysis: Analytical Method: SM 4500-Cl B Prep Method: N/A QC Batch: 86237 Date Analyzed: 2011-11-09 Analyzed By: AR Prep Batch: 73222 Sample Preparation: 2011-11-07 Prepared By: AR

Sample: 281555 - AH-3 0-1'

Laboratory: Midland

TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A Analysis: QC Batch: 86138 Date Analyzed: 2011-11-04 Analyzed By: kg Prep Batch: 73148 Sample Preparation: 2011-11-04 Prepared By: kg

RLDilution RLCert Result Units Parameter Flag < 50.0 50.0 \overline{DRO} U Ū mg/Kg Spike Percent Recovery Units Dilution Amount Recovery Limits Surrogate Flag Cert Result

 $\overline{1}$

100

93

mg/Kg

93.0

67.5 - 147.1

Sample: 281555 - AH-3 0-1'

Laboratory: Midland

n-Tricosane

TPH GRO Analytical Method: S 8015 D Prep Method: S 5035 Analysis: Date Analyzed: Analyzed By: AG QC Batch: 86135 2011-11-05 Prep Batch: 73143 Sample Preparation: 2011-11-04 Prepared By: AG

 Parameter
 Flag
 Cert
 Result
 Units
 Dilution
 RL

 GRO
 1
 3.68
 mg/Kg
 1
 2.00

Percent Recovery Spike Flag Units Dilution Cert Result Amount Recovery Limits Surrogate mg/Kg 2.00 98 30 - 134.6 Trifluorotoluene (TFT) 1.96 1 22.4 - 149 1.88 mg/Kg 1 2.00 94 4-Bromofluorobenzene (4-BFB)

Sample: 281556 - AH-3 1-1.5'

Laboratory: Midland

Analytical Method: Analysis: Chloride (Titration) SM 4500-Cl B Prep Method: N/A QC Batch: 86237 Date Analyzed: 2011-11-09 Analyzed By: AR Prep Batch: 73222 Sample Preparation: 2011-11-07 Prepared By: AR

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Foster Eddy #14 Well

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Eddy Co., NM

Sample: 281557 - AH-3 2-2.5'

Laboratory: Midland

Analysis:

Chloride (Titration)

86237

Analytical Method:

SM 4500-Cl B

Prep Method: N/A Analyzed By: AR

QC Batch: Prep Batch: 73222 Date Analyzed: Sample Preparation: 2011-11-07

2011-11-09

Prepared By: AR

RL

Parameter		Flag	Cert	Result	Units	Dilution	RL
Chloride	U	U		<200	mg/Kg	50	4.00

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Method Blanks

Method Blank (1)

QC Batch: 86134

QC Batch:

86134

Date Analyzed:

2011-11-05

Analyzed By: AG

Prep Batch: 73143

QC Preparation: 2011-11-04 Prepared By: AG

			MDL		
Parameter	\mathbf{Flag}	Cert	Result	Units	RL
Benzene		1	< 0.0118	mg/Kg	0.02
Toluene		1	< 0.00600	${ m mg/Kg}$	0.02
Ethylbenzene		1	< 0.00850	mg/Kg	0.02
Xylene		1	< 0.00613	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.88	mg/Kg	1	2.00	94	65.9 - 111.8
4-Bromofluorobenzene (4-BFB)			1.67	mg/Kg	1	2.00	84	48.4 - 123.1

Method Blank (1)

QC Batch: 86135

QC Batch:

86135

Date Analyzed:

2011-11-05

Analyzed By: AG

Prep Batch: 73143

QC Preparation:

2011-11-04

Prepared By: AG

		MDL						
Parameter	Flag	Cert	Result	Units	RL			
GRO		1	0.915	mg/Kg	2			

Sumo mata	Flag	Cont	Result	Units	Dilution	Spike	Percent	Recovery Limits
Surrogate	riag	Cert	nesuit	Omis	Diluion	Amount	Recovery	Limits
Trifluorotoluene (TFT)			1.90	mg/Kg	1	2.00	95	67.6 - 150
4-Bromofluorobenzene (4-BFB)			1.60	mg/Kg	1	2.00	80	52.4 - 130

Method Blank (1)

QC Batch: 86138

QC Batch:

86138

Date Analyzed:

2011-11-04

Analyzed By: kg

Prep Batch:

73148

QC Preparation:

2011-11-04

Prepared By: kg

114-6401036

Work Order: 11110410

Foster Eddy #14 Well

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Eddy Co., NM

Parameter		\mathbf{F}	lag	Cert		MDL tesult	Units	m RL
DRO				1		<14.5	mg/Kg	50
Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			114	mg/Kg	1	100	114	52.7 - 133.8

Method Blank (1)

QC Batch: 86236

QC Batch: 86236 Prep Batch: 73222 Date Analyzed: QC Preparation:

2011-11-09 2011-11-07

Analyzed By: AR

Prepared By: AR

MDL Parameter CertUnits RLFlag Result Chloride <3.85 mg/Kg

Method Blank (1)

QC Batch: 86237

QC Batch: Prep Batch: 73222

86237

Date Analyzed: QC Preparation:

2011-11-09 2011-11-07

Analyzed By: AR Prepared By: AR

MDL

Parameter Flag Cert RLResult Units Chloride < 3.85 mg/Kg

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Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch:

86134

Date Analyzed:

2011-11-05

Analyzed By: AG

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Eddy Co., NM

Prep Batch: 73143

QC Preparation: 2011-11-04

Prepared By: AG

			LCS			Spike	Matrix		Rec.
Param	F	C	Result	Units	Dil.	Amount	Result	Rec.	Limit
Benzene		1	2.03	mg/Kg	1	2.00	< 0.0118	102	77.4 - 121.7
Toluene		1	1.98	mg/Kg	1	2.00	< 0.00600	99	88.6 - 121.6
Ethylbenzene		1	1.93	mg/Kg	1	2.00	< 0.00850	96	74.3 - 117.9
Xylene		1	5.83	mg/Kg	1	6.00	< 0.00613	97	73.4 - 118.8

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	2.01	mg/Kg	1	2.00	< 0.0118	100	77.4 - 121.7	1	20
Toluene		1	1.97	mg/Kg	1	2.00	< 0.00600	98	88.6 - 121.6	0	20
Ethylbenzene		1	1.89	mg/Kg	1	2.00	< 0.00850	94	74.3 - 117.9	2	20
Xylene		1	5.74	mg/Kg	1	6.00	< 0.00613	96	73.4 - 118.8	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)	1.92	1.90	mg/Kg	1	2.00	96	95	65.5 - 116.7
4-Bromofluorobenzene (4-BFB)	1.93	1.94	mg/Kg	1	2.00	96	97	56.2 - 132.1

Laboratory Control Spike (LCS-1)

QC Batch: Prep Batch: 73143

86135

Date Analyzed: QC Preparation: 2011-11-04

2011-11-05

Analyzed By: AG Prepared By: AG

			LCS			Spike	Matrix		Rec.
Param	\mathbf{F}	C	Result	Units	Dil.	Amount	Result	Rec.	Limit
GRO		1	17.8	mg/Kg	1	20.0	< 0.753	89	60.9 - 95.4

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control spikes continued											
-			LCSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	C	Result	Units	Dil.	Amount	Result	Rec.	Limit_	RPD	Limit
_								-			
			LCSD			Spike	Matrix		${ m Rec.}$		RPD
Param	\mathbf{F}	C	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
GRO		1	18.2	mg/Kg	1	20.0	< 0.753	91	60.9 - 95.4	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)	1.97	1.96	mg/Kg	1	2.00	98	98	61.9 - 142
4-Bromofluorobenzene (4-BFB)	1.78	1.79	mg/Kg	1	2.00	89	90	56.2 - 132

Laboratory Control Spike (LCS-1)

QC Batch: 86138 Prep Batch: 73148 Date Analyzed: 2011-11-04 QC Preparation: 2011-11-04 Analyzed By: kg Prepared By: kg

			LCS			Spike	Matrix		Rec.
Param	\mathbf{F}	C	Result	Units	Dil.	Amount	Result	Rec.	Limit
DRO		1	282	mg/Kg	1	250	<14.5	113	64.5 - 146.9

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	C	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
DRO		1	290	mg/Kg	1	250	<14.5	116	64.5 - 146.9	3	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
n-Tricosane	131	135	mg/Kg	1	100	131	135	65.3 - 135.8

Laboratory Control Spike (LCS-1)

QC Batch: 86236 Prep Batch: 73222

Date Analyzed: 2011-11-09 QC Preparation: 2011-11-07 Analyzed By: AR Prepared By: AR

			LCS			Spike	Matrix		Rec.
Param	F	C	Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride			97.8	mg/Kg	1	100	<3.85	98	85 - 115

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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
Chloride			106	mg/Kg	1	100	< 3.85	106	85 - 115	8	20

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

Laboratory Control Spike (LCS-1)

QC Batch:

86237

Date Analyzed:

2011-11-09

Analyzed By: AR

Prep Batch: 73222

QC Preparation: 2011-11-07 Prepared By: AR

			LCS			Spike	Matrix		Rec.
Param	\mathbf{F}	C	Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride			99.4	mg/Kg	1	100	< 3.85	99	85 - 115

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
Chloride			106	mg/Kg	1	100	< 3.85	106	85 - 115	6	20

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

Matrix Spike (MS-1) Spiked Sample: 281552

QC Batch:

86134

Date Analyzed:

2011-11-05

Prep Batch: 73143

QC Preparation: 2011-11-04

Analyzed By: AG Prepared By: AG

			MS			Spike	Matrix		Rec.
Param	F	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
Benzene		1	2.24	mg/Kg	1	2.00	< 0.0118	112	69.4 - 123.6
Toluene		1	2.23	mg/Kg	1	2.00	< 0.00600	112	75.4 - 134.3
Ethylbenzene		1	2.32	mg/Kg	1	2.00	< 0.00850	116	58.8 - 133.7
Xylene		1	6.98	mg/Kg	1	6.00	< 0.00613	116	57 - 134.2

				MSD			Spike	Matrix		Rec.		RPD
Param		\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene	Qr	Qr	1	1.72	mg/Kg	1	2.00	< 0.0118	86	69.4 - 123.6	26	20
Toluene	Qr	Qr	1	1.70	mg/Kg	1	2.00	< 0.00600	85	75.4 - 134.3	27	20
Ethylbenzene	Qr	Qr	i	1.76	mg/Kg	1	2.00	< 0.00850	88	58.8 - 133.7	27	20
Xylene	Qr	$\mathbf{Q}\mathbf{r}$	1	5.30	mg/Kg	1	6.00	< 0.00613	88	57 - 134.2	27	20

114-6401036

Work Order: 11110410

Foster Eddy #14 Well

Page Number: 18 of 23

Eddy Co., NM

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

	MS	MSD			\mathbf{Spike}	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	$_{ m Limit}$
Trifluorotoluene (TFT)	1.94	1.94	mg/Kg	1	2	97	97	79.4 - 141.1
4-Bromofluorobenzene (4-BFB)	2.07	2.04	mg/Kg	1	2	104	102	71 - 167

Matrix Spike (MS-1) Spiked Sample: 281555

QC Batch:

86135

Date Analyzed:

2011-11-05

Analyzed By: AG

Prep Batch: 73143

QC Preparation:

2011-11-04

Prepared By: AG

			MS			Spike	Matrix		Rec.	
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	
GRO		1	19.9	mg/Kg	1	20.0	3.68	81	61.8 - 114	

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
GRO		. 1	22.0	mg/Kg	1	20.0	3.68	92	61.8 - 114	10	20

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

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	1.95	1.95	mg/Kg	1	2	98	98	29.4 - 161.7
4-Bromofluorobenzene (4-BFB)	2.01	2.02	mg/Kg	1	2	100	101	37.3 - 162

Matrix Spike (MS-1) Spiked Sample: 281552

QC Batch:

86138 Prep Batch: 73148 Date Analyzed:

QC Preparation:

2011-11-04

2011-11-04

Analyzed By: kg Prepared By: kg

			MS			Spike	Matrix		Rec.
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
DRO		1	293	mg/Kg	1	250	23.1	108	38.8 - 153.3

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	302	mg/Kg	1	250	23.1	112	38.8 - 153.3	3	20

114-6401036

Work Order: 11110410 Foster Eddy #14 Well Page Number: 19 of 23 Eddy Co., NM

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
n-Tricosane	125	122	mg/Kg	1	100	125	122	54.6 - 149.8

Matrix Spike (MS-1)

Spiked Sample: 281549

QC Batch:

86236

Date Analyzed: 2011-11-09 Analyzed By: AR

Prep Batch: 73222

QC Preparation: 2011-11-07

Prepared By: AR

			MS			Spike	Matrix		Rec.
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride			9130	mg/Kg	100	10000	<385	88	79.4 - 120.6

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	C	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride			9780	mg/Kg	100	10000	<385	95	79.4 - 120.6	7	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: 281569

QC Batch: Prep Batch: 73222

86237

Date Analyzed:

2011-11-09

QC Preparation:

2011-11-07

Analyzed By: AR

Prepared By: AR

			MS			Spike	Matrix		Rec.
Param	\mathbf{F}	C	Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride			10200	mg/Kg	100	10000	<385	102	79.4 - 120.6

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	C	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride			10400	mg/Kg	100	10000	<385	104	79.4 - 120.6	2	20

114-6401036

Work Order: 11110410 Foster Eddy #14 Well Page Number: 20 of 23 Eddy Co., NM

Calibration Standards

Standard (CCV-1)

QC Batch: 86134

Date Analyzed: 2011-11-05

Analyzed By: AG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene	· · · · · · · · · · · · · · · · · · ·	· 1	mg/Kg	0.100	0.101	101	80 - 120	2011-11-05
Toluene		1	mg/Kg	0.100	0.0981	98	80 - 120	2011-11-05
Ethylbenzene		1	mg/Kg	0.100	0.0959	96	80 - 120	2011-11-05
Xylene		1	mg/Kg	0.300	0.289	96	80 - 120	2011-11-05

Standard (CCV-2)

QC Batch: 86134

Date Analyzed: 2011-11-05

Analyzed By: AG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/Kg	0.100	0.0921	92	80 - 120	2011-11-05
Toluene		1	mg/Kg	0.100	0.0888	89	80 - 120	2011-11-05
Ethylbenzene		1	mg/Kg	0.100	0.0859	86	80 - 120	2011-11-05
Xylene		1	mg/Kg	0.300	0.260	87	80 - 120	2011-11-05

Standard (CCV-1)

QC Batch: 86135

Date Analyzed: 2011-11-05

Analyzed By: AG

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	\mathbf{Flag}	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		1	mg/Kg	1.00	1.07	107	80 - 120	2011-11-05

Standard (CCV-2)

QC Batch: 86135

Date Analyzed: 2011-11-05

Analyzed By: AG

114-6401036

Work Order: 11110410

Foster Eddy #14 Well

Page Number: 21 of 23

Eddy Co., NM

D	Ela.	Clout	IInita	CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		1	mg/Kg	1.00	1.15	115	80 - 120	2011-11-05

Standard (CCV-1)

QC Batch: 86138

Date Analyzed: 2011-11-04

Analyzed By: kg

				CCVs	CCVs	CCVs	Percent	-
				True	Found	Percent	Recovery	\mathbf{Date}
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		1	mg/Kg	250	266	106	80 - 120	2011-11-04

Standard (CCV-2)

QC Batch: 86138

Date Analyzed: 2011-11-04

Analyzed By: kg

				$rac{ ext{CCVs}}{ ext{True}}$	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		1	mg/Kg	250	237	95	80 - 120	2011-11-04

Standard (ICV-1)

QC Batch: 86236

Date Analyzed: 2011-11-09

Analyzed By: AR

				ICVs	ICVs	ICVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride			mg/Kg	100	96.6	97	85 - 115	2011-11-09

Standard (CCV-1)

QC Batch: 86236

Date Analyzed: 2011-11-09

Analyzed By: AR

114-6401036

Work Order: 11110410

Foster Eddy #14 Well

Page Number: 22 of 23

Eddy Co., NM

Param	Flag	Cont	Units	CCVs True Conc.	CCVs Found	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
raram	riag	Cert	Omes	Conc.	Conc.	necovery	Limits	Anaryzed
Chloride			mg/Kg	100	103	103	85 - 115	2011-11-09

Standard (ICV-1)

QC Batch: 86237

Date Analyzed: 2011-11-09

Analyzed By: AR

				ICVs True	ICVs Found	ICVs Percent	Percent Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride		7-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	mg/Kg	100	104	104	85 - 115	2011-11-09

Standard (CCV-1)

QC Batch: 86237

Date Analyzed: 2011-11-09

Analyzed By: AR

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride			mg/Kg	100	96.2	96	85 - 115	2011-11-09

 Report Date: November 10, 2011
 Work Order: 11110410
 Page Number: 23 of 23

 114-6401036
 Foster Eddy #14 Well
 Eddy Co., NM

Appendix

Laboratory Certifications

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

Standard Flags

F Description

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

Attachments

The scanned attachments will follow this page.

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

01401111 #8W PAGE: OF: **Analysis Request of Chain of Custody Record ANALYSIS REQUEST** (Circle or Specify Method No.) TETRA TECH 8 8 1910 N. Big Spring St. 문 护 Midland, Texas 79705 a B Б (432) 682-4559 • Fax (432) 682-3946 ঠ ₹ ខ CLIENT NAME: SITE MANAGER: GC.MS Vol. 8240/8260/624 PRESERVATIVE NUMBER OF CONTAINERS Ba g Fke Tavarez COOMETHOD PROJECT NO.: PROJECT NAME: GC.MS Semi. Vol. FILTERED (Y/N)
HCL
HNO3 Foster Eddy #14 Well 114-6401036 Eddy Co. NM LAB I.D. MATRIX COMP. DATE TIME SAMPLE IDENTIFICATION GRAB NONE NUMBER 핑 2011 0-1' 10/31 AH-I 281549 1-1.5 950 2-25' 551 AH-2 0-1' 552 1-1-5' 553 2-2.5' 554 AH-3 0-1' 555 1-1.5 556 2-2-5' 557 3-3.5' 558 Date: 1 - 3- 11 Time: 6 ! 50 Date: 15/31/11 RELINQUISHED BY: (Signature) RECEIVED BY: (Signature) Date: SAMPLED BY: (Print & Initial) Cur. L RELINQUISHED BY: (Signature) SAMPLE SHIPPED BY: (Circle) RECEIVED BY: (Signature) Time MAND DELIVERED RELINQUISHED BY: (Signature) RECEIVED BY: (Signature) Date: TETRA TECH CONTACT PERSON: Results by: Time: RECEIVING LABORATORY: TRACE RECEIVED BY: (Signatur The Tavarez **RUSH Charges** ___ STATE: ______

Please fill out all copies - Laboratory retains Yellow copy - Betum Original copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy)

(Left Def Dame It Sungere goed 10 malla - or total Bray Encled

50 mallar.

TIME:

PHONE:

SAMPLE CONDITION WHEN RECEIVED:

11,50

Work Order: 12042427 Report Date: May 8, 2012 Page Number: 1 of 2

Summary Report

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

Report Date: May 8, 2012

Work Order: 12042427

Project Location: Eddy Co., NM

Project Name:

COG/Foster Eddy #14 Well

Project Number: 114-6401036

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
295203	North Sidewall	soil	2012-04-17	00:00	2012-04-24
295204	South Sidewall	soil	2012-04-17	00:00	2012-04-24
295205	East Sidewall	soil	2012-04-17	00:00	2012-04-24
295206	West Sidewall	soil	2012-04-17	00:00	2012-04-24
295207	Bottom Hole 1'	soil	2012-04-17	00:00	2012-04-24

Sample: 295203 - North Sidewall

Param	Flag	Result	Units	RL
Chloride		< 20.0	mg/Kg	4

Sample: 295204 - South Sidewall

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 295205 - East Sidewall

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 295206 - West Sidewall

Report Date: May 8, 2012		Work Order: 12042427	Page 1	Page Number: 2 of 2		
Param	Flag	Result	Units	RL		
Chloride		<20.0	${ m mg/Kg}$	4		
Sample: 295207	- Bottom Hole 1'					
Param	Flag	Result	Units	RL		
Chloride		< 20.0	mg/Kg	4		



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E-Mail: lab@traceanalysis.com

Certifications

DBE NELAP DoD LELAP WBE HUB **NCTRCA** Oklahoma ISO 17025 Kansas

Analytical and Quality Control Report

Ike Tavarez Tetra Tech 1910 N. Big Spring Street

Midland, TX, 79705

Report Date: November 10, 2011

Work Order: 11110410

Project Location: Eddy Co., NM

Project Name:

Foster Eddy #14 Well

Project Number:

114-6401036

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
281549	AH-1 0-1'	soil	2011-10-31	00:00	2011-11-03
281550	AH-1 1-1.5'	soil	2011-10-31	00:00	2011-11-03
281551	AH-1 2-2.5'	soil	2011-10-31	00:00	2011-11-03
281552	AH-2 0-1'	soil	2011-10-31	00:00	2011-11-03
281553	AH-2 1-1.5'	soil	2011-10-31	00:00	2011-11-03
281554	AH-2 2-2.5'	soil	2011-10-31	00:00	2011-11-03
281555	AH-3 0-1'	soil	2011-10-31	00:00	2011-11-03
281556	AH-3 1-1.5'	soil	2011-10-31	00:00	2011-11-03
281557	AH-3 2-2.5'	soil	2011-10-31	00:00	2011-11-03

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 23 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	
Analytical Report	
Sample 281549 (AH-1 0-1')	
Sample 281550 (AH-1 1-1.5')	
Sample 281551 (AH-1 2-2.5')	
Sample 281552 (AH-2 0-1')	
Sample 281553 (AH-2 1-1.5')	
Sample 281554 (AH-2 2-2.5')	
Sample 281555 (AH-3 0-1')	
Sample 281556 (AH-3 1-1.5')	
Sample 281557 (AH-3 2-2.5')	
Method Blanks	1
QC Batch 86134 - Method Blank (1)	
QC Batch 86135 - Method Blank (1)	
QC Batch 86138 - Method Blank (1)	
QC Batch 86236 - Method Blank (1)	
QC Batch 86237 - Method Blank (1)	
•	
Laboratory Control Spikes	1
QC Batch 86134 - LCS (1)	
QC Batch 86135 - LCS (1)	
QC Batch 86138 - LCS (1)	
QC Batch 86236 - LCS (1)	
QC Batch 86237 - LCS (1)	
QC Batch 86134 - MS (1)	
QC Batch 86135 - MS (1)	
QC Batch 86138 - MS (1)	
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QC Batch 86134 - CCV (2)	
QC Batch 86135 - CCV (1)	
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QC Batch 86138 - CCV (1)	
QC Batch 86138 - CCV (2)	
QC Batch 86236 - ICV (1)	
QC Batch 86236 - CCV (1)	
QC Batch 86237 - ICV (1)	
QC Batch 86237 - CCV (1)	
QC Dauch 00201 - 007 (1)	• • • •
Appendix	2
Laboratory Certifications	

Standard Flags	·	23
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Case Narrative

Samples for project Foster Eddy #14 Well were received by TraceAnalysis, Inc. on 2011-11-03 and assigned to work order 11110410. Samples for work order 11110410 were received intact at a temperature of 4.3 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	73143	2011-11-04 at 12:45	86134	2011-11-05 at 02:47
Chloride (Titration)	SM 4500-Cl B	73222	2011-11-07 at 09:37	86236	2011-11-09 at 10:59
Chloride (Titration)	SM 4500-Cl B	73222	2011-11-07 at 09:37	86237	2011-11-09 at 11:01
TPH DRO - NEW	S 8015 D	73148	2011-11-04 at 13:42	86138	2011-11-04 at 13:42
TPH GRO	S 8015 D	73143	2011-11-04 at 12:45	86135	2011-11-05 at 03:14

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 11110410 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

 Report Date: November 10, 2011
 Work Order: 11110410
 Page Number: 6 of 23

 114-6401036
 Foster Eddy #14 Well
 Eddy Co., NM

Analytical Report

Sample: 281549 - AH-1 0-1'

Laboratory: Midland

Analysis: BTEX QC Batch: 86134 Prep Batch: 73143 Analytical Method: S 8021B
Date Analyzed: 2011-11-05
Sample Preparation: 2011-11-04

Prep Method: S 5035 Analyzed By: AG Prepared By: AG

				m RL			
Parameter		Flag	Cert	Result	Units	Dilution	RL
Benzene	Qr,U	Qr,U	1	< 0.0200	mg/Kg	1	0.0200
Toluene	Qr,U	$_{ m Qr,U}$	1	< 0.0200	mg/Kg	1	0.0200
Ethylbenzene	Qr,U	$_{ m Qr,U}$	1 .	< 0.0200	mg/Kg	1	0.0200
Xylene	Qr,U	$_{ m Qr,U}$	1	< 0.0200	mg/Kg	1	0.0200

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			1.96	mg/Kg	1	2.00	98	82.8 - 143.1
4-Bromofluorobenzene (4-BFB)			1.98	mg/Kg	1	2.00	99	70.6 - 179

Sample: 281549 - AH-1 0-1'

Laboratory: Midland

Analysis: Chloride (Titration)
QC Batch: 86236
Prep Batch: 73222

Analytical Method: SM 4500-Cl B Date Analyzed: 2011-11-09 Sample Preparation: 2011-11-07 Prep Method: N/A
Analyzed By: AR
Prepared By: AR

			\mathbf{RL}			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			280	mg/Kg	50	4.00

Sample: 281549 - AH-1 0-1'

Laboratory: Midland

Prep Batch: 73148

Analysis: TPH DRO - NEW QC Batch: 86138

Analytical Method: S 8015 D
Date Analyzed: 2011-11-04
Sample Preparation: 2011-11-04

Prep Method: N/A
Analyzed By: kg
Prepared By: kg

				RL			
Parameter		Flag	Cert	Result	Units	Dilution	RL
DRO	υ	U	1	< 50.0	mg/Kg	1	50.0

114-6401036

Work Order: 11110410

Foster Eddy #14 Well

Q	TN	Ct	D14	TT '4	D3. //	Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	${f Units}$	Dilution	Amount	Recovery	Limits
n-Tricosane			123	mg/Kg	1	100	123	67.5 - 147.1

Sample: 281549 - AH-1 0-1'

Laboratory:

Midland

Analysis: QC Batch:

TPH GRO 86135

Analytical Method:

S 8015 D 2011-11-05

Prep Method: S 5035 Analyzed By: AG

Prep Batch: 73143 Date Analyzed: Sample Preparation:

2011-11-04

Prepared By: AG

Page Number: 7 of 23

Eddy Co., NM

RL

Parameter Cert Flag Result Units Dilution RLGRO 3.53 mg/Kg 2.00 1

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			1.96	mg/Kg	1	2.00	98	30 - 134.6
4-Bromofluorobenzene (4-BFB)			1.87	mg/Kg	1	2.00	94	22.4 - 149

Sample: 281550 - AH-1 1-1.5'

Laboratory: Midland

Analysis: Chloride (Titration)

QC Batch: 86237 Prep Batch: 73222

Analytical Method: Date Analyzed: 2011-11-09 Sample Preparation:

SM 4500-Cl B Prep Method: Analyzed By: 2011-11-07 Prepared By:

RL

Parameter Flag Cert Result Units Dilution RLChloride Ū <200 mg/Kg 50 4.00 υ

Sample: 281551 - AH-1 2-2.5'

Laboratory:

Prep Batch:

Midland

Analysis: Chloride (Titration) QC Batch:

86237 73222 Analytical Method: Date Analyzed:

Sample Preparation:

SM 4500-Cl B 2011-11-09 2011-11-07

Prep Method: N/A Analyzed By: AR Prepared By: AR

N/A

AR

AR

continued ...

Report Date: November 10, 2011 114-6401036

Work Order: 11110410 Foster Eddy #14 Well

Page Number: 8 of 23 Eddy Co., NM

sample 281551 continued ...

			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			286	mg/Kg	50	4.00

Sample: 281552 - AH-2 0-1'

Laboratory: Midland

Analysis: BTEX QC Batch: 86134 Prep Batch: 73143

Analytical Method: S 8021B Date Analyzed: 2011-11-05 Sample Preparation: 2011-11-04

Prep Method: S 5035 \mathbf{AG} Analyzed By: Prepared By: AG

				RL			
Parameter		\mathbf{Flag}	Cert	Result	Units	Dilution	m RL
Benzene	Qr,U	Qr,U	1	< 0.0200	mg/Kg	1	0.0200
Toluene	Q_{r},U	Qr,U	1	< 0.0200	mg/Kg	1	0.0200
Ethylbenzene	Qr,U	Qr,U	1	< 0.0200	mg/Kg	1	0.0200
Xylene	Qr,U	$_{ m Qr,U}$	1	< 0.0200	mg/Kg	1	0.0200

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			1.95	mg/Kg	1	2.00	98	82.8 - 143.1
4-Bromofluorobenzene (4-BFB)	_		2.00	mg/Kg	1	2.00	100	70.6 - 179

Sample: 281552 - AH-2 0-1'

Laboratory: Midland

Analysis: Chloride (Titration) QC Batch: 86237 Prep Batch: 73222

Analytical Method: SM 4500-Cl B Date Analyzed: 2011-11-09 Sample Preparation:

2011-11-07

Prep Method: N/A Analyzed By: AR Prepared By: AR

			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			<200	mg/Kg	50	4.00

Report Date: November 10, 2011 Work Order: 11110410 Page Number: 9 of 23 Eddy Co., NM 114-6401036 Foster Eddy #14 Well

Sample: 281552 - AH-2 0-1'

Laboratory: Midland

Analysis: TPH DRO - NEW

QC Batch: 86138 Prep Batch: 73148 Analytical Method:

S 8015 D Date Analyzed: 2011-11-04 Sample Preparation: 2011-11-04 Prep Method: N/A

Analyzed By: kg Prepared By: kg

RLParameter Cert Result Units Dilution RLFlag DRO < 50.0 mg/Kg 50.0

Spike Percent Recovery Surrogate Flag Cert Result Units Dilution Amount Recovery Limits n-Tricosane 132 100 132 67.5 - 147.1 mg/Kg 1

Sample: 281552 - AH-2 0-1'

Laboratory: Midland

Analysis: TPH GRO QC Batch: 86135 Prep Batch: 73143

Analytical Method: Date Analyzed: Sample Preparation:

S 8015 D 2011-11-05 2011-11-04

Prep Method: S 5035 Analyzed By: AG Prepared By: AG

RLFlag Cert Result Dilution RLParameter Units **GRO** 3.30 2.00 mg/Kg

Spike Percent Recovery Flag Surrogate Cert Limits Result Units Dilution Amount Recovery Trifluorotoluene (TFT) mg/Kg 98 30 - 134.6 1.96 2.00 1 4-Bromofluorobenzene (4-BFB) 22.4 - 149 1.87 mg/Kg 1 2.00 94

Sample: 281553 - AH-2 1-1.5'

73222

Laboratory: Midland

Prep Batch:

Analysis: Chloride (Titration) QC Batch: 86237

Analytical Method: Date Analyzed: Sample Preparation:

SM 4500-Cl B 2011-11-09 2011-11-07

Prep Method: N/A Analyzed By: AR Prepared By: AR

RLFlag Parameter Cert Result Units Dilution RLChloride Ū <200 4.00 mg/Kg 50 U

114-6401036

Work Order: 11110410 Foster Eddy #14 Well

Page Number: 10 of 23

Eddy Co., NM

Sample: 281554 - AH-2 2-2.5'

Laboratory:

Midland

Analysis: Chloride (Titration) Analytical Method:

SM 4500-Cl B

Prep Method: N/A

QC Batch:

86237

Date Analyzed:

2011-11-09

Analyzed By: AR

Prep Batch: 73222 Sample Preparation: 2011-11-07 Prepared By: AR

RL

Cert Result Dilution RLParameter Flag Units Chloride Ū <200 mg/Kg 50 4.00 U

Sample: 281555 - AH-3 0-1'

Laboratory: Midland

BTEX Analysis:

Analytical Method:

S 8021B

Prep Method: S 5035

QC Batch: Prep Batch: 73143

86134

Date Analyzed: Sample Preparation:

2011-11-05 2011-11-04 Analyzed By: \mathbf{AG} Prepared By: \mathbf{AG}

RT.

				1013			
Parameter		Flag	Cert	Result	Units	Dilution	RL
Benzene	Qr,U	Qr,U	1	< 0.0200	mg/Kg	1	0.0200
Toluene	Qr,U	Qr,U	1	< 0.0200	mg/Kg	1	0.0200
Ethylbenzene	$\mathbf{Qr}_{i}\mathbf{U}$	$_{ m Qr,U}$	1	< 0.0200	mg/Kg	1	0.0200
Xylene	Qr,U	Qr,U	1	< 0.0200	mg/Kg	1	0.0200

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits o
Trifluorotoluene (TFT)			1.96	mg/Kg	1	2.00	98	82.8 - 143.1
4-Bromofluorobenzene (4-BFB)			2.00	mg/Kg	1	2.00	100	70.6 - 179

Sample: 281555 - AH-3 0-1'

Laboratory: Analysis:

Midland

Chloride (Titration)

Analytical Method: Date Analyzed:

SM 4500-Cl B

Prep Method: N/A Analyzed By: AR

QC Batch: Prep Batch:

86237 73222

Sample Preparation:

2011-11-09 2011-11-07

Prepared By: AR

RL

Flag Cert Result Dilution RLParameter Units 2920 Chloride mg/Kg 100 4.00

Report Date: November 10, 2011 Work Order: 11110410 Page Number: 11 of 23 114-6401036 Eddy Co., NM Foster Eddy #14 Well Sample: 281555 - AH-3 0-1' Laboratory: Midland Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A QC Batch: 86138 Date Analyzed: 2011-11-04 Analyzed By: kg Prep Batch: 73148 Sample Preparation: 2011-11-04 Prepared By: kg RLParameter Flag Cert Result Units Dilution RLDRO U < 50.0 50.0 υ mg/Kg Spike Percent Recovery Surrogate Flag Cert Result Units Dilution Amount Recovery Limits n-Tricosane 93.0 mg/Kg 100 93 67.5 - 147.1 1 Sample: 281555 - AH-3 0-1' Laboratory: Midland Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035 QC Batch: 86135 Date Analyzed: 2011-11-05 Analyzed By: AGPrep Batch: 73143 Sample Preparation: Prepared By: 2011-11-04 AG RLParameter Flag Cert Result Units Dilution RLGRO 3.68 mg/Kg 2.00 Spike Percent Recovery Surrogate Recovery Flag Cert Result Units Dilution Amount Limits Trifluorotoluene (TFT) 1.96 30 - 134.6 mg/Kg 1 2.00 98 4-Bromofluorobenzene (4-BFB) 1.88 mg/Kg 1 2.00 94 22.4 - 149

Sample:	281556	- AH-3	1-1.5
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Laboratory: Midland

Analysis: Chloride (Titration)
QC Batch: 86237
Prep Batch: 73222

Analytical Method: SM 4500-Cl B
Date Analyzed: 2011-11-09
Sample Preparation: 2011-11-07

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

Report Date: November 10, 2011 Work Order: 11110410 Page Number: 12 of 23 114-6401036 Foster Eddy #14 Well Eddy Co., NM Sample: 281557 - AH-3 2-2.5' Laboratory: Midland Analytical Method: Analysis: Chloride (Titration) SM 4500-Cl B Prep Method: N/A QC Batch: 86237 Date Analyzed: 2011-11-09 Analyzed By: ARPrep Batch: 73222 Sample Preparation: 2011-11-07 Prepared By: AR

114-6401036

Work Order: 11110410

Foster Eddy #14 Well

Page Number: 13 of 23 Eddy Co., NM

Method Blanks

Method Blank (1)

QC Batch: 86134

QC Batch: 86134

Date Analyzed: 2011-11-05

Analyzed By: AG

Prep Batch: 73143

QC Preparation: 2011-11-04

Prepared By: AG

			MDL		
Parameter	Flag	Cert	Result	Units	RL
Benzene		1	< 0.0118	mg/Kg	0.02
Toluene		1	< 0.00600	mg/Kg	0.02
Ethylbenzene		1	< 0.00850	mg/Kg	0.02
Xylene		1	< 0.00613	mg/Kg	0.02

						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			1.88	mg/Kg	1	2.00	94	65.9 - 111.8
4-Bromofluorobenzene (4-BFB)			1.67	mg/Kg	1	2.00	84	48.4 - 123.1

Method Blank (1)

QC Batch: 86135

QC Batch: 86135 Prep Batch: 73143 Date Analyzed: 2011-11-05 QC Preparation: 2011-11-04

Analyzed By: AG Prepared By: AG

			MDL		
Parameter	Flag	Cert	Result	Units	RL
GRO		1	0.915	mg/Kg	2

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.90	mg/Kg	1	2.00	95	67.6 - 150
4-Bromofluorobenzene (4-BFB)			1.60	mg/Kg	1	2.00	80	52.4 - 130

Method Blank (1)

QC Batch: 86138

QC Batch: 86138 Prep Batch: 73148 Date Analyzed: 2011-11-04 QC Preparation: 2011-11-04

Analyzed By: kg Prepared By: kg

114-6401036

Work Order: 11110410

Foster Eddy #14 Well

Page Number: 14 of 23 Eddy Co., NM

Parameter		F	lag	Cert		MDL tesult	Units	RL	
DRO				1		<14.5	mg/Kg	50	
a	771	G ,	D. U	***	D.1. (*	Spike	Percent	Recovery	
Surrogate	\mathbf{Flag}	Cert	\mathbf{Result}	Units	Dilution	Amount	Recovery	Limits	
n-Tricosane			114	mg/Kg	1	100	114	52.7 - 133.8	

Method Blank (1)

QC Batch: 86236

QC Batch: 86236 Prep Batch: 73222

5 Date Anal

Date Analyzed: 2011-11-09 QC Preparation: 2011-11-07 Analyzed By: AR Prepared By: AR

Method Blank (1)

QC Batch: 86237

QC Batch: 86237 Prep Batch: 73222 Date Analyzed: 2 QC Preparation: 2

2011-11-09 2011-11-07 Analyzed By: AR Prepared By: AR

114-6401036

Work Order: 11110410

Foster Eddy #14 Well

Page Number: 15 of 23 Eddy Co., NM

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch:

Date Analyzed:

2011-11-05

Analyzed By: AG

Prepared By: AG

Prep Batch: 73143

QC Preparation: 2011-11-04

			LCS			$_{ m Spike}$	Matrix		${ m Rec.}$
Param	${f F}$	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
Benzene		1	2.03	mg/Kg	1	2.00	< 0.0118	102	77.4 - 121.7
Toluene		1	1.98	mg/Kg	1	2.00	< 0.00600	99	88.6 - 121.6
Ethylbenzene		1	1.93	mg/Kg	1	2.00	< 0.00850	96	74.3 - 117.9
Xylene		1	5.83	mg/Kg	1	6.00	< 0.00613	97	73.4 - 118.8

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	2.01	mg/Kg	1	2.00	< 0.0118	100	77.4 - 121.7	1	20
Toluene		1	1.97	mg/Kg	1	2.00	< 0.00600	98	88.6 - 121.6	0	20
Ethylbenzene		1	1.89	mg/Kg	1	2.00	< 0.00850	94	74.3 - 117.9	2	20
Xylene		1	5.74	mg/Kg	1	6.00	< 0.00613	96	73.4 - 118.8	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)	1.92	1.90	mg/Kg	1	2.00	96	95	65.5 - 116.7
4-Bromofluorobenzene (4-BFB)	1.93	1.94	mg/Kg	1	2.00	96	97	56.2 - 132.1

Laboratory Control Spike (LCS-1)

QC Batch: Prep Batch: 73143

86135

Date Analyzed:

2011-11-05

QC Preparation: 2011-11-04 Analyzed By: AG Prepared By: AG

			LCS			Spike	Matrix		Rec.
Param	F	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
GRO		1	17.8	mg/Kg	1	20.0	< 0.753	89	60.9 - 95.4

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

continued ...

Work Order: 11110410 Page Number: 16 of 23 Report Date: November 10, 2011 114-6401036 Foster Eddy #14 Well Eddy Co., NM control spikes continued . . . LCSD RPD Spike Rec. Matrix \mathbf{C} Result RPD Param Units Dil. Amount Result Rec. Limit Limit LCSD RPD Spike Matrix Rec. Param \mathbf{F} \mathbf{C} Result Units Dil. Amount Result Rec. Limit RPD Limit GRO 18.2 mg/Kg 20.0< 0.753 91 60.9 - 95.4 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) 1.971.96 mg/Kg 1 2.0098 98 61.9 - 142 4-Bromofluorobenzene (4-BFB) 1.78 1.79 mg/Kg 1 2.00 89 90 56.2 - 132Laboratory Control Spike (LCS-1) QC Batch: 86138 Date Analyzed: 2011-11-04 Analyzed By: kg Prep Batch: 73148 QC Preparation: 2011-11-04 Prepared By: kg LCS Rec. Spike Matrix Param F \mathbf{C} Result Units Dil. Amount Result Rec. Limit DRO 282 mg/Kg 250 <14.5 113 64.5 - 146.9 1 Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCS	LCSD			\mathbf{Spike}	LCS	$_{ m LCSD}$	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
n-Tricosane	131	135	mg/Kg	1	100	131	135	65.3 - 135.8

Dil.

Units

mg/Kg

Spike

Amount

250

Matrix

Result

<14.5

Rec.

116

Rec.

Limit

64.5 - 146.9

RPD

Limit

20

RPD

3

LCSD

Result

290

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

 \mathbf{F}

C

Laboratory Control Spike (LCS-1)

Param

DRO

			LCS			Spike	Matrix		Rec.
Param	F	C	Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride			97.8	mg/Kg	1	100	<3.85	98	85 - 115

114-6401036

Work Order: 11110410

Foster Eddy #14 Well

Page Number: 17 of 23 Eddy Co., NM

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
Chloride			106	mg/Kg	1	100	< 3.85	106	85 - 115	8	20

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

Laboratory Control Spike (LCS-1)

QC Batch:

86237

Prep Batch: 73222

Date Analyzed: QC Preparation:

2011-11-09 2011-11-07

Analyzed By: AR

Prepared By: AR

			LCS			Spike	Matrix		Rec.
Param	${f F}$	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride			99.4	mg/Kg	1	100	< 3.85	99	85 - 115

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	C	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride			106	mg/Kg	1	100	< 3.85	106	85 - 115	6	20

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

Matrix Spike (MS-1) Spiked Sample: 281552

QC Batch:

86134

Prep Batch: 73143

Date Analyzed:

2011-11-05

QC Preparation: 2011-11-04

Analyzed By: AG

Prepared By: AG

			MS			Spike	Matrix		Rec.
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
Benzene		1	2.24	mg/Kg	1	2.00	< 0.0118	112	69.4 - 123.6
Toluene		1	2.23	mg/Kg	1	2.00	< 0.00600	112	75.4 - 134.3
Ethylbenzene		1	2.32	mg/Kg	1	2.00	< 0.00850	116	58.8 - 133.7
Xylene		1	6.98	mg/Kg	1	6.00	< 0.00613	116	57 - 134.2

				MSD			Spike	Matrix		Rec.		RPD
Param	•	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	${f Limit}$	RPD	Limit
Benzene	Qr	Qr	1	1.72	mg/Kg	1	2.00	< 0.0118	86	69.4 - 123.6	26	20
Toluene	Qr	Qr	3	1.70	mg/Kg	1	2.00	< 0.00600	85	75.4 - 134.3	27	20
Ethylbenzene	Qr	Qr	1	1.76	mg/Kg	1	2.00	< 0.00850	88	58.8 - 133.7	27	20
Xylene	Qr	Qr	1	5.30	mg/Kg	1	6.00	< 0.00613	88	57 - 134.2	27	20

114-6401036

Work Order: 11110410

Foster Eddy #14 Well

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Eddy Co., NM

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)	1.94	1.94	mg/Kg	1	2	97	97	79.4 - 141.1
4-Bromofluorobenzene (4-BFB)	2.07	2.04	mg/Kg	1	2	104	102	71 - 167

Matrix Spike (MS-1)

Spiked Sample: 281555

QC Batch:

86135

Date Analyzed:

2011-11-05

Analyzed By: AG

Prep Batch: 73143

QC Preparation:

2011-11-04

Prepared By: AG

			MS			Spike	Matrix		Rec.
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
GRO		1	19.9	mg/Kg	1	20.0	3.68	81	61.8 - 114

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
GRO		1	22.0	mg/Kg	1	20.0	3.68	92	61.8 - 114	10	20

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

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	1.95	1.95	mg/Kg	1	2	98	98	29.4 - 161.7
4-Bromofluorobenzene (4-BFB)	2.01	2.02	mg/Kg	1	2	100	101	37.3 - 162

Matrix Spike (MS-1) Spiked Sample: 281552

QC Batch:

86138

Prep Batch: 73148

Date Analyzed: 2011-11-04 2011-11-04 Analyzed By: kg

Prepared By: kg

			MS			Spike	Matrix		Rec.
Param	F	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
DRO		1	293	mg/Kg	1	250	23.1	108	38.8 - 153.3

QC Preparation:

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	302	mg/Kg	1	250	23.1	112	38.8 - 153.3	3	20

114-6401036

Work Order: 11110410

Foster Eddy #14 Well

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Eddy Co., NM

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec .	\mathbf{Limit}
n-Tricosane	125	122	mg/Kg	1	100	125	122	54.6 - 149.8

Matrix Spike (MS-1) Spiked Sample: 281549

QC Batch:

86236 Prep Batch: 73222

Date Analyzed: QC Preparation:

2011-11-09 2011-11-07 Analyzed By: AR

Prepared By: AR

			MS			Spike	Matrix		Rec.
Param	F	C	Result	Units	Dil.	Amount	Result	Rec.	Limit
Chloride		,	9130	mg/Kg	100	10000	<385	88	79.4 - 120.6

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	\mathbf{Units}	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride			9780	mg/Kg	100	10000	<385	95	79.4 - 120.6	7	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: 281569

QC Batch:

Prep Batch: 73222

86237

Date Analyzed:

2011-11-09

QC Preparation: 2011-11-07

Analyzed By: AR

Prepared By: AR

MS Spike Matrix Rec. \mathbf{C} Param F Result Units Dil. Amount Result Rec. Limit 10200 Chloride mg/Kg 100 10000 <385 102 79.4 - 120.6

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
Chloride			10400	mg/Kg	100	10000	<385	104	79.4 - 120.6	2	20

114-6401036

Work Order: 11110410 Foster Eddy #14 Well Page Number: 20 of 23 Eddy Co., NM

Calibration Standards

Standard (CCV-1)

QC Batch: 86134

Date Analyzed: 2011-11-05

Analyzed By: AG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		I	mg/Kg	0.100	0.101	101	80 - 120	2011-11-05
Toluene		1	$_{ m mg/Kg}$	0.100	0.0981	98	80 - 120	2011-11-05
Ethylbenzene		1	mg/Kg	0.100	0.0959	96	80 - 120	2011-11-05
Xylene		1	${ m mg/Kg}$	0.300	0.289	96	80 - 120	2011-11-05

Standard (CCV-2)

QC Batch: 86134

Date Analyzed: 2011-11-05

Analyzed By: AG

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		1	mg/Kg	0.100	0.0921	92	80 - 120	2011-11-05
Toluene		1	$_{ m mg/Kg}$	0.100	0.0888	89	80 - 120	2011-11-05
Ethylbenzene		1	mg/Kg	0.100	0.0859	86	80 - 120	2011-11-05
Xylene		1	mg/Kg	0.300	0.260	87	80 - 120	2011-11-05

Standard (CCV-1)

QC Batch: 86135

Date Analyzed: 2011-11-05

Analyzed By: AG

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	\mathbf{Units}	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		1	mg/Kg	1.00	1.07	107	80 - 120	2011-11-05

Standard (CCV-2)

QC Batch: 86135 Date Analyzed: 2011-11-05 Analyzed By: AG

114-6401036

Work Order: 11110410 Foster Eddy #14 Well Page Number: 21 of 23

Eddy Co., NM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	1.15	115	80 - 120	2011-11-05

Standard (CCV-1)

QC Batch: 86138

Date Analyzed: 2011-11-04

Analyzed By: kg

				CCVs True	CCVs Found	CCVs Percent	Percent	Data
				irue	, round	rercent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		1	mg/Kg	250	266	106	80 - 120	2011-11-04

Standard (CCV-2)

QC Batch: 86138

Date Analyzed: 2011-11-04

Analyzed By: kg

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		1	mg/Kg	250	237	95	80 - 120	2011-11-04

Standard (ICV-1)

QC Batch: 86236

Date Analyzed: 2011-11-09

Analyzed By: AR

				ICVs	ICVs	ICVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride			mg/Kg	100	96.6	97	85 - 115	2011-11-09

Standard (CCV-1)

QC Batch: 86236

Date Analyzed: 2011-11-09

Analyzed By: AR

114-6401036

Work Order: 11110410

Foster Eddy #14 Well

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Eddy Co., NM

				CCVs True	CCVs Found	${ m CCVs} \ { m Percent}$	Percent Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride			mg/Kg	100	103	103	85 - 115	2011-11-09

Standard (ICV-1)

QC Batch: 86237

Date Analyzed: 2011-11-09

Analyzed By: AR

				ICVs	ICVs	ICVs	Percent	
				True	Found	Percent	Recovery	\mathbf{Date}
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride			mg/Kg	100	104	104	85 - 115	2011-11-09

Standard (CCV-1)

QC Batch: 86237

Date Analyzed: 2011-11-09

Analyzed By: AR

				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	\mathbf{Flag}	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride			mg/Kg	100	96.2	96	85 - 115	2011-11-09

 Report Date: November 10, 2011
 Work Order: 11110410
 Page Number: 23 of 23

 114-6401036
 Foster Eddy #14 Well
 Eddy Co., NM

Appendix

Laboratory Certifications

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

Standard Flags

F Description

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

Attachments

The scanned attachments will follow this page.

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

0140111 #8W

Analysis Request of Chain of Custody Record										PAGE: / OF:																			
													ANALYSIS REQUEST (Circle or Specify Method No.)																
TETRA 1910 N. Big 5 Midland, Tex (432) 682-4559							Spring St.							-	5 (Ext. to C35)	1 1		Vr Pd Hg									TDS		
CLIENT NAME: COG1				SITE MANAGER: The Tavarez							PRESERVATIVE METHOD				TX1005	1 !	As Ba Cd		,		60/624	2/0/023					핆		
PROJECT NO.: 114-6401036			PR	OJE O	CT St	NAME: er Eddy #14 Edd			CONTAINERS Y/N)								βÌ.		Volatile		8240/82	9i. Vol. 8	8 8		, L	tos)	s/Catio		
LAB I.D. NUMBER	DATE 2011	TIME	MATRIX	COMP.	GRAB	Ed. SAMPL	4 Co., NM LE IDENTIFICATION	a Casawa	FILTERED (Y/N)	된	HNO3	핑	NONE	A	TPH 8015	PAH 8270	RCRA Metals	TCLP Metals Ag	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625 PCR's 8080/608	Pest. 808/608	Chloride *>	Gamma Spec	PLM (Asbestos)	Major Anions/Cations,		
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RELINQUISHED BY: (Signature) Date: 11-3-1 RECEIVED BY: (Signature) RELINQUISHED BY: (Signature) Date: RECEIVED BY: (Signature)								Time:							SAMPLED BY: (Print & Initial) SAMPLE SHIPPED BY: (Circle) SAMPLE SHIPPED BY: (Circle) AIRBILL #:														
Time: RELINQUISHED BY: (Signature) Date:					RECEIVED BY: (Signature)		Time:								EDE)		VERE	BUS						OTHER:					
Time:						RECEIVED BY: (Signature)	\	Time:							TETRA TECH CONTACT PERSON						SON:	Results by:							
ADDRESS: CITY: MIO CONTACT:	STATE:								TIME: (1,',50						Ile Tavarez RUSH Charges Authorized: Yes No														
SAMPLE CONDITION WHEN RECEIVED: REMARKS: Lever Deple of THE Decord 5, we write.											4																		
	Please fill out all copies - Laboratory retains Yellow copy - Beturn Original copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy Curt during Prof. Brown Qued 10 Malla - Ur Tatel Broy Encurs																												