SITE INFORMATION

	······································	Repo	ort Type: C	Closure R	eport		<u></u>			
General Site In	formation:		the second s							
Site:		and the second	deral Unit #128							
Company:		COG Ope	COG Operating LLC							
	ship and Range	Unit I	Sec 11	T17S	R29E					
Lease Number	r:		API-30-015-36157							
County:		Eddy Cou	Eddy County							
GPS:			32.84806°	<u>N</u>		104.03749° W				
Surface Owne		Federal								
Mineral Owner Directions:	• • • • • • • • • • • • • • • • • • •		lls, from the interson right and travel			and 82, travel west on Hwy 8 150' to site.	2 for 2.9			
							······································			
Release Data:	HI-TINE, J. MALE AND STATES THE CONTRACT OF			s an e Crit	e çe şe sv					
Date Released	!:	12/23/201	2			ECEIVED				
Type Release:		Oil				ALLC 0 0 0000				
Source of Cont	the second s	the second s	orage Tank			AUG 2 3 2013				
Fluid Released		22 bbls				OCD ADTERIA	<u> </u>			
Fluids Recover	ea: iunication:	18 bbls		N OR I LAR	NIN SCARE	IOCD ARTESIA				
Name:	Pat Ellis	<u> </u>	- 6622 (h-642 - 473 - 647 - 647 - 647	nd) Fryslâns (dan (f	like Tavar	ez	and a second second			
Company:	COG Operating,				Tetra Tec	h				
Address:	One Concho Cer		· · · · · · · · · · · · · · · · · · ·		1910 N. E					
/100/000	600 W. Illinois Av		<u> </u>		101011.1					
City:	Midland Texas, 7				Midland,	Texas				
Phone number.					(432) 682-4559					
Fax:	(432) 684-7137	<u></u>		······						
Email:	pellis@conchore	sources com		· · · · · · · · · · · · · · · · · · ·	ike tavar	ez@tetratech.com				
		<u></u>		and the stand of the second	1					

Ranking Criteria

Depth to Groundwater:	Ranking Score	Site Data	
<50 ft	20		
50-99 ft	10		
>100 ft.	0	0	
WellHead Protection:	Ranking Score	Site Data	
Water Source <1,000 ft., Private <200 ft.	20		
Water Source >1,000 ft., Private >200 ft.	0	0	
Surface Body of Water:	Ranking Score	Site Data	
<200 ft.	20		
200 ft - 1,000 ft.	10		
>1,000 ft	0	0	
Total Ranking Score:			

Acceptable Soil RRAL (mg/kg)									
Benzene	Total BTEX	TPH							
10	50	5,000							



May 15, 2013

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

Re: Closure Report for the COG Operating LLC., Dodd Federal Unit #128 Well Location, Unit I, Section 11, Township 17 South, Range 29 East, Eddy County, New Mexico.

Mr. Bratcher:

Tetra Tech, Inc. (Tetra Tech) was contacted by COG Operating LLC. (COG) to assess a spill from the Dodd Federal Unit #128 Well Location located in Unit I, Section 11, Township 17 South, Range 29 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.84806°, W 104.03749°. 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 December 23, 2012, and released approximately twenty two (22) barrels of oil from a mobile storage tank. To alleviate the problem, COG personnel lowered the oil level in the mobile tank. Eighteen (18) barrels of standing oil was recovered. The spill initiated on the east side of the pad in the pasture and migrated north -northwest affecting an area approximately 30' X 285'. The final C-141 form is enclosed in Appendix A.

Groundwater

No water wells were listed within Section 11. According to the NMOCD groundwater map, the average depth to groundwater in this area is approximately 150' below surface. The groundwater data is shown in Figure B.

TETRATECH

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 January 23, 2013, Tetra Tech personnel inspected and sampled the spill area. Seven (7) auger holes (AH-1 through AH-7) 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, a shallow hydrocarbon impact was detected in the subsurface soils. With the exception of AH-1 and AH-3, all of the auger holes location exceeded the RRAL for either TPH, benzene or total BTEX. Auger holes (AH-2, AH-4, AH-5, AH-6 and AH-7) showed concentrations above the RRAL at 0-1' and declined below the RRAL at 1-1.5' below surface. Auger hole (AH-2) was not vertically defined at 1-1.5' below surface. The areas of AH-1 and AH-3 did not show hydrocarbon impacted soils above the RRAL. Deeper samples were not collected due to the dense formation at the site.

In addition, the chloride detected ranged from <20.0 mg/kg to 113 mg/kg. The chloride concentrations detected do not appear to an environmental concern.

Site Remediation and Conclusion

On May 7, 2013, Tetra Tech personnel supervised the excavation of the impacted soils. A trench (CS-1) was installed in the area of AH-2 to further delineate the vertical extent of the hydrocarbon release. Referring to Table 1, the confirmation trench samples not show any hydrocarbon impacts at 3.0' below surface, above the RRAL.

In order to remove the hydrocarbon concentrations above the RRAL, the excavation depths ranged from 1.0' to 3.0' below surface. The excavated areas and depths are highlighted in Table 1 and shown on Figure 4. Approximately 180 cubic yards³ of soil were removed and transported to R360 facility for proper disposal. Once approved by the BLM, the site was then backfilled with clean material to surface grade, ripped and seeded.

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

Respectfully submitted,

TETRA TECH lke Tavarez, ₽G

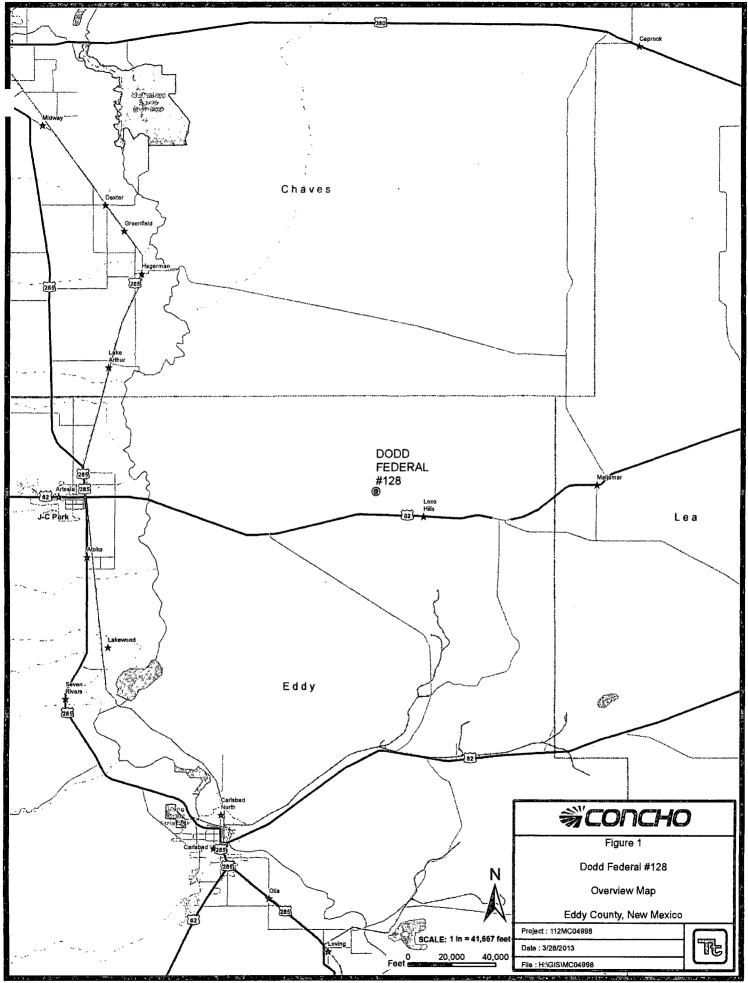
Senior Project Manager

cc: Pat Ellis – COG cc: Jeff Robertson – BLM , .

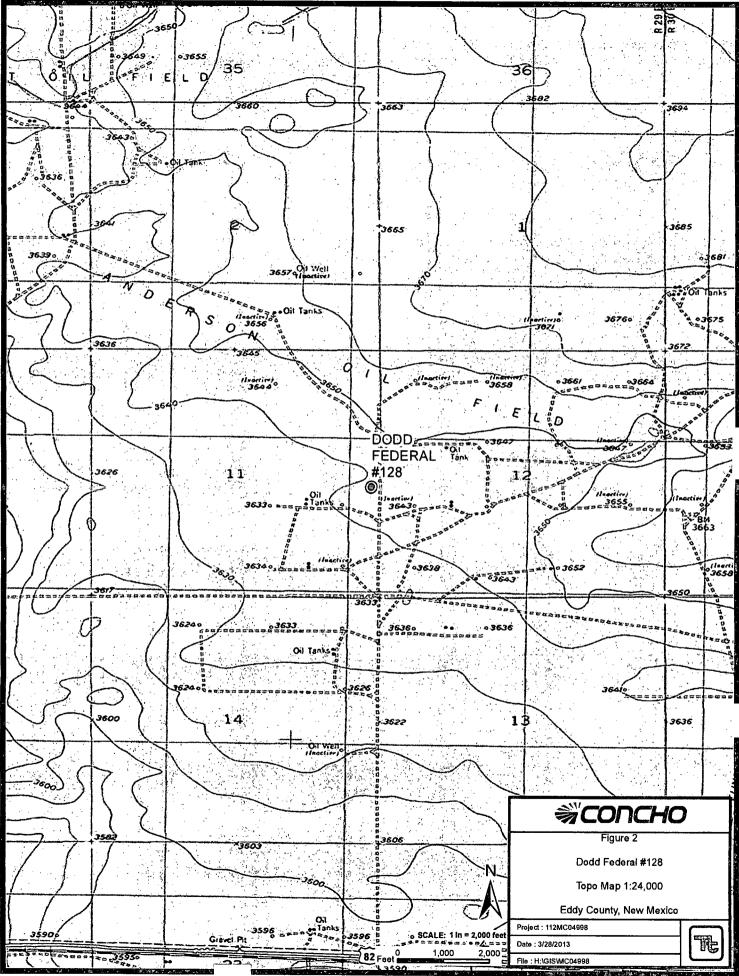
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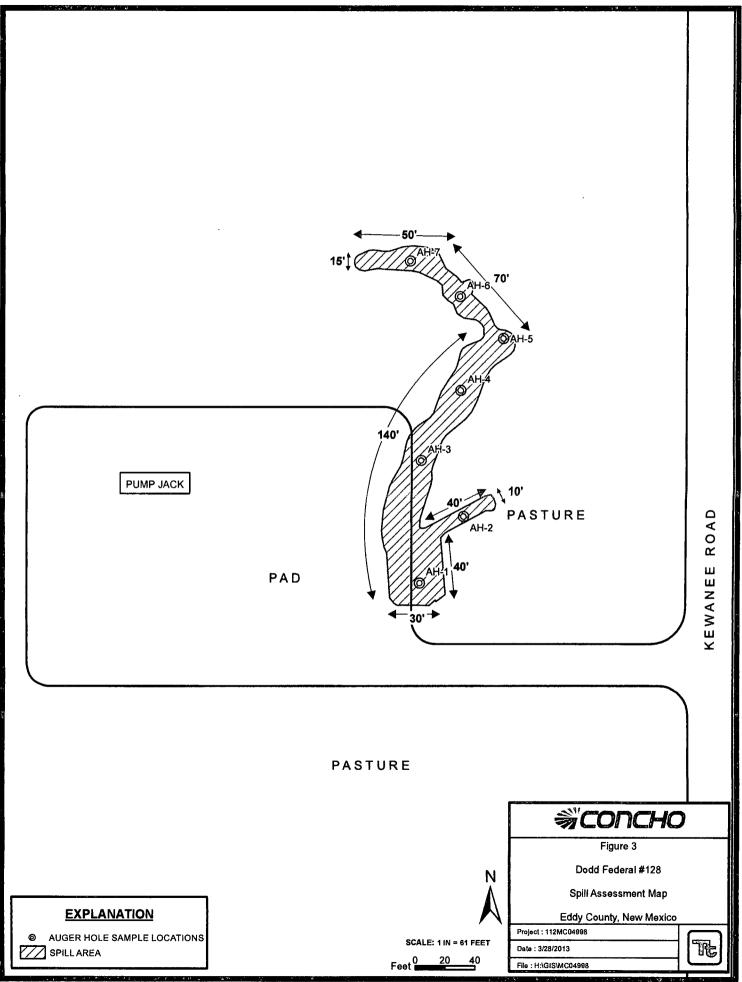
Figures



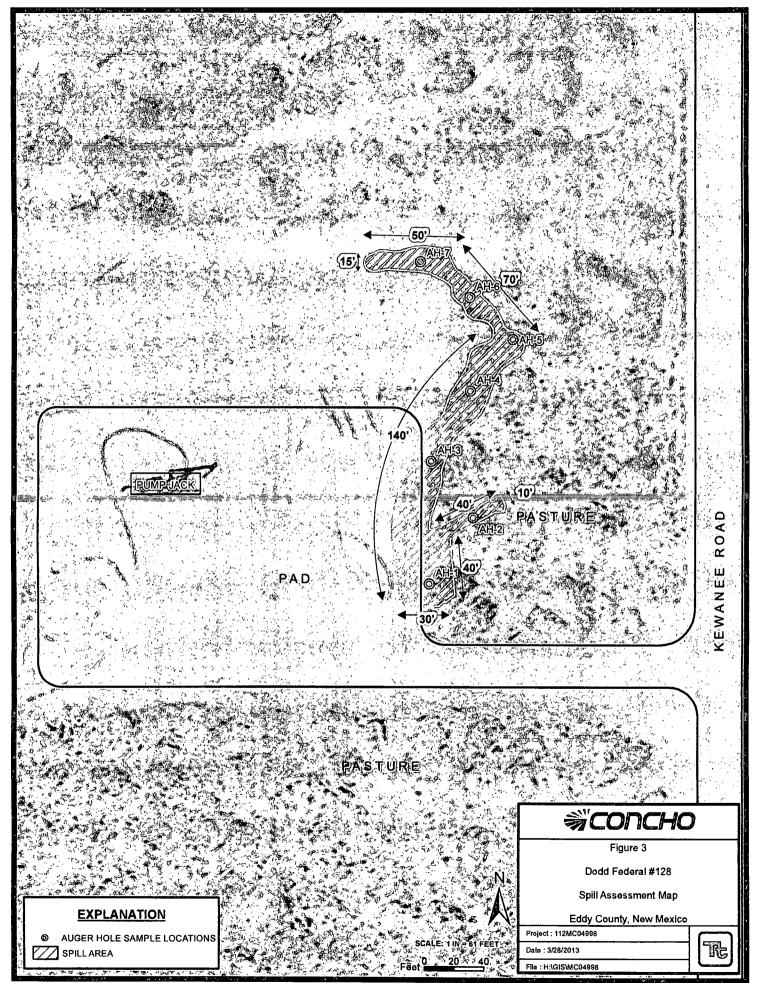
Drawn By: Isabel Marmolejo



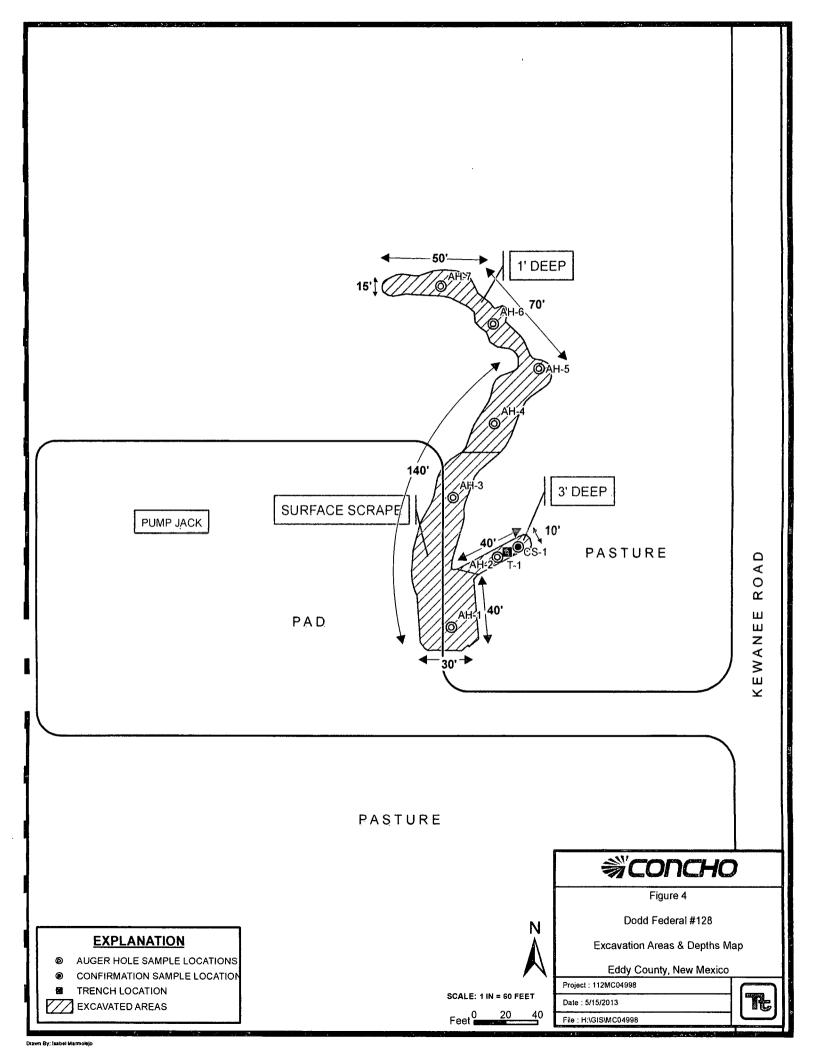
Drewn By: Isabel Marmolejo



Drawn By: Isabel Marmolejo



Drawn By: Isabel Marmolejo



Tables

.

Table 1 COG Operating LLC. Dodd Federal #128 Eddy County, New Mexico

Sample Sample	Sample	Sample	pie BEB	Soil Status		-	TPH (mg/k	g)	Benzene	Toluene	Ethlybenzene	Xylene	Total BTEX	Chloride
D	Date	Depth (ft)	Depth (ft)	In-Situ	Removed	GRO	DRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	BIEX (mg/kg)	(mg/kg)
AH-1	1/23/2013	0-1	1	Х		5.81	92.6	98.4	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	113
		1-1.5	1	Х		-	-	-	-	-	-	-	-	<20.0
AH-2	1/23/2013	0-1	a an		X,	11,200	14,600	25,800	87.6	425	312	323	1,148	<20.0
	11	1-1.5	o the states		२ X ें≭	8,780	12,600	21,380	103	533	332	339	1,307	<20.0 [™]
CS-1	5/7/2013	÷ 2 3	Mer and		X	1,560	607 🌷	2,167.	0.265	21.1	35.8	28.0	85.2	
	11	; 3 *≈; *		10	X -	- 16.3	<50.0	~16:3	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	
	0	4	-	Х		15.9	64.1	80.0	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	-
AH-3	1/23/2013	0-1	1	Х		9.67	62.7	72.4	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<20.0
	n	1-1.5	1	Х		-		-	-		-	-	-	<20.0
AH-4	1/23/2013	0-1			(X)	6,920	12,300	19,220	41.2	313	, 252	292	.898	<20.0
	"	1-1.5	-	Х		7.28	337	344	<0.0200	0.0864	<0.0200	0.121	0.207	<20.0
	U	2-2.5	-	Х		-	-	-	-	-		-	-	22.7
AH-5	1/23/2013	0-1			• X	2,990	10,300	13,290	17.2	°241	224	248	730	<20.0
	n	1-1.5	-	Х		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<20.0
AH-6	1/23/2013	0-1 ,*	a si cana ang ang ang ang ang ang ang ang ang		X .	1,450	2,780	4,230	1.79	50.0	53.3	57.6	163	<20.0
["	1-1.5	-	Х		-	-	-	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<20.0
	"	2-2.5	-	Х		-	-	-	-	-	-	-	-	<20.0
	11	2.5-3	-	Х		•	-	-	-	-	-	-	-	36.8
AH-7	1/23/2013	0-1-,			X	4,310	7,750	12,060	. 11.7 _	170	141	147	470	<20.0
	n	1-1.5	-	Х		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<20.0
	H	2-2.5	-	Х		-	-	-	-			-	-	<20.0
	u	3-3.5	-	Х		-	-	-	-	-	-	-	-	<20.0

(-) Not Analyzed

(BEB) Below Excavation Bottom

Excavated Areas and Depths

Photos

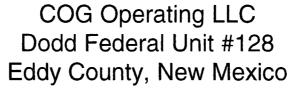
COG Operating LLC Dodd Federal Unit #128 Eddy County, New Mexico

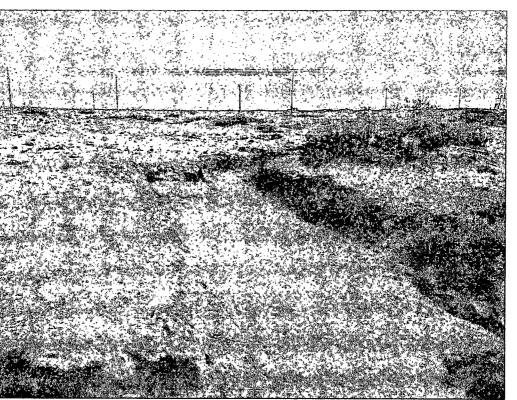


View South - Area of AH-2

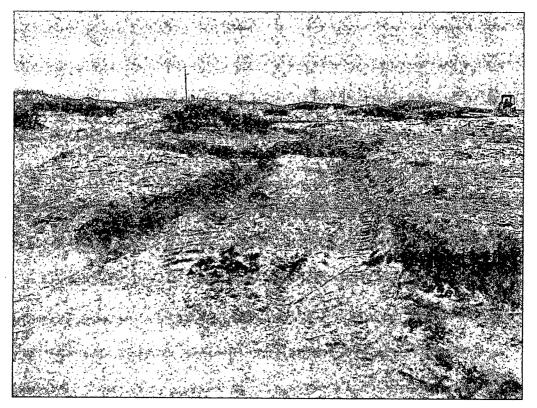


View North – Area of AH-4 and AH-5





View Southeast – Area of AH-6



View East – Area of AH-7

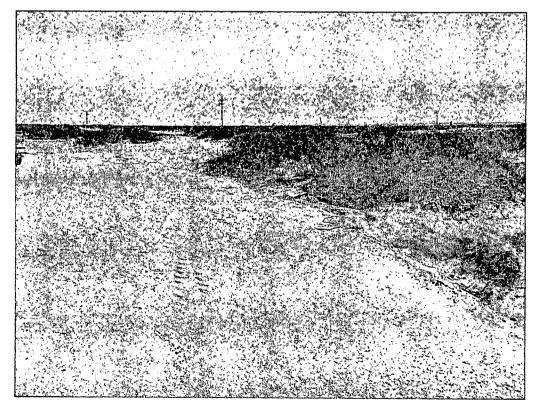
- TETRA TECH

COG Operating LLC Dodd Federal Unit #128 Eddy County, New Mexico



tetra tech

View South – Backfill



View North – Backfill

Appendix A

State of New Mexico	
Energy Minerals and Natural Resou	ces

gy Minerals and Natural Resources Oil Conservation Division 1220 South St. Francis Dr. NMOCD ARTESIA Revised October 10, 2003 Subrit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form



Form C-141 Revised October 10, 2003

1220 5, 50, 11an	icis Di., Saina			Sa	inta Fe	e, NM 875	05				side of form
			Rele	ease Notific	catio	n and Co	orrective A	ction			
						OPERA	ΓOR	🔲 Initi	al Report	\boxtimes	Final Report
Name of Co				ing LLC		Contact		at Ellis			
Address				Midland, TX 79		Telephone 1		230-0077			
Facility Na	me	D	odd Fede	eral Unit #128		Facility Typ	e Well	Location			
Surface Ow	ner: Feder	al		Mineral C	Owner			Lease M	lo. (API#)	30-015	5-36157
				LOCA	TIO	N OF RE	LEASE				
Unit Letter I	Section 11	Township 17S	Range 29E	Feet from the	North	/South Line	Feet from the	East/West Line	County	Edd	y
			د۔ <u></u>]	Latitude N32.8	4810 °	[°] Longitud	e W104.03795	0	L		
						OF REL					
Type of Rele	ase: Oil				0112		Release 22 bbls	Volume I	Recovered	18 bbl	5
Source of Re	lease: Mot	oile Storage Ta	ink				lour of Occurrenc		Hour of Di		
Was Immedi	ata Nation (Siven?				12/23/2012 If YES, To		13/23/20	12 5:00 a.n)	
was minicui	ale nonce (Yes 🛛	No 🛛 Not R	equired		whom:				
By Whom?						Date and H	lour				
Was a Water	course Read					1 .	lume Impacting t	he Watercourse.			
			Yes 🛛	No		N/A					
If a Watercon	urse was Im	pacted, Descr	ibe Fully.'	k							
Describe Cau	use of Probl	em and Reme	dial Action	n Taken.*							
Mobile stora	-	rflowed due to	the increa	ased production fi	rom the	well. Oil from	n the mobile tank	has been pulled to	lower the t	ank leve	el and
•											
Describe Are	ea Affected	and Cleanup A	Action Tak	ken.*							
	sal. The site							led the RRAL was epared a closure re			
regulations a public health should their o or the enviro	Il operators or the envi operations h nment. In a	are required to ronment. The nave failed to a	o report an acceptance idequately ICD accept	nd/or file certain r ce of a C-141 repo investigate and r	elease n ort by th emediat	otifications a e NMOCD m e contaminati	nd perform correc arked as "Final Ro on that pose a thre	nderstand that purs tive actions for rele eport" does not reli eat to ground water esponsibility for co	eases which eve the ope , surface w	may en rator of ater, hui	idanger Tiability man health
		11/2	1	\leq			OIL CONS	SERVATION	DIVISI	DN	
Signature:]]/	11									
Printed Name	e: Ike Tavar	rez (agent for	COG)			Approved by District Supervisor:					
Title: Projec	t Manager					Approval Da	e:	Expiration I	Date:		
		arez@tetratec	h.com			Conditions of	Approval:		Attached		
Date: 5	-15-	-15	Phone:	(432) 682-4559							-

* 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 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?	FOR		_ 🛛 Initia	l Report		Final Report
Name of Co	mpany	COG OP	ERATIN	GLLC		Contact	Pa	it Ellis				
Address		st Illinois Av	enue, M	idland, TX 7970	1	Telephone h	No. 432-2	230-00	77			
Facility Nan	ne	Dodd Fed	eral Unit	#128		Facility Typ	e Wel	locati	on			
									1	T CATTO	20.0	1 - 4/1 - 4
Surface Ow	ner Fede	ral		Mineral O	wner				Lease N	lo. (API#)	30-0	15-30157
				ومرجعها المراجعة فتنبع والمتجب والمتحص ومحاجب والمحصور والمحاجب		N OF REI						
Unit Letter	Section 11	Township 1 7S	Range 29E	Feet from the	North/	South Line	Feet from the	East/V	Vest Line	County	Eddy	
J	31	175	296							E	luuy	
Ngung gelak karinny wa kanakarinni na mang	kangada di 1994 yana sa sa sa sa sa sa sa sa		99 - 99 - 99 - 90 - 90 - 90 - 90 - 90 -	Latitude 32.8		Longita OF RELI	ude 104.03795 EASE					
Type of Relea	ase Oil					Volume of	Release 22bbls	·	Volume R	ecovered	18bbl	S
Source of Rel		le storage tanl				1	our of Occurrence	e	Date and	Hour of Disc	overy	,
		الماد مربعيا الانتجاب معاقد أوجره و				12/23/2012			12/23/201	2 5:00 a.m.		
Was Immedia	te Notice C		Yes 🛛	No 🖾 Not Rei	quired	lf YES, To	Whom?					
By Whom?				بر السامی الی الی الی الی الی الی الی الی الی ال		Date and H	our					
Was a Water	course Read					IFYES, Vo	lume Impacting th	he Wate	rcourse.			
			Yes 🛛	No								
If a Watercou	rse was Im	pacted, Descri	be Fully.*	f						*****		
Describe Cau	se of Proble	em and Remed	lial Action	n Taken.*	·····					<u></u>		
Mobile storag reoccurrence.	•	flowed due to	increased	production from v	well. Oi	il from the mo	bile tank has been	n pulled	to lower th	e tank level	and p	revent
Describe Are	a Affected	and Cleanup A	ction Tak	en.*								
location into remediation v	the pasture. vork plan to	Tetra Tech w the NMOCD	ill sample /BLM for	we were able to rea the spill site area t approval prior to a	to delin any sigr	eate any possi nificant remed	ible contamination liation work.	n from t	he release a	ind we will j	oresen	ta
regulations al public health should their o	l operators or the envir perations h ument. In a	are required to conment. The ave failed to a ddition, NMO	report an acceptanc dequately CD accept	is true and completed d/or file certain relevant e of a C-141 report investigate and rent tance of a C-141 rent	lease no t by the mediate	otifications an NMOCD ma contaminatic	d perform correct urked as "Final Re on that pose a thre	ive action port" do at to gro	ons for releases not relie ound water,	ases which n eve the opera surface wat	nøy er itor of er, hu	ndanger Fliability man health
		~		7			OIL CONS	ERV	ATION I	DIVISIO	N	
Signature:	~		T (5								
Printed Name		Josh	Russo			Approved by I	District Superviso	r:				
Title:		Senior Enviror		oordinator		Approval Date	3:	E	xpiration D)ate:		
E-mail Addre			oncho.con			Conditions of Approval:						
Date: 01/07/2013 Phone: 432-212-2399												

.

* Attach Additional Sheets If Necessary

Appendix B

Water Well Data Average Depth to Groundwater (ft) COG-Dodd Federal #128 Eddy County, New Mexico

	16 9	South	:	1	
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21 61	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

	17	South	:		
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22 79	23	24
30	29	28	27	26	25
31	32	33	34	35 25	8 36

	16	South			
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14 220 dry	13
19 110	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

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

	17 Sc	outh			
6	5	4	3	2	1
7	8	9	10	11 SITE	12
18	17	16	15	14	13
19	20	21	22 80	23	24
30	29 210 208'	28	27	26	25
31	32	33	34	35 153	36

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

	18 :	South		28 Eas	t
6	5	4	3	2	1
7 49	8 69	9	10	11	12
18	17	16	15	14	13
19	20	21 226	22	23	24
49	29	28	27	26	25
31	32	33	34	35 65	36

	18 :	South	29	e Eas	t
6	5	4	3	2	1
7	8	9	10 95	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

	U.L.		57			
	18	South		30 Eas	t	
6	5	4	3	2	1	
7	8	9	10	11	12	
18	17	16	15	14	13	
19	20	21	22	23	24	
30	29	28	27	26	25	
31	32	33	34	35	36	

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: February 4, 2013

Work Order: 13012801

Project Location:Eddy Co., NMProject Name:COG/Dodd Fed. #128Project Number:112C04998

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
319415	AH-1 0-1' 1' BEB	soil	2013-01-23	00:00	2013-01-25
319416	AH-1 1-1.5' 1' BEB	soil	2013-01-23	00:00	2013-01-25
319417	AH-2 0-1'	soil	2013-01-23	00:00	2013-01-25
319418	AH-2 1-1.5'	soil	2013-01-23	00:00	2013-01-25
319419	AH-3 0-1' 1' BEB	soil	2013-01-23	00:00	2013-01-25
319420	AH-3 1-1.5' 1' BEB	soil	2013-01-23	00:00	2013-01-25
319421	AH-4 0-1'	soil	2013-01-23	00:00	2013-01-25
319422	AH-4 1-1.5'	soil	2013-01-23	00:00	2013-01-25
319423	AH-4 2-2.5'	soil	2013-01-23	00:00	2013-01-25
319424	AH-5 0-1'	soil	2013-01-23	00:00	2013-01-25
319425	AH-5 1-1.5'	soil	2013-01-23	00:00	2013-01-25
319426	AH-6 0-1'	soil	2013-01-23	00:00	2013-01-25
319427	AH-6 1-1.5'	soil	2013-01-23	00:00	2013-01-25
319428	AH-6 2-2.5'	soil	2013-01-23	00:00	2013-01-25
319429	AH-6 2.5-3'	soil	2013-01-23	00:00	2013-01-25
319430	AH-7 0-1'	soil	2013-01-23	00:00	2013-01-25
319431	AH-7 1-1.5'	soil	2013-01-23	00:00	2013-01-25
319432	AH-7 2-2.5'	soil	2013-01-23	00:00	2013-01-25
319433	AH-7 3-3.5'	soil	2013-01-23	00:00	2013-01-25

		BTEX				TPH GRO
	Benzene	Toluene	Ethylbenzene	Xylene	DRO	GRO
Sample - Field Code	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
319415 - AH-1 0-1' 1' BEB	<0.0200 Qr,Qs	<0.0200 qr,qs	<0.0200 Qr,Q8	<0.0200 Qr,Qs	92.6	5.81 Qs
319417 - AH-2 0-1'	87.6 Qs	425 Qs	312 Qs	323 Qs	14600	11200 Qs
319418 - AH-2 1-1.5'	103 Qr	533 Qr	332 Qr	339 Qr	12600 Qs	8780 Qs
319419 - AH-3 0-1' 1' BEB	<0.0200 Qr,Qs	<0.0200 qr,Qs	<0.0200 qr,qs	<0.0200 qr,qs	62.7	9.67 Qs
319421 - AH-4 0-1'	41.2 Q ⁵	313 Qs	252 Qs	292 Qs	12300	6920 Qs

continued ...

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		B	rex		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)
319422 - AH-4 1-1.5'	<0.0200 Qs	0.0864 Qs	<0.0200 Qs	0.121 Qs	337 Qs	7.28 Qs
319424 - AH-5 0-1'	17.2 Qs	$241 _{Qs}$	224 Q.	248 Qs	10300	2990 Qa
319425 - AH-5 1-1.5'	<0.0200 gr	$<\!0.0200$ Qr	< 0.0200 gr	< 0.0200 gr	<50.0 Qs	<4.00 Qs
319426 - AH-6 0-1'	1.79 Qs	50.0 Qs	53.3 Qa	57.6 Qs	2780	1450 Qa
319427 - AH-6 1-1.5'	<0.0200 Qr	< 0.0200 gr	<0.0200 Qr	< 0.0200 gr		
319430 - AH-7 0-1'	11.7 Qs	170 Qs	141 qs	147 Qs	7750	4310 Qs
319431 - AH-7 1-1.5'	<0.0200 Qr	<0.0200 Qr	<0.0200 Qr	<0.0200 qr	<50.0 Q#	<4.00 Q#

Sample: 319415 - AH-1 0-1' 1' BEB

Param	Flag	Result	Units	RL
Chloride		113	mg/Kg	4

Sample: 319416 - AH-1 1-1.5' 1' BEB

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4
Sample: 319417	- AH-2 0-1'			
Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4
Sample: 319418	- AH-2 1-1.5'			
Param	Flag	Result	Units	RL
		<20.0	mg/Kg	4
Chloride		······		
Chloride		//		
	- AH-3 0-1' 1' BEB			
Chloride Sample: 319419 Param	- AH-3 0-1' 1' BEB Flag	Result	Units	RL

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

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Report Date: February 4, 2013		Work Order: 13012801	Page	Page Number: 3 of 4	
Sample: 319421 -	AH-4 0-1'				
Param	Flag	Result	Units	\mathbf{RL}	
Chloride		<20.0	mg/Kg	4	
Sample: 319422 -	AH-4 1-1.5'				
Param	Flag	Result	Units	RL	
Chloride		<20.0	mg/Kg	4	
Sample: 319423 -	AH-4 2-2.5'				
Param	Flag	Result	Units	\mathbf{RL}	
Chloride		22.7	mg/Kg	4	
Sample: 319424 -	AH-5 0-1'				
Param	Flag	Result	Units	\mathbf{RL}	
Chloride		<20.0	mg/Kg	4	
Sample: 319425 -	AH-5 1-1.5'				
Param	Flag	Result	Units	RL	
Chloride		<20.0	mg/Kg	. 4	
Sample: 319426 -	AH-6 0-1'				
Param	Flag	Result	Units	RL	
Chloride		<20.0	mg/Kg	4	
Sample: 319427 -	AH-6 1-1.5'				
Param	Flag	Result	Units	RL	
Chloride		<20.0	mg/Kg	4	
Sample: 319428 -	AH-6 2-2.5'				
Param	Flag	Result	Units	RL	
Chloride		<20.0	mg/Kg	4	

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Report Date: Febru	uary 4, 2013	Work Order: 13012801	Page N	Page Number: 4 of 4	
Sample: 319429	- AH-6 2.5-3'				
Param	Flag	Result	Units	\mathbf{RL}	
Chloride		36.8	mg/Kg	4	
Sample: 319430	- AH-7 0-1'				
Param	\mathbf{Flag}	Result	Units	\mathbf{RL}	
Chloride		<20.0	mg/Kg	4	
Sample: 319431	- AH-7 1-1.5'				
Param	Flag	Result	Units	\mathbf{RL}	
Chloride		<20.0	mg/Kg	4	
Sample: 319432	- AH-7 2-2.5'				
Param	Flag	Result	Units	RL	
Chloride		<20.0	mg/Kg	4	
Sample: 319433	- AH-7 3-3.5'				
Param	Flag	Result	Units	RL	
		<20.0	mg/Kg	4	

Summary Report

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

Report Date: May 9, 2013

Work Order: 13050801

Project Location:Eddy Co., NMProject Name:COG/Dodd Fed. #128Project Number:112C04998

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
328293	CS-1 (AH-2) 2'	soil	2013-05-07	00:00	2013-05-07
328294	CS-1 (AH-2) 3'	soil	2013-05-07	00:00	2013-05-07
328295	CS-1 (AH-2) 4'	soil	2013-05-07	00:00	2013-05-07

		BT	EX	1	TPH DRO - NEW	TPH GRO
	Benzene	Toluene	Ethylbenzene	Xylene	DRO	GRO
Sample - Field Code	(mg/Kg)	(mg/Kg)	(mg/Kg)	(18g/Kg)	(mg/Kg)	(mg/Kg)
328293 - CS-1 (AH-2) 2'	0.265 Qs	21.1 Je,Q8	35.8 Je	28.0	607 Qs	1560
328294 - CS-1 (AH-2) 3'	$< 0.0400^{-1}$ Qs	<0.0400 Q#	< 0.0400	< 0.0400	<50.0	16.3^{-2}
328295 - CS-1 (AH-2) 4'	<0.0400 Qr	<0.0400 Qs	< 0.0400	< 0.0400	64.1	15.9 ³

¹Dilution due to turbidity.

 $^{^{2}}$ Dilution due to turbidity.

³Dilution due to turbidity.

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) Lubbock, Texas 79424 800-378-1296 806-El Paso, Texas 79922 915-Midland, Texas 79703 432-Suite 100 Carroliton, Texas 75006 972-E-Mail: lab@traceanalysis.com WEB; www.traceanalysis.com

806-794-1296 FAX 808-794-1298 915-585-3443 FAX 915-585-4944 432-689-6301 FAX 432-689-6313 972-242-7750

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: May 9, 2013

Work Order: 13050801

Project Location:Eddy Co., NMProject Name:COG/Dodd Fed. #128Project Number:112C04998

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
328293	CS-1 (AH-2) 2'	soil	2013-05-07	00:00	2013-05-07
328294	CS-1 (AH-2) 3'	soil	2013-05-07	00:00	2013-05-07
328295	CS-1 (AH-2) 4'	soil	2013-05-07	00:00	2013-05-07

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

This report consists of a total of 20 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Riebart A

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

Report Contents

Case Narrative	3
Sample 328293 (CS-1 (AH-2) 2') Sample 328294 (CS-1 (AH-2) 3')	4 4 5 6
QC Batch 101190 - Method Blank (1)	8 8 8 9
Laboratory Control Spikes 14 QC Batch 101190 - LCS (1) 1 QC Batch 101192 - LCS (1) 1 QC Batch 101193 - LCS (1) 1 QC Batch 101195 - MS (1) 1 QC Batch 101192 - xMS (1) 1 QC Batch 101193 - MS (1) 1 QC Batch 101193 - MS (1) 1 QC Batch 101195 - MS (1) 1	0 0 0 1 2 2 3
Calibration Standards 14 QC Batch 101190 - CCV (1) 1 QC Batch 101190 - CCV (2) 14 QC Batch 101190 - CCV (3) 14 QC Batch 101190 - CCV (3) 14 QC Batch 101190 - CCV (4) 14 QC Batch 101192 - CCV (1) 14 QC Batch 101192 - CCV (2) 14 QC Batch 101192 - CCV (2) 14 QC Batch 101192 - CCV (2) 14 QC Batch 101192 - CCV (3) 14 QC Batch 101193 - CCV (1) 14 QC Batch 101193 - CCV (2) 14 QC Batch 101193 - CCV (2) 14 QC Batch 101195 - CCV (3) 14 QC Batch 101195 - CCV (2) 14 QC Batch 101195 - CCV (3) 14	-555556666777
Appendix 19 Report Definitions 19 Laboratory Certifications 19 Standard Flags 19 Result Comments 19 Attachments 20	- 9 9 9

Case Narrative

Samples for project COG/Dodd Fed. #128 were received by TraceAnalysis, Inc. on 2013-05-07 and assigned to work order 13050801. Samples for work order 13050801 were received intact at a temperature of 4.8 C.

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

		Prep	Prep	$\rm QC$	Analysis
Test	Method	Batch	Date	Batch	Date
BTEX	S 8021B	85768	2013-05-09 at 08:52	101195	2013-05-09 at 08:53
TPH DRO - NEW	S 8015 D	85763	2013-05-08 at 09:00	101190	2013-05-09 at 08:05
TPH DRO - NEW	S 8015 D	85765	2013-05-08 at 10:00	101192	2013-05-09 at 08:30
TPH GRO	S 8015 D	85766	2013-05-09 at 08:30	101193	2013-05-09 at 08:31

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

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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 13050801 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: May 9, 2013 112C04998 Work Order: 13050801 COG/Dodd Fed. #128 Page Number: 4 of 20 Eddy Co., NM

Analytical Report

Sample: 328293 - CS-1 (AH-2) 2'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland BTEX 101195 85768		Da	te Analy	Method: yzed: eparation:	S 8021B 2013-05- 2013-05-	-09		Prep Method Analyzed By Prepared By:	AH .
						\mathbf{RL}				
Parameter		Flag		Cert	R	esult	Units		Dilution	RL
Benzene		Qs		1	0	0.265	mg/Kg		2	0.0200
Toluene		Je,Qr		ı		21.1	mg/Kg		2	0.0200
Ethylbenzene	2	Je		1		35.8	mg/Kg		2	0.0200
Xylene				ł		28.0	mg/Kg		2	0.0200
Surrogate			Flag	Cert	Result	Units	Dilution	Spike Amount	v	Recovery Limits
Trifluorotolue					3.78	mg/Kg	2	4.00	94	70 - 130
4-Bromofluor	obenzene (4-BFB)	Qsr	Q∗r		6.10	mg/Kg	2	4.00	152	70 - 130
_	8293 - CS-1 (AH- Midland	2) 2'								
Laboratory: Analysis: QC Batch: Prep Batch:	TPH DRO - NEW 101190 85763			Date	ytical Met Analyzed ple Prepar	: 20	8015 D)13-05-09)13-05-08		Prep Metho Analyzed E Prepared E	By: CW

]	RL			
Parameter		Flag		Cert	Res	Result		Dilution	RL
DRO		Qs		1	607		mg/Kg	1	50.0
							Spike	Percent	Recovery
Surrogate		Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
n-Tricosane	Qsr	Qør		188	mg/Kg	1	100	188	70 - 130

Sample: 328293 - CS-1 (AH-2) 2'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	101193	Date Analyzed:	2013-05-09	Analyzed By:	\mathbf{AH}
Prep Batch:	85766	Sample Preparation:	2013-05-08	Prepared By:	AH

Report Date: May 9, 2013 112C04998		.	Page Number: 5 of 20 Eddy Co., NM						
Parameter	Flag		Cert	I	RL Result	Unit	s	Dilution	RL
GRO			1		1560	mg/K	g	10	4.00
Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB)	Qsr	Qsr		$\begin{array}{c} 16.8 \\ 41.6 \end{array}$	mg/Kg mg/Kg	$\begin{array}{c} 10 \\ 10 \end{array}$	20.0 20.0	84 208	70 - 130 70 - 130

Sample: 328294 - CS-1 (AH-2) 3'

•

Laboratory: Midland Analysis: BTEX QC Batch: 101195 Prep Batch: 85768		Analytical Date Anal Sample Pr	lyzed:	2013-05	-09		Prep Metho Analyzed By Prepared By	y: AH
				\mathbf{RL}				
Parameter	Flag	Cert		Result	Uni	ts	Dilution	RL
Benzene	Qs,U	1		< 0.0400	mg/K	g	. 2	0.0200
Toluene	Qs, U	1		< 0.0400	mg/K	g	2	0.0200
Ethylbenzene	υ	1		< 0.0400	mg/K	g	2	0.0200
Xylene	U	1		< 0.0400	mg/K	g	2	0.0200
						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Triffuorotoluene (TFT)			3.70	mg/Kg	2	4.00	92	70 - 130

3.87

mg/Kg

2

4.00

97

70 - 130

Sample: 328294 - CS-1 (AH-2) 3'

4-Bromofluorobenzene (4-BFB)

Laboratory: Analysis: QC Batch: Prep Batch:	Midland TPH DRO - NI 101192 85765	EW	Date	lytical Metha 9 Analyzed: ple Preparat	2013-0)5-09	Prep Me Analyzec Preparec	ł By: CW
					RL			
Parameter		Flag	Cert	Res	ult	Units	Dilution	RL
DRO		U	1	<5	0.0	mg/Kg	1	50.0
						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
n-Tricosane			103	mg/Kg	1	100	103	70 - 130

Report Date 112C04998	e: May 9, 2013			Order: 13050801 Dodd Fed. #128		Page Number: 6 of 20 Eddy Co., NM			
Sample: 32	8294 - CS-1 (J	AH-2) 3'							
Laboratory: Analysis: QC Batch:	Midland TPH GRO 101193		Analytical M Date Analyz			Prep Method: Analyzed By:	S 5035 AH		
Prep Batch:			Sample Prep			Prepared By:	AH		
				RL					
Parameter		Flag	Cert	Result	Units	Dilution	RL		
GRO	2	в	1	16.3	mg/Kg	2	4.00		

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			3.24	mg/Kg	2	4.00	81	70 - 130
4-Bromofluorobenzene (4-BFB)			3.53	mg/Kg	2	4.00	88	70 - 130

Sample: 328295 - CS-1 (AH-2) 4'

Laboratory: Midland Analysis: BTEX QC Batch: 101195 Prep Batch: 85768		Date Ana	l Method: lyzed: reparation	2013-05	-09		Prep Method Analyzed By: Prepared By:	AH
				RL				
Parameter	Flag	Cert		Result	Unit	s	Dilution	\mathbf{RL}
Benzene	$Q_{s,U}$	1	<	< 0.0400	mg/K	g	2	0.0200
Toluene	\mathbf{Qs}, \mathbf{U}	ı	<	<0.0400	mg/K	g	2	0.0200
Ethylbenzene	υ	1	<	<0.0400	mg/K	g	2	0.0200
Xylene	υ	1	<	< 0.0400	mg/K	g	2	0.0200
Surrogate	Fla	g Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		<u> </u>	3.87	mg/Kg	2	4.00	97	70 - 130
4-Bromofluorobenzene (4-BFB)			3.96	mg/Kg	2	4.00	99	70 - 130

Sample: 328295 - CS-1 (AH-2) 4'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	101192	Date Analyzed:	2013-05-09	Analyzed By:	ĊŴ
Prep Batch:	85765	Sample Preparation:	2013-05-08	Prepared By:	CW

Report Date: May 112C04998	9, 2013	Work Order: 13050801 COG/Dodd Fed. #128					Page Number: 7 of 20 Eddy Co., NM		
Parameter DRO		Flag	Cert		RL sult	Units	Dilution	RL	
		·····	1	6	4.1	mg/Kg	1	50.0	
Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits	
n-Tricosane			84.3	mg/Kg	1	100	84	70 - 130	

Sample: 328295 - CS-1 (AH-2) 4'

Laboratory:	Midland										
Analysis:	Analysis: TPH GRO		Analyti	ical Metho	d: S 801	5 D		Prep Method: S 5033			
QC Batch:	101193		Date A	nalyzed:	2013-0	05-09		Analyzed B	y: AH		
Prep Batch:	85766		Sample	Preparati	on: 2013-0	05-08		Prepared B	y: AH		
					RL						
Parameter		Flag	Cer	ti	Result	Un	its	Dilution	RL		
GRO	3	в	J		15.9	mg/l	Кg	2	4.00		
							Spike	Percent	Recovery		
Surrogate		F	`lag Cert	Result	Units	Dilution	Amount	Recovery	Limits		
Trifluorotolu	ene (TFT)			3.40	mg/Kg	2	4.00	85	70 - 130		
4-Bromofluor	obenzene (4-BFB)			3.54	m mg/Kg	2	4.00	88	70 - 130		

1

Report Date: May 9, 2013 112C04998

Method Blanks

Method Blank (1)	QC E	Batch: 10119	0					
QC Batch: 101190			Date A	analyzed:	2013-05-09		Analyze	d By: CW
Prep Batch: 85763			QC Pr	eparation:	2013-05-08		Prepare	d By: CW
						MDL		
Parameter		Flag		Cert		Result	Units	RL
DRO		0.11		1		10.9	mg/Kg	50
<u></u>		<u></u>				C) :1		
Surrogate	Flag	Cert	Result	Units	Dilution	Spike 1 Amount	Percent Recovery	Recovery Limits
n-Tricosane	riag		109	mg/Kg	1	1 Amount 100	109	70 - 130
			100		*		100	10 100
Method Blank (1) QC Batch: 101192 Prep Batch: 85765	QC B	atch: 10119	Date A	nalyzed: eparation:	2013-05-09 2013-05-08		Analyze Preparec	
				~		MDL		
Parameter DRO		Flag		Cert		Result <6.88	Units	RL 50
		<u></u>		1		<0.88	mg/Kg	
						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution		Recovery	Limits
n-Tricosane			108	mg/Kg	1	100	108	70 - 130
Method Blank (1) QC Batch: 101193 Prep Batch: 85766	QC B	atch: 10119	Date A	Analyzed: eparation:	2013-05-09 2013-05-09		Analyze Prepare	
r op Daton. 00100			QU I I	opuration offi	2010-00-00		110,000	. <i>Dy</i> . 111
						MDL		
				~		D I	TT *.	DI
Parameter GRO		Flag		Cert		Result 2.52	Units mg/Kg	RL4

Report Date: May 9, 2013 112C04998	Work Order: 13050801 COG/Dodd Fed. #128						Page Number: 9 of 20 Eddy Co., NM		
Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits	
Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB)	X		$1.69 \\ 1.68$	mg/Kg mg/Kg	1	$2.00 \\ 2.00$	84 84	70 - 130 70 - 130	

Method Blank (1)	QC Batch: 101195							
QC Batch: 101195		Date A	nalyzed:	2013-05-	09		Analyzec	l By: AH
Prep Batch: 85768		QC Pre	eparation:	2013-05-	09		Prepared	By: AH
					MDL			
Parameter	Flag		Cert		Result		Units	RL
Benzene			1		< 0.00810		mg/Kg	0.02
Toluene			1		< 0.00750		mg/Kg	0.02
Ethylbenzene			1		< 0.00730		mg/Kg	0.02
Xylene			l		< 0.00700		mg/Kg	0.02
						Spike	Percent	Recovery
Surrogate	Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			1.91	mg/Kg	1	2.00	96	70 - 130
4-Bromofluorobenzene (4-	BFB)		1.87	mg/Kg	1	2.00	94	70 - 130

Report Date: May 9, 2013 112C04998

n-Tricosane

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

Prep Batch: 85763			e Analyze Preparati		3-05-09 3-05-08			U	vzed By wred By	
Param	F	С	LCS Result	Units	Dil.	Spike Amount		atrix sult R	ec.	Rec. Limit
DRO		1	260	mg/Kg	1	250	10	0.9 1	00	70 - 130
Percent recovery is based or	1 the spike re	sult. RPD	is based	on the s	oike and s	oike duplica	ate resu	ılt.		
	-			-	_	_				
Danous	F (LCSD	TIn:4a	10:1	Spike	Matrix	Dee	Rec.	חחח	RPD Limit
Param DRO		$\frac{1}{255}$	Units mg/Kg	Dil.	Amount 250	Result 10.9	Rec. 98	Limit 70 - 130	$\frac{\text{RPD}}{2}$	Limit 20
								······································	Z	
Percent recovery is based or	i the spike re	sult. RPD	is based of	on the sp	pike and sp	pike duplica	ate resu	ılt.		
	LCS	LCS	D			Spike	LCS	S LCS	D	Rec.
Surrogate	Resul			nits	Dil.	Amount	Rec			Limit
n-Tricosane	120	110	3 mg	g/Kg	1	100	120	116		70 - 130
LaboratoryControl SpikQC Batch:101192Prep Batch:85765	æ (LCS-1)		e Analyzec Preparatic		3-05-09 3-05-08			U 10	zed By red By	
QC Batch: 101192	æ (LCS-1)		Preparatio			Cuilra	Ма	Prepa		r: CW
QC Batch: 101192 Prep Batch: 85765		QC	Preparatio	on: 201	3-05-08	Spike		Prepa	.red By	r: CW Rec.
QC Batch: 101192 Prep Batch: 85765 Param	æ (LCS-1) F	QC	Preparatio LCS Result	on: 201 Units		Amount	Re	Prepa utrix sult Re	red By ec,	r: CW Rec. Limit
QC Batch: 101192 Prep Batch: 85765 Param DRO	F	QC 	Preparatio LCS Result 261	on: 201 Units mg/Kg	3-05-08 Dil.	Amount 250	Re <6	Prepa utrix sult Ra 5.88 10	red By ec,	r: CW Rec.
QC Batch: 101192 Prep Batch: 85765 Param	F	QC C sult. RPD	Preparatio LCS Result 261	on: 201 Units mg/Kg	3-05-08 Dil. 1 Dike and sp	Amount 250	Re <6	Prepa utrix sult Ra 5.88 10	red By ec,	r: CW Rec. Limit
QC Batch: 101192 Prep Batch: 85765 Param DRO Percent recovery is based or	F 1 the spike re	QC C sult. RPD LCSD	Preparatio LCS Result 261 is based o	on: 201 Units mg/Kg on the sp	Dil. Dil. 1 Dike and sp Spike	Amount 250	Re <0 ate resu	Prepa sutrix sult Ra 5.88 10 lt. Rec.	red By ec,)4	r: CW Rec. Limit
QC Batch: 101192 Prep Batch: 85765 Param DRO Percent recovery is based or Param	F	QC C i sult. RPD LCSD C Result	Preparatio LCS Result 261 is based o Units	on: 201 Units mg/Kg on the sp Dil.	Dil. 1 Dike and sp Spike Amount	Amount 250 Dike duplica Matrix Result	Re <0 ate resu Rec.	Prepa utrix sult Ra 5.88 10 lt. Rec. Limit	red By ec, <u>14</u> RPD	r: CW Rec. Limit 70 - 130 RPD Limit
QC Batch: 101192 Prep Batch: 85765 Param DRO Percent recovery is based or	F 1 the spike re	QC C sult. RPD LCSD C Result	Preparatio LCS Result 261 is based o	on: 201 Units mg/Kg on the sp Dil.	Dil. Dil. 1 Dike and sp Spike	Amount 250 Dike duplica Matrix	Re <0 ate resu	Prepa sutrix sult Ra 5.88 10 lt. Rec.	red By ec,)4	r: CW Rec. Limit 70 - 130 RPD
QC Batch: 101192 Prep Batch: 85765 Param DRO Percent recovery is based or Param	F 1 the spike re F (QC C sult. RPD LCSD C Result 253	Preparatio LCS Result 261 is based o Units mg/Kg	Dil.	Dil. 1 Dike and sp Spike Amount 250	Amount 250 Dike duplica Matrix Result <6.88	Re <0 ate resu Rec. 101	Prepa atrix sult Ra 5.88 10 alt. Rec. Limit 70 - 130	red By ec, <u>14</u> RPD	r: CW Rec. Limit 70 - 130 RPD Limit
QC Batch: 101192 Prep Batch: 85765 Param DRO Percent recovery is based on Param DRO	F 1 the spike re F (QC C sult. RPD LCSD C Result 253	Preparation LCS Result 261 is based of Units mg/Kg is based of	Dil.	Dil. 1 Dike and sp Spike Amount 250	Amount 250 Dike duplica Matrix Result <6.88	Re <0 ate resu Rec. 101	Prepa utrix <u>sult Ra</u> <u>5.88 10</u> ilt. <u>Rec.</u> <u>Limit</u> <u>70 - 130</u> ilt.	red By ec, <u>)4</u> <u>RPD</u> <u>3</u>	r: CW Rec. Limit 70 - 130 RPD Limit

mg/Kg

1

100

120

120

70 - 130

120

120

Report Date: May 9, 2013 112C04998	2013 Work Order: 13050801 COG/Dodd Fed. #128									:: 11 of 20 7 Co., NM
Laboratory Control Spik	e (LCS-1)									
QC Batch: 101193		D	ate Analyze	ed: 20	013-05-09			·A	nalyzed	By: AH
Prep Batch: 85766			C Preparat		13-05-09				repared 1	
			LCS			Spike	М	atrix		Rec.
Param	\mathbf{F}	С	Result	Units	Dil.	Amount	R	esult	Rec.	Limit
GRO	· · · · · · · · · · · · · · · · · · ·	1	17.8	mg/K	g 1	20.0	2	2.52	89	70 - 130
Percent recovery is based on	the spike re	sult. RP	'D is based	on the s	spike and	spike duplic	ate res	ult.		
, <u> </u>	-	LCS	П		Spike	Matrix		Rec.		RPD
Param	FC			Dil.	Amoun		Rec.	Limi		
GRO		18.6			20.0	2.52	93	70 - 1		20
Percent recovery is based on	the spike res							···· —•.		
r around root ory no bareer on	one ppike rea				June and				-	_
a .				CSD	TT	Spi		LCS	LCSD	Rec.
Surrogate					Units	Dil. Amo		Rec.	Rec.	Limit
			1.76 1	.76 1	mg/Kg	1 2.0		88	88	70 - 130
Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BF	<u> </u>				mg/Kg	1 2.0	00	89	90	70 - 130
4-Bromofluorobenzene (4-BF Laboratory Control Spike QC Batch: 101195	<u> </u>	Di	1.78 1	.80 1 ed: 20	13-05-09	1 2.0)0	A	nalyzed 1	Зу: АН
4-Bromofluorobenzene (4-BF Laboratory Control Spike QC Batch: 101195	<u> </u>	Di	1.78 1	.80 1 ed: 20		1 2.0)0	A		Зу: АН
4-Bromofluorobenzene (4-BF Laboratory Control Spike QC Batch: 101195	<u> </u>	Di	1.78 1 ate Analyze C Preparat	.80 1 ed: 20	13-05-09			A	nalyzed 1	Зу: АН
4-Bromofluorobenzene (4-BF Laboratory Control Spike QC Batch: 101195 Prep Batch: 85768	<u> </u>	Di	1.78 1	.80 1 ed: 20	13-05-09	1 2.0 Spike Amount	Ma	A	nalyzed 1	Зу: АН Зу: АН
4-Bromofluorobenzene (4-BF Laboratory Control Spike QC Batch: 101195 Prep Batch: 85768 Param	e (LCS-1)	Da Qa	1.78 1 ate Analyze C Preparat LCS	.80 1 ed: 20 ion: 20	013-05-09 013-05-09 Dil.	Spike	Ma Re	A Pi utrix	nalyzed 1 repared 1	By: AH By: AH Rec. Limit 70 - 130
4-Bromofluorobenzene (4-BF Laboratory Control Spike QC Batch: 101195 Prep Batch: 85768 Param Benzene Toluene	e (LCS-1)	Da Qu C	1.78 1 ate Analyze C Preparat LCS Result 2.06 2.01	.80 1 ed: 20 ion: 20 Units mg/Kg mg/Kg	013-05-09 013-05-09 Dil. 1 1	Spike Amount 2.00 2.00	Ma Re <0.0 <0.0	A Pr sult 00810 00750	nalyzed 1 repared 1 Rec. 103 100	By: AH By: AH Rec. Linit 70 - 130 70 - 130
4-Bromofluorobenzene (4-BF Laboratory Control Spike QC Batch: 101195 Prep Batch: 85768 Param Benzene Toluene Ethylbenzene	e (LCS-1)	Da Qa <u>C</u>	1.781ate AnalyzeC PreparatLCSResult2.062.012.00	ed: 20 ion: 20 Units mg/Kg mg/Kg mg/Kg	013-05-09 013-05-09 Dil. 1 1 1	Spike Amount 2.00 2.00 2.00	Ma Re <0.0 <0.0	A Pr sult 30810 30750 30730	nalyzed 1 repared 1 Rec. 103 100 100	By: AH By: AH Rec. Linit 70 - 130 70 - 130 70 - 130
4-Bromofluorobenzene (4-BF Laboratory Control Spike QC Batch: 101195 Prep Batch: 85768 Param Benzene Toluene Ethylbenzene Xylene	e (LCS-1) F		1.781ate AnalyzeC PreparatLCSResult2.062.012.005.85	.80 1 ed: 20 ion: 20 Units mg/Kg mg/Kg mg/Kg	013-05-09 013-05-09 Dil. 1 1 1 1	Spike Amount 2.00 2.00 2.00 6.00	Ma Re <0.0 <0.0 <0.0	A Pr sult 20810 20750 20730 20700	nalyzed 1 repared 1 Rec. 103 100	By: AH By: AH Rec. Linit 70 - 130 70 - 130
4-Bromofluorobenzene (4-BF Laboratory Control Spike QC Batch: 101195	e (LCS-1) F		1.781ate AnalyzeC PreparatLCSResult2.062.012.005.85	.80 1 ed: 20 ion: 20 Units mg/Kg mg/Kg mg/Kg	013-05-09 013-05-09 Dil. 1 1 1 1	Spike Amount 2.00 2.00 2.00 6.00	Ma Re <0.0 <0.0 <0.0	A Pr sult 20810 20750 20730 20700	nalyzed 1 repared 1 Rec. 103 100 100	By: AH By: AH Rec. Linit 70 - 130 70 - 130 70 - 130
4-Bromofluorobenzene (4-BF Laboratory Control Spike QC Batch: 101195 Prep Batch: 85768 Param Benzene Toluene Ethylbenzene Xylene Percent recovery is based on	e (LCS-1) F		1.781ate Analyze C PreparatLCS Result2.06 2.01 2.00 5.85D is based	.80 1 ed: 20 ion: 20 Units mg/Kg mg/Kg mg/Kg	013-05-09 013-05-09 Dil. 1 1 1 1	Spike Amount 2.00 2.00 2.00 6.00	Ma Re <0.0 <0.0 <0.0	A Pr sult 20810 20750 20730 20700	nalyzed 1 repared 1 103 100 100 98	By: AH By: AH Rec. Linit 70 - 130 70 - 130 70 - 130 70 - 130 RPD
4-Bromofluorobenzene (4-BF Laboratory Control Spike QC Batch: 101195 Prep Batch: 85768 Param Benzene Toluene Ethylbenzene Xylene Percent recovery is based on Param	e (LCS-1) F	Da Qu C ' ' ' ' sult. RP LCSE Result	1.781ate AnalyzeC PreparatLCSResult2.062.012.005.85D is basedtUnits	.80 1 ed: 20 ion: 20 Units mg/Kg mg/Kg mg/Kg	013-05-09 013-05-09 Dil. 1 1 1 spike and Spike Amount	Spike Amount 2.00 2.00 6.00 spike duplica Matrix Result	Ma Re <0.0 <0.0 <0.0 ate res Rec.	A Pr sult 20810 20750 20700 ult. Rec Limi	nalyzed 1 repared 1 Rec. 103 100 98 t RP1	By: AH By: AH Rec. Linit 70 - 130 70 - 130 70 - 130 70 - 130 RPD D Limit
4-Bromofluorobenzene (4-BF Laboratory Control Spike QC Batch: 101195 Prep Batch: 85768 Param Benzene Toluene Ethylbenzene Xylene Percent recovery is based on Param Benzene	e (LCS-1) F the spike res	Da Qd C 1 3 3 3 3 3 3 3 3 1 3 3 1 3 3 1 3 3 1 3 3 4 3 4	1.7811.781ate AnalyzeC PreparatLCSResult2.062.012.005.85D is basedtUnitsmg/Kg	ed: 20 ion: 20 Units mg/Kg mg/Kg mg/Kg on the s	013-05-09 013-05-09 Dil. 1 1 1 spike and Spike Amount 2.00	Spike Amount 2.00 2.00 6.00 spike duplic: Matrix Result <0.00810	Ma Re <0.0 <0.0 <0.0 ate rest Rec. 103	A Pr sult 20810 20750 20730 20700 ult. Rec Limi 70 - 1	nalyzed 1 repared 1 103 100 98 t RPI 30 0	By: AH By: AH Rec. Limit 70 - 130 70 - 130 70 - 130 70 - 130 RPD Limit 20
4-Bromofluorobenzene (4-BF Laboratory Control Spike QC Batch: 101195 Prep Batch: 85768 Param Benzene Toluene Ethylbenzene Xylene Percent recovery is based on Param Benzene Toluene	e (LCS-1) F the spike res	Da Qd C 1 3 3 3 3 3 3 3 4 4 4 4 4 4 4 4 4 4 4 4	1.781ate AnalyzeC PreparatLCSResult2.062.012.005.85D is basedtUnitsmg/Kgmg/Kg	.80 1 ed: 20 ion: 20 Units mg/Kg mg/Kg mg/Kg on the s Dil. 1 1	013-05-09 013-05-09 Dil. 1 1 1 1 1 spike and Spike Amount 2.00 2.00	Spike Amount 2.00 2.00 6.00 spike duplic: Matrix Result <0.00810 <0.00750	Ma Re <0.0 <0.0 <0.0 ate rest Rec. 103 100	A Pr sult 20810 20750 20700 20000 20000 2000 20000 2000000	nalyzed 1 repared 1 103 100 100 98 t RP1 30 0 30 0	By: AH By: AH Rec. Limit 70 - 130 70 - 130 70 - 130 70 - 130 RPD Limit 20 20
4-Bromofluorobenzene (4-BF Laboratory Control Spike QC Batch: 101195 Prep Batch: 85768 Param Benzene Toluene Ethylbenzene Xylene Percent recovery is based on Param Benzene	e (LCS-1) F the spike res	Da Qd C 1 3 3 3 3 3 3 3 3 1 3 3 1 3 3 1 3 3 1 3 3 4 3 4	1.7811.781ate AnalyzeC PreparatLCSResult2.062.012.005.85D is basedtUnitsmg/Kg	.80 1 ed: 20 ion: 20 Units mg/Kg mg/Kg mg/Kg on the s Dil. 1	013-05-09 013-05-09 Dil. 1 1 1 spike and Spike Amount 2.00	Spike Amount 2.00 2.00 6.00 spike duplic: Matrix Result <0.00810	Ma Re <0.0 <0.0 <0.0 ate rest Rec. 103	A Pr sult 20810 20750 20730 20700 ult. Rec Limi 70 - 1	nalyzed 1 repared 1 103 100 100 98 t RPI 30 0 30 0 30 0	By: AH By: AH Rec. Limit 70 - 130 70 - 130 70 - 130 70 - 130 RPD Limit 20

Report Date: May 9, 2013 112C04998	Work Order: 13050801 COG/Dodd Fed. #128						Page Number: 12 of 20 Eddy Co., NM			
control spikes continued	LCS	LCSD			0	I OP	I COD	Dura		
Surrogate	Result	Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit		
	LCS	LCSD			Spike	LCS	LCSD	Rec.		
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit		
Trifluorotoluene (TFT)	1.90	1.90	mg/Kg	1	2.00	95	95	70 - 130		
4-Bromoffuorobenzene (4-BFB)	1.97	1.92	mg/Kg	1	2.00	98	96	70 - 130		

Matrix Spike (MS-1) Spiked Sample: 328063

QC Batch: Prep Batch:		Date Analyzed: QC Preparation:		Analyzed By: Prepared By:	
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				\mathbf{MS}			Spike	Matrix		Rec.
Param		\mathbf{F}	С	Result	Units	Dil.	Amount	Result	Rec.	Limit
DRO	Qs	Qs	1	3170	mg/Kg	5	250	3530	-144	70 - 130
Denerst account in based on a	he and	0.00000		D is been	un the mile	a and a	ilea dun liaste			<u></u>

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.	Linit	RPD	Limit
DRO	Qs	Qs	1	3370	mg/Kg	5	250	3530	-64	70 - 130	6	20
Percent recovery is based on t	the s	pike	esul	t. RPD is	s based on	the s	oike and sp	ike duplic	ate resi	ılt.	<u>, ", ", "</u> , ",	

			MS	MSD			Spike	MS	MSD	Rec.
Surrogate			Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
n-Tricosane	Qar	Qar	554	639	mg/Kg	5	100	554	639	70 - 130

Matrix Spike (xMS-1) Spiked Sample: 328086

QC Batch: Prep Batch:	101192 85765										
Param		F	СІ	MS Result	Units	Dil.	Spike Amount		atrix esult I	lec.	Rec. Limit
DRO			1	763	mg/Kg	1	250	2	189	110	70 - 130
Percent recov	very is based on the spike	e resu	lt. RPD	is based o	on the s	pike and sp	ike duplic	ate res	ult.		
			MSD			Spike	Matrix		Rec.		RPD
Param	F	С	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
DRO		1	756	mg/Kg	1	250	489	107	70 - 130	1	20

Report Date: May 9, 2013	Work Order: 13050801	Page Number: 13 of 20
112C04998	COG/Dodd Fed. #128	Eddy Co., NM

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

			${ m MS}$	MSD			Spike	MS	MSD	Rec.
Surrogate			Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
n-Tricosane	Qør	Qsr	185	178	m mg/Kg	1	100	185	178	70 - 130

Matrix Spike (MS-1) Spiked Sample: 328094

QC Batch:	101193	Date Analyzed:	2013-05-09	Analyzed By:	AH
Prep Batch:	85766	QC Preparation:	2013-05-09	Prepared By:	AH

			\mathbf{MS}			Spike	Matrix		Rec.
Param	\mathbf{F}	С	Result	Units	Dil.	Amount	Result	Rec.	Limit
GRO		1	14.2	mg/Kg	1	20.0	7.56	33	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
GRO		1	16.0	mg/Kg	1	20.0	7.56	45	70 - 130	$1\overline{6}$	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)	1.62	1.60	mg/Kg	1	2	81	80	70 - 130
4-Bromofluorobenzene (4-BFB)	1.84	1.78	mg/Kg	1	2	92	89	70 - 130

Matrix Spike (MS-1) Spiked Sample: 328094

Ethylbenzene

Xylene

QC Batch: Prep Batch:	101195 85768				ate Analy: C Prepara		8-05-09 8-05-09			Analyzed Prepared	v
Ð			D	G	MS	TT •.	Du	Spike	Matrix	n	Rec.
Param			\mathbf{F}	C	Result	Units	Dil.	Amount	Result	Rec.	Limit
Benzene		Q×	Qs	1	1.38	mg/Kg	1	2.00	< 0.00810	69	70 - 130
Toluene		\mathbf{Q}_{k}	Q_F	1	1.39	m mg/Kg	1	2.00	< 0.00750	70	70 - 130

mg/Kg

ing/Kg

1

1

2.00

6.00

72

70

< 0.00730

< 0.00700

70 - 130

70 - 130

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

1

1

1.43

4.22

Report Date: May 9, 2013 112C04998				Work Or COG/Do					Page Number: 14 of 20 Eddy Co., NM			
matrix spikes continued									-			
			MSD			Spike	Matrix		Rec.		RPD	
Param	F	_C	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit	
			MSD			Spike	Matrix		Rec.		RPD	
Param	F	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit	
Benzene		1	1.50	mg/Kg	1	2.00	< 0.00810	75	70 - 130	8	20	
Toluene		1	1.50	mg/Kg	1	2.00	< 0.00750	75	70 - 130	8	20	
Ethylbenzene		1	1.55	mg/Kg	1	2.00	< 0.00730	78	70 - 130	8	20	
Xylene		1	4.55	mg/Kg	1	6.00	< 0.00700	76	70 - 130	8	20	

	\mathbf{MS}	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	1.87	1.87	mg/Kg	1	2	94	94	70 - 130
4-Bromofluorobenzene (4-BFB)	1.93	1.88	mg/Kg	1	2	96	94	70 - 130

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Report Date: May 9, 2013 112C04998

Calibration Standards

Standard (CCV-1)

QC Batch:	101190		Date	Analyzed:	2013-05-09		Analyz	zed By: CW
				CCVs	CCVs	CCVs	Percent	
				True	Found	$\operatorname{Percent}$	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		1	mg/Kg	250	254	102	80 - 120	2013-05-09

Standard (CCV-2)

QC Batch:	101190		Date	Analyzed:	2013-05-09		Analy	zed By: CW
				CCVs	CCVs	CCVs	Percent	D
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		1	mg/Kg	250	251	100	80 - 120	2013-05-09

Standard (CCV-3)

QC Batch:	101190		Date	Analyzed:	2013-05-09		Analy	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	246	98	80 - 120	2013-05-09

Standard (CCV-4)

QC Batch:	101190		Date	Analyzed:	2013-05-09		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	238	95	80 - 120	2013-05-09

'lag Cert	Date A Units mg/Kg	CCVs True Conc.	2013-05-09 CCVs Found	CCVs	Analyz	ed By: CV
	Units	CCVs True Conc.	CCVs		Analyz	ad Bro CW
		True Conc.				set by: Cv
		Conc.	Found		Percent	
				Percent	Recovery	Date
J	mg/Kg		Conc.	Recovery	Limits	Analyze
		250	252	101	80 - 120	2013-05-(
	Date 1	Analyzed:	2013-05-09		Analyz	ed By: CV
		CCVs	CCVs	CCV ₈	Percent	
						Date
`lag Cert					Limits	Analyze
IGE UCH	Units	Conc.	Conc.		80 - 120	2013-05-0
	Units mg/Kg	Conc. 250	266	106		2010.00 (
	mg/Kg	250		106		ed By: CW
	mg/Kg	250 Analyzed: CCVs	266 2013-05-09 CCVs	CCVs	Analyz Percent	ed By: CW
1	mg/Kg Date J	250 Analyzed: CCVs True	266 2013-05-09 CCVs Found	CCVs Percent	Analyz Percent Recovery	ed By: CW Date
ı 'lag Cert	mg/Kg Date J Units	250 Analyzed: CCVs True Conc.	266 2013-05-09 CCVs Found Conc.	CCVs Percent Recovery	Analyz Percent Recovery Limits	ed By: CW Date Analyzee
1	mg/Kg Date J	250 Analyzed: CCVs True	266 2013-05-09 CCVs Found	CCVs Percent	Analyz Percent Recovery	ed By: CW Date
ı 'lag Cert	mg/Kg Date J Units	250 Analyzed: CCVs True Conc.	266 2013-05-09 CCVs Found Conc.	CCVs Percent Recovery	Analyz Percent Recovery Limits	ed By: CW Date Analyzee
ı 'lag Cert	mg/Kg Date A Units mg/Kg	250 Analyzed: CCVs True Conc. 250	266 2013-05-09 CCVs Found Conc.	CCVs Percent Recovery	Analyz Percent Recovery Limits 80 - 120	ed By: CW Date Analyzed
ı 'lag Cert	mg/Kg Date A Units mg/Kg	250 Analyzed: CCVs True Conc. 250 Analyzed: CCVs	266 2013-05-09 CCVs Found Conc. 279 2013-05-09 CCVs	CCVs Percent Recovery 112 CCVs	Analyz Percent Recovery Limits 80 - 120 Analyz Percent	ed By: CW Date Analyzed 2013-05-(zed By: AF
ı 'lag Cert	mg/Kg Date A Units mg/Kg	250 Analyzed: CCVs True Conc. 250 Analyzed:	266 2013-05-09 CCVs Found Conc. 279 2013-05-09	CCVs Percent Recovery 112	Analyz Percent Recovery Limits 80 - 120 Analyz	ed By: CW Date Analyzed 2013-05-(
		Date .	Date Analyzed: CCVs True	CCVs CCVs True Found g Cert Units Conc. Conc.	CCVs CCVs CCVs True Found Percent g Cert Units Conc. Conc. Recovery	CCVs CCVs CCVs Percent True Found Percent Recovery g Cert Units Conc. Conc. Recovery Limits

QC Batch: 101193

Date Analyzed: 2013-05-09

Analyzed By: AH

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Report Date: 112C04998	Report Date: May 9, 2013 112C04998			Work Order: COG/Dodd	Page Number: 17 of 20 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	0.910	91	80 - 120	2013-05-09

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Standard (CCV-3)

QC Batch: 1	.01193		Date	Analyzed:	2013-05-09		Analyzed By: AH			
Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed		
GRO		1	mg/Kg	1.00	0.898	90	80 - 120	2013-05-09		

Standard (CCV-1)

QC Batch: 10	1195		Date An	alyzed: 20	Analy	zed By: AH		
				CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	Fla	ag Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		1	mg/kg	0.100	0.102	102	80 - 120	2013-05-09
Toluene		1	mg/kg	0.100	0.0988	99	80 - 120	2013-05-09
Ethylbenzene		t	mg/kg	0.100	0.0974	97	80 - 120	2013-05-09
Xylene		1	mg/kg	0.300	0.284	95	80 - 120	2013-05-09

Standard (CCV-2)

QC Batch: 101195			Date An	Analyzed By: Al								
				CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date				
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed				
Benzene		1	mg/kg	0.100	0.0961	96	80 - 120	2013-05-09				
Toluene		1	mg/kg	0.100	0.0932	93	80 - 120	2013-05-09				
Ethylbenzene		1	mg/kg	0.100	0.0915	92	80 - 120	2013-05-09				
Xylene		1	mg/kg	0.300	0.269	90	80 - 120	2013-05-09				

Report Date: May 9, 112C04998	2013			rk Order: 13 G/Dodd Fee	Page Number: 18 of 20 Eddy Co., NM							
Standard (CCV-3)												
QC Batch: 101195			Date An	alyzed: 20	Analyzed By: AH							
				CCVs	CCVs	CCVs	Percent					
				True	Found	Percent	Recovery	Date				
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed				
Benzene		i	mg/kg	0.100	0.0986	99	80 - 120	2013-05-09				
Toluene		1	mg/kg	0.100	0.0962	96	80 - 120	2013-05-09				
Ethylbenzene		1	mg/kg	0.100	0.0948	95	80 - 120	2013-05-09				
Xylene		1	nıg/kg	0.300	0.278	93	80 - 120	2013-05-09				

Work Order: 13050801 COG/Dodd Fed. #128 Page Number: 19 of 20 Eddy Co., NM

Appendix

Report Definitions

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

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	T104704392-12-4	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

Result Comments

Report Date: May 9, 2013 112C04998 Work Order: 13050801 COG/Dodd Fed. #128 Page Number: 20 of 20 Eddy Co., NM

1 Dilution due to turbidity.

2 Dilution due to turbidity.

3 Dilution due to turbidity.

Attachments

The scanned attachments will follow this page. Please note, each attachment may consist of more than one page.

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