SITE INFORMATION

General Site in	formation:	M. Carley Mary		a da se cara da da	e states	这个 ^的 了,这个时候还是这个中国的,		
Site:		Myox 29	State Com #3H					
Company:		COG Ope	erating LLC					
Section, Town	ship and Range	Unit N	Sec 29	T25S	R28E			
Lease Number		API# 30-0	15-39404					
County:		Eddy Cou	unty					
GPS:			32.09375°	N		104.11177° W		
Surface Owner	<u> </u>	State						
Mineral Owner	* * 		T 1 005 (D					
		road. Trav follow the r	el 1.3 miles on the oad to the west 1	e caliche road a .0 miles to the lo	nd turn sout ocation.	th. Travel south approx 0.4 mil	les and	
Release Data: Date Released: Type Release:		11/17/201 Produced	2 Water		<u> </u>	RECEIVED 1	X X X X	
Source of Conta	amination:	Stroage T	Stroage Tank					
Eluid Released		12 bbls	12 bbls APR 2 3 2013					
r laid r leicabea.	əd:	10 bbls						
Fluids Recovered		the second s			******* #* ##** I THE INVOL CLONED **		教育学家的人	
Fluids Recovere	unication.	\$**? * *6%				NMOUD ARIES A	1 Mar 1 - 1	
Fluids Recovere Official Comm Name:	unication:				Ike Tava	NMOCU ARIES A		
Fluids Recover Official Comm Name: Company:	Pat Ellis COG Operating, L	LC		4¥£228	Ike Tava Tetra Teo	NMOCO-ARIESTA rez ch		
Fluids Recover Official:Comm Name: Company: Address:	Pat Ellis COG Operating, L One Concho Cent	LC ter			Ike Tava Tetra Teo 1910 N.	rez ch Big Spring		
Fluids Recover Official Comm Name: Company: Address:	Pat Ellis COG Operating, L One Concho Cent 600 W. Illinois Ave	LLC ter e.			Ike Tava Tetra Teo 1910 N.	RMOUD AHIESTA rez ch Big Spring		
Fluids Recover Official:Comm Name: Company: Address: City:	Pat Ellis COG Operating, L One Concho Cent 600 W. Illinois Ave Midland Texas, 79	LLC ter e. 9701			Ike Tava Tetra Teo 1910 N. Midland,	NMOCO-ARIESTA rez ch Big Spring Texas		
Fluids Recovere Official:Comm Name: Company: Address: City: Phone number:	Pat Ellis COG Operating, L One Concho Cent 600 W. Illinois Av Midland Texas, 79 (432) 686-3023	LC ter e. 9701			Ike Tava Tetra Teg 1910 N. I Midland, (432) 682	NMOCD-AHIESTA rez ch Big Spring Texas 2-4559		
Fluids Recovere Official Comm Name: Company: Address: City: Phone number: Fax:	Pat Ellis Pat Ellis COG Operating, L One Concho Cent 600 W. Illinois Ave Midland Texas, 79 (432) 686-3023 (432) 684-7137	LC ter e. 9701			Ike Tava Tetra Tec 1910 N. Midland, (432) 682	NMOCO-AHIESTA rez ch Big Spring Texas 2-4559		
Fluids Recover Official:Comm Name: Company: Address: City: Phone number: Fax: Email:	Pat Ellis Pat Ellis COG Operating, L One Concho Cent 600 W. Illinois Ave Midland Texas, 79 (432) 686-3023 (432) 684-7137 pellis@conchores	LLC ter e. 9701			Ike Tava Ike Tava Tetra Tec 1910 N. Midland, (432) 682 ike.tava	NMOCO-ARIESTA rez ch Big Spring Texas 2-4559 rez@tetratech.com		

Depth to Groundwater:	Ranking Score	Site Data	
<50 ft	20	20	
50-99 ft	10	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)		



March 4, 2013

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

HECEIVED APR 23 2013 MOCD ARTESIA

Re: Closure Report for the COG Operating LLC., Myox 29 State Com #3H Well, Section 29, Township 25 South, Range 28 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 Myox 29 State Com #3H well located in Unit N, Section 29, Township 25 South, Range 28 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.09375°, W 104.11177°. 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 November 17, 2012, and released approximately twelve two (12) barrels of produced fluid from a storage tank. Ten (10) barrels of standing fluids were recovered. The spill initiated in the pasture on the southwest edge of the pad adjacent to the lease road entering the well location. The initial C-141 form is enclosed in Appendix A.

Groundwater

According to the New Mexico State Engineers Office no water wells were listed within Section 29, but two wells were listed in Sections 20 and 28 with depths to groundwater of 96.0' and 90.0' below surface, respectively. According to the NMOCD groundwater map, one well is listed in Section 29 with a depth to groundwater of 15.0' below surface. This well appears to be located near a draw with a relative elevation of 2969'. The site relative elevation is approximately 2974', which indicates the groundwater depth at

Tetra Tech



the site could be at approximately 20.0' below surface. Based on the limited groundwater data, Tetra Tech will inventory water wells in the area and confirm the groundwater depth from any water wells accessible near the area. The groundwater data is shown on 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 100 mg/kg.

Soil Assessment and Analytical Results

On December 6, 2012, 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 and spill area are shown on Figure 3.

Referring to Table 1, none of the auger hole samples exceeded the RRAL for either TPH or BTEX. A shallow chloride impact was detected in all auger holes with the maximum chloride concentration of 2,960 mg/kg detected in the area of AH-6 at 0-1.0'. Auger holes (AH-1, AH-3, AH-4, AH-6 and AH-7) did show a surface chloride impact at 0-1' and 1-1.5' below surface which significantly declined with depth. The chloride concentrations spiked in the areas of AH-2, AH-4, AH-6 and AH-7 at 5-5.5' to 1,030 mg/kg 2,110 mg/kg, 1,130 mg/kg and 1,370 mg/kg, respectively. These areas were not vertically defined.



Remediation and Conclusion

Based on the approved work plan, Tetra Tech personnel supervised the excavation of the site. The excavated areas and depths are highlighted in Table 1 and shown on Figure 4. The final excavation depths of the soil remediation were met as stated in the approved work plan. Approximately 40 cubic yards of soil were excavated and transported to the R360 facility for proper disposal.

As proposed in the work plan, a background trench was installed at the site. The sampling results are shown in Table 1. Referring to Table 1, the background chlorides showed highs of 888 mg/kg at 8.0' and 3,360 mg/kg at 10.0' below surface. A trench (T-1) was installed in the areas of AH-4 to define extents and showed a chloride of 2,030 mg/kg at 7.0' below surface. Deeper samples were not collected due to the dense formation. The chloride concentrations detected appear to be background.

Based on the background chlorides, AH-1 and AH-3 were excavated to a depth of 1.0' below and 2.0' in the areas of AH-6 and AH-7. The remaining areas were not excavated as the deeper chlorides appeared to be background concentrations.

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, TETRATECH lke Tavarez. PG

Senior Project Manager

cc: Pat Ellis - COG

Figures









Drawn By: Isabel Marmolejc



Onevn By: (sabel Marmole)

Tables

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7

Table 1COG Operating LLC.Myox 29 State Commingle #3HEddy County, New Mexico

Sample ID	Sample Date	Sample	Soil Status		-	TPH (mg/kg)			Toluene	Ethlybenzene	Xylene Total		Chloride
Sample ID	Sample Date	Depth (ft)	In-Situ	Removed	GRO	DRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
AH-1	12/6/2012	0-1		X	<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	1,660
	n	1-1.5	X		-	-	-	-	-	-	-	-	320
	ti .	2-2.5	Х		-	-	-	-	-	-	-	-	305
		3-3.5	X		-	-	-	-	-	-	-	-	1,410
	u	4-4.5	X		-	-	-	-	-	-	-	-	635
	11	5-5.5	Х		-	-	-	-	-	-	-		769
AH-2	12/6/2012	0-1	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	821
	12	1-1.5	X		-	-	-	-	-	-	-	-	138
	I#	2-2.5	X		-	-	-	-	-	-	-	-	1,120
	13	3-3.5	X		-	-	-	-	-	-	-	-	1,020
	11	4-4.5	X		-	-	-	-	-	-	-	-	1,030
AH-3	12/6/2012	0-1		X	<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	1,800
	=======================================	1-1.5	Х		-	-	-	-	-	-	-	-	306
	11	2-2.5	Х		-	-	-	-	-	-	-	-	38.9
	11	3-3.5	Х		-	-	-	-	-	-	-	-	126
	18	4-4.5	X		-	-	-	-	-	-	-	-	122
	10	5-5.5	Х		-	-	-	-	-	-	-	-	112

Table 1COG Operating LLC.Myox 29 State Commingle #3HEddy County, New Mexico

Sample ID	Somela Data	Sample	Soil	Status	-	ГРН (mg/k	g)	Benzene Toluene	ne Toluene Ethlybenzene	Ethlybenzene	e Xylene Total		Chloride
	Sample Date	Depth (ft)	In-Situ	Removed	GRO	DRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
AH-4	12/6/2012	0-1	Х		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	948
	11	1-1.5	Х		-	-	-	-	-	-	-	-	486
	11	2 - 2.5	Х		-	-	-	-	-	-	-	-	141
	n	3-3.5	Х		-	-	-	-	-	-	-	-	108
	n	4-4.5	Х		-	-	-	-	-	-	-	-	537
	N	5-5.5	Х		-	-	-	-	-		-	-	2,110
T-1	2/19/2013	3	Х		-	-	-	-	-	-	-	-	152
	11	5	Х		-	-	-	-	-	-	-		1,620
	11	7	Х		-	-	-	-	-		-	-	2,030
AH-5	12/6/2012	0-1	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	734
	lt	1-1.5	Х		-	-	-	-	-	-	-	-	251
	11	2-2.5	Х		-	-	-	-	-	-	-	-	320
	là	3-3.5	Х		-	-	-	-	-	-	-	-	463
	n	4-4.5	Х		-	-	-	-	-	-	-	-	389
	II	5-5.5	Х		-	-	-	-	-	-	-	-	54.2

Table 1 COG Operating LLC. Myox 29 State Commingle #3H Eddy County, New Mexico

Sample ID	Sample Date	Sample	Soil Status TPH (mg/kg)		Benzene Toluene		ne Ethlybenzene	Xylene Total		Chloride			
Sample ID		Depth (ft)	In-Situ	Removed	GRO	DRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
AH-6	12/6/2012	0-1:57		× X -	<8.00	<50.0	≤50.0	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	2,960
	li	1-1.5		X									2,880
	11	2-2.5	X		-	-	-	-	-	-	-	-	440
	11	3-3.5	Х		-	-	-	-	-	_	-	-	284
	11	4-4.5	Х		-	-	-		-	-	-	-	660
	11	5-5.5	Х		-	-	-	-	-	-	-	-	1,130
AH-7	12/6/2012	-0-1		X	\$ <4.00	<50.0	₹\$0:0	<0.0200	<0.0200	<0.0200	<0.0200	<0.020Õ	1,630
	11	1-1.5		X			Constant of the second s						2,420
	11	2-2.5	X		_		-	_	-	-	-	-	812
	11	3-3.5	X		-		-	-	-	-	-	-	1,380
	11	4-4.5	Х		-	-	-	-	-	-	-	-	1,790
	ii	5-5.5	Х		-		-		-	-	-		1,370
Background	2/18/2013	0	X		-	-	-	-	-	-	-	-	<20
	11	2	X		-	-	-	-	-	-	-	-	60.9
	11	4	Х		-	-	-	-	-		-	-	81.2
	11	6	X		-	-	-	-	-	-	-	-	264
	11	8	Х		-	-	-		-	-	-	-	888
	n	10	Х		-	-	-	-	-	-	-	-	3,360





Photos





View West – Area of AH-6 and AH-7



View East – Area of AH-3





TETRA TECH



View West - Area of AH-1



View South - Backfill

Appendix A

State of New Mexico Energy Minerals and Natural Resources

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



Release Notification and Corrective Action

		OPERATOR	[Initial Report	🛛 Final Report
Name of Company	COG Operating LLC	Contact	Pat Ellis		
Address 600 West	Illinois Avenue, Midland, TX 79701	Telephone No.	(432) 230-0077	7	
Facility Name	Myox 29 State Com #3H	Facility Type	Well Locatio	n	
Surface Owner: State	Mineral Owner	· · · · · · · · · · · · · · · · · · ·		Lease No. (API#)	30-015-39404

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County				
N	29	258	28E						Eddy			
}				1								

Latitude N 32.09375° Longitude W 104.11177°

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release 12 bbls	Volume R	ecovered 10 bbls
Source of Release: Storage Tank	Date and Hour of Occurrence 11/17/2012	Date and I 11/17/201	Hour of Discovery 2 7:00 a.m.
Was Immediate Notice Given?	If YES, To Whom?		
🗌 Yes 🛛 No 🖾 Not Required			
By Whom? Josh Russo	Date and Hour 3/15/10 4:59 p.m.	·	
Was a Watercourse Reached?	If YES, Volume Impacting the Wa	tercourse.	
Yes 🗶 No	N/A		
If a Watercourse was Impacted, Describe Fully.*			
Describe Cause of Problem and Remedial Action Taken.*			
A 2" valve was left open on a storage tank which allowed the release of fl	uid. The valve has been sealed to pre-	event reoccuri	ence.
Describe Area Affected and Cleanup Action Taken.*			
Tates Task newspaped increased the site and collected complex to define the	e spille extent. Soil that exceeded DD		und and boulad amon fan
proper disposal. The site was then brought up to surface grade with clean	backfill material. Tetra Tech prepared	AL was remo 1 a closure rei	ort and submitted it to
NMOCD for review.	F· · P·		
I hereby certify that the information given above is true and complete to the regulations all operators are required to report and/or file certain release n	the best of my knowledge and understand or the second second second second second second second second second s	and that pursu	ant to NMOCD rules and
public health or the environment. The acceptance of a C-141 report by th	e NMOCD marked as "Final Report"	does not relie	we the operator of liability
should their operations have failed to adequately investigate and remediat	e contamination that pose a threat to g	ground water,	surface water, human health
or the environment. In addition, NMOCD acceptance of a C-141 report d	oes not relieve the operator of respon	sibility for co	mpliance with any other
Tederal, state, of local laws and/of regulations.	OIL CONSERV		
	<u>OIL CONSER</u>	VATION	DIVISION
Signature:			
Distribution in T	Approved by District Supervisor:		
Printed Name: Ike Tavarez			
Title: Project Manager	Approval Date:	Expiration D	ate:
E-mail Address: Ike Tayarez@TetraTech.com	Conditions of Approval:		
D mai Address. IK. Tavareze Tenarten.com	Conditions of Approval.		Attached
Date: 3 - 1/- 13 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 Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

			Rele	ease Notific	atio	n and Co	orrective A	ction				
						OPERAT	ror	Þ	Initia	al Report		Final Report
Name of Co	mpany	COG OP	ERATIN	G LLC		Contact	Pa	at Ellis				
Address	600 We	st Illinois A	venue, M	idland, TX 7970)1	Telephone N	No. 432-	230-0077	,			
Facility Nar	ne	Myox 29	State Co	m #3H		Facility Type Well location						
Surface Ow	ner State			Mineral O	wner		·····		Lease N	lo. (API#)	30-01	5-39404
				LOCA	TIO	N OF REI	EASE					
Unit Letter	Section	Townshin	Range	Feet from the	North	South Line	Feet from the	Fast/We	st Line	County		
N	29	258	28Ē								Eddy	
Latitude 32 05.669 Longitude 104 06.699 NATURE OF RELEASE												
Type of Rele	ase Produ	uced water		· · · · · · · · · · · · · · · · · · ·		Volume of	Release 12bbls	1	/olume F	lecovered	10bbls]
Source of Release Storage tank						Date and H 11/17/2012	lour of Occurrenc	e [Date and 1/17/201	Hour of Dis 2 7:00 a.n	covery 1.	
Was Immedia	ate Notice (Given?	Yes 🛛	No 🖾 Not Re	quired	If YES, To	Whom?	K				
By Whom?						Date and H	lour					
Was a Water	course Read	hed?	Yes 🛛	No		If YES, Volume Impacting the Watercourse.						
If a Watercou	irse was Im	pacted, Descr	ibe Fully.'	k		<u> </u>				<u> </u>		
Describe Cau	se of Probl	em and Reme	dial Actio	n Taken.*								
A 2" valve w	as left open	on a storage	tank whicl	n allowed the relea	ase of fl	uid. The valv	e has been sealed	to prevent	reoccur	rence.		
Describe Are	a Affected	and Cleanup	Action Tal	ten.*			*****		<u> </u>			
Initially 12bt southwest ed contaminatio	ols of produ ge of the pa n from the i	ced water wer d adjacent to release and we	e released the lease r e will pres	from the storage to oad entering the went a remediation	tank and vell loca work pl	d we were abl ation. Tetra T an to the NM	e to recover 10bb ech will sample th OCD for approva	ls with a v he spill site I prior to a	acuum ti e area to ny signi	uck. The re delineate ar ficant remed	lease of y possi liation y	courred at the ble work.
I hereby certi regulations a public health should their c or the environ federal, state,	fy that the i ll operators or the environment operations h mment. In a or local law	information gi are required t ronment. The ave failed to a ddition, NMC ws and/or regu	ven above o report an acceptance adequately OCD accept ations.	t is true and compl ad/or file certain re- ce of a C-141 report investigate and re- tance of a C-141 re-	lete to the elease n ort by the emediat report d	he best of my otifications ar e NMOCD m e contaminati oes not reliev	knowledge and u nd perform correc arked as "Final R on that pose a thr e the operator of r	inderstand ctive action eport" doe reat to grou responsibil	that purs is for relies not relied ind water lity for c	suant to NM eases which eve the ope surface wa compliance v	OCD ru may er rator of ater, hu vith any	ales and adanger liability man health other
Signature		21	7.				OIL CON	SERVA	TION	DIVISIO	<u>)N</u>	
Printed Name		Josh	Russo	>		Approved by	District Supervis	or:				
Title:		Senior Enviro	nmental C	oordinator		Approval Dat	e:	Ex	piration	Date:		
E-mail Addre	255:	jrusso@c	concho.co	m		Conditions of	Approval:			Attached		
Date: 11	/29/2012	Phone	: 432	-212-2399								

* Attach Additional Sheets If Necessary

Appendix B

Water Well Data Average Depth to Groundwater (ft) Myox 29 State Commingle #3H Eddy County, New Mexico

	24 Sc	outh	uth 27 East					
6	5	4	3	2	1			
7	8 26	9 43	10	11	12 27			
18 34	17	16	15	14	13 3 1			
19	20	21	22 70	23	24			
30	29	28	27	26	25			
31	32	33	34	35	36			

		24	4 Sa	outh	1	28	Ea	st			
6	70	5	30	4	30	3		2	55	1	60
7		8	50	9		10		11		12	
						17		20		73	
18		17		16		15		14		13	
		42		29		18		52		34	
19		20 48		21		22		23		24	
30		29		28		27		26		25	
31		32		33		34		35		36	

	24	South		t	
6	5	4	3	2	1
7 160	8	9	10	11	12
18	17	16 18	15	14	13
19	20	(21	22	23	24
30	29	28	27	26	25
31	32 مىر	33	34	35	36

29 East

	25	South		27 Eas	t
6	5	4	3	2	1
7	8	9	10	11	12 92
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33 19	34	35	36

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

	25 50	outn	28	East	
6	5	4 35	3	2	1
	59		32		
7	8	9	10	11	12
18	17	16	15	14	13
67			48 49		
19	20	21	22	23	24
	96				2
30	29 15	28	27	26	25
	SITE	90		30	
31	32	33	34	35	36
]	ļ			40 (

6	5	4	3	2	1
40					
	8	9	10	11	12
Γ r	[40		
لىر 18	17	16	15	14	13
			60		
19	20	21	22	23	24
30	29	28	27	26	25
30					
31	32	33	34	35	36

25 South

	26	South	2	28 East	
6	5	4	3	2 1 20	1 ~~
7	8	9	10	11	12 100
18	17	16	15	14 120	13 56
19	20	21	22 120	23	24
30	29	28	27	26	25
31	32	33	34	35	36

	26 So	outh	29) East	
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22 57 69	23	24
30 了	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: March 1, 2013

Work Order: 13022008

Project Location:	Eddy Co., NM
Project Name:	COG/Myox 29 State Com. #3H
Project Number:	114-6401608

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
321699	BG 0' Background	soil	2013-02-18	00:00	2013-02-20
321700	BG 2' Background	soil	2013-02-18	00:00	2013-02-20
321701	BG 4' Background	soil	2013-02-18	00:00	2013-02-20
321702	BG 6' Background	soil	2013-02-18	00:00	2013-02-20
321703	BG 8' Background	soil	2013-02-18	00:00	2013-02-20
321704	BG 10' Background	soil	2013-02-18	00:00	2013-02-20
321705	T-1 (AH-4) 3'	soil	2013-02-19	00:00	2013-02-20
321706	T-1 (AH-4) 5'	soil	2013-02-19	00:00	2013-02-20
321707	T-1 (AH-4) 7'	soil	2013-02-19	00:00	2013-02-20

Sample: 321699 - BG 0' Background

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

Sample: 321700 - BG 2' Background

Param	Flag	Result	\mathbf{Units}	\mathbf{RL}
Chloride		60.9	mg/Kg	4

Sample: 321701 - BG 4' Background

continued ...

Report Date: March 1, 2013		Work Order: 13022008	Page I	Number: 2 of 2
sample 321701 cont	tinued			
Param	Flag	Result	Units	RL
Param	Flag	Result	Units	RL
Chloride		81.2	mg/Kg	4
Sample: 321702 -	- BG 6' Background			
Param	Flag	Result	Units	RL
Chloride		264	mg/Kg	4
Sample: 321703 -	BG 8' Background			
Param	Flag	Result	Units	RL
Chloride	• • • • • • • • • • • • • • • • • • •	888	mg/Kg	4
Sample: 321704 -	BG 10' Background			
Sample: 321704 -	· BG 10' Background			
Sample: 321704 - Param Chloride	BG 10' Background Flag	Result 3360	Units mg/Kg	RL 4
Sample: 321704 - Param Chloride Sample: 321705 -	• BG 10' Background Flag • T-1 (AH-4) 3'	Result 3360	Units mg/Kg	RL 4
Sample: 321704 - Param Chloride Sample: 321705 - Param	BG 10' Background Flag • T-1 (AH-4) 3' Flag	Result 3360 Result	Units mg/Kg Units	RL 4 RL
Sample: 321704 - Param Chloride Sample: 321705 - Param Chloride	• BG 10' Background Flag • T-1 (AH-4) 3' Flag	Result 3360 Result 152	Units mg/Kg Units mg/Kg	RL 4 RL 4
Sample: 321704 - Param Chloride Sample: 321705 - Param Chloride Sample: 321706 -	• BG 10' Background Flag • T-1 (AH-4) 3' Flag T-1 (AH-4) 5'	Result 3360 Result 152	Units mg/Kg Units mg/Kg	RL 4 RL 4
Sample: 321704 - Param Chloride Sample: 321705 - Param Chloride Sample: 321706 - Param	• BG 10' Background Flag • T-1 (AH-4) 3' Flag T-1 (AH-4) 5' Flag	Result 3360 Result 152 Result	Units mg/Kg Units mg/Kg Units	RL 4 RL 4 RL
Sample: 321704 - Param Chloride Sample: 321705 - Param Chloride Sample: 321706 - Param Chloride	BG 10' Background Flag • T-1 (AH-4) 3' Flag T-1 (AH-4) 5' Flag	Result 3360 Result 152 Result 1620	Units mg/Kg Units mg/Kg Units mg/Kg	RL 4 RL 4 RL 4
Sample: 321704 - Param Chloride Sample: 321705 - Param Chloride Sample: 321706 - Param Chloride Sample: 321707 -	BG 10' Background Flag T-1 (AH-4) 3' Flag T-1 (AH-4) 5' Flag T-1 (AH-4) 7'	Result 3360 Result 152 Result 1620	Units mg/Kg Units mg/Kg Units mg/Kg	RL 4 RL 4 RL 4
Sample: 321704 - Param Chloride Sample: 321705 - Param Chloride Sample: 321706 - Param Chloride Sample: 321707 - Param	BG 10' Background Flag T-1 (AH-4) 3' Flag T-1 (AH-4) 5' Flag T-1 (AH-4) 7' Flag	Result 3360 Result 152 Result 1620	Units mg/Kg Units mg/Kg Units mg/Kg Units	RL 4 RL 4 RL 4



(BioAquatic) 2501 Mayes Rd., Suite 100

Carroliton.

Texas 75006 E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

972-242-7750

Certifications

DoD LELAP WBE HUB NCTRCA DBE NELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

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

Report Date: March 1, 2013

Work Order: 13022008

Project Location: Eddy Co., NM Project Name: COG/Myox 29 State Com. #3H Project Number: 114-6401608

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
321699	BG 0' Background	soil	2013-02-18	00:00	2013-02-20
321700	BG 2' Background	soil	2013-02-18	00:00	2013-02-20
321701	BG 4' Background	soil	2013-02-18	00:00	2013-02-20
321702	BG 6' Background	soil	2013-02-18	00:00	2013-02-20
321703	BG 8' Background	soil	2013-02-18	00:00	2013-02-20
321704	BG 10' Background	soil	2013-02-18	00:00	2013-02-20
321705	T-1 (AH-4) 3'	soil	2013-02-19	00:00	2013-02-20
321706	T-1 (AH-4) 5'	soil	2013-02-19	00:00	2013-02-20
321707	T-1 (AH-4) 7'	soil	2013-02-19	00:00	2013-02-20

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

This report consists of a total of 12 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Michael april

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

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Sample 321700 (BG 2' Background)	5
Sample 321701 (BG 4' Background)	5
Sample 321702 (BG 6' Background)	5
Sample 321703 (BG 8' Background)	6
Sample 321704 (BG 10' Background)	6
Sample 321705 (T-1 (AH-4) 3')	6
Sample 321706 (T-1 (AH-4) 5')	7
Sample 321707 (T-1 (AH-4) $7'$)	7
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Case Narrative

Samples for project COG/Myox 29 State Com. #3H were received by TraceAnalysis, Inc. on 2013-02-20 and assigned to work order 13022008. Samples for work order 13022008 were received intact at a temperature of 0.8 C.

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

		Prep	Prep	\mathbf{QC}	Analysis
Test	Method	Batch	Date	Batch	Date
Chloride (Titration)	SM 4500-Cl B	84150	2013-02-27 at 13:47	99333	2013-02-28 at 13:48

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

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 13022008 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: March 1, 2013 114-6401608 Work Order: 13022008 COG/Myox 29 State Com. #3H Page Number: 5 of 12 Eddy Co., NM

Analytical Report

Sample: 321699 - BG 0' Background

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 99333 84150	Analy Date Samp	rtical Method: Analyzed: le Preparation:	SM 4500-Cl B 2013-02-28 2013-02-27	Prep Method: Analyzed By: Prepared By:	N/A AR AR
Parameter	Flag	Cert	RL Besult	Unite	Dilution	BL.
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 321700 - BG 2' Background

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration 99333 84150)	Analytic Date Ar Sample	cal Method: nalyzed: Preparation:	SM 4500-Cl B 2013-02-28 2013-02-27	Prep Method: Analyzed By: Prepared By:	N/A AR AR
				RL			
Parameter	I	lag	\mathbf{Cert}	Result	Units	Dilution	RL
Chloride				60.9	mg/Kg	5	4.00

Sample: 321701 - BG 4' Background

Laboratory:	Midland					
Analysis:	Chloride (Titration)	Analytic	al Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	99333	Date An	alyzed:	2013-02-28	Analyzed By:	AR
Prep Batch:	84150	Sample Preparation:		2013-02-27	Prepared By:	AR
			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			81.2	mg/Kg	5	4.00

Report Date: March 1, 2013	Work Order: 13022008	Page Number: 6 of 12
114-6401608	COG/Myox 29 State Com. #3H	Eddy Co., NM

Sample: 321702 - BG 6' Background

Laboratory:	Midland					
Analysis:	Chloride (Titration)	Analytic	al Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	99333	Date Analyzed:		2013-02-28	Analyzed By:	AR
Prep Batch:	84150	Sample Preparation:		2013-02-27	Prepared By:	AR
			RL			
Parameter	Flag	Cert	Result	Units	Dilution	\mathbf{RL}
Chloride			264	mg/Kg	5	4.00

Sample: 321703 - BG 8' Background

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 99333 84150	Analytic Date An Sample I	al Method: alyzed: Preparation:	SM 4500-Cl B 2013-02-28 2013-02-27	Prep Method: Analyzed By: Prepared By:	N/A AR AR
Parameter	Flag	Cert	RL Result	Units	Dilution	\mathbf{RL}
Chloride			888	mg/Kg	5	4.00

Sample: 321704 - BG 10' Background

Chloride			3360	mg/Kg	10	4.00
Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Prep Batch:	84150	Sample Preparation:		2013-02-27	Prepared By:	AR
QC Batch:	99333	Date An	alyzed:	2013-02-28	Analyzed By:	AR
Analysis:	Chloride (Titration)	Analytic	al Method:	SM 4500-Cl B	Prep Method:	N/A
Laboratory:	Midland					

Sample: 321705 - T-1 (AH-4) 3'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	99333	Date Analyzed:	2013-02-28	Analyzed By:	AR
Prep Batch:	84150	Sample Preparation:	2013-02-27	Prepared By:	AR

Report Date: March 1, 2013 114-6401608		Worl COG/My	k Order: 1302200 ox 29 State Com.	Page Number: 7 of 12 Eddy Co., NM		
Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			152	mg/Kg	5	4.00

Sample: 321706 - T-1 (AH-4) 5'

Laboratory: Midland Analysis: Chloride (Titration) QC Batch: 99333 Prep Batch: 84150		Analytic Date An Sample I	al Method: alyzed: Preparation:	SM 4500-Cl B 2013-02-28 2013-02-27	Prep Method: Analyzed By: Prepared By:	N/A AR AR
			\mathbf{RL}			
Parameter	Flag	\mathbf{Cert}	Result	Units	Dilution	\mathbf{RL}
Chloride			1620	mg/Kg	5	4.00

Sample: 321707 - T-1 (AH-4) 7'

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 99333 84150	Ana Date Sam	lytical Method: 9 Analyzed: ple Preparation:	SM 4500-Cl B 2013-02-28 2013-02-27	Prep Method: Analyzed By: Prepared By:	N/A AR AR
			RL			
Parameter	Flag	Cert	\mathbf{Result}	Units	Dilution	RL
Chloride			2030	mg/Kg	10	4.00

Report Date: March 1, 2013 114-6401608

Work Order: 13022008 COG/Myox 29 State Com. #3H Page Number: 8 of 12 Eddy Co., NM

Method Blanks

Method Bla	ank (1)	QC Batch: 99333				
QC Batch: Prep Batch:	99333 84150		Date Analyzed: QC Preparation:	2013-02-28 2013-02-27	Analyzed By Prepared By	y: AR 7: AR
Parameter		Flag	Cert	MDL Result	Units	RL
Chloride		0		<3.85	mg/Kg	4

Report Date: March 1, 2013 114-6401608

Work Order: 13022008 COG/Myox 29 State Com. #3H Page Number: 9 of 12 Eddy Co., NM

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 99333 Prep Batch: 84150			${f Dat} {f QC}$	e Analyze Preparati	d: 201 on: 201	3-02-28 3-02-27			Ana Prej	lyzed By pared By	: AR : AR
Dener		F	a	LCS	T Turita	ויח	Spike	M	latrix	2	Rec.
Chloride		F	C	2440	Units mg/Kg	<u> </u>	2500		$\frac{1}{2.85}$	$\frac{1}{98}$	$\frac{\text{Limit}}{5 - 115}$
Percent recovery is based on the	mike		H RPI) is based	on the s	vike and sr	vike duplic	ate res	sult		
recent recovery is based on the	pine	, 100u	10. 101 1	7 13 Dasca	on one s	one and of	nic dupie		Julio.		
	-	~	LCSE)	DU	Spike	Matrix	n	Rec.	DDD	RPD
Param	Ŀ.	<u> </u>	Resul	t Units	1	Amount	Result	<u>Rec.</u>	Limit	F	Limit
Percent recovery is based on the	mile	rocu) is based	on the s	ike and er	ike dunlie	ato ros			
Matrix Spike (MS-1) Spike	i Sa	mple:	321707	,							
QC Batch: 99333			Dat	e Analyze	d: 201	3-02-28			Ana	lyzed By	: AR
Prep Batch: 84150			QC	Preparatio	on: 201	3-02-27			Pre	pared By	AR
Param		F	С	MS Result	Units	Dil.	Spike Amount	Ma Re	trix sult Re	ec.	Rec. Limit
Chloride				4420	mg/Kg	10	2500	20)30 9	6 78	9 - 121
Percent recovery is based on the s	spike	resu	lt. RPI) is based	on the sp	oike and sp	oike duplic	ate res	sult.		
			MSD			Spike	Matrix		Rec.		RPD
Param	F	С	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride			4890	mg/Kg	10	2500	2030	114	78.9 - 121	10	20

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

Page Number: 10 of 12 Eddy Co., NM

Calibration Standards

Standard (CCV-1)

QC Batch:	99333			Date A	nalyzed: 2	013-02-28		Analyzed By: AR		
					CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date	
Param		Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed	
Chloride				mg/Kg	100	100	100	85 - 115	2013-02-28	

Standard (CCV-2)

QC Batch:	99333			Date A	nalyzed:	2013-02-28		Analy	zed By: AR
					CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param		Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride				mg/Kg	100	99.7	100	85 - 115	2013-02-28

Work Order: 13022008 COG/Myox 29 State Com. #3H Page Number: 11 of 12 Eddy Co., NM

Appendix

Report Definitions

Definition
Method Detection Limit
Minimum Quantitation Limit
Sample Detection Limit

Laboratory Certifications

	Certifying	Certification	Laboratory
С	Authority	Number	Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704392-12-4	Midland

ς

Standard Flags

- F Description
- B Analyte detected in the corresponding method blank above the method detection limit
- H Analyzed out of hold time
- J Estimated concentration
- Jb The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
- Je Estimated concentration exceeding calibration range.
- MI1 Split peak or shoulder peak
- MI2 Instrument software did not integrate
- MI3 Instrument software misidentified the peak
- MI4 Instrument software integrated improperly
- MI5 Baseline correction
- Qc Calibration check outside of laboratory limits.
- Qr RPD outside of laboratory limits
- Qs Spike recovery outside of laboratory limits.
- Qsr Surrogate recovery outside of laboratory limits.
- U The analyte is not detected above the SDL

Attachments
Report Date: March 1, 2013 114-6401608

Work Order: 13022008 COG/Myox 29 State Com. #3H Page Number: 12 of 12 Eddy Co., NM

The scanned attachments will follow this page.

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

13022008		
Analysis Request of Chain of Custod	v Record	PAGE: OF:
		ANALYSIS REQUEST (Circle or Specify Method No.)
TETRATECH 1910 N. Big Spring St. Midland, Texas 79705 (432) 682-4559 • Fax (432) 682-3946		5 (Ext to C35) d Cr Pb Hg Se d Vr Pd Hg Se DS
CLIENT NAME: COG SITE MANAGER: Ike Tavarez	PRESERVATIVE	TX100 5 Ba Co 60/624 270/625
PROJECT NO.: PROJECT NAME: 114-6401608 COG-Mye 29 State Com 34	CONTA	5 MOD. Is Ag A Is Ag A Is Ag A Is Ag A Als A Kol8 B 8240/82 B 608 B 608 B 608 B 608 B 608 S 608 S 608 S 608 S 608 S 608 S 602 S 602 S 6 8240/82 S 6 8240/82 S 6 8240/82 S 6 8240/82 S 6 8240/82 8 8240/82 8 8240/82 8 8240/82 8 8240/82 8 8240/82 8 8 8240/82 8 8 8240/82 8 8 8240/82 8 8 8240/82 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
LAB I.D. NUMBER DATE TIME TIME AND BE SAMPLE IDENTIFICATION	NUMBER OI FILTERED (HCL HCL ICE NONE	PILA 0021 TPH 8011 PAH 8270 RCRA Meta TCLP Volati TCLP Volati TCLP Semi RCI GC.MS Sen GG.MS Vol. GC.MS Sen RCI FCLP Semi RCI Chloride PEst. 808/6 Gamma Sp Chloride PLM (Asbee PLM (Asbee
32/1679 2/18 5 × B60' Bickground	1	
-100 BG 2'		
701 864' 11		
702 866'		
703 868' "		
704 1 86.0' 1		Ϋ́
705 2/19 T-1 CAH-40 2'		
706 T-1 (AH-4) 5'	, , , , , , , , , , , , , , , , , , , ,	
707 V T-1 CAH-4) 7'		
Date: 7 = 7 D= 15 DECEMED BY (Signature)	Date: 2/20/17	SAMPLED BY (Print & Initian
RELINQUISHED BY: (Signature) Date: Image: Contraction Mone March Time: IO35 RELINQUISHED BY: (Signature) Date: Received BY: (Signature)	Time: <u>10.35</u> Date:	SAMPLE SHIPPEDBY: (Circle) AIRBILL #:
Time: 7 RELINQUISHED BY: (Signature) Date: RECEIVED BY: (Signature) RECEIVED BY: (Signature)	Time: Date:	FEDEX BUS HAND DELIVERED UPS OTHER: TETRA TECH CONTACT DEPSON: Results by:
RECEIVING LABORATORY: RECEIVED BY: (Signature)		Ike Taverez RUSH Charges Authorized:
CONTACT: PHONE: DATE: SAMPLE CONDITION WHEN RECEIVED: REMARKS: (), S C	TIME:	Yes No

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

Summary Report

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

Report Date: December 20, 2012

Work Order: 12120719

Project Location:	Eddy Co., NM
Project Name:	COG/Myox 29 State Com. #3H
Project Number:	114-6401608

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
316090	AH-1 (0-1')	soil	2012-12-06	00:00	2012-12-07
316091	AH-1 (1-1.5')	soil	2012-12-06	00:00	2012-12-07
316092	AH-1 (2-2.5')	soil	2012-12-06	00:00	2012-12-07
316093	AH-1 (3-3.5')	soil	2012-12-06	00:00	2012-12-07
316094	AH-1 (4-4.5')	soil	2012-12-06	00:00	2012-12-07
316095	AH-1 (5-5.5')	soil	2012-12-06	00:00	2012-12-07
316096	AH-2 (0-1')	soil	2012-12-06	00:00	2012-12-07
316097	AH-2 (1-1.5')	soil	2012-12-06	00:00	2012-12-07
316098	AH-2 (2-2.5')	soil	2012-12-06	00:00	2012-12-07
316099	AH-2 (3-3.5')	soil	2012-12-06	00:00	2012-12-07
316100	AH-2 (4-4.5')	soil	2012-12-06	00:00	2012-12-07
316101	AH-3 (0-1')	soil	2012-12-06	00:00	2012-12-07
316102	AH-3 (1-1.5')	soil	2012-12-06	00:00	2012-12-07
316103	AH-3 (2-2.5')	soil	2012-12-06	00:00	2012-12-07
316104	AH-3 (3-3.5')	soil	2012-12-06	00:00	2012-12-07
316105	AH-3 (4-4.5')	soil	2012-12-06	00:00	2012-12-07
316106	AH-3 (5-5.5')	soil	2012-12-06	00:00	2012-12-07
316107	AH-4 (0-1')	soil	2012-12-06	00:00	2012 - 12 - 07
316108	AH-4 (1-1.5')	soil	2012-12-06	00:00	2012-12-07
316109	AH-4 (2-2.5')	soil	2012-12-06	00:00	2012-12-07
316110	AH-4 (3-3.5')	soil	2012-12-06	00:00	2012-12-07
316111	AH-4 (4-4.5')	soil	2012-12-06	00:00	2012-12-07
316112	AH-4 (5-5.5')	soil	2012-12-06	00:00	2012-12-07
316113	AH-5 (0-1')	soil	2012-12-06	00:00	2012-12-07
316114	AH-5 (1-1.5')	soil	2012-12-06	00:00	2012-12-07
316115	AH-5 (2-2.5')	soil	2012-12-06	00:00	2012-12-07
316116	AH-5 (3-3.5')	soil	2012-12-06	00:00	2012-12-07
316117	AH-5 (4-4.5')	soil	2012-12-06	00:00	2012-12-07
316118	AH-5 (5-5.5')	soil	2012-12-06	00:00	2012-12-07
316119	AH-6 (0-1')	soil	2012-12-06	00:00	2012-12-07
	TraceAnalysis, Inc. • 6701 A	berdeen Ave., Suite	9 • Lubbock, TX 794	424-1515 • (806)	794-1296

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
316120	AH-6 (1-1.5')	soil	2012-12-06	00:00	2012-12-07
316121	AH-6 (2-2.5')	soil	2012-12-06	00:00	2012-12-07
316122	AH-6 (3-3.5')	soil	2012-12-06	00:00	2012-12-07
316123	AH-6 (4-4.5')	soil	2012-12-06	00:00	2012-12-07
316124	AH-6(5-5.5')	soil	2012-12-06	00:00	2012-12-07
316125	AH-7 (0-1')	soil	2012-12-06	00:00	2012-12-07
316126	AH-7 (1-1.5')	soil	2012-12-06	00:00	2012-12-07
316127	AH-7 (2-2.5')	soil	2012-12-06	00:00	2012-12-07
316128	AH-7 (3-3.5')	soil	2012-12-06	00:00	2012-12-07
316129	AH-7 (4-4.5')	soil	2012-12-06	00:00	2012-12-07
316130	AH-7 (5-5.5')	soil	2012-12-06	00:00	2012-12-07

		B	TEX		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)
316090 - AH-1 (0-1')	< 0.0200	< 0.0200	< 0.0200	< 0.0200	<50.0 Q8	<4.00
316096 - AH-2 (0-1')	< 0.0200	< 0.0200	< 0.0200	< 0.0200	<50.0 Qs	<4.00
316101 - AH-3 (0-1')	< 0.0200	< 0.0200	< 0.0200	< 0.0200	<50.0 Qs	<4.00
316107 - AH-4 (0-1')	< 0.0200	< 0.0200	< 0.0200	< 0.0200	<50.0 Q8	<4.00
316113 - AH-5 (0-1')	< 0.0200	< 0.0200	< 0.0200	<0.0200	<50.0 Qs	<4.00
316119 - AH-6 (0-1')	$< 0.0400^{-1}$	< 0.0400	< 0.0400	<0.0400	<50.0 qs	<8.00 ²
316125 - AH-7 (0-1')	< 0.0200	< 0.0200	< 0.0200	<0.0200	<50.0 qs	<4.00

Sample: 316090 - AH-1 (0-1')

Param	Flag	Result	Units	RL
Chloride		1660	mg/Kg	4

Sample: 316091 - AH-1 (1-1.5')

Param	Flag	Result	Units	RL
Chloride		320	mg/Kg	4

Sample: 316092 - AH-1 (2-2.5')

Param	Flag	\mathbf{Result}	Units	RL
Chloride		305	mg/Kg	4

Sample: 316093 - AH-1 (3-3.5')

²Dilution due to surfactants.

¹Dilution due to surfactants.

Report Date: Decen	nber 20, 2012	Work Order: 12120719	Page	Number: 3 of 7
Param	Flag	Result	Units	\mathbf{RL}
Chloride		1410	mg/Kg	4
Sample: 316094 -	AH-1 (4-4.5')			
Param	Flag	Result	Units	RL
Chloride		635	mg/Kg	4
Sample: 316095 -	AH-1 (5-5.5')			
Param	Flag	Result	Units	\mathbf{RL}
Chloride	0	769	mg/Kg	4
Sample: 316096 -	AH-2 (0-1')			
Param	Flag	Result	Units	RL
Chloride		821	mg/Kg	4
Sample: 316097 -	AH-2 (1-1.5')			
Param	Flag	Result	Units	RL
Chloride		138	mg/Kg	4
Sample: 316098 -	AH-2 (2-2.5')			
Param	Flag	Result	Units	RL
Chloride		1120	mg/Kg	4
G 1 01 0000				
Sample: 316099 -	AH-2 (3-3.5')			
Param	Flag	Result	Units	RL
Chloride		1020	mg/Kg	4
Sample: 316100 -	AH-2 (4-4.5')			
Param	Flag	Result	Units	\mathbf{RL}
Chloride		1030	mg/Kg	4

Report Date: December	20, 2012	Work Order: 12120719	Page	Number: 4 of 7
Sample: 316101 - AH	-3 (0-1')			
Param	Flag	Result	Units	RL
Chloride		1800	mg/Kg	4
Sample: 316102 - AH	-3 (1-1.5')			
Param	Flag	Result	Units	\mathbf{RL}
Chloride		306	mg/Kg	4
Sample: 316103 - AH	-3 (2-2.5')			
Param	Flag	Result	Units	\mathbf{RL}
Chloride		38.9	mg/Kg	4
Sample: 316104 - AH	-3 (3-3.5')			
Param	Flag	Result	Units	RL
Sample: 316105 - AH	-3 (4-4.5')			
Param	Flag	Result	Units	RL
Chloride		122	mg/Kg	4
Sample: 316106 - AH	-3 (5-5.5')			
Param	Flag	Result	Units	\mathbf{RL}
Chloride	· · · · · · · · · · · · · · · · · · ·	112	mg/Kg	4
Sample: 316107 - AH	-4 (0-1')			
Param	Flag	Result	Units	\mathbf{RL}
Chloride		948	mg/Kg	4
Sample: 316108 - AH	-4 (1-1.5')			
Param	Flag	Result	Units	RL
Chloride	0	486	mg/Kg	4
· · · · · · · · · · · · · · · · · · ·			<u> </u>	

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Sample: 316109 - A	H-4 (2-2.5')			
Param	Flag	Result	Units	\mathbf{RL}
Chloride		141	mg/Kg	4
Sample: 316110 - A	H-4 (3-3.5')			
Param	Flag	Result	Units	RL
Chloride		108	mg/Kg	4
Sample: 316111 - A	H-4 (4-4.5')			
Param	Flag	Result	Units	\mathbf{RL}
Chloride		537	mg/Kg	4
Sample: 316112 - A	H-4 (5-5.5')			
Param	Flag	Result	Units	RL
Chloride		2110	mg/Kg	4
Sample: 316113 - A	.H-5 (0-1')			
Param	Flag	Result	Units	RL
Chloride		734	mg/Kg	4
Sample: 316114 - A	.H-5 (1-1.5')			
Param	Flag	Result	Units	RL
Chloride		251	mg/Kg	4
Sample: 316115 - A	AH-5 (2-2.5')			
Param	Flag	Result	Units	\mathbf{RL}
Chloride		320	mg/Kg	4
Sample: 316116 - A	AH-5 (3-3.5')			
Param	Flag	Result	Units	\mathbf{RL}
Chloride	······	463	mg/Kg	4

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Sample: 316117 -	- AH-5 (4-4.5')			
Param	Flag	Result	Units	RL
Chloride		389	mg/Kg	4
Sample: 316118 -	- AH-5 (5-5.5')			
Param	\mathbf{Flag}	Result	Units	RL
Chloride		54.2	mg/Kg	4
Sample: 316119 -	- AH-6 (0-1')			
Param	\mathbf{Flag}	Result	Units	RL
Chloride	<u> </u>	2960	mg/Kg	4
G 1 010100				
Sample: 316120 -	• AH-6 (1-1.5')			
Param	Flag	Result	Units	RL
Chloride		2880	mg/Kg	4
Sample: 316121 - Param	· AH-6 (2-2.5')			זמ
Chloride	Flag	440 Result	Units mg/Kg	KL 4
Chloride Sample: 316122 -	Flag • AH-6 (3-3.5')	440	mg/Kg	4
Chloride Sample: 316122 - Param	Flag • AH-6 (3-3.5') Flag	Result Result	Units mg/Kg Units	4
Chloride Sample: 316122 - Param Chloride	Flag • AH-6 (3-3.5') Flag	Result 440 Result 284	Units mg/Kg Units mg/Kg	RL 4 RL 4
Chloride Sample: 316122 - Param Chloride Sample: 316123 -	Flag • AH-6 (3-3.5') Flag • AH-6 (4-4.5')	Result Result 284	Units mg/Kg Units mg/Kg	RL 4 RL 4
Chloride Sample: 316122 - Param Chloride Sample: 316123 - Param	Flag • AH-6 (3-3.5') Flag • AH-6 (4-4.5') Flag	Result 440 Result 284 Result	Units mg/Kg Units mg/Kg Units	RL 4 RL 4 RL
Chloride Sample: 316122 - Param Chloride Sample: 316123 - Param Chloride	Flag • AH-6 (3-3.5') Flag • AH-6 (4-4.5') Flag	Result 284 Result 660	Units mg/Kg Units mg/Kg Units mg/Kg	RL 4 RL 4 RL 4
Chloride Sample: 316122 - Param Chloride Sample: 316123 - Param Chloride	Flag • AH-6 (3-3.5') Flag • AH-6 (4-4.5') Flag	Result 440 Result 284 Result 660	Units mg/Kg Units mg/Kg Units mg/Kg	RL 4 RL 4 RL 4
Chloride Sample: 316122 - Param Chloride Sample: 316123 - Param Chloride Sample: 316124 -	Flag • AH-6 (3-3.5') Flag • AH-6 (4-4.5') Flag • AH-6 (5-5.5')	Result 284 Result 660	Units mg/Kg Units mg/Kg Units mg/Kg	RL 4 RL 4 RL 4
Chloride Sample: 316122 - Param Chloride Sample: 316123 - Param Chloride Sample: 316124 - Param	Flag • AH-6 (3-3.5') Flag • AH-6 (4-4.5') Flag • AH-6 (5-5.5') Flag	Result 440 Result 284 Result 660 Result	Units mg/Kg Units mg/Kg Units mg/Kg Units	RL 4 RL 4 RL 4 RL

Report Date: Dece	mber 20, 2012	Work Order: 12120719	Page	Number: 7 of 7
Sample: 316125	- AH-7 (0-1')			
Param	Flag	Result	Units	RL
Chloride		1630	mg/Kg	4
Sample: 316126	- AH-7 (1-1.5')			
Param	Flag	Result	Units	RL
Chloride		2420	mg/Kg	4
Sample: 316127	- AH-7 (2-2.5')			
Param	Flag	Result	Units	\mathbf{RL}
Chloride		812	mg/Kg	4
Sample: 316128	- AH-7 (3-3.5')			
Param	Flag	\mathbf{Result}	Units	RL
Chloride		1380	mg/Kg	4
Sample: 316129	- AH-7 (4-4.5')			
Param	Flag	Result	Units	\mathbf{RL}
Chloride		1790	mg/Kg	4
Sample: 316130	- AH-7 (5-5.5')			
Demen	Flag	Derult	TT !+-	זת

Param	Flag	Result	Units	\mathbf{RL}
Chloride		1370	mg/Kg	4



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: December 20, 2012

Work Order:	12120719

Project Location:Eddy Co., NMProject Name:COG/Myox 29 State Com. #3HProject Number:114-6401608

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
316090	AH-1 (0-1')	soil	2012-12-06	00:00	2012-12-07
316091	AH-1 (1-1.5')	soil	2012-12-06	00:00	2012-12-07
316092	AH-1 (2-2.5')	soil	2012-12-06	00:00	2012-12-07
316093	AH-1 (3-3.5')	soil	2012-12-06	00:00	2012-12-07
316094	AH-1 (4-4.5')	soil	2012-12-06	00:00	2012-12-07
316095	AH-1 (5-5.5')	soil	2012-12-06	00:00	2012-12-07
316096	AH-2 (0-1')	soil	2012-12-06	00:00	2012-12-07
316097	AH-2 (1-1.5')	soil	2012-12-06	00:00	2012-12-07
316098	AH-2 (2-2.5')	soil	2012-12-06	00:00	2012-12-07
316099	AH-2 (3-3.5')	soil	2012-12-06	00:00	2012-12-07
316100	AH-2 (4-4.5')	soil	2012-12-06	00:00	2012-12-07
316101	AH-3 (0-1')	soil	2012-12-06	00:00	2012-12-07
316102	AH-3 (1-1.5')	soil	2012-12-06	00:00	2012-12-07
316103	AH-3 (2-2.5')	soil	2012-12-06	00:00	2012-12-07
316104	AH-3 (3-3.5')	soil	2012-12-06	00:00	2012-12-07
316105	AH-3 (4-4.5')	soil	2012-12-06	00:00	2012-12-07
316106	AH-3 (5-5.5')	soil	2012-12-06	00:00	2012-12-07
316107	AH-4 (0-1')	soil	2012-12-06	00:00	2012-12-07

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
316108	AH-4 (1-1.5')	soil	2012-12-06	00:00	2012-12-07
316109	AH-4 (2-2.5')	soil	2012-12-06	00:00	2012-12-07
316110	AH-4 (3-3.5')	soil	2012-12-06	00:00	2012-12-07
316111	AH-4 (4-4.5')	soil	2012-12-06	00:00	2012-12-07
316112	AH-4 (5-5.5')	soil	2012-12-06	00:00	2012-12-07
316113	AH-5 (0-1')	soil	2012-12-06	00:00	2012-12-07
316114	AH-5 (1-1.5')	soil	2012-12-06	00:00	2012-12-07
316115	AH-5 (2-2.5')	soil	2012-12-06	00:00	2012-12-07
316116	AH-5 (3-3.5')	soil	2012-12-06	00:00	2012-12-07
316117	AH-5 (4-4.5')	soil	2012-12-06	00:00	2012-12-07
316118	AH-5 (5-5.5')	soil	2012-12-06	00:00	2012-12-07
316119	AH-6 (0-1')	soil	2012-12-06	00:00	2012-12-07
316120	AH-6 (1-1.5')	soil	2012-12-06	00:00	2012-12-07
316121	AH-6 (2-2.5')	soil	2012-12-06	00:00	2012-12-07
316122	AH-6 (3-3.5')	soil	2012-12-06	00:00	2012-12-07
316123	AH-6 (4-4.5')	soil	2012-12-06	00:00	2012-12-07
316124	AH-6 (5-5.5')	soil	2012-12-06	00:00	2012-12-07
316125	AH-7 (0-1')	soil	2012-12-06	00:00	2012-12-07
316126	AH-7 (1-1.5')	soil	2012-12-06	00:00	2012-12-07
316127	AH-7 (2-2.5')	soil	2012-12-06	00:00	2012-12-07
316128	AH-7 (3-3.5')	soil	2012-12-06	00:00	2012-12-07
316129	AH-7 (4-4.5')	soil	2012-12-06	00:00	2012-12-07
316130	AH-7 (5-5.5')	soil	2012-12-06	00:00	2012-12-07

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

Michael about

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

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Case Narrative

Samples for project COG/Myox 29 State Com. #3H were received by TraceAnalysis, Inc. on 2012-12-07 and assigned to work order 12120719. Samples for work order 12120719 were received intact at a temperature of 8.7 C. Samples were received on ice.

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

		Prep	Prep	\mathbf{QC}	Analysis
Test	Method	Batch	Date	Batch	Date
BTEX	S 8021B	82439	2012-12-10 at 09:59	97270	2012-12-10 at 09:59
Chloride (Titration)	SM 4500-Cl B	82664	2012-12-17 at 10:04	97562	2012-12-18 at 11:59
Chloride (Titration)	SM 4500-Cl B	82664	2012-12-17 at 10:04	97581	2012-12-18 at 16:11
Chloride (Titration)	SM 4500-Cl B	82664	2012-12-17 at 10:04	97582	2012-12-18 at 16:15
Chloride (Titration)	SM 4500-Cl B	82664	2012-12-17 at 10:04	97583	2012-12-18 at 16:24
Chloride (Titration)	SM 4500-Cl B	82664	2012-12-17 at 10:04	97584	2012-12-18 at 16:33
TPH DRO - NEW	S 8015 D	82442	2012-12-10 at 11:00	97274	2012-12-11 at 09:50
TPH GRO	S 8015 D	82441	2012-12-10 at 09:59	97272	2012-12-10 at 09:59

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 12120719 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

Report Date: December 20, 2012 114-6401608

Work Order: 12120719 COG/Myox 29 State Com. #3H Page Number: 7 of 45 Eddy Co., NM

Analytical Report

Sample: 316090 - AH-1 (0-1')

Laboratory: Midland Analysis: BTEX QC Batch: 97270 Prep Batch: 82439		Analytica Date Ana Sample P	l Method: lyzed: reparation	S 80211 2012-12 :: 2012-12	B 2-10 2-10		Prep Methoo Analyzed By Prepared By	l: S 5035 7: YG 1: YG
				RL				
Parameter	Flag	\mathbf{Cert}		Result	Un	its	Dilution	RL
Benzene	υ	1	<	(0.0200	mg/I	ζg	1	0.0200
Toluene	υ	1	<	0.0200	mg/I	٢g	1	0.0200
Ethylbenzene	υ	1	<	(0.0200	mg/I	٢g	1	0.0200
Xylene	U	1	<	(0.0200	mg/I	٢g	1	0.0200
a .		a .		TT		Spike	Percent	Recovery
Surrogate	F1a	ig Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			1.96	mg/Kg	1	2.00	98	79.5 - 108
4-Bromofluorobenzene (4-BF	<u>'B)</u>		1.96	mg/Kg	1	2.00	98	71.4 - 108

Sample: 316090 - AH-1 (0-1')

Laboratory:	Midland					
Analysis:	Chloride (Titration)	Analytic	al Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	97581	Date An	alyzed:	2012-12-18	Analyzed By:	AR
Prep Batch: 82664			Preparation:	2012-12-17	Prepared By:	AR
			\mathbf{RL}			
Parameter	Flag	Cert	Result	Units	Dilution	\mathbf{RL}
Chloride			1660	mg/Kg	10	4.00

Sample: 316090 - AH-1 (0-1')

Laboratory: Midland Analysis: TPH DRO - NEW QC Batch: 97274 Prep Batch: 82442			Analytical M Date Analyz Sample Prep	fethod: æd: paration:	S 8015 D 2012-12-11 2012-12-10	Prep Method: Analyzed By: Prepared By:	N/A CW CW
				\mathbf{RL}			
Parameter	Fl	ag	Cert	Result	Units	Dilution	\mathbf{RL}
DRO	Q	a,U	1	<50.0	mg/Kg	1	50.0

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			126	mg/Kg	1	100	126	70 - 130

Sample: 316090 - AH-1 (0-1')

Laboratory:MidlandAnalysis:TPH GROQC Batch:97272Prep Batch:82441			Analytical Method:S 8015 DDate Analyzed:2012-12-10Sample Preparation:2012-12-10					Prep Method Analyzed By Prepared By:	: S 5035 YG YG	
						\mathbf{RL}				
Parameter		Flag		Cert	F	Result	Ur	its	Dilution	RL
GRO		υ		1		<4.00	mg/	Kg	1	4.00
Surrogate			Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotolue	ne (TFT)		Ÿ		2.22	mg/Kg	1	2.00	111	70 - 130
4-Bromofluoro	obenzene (4-BFB)				1.89	mg/Kg	1	2.00	94	70 - 130

Sample: 316091 - AH-1 (1-1.5')

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 97581 82664	Analytic Date An Sample I	al Method: alyzed: Preparation:	SM 4500-Cl B 2012-12-18 2012-12-17	Prep Method: Analyzed By: Prepared By:	N/A AR AR
			\mathbf{RL}			
Parameter	Flag	\mathbf{Cert}	\mathbf{Result}	Units	Dilution	\mathbf{RL}
Chloride			320	mg/Kg	5	4.00

Sample: 316092 - AH-1 (2-2.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	97581	Date Analyzed:	2012-12-18	Analyzed By:	AR
Prep Batch:	82664	Sample Preparation:	2012-12-17	Prepared By:	AR

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sample 3160	92 continued						
			\mathbf{RL}				
Parameter	Flag	Cert	Result	Units	Dilution	RL	
			\mathbf{RL}				
Parameter	Flag	Cert	Result	Units	Dilution	RL	
Chloride			305	mg/Kg	5	4.00	
Sample: 31 Laboratory: Analysis: QC Batch: Prep Batch:	6093 - AH-1 (3-3.5') Midland Chloride (Titration) 97581 82664	Analytic Date Ar Sample	cal Method: nalyzed: Preparation:	SM 4500-Cl B 2012-12-18 2012-12-17	Prep Method: Analyzed By: Prepared By:	N/A AR AR	
Parameter	Flag	Cert	RL Result	Units	Dilution	BL	
Chloride	1 1005	0010	1410	mg/Kg	10	4.00	
Sample: 31 Laboratory: Analysis: QC Batch: Prep Batch:	6094 - AH-1 (4-4.5') Midland Chloride (Titration) 97581 82664	Analytic Date Ar Sample	cal Method: aalyzed: Preparation:	SM 4500-Cl B 2012-12-18 2012-12-17	Prep Method: Analyzed By: Prepared By:	N/A AR AR	

			RL			
Parameter	Flag	Cert	Result	Units	Dilution	\mathbf{RL}
Chloride			635	mg/Kg	5	4.00

Sample: 316095 - AH-1 (5-5.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	97581	Date Analyzed:	2012-12-18	Analyzed By:	AR
Prep Batch:	82664	Sample Preparation:	2012-12-17	Prepared By:	AR

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			769	mg/Kg	5	4.00

Sample: 316096 - AH-2 (0-1')

Laboratory: Midland Analysis: BTEX QC Batch: 97270 Prep Batch: 82439		Analytica Date Ana Sample P	l Method: lyzed:	S 80211 2012-12	B 2-10 2-10		Prep Method Analyzed By Prepared By	l: S 5035 r: YG
Tep Daten. 02409		Sample 1	reparation	. 2012-12	2-10		I tepared by	. 10
				\mathbf{RL}				
Parameter	Flag	Cert		Result	Uni	ts	Dilution	\mathbf{RL}
Benzene	υ	1	<	0.0200	mg/ł	ζg	1	0.0200
Toluene	U	1	<	0.0200	mg/F	ζg	1	0.0200
Ethylbenzene	U	1	<	0.0200	mg/F	ξg	1	0.0200
Xylene	U	1	<	0.0200	mg/F	Kg	1	0.0200
						Spike	Percent	Recovery
Surrogate	Fla	g Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			1.98	mg/Kg	1	2.00	99	79.5 - 108
4-Bromofluorobenzene (4-B	FB)		1.94	mg/Kg	1	2.00	97	71.4 - 108

Sample: 316096 - AH-2 (0-1')

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 97581 82664	Analytic Date An Sample 1	al Method: alyzed: Preparation:	SM 4500-Cl B 2012-12-18 2012-12-17	Prep Method: Analyzed By: Prepared By:	N/A AR AR
			RL			
Parameter	Flag	Cert	Result	Units	Dilution	\mathbf{RL}
Chloride			821	mg/Kg	5	4.00

Sample: 316096 - AH-2 (0-1')

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	97274	Date Analyzed:	2012-12-11	Analyzed By:	ĊŴ
Prep Batch:	82442	Sample Preparation:	2012-12-10	Prepared By:	CW

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							\mathbf{RL}					
Parameter			Flag		Cert		Result		Units		Dilution	RL
DRO			Qs,U		1		<50.0		mg/Kg		1	50.0
									Spike		Percent	Recovery
Surrogate		Flag	Ce	rt	Result	Units	s Dil	ution	Amou	nt	Recovery	Limits
n-Tricosane	Qsr	Qør			130	mg/K	g	1	100		130	70 - 130
Laboratory: Analysis: QC Batch: Prep Batch:	Midland TPH GR 97272 82441	0			Analytic Date An Sample I	al Method alyzed: Preparatio	l: S 801 2012- on: 2012-	5 D 12-10 12-10			Prep Meth Analyzed I Prepared F	od: S 5035 3y: YG 3y: YG
Parameter			Flag		Cert		RESULT		Units		Dilution	BL
GRO			U		1		<4.00	J	mg/Kg		1	4.00
Surrogate				Flag	Cert	Result	Units	Dilu	S tion Ar	pike nount	Percent Recovery	Recovery Limits
Trifluorotolu	ene (TFT)					2.33	mg/Kg	1		2.00	116	70 - 130
4-Bromofluor	obenzene	(4-BFB)				1.90	mg/Kg	1		2.00	95	70 - 130

Sample: 316097 - AH-2 (1-1.5')

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 97581 82664	Analytic Date An Sample I	al Method: alyzed: Preparation:	SM 4500-Cl B 2012-12-18 2012-12-17	Prep Method: Analyzed By: Prepared By:	N/A AR AR
			\mathbf{RL}			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			138	mg/Kg	5	4.00

Sample: 316098 - AH-2 (2-2.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	97581	Date Analyzed:	2012-12-18	Analyzed By:	AR
Prep Batch:	82664	Sample Preparation:	2012-12-17	Prepared By:	AR

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			1120	mg/Kg	5	4.00

Sample: 316099 - AH-2 (3-3.5')

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 97581 82664		Analyt Date A Sample	ical Method: analyzed: Preparation:	SM 4500-Cl B 2012-12-18 2012-12-17	Prep Method: Analyzed By: Prepared By:	N/A AR AR
				RL			
Parameter	F	ag	Cert	Result	Unit	ts Dilution	RL
Chloride				1020	mg/K	.g 5	4.00

Sample: 316100 - AH-2 (4-4.5')

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titratio 97582 82664	on)	Analy Date A Sampl	tical Method: Analyzed: le Preparation:	SM 4500-Cl B 2012-12-18 2012-12-17	Prep Method: Analyzed By: Prepared By:	N/A AR AR
				\mathbf{RL}			
Parameter		Flag	Cert	\mathbf{Result}	Units	Dilution	\mathbf{RL}
Chloride				1030	mg/Kg	5	4.00

Sample: 316101 - AH-3 (0-1')

Laboratory: Analysis: QC Batch: Prep Batch:	Midland BTEX 97270 82439		Analytical Me Date Analyze Sample Prepa	ethod: S 8021B 2012-12- aration: 2012-12-	10 10	Prep Method: Analyzed By: Prepared By:	S 5035 YG YG
				RL			
Parameter		Flag	Cert	Result	Units	Dilution	\mathbf{RL}
Benzene		υ	1	< 0.0200	mg/Kg	1	0.0200
Toluene		υ	1	< 0.0200	mg/Kg	1	0.0200
Ethylbenzene	•	U	1	< 0.0200	mg/Kg	1	0.0200

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sample 3161	01 continued								
					\mathbf{RL}				
Parameter		Flag	Cert		Result	J	nits	Dilution	R
Xylene		U	1		<0.0200	mg	/Kg	1	0.020
							Spike	Percent	Recover
Surrogate		FL	ag Cert	Result	Units	Dilutio	a Amount	Recovery	Limits
Trifluorotolu	ene (TFT)			2.00	mg/Kg	1	2.00	100	79.5 - 10
4-Bromofluor	robenzene (4-BFF	3)		1.93	mg/Kg	1	2.00	96	71.4 - 10
Sample: 31	6101 - AH-3 (0	-1')							
Laboratory:	Midland								
Analysis:	Chloride (Titrat	tion)	Anal	ytical Me	thod: S	M 4500-C	В	Prep Me	thod: N/.
QC Batch:	97582	,	Date	Analyze	d: 2	012-12-18		Analyze	d By: AR
Prep Batch:	82664		Sam	ple Prepa	ration: 2	012-12-17		Prepareo	i By: AR
-			-					-	
					RL				
Parameter		Flag	Cert		Result	t	Inits	Dilution	R
Chloride					1800	mg	/Kg	10	4.0
Sample: 31	6101 - AH-3 (0	-1')							
Laboratory	Midland								
Analysis:	TPH DRO - NE	εw	Anz	lytical M	ethod:	5 8015 D		Prep Me	thod: N/.
QC Batch:	97274		Dat	e Analyz	ed:	2012-12-11		Analyzed	1 By: CW
Prep Batch:	82442		San	ple Prep	aration:	2012-12-10	i	Preparec	By: CW
-					\mathbf{RL}			_	-
Parameter		Flag	Cert		Result	τ	Inits	Dilution	R
DRO		Q8,U	1		<50.0	mg	/Kg	1	50.
							Spike	Percent	Recover
Surrogate	Flag	Cert	Result	Units	Dih	ition	Amount	Recoverv	Limite
	1 100g		116	mg/K		1	100	116	70 - 130
n-Tricosane					E	1	1 1 1 1 1	1 1	117 - 111

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	97272	Date Analyzed:	2012-12-10	Analyzed By:	YG
Prep Batch:	82441	Sample Preparation:	2012-12-10	Prepared By:	YG

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					RL		TT *1			DI
Parameter	Flag		Cert		Result		Unit	S	Dilution	
GRO	U		1		<4.00		mg/K	5	1	4.00
Surrogate		Flag	Cert	Result	Unit	s	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotolu	ene (TFT)	0		2.01	mg/k		1	2.00	100	70 - 130
4-Bromofluor	robenzene (4-BFB)			1.88	mg/k	۲g	1	2.00	94	70 - 130
Sample: 31	6102 - AH-3 (1-1.5')									
•	· · · · · · · · · · · · · · · · · · ·									
Laboratory:	Midland									
Laboratory: Analysis:	Midland Chloride (Titration)		Anal	ytical Me	thod:	SM	4500-Cl B		Prep Met	10d: N/A
Laboratory: Analysis: QC Batch:	Midland Chloride (Titration) 97582		Anal Date	ytical Me Analyzed	thod: 1:	SM 201	4500-Cl B 2-12-18		Prep Met Analyzed	nod: N/A By: AR
Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 97582 82664		Anal Date Sam	lytical Me Analyzec ple Prepar	thod: 1: ration:	SM 201 201	24500-Cl B 2-12-18 2-12-17		Prep Met Analyzed Prepared	hod: N/A By: AR By: AR
Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 97582 82664		Anal Date Sam	lytical Me 9 Analyzec ple Prepar	thod: l: ration: RL	SM 201 201	2-12-18 2-12-17		Prep Met Analyzed Prepared	hod: N/A By: AR By: AR
Laboratory: Analysis: QC Batch: Prep Batch: Parameter	Midland Chloride (Titration) 97582 82664 Flag		Anal Date Sam Cert	ytical Me Analyzec ple Prepa	thod: l: ration: RL Result	SM 201 201	24500-Cl B 2-12-18 2-12-17 Unit:	3	Prep Met Analyzed Prepared Dilution	hod: N/A By: AR By: AR RL

Sample: 316103 - AH-3 (2-2.5')

Chloride	· · · · · · · · · · · · · · · · · · ·		38.9	mg/Kg	5	4.00
Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Prep Batch:	82664	Sample Preparation:		2012-12-17	Prepared By:	AR
QC Batch:	97582	Date Analyzed:		2012-12-18	Analyzed By:	AR
Analysis:	Chloride (Titration)	Analytic	al Method:	SM 4500-Cl B	Prep Method:	N/A
Laboratory:	Midland					

Sample: 316104 - AH-3 (3-3.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	97582	Date Analyzed:	2012-12-18	Analyzed By:	AR
Prep Batch:	82664	Sample Preparation:	2012-12-17	Prepared By:	AR

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			126	mg/Kg	5	4.00

Sample: 316105 - AH-3 (4-4.5')

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 97582 82664	Analyti Date A Sample	ical Method: nalyzed: Preparation:	SM 4500-Cl B 2012-12-18 2012-12-17	Prep Method: Analyzed By: Prepared By:	N/A AR AR
			\mathbf{RL}			
Parameter	\mathbf{Flag}	Cert	Result	Units	Dilution	\mathbf{RL}
Chloride			122	mg/Kg	5	4.00

Sample: 316106 - AH-3 (5-5.5')

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 97582 82664	Ana Dat San	alytical Method: e Analyzed: aple Preparation:	SM 4500-Cl B 2012-12-18 2012-12-17	Prep Method: Analyzed By: Prepared By:	N/A AR AR
			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			112	mg/Kg	5	4.00

Sample: 316107 - AH-4 (0-1')

Laboratory: Analysis: QC Batch: Prep Batch:	Midland BTEX 97270 82439		Analytical Me Date Analyze Sample Prepa	ethod: S 8021B d: 2012-12-3 ration: 2012-12-3	10 10	Prep Method: Analyzed By: Prepared By:	S 5035 YG YG
				\mathbf{RL}			
Parameter		Flag	Cert	Result	Units	Dilution	RL
Benzene		U	1	< 0.0200	mg/Kg	1	0.0200
Toluene		U	1	< 0.0200	mg/Kg	1	0.0200
Ethylbenzene	· · · · · · · · · · · · · · · · · · ·	υ	1	< 0.0200	mg/Kg	1	0.0200

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sample 3161	07 continued									
					RL					
Parameter		Flag	Cert		Result	Unit	S.	Dilution		RL
Xylene		U	1		<0.0200	mg/K	g	1	(0.0200
							Spike	Percent	Rec	overv
Surrogate		Flag	Cert	Result	Units	Dilution	Amount	Recovery	Li	mits
Trifluorotolu	ene (TFT)	8		2.01	mg/Kg	1	2.00	100	79.5	- 108
4-Bromofluor	cobenzene (4-BFB)			1.97	mg/Kg	1	2.00	98	71.4	- 108
Laboratory: Analysis: QC Batch: Prep Batch: Parameter Chloride	Midland Chloride (Titratio 97582 82664	on) Flag	Ana Date Sam Cert	lytical Me e Analyzeo ple Prepa	thod: 5 d: 5 ration: 5 RL Result 948	SM 4500-Cl B 2012-12-18 2012-12-17 Uni ⁻ mg/K	g	Prep Me Analyzed Prepared Dilution 5	thod: i By: l By:	N/A AR AR RL 4.00
Sample: 31 Laboratory: Analysis: QC Batch: Prep Batch:	6107 - AH-4 (0-1 Midland TPH DRO - NEW 97274 82442	L') V	An: Dai San	alytical M te Analyz nple Prep	ethod: ed: aration:	S 8015 D 2012-12-11 2012-12-10		Prep Me Analyzed Prepared	thod: i By: i By:	N/A CW CW
. .		71	<i>c</i> .		RL	** -				
Parameter		Flag	Cert	····-	Kesult	Unit	ts	Dilution		
DKU		Q8,U	1		< 50.0	mg/K	g	1		50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			124	mg/Kg	1	100	124	70 - 130

Sample: 316107 - AH-4 (0-1')

Laboratory: Analysis:	Midland TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	97272	Date Analyzed:	2012-12-10	Analyzed By:	YG
Prep Batch:	82441	Sample Preparation:	2012-12-10	Prepared By:	YG

Report Date 114-6401608		Work Order: 12120719 COG/Myox 29 State Com. #3H					Page Number: 17 of 45 Eddy Co., NM		
_			_		\mathbf{RL}				
Parameter	Flag		Cert		Result	Unit	S	Dilution	RL
GRO	υ		1		<4.00	mg/K	g	1	4.00
							Spike	Percent	Recovery
Surrogate		Flag	Cert	Result	Units	5 Dilution	Amount	Recovery	Limits
Trifluorotolu	ene (TFT)			2.32	mg/K	g 1	2.00	116	70 - 130
4-Bromofluor	robenzene (4-BFB)			1.91	mg/K	g 1	2.00	96	70 - 130
Sample: 31	.6108 - AH-4 (1-1.5')								
Laboratory:	Midland								
Analysis:	Chloride (Titration)		Ana	ytical Me	thod:	SM 4500-Cl B		Prep Met	hod: N/A
QC Batch:	97582		Date	Analyze	d:	2012-12-18		Analyzed	By: AR
Prep Batch:	82664		Sam	ple Prepa	ration:	2012-12-17		Prepared	By: AR
					RL				
			\sim .		-	*** **			
Parameter	Flag		Cert		Result	Unit	8	Dilution	RL_

Sample: 316109 - AH-4 (2-2.5')

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 97582 82664	Analytic Date Ar Sample	cal Method: aalyzed: Preparation:	SM 4500-Cl B 2012-12-18 2012-12-17	Prep Method: Analyzed By: Prepared By:	N/A AR AR
			RL			
Parameter	Flag	Cert	Result	Units	Dilution	\mathbf{RL}
Chloride			141	mg/Kg	5	4.00

Sample: 316110 - AH-4 (3-3.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	97583	Date Analyzed:	2012-12-18	Analyzed By:	AR
Prep Batch:	82664	Sample Preparation:	2012-12-17	Prepared By:	AR

Report Date: Decemb 114-6401608	per 20, 2012	Wo COG/M	ork Order: 121207 Iyox 29 State Cor	Page Number: 18 of 4 Eddy Co., NM		
			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			108	mg/Kg	5	4.00

Sample: 316111 - AH-4 (4-4.5')

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 97583 82664	Analytic Date An Sample	al Method: alyzed: Preparation:	SM 4500-Cl B 2012-12-18 2012-12-17	Prep Method: Analyzed By: Prepared By:	N/A AR AR
			RL			
Parameter	Flag	\mathbf{Cert}	Result	Units	Dilution	\mathbf{RL}
Chloride			537	mg/Kg	5	4.00

Sample: 316112 - AH-4 (5-5.5')

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 97583 82664	Analytic Date An Sample 1	al Method: alyzed: Preparation:	SM 4500-Cl B 2012-12-18 2012-12-17	Prep Method: Analyzed By: Prepared By:	N/A AR AR
			RL			
Parameter	Flag	\mathbf{Cert}	Result	Units	Dilution	\mathbf{RL}
Chloride			2110	mg/Kg	10	4.00

Sample: 316113 - AH-5 (0-1')

Laboratory: Analysis: QC Batch: Prep Batch:	Midland BTEX 97270 82439		Analytical Mo Date Analyze Sample Prepa	ethod: d: aration:	S 8021B 2012-12- 2012-12-	10 10	Prep Method: Analyzed By: Prepared By:	S 5035 YG YG
					RL			
Parameter		Flag	\mathbf{Cert}	R	esult	Units	Dilution	RL
Benzene		υ	1	<0.	0200	mg/Kg	1	0.0200
Toluene		υ	1	<0.	0200	mg/Kg	1	0.0200
Ethylbenzene	: 	U	1	<0.	0200	mg/Kg	1	0.0200

continued ...

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sample 31611	13 continued								
					\mathbf{RL}				
Parameter		Flag	Cert		Result	Unit	5	Dilution	RL
Xylene		υ	1	<	<0.0200	mg/Kg	3	1	0.0200
Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotolu	ene (TFT)	<u>_</u>		1.98	mg/Kg	ç 1	2.00	99	79.5 - 108
4-Bromofluor	obenzene (4-BFB)			1.90	mg/Kg	ç 1	2.00	95	71.4 - 108
Sample: 31	6113 - AH-5 (0-1' Midland)							
Analysis	Chloride (Titration	n)	Ana	vtical Me	thod	SM 4500-Cl B		Prep Met	hod N/A
QC Batch:	97583	*)	Date	Analyzed	1:	2012-12-18		Analyzed	By: AR
Prep Batch:	82664		Sam	ple Prepa	ration:	2012-12-17		Prepared	By: AR
					RL				

Parameter	Flag	Cert	Result	Units	Dilution	\mathbf{RL}
Chloride			734	mg/Kg	5	4.00

Sample: 316113 - AH-5 (0-1')

Laboratory: Analysis: QC Batch: Prep Batch:	Midland TPH DRO - NEW 97274 82442		Ana Date Sam	Analytical Method: Date Analyzed: Sample Preparation:		5 D 2-11 2-10	Prep Me Analyze Preparec	ethod: N/A d By: CW d By: CW
					RL			
Parameter		Flag	Cert	Res	sult	Units	Dilution	\mathbf{RL}
DRO	· · · · · · · · · · · · · · · · · · ·	Qs,U	1	<5	0.0	mg/Kg	1	50.0
Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			126	mg/Kg	1	100	126	70 - 130

Sample: 316113 - AH-5 (0-1')

Laboratory:	Midland TPH CBO	Analytical Method	S 8015 D	Pren Method	S 5035
QC Batch:	97272	Date Analyzed:	2012-12-10	Analyzed By:	3 3033 YG
Prep Batch:	82441	Sample Preparation:	2012-12-10	Prepared By:	YG

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Paramatar	Flag		Cert		RL	Unit	-0	Dilution	BI
GRO					< 4.00	OII	σ	1	4.00
	- · · · · · · · · · · · · · · · · · · ·				<u></u>	,iiig/ 1,	5		
							Spike	Percent	Recovery
Surrogate		Flag	Cert	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotolu	ene (TFT)			2.38	mg/K	g 1	2.00	119	70 - 130
1 Dromofinor	robenzene (4-BFB)			1.87	mg/K	g 1	2.00	94	70 - 130
4-Bromonuor									
Sample: 31	6114 - AH-5 (1-1.5')								
Sample: 31	6114 - AH-5 (1-1.5') Midland								
Sample: 31 Laboratory: Analysis:	6114 - AH-5 (1-1.5') Midland Chloride (Titration)		Ana	lytical Me	thod:	SM 4500-Cl B		Prep Met	hod: N/A
Sample: 31 Laboratory: Analysis: QC Batch:	6114 - AH-5 (1-1.5') Midland Chloride (Titration) 97583		Anal Date	lytical Me Analyzec	thod: 1:	SM 4500-Cl B 2012-12-18		Prep Met Analyzed	hod: N/A By: AR
Sample: 31 Laboratory: Analysis: QC Batch: Prep Batch:	6114 - AH-5 (1-1.5') Midland Chloride (Titration) 97583 82664		Ana Date Sam	lytical Me Analyzec ple Prepa	thod: 1: ration:	SM 4500-Cl B 2012-12-18 2012-12-17		Prep Met Analyzed Prepared	hod: N/A By: AR By: AR
Sample: 31 Laboratory: Analysis: QC Batch: Prep Batch:	6114 - AH-5 (1-1.5') Midland Chloride (Titration) 97583 82664		Anal Date Sam	lytical Me 2 Analyzec ple Prepar	thod: 1: ration: RL	SM 4500-Cl B 2012-12-18 2012-12-17		Prep Met Analyzed Prepared	hod: N/A By: AR By: AR
Sample: 31 Laboratory: Analysis: QC Batch: Prep Batch: Parameter	6114 - AH-5 (1-1.5') Midland Chloride (Titration) 97583 82664 Flag		Anal Date Sam	lytical Me e Analyzec ple Prepar	thod: 1: ration: RL Result	SM 4500-Cl B 2012-12-18 2012-12-17 Unit	ъ	Prep Met Analyzed Prepared Dilution	hod: N/A By: AR By: AR RL

Sample: 316115 - AH-5 (2-2.5')

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 97583 82664	Analytic Date An Sample 2	al Method: alyzed: Preparation:	SM 4500-Cl B 2012-12-18 2012-12-17	Prep Method: Analyzed By: Prepared By:	N/A AR AR
			\mathbf{RL}			
Parameter	Flag	Cert	Result	Units	Dilution	\mathbf{RL}
Chloride			320	mg/Kg	5	4.00

Sample: 316116 - AH-5 (3-3.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	97583	Date Analyzed:	2012-12-18	Analyzed By:	AR
Prep Batch:	82664	Sample Preparation:	2012-12-17	Prepared By:	\mathbf{AR}

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Parameter	Flag	Cert	RL Result	Units	Dilution	\mathbf{RL}
Chloride			463	mg/Kg	5	4.00

Sample: 316117 - AH-5 (4-4.5')

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 97583 82664	Analy Date Samp	rtical Method: Analyzed: le Preparation:	SM 4500-Cl B 2012-12-18 2012-12-17	Prep Method: Analyzed By: Prepared By:	N/A AR AR
			\mathbf{RL}			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride	······································		389	mg/Kg	5	4.00

Sample: 316118 - AH-5 (5-5.5')

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 97583 82664	Analyt Date A Sample	ical Method: analyzed: Preparation:	SM 4500-Cl B 2012-12-18 2012-12-17	Prep Method: Analyzed By: Prepared By:	N/A AR AR
			\mathbf{RL}			
Parameter	Flag	Cert	Result	Units	Dilution	\mathbf{RL}
Chloride			54.2	mg/Kg	5	4.00

Sample: 316119 - AH-6 (0-1')

Laboratory: Analysis: QC Batch: Prep Batch:	Midland BTEX 97270 82439		Analytical M Date Analyz Sample Prej	Method: S 8021E zed: 2012-12 paration: 2012-12	3 -10 -10	Prep Method: Analyzed By: Prepared By:	S 5035 YG YG
				\mathbf{RL}			
Parameter		Flag	Cert	Result	Units	Dilution	RL
Benzene	1	ט ^ע	1	< 0.0400	mg/Kg	2	0.0200
Toluene		U	3	< 0.0400	mg/Kg	2	0.0200
Ethylbenzene		U	1	< 0.0400	mg/Kg	2	0.0200

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sample 3161	19 continu	ued											
						RL							
Parameter			Flag	Cert		Result		Units	1	Dilution		RL	
Xylene			U	1		< 0.0400		mg/Kg		2		0.0200	
									Spike	Percent	Rec	overv	
Surrogate			Fla	g Cert	Result	Units	Dilu	ution	Amount	Recovery	Li	mits	
Trifluorotolu	ene (TFT	')		0	3.92	mg/Kg	g j	2	4.00	98	79.5	5 - 108	
4-Bromofluo	robenzene	(4-BFB)			3.93	mg/Kg	Š.	2	4.00	98	71.4	- 108	
Sample: 31	6119 - A	H-6 (0- 3	L')										
- T 1	۲	, 1	,										
Laboratory:	Chlorid	l o (Titnotic	n)	Ana	rtical Mc	thad	SM 450			Drop Mc	thad	N/A	
Analysis:	07592	e (Thrain))	Doto	Appluzo	anou:	9019 19			A polymore	A Davi	AD	
QU Datch:	97000 97664			Date	nlo Propo	u. rotion:	2012-12	-10		Properor	I Dy.		
r rep Daten.	02004			Jam	pie i repa	140011.	2012-12	~11		Ttepate	I Dy.	лц	
_				a .		RL						DI	
Parameter			Flag	Cert		Result		Units		Dilution			
Chloride						2960		mg/Kg		10		4.00	
Sample: 31	6119 - A	H-6 (0-1	l')										
Laboratory:	Midland	1											
Analysis:	TPH DI	RO - NEV	V	Ana	lytical M	lethod:	S 8015	D		Prep Me	thod:	N/A	
QC Batch:	97274			Dat	e Analyze	ed:	2012-12	2-11		Analyze	d By:	ĊŴ	
Prep Batch:	82442			San	nple Prep	aration:	2012-12	2-10		Prepareo	i By:	CW	
						\mathbf{RL}							
Parameter			Flag	Cert		Result		Units		Dilution		RL	
DRO			Qs,U	1		<50.0		mg/Kg		1		50.0	
								St	oike	Percent	Re	covery	
		Floor	Cont	Regult	Unite	• D	ilution	Am	ount	Recovery	T.	imita	
Surrogate		riag	Cert	riesuit	Units	3 D	interon		oun	Receiver	<u> </u>	mits	

Sample: 316119 - AH-6 (0-1')

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	97272	Date Analyzed:	2012-12-10	Analyzed By:	YG
Prep Batch:	82441	Sample Preparation:	2012-12-10	Prepared By:	$\mathbf{Y}\mathbf{G}$

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						RL					
Parameter		Flag		Cert		Result		Uni	ts	Dilution	RL
GRO	2	υ		1		<8.00		mg/k	g	2	4.00
Surrogate			Flag	Cert	Result	Unit	s	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotolu	ene (TFT)				3.56	 mg/ł	ζg	2	4.00	89	70 - 130
4-Bromofluor	robenzene (4-BF	Β)			3.79	mg/ł	٢g	2	4.00	95	70 - 130
Sample: 31	6120 - AH-6 (1-1.5')									
Laboratory:	Midland										
Analysis:	Chloride (Titra	ation)		Anal	ytical Me	thod:	SM	4500-Cl B		Prep Met	hod: N/A
QC Batch:	97584			Date	Analyzed	d:	201	2-12-18		Analyzed	By: AR
Prep Batch:	82664			Sam	ple Prepa	ration:	201	2-12-17		Prepared	By: AR
						RL					
T				<u> </u>		D		** •		D !!	57

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			2880	mg/Kg	10	4.00

Sample: 316121 - AH-6 (2-2.5')

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 97584 82664	Analytic Date An Sample I	al Method: alyzed: Preparation:	SM 4500-Cl B 2012-12-18 2012-12-17	Prep Method: Analyzed By: Prepared By:	N/A AR AR
Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			440	mg/Kg	5	4.00

Sample: 316122 - AH-6 (3-3.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	97584	Date Analyzed:	2012-12-18	Analyzed By:	AR
Prep Batch:	82664	Sample Preparation:	2012-12-17	Prepared By:	AR

Report Date: December 20, 2012 114-6401608 Parameter Flag	per 20, 2012	Wo COG/M	ork Order: 121207 Ayox 29 State Cor	Page Number: 24 of 45 Eddy Co., NM		
Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			284	mg/Kg	5	4.00

Sample: 316123 - AH-6 (4-4.5')

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titrati 97584 82664	on)	Analytic Date An Sample	al Method: alyzed: Preparation:	SM 4500-Cl B 2012-12-18 2012-12-17	Prep Method: Analyzed By: Prepared By:	N/A AR AR
				RL			
Parameter		Flag	\mathbf{Cert}	Result	Units	Dilution	RL
Chloride				660	mg/Kg	5	4.00

Sample: 316124 - AH-6 (5-5.5')

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 97584 82664	Analytic Date An Sample	al Method: alyzed: Preparation:	SM 4500-Cl B 2012-12-18 2012-12-17	Prep Method: Analyzed By: Prepared By:	N/A AR AR
			\mathbf{RL}			
Parameter	\mathbf{Flag}	Cert	Result	Units	Dilution	\mathbf{RL}
Chloride			1130	mg/Kg	10	4.00

Sample: 316125 - AH-7 (0-1')

Laboratory: Analysis: QC Batch: Prep Batch:	Midland BTEX 97270 82439		Analytical Me Date Analyze Sample Prepa	ethod: S 8 d: 201 aration: 201	021B 2-12-10 2-12-10	Prep Method: Analyzed By: Prepared By:	S 5035 YG YG
				RL	J		
Parameter		Flag	Cert	Result	t Units	Dilution	RL
Benzene		U	1	< 0.0200) mg/Kg	1	0.0200
Toluene		υ	1	< 0.0200) mg/Kg	1	0.0200
Ethylbenzene		U	1	< 0.0200) mg/Kg	1	0.0200

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sample 31612	25 continu	ied											
						RL							
Parameter			Flag	Cert		Result		Units		Dilution		RL	
Xylene			U	1	<	< 0.0200	1	ng/Kg		1		0.0200	
								S	niko	Porcont	Rec	OVOPT	
Surrogate			Flag	r Cert	Result	Units	Dilut	ion Ar	nount	Recoverv	Li	mits	
Trifluorotolu	ene (TFT)			2.00	mg/Ke	· 1		2.00	100	79.5	5 - 108	
4-Bromofluor	obenzene	(4-BFB)			1.92	mg/K	, 1	- 	2.00	96	71.4	- 108	
Laboratory: Analysis: QC Batch: Prep Batch: Parameter	Midland Chloride 97584 82664	e (Titratio	n) Flag	Ana Date Sam Cert	lytical Me e Analyze ple Prepa	ethod: d: wration: RL Result	SM 4500- 2012-12-1 2012-12-1	-Cl B 18 17 Units		Prep Me Analyzed Prepared Dilution	thod: 1 By: 1 By:	N/A AR AR RL	
Chloride					v.	1630]	mg/Kg		10		4.00	
Sample: 31 Laboratory: Analysis: QC Batch: Prep Batch:	6125 - A Midland TPH DF 97274 82442	H-7 (0-1 RO - NEW	')	An: Dat Sar	alytical M ze Analyze nple Prep	lethod: ed: aration:	S 8015 I 2012-12- 2012-12-) -11 -10		Prep Me Analyzec Prepared	thod: l By: l By:	N/A CW CW	
D				Quit		RL		T Too la a		Dibetion		DT	
Parameter			riag	Cert		<50.0		$\frac{\text{Onits}}{m \sigma / V \sigma}$				50.0	
5110			Qs,U	1		<00.0]	mg/ ry		1		0.0	
Surrogate		Flag	Cert	Result	Units	s D	ilution	Spike Amou	e nt	Percent Recovery	Rec Li	covery mits	
					(~ .			100		107			

Sample: 316125 - AH-7 (0-1')

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	97272	Date Analyzed:	2012-12-10	Analyzed By:	YG
Prep Batch:	82441	Sample Preparation:	2012-12-10	Prepared By:	YG

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			a <i>t</i>	Ŧ	RL	TT 11		בין ני		DI
CDO	r lag		Cert	r	<1 00	Unit	s	Dilution		<u> </u>
GRU	<u> </u>	·	1		<4.00	ing/ K	8	L		4.00
							Spike	Percent	Ree	covery
Surrogate		Flag	\mathbf{Cert}	Result	Units	Dilution	Amount	Recovery	$\mathbf{L}\mathbf{i}$	imits
Trifluorotolue	ene (TFT)			2.10	mg/Kg	1	2.00	105	70	- 130
4-Bromofluorobenzene (4-BFB)				1.88	mg/Kg	1	2.00	94	70	- 130
4-Bromofluor Sample: 31	6126 - AH-7 (1-1.5')									
4-Bromofluor Sample: 31 Laboratory: Analysis: QC Batch: Prep Batch:	6126 - AH-7 (1-1.5') Midland Chloride (Titration) 97584 82664		Anal Date Sam	ytical Met Analyzed ple Prepara	hod: S : 2 ation: 2	SM 4500-Cl B 2012-12-18 2012-12-17		Prep Met Analyzed Prepared	hod: By: By:	N/A AR AR
4-Bromofluor Sample: 31 Laboratory: Analysis: QC Batch: Prep Batch:	6126 - AH-7 (1-1.5') Midland Chloride (Titration) 97584 82664		Anal Date Sam	ytical Met Analyzed ple Prepara	hod: S : 2 ation: 2	SM 4500-Cl B 2012-12-18 2012-12-17		Prep Met Analyzed Prepared	hod: By: By:	N/A AR AR
4-Bromofluor Sample: 31 Laboratory: Analysis: QC Batch: Prep Batch: Parameter	6126 - AH-7 (1-1.5') Midland Chloride (Titration) 97584 82664 Flag		Anal Date Sam	ytical Met 9 Analyzed 9 Prepara F	hod: S : 2 ation: 2 RL Result	SM 4500-Cl B 2012-12-18 2012-12-17 Unit:	5	Prep Met Analyzed Prepared Dilution	hod: By: By:	N/A AR AR RL

Sample: 316127 - AH-7 (2-2.5')

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 97584 82664	Analytic Date An Sample I	al Method: alyzed: Preparation:	SM 4500-Cl B 2012-12-18 2012-12-17	Prep Method: Analyzed By: Prepared By:	N/A AR AR
			\mathbf{RL}			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			812	mg/Kg	5	4.00

Sample: 316128 - AH-7 (3-3.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	97584	Date Analyzed:	2012-12-18	Analyzed By:	AR
Prep Batch:	82664	Sample Preparation:	2012-12-17	Prepared By:	AR

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Parameter Flag		RL Cert Result Units			Dilution RL	
Chloride			1380	mg/Kg	10	4.00

Sample: 316129 - AH-7 (4-4.5')

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 97584 82664	Anal Date Samj	ytical Method: Analyzed: ple Preparation:	SM 4500-Cl B 2012-12-18 2012-12-17	Prep Method: Analyzed By: Prepared By:	N/A AR AR
			RL			
Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			1790	mg/Kg	10	4.00

Sample: 316130 - AH-7 (5-5.5')

Laboratory: Midland Analysis: Chloride (Titration) QC Batch: 97562 Prep Batch: 82664		Analytical Method: Date Analyzed: Sample Preparation:		SM 4500-Cl B 2012-12-18 2012-12-17	Prep Method: Analyzed By: Prepared By:	N/A AR AR
			\mathbf{RL}			
Parameter	\mathbf{Flag}	Cert	Result	Units	Dilution	RL
Chloride			1370	mg/Kg	10	4.00
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Method Blanks

Method Blank (1) QC Batch: 97270				
QC Batch: 97270 Prep Batch: 82439	Date Analyzed: QC Preparation:	2012-12-10 2012-12-10	Analyzed I Prepared I	By: YG By: YG
Parameter Flag	Cert	$egin{array}{c} { m MDL} \\ { m Result} \end{array}$	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	1	<0.00700	mg/Kg	0.02
Surrogate Flag	Cert Result	Units Dilution	Spike Percent Amount Recovery	Recovery Limits
Trifluorotoluene (TFT)	1.98	mg/Kg 1	2.00 99	70 - 130
4-Bromofluorobenzene (4-BFB)	2.02	mg/Kg 1	2.00 101	70 - 130
Method Blank (1) QC Batch: 97272 QC Batch: 97272 Prep Batch: 82441	Date Analyzed: QC Preparation:	2012-12-10 2012-12-10	Analyzed J Prepared J	By: YG By: YG
Ttop Data		MDI.	T TOPATEU T	<i>.</i>

Parameter	Flag		Cert		Result		Units	\mathbf{RL}
GRO			1		<2.32		mg/Kg	4
Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.06	mg/Kg	1	2.00	103	70 - 130
4-Bromofluorobenzene (4-BFB)			1.96	mg/Kg	1	2.00	98	70 - 130

Method Blank (1) QC Batch: 97274

QC Batch:	97274	Date Analyzed:	2012-12-11	Analyzed By:	CW
Prep Batch:	82442	QC Preparation:	2012-12-10	Prepared By:	CW

Report Date 114-6401608	: Decemb	er 20, 20	12	COC	Work Order: 12120719 COG/Myox 29 State Com. #3H					:: 29 of 45 7 Co., NM
Parameter			Flag		Cert		MDI Result	J t	Units	RL
DRO					1		< 9.09)	mg/Kg	50
Surrogate		Flag	Cert	Result	Units mg/Kg	Dilutio	m	Spike Amount	Percent Recovery	Recovery Limits 70 - 130
		- .								
Method Bla	ank (1)	QC E	Batch: 97562							
QC Batch: Prep Batch:	97562 82664			Date Ar QC Prej	nalyzed: paration:	2012-12-18 2012-12-17			Analyzed I Prepared E	By: AR By: AR
Parameter			Flag		Cert		MDL Result	, ;	Units	RL
Chloride							<3.85)	mg/Kg	4
Method Bla	ank (1)	QC B	Batch: 97581							
QC Batch: Prep Batch:	97581 82664			Date Ar QC Prej	alyzed: paration:	2012-12-18 2012-12-17			Analyzed H Prepared H	By: AR By: AR
Parameter			Flag		Cert		MDI. Result	;	Units	RL
Chloride							<3.85		mg/Kg	4
Method Bla	unk (1)	QC B	atch: 97582							
QC Batch: Prop. Batch:	97582 82664			Date Ar	alyzed:	2012-12-18			Analyzed F	By: AR
r iep Datoil.	04004			vg⊖ r rej	pai a 61011.	4014-14-1 <i>1</i>	MDL	ı	i repared D	y. AIL
Parameter			Flag		Cert		Result	,	Units	RL
Chlorida							/3 85		mg/Kg	Λ

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Method Blank (1)	QC Batch: 97583				
QC Batch: 97583		Date Analyzed:	2012-12-18	Analyzed By:	AR
Prep Batch: 82664		QC Preparation:	2012-12-17	Prepared By:	AR
			MDL		
Parameter	Flag	Cert	\mathbf{Result}	Units	RL
Chloride			<3.85	mg/Kg	4
Method Blank (1)	QC Batch: 97584				
OC Batch: 97584		Date Analyzed	2012-12-18	Analyzed By:	AR
Prep Batch: 82664		QC Preparation:	2012-12-17	Prepared By:	AR
			MDL		
Parameter	Flag	Cert	Result	\mathbf{Units}	RL
Chloride	· · ·		<3.85	mg/Kg	4

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Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch:	97270	Date Analyzed:	2012-12-10	Analyzed By:	$\mathbf{Y}\mathbf{G}$
Prep Batch:	82439	QC Preparation:	2012-12-10	Prepared By:	YG

			LCS			Spike	Matrix		Rec.
Param	\mathbf{F}	С	\mathbf{Result}	Units	Dil.	Amount	Result	Rec.	Limit
Benzene		1	1.87	mg/Kg	1	2.00	< 0.00810	94	70 - 130
Toluene		1	1.91	mg/Kg	1	2.00	< 0.00750	96	70 - 130
Ethylbenzene		1	2.00	mg/Kg	1	2.00	< 0.00730	100	70 - 130
Xylene		1	5.92	mg/Kg	1	6.00	< 0.00700	99	70 - 130

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

			LCSD			Spike	Matrix		Rec.		RPD
Param	F	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene		1	1.82	mg/Kg	1	2.00	< 0.00810	91	70 - 130	3	20
Toluene		1	1.87	mg/Kg	1	2.00	< 0.00750	94	70 - 130	2	20
Ethylbenzene		1	1.96	mg/Kg	1	2.00	< 0.00730	98	70 - 130	2	20
Xylene		1	5.75	mg/Kg	1	6.00	< 0.00700	96	70 - 130	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
Trifluorotoluene (TFT)	2.05	1.99	mg/Kg	1	2.00	102	100	70 - 130
4-Bromofluorobenzene (4-BFB)	2.07	1.98	mg/Kg	1	2.00	104	99	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch:	97272		D٤	ate Analyze	ed: 2012-	12-10		1	Analyzed	By: YG
Prep Batch:	82441		Q	C Preparat	ion: 2012-	12-10		I	Prepared	By: YG
				LCS			Spike	Matrix		Rec.
Param		\mathbf{F}	\mathbf{C}	\mathbf{Result}	Units	Dil.	Amount	Result	Rec.	Limit
GRO			1	21.8	mg/Kg	1	20.0	<2.32	109	70 - 130

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control spikes continued											
_	_	-	LCSD			Spike	Matrix		Re	ec.	RPD
Param	F	С	Result	Units	Dil.	Amount	t Result	Rec.	Lin	nit R	PD Limit
			LCSD			Spike	Matrix		Re	èc	RPD
Param	\mathbf{F}	С	Result	Units	Dil.	Amount	t Result	Rec.	Lin	nit R	PD Limit
GRO		1	22.4	mg/Kg	g 1	20.0	<2.32	112	70 -	130	3 20
Percent recovery is based on the	spike	resu	lt. RPD	is based	on the	spike and	spike duplic	ate res	ult.		
			LC	'S LO	SD		Sn	iko	LCS	LCSD	Rec
Surrogate			Res	ult Re	sult	Units	Dil. Am	ount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)			1.8	35 1.	.88	mg/Kg	1 2.	00	92	94	70 - 130
4-Bromofluorobenzene (4-BFB)			2.0)0 1.	.93	mg/Kg	1 2.	00	100	96	70 - 130
QC Batch: 97274 Prep Batch: 82442 Param		F	Date QC P C I	Analyzec reparatic LCS Result	l: 20 on: 20 Units	12-12-11 12-12-10 s Dil.	Spike Amount	M ; R	I atrix esult	Analyzec Prepared Rec.	l By: CW By: CW Rec. Limit
DRO			1	277	mg/K	g 1	250	<	9.09	111	70 - 130
Percent recovery is based on the	spike	resu	lt. RPD	is based	on the	spike and s	spike duplic	ate res	ult.		
			LCSD			Spike	Matrix		Re	c.	RPD
Param	\mathbf{F}	С	Result	Units	Dil.	Amount	Result	Rec.	Lin	nit R	PD Limit
DRO		1	269	mg/Kg	; 1	250	<9.09	108	70 -	130	3 20
Percent recovery is based on the	spike	resu	lt. RPD	is based	on the	spike and s	spike duplic	ate res	ult.		
	LC	CS	LCS	D			Spike	LC	s	LCSD	Rec.
Surrogate	Res	ult	Resu	lt U	nits	Dil.	Amount	Re	c.	Rec.	Limit
n-Tricosane	12	23	122	m	g/Kg	1	100	12	3	122	70 - 130
Laboratory Control Spike (L QC Batch: 97562 Prep Batch: 82664	CS-1)	Date QC F	Analyzec reparatio	l: 20 on: 20	12-12-18 12-12-17	Spike	М	atrix	Analyze Preparec	d By: AR d By: AR Rec.
Param		F.	<u> </u>	tesult	Units	Dil.	Amount	; R	esult	Rec.	Limit
Chloride				2620	mg/K	g 1	2500	<	3.85	105	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	\mathbf{Result}	Rec.	Limit	RPD	Limit
Chloride			2530	mg/Kg	1	2500	<3.85	101	85 - 115	4	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:	97581	Date Analyzed:	2012-12-18	Analyzed By:	AR
Prep Batch:	82664	QC Preparation:	2012-12-17	Prepared By:	AR

ਸ	a	D						
т.	U	Result	Units	Dil.	Amount	Result	Rec.	Limit
		2740	mg/Kg	1	2500	<3.85	110	85 - 115
			2740	2740 mg/Kg	2740 mg/Kg 1	2740 mg/Kg 1 2500	2740 mg/Kg 1 2500 <3.85	2740 mg/Kg 1 2500 <3.85 110

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}	\mathbf{Result}	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride			2750	mg/Kg	1	2500	<3.85	110	85 - 115	0	20

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

Laboratory Control Spike (LCS-1)

Chloride

QC Batch:	97582		Da	ate Analyze	d: 2012	-12-18			Analyzed By:	AR	
Prep Batch:	82004		Q	C Preparati	on: 2012-	-12-17			Prepared By:	AR	
Param		F	C	LCS Bosult	Unite	٦	Spike A mount	Matrix	Bec	Rec.	

mg/Kg

1

2500

<3.85

110

85 - 115

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

2750

			LCSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride			2610	mg/Kg	1	2500	<3.85	104	85 - 115	5	20

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Laboratory Control Spike (LC	CS-1)									
QC Batch: 97583			Dat	e Analyze	ed: 201	2-12-18			Analy	zed By	: AR
Prep Batch: 82664			QC	Preparat	ion: 201	2-12-17			Prepa	red By	: AR
		F	a	LCS	TT !4	1:1	Spike	Matr	ix H D-		Rec.
Chloride		<u>г</u>	<u> </u>	2530	Units		Amount 2500	Kesu	$\frac{11}{85}$ 10	$\frac{1}{1}$	$\frac{\text{Limit}}{5 - 115}$
Percent recovery is based on the s	pike	resul	lt. RPI) is based	on the s	pike and s	oike duplica	ate result			
	F		T COT	 \		a					חחח
Param	ਸ	С	Resul) t Units	a Dil	Amount	Matrix	Rec	Rec. Limit	RPD	RPD Limit
Chloride	- <u>-</u>	<u> </u>	2590	mg/K	g 1	2500	<3.85	$\frac{1000}{104}$	<u>5 - 115</u>	$\frac{10}{2}$	20
Percent recovery is based on the s	pike	resul	t. RPI) is based	on the s	pike and st	oike duplica	ate result			
•	•					· •	. 1				
Laboratory Control Spike (LC	CS-1)									
QC Batch: 97584			Dat	e Analyze	ed: 201	2-12-18			Analy	zed By	: AR
Prep Batch: 82664			QC	Preparat	ion: 201	2-12-17			Prepa	red By	: AR
				LCS			Snike	Matr	ix		Rec
Param		F	С	Result	Units	Dil.	Amount	Resu	lt Re	c.	Limit
Chloride				2510	mg/Kg	1	2500	<3.8	5 10	0 8	5 - 115
Percent recovery is based on the s	pike	resul	t. RPI) is based	on the s	oike and sp	oike duplica	ate result.	•		
			LCST)		Spike	Matrix		Rec		RDD
Param	F	С	Resul	, t Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride			2670	mg/K	g 1	2500	<3.85	107 8	5 - 115	6	20
Percent recovery is based on the sp	oike	resul	t. RPI) is based	on the s	oike and st	oike duplica	te result.	-		
						1	1				
	a	,	010050	,							
Matrix Spike (MS-1) Spiked	San	iple:	310050)							
QC Batch: 97270			Dat	e Analyze	ed: 201	2-12-10			Analy	zed By	: YG
Prep Batch: 82439			\mathbf{QC}	Preparati	ion: 201	2-12-10			Prepa	red By:	YG
				MS			Spike	Matri	x		Rec.
Param	H	?	C I	Result	Units	Dil.	Amount	Resul	t Re	ec.	Limit
Benzene			1	1.79	mg/Kg	1	2.00	< 0.008	10 9	0 7	0 - 130
Toluene			1	1.82	mg/Kg	1	2.00	< 0.007	50 9	1 7	0 - 130
Ethylbenzene			1	1.89	mg/Kg	1	2.00	< 0.007	30 9-	4 7	0 - 130

continued ...

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matrix spikes continued

			MS			Spike	Matrix		Rec.	
Param	\mathbf{F}	\mathbf{C}	\mathbf{Result}	Units	Dil.	Amount	Result	Rec.	Limit	
Xylene		1	5.57	mg/Kg	1	6.00	< 0.00700	93	70 - 130	

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

			MSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	С	\mathbf{Result}	Units	Dil.	Amount	\mathbf{Result}	Rec.	Limit	RPD	Limit
Benzene		1	1.83	mg/Kg	1	2.00	< 0.00810	92	70 - 130	2	20
Toluene		1	1.85	mg/Kg	1	2.00	< 0.00750	92	70 - 130	2	20
Ethylbenzene		1	1.94	mg/Kg	1	2.00	< 0.00730	97	70 - 130	3	20
Xylene		1	5.68	mg/Kg	1	6.00	< 0.00700	95	70 - 130	2	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	\mathbf{Result}	\mathbf{Result}	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	2.03	1.98	mg/Kg	1	2	102	99	70 - 130
4-Bromofluorobenzene (4-BFB)	2.05	1.98	mg/Kg	1	2	102	99	70 - 130

Spiked Sample: 316050 Matrix Spike (MS-1)

QC Batch:	97272	Date Analyzed:	2012-12-10	Analyzed By:	$\mathbf{Y}\mathbf{G}$
Prep Batch:	82441	QC Preparation:	2012-12-10	Prepared By:	YG

			MS			Spike	Matrix		Rec.
Param	\mathbf{F}	\mathbf{C}	Result	Units	Dil.	Amount	Result	Rec.	Limit
GRO		1	17.6	mg/Kg	1	20.0	<2.32	88	70 - 130

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

			MSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	С	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
GRO		1	19.8	mg/Kg	1	20.0	<2.32	99	70 - 130	12	20

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	\mathbf{Result}	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	1.84	1.89	mg/Kg	1	2	92	94	70 - 130
4-Bromofluorobenzene (4-BFB)	1.99	1.99	mg/Kg	1	2	100	100	70 - 130

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Matrix Spike (N	IS- 1)	Spiked	Sai	mple	316050)								
QC Batch: 9727	'4				Dat	e Analyze	ed: 20	12-12-11			A	nalyze	ed By:	CW
Prep Batch: 8244	2				\mathbf{QC}	Preparat	ion: 20	12-12-10			P	repare	ed By:	CW
						MS			Spike	Ν	latrix			Rec.
Param				F	С	Result	Unit	s Dil.	Amoun	t F	lesult	Rec	•	Limit
DRO					1	302	mg/k	lg 1	250	<	<9.09	121	7	0 - 130
Percent recovery is	based of	n the sp	pike	resu	lt. RPI) is based	l on the	spike and	spike duplie	cate rea	sult.			
					MSI)		Spike	Matrix		Rec	2.		RPD
Param			\mathbf{F}	С	Resu	lt Unit	ts Dil	. Amour	nt Result	Rec.	Lim	it	RPD	Limit
DRO		Qs	Qs	1	329	mg/ł	Kg 1	250	< 9.09	132	70 - 1	130	9	20
Percent recovery is	based or	n the sp	oike	resu	lt. RPI) is based	l on the	spike and	spike duplie	cate res	sult.			
				MS]	MSD			Spike]	MS	MSD		Rec.
Surrogate			I	Resul	t F	Result	Units	Dil.	Amoun	t F	Rec.	Rec.		Limit
n-Tricosane Qs	r Qør	-		137		141	mg/Kg	ς 1	100		137	141	7	0 - 130
Matrix Spike (M QC Batch: 9756 Prep Batch: 8266	IS-1) 32 34	Spiked	Saı	nple:	316325 Dat QC	5 e Analyze Preparat	ed: 20 .ion: 20)12-12-18)12-12-17			A F	\nalyz `repar	ed By ed By	: AR : AR
Daman				T.	C	MS	¥T	Dil	Spike	Ma	atrix	Dee	1	Rec.
r aram Chloride				<u>г</u>	<u> </u>	Result 8100	Units	$\frac{D11}{10}$	2500		5011 260	80	78	0 - 121
	· · ·		.,			0190	ng/ rt	5 10	2000		1,	03	10.	v = 121
Percent recovery is	based of	n the sp	oike	resu	it. RPI) is based	l on the	spike and	spike duplic	cate re	sult.			
5			-	~	MSD			Spike	Matrix	-	Rec.			RPD
Param			F.	C	Result	Units	Dil.	Amount	Result	Rec.	Limi	t	KPD	Limit
Unioride					8570	mg/Kg	g 10	2500	5960	104	- 78.9 - 1	121	4	20

Matrix Spike	(MS-1)	Spiked	Sample:	316099
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QC Batch:	97581	Date Analyzed:	2012-12-18	Analyzed By:	AR
Prep Batch:	82664	QC Preparation:	2012-12-17	Prepared By:	AR

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·			<u>_</u>				·			
_	_	~	MS			Spike	Ma	atrix		Rec.
Param	F	C	Result	Units	Dil.	Amount	Re	esult Re	<u>c.</u>	Limit
Chloride			3330	mg/Kg	5	2500	1	020 92	2 78	.9 - 121
Percent recovery is based	on the spike re	sult. RP	D is based	l on the	spike and s	spike dupli	cate re	sult.		
		MSD	I		Spike	Matrix		Rec.		RPD
Param	F C	C Resul	t Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride		3170	mg/Kį	g 5	2500	1020	86	78.9 - 121	5	20
Percent recovery is based	on the spike re	sult. RP	D is based	l on the	spike and s	spike dupli	cate re	sult.		
Matrix Spike (MS-1)	Spiked Samp	ole: 31610	9							
		_								
QC Batch: 97582		Da	te Analyze	ed: 20	12-12-18			Ana	lyzed By	7: AR
Prep Batch: 82664		QC	Preparat	ion: 20	12-12-17			Prep	bared By	': AR
			MS			Spike	Ma	atrix		Rec.
Param	F	C	Result	Units	Dil.	Amount	Re	sult Re	с.	Limit
Chloride			2520	mg/Kg	5	2500	1	41 95	5 78	.9 - 121
Percent recovery is based	on the spike re	sult. RP	D is based	l on the s	spike and s	spike dupli	cate re	sult.		
		MSD			Spike	Matrix		Rec.		RPD
Param	F C	Resul	t Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	, .	2640	mg/Kg	g 5	2500	141	100	78.9 - 121	5	20
Percent recovery is based	on the spike re	sult. RP	D is based	l on the s	spike and s	pike dupli	cate re	sult.		
	-				•	I				
Matrix Spike (MS-1)	Spiked Samp	le: 31611	9							
QC Batch: 97583		Da	te Analvze	ed: 20	12-12-18			Ana	vzed Bv	: AR
Prep Batch: 82664		QC	Preparat	ion: 20	12-12-17			Prep	pared By	: AR
-								-		
			MS			Spiko	Me	trin		Pee
Param	ਸ	С	Result	Units	Dil	Amount	Re	sult Re	r ,	Limit
Chloride			5570	mg/Kg	10	2500	29	960 10	4 78	.9 - 121
Percent recovery is based	on the spike re	sult. R.P	D is based	on the s	spike and s	pike dupli	cate re	sult.		
								_		
D	ъ <i>с</i>	MSD	. TT •/	D'1	Spike	Matrix	n	Rec.	DDD	RPD
Param	F C	Resul	t Units	$D\Pi$.	Amount	Result	Rec.	Limit	RPD	Limit

 Param
 F
 C
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 Dil.
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 Result
 Rec.
 Limit
 RPD
 L

 Chloride
 5440
 mg/Kg
 10
 2500
 2960
 99
 78.9 - 121
 2

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Matrix Spike (MS-1) Sp	iked Sa	mple	: 31612	Ð							
QC Batch: 97584			Dat	e Analyze	d: 201	12-12-18			Ana	alyzed By	: AR
Prep Batch: 82664			\mathbf{QC}	Preparati	on: 201	12-12-17			Pre	pared By	: AR
				MS			Spike	M	atrix		Rec.
Param		F	С	Result	Units	Dil.	Amount	Re	esult Re	ec.	Limit
Chloride				4490	mg/Kg	10	2500	1	790 10	08 78	.9 - 121
Percent recovery is based on th	ne spike	e rest	ılt. RPI) is based	on the s	pike and s	pike dupli	cate re	sult.		
			MSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{F}	С	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride			4170	mg/Kg	10	2500	1790	95	78.9 - 121	7	20

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Calibration Standards

Standard (CCV-1)

QC Batch: 9	7270			Date Ana	alyzed: 201	2-12-10		Analyz	zed By: YG
					CCVs	CCVs	CCVs	Percent	
					True	Found	Percent	Recovery	Date
Param		Flag	\mathbf{Cert}	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene			1	mg/kg	0.100	0.102	102	80 - 120	2012-12-10
Toluene			1	mg/kg	0.100	0.102	102	80 - 120	2012-12-10
Ethylbenzene			1	mg/kg	0.100	0.103	103	80 - 120	2012-12-10
Xylene			1	mg/kg	0.300	0.302	101	80 - 120	2012-12-10

Standard (CCV-2)

QC Batch: 97270)		Date Ana	alyzed: 201	12-12-10		Analyz	zed By: YG
				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		1	mg/kg	0.100	0.0966	97	80 - 120	2012-12-10
Toluene		1	mg/kg	0.100	0.0963	96	80 - 120	2012-12-10
Ethylbenzene		1	mg/kg	0.100	0.0965	96	80 - 120	2012-12-10
Xylene		1	mg/kg	0.300	0.284	95	80 - 120	2012-12-10

Standard (CCV-3)

QC Batch: 97270			Date Ana	alyzed: 201	2-12-10		Analyz	zed By: YG
				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		1	mg/kg	0.100	0.0986	99	80 - 120	2012-12-10
Toluene		1	mg/kg	0.100	0.0978	98	80 - 120	2012-12-10
Ethylbenzene		1	mg/kg	0.100	0.0981	98	80 - 120	2012-12-10
Xylene		1	mg/kg	0.300	0.287	96	80 - 120	2012-12-10

Report Date: 114-6401608	December 20	, 2012	C	Work Or OG/Myox 2	rder: 12120719 29 State Com.) #3H	Page Nu	mber: 40 of 45 Eddy Co., NM
Standard (Co	CV-1)							
QC Batch: 97	272		Date	Analyzed:	2012-12-10		Analy	zed By: YG
				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		1	mg/Kg	1.00	1.15	115	80 - 120	2012-12-10
Standard (Co	CV-2)							
QC Batch: 97	272		Date	Analyzed:	2012-12-10		Analy	zed By: YG
				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
				n .	Conc.	Recovery	Limits	Analyzed
Param	Flag	Cert	Units	Conc.	001101	10000101		
Param GRO Standard (C)	Flag	Cert 1	Units mg/Kg	1.00	0.948	95	80 - 120	2012-12-10
Param GRO Standard (CO QC Batch: 97	Flag C V-3) 7272	Cert	Units mg/Kg Date	Analyzed:	0.948 0.948 2012-12-10	95	80 - 120 Analy	2012-12-10 zed By: YG
Param GRO Standard (CO QC Batch: 97	Flag C V-3) 7272	Cert1	Units mg/Kg Date	Analyzed:	0.948 2012-12-10 CCVs	CCVs	80 - 120 Analy Percent	2012-12-10 zed By: YG
Param GRO Standard (Co QC Batch: 97	Flag CV-3) 7272	Cert	Units mg/Kg Date	Analyzed: CCVs True	0.948 0.948 2012-12-10 CCVs Found Conc	CCVs Percent Becovery	80 - 120 Analy Percent Recovery Limits	2012-12-10 zed By: YG Date Analyzed
Param GRO Standard (Co QC Batch: 97 Param GRO	Flag C V-3) 7272 Flag	Cert 1 Cert	Units mg/Kg Date Units mg/Kg	Analyzed: CCVs True Conc. 1.00	0.948 0.948 2012-12-10 CCVs Found Conc. 1.19	CCVs Percent Recovery 119	80 - 120 Analy Percent Recovery Limits 80 - 120	2012-12-10 zed By: YG Date Analyzed 2012-12-10
Param GRO Standard (CO QC Batch: 97 Param GRO Standard (CO	Flag CV-3) 7272 Flag CV-1)	Cert 1 Cert 1	Units mg/Kg Date Units mg/Kg	Analyzed: CCVs True Conc. 1.00	0.948 0.948 2012-12-10 CCVs Found Conc. 1.19	CCVs Percent Recovery 119	80 - 120 Analy Percent Recovery Limits 80 - 120	2012-12-10 zed By: YG Date Analyzed 2012-12-10
Param GRO Standard (CO QC Batch: 97 Param GRO Standard (CO QC Batch: 97	Flag CV-3) 7272 Flag CV-1) 7274	Cert 1 Cert 1	Units mg/Kg Date Units mg/Kg Date	Analyzed: CCVs True Conc. 1.00	0.948 0.948 2012-12-10 CCVs Found Conc. 1.19 2012-12-11	CCVs Percent Recovery 119	80 - 120 Analy Percent Recovery Limits 80 - 120 Analy:	2012-12-10 zed By: YG Date Analyzed 2012-12-10 zed By: CW
Param GRO Standard (Co QC Batch: 97 Param GRO Standard (Co QC Batch: 97 Param	Flag CV-3) 7272 Flag CV-1) 7274	Cert 1 Cert 1	Units mg/Kg Date Units mg/Kg Date	Analyzed: CCVs True Conc. 1.00 Analyzed: CCVs True	0.948 0.948 2012-12-10 CCVs Found Conc. 1.19 2012-12-11 CCVs Found	CCVs Percent Recovery 119 CCVs Percent	80 - 120 Analy Percent Recovery Limits 80 - 120 Analyz Percent Recovery	2012-12-10 zed By: YG Date Analyzed 2012-12-10 zed By: CW Date
Param GRO Standard (CO QC Batch: 97 Param GRO Standard (CO QC Batch: 97 Param	Flag CV-3) 7272 Flag CV-1) 7274	Cert 1 Cert 1 Cert	Units mg/Kg Date Units mg/Kg Date	Analyzed: CCVs True Conc. 1.00 Analyzed: CCVs True Conc.	0.948 0.948 2012-12-10 CCVs Found Conc. 1.19 2012-12-11 CCVs Found COrcs Found Conc. 278	CCVs Percent Recovery 119 CCVs Percent Recovery	80 - 120 Analy Percent Recovery Limits 80 - 120 Analyz Percent Recovery Limits 80 - 120	2012-12-10 zed By: YG Date Analyzed 2012-12-10 zed By: CW Date Analyzed 2012-12-11

QC Batch: 97274

Analyzed By: CW

114-6401608	December 20,	2012	CO	Work Ord DG/Myox 29	er: 12120719 State Com.	#3H	Page Nu	mber: 41 of 45 Eddy Co., NM
Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	262	105	80 - 120	2012-12-11
Standard (C	CV-3)							
QC Batch: 97	274		Date A	Analyzed: 2	012-12-11		Analyz	zed By: CW
				CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO								
DRO Standard (C) QC Batch: 97	CV-1) 7562		Date A	Analyzed: 2	012-12-18		Analy	zed By: AR
DRO Standard (Co QC Batch: 97	C V-1) 7562		Date 1	Analyzed: 2 CCVs	2012-12-18 CCVs	CCVs	Analy Percent	zed By: AR
DRO Standard (Co QC Batch: 97 Param	CV-1) 7562 Flag	Cert	Date A Units	Analyzed: 2 CCVs True Conc.	012-12-18 CCVs Found Conc.	CCVs Percent Becovery	Analy Percent Recovery Limits	zed By: AR Date Analyzed
DRO Standard (C) QC Batch: 97 Param Chloride	CV-1) 7562 Flag	Cert	Date A Units mg/Kg	Analyzed: 2 CCVs True Conc. 100	2012-12-18 CCVs Found Conc. 97.1	CCVs Percent Recovery 97	Analy Percent Recovery Limits 85 - 115	zed By: AR Date Analyzed 2012-12-18
DRO Standard (C) QC Batch: 97 Param Chloride Standard (C)	CV-1) 7562 Flag	Cert	Date A Units mg/Kg	Analyzed: 2 CCVs True Conc. 100	2012-12-18 CCVs Found Conc. 97.1	CCVs Percent Recovery 97	Analy Percent Recovery Limits 85 - 115	zed By: AR Date Analyzed 2012-12-18
DRO Standard (C) QC Batch: 97 Param Chloride Standard (C) QC Batch: 97	CV-1) 7562 Flag CV-2) 7562	Cert	Date A Units mg/Kg Date A	Analyzed: 2 CCVs True Conc. 100 Analyzed: 2	2012-12-18 CCVs Found Conc. 97.1	CCVs Percent Recovery 97	Analy Percent Recovery Limits 85 - 115 Analy	zed By: AR Date Analyzed 2012-12-18 zed By: AR
DRO Standard (C QC Batch: 97 Param Chloride Standard (C QC Batch: 97	CV-1) 7562 Flag CV-2) 7562	Cert	Date A Units mg/Kg Date A	Analyzed: 2 CCVs True Conc. 100 Analyzed: 2 CCVs True	2012-12-18 CCVs Found Conc. 97.1 2012-12-18 CCVs Found	CCVs Percent Recovery 97 CCVs Percent	Analy Percent Recovery Limits 85 - 115 Analy Percent Recovery	zed By: AR Date <u>Analyzed</u> 2012-12-18 zed By: AR Date
DRO Standard (C QC Batch: 97 Param Chloride Standard (C QC Batch: 97 Param	CV-1) 7562 Flag CV-2) 7562 Flag	Cert	Date A Units mg/Kg Date A Units	Analyzed: 2 CCVs True Conc. 100 Analyzed: 2 CCVs True Conc.	2012-12-18 CCVs Found Conc. 97.1 2012-12-18 CCVs Found Conc.	CCVs Percent Recovery 97 CCVs Percent Recovery	Analy Percent Recovery Limits 85 - 115 Analy Percent Recovery Limits	zed By: AR Date Analyzed 2012-12-18 zed By: AR Date Analyzed

Standard (CCV-1)

QC Batch: 97581

Date Analyzed: 2012-12-18

Analyzed By: AR

Report Date: De 114-6401608 Param Chloride Standard (CCV QC Batch: 9758 Param Chloride Standard (CCV QC Batch: 9758 Param Chloride Standard (CCV QC Batch: 9758	ecember 20,	2012	CC	Work Ord DG/Myox 29	er: 12120719 State Com.	#3H	Page Nu	mber: 42 of 45 Eddy Co., NM
Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2012-12-18
Standard (CC	V-2)							
QC Batch: 975	81		Date A	analyzed: 2	012-12-18		Analy	zed By: AR
				CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	Flag	\mathbf{Cert}	Units	Conc.	Conc.	Recovery	Limits	Analyzed 2012-12-18
Chloride Standard (CC	V-1)		mg/Kg	100	99.0		00 - 110	2012 12 10
Chloride Standard (CC QC Batch: 975	V-1) 82		mg/Kg Date A	100 Analyzed: 2 CCVs True	012-12-18 CCVs Found	CCVs Percent	Analy Percent Recovery	zed By: AR Date
Chloride Standard (CC QC Batch: 975 Param	V-1) 82 Flag	Cert	mg/Kg Date A Units	100 Analyzed: 2 CCVs True Conc.	012-12-18 CCVs Found Conc.	CCVs Percent Recovery	Analy Percent Recovery Limits	zed By: AR Date Analyzed
Chloride Standard (CC QC Batch: 975 Param Chloride	V-1) 82 Flag	Cert	mg/Kg Date A Units mg/Kg	Analyzed: 2 CCVs True Conc. 100	012-12-18 CCVs Found Conc. 101	CCVs Percent Recovery 101	Analy Percent Recovery Limits 85 - 115	zed By: AR Date Analyzed 2012-12-18
Chloride Standard (CC QC Batch: 975 Param Chloride Standard (CC	V-1) 82 Flag V-2)	Cert	mg/Kg Date A Units mg/Kg	100 Analyzed: 2 CCVs True Conc. 100	012-12-18 CCVs Found Conc. 101	CCVs Percent Recovery 101	Analy Percent Recovery Limits 85 - 115	zed By: AR Date Analyzed 2012-12-18
Chloride Standard (CC QC Batch: 975 Param Chloride Standard (CC QC Batch: 975	V-1) 82 Flag V-2) 82	Cert	mg/Kg Date A Units mg/Kg Date A	100 Analyzed: 2 CCVs True Conc. 100	012-12-18 CCVs Found Conc. 101 012-12-18	CCVs Percent Recovery 101	Analy Percent Recovery Limits 85 - 115 Analy	zed By: AR Date Analyzed 2012-12-18 zed By: AR
Chloride Standard (CC QC Batch: 975 Param Chloride Standard (CC QC Batch: 975 Param	V-1) 82 Flag V-2) 82	Cert	mg/Kg Date A Units mg/Kg Date A	Analyzed: 2 CCVs True Conc. 100 Analyzed: 2 CCVs True Corc	012-12-18 CCVs Found Conc. 101 012-12-18 CCVs Found Conc	CCVs Percent Recovery 101 CCVs Percent Becovery	Analy Percent Recovery Limits 85 - 115 Analy Percent Recovery Limits	zed By: AR Date <u>Analyzed</u> 2012-12-18 zed By: AR Date Analyzed

Standard (CCV-1)

QC Batch: 97583

Date Analyzed: 2012-12-18

Analyzed By: AR

Report Date: D 114-6401608	ecember 20,	2012	CC	Work Or OG/Myox 2	rder: 12120719 29 State Com.) #3H	Page Nu	mber: 43 of 45 Eddy Co., NM
Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.1	99	85 - 115	2012-12-18
Standard (CC	V-2)							
QC Batch: 975	583		Date A	nalyzed:	2012-12-18		Analy	zed By: AR
_				CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	Flag	Cert	Units	<u> </u>	<u> </u>	Recovery	Limits	Analyzed
Standard (CC QC Batch: 975	2 V-1) 584		Date A	nalyzed:	2012-12-18		Analy	zed By: AR
				CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	Flag	Cert	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2012-12-18
Standard (CC	V-2)							
QC Batch: 975	584		Date A	nalyzed:	2012-12-18		Analy	zed By: AR
				CCVs	CCVs Found	CCVs Percent	Percent	Data
Param	Flag	Cert	Units	Conc.	Conc.	Recoverv	Limits	Analyzed
Chloride			mg/Kg	100	99.8	100	85 - 115	2012-12-18

Work Order: 12120719 COG/Myox 29 State Com. #3H Page Number: 44 of 45 Eddy Co., NM

Appendix

Report Definitions

Name	Definition
$\overline{\mathrm{M}}\mathrm{DL}^{}$	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

Laboratory Certifications

	Certifying	Certification	Laboratory
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

Work Order: 12120719 COG/Myox 29 State Com. #3H Page Number: 45 of 45 Eddy Co., NM

1 Dilution due to surfactants.

2 Dilution due to surfactants.

Attachments

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

Analysis I	Request of Ch	ain of Custo	dy R	e	co	oro	b						A	NAL	PAC YSIS	GE:		T d No 1	OF;	_5	<u>)</u>
	TETRA 1910 N. Big Midland, Ter (432) 682-4559	TECH Spring St. xas 79705 • Fax (432) 682-3946							05 (Ext. to C35)	d Cr Ph Ha Se	d Vr Pd Hg Se								TOS		
LIENT NAME:	SITE MANAG	R: L. Tauchez	ERS		PRES	SER	VATIVE		1X10	Ba	Ba			30/624	70/62				s, pH,		
ROJECT NO .: 114 - 642 1608 LAB I.D. DATE TIME	PROJECT NAME: () GG - Myor 29 State EGG - EG SAMP	2 Gin ≠ 3H ddy (D, NM LE IDENTIFICATION	BER OF CONTAIN		8		Ψ	X 8021B	8015 MOD.	8270 A Metals Ag As	P Metals Ag As	P Volatiles	P Semi Volatiles	AS Vol. 8240/826	VIS Semi. Vol. 82	\$ 8080/608		a Beta (Air)	(Asbestos) or Anions/Cation		
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CLIENT NAME:	SITE MANAGER:	INERS	ľ	PRES ME	ERVAT	IVE		NIX-	s Ba C	IS Ba C	s	260/624	3270/625				,Hq ,suc		
PROJECT NO.: 14-6401603 LAB I.D. NUMBER DATE TIME	ME: 1906 29 919te (on #311 Eddy (O. NM SAMPLE IDENTIFICATION	UMBER OF CONTA	ILTERED (Y/N) ICL	INO3	DE		TEX 80218	AH 8270	ICRA Metals Ag A	CLP Metals Ag A CLP Volatiles	CLP Semi Volatile	ICI IC.MS Vol. 8240/8	C.MS Semi. Vol. 1	CES 608/608	Chloride Spec.	Ipha Beta (Air)	'LM (Asbestos) Aajor Anions/Cati		
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CLIENT NAM		G				SITE MANAGE	R: Taugree	NERS		PRE	SER			TX100	, Ba	s Ba C			60/624	270/625					ns, pH,		
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LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPL	Eddy (O, NM e IDENTIFICATION	NUMBER OF	FILTERED (HNO3	ICE	NONE	BTEY BODIE	TPH 801	PAH 8270 RCRA Meta	TCLP Meta	TCLP Volati	ICLP Semi	GC.MS Vol.	GC.MS Sen	PCH'S BUBU Pest. 808/6	Chloride)	Gamma Sp Alcha Boto	PLM (Asbe	Major Anior		
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