SITE INFORMATION

Report Type: Closure Report

General Site Information:						
Site:	Myox 31-13 Flow line					
Company:	COG Operating LLC					
Section, Township and Range	Unit P	Sec. 31	T-25-S	R-28-E		
Lease Number:	API-30-015-37497					
County:	Eddy					
GPS:	32.08029° N			104.11799° W		
Surface Owner:	State					
Mineral Owner:						
Directions:	Intersection of Hwy 285 and White City Road (Approximately 12 miles south of Malaga, NM), travel west on White City Rd 2.5 mi, right 1.0 mi, left 0.5 miles, right over cattle guard 0.5 mi to location in pasture east of lease road					

Release Data:	
Date Released:	2/10/2012
Type Release:	Produced Water
Source of Contamination:	Flow line
Fluid Released:	20 bbls
Fluids Recovered:	None

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Official Communication:			
Name:	Pat Ellis		Ike Tavarez
Company:	COG Operating, LLC		Tetra Tech
Address:	550 W. Texas Ave. Ste. 1300		1910 N. Big Spring
P.O. Box			
City:	Midland Texas, 79701		Midland, Texas
Phone number:	(432) 686-3023		(432) 682-4559
Fax:	(432) 684-7137		
Email:	pellis@conchoresources.com		ike.tavarez@tetratech.com

Ranking Criteria		
Depth to Groundwater:	***Ranking Score***	***Site Data***
<50 ft	20	
50-99 ft	10	
>100 ft.	***20***	***20***
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:	**20**	

Acceptable Soil RRAL (mg/kg)		
Benzene	***Total BTEX***	***TPH***
10	50	100

TETRA TECH

October 9, 2012

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

Re: Closure Report for the COG Operating LLC., Myox 31-13 Flow line, Unit P, Section 31, 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 31-13 Flow line located in Unit P, Section 31, Township 25 South, Range 28 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.08029°, W 104.11799°. 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 February 10, 2012, and released approximately twenty (20) barrels of produced water due to a grass fire melting the flow line. To alleviate the problem, COG personnel replaced the damaged line. COG was unable to recover any of spilled fluids. The spill initiated from the damaged flowline and migrated across the native pasture impacting an area approximately 60' x 180'. The initial C-141 form is enclosed in Appendix A.

Groundwater

No water wells were listed within Section 31. The New Mexico State Engineers Office showed 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

Tetra Tech
1910 North Big Spring, Midland,TX 79705
Tel 432.682.4559 Fax 432.682.3946 www.tetratech.com

elevation is approximately 3014', which the groundwater depth at the site should be at approximately 50.0' 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 March 7, 2012, Tetra Tech personnel inspected and sampled the spill area. Seven (7) auger holes (AH-1 through AH-7) were installed to a depth of 5-5.5' below surface 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 reports and chain-of-custody documentation are included in Appendix C. The sampling results are summarized in Table 1. The auger hole locations are shown on Figure 3.

Referring to Table 1, all of the submitted samples were below the RRAL for TPH and BTEX. Elevated chloride concentrations were detected at all of the auger holes, with the exception AH-1 and AH-7. Auger holes (AH-1 and AH-7) did not show a significant impact to the soils. Auger hole (AH-2) showed a shallow impact declining to 608 mg/kg at 2-2.5' below surface. The remaining auger holes were not vertically defined.

On April 16, 2012, Tetra Tech personnel supervised the installation of four (4) boreholes (BH-1 through BH-4) utilizing an air rotary drilling rig. Samples were collected to a depth of 40.0' below surface. The sampling results are summarized on Table 1. Referring to Table 1, the elevated chloride concentrations significantly declined with depth at 5.0' to 7.0' below surface. The deeper samples from 7.0' to 25.0' did show chloride

concentrations ranging from 1,020 mg/kg to 1,740 mg/kg, but declined with depth.

Remediation and Conclusion

On July 2, 2012, Tetra Tech personnel supervised the excavation as stated in the approved work plan. In order to remove the elevated chloride concentrations, the proposed excavation depths ranged from 2.0' to 7.0' below surface. The spill foot print and final excavation depths of the soil remediation were met as stated in the approved work plan. Approximately 1,000 cubic yards were removed and disposed of at R360 facility. The areas of AH-3, AH-4, AH-5 and AH-6 were backfilled to 4.0' then a 40 mil liner was installed in the excavation bottom. The excavated areas were then backfilled with clean material to grade.

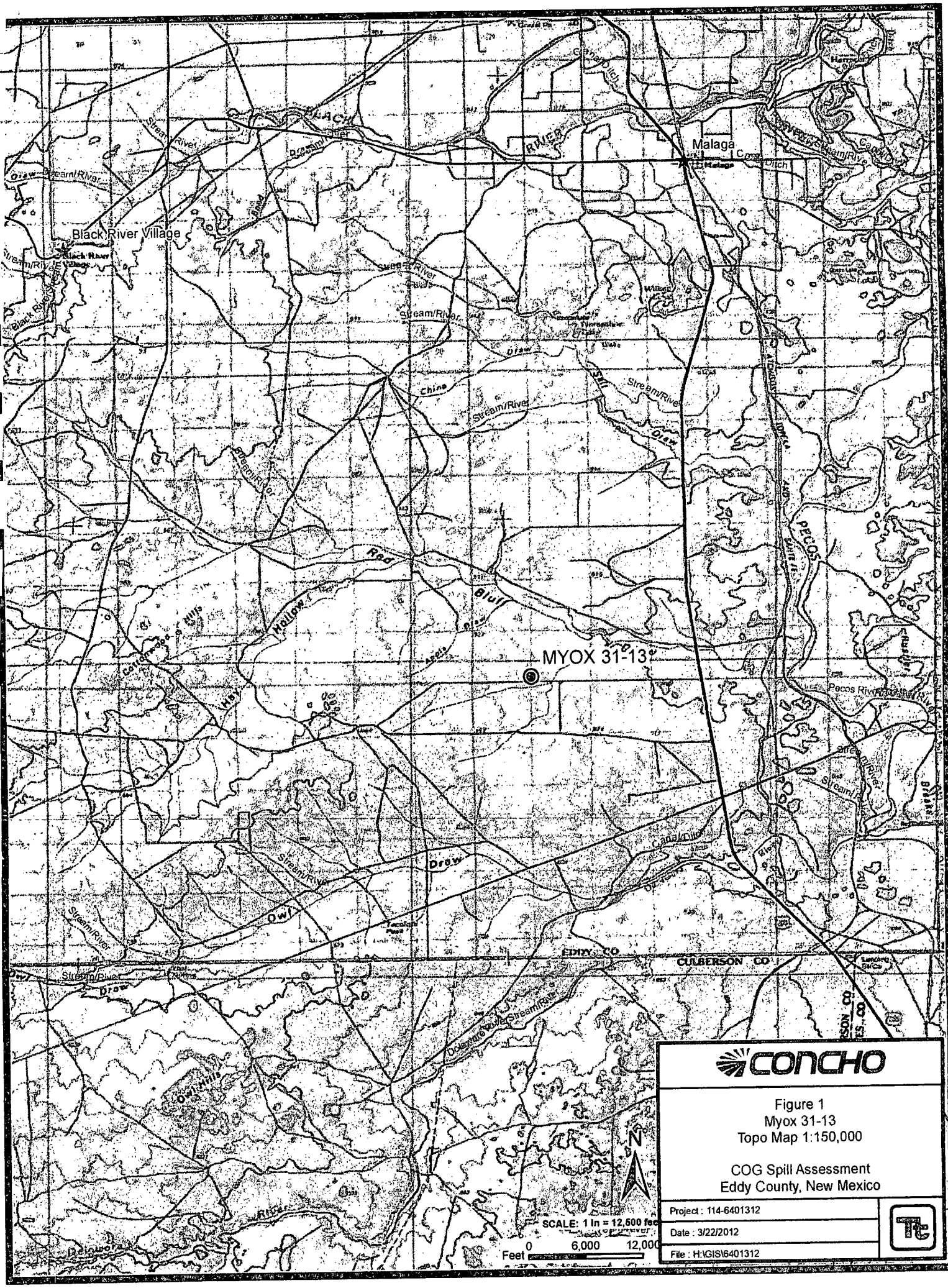
Based on the remediation activities performed at this location, COG requests closure for this site. The C-141 (Final) is included in Appendix A. If you have any questions or comments concerning the assessment or the remediation activities performed at the site, please call me at (432) 682-4559.

Respectfully submitted,
TETRA TECH

Ike Tavarez
Senior Project Manager

cc: Pat Ellis – COG

Figures

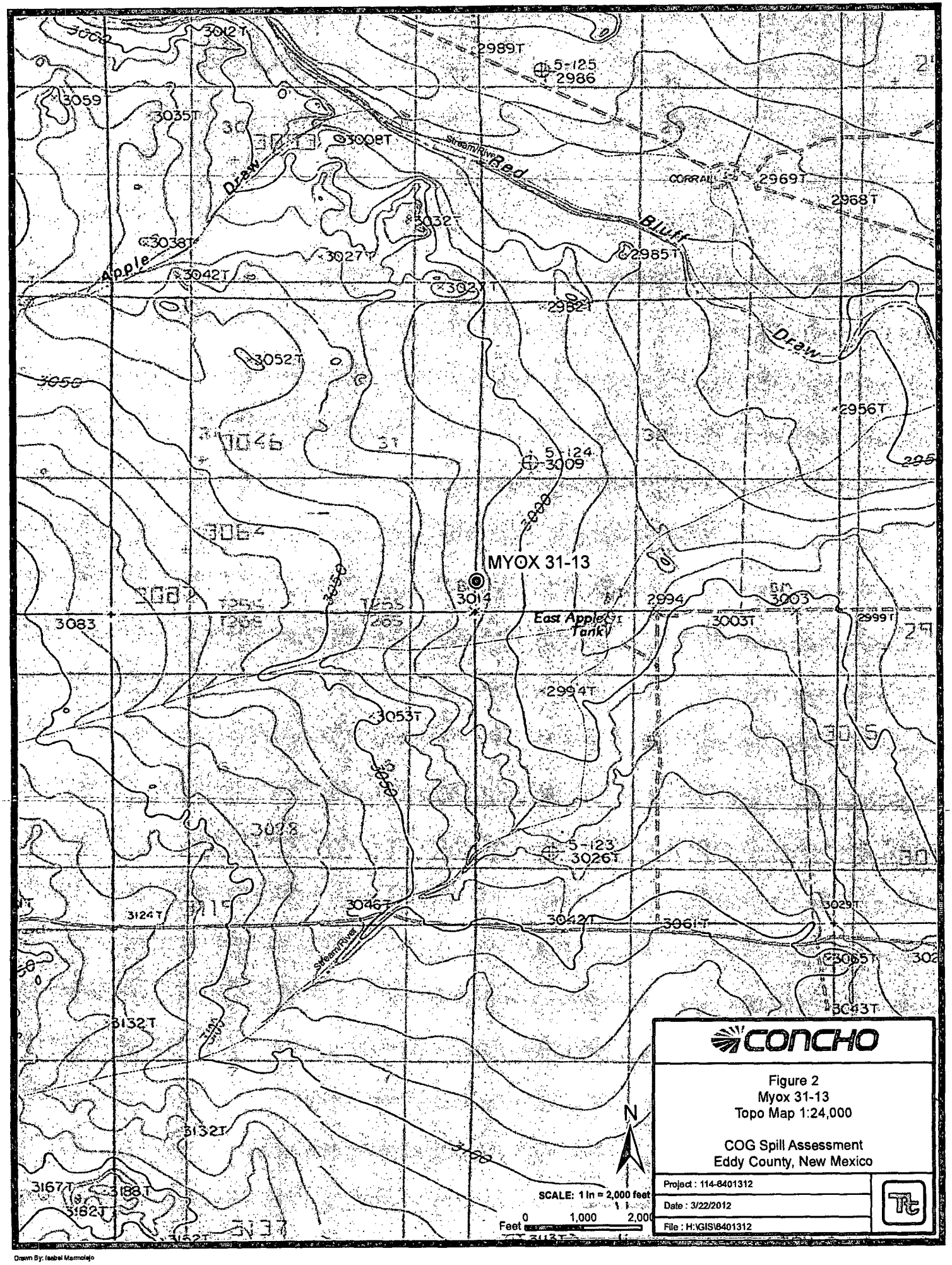


CONCHO

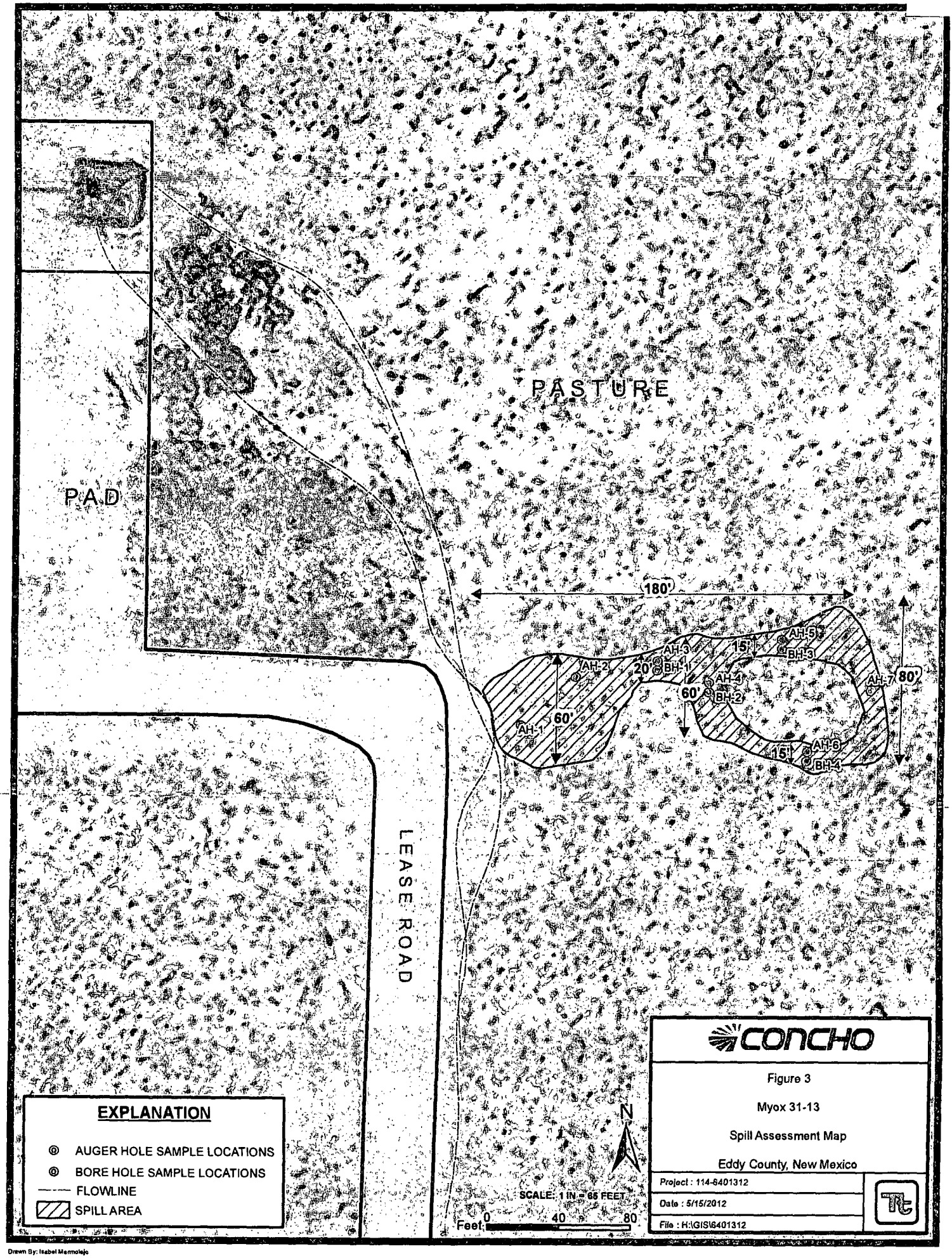
Figure 1
Myox 31-13
Topo Map 1:150,000

COG Spill Assessment
Eddy County, New Mexico

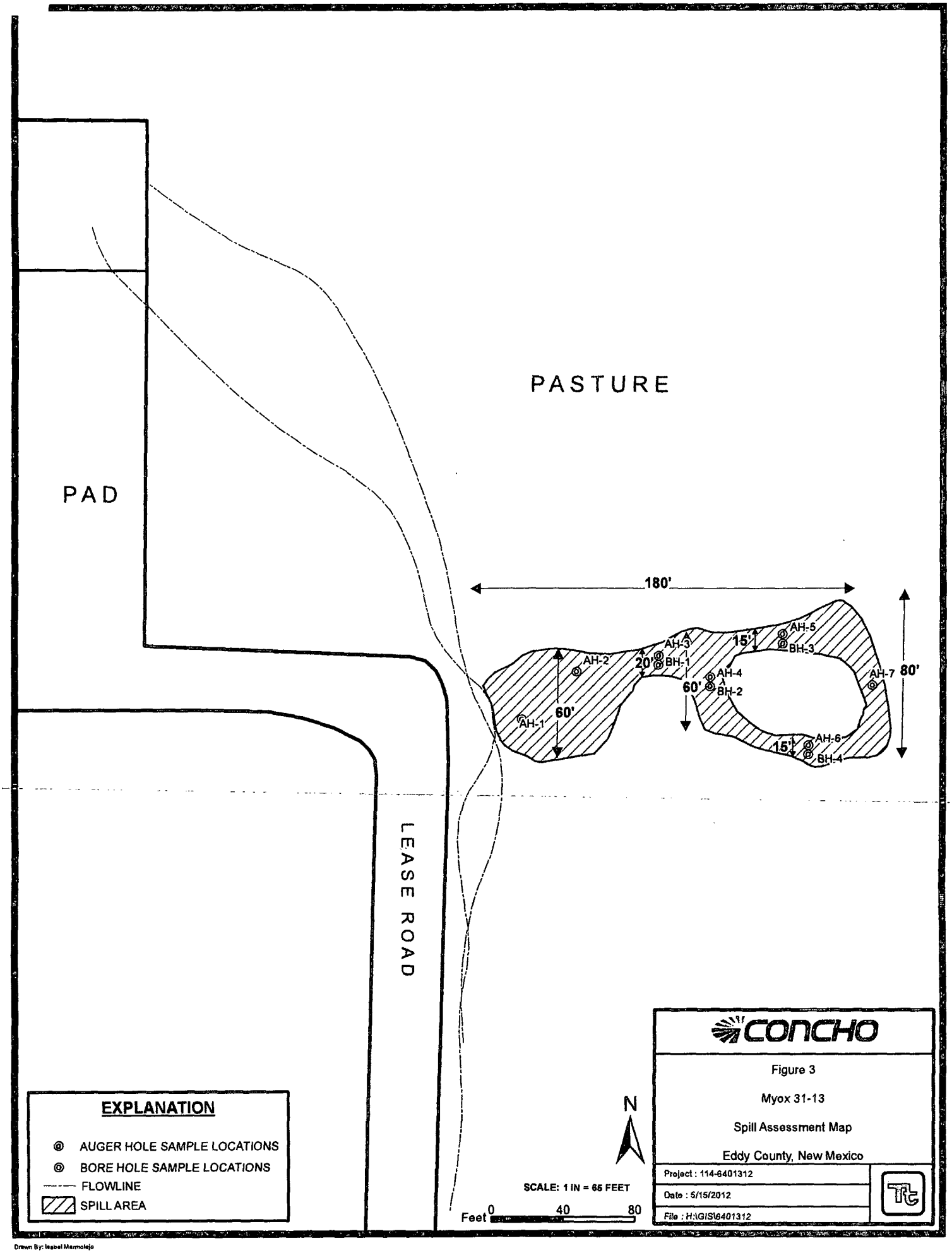
Project : 114-6401312	
Date : 3/22/2012	
File : H:\GIS\6401312	



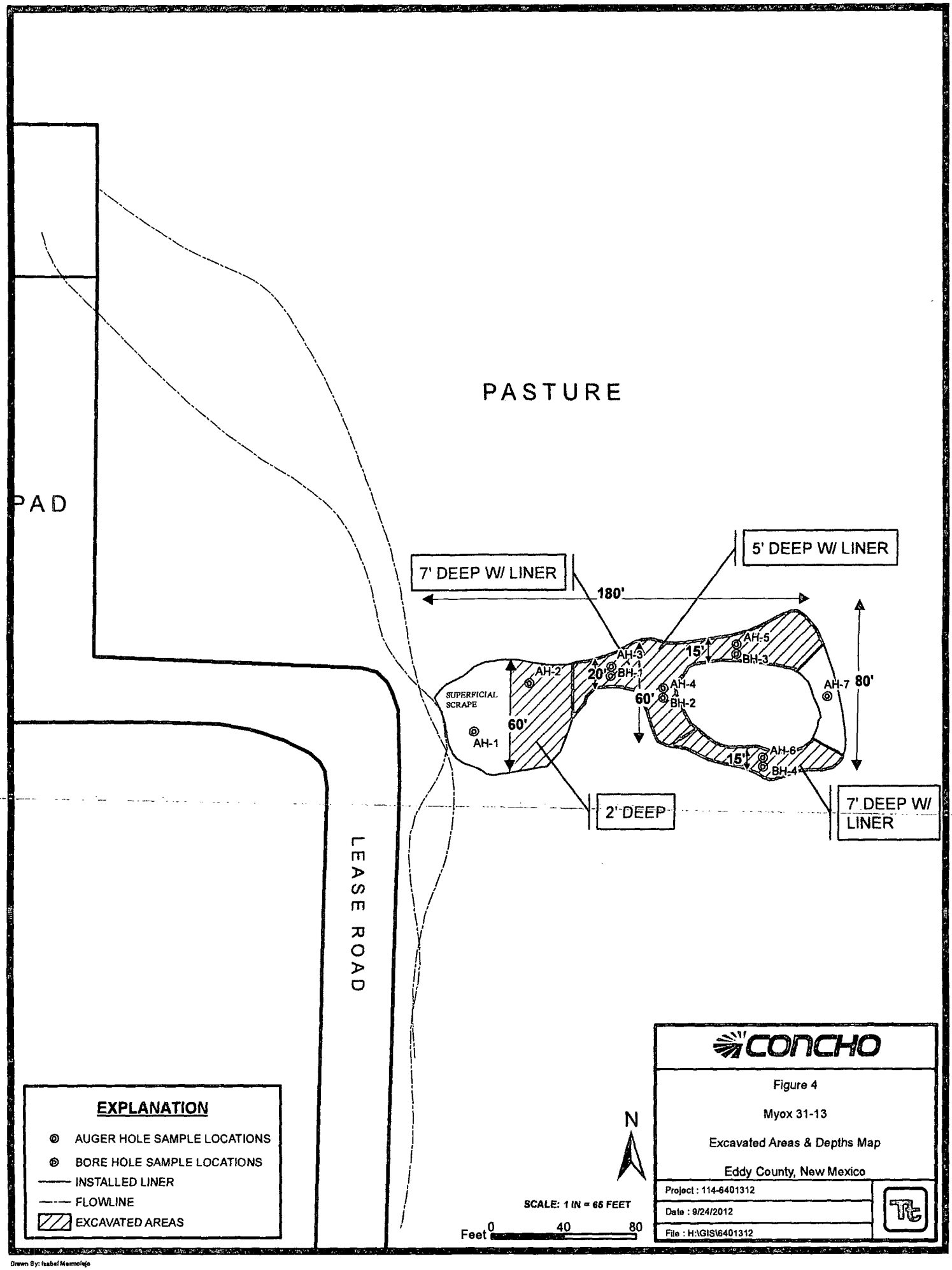
Drawn By: Isabel Marmolejo



Drawn By: Isabel Marmolejo



Drawn By: Isabel Memolejo



Drawn By: Isabel Memolejo

Tables

Table 1
COG Operating LLC.
Myox 31-13 Well Site
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	Total						
AH-1	3/7/2012	0-1	X		<2.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<200
	"	1-1.5	X		-	-	-	-	-	-	-	-	207
	"	2-2.5	X		-	-	-	-	-	-	-	-	<200
	"	3-3.5	X		-	-	-	-	-	-	-	-	<200
	"	4-4.5	X		-	-	-	-	-	-	-	-	<200
	"	5-5.5	X		-	-	-	-	-	-	-	-	<200
AH-2	3/7/2012	0-1		X	<2.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	11,800
	"	1-1.5		X	-	-	-	-	-	-	-	-	10,600
	"	2-2.5	X		-	-	-	-	-	-	-	-	608
	"	3-3.5	X		-	-	-	-	-	-	-	-	<200
	"	4-4.5	X		-	-	-	-	-	-	-	-	218
	"	5-5.5	X		-	-	-	-	-	-	-	-	<200

Table 1
COG Operating LLC.
Myox 31-13 Well Site
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	Total						
AH-3	3/7/2012	0-1		X	<2.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	15,700
	"	1-1.5		X	-	-	-	-	-	-	-	-	13,300
	"	2-2.5		X	-	-	-	-	-	-	-	-	11,700
	"	3-3.5		X	-	-	-	-	-	-	-	-	11,600
	"	4-4.5		X	-	-	-	-	-	-	-	-	8,310
	"	5-5.5		X	-	-	-	-	-	-	-	-	1,280
BH-1	4/16/2012	0-1		X	-	-	-	-	-	-	-	-	18,300
	"	2-3		X	-	-	-	-	-	-	-	-	14,400
	"	4-5		X	-	-	-	-	-	-	-	-	6,590
	"	6-7		X	-	-	-	-	-	-	-	-	2,210
	"	9-10	X		-	-	-	-	-	-	-	-	1,470
	"	14-15	X		-	-	-	-	-	-	-	-	986
	"	19-20	X		-	-	-	-	-	-	-	-	1,020
	"	24-25	X		-	-	-	-	-	-	-	-	719
	"	29-30	X		-	-	-	-	-	-	-	-	405
	"	39-40	X		-	-	-	-	-	-	-	-	258

Table 1
COG Operating LLC.
Myox 31-13 Well Site
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	Total						
AH-4	3/7/2012	0-1		X	<2.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	16,000
	"	1-1.5		X	-	-	-	-	-	-	-	-	17,600
	"	2-2.5		X	-	-	-	-	-	-	-	-	15,700
	"	3-3.5		X	-	-	-	-	-	-	-	-	12,600
	"	4-4.5		X	-	-	-	-	-	-	-	-	10,300
	"	5-5.5		X	-	-	-	-	-	-	-	-	2,580
BH-2	4/16/2012	0-1		X	-	-	-	-	-	-	-	-	2,910
	"	2-3		X	-	-	-	-	-	-	-	-	5,620
	"	4-5		X	-	-	-	-	-	-	-	-	7,450
	"	6-7	X		-	-	-	-	-	-	-	-	1,280
	"	9-10	X		-	-	-	-	-	-	-	-	1,740
	"	14-15	X		-	-	-	-	-	-	-	-	743
	"	19-20	X		-	-	-	-	-	-	-	-	991
	"	24-25	X		-	-	-	-	-	-	-	-	827
	"	29-30	X		-	-	-	-	-	-	-	-	319
	"	39-40	X		-	-	-	-	-	-	-	-	177

Table 1
COG Operating LLC.
Myox 31-13 Well Site
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	Total						
AH-5	3/7/2012	0-1		X	<2.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	12,700
	"	1-1.5		X	-	-	-	-	-	-	-	-	14,800
	"	2-2.5		X	-	-	-	-	-	-	-	-	14,800
	"	3-3.5		X	-	-	-	-	-	-	-	-	9,350
	"	4-4.5		X	-	-	-	-	-	-	-	-	7,230
	"	5-5.5		X	-	-	-	-	-	-	-	-	9,830
BH-3	4/16/2012	0-1		X	-	-	-	-	-	-	-	-	9,360
	"	2-3		X	-	-	-	-	-	-	-	-	13,900
	"	4-5		X	-	-	-	-	-	-	-	-	10,400
	"	6-7	X		-	-	-	-	-	-	-	-	922
	"	9-10	X		-	-	-	-	-	-	-	-	1,430
	"	14-15	X		-	-	-	-	-	-	-	-	1,170
	"	19-20	X		-	-	-	-	-	-	-	-	1,180
	"	24-25	X		-	-	-	-	-	-	-	-	1,100
	"	29-30	X		-	-	-	-	-	-	-	-	587
	"	39-40	X		-	-	-	-	-	-	-	-	304

Table 1
COG Operating LLC.
Myox 31-13 Well Site
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	Total						
AH-6	3/7/2012	0-1		X	<2.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	14,600
	"	1-1.5		X	-	-	-	-	-	-	-	-	14,000
	"	2-2.5		X	-	-	-	-	-	-	-	-	10,200
	"	3-3.5		X	-	-	-	-	-	-	-	-	5,570
	"	4-4.5		X	-	-	-	-	-	-	-	-	696
	"	5-5.5		X	-	-	-	-	-	-	-	-	1,190
BH-4	4/16/2012	0-1		X	-	-	-	-	-	-	-	-	17,600
	"	2-3		X	-	-	-	-	-	-	-	-	13,200
	"	4-5		X	-	-	-	-	-	-	-	-	1,560
	"	6-7		X	-	-	-	-	-	-	-	-	2,380
	"	9-10	X		-	-	-	-	-	-	-	-	1,110
	"	14-15	X		-	-	-	-	-	-	-	-	1,050
	"	19-20	X		-	-	-	-	-	-	-	-	849
	"	24-25	X		-	-	-	-	-	-	-	-	679
	"	29-30	X		-	-	-	-	-	-	-	-	506
	"	39-40	X		-	-	-	-	-	-	-	-	288

Table 1
COG Operating LLC.
Myox 31-13 Well Site
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	Total						
AH-7	3/7/2012	0-1	X		<2.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<200
	"	1-1.5	X		-	-	-	-	-	-	-	-	<200
	"	2-2.5	X		-	-	-	-	-	-	-	-	<200
	"	3-3.5	X		-	-	-	-	-	-	-	-	<200
	"	4-4.5	X		-	-	-	-	-	-	-	-	<200
	"	5-5.5	X		-	-	-	-	-	-	-	-	330

(-) Not Analyzed

Excavated Depths

Liner Installation and Depth

1312

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	COG OPERATING LLC	Contact	Pat Ellis
Address	550 W. Texas, Suite 100, Midland, TX 79701	Telephone No.	432-230-0077
Facility Name	Myox 31-13	Facility Type	Well location

Surface Owner State	Mineral Owner	Lease No. (API#) 30-015-37497

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
SE - P	31	25S	28E					Eddy

Latitude 32 04.821 Longitude 104 07.083

NATURE OF RELEASE

Type of Release Produced water	Volume of Release 20bbls	Volume Recovered None
Source of Release Poly water line	Date and Hour of Occurrence 02/10/2012	Date and Hour of Discovery 02/10/2012 6:00 p.m.
Was Immediate Notice Given? ☐ Yes ☒ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

*If a Watercourse was Impacted, Describe Fully.**

Describe Cause of Problem and Remedial Action Taken.*

Heat from a gas fire melted a nearby poly produced water line causing the release. The bad section of the poly line has been replaced.

Describe Area Affected and Cleanup Action Taken.*

Initially roughly 20bbls were released from the poly line and we were unable to recover any fluid with a vacuum truck. The spill area is located in the pasture area off of the well location. Tetra Tech will sample the spill site area to delineate any possible contamination from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation work.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	OIL CONSERVATION DIVISION	
Printed Name: Josh Russo	Approved by District Supervisor:	
Title: HSE Coordinator	Approval Date:	Expiration Date:
E-mail Address: jrusso@conchoresources.com	Conditions of Approval:	Attached ☐
Date: 02/23/2012 Phone: 432-212-2399		

* Attach Additional Sheets If Necessary

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

State of New Mexico
Energy Minerals and Natural Resources

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

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Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company	COG Operating LLC	Contact	Pat Ellis
Address	550 W. Texas, Suite 1300 Midland, Texas 79701	Telephone No.	(432) 230-0077
Facility Name	Myox 31-13	Facility Type	Well Location

Surface Owner: State	Mineral Owner	Lease No. (API#) 30-015-37497

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
P	31	25S	28E					Eddy

Latitude N 32.08029° **Longitude** W 104.11799°

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release 20 bbls	Volume Recovered None
Source of Release: Poly water line	Date and Hour of Occurrence 02/10/2012	Date and Hour of Discovery 02/10/2012 6:00 p.m.
Was Immediate Notice Given? ☐ Yes ☒ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour 3/15/10 4:59 p.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

Heat from a gas fire melted a nearby poly produced water line causing the release. The bad section of the poly line has been replaced.

Describe Area Affected and Cleanup Action Taken.*

Tetra Tech personnel inspected the site and collected samples to define the spills extent. Soil that exceeded RRAL was removed and hauled away for proper disposal, the site was then brought up to surface grade with clean backfill material. Tetra Tech prepared a closure report and submitted it to NMOCD for review.

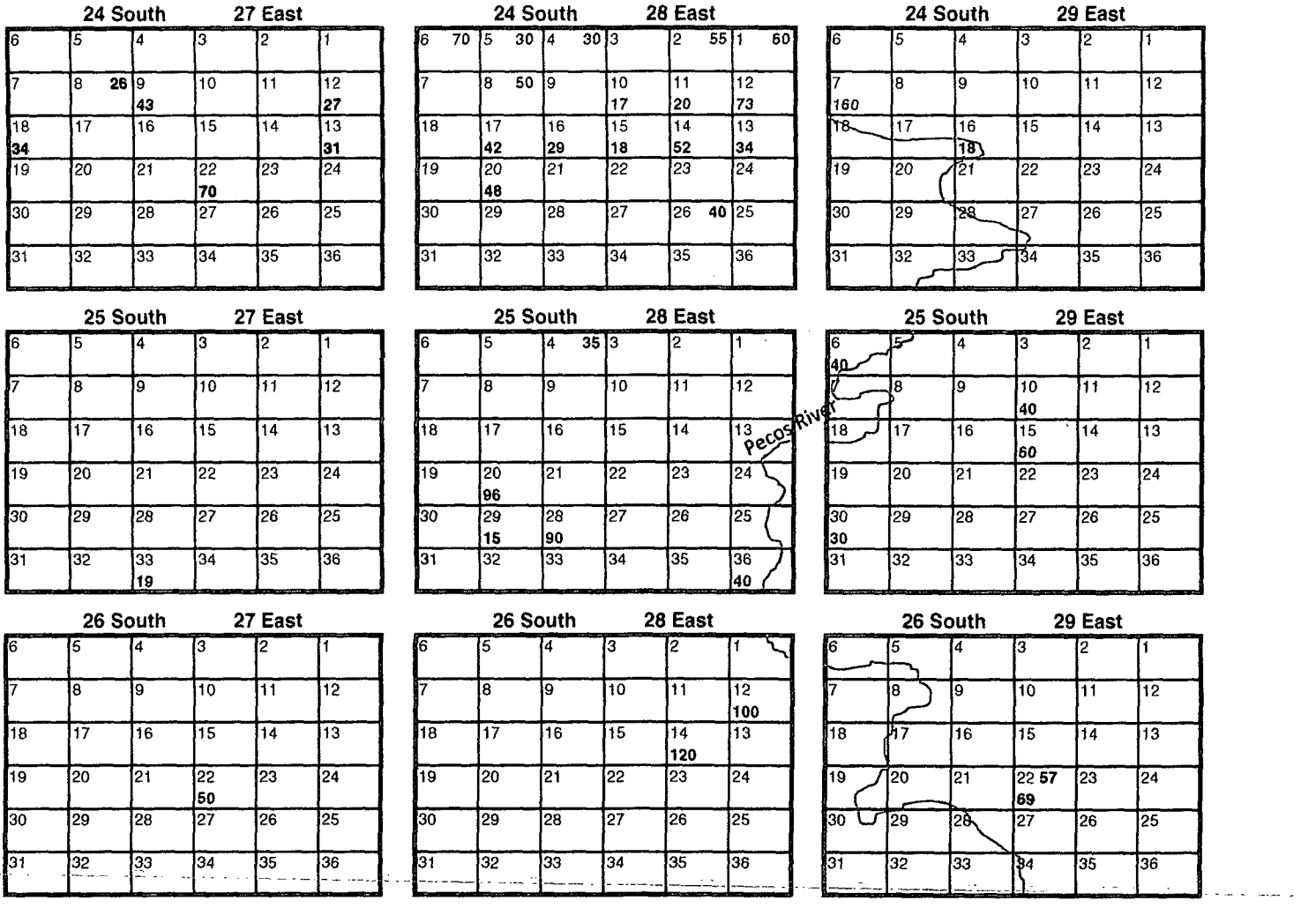
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	OIL CONSERVATION DIVISION	
Printed Name: Ike Tavarez	Approved by District Supervisor:	
Title: Project Manager	Approval Date:	Expiration Date:
E-mail Address: Ike.Tavarez@TetraTech.com	Conditions of Approval:	Attached ☐
Date: 10-24-12 Phone: (432) 682-4559		

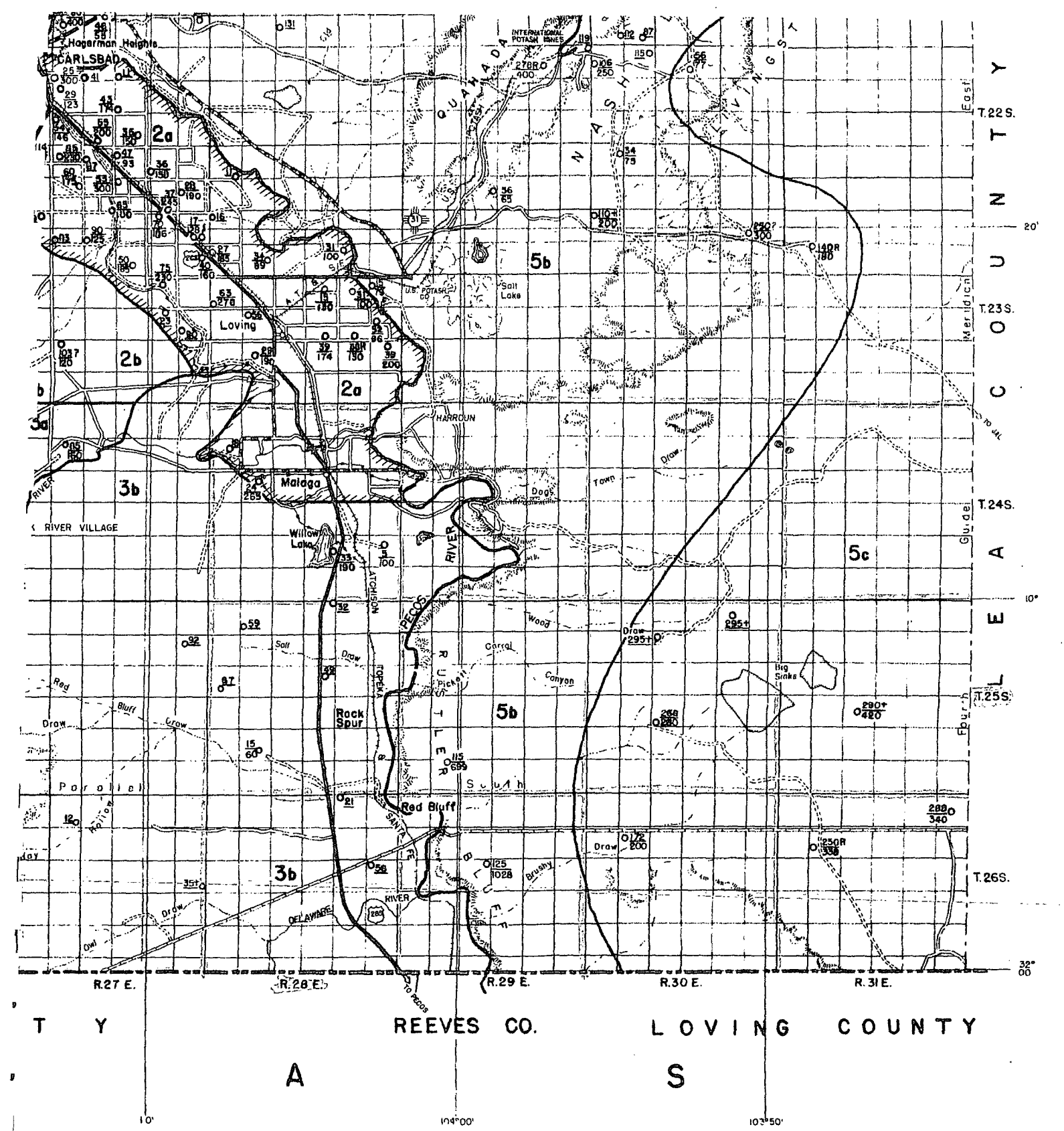
* Attach Additional Sheets If Necessary

Appendix B

Water Well Data
Average Depth to Groundwater (ft)
COG - Myox 31-13
Eddy County, New Mexico



- New Mexico State Engineers Well Reports
- USGS Well Reports
- Geology and Groundwater Conditions in Southern Eddy, County, NM
- NMOCD - Groundwater Data
- Site Location



BILITY OF GROUND WATER

NEW MEXICO

Note Most well depths are reported. Depths to water are measured except those followed by the letter R which are reported. Measurements made 1947 to 1950.

5 10 MILES

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	POD Code	Subbasin	County	Q 64	Q 16	Q 4	Sec	Twn	Rng	X	Y	Depth Well	Depth Water	Water Column
C 01668			ED		3	3	12	26S	28E	589957	3546554*	250	100	150
C 02160			ED	4	1	2	14	26S	28E	589243	3546044*	300	120	180
C 02160 S			ED	1	1	2	14	26S	28E	589043	3546244*	300	120	180
C 02160 S2			ED	1	1	2	14	26S	28E	589043	3546244*	300	120	180
C 02160 S3			ED	2	2	1	14	26S	28E	588834	3546241*	300	120	180
C 02160 S4			ED	2	2	1	14	26S	28E	588834	3546241*	300	120	180
C 02160 S5			ED	1	1	1	14	26S	28E	588225	3546237*	300	120	180
C 02160 S6			ED	3	3	1	14	26S	28E	588232	3545635*	300	120	180
C 02160 S7			ED	3	3	1	22	26S	28E	586638	3543998*	300	120	180
C 02160 S8			ED	2	3	3	12	26S	28E	590056	3546653*	200	120	80
C 02160 S9			ED	3	3	2	02	26S	28E	589020	3548868*	300	120	180
C 02477		CUB	ED		1	1	03	26S	28E	586687	3549347*	150		
C 02478		CUB	ED		2	1	05	26S	28E	583848	3549325*	100		
C 02479		CUB	ED		4	4	10	26S	28E	587909	3546534*	200		
C 02480		CUB	ED		4	4	10	26S	28E	587909	3546534*	150		
C 02481		CUB	ED		1	1	14	26S	28E	588326	3546138*	200		
C 02894		C	ED	2	2	3	12	26S	28E	590458	3547061*	240		
C 02924		C	ED	1	3	2	11	26S	28E	589032	3547451*			

Average Depth to Water: **118 feet**

Minimum Depth: **100 feet**

Maximum Depth: **120 feet**

Record Count: 18

PLSS Search:

Township: 26S **Range:** 28E

***UTM location was derived from PLSS - see Help**

5/30/12 12:08 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Code	Subbasin	County	Q 64	Q 16	Q 4	Sec	Twp	Rng	X	Y	Depth Well	Depth Water	Water Column	
C 02218		CUB	ED	4	1	4	07	26S	27E	573039	3546725*	35			
C 02219		CUB	ED	4	4	4	05	26S	27E	575033	3547948*	35			
C 02474		CUB	ED		4	3	02	26S	27E	578964	3548029*	100			
C 02475		CUB	ED		2	4	13	26S	27E	581450	3545252*	100			
C 02476		CUB	ED		4	1	24	26S	27E	580653	3544032*	150			
C 02930		C	ED	2	3	4	22	26S	27E	577938	3543284*	100	50	50	

Average Depth to Water: **50 feet**

Minimum Depth: ***50 feet***

Maximum Depth: **50 feet**

Record Count: 6

PLSS Search:

Township: 26S **Range:** 27E

***UTM location was derived from PLSS - see Help**

5/30/12 12:08 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	POD Code	Subbasin	County	Q 64	Q 16	Q 4	Sec	Twn	Rng	X	Y	Depth Well	Depth Water	Water Column
C 01278		C	ED		4	3	28	25S	28E	585470	3551338*	205	90	115
C 01411		C	ED	4	4	2	04	25S	28E	586289	3558522*	69	35	34
C 01453		C	ED		1	2	26	25S	28E	589096	3552612*	70	40	30
C 01522		C	ED			1	22	25S	28E	586843	3554004*	150		
C 01573 POD1		C	ED	3	1	4	20	25S	28E	584144	3553361	176	96	80
C 02668		C	ED	2	1	2	09	25S	28E	585890	3557525*	150		
C 03263 POD1			ED	1	1	1	07	25S	28E	581628	3557501*	133		

Average Depth to Water: **65 feet**

Minimum Depth: **35 feet**

Maximum Depth: **96 feet**

Record Count: 7

PLSS Search:

Township: 25S **Range:** 28E

***UTM location was derived from PLSS - see Help**

5/30/12 12:06 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	POD Code	Subbasin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
C 02588		C	ED	3	4	3	33	25S	27E	575645	3549575*	81	19	62
C 03261 POD1			ED	3	2	1	20	25S	27E	574007	3554006*	351		
C 03262 POD1			ED	2	1	2	22	25S	27E	577837	3554244*	75		

Average Depth to Water: **19 feet**

Minimum Depth: **19 feet**

Maximum Depth: **19 feet**

Record Count: 3

PLSS Search:

Township: 25S **Range:** 27E

***UTM location was derived from PLSS - see Help**

5/30/12 12:07 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER

Appendix C

Summary Report

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

Report Date: March 16, 2012

Work Order: 12030929

Project Location: Eddy Co., NM
Project Name: COG/Myox 31-13 Well Site
Project Number: 114-6401312

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
290984	AH-1 0-1'	soil	2012-03-07	00:00	2012-03-09
290985	AH-1 1-1.5'	soil	2012-03-07	00:00	2012-03-09
290986	AH-1 2-2.5'	soil	2012-03-07	00:00	2012-03-09
290987	AH-1 3-3.5'	soil	2012-03-07	00:00	2012-03-09
290988	AH-1 4-4.5'	soil	2012-03-07	00:00	2012-03-09
290989	AH-1 5-5.5'	soil	2012-03-07	00:00	2012-03-09
290990	AH-2 0-1'	soil	2012-03-07	00:00	2012-03-09
290991	AH-2 1-1.5'	soil	2012-03-07	00:00	2012-03-09
290992	AH-2 2-2.5'	soil	2012-03-07	00:00	2012-03-09
290993	AH-2 3-3.5'	soil	2012-03-07	00:00	2012-03-09
290994	AH-2 4-4.5'	soil	2012-03-07	00:00	2012-03-09
290995	AH-2 5-5.5'	soil	2012-03-07	00:00	2012-03-09
290996	AH-3 0-1'	soil	2012-03-07	00:00	2012-03-09
290997	AH-3 1-1.5'	soil	2012-03-07	00:00	2012-03-09
290998	AH-3 2-2.5'	soil	2012-03-07	00:00	2012-03-09
290999	AH-3 3-3.5'	soil	2012-03-07	00:00	2012-03-09
291000	AH-3 4-4.5'	soil	2012-03-07	00:00	2012-03-09
291001	AH-3 5-5.5'	soil	2012-03-07	00:00	2012-03-09
291002	AH-4 0-1'	soil	2012-03-07	00:00	2012-03-09
291003	AH-4 1-1.5'	soil	2012-03-07	00:00	2012-03-09
291004	AH-4 2-2.5'	soil	2012-03-07	00:00	2012-03-09
291005	AH-4 3-3.5'	soil	2012-03-07	00:00	2012-03-09
291006	AH-4 4-4.5'	soil	2012-03-07	00:00	2012-03-09
291007	AH-4 5-5.5'	soil	2012-03-07	00:00	2012-03-09
291008	AH-5 0-1'	soil	2012-03-07	00:00	2012-03-09
291009	AH-5 1-1.5'	soil	2012-03-07	00:00	2012-03-09
291010	AH-5 2-2.5'	soil	2012-03-07	00:00	2012-03-09
291011	AH-5 3-3.5'	soil	2012-03-07	00:00	2012-03-09
291012	AH-5 4-4.5'	soil	2012-03-07	00:00	2012-03-09
291013	AH-5 5-5.5'	soil	2012-03-07	00:00	2012-03-09

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
291014	AH-6 0-1'	soil	2012-03-07	00:00	2012-03-09
291015	AH-6 1-1.5'	soil	2012-03-07	00:00	2012-03-09
291016	AH-6 2-2.5'	soil	2012-03-07	00:00	2012-03-09
291017	AH-6 3-3.5'	soil	2012-03-07	00:00	2012-03-09
291018	AH-6 4-4.5'	soil	2012-03-07	00:00	2012-03-09
291019	AH-6 5-5.5'	soil	2012-03-07	00:00	2012-03-09
291020	AH-7 0-1'	soil	2012-03-07	00:00	2012-03-09
291021	AH-7 1-1.5'	soil	2012-03-07	00:00	2012-03-09
291022	AH-7 2-2.5'	soil	2012-03-07	00:00	2012-03-09
291023	AH-7 3-3.5'	soil	2012-03-07	00:00	2012-03-09
291024	AH-7 4-4.5'	soil	2012-03-07	00:00	2012-03-09
291025	AH-7 5-5.5'	soil	2012-03-07	00:00	2012-03-09

	BTEX				TPH DRO - NEW	TPH GRO
Sample - Field Code	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
290984 - AH-1 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
290990 - AH-2 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
290996 - AH-3 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
291002 - AH-4 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
291008 - AH-5 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
291014 - AH-6 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
291020 - AH-7 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00

Sample: 290984 - AH-1 0-1'

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

Sample: 290985 - AH-1 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**207**	mg/Kg	4

Sample: 290986 - AH-1 2-2.5'

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

Sample: 290987 - AH-1 3-3.5'

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

Sample: 290988 - AH-1 4-4.5'

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

Sample: 290989 - AH-1 5-5.5'

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

Sample: 290990 - AH-2 0-1'

Param	Flag	Result	Units	RL
Chloride		**11800**	mg/Kg	4

Sample: 290991 - AH-2 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**10600**	mg/Kg	4

Sample: 290992 - AH-2 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**608**	mg/Kg	4

Sample: 290993 - AH-2 3-3.5'

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

Sample: 290994 - AH-2 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**218**	mg/Kg	4

Sample: 290995 - AH-2 5-5.5'

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

Sample: 290996 - AH-3 0-1'

Param	Flag	Result	Units	RL
Chloride		**15700**	mg/Kg	4

Sample: 290997 - AH-3 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**13300**	mg/Kg	4

Sample: 290998 - AH-3 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**11700**	mg/Kg	4

Sample: 290999 - AH-3 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**11600**	mg/Kg	4

Sample: 291000 - AH-3 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**8310**	mg/Kg	4

Sample: 291001 - AH-3 5-5.5'

Param	Flag	Result	Units	RL
Chloride		**1280**	mg/Kg	4

Sample: 291002 - AH-4 0-1'

Param	Flag	Result	Units	RL
Chloride		**16000**	mg/Kg	4

Sample: 291003 - AH-4 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**17600**	mg/Kg	4

Sample: 291004 - AH-4 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**15700**	mg/Kg	4

Sample: 291005 - AH-4 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**12600**	mg/Kg	4

Sample: 291006 - AH-4 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**10300**	mg/Kg	4

Sample: 291007 - AH-4 5-5.5'

Param	Flag	Result	Units	RL
Chloride		**2580**	mg/Kg	4

Sample: 291008 - AH-5 0-1'

Param	Flag	Result	Units	RL
Chloride		**12700**	mg/Kg	4

Sample: 291009 - AH-5 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**14800**	mg/Kg	4

Sample: 291010 - AH-5 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**14800**	mg/Kg	4

Sample: 291011 - AH-5 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**9350**	mg/Kg	4

Sample: 291012 - AH-5 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**7230**	mg/Kg	4

Sample: 291013 - AH-5 5-5.5'

Param	Flag	Result	Units	RL
Chloride		**9830**	mg/Kg	4

Sample: 291014 - AH-6 0-1'

Param	Flag	Result	Units	RL
Chloride		**14600**	mg/Kg	4

Sample: 291015 - AH-6 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**14000**	mg/Kg	4

Sample: 291016 - AH-6 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**10200**	mg/Kg	4

Sample: 291017 - AH-6 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**5570**	mg/Kg	4

Sample: 291018 - AH-6 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**696**	mg/Kg	4

Sample: 291019 - AH-6 5-5.5'

Param	Flag	Result	Units	RL
Chloride		**1190**	mg/Kg	4

Sample: 291020 - AH-7 0-1'

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

Sample: 291021 - AH-7 1-1.5'

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

Sample: 291022 - AH-7 2-2.5'

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

Sample: 291023 - AH-7 3-3.5'

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

Sample: 291024 - AH-7 4-4.5'

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

Sample: 291025 - AH-7 5-5.5'

Param	Flag	Result	Units	RL
Chloride		**330**	mg/Kg	4

Summary Report

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

Report Date: May 9, 2012

Work Order: 12041901

Project Location: Eddy Co., NM
Project Name: COG/Myox 31-13 Well Site
Project Number: 114-6401312

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
294561	BH-1 @ AH-3 0-1'	soil	2012-04-16	00:00	2012-04-18
294562	BH-1 @ AH-3 2-3'	soil	2012-04-16	00:00	2012-04-18
294563	BH-1 @ AH-3 4-5'	soil	2012-04-16	00:00	2012-04-18
294564	BH-1 @ AH-3 6-7'	soil	2012-04-16	00:00	2012-04-18
294565	BH-1 @ AH-3 9-10'	soil	2012-04-16	00:00	2012-04-18
294566	BH-1 @ AH-3 14-15'	soil	2012-04-16	00:00	2012-04-18
294567	BH-1 @ AH-3 19-20'	soil	2012-04-16	00:00	2012-04-18
294568	BH-1 @ AH-3 24-25'	soil	2012-04-16	00:00	2012-04-18
294569	BH-1 @ AH-3 29-30'	soil	2012-04-16	00:00	2012-04-18
294570	BH-1 @ AH-3 39-40'	soil	2012-04-16	00:00	2012-04-18
294571	BH-2 @ AH-4 0-1'	soil	2012-04-16	00:00	2012-04-18
294572	BH-2 @ AH-4 2-3'	soil	2012-04-16	00:00	2012-04-18
294573	BH-2 @ AH-4 4-5'	soil	2012-04-16	00:00	2012-04-18
294574	BH-2 @ AH-4 6-7'	soil	2012-04-16	00:00	2012-04-18
294575	BH-2 @ AH-4 9-10'	soil	2012-04-16	00:00	2012-04-18
294576	BH-2 @ AH-4 14-15'	soil	2012-04-16	00:00	2012-04-18
294577	BH-2 @ AH-4 19-20'	soil	2012-04-16	00:00	2012-04-18
294578	BH-2 @ AH-4 24-25'	soil	2012-04-16	00:00	2012-04-18
294579	BH-2 @ AH-4 29-30'	soil	2012-04-16	00:00	2012-04-18
294580	BH-2 @ AH-4 39-40'	soil	2012-04-16	00:00	2012-04-18
294581	BH-3 @ AH-5 0-1'	soil	2012-04-16	00:00	2012-04-18
294582	BH-3 @ AH-5 2-3'	soil	2012-04-16	00:00	2012-04-18
294583	BH-3 @ AH-5 4-5'	soil	2012-04-16	00:00	2012-04-18
294584	BH-3 @ AH-5 6-7'	soil	2012-04-16	00:00	2012-04-18
294585	BH-3 @ AH-5 9-10'	soil	2012-04-16	00:00	2012-04-18
294586	BH-3 @ AH-5 14-15'	soil	2012-04-16	00:00	2012-04-18
294587	BH-3 @ AH-5 19-20'	soil	2012-04-16	00:00	2012-04-18
294588	BH-3 @ AH-5 24-25'	soil	2012-04-16	00:00	2012-04-18
294589	BH-3 @ AH-5 29-30'	soil	2012-04-16	00:00	2012-04-18
294590	BH-3 @ AH-5 39-40'	soil	2012-04-16	00:00	2012-04-18

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
294591	BH-4 @ AH-6 0-1'	soil	2012-04-16	00:00	2012-04-18
294592	BH-4 @ AH-6 2-3'	soil	2012-04-16	00:00	2012-04-18
294593	BH-4 @ AH-6 4-5'	soil	2012-04-16	00:00	2012-04-18
294594	BH-4 @ AH-6 6-7'	soil	2012-04-16	00:00	2012-04-18
294595	BH-4 @ AH-6 9-10'	soil	2012-04-16	00:00	2012-04-18
294596	BH-4 @ AH-6 14-15'	soil	2012-04-16	00:00	2012-04-18
294597	BH-4 @ AH-6 19-20'	soil	2012-04-16	00:00	2012-04-18
294598	BH-4 @ AH-6 24-25'	soil	2012-04-16	00:00	2012-04-18
294599	BH-4 @ AH-6 29-30'	soil	2012-04-16	00:00	2012-04-18
294600	BH-4 @ AH-6 39-40'	soil	2012-04-16	00:00	2012-04-18

Sample: 294561 - BH-1 @ AH-3 0-1'

Param	Flag	Result	Units	RL
Chloride		**18300**	mg/Kg	4

Sample: 294562 - BH-1 @ AH-3 2-3'

Param	Flag	Result	Units	RL
Chloride		**14400**	mg/Kg	4

Sample: 294563 - BH-1 @ AH-3 4-5'

Param	Flag	Result	Units	RL
Chloride		**6590**	mg/Kg	4

Sample: 294564 - BH-1 @ AH-3 6-7'

Param	Flag	Result	Units	RL
Chloride		**2210**	mg/Kg	4

Sample: 294565 - BH-1 @ AH-3 9-10'

Param	Flag	Result	Units	RL
Chloride		**1470**	mg/Kg	4

Sample: 294566 - BH-1 @ AH-3 14-15'

Param	Flag	Result	Units	RL
Chloride		**986**	mg/Kg	4

Sample: 294567 - BH-1 @ AH-3 19-20'

Param	Flag	Result	Units	RL
Chloride		**1020**	mg/Kg	4

Sample: 294568 - BH-1 @ AH-3 24-25'

Param	Flag	Result	Units	RL
Chloride		**719**	mg/Kg	4

Sample: 294569 - BH-1 @ AH-3 29-30'

Param	Flag	Result	Units	RL
Chloride		**405**	mg/Kg	4

Sample: 294570 - BH-1 @ AH-3 39-40'

Param	Flag	Result	Units	RL
Chloride		**258**	mg/Kg	4

Sample: 294571 - BH-2 @ AH-4 0-1'

Param	Flag	Result	Units	RL
Chloride		**2910**	mg/Kg	4

Sample: 294572 - BH-2 @ AH-4 2-3'

Param	Flag	Result	Units	RL
Chloride		**5620**	mg/Kg	4

Sample: 294573 - BH-2 @ AH-4 4-5'

Param	Flag	Result	Units	RL
Chloride		**7450**	mg/Kg	4

Sample: 294574 - BH-2 @ AH-4 6-7'

Param	Flag	Result	Units	RL
Chloride		**1280**	mg/Kg	4

Sample: 294575 - BH-2 @ AH-4 9-10'

Param	Flag	Result	Units	RL
Chloride		**1740**	mg/Kg	4

Sample: 294576 - BH-2 @ AH-4 14-15'

Param	Flag	Result	Units	RL
Chloride		**743**	mg/Kg	4

Sample: 294577 - BH-2 @ AH-4 19-20'

Param	Flag	Result	Units	RL
Chloride		**991**	mg/Kg	4

Sample: 294578 - BH-2 @ AH-4 24-25'

Param	Flag	Result	Units	RL
Chloride		**827**	mg/Kg	4

Sample: 294579 - BH-2 @ AH-4 29-30'

Param	Flag	Result	Units	RL
Chloride		**319**	mg/Kg	4

Sample: 294580 - BH-2 @ AH-4 39-40'

Param	Flag	Result	Units	RL
Chloride		**177**	mg/Kg	4

Sample: 294581 - BH-3 @ AH-5 0-1'

Param	Flag	Result	Units	RL
Chloride		**9360**	mg/Kg	4

Sample: 294582 - BH-3 @ AH-5 2-3'

Param	Flag	Result	Units	RL
Chloride		**13900**	mg/Kg	4

Sample: 294583 - BH-3 @ AH-5 4-5'

Param	Flag	Result	Units	RL
Chloride		**10400**	mg/Kg	4

Sample: 294584 - BH-3 @ AH-5 6-7'

Param	Flag	Result	Units	RL
Chloride		**922**	mg/Kg	4

Sample: 294585 - BH-3 @ AH-5 9-10'

Param	Flag	Result	Units	RL
Chloride		**1430**	mg/Kg	4

Sample: 294586 - BH-3 @ AH-5 14-15'

Param	Flag	Result	Units	RL
Chloride		**1170**	mg/Kg	4

Sample: 294587 - BH-3 @ AH-5 19-20'

Param	Flag	Result	Units	RL
Chloride		**1180**	mg/Kg	4

Sample: 294588 - BH-3 @ AH-5 24-25'

Param	Flag	Result	Units	RL
Chloride		**1100**	mg/Kg	4

Sample: 294589 - BH-3 @ AH-5 29-30'

Param	Flag	Result	Units	RL
Chloride		**587**	mg/Kg	4

Sample: 294590 - BH-3 @ AH-5 39-40'

Param	Flag	Result	Units	RL
Chloride		**304**	mg/Kg	4

Sample: 294591 - BH-4 @ AH-6 0-1'

Param	Flag	Result	Units	RL
Chloride		**17600**	mg/Kg	4

Sample: 294592 - BH-4 @ AH-6 2-3'

Param	Flag	Result	Units	RL
Chloride		**13200**	mg/Kg	4

Sample: 294593 - BH-4 @ AH-6 4-5'

Param	Flag	Result	Units	RL
Chloride		**1560**	mg/Kg	4

Sample: 294594 - BH-4 @ AH-6 6-7'

Param	Flag	Result	Units	RL
Chloride		**2380**	mg/Kg	4

Sample: 294595 - BH-4 @ AH-6 9-10'

Param	Flag	Result	Units	RL
Chloride		**1110**	mg/Kg	4

Sample: 294596 - BH-4 @ AH-6 14-15'

Param	Flag	Result	Units	RL
Chloride		**1050**	mg/Kg	4

Sample: 294597 - BH-4 @ AH-6 19-20'

Param	Flag	Result	Units	RL
Chloride		**849**	mg/Kg	4

Sample: 294598 - BH-4 @ AH-6 24-25'

Param	Flag	Result	Units	RL
Chloride		**679**	mg/Kg	4

Sample: 294599 - BH-4 @ AH-6 29-30'

Param	Flag	Result	Units	RL
Chloride		**506**	mg/Kg	4

Sample: 294600 - BH-4 @ AH-6 39-40'

Param	Flag	Result	Units	RL
Chloride		**288**	mg/Kg	4

TRACEANALYSIS, INC.

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Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report
(Corrected Report)

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

Report Date: May 9, 2012

Work Order: 12041901

Project Location: Eddy Co., NM
Project Name: COG/Myox 31-13 Well Site
Project Number: 114-6401312

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

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
294561	BH-1 @ AH-3 0-1'	soil	2012-04-16	00:00	2012-04-18
294562	BH-1 @ AH-3 2-3'	soil	2012-04-16	00:00	2012-04-18
294563	BH-1 @ AH-3 4-5'	soil	2012-04-16	00:00	2012-04-18
294564	BH-1 @ AH-3 6-7'	soil	2012-04-16	00:00	2012-04-18
294565	BH-1 @ AH-3 9-10'	soil	2012-04-16	00:00	2012-04-18
294566	BH-1 @ AH-3 14-15'	soil	2012-04-16	00:00	2012-04-18
294567	BH-1 @ AH-3 19-20'	soil	2012-04-16	00:00	2012-04-18
294568	BH-1 @ AH-3 24-25'	soil	2012-04-16	00:00	2012-04-18
294569	BH-1 @ AH-3 29-30'	soil	2012-04-16	00:00	2012-04-18
294570	BH-1 @ AH-3 39-40'	soil	2012-04-16	00:00	2012-04-18
294571	BH-2 @ AH-4 0-1'	soil	2012-04-16	00:00	2012-04-18
294572	BH-2 @ AH-4 2-3'	soil	2012-04-16	00:00	2012-04-18
294573	BH-2 @ AH-4 4-5'	soil	2012-04-16	00:00	2012-04-18
294574	BH-2 @ AH-4 6-7'	soil	2012-04-16	00:00	2012-04-18
294575	BH-2 @ AH-4 9-10'	soil	2012-04-16	00:00	2012-04-18
294576	BH-2 @ AH-4 14-15'	soil	2012-04-16	00:00	2012-04-18

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
294577	BH-2 @ AH-4 19-20'	soil	2012-04-16	00:00	2012-04-18
294578	BH-2 @ AH-4 24-25'	soil	2012-04-16	00:00	2012-04-18
294579	BH-2 @ AH-4 29-30'	soil	2012-04-16	00:00	2012-04-18
294580	BH-2 @ AH-4 39-40'	soil	2012-04-16	00:00	2012-04-18
294581	BH-3 @ AH-5 0-1'	soil	2012-04-16	00:00	2012-04-18
294582	BH-3 @ AH-5 2-3'	soil	2012-04-16	00:00	2012-04-18
294583	BH-3 @ AH-5 4-5'	soil	2012-04-16	00:00	2012-04-18
294584	BH-3 @ AH-5 6-7'	soil	2012-04-16	00:00	2012-04-18
294585	BH-3 @ AH-5 9-10'	soil	2012-04-16	00:00	2012-04-18
294586	BH-3 @ AH-5 14-15'	soil	2012-04-16	00:00	2012-04-18
294587	BH-3 @ AH-5 19-20'	soil	2012-04-16	00:00	2012-04-18
294588	BH-3 @ AH-5 24-25'	soil	2012-04-16	00:00	2012-04-18
294589	BH-3 @ AH-5 29-30'	soil	2012-04-16	00:00	2012-04-18
294590	BH-3 @ AH-5 39-40'	soil	2012-04-16	00:00	2012-04-18
294591	BH-4 @ AH-6 0-1'	soil	2012-04-16	00:00	2012-04-18
294592	BH-4 @ AH-6 2-3'	soil	2012-04-16	00:00	2012-04-18
294593	BH-4 @ AH-6 4-5'	soil	2012-04-16	00:00	2012-04-18
294594	BH-4 @ AH-6 6-7'	soil	2012-04-16	00:00	2012-04-18
294595	BH-4 @ AH-6 9-10'	soil	2012-04-16	00:00	2012-04-18
294596	BH-4 @ AH-6 14-15'	soil	2012-04-16	00:00	2012-04-18
294597	BH-4 @ AH-6 19-20'	soil	2012-04-16	00:00	2012-04-18
294598	BH-4 @ AH-6 24-25'	soil	2012-04-16	00:00	2012-04-18
294599	BH-4 @ AH-6 29-30'	soil	2012-04-16	00:00	2012-04-18
294600	BH-4 @ AH-6 39-40'	soil	2012-04-16	00:00	2012-04-18

Report Corrections (Work Order 12041901)

- Added Cl for samples 294569, 294570, 294579, 294580, 294589, 294590, 294599, and 294600 4/30/12.

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.

Michael Abel

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

Report Contents

Case Narrative

Samples for project COG/Myox 31-13 Well Site were received by TraceAnalysis, Inc. on 2012-04-18 and assigned to work order 12041901. Samples for work order 12041901 were received intact at a temperature of 5.7 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
Chloride (Titration)	SM 4500-Cl B	76803	2012-04-24 at 08:19	90550	2012-04-24 at 14:48
Chloride (Titration)	SM 4500-Cl B	76803	2012-04-24 at 08:19	90652	2012-04-26 at 11:37
Chloride (Titration)	SM 4500-Cl B	76803	2012-04-24 at 08:19	90653	2012-04-26 at 11:38
Chloride (Titration)	SM 4500-Cl B	76803	2012-04-24 at 08:19	90654	2012-04-26 at 11:38
Chloride (Titration)	SM 4500-Cl B	77160	2012-05-04 at 09:09	91023	2012-05-09 at 10:46

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 12041901 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.

Analytical Report

Sample: 294561 - BH-1 @ AH-3 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	90550	Date Analyzed:	2012-04-24	Analyzed By:	AR
Prep Batch:	76803	Sample Preparation:	2012-04-24	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**18300**	mg/Kg	100	4.00

Sample: 294562 - BH-1 @ AH-3 2-3'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	90550	Date Analyzed:	2012-04-24	Analyzed By:	AR
Prep Batch:	76803	Sample Preparation:	2012-04-24	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**14400**	mg/Kg	100	4.00

Sample: 294563 - BH-1 @ AH-3 4-5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	90550	Date Analyzed:	2012-04-24	Analyzed By:	AR
Prep Batch:	76803	Sample Preparation:	2012-04-24	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**6590**	mg/Kg	100	4.00

Sample: 294564 - BH-1 @ AH-3 6-7'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	90550	Date Analyzed:	2012-04-24	Analyzed By:	AR
Prep Batch:	76803	Sample Preparation:	2012-04-24	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**2210**	mg/Kg	100	4.00

Sample: 294565 - BH-1 @ AH-3 9-10'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	90550	Date Analyzed:	2012-04-24	Analyzed By:	AR
Prep Batch:	76803	Sample Preparation:	2012-04-24	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**1470**	mg/Kg	100	4.00

Sample: 294566 - BH-1 @ AH-3 14-15'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	90652	Date Analyzed:	2012-04-26	Analyzed By:	AR
Prep Batch:	76803	Sample Preparation:	2012-04-24	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**986**	mg/Kg	50	4.00

Sample: 294567 - BH-1 @ AH-3 19-20'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	90652	Date Analyzed:	2012-04-26	Analyzed By:	AR
Prep Batch:	76803	Sample Preparation:	2012-04-24	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1020**	mg/Kg	50	4.00

Sample: 294568 - BH-1 @ AH-3 24-25'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	90652	Date Analyzed:	2012-04-26	Analyzed By:	AR
Prep Batch:	76803	Sample Preparation:	2012-04-24	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**719**	mg/Kg	50	4.00

Sample: 294569 - BH-1 @ AH-3 29-30'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91023	Date Analyzed:	2012-05-09	Analyzed By:	AR
Prep Batch:	77160	Sample Preparation:	2012-05-04	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**405**	mg/Kg	5	4.00

Sample: 294570 - BH-1 @ AH-3 39-40'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91023	Date Analyzed:	2012-05-09	Analyzed By:	AR
Prep Batch:	77160	Sample Preparation:	2012-05-04	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**258**	mg/Kg	5	4.00

Sample: 294571 - BH-2 @ AH-4 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	90652	Date Analyzed:	2012-04-26	Analyzed By:	AR
Prep Batch:	76803	Sample Preparation:	2012-04-24	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**2910**	mg/Kg	100	4.00

Sample: 294572 - BH-2 @ AH-4 2-3'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	90652	Date Analyzed:	2012-04-26	Analyzed By:	AR
Prep Batch:	76803	Sample Preparation:	2012-04-24	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**5620**	mg/Kg	100	4.00

Sample: 294573 - BH-2 @ AH-4 4-5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	90652	Date Analyzed:	2012-04-26	Analyzed By:	AR
Prep Batch:	76803	Sample Preparation:	2012-04-24	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**7450**	mg/Kg	100	4.00

Sample: 294574 - BH-2 @ AH-4 6-7'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	90652	Date Analyzed:	2012-04-26	Analyzed By:	AR
Prep Batch:	76803	Sample Preparation:	2012-04-24	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1280**	mg/Kg	100	4.00

Sample: 294575 - BH-2 @ AH-4 9-10'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	90652	Date Analyzed:	2012-04-26	Analyzed By:	AR
Prep Batch:	76803	Sample Preparation:	2012-04-24	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1740**	mg/Kg	100	4.00

Sample: 294576 - BH-2 @ AH-4 14-15'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	90652	Date Analyzed:	2012-04-26	Analyzed By:	AR
Prep Batch:	76803	Sample Preparation:	2012-04-24	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**743**	mg/Kg	50	4.00

Sample: 294577 - BH-2 @ AH-4 19-20'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	90652	Date Analyzed:	2012-04-26	Analyzed By:	AR
Prep Batch:	76803	Sample Preparation:	2012-04-24	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**991**	mg/Kg	50	4.00

Sample: 294578 - BH-2 @ AH-4 24-25'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	90653	Date Analyzed:	2012-04-26	Analyzed By:	AR
Prep Batch:	76803	Sample Preparation:	2012-04-24	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**827**	mg/Kg	50	4.00

Sample: 294579 - BH-2 @ AH-4 29-30'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91023	Date Analyzed:	2012-05-09	Analyzed By:	AR
Prep Batch:	77160	Sample Preparation:	2012-05-04	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**319**	mg/Kg	5	4.00

Sample: 294580 - BH-2 @ AH-4 39-40'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91023	Date Analyzed:	2012-05-09	Analyzed By:	AR
Prep Batch:	77160	Sample Preparation:	2012-05-04	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**177**	mg/Kg	5	4.00

Sample: 294581 - BH-3 @ AH-5 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	90653	Date Analyzed:	2012-04-26	Analyzed By:	AR
Prep Batch:	76803	Sample Preparation:	2012-04-24	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**9360**	mg/Kg	100	4.00

Sample: 294582 - BH-3 @ AH-5 2-3'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	90653	Date Analyzed:	2012-04-26	Analyzed By:	AR
Prep Batch:	76803	Sample Preparation:	2012-04-24	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**13900**	mg/Kg	100	4.00

Sample: 294583 - BH-3 @ AH-5 4-5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	90653	Date Analyzed:	2012-04-26	Analyzed By:	AR
Prep Batch:	76803	Sample Preparation:	2012-04-24	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**10400**	mg/Kg	100	4.00

Sample: 294584 - BH-3 @ AH-5 6-7'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	90653	Date Analyzed:	2012-04-26	Analyzed By:	AR
Prep Batch:	76803	Sample Preparation:	2012-04-24	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**922**	mg/Kg	50	4.00

Sample: 294585 - BH-3 @ AH-5 9-10'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	90653	Date Analyzed:	2012-04-26	Analyzed By:	AR
Prep Batch:	76803	Sample Preparation:	2012-04-24	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**1430**	mg/Kg	50	4.00

Sample: 294586 - BH-3 @ AH-5 14-15'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	90653	Date Analyzed:	2012-04-26	Analyzed By:	AR
Prep Batch:	76803	Sample Preparation:	2012-04-24	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**1170**	mg/Kg	100	4.00

Sample: 294587 - BH-3 @ AH-5 19-20'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	90653	Date Analyzed:	2012-04-26	Analyzed By:	AR
Prep Batch:	76803	Sample Preparation:	2012-04-24	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**1180**	mg/Kg	100	4.00

Sample: 294588 - BH-3 @ AH-5 24-25'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	90653	Date Analyzed:	2012-04-26	Analyzed By:	AR
Prep Batch:	76803	Sample Preparation:	2012-04-24	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1100**	mg/Kg	100	4.00

Sample: 294589 - BH-3 @ AH-5 29-30'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91023	Date Analyzed:	2012-05-09	Analyzed By:	AR
Prep Batch:	77160	Sample Preparation:	2012-05-04	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**587**	mg/Kg	5	4.00

Sample: 294590 - BH-3 @ AH-5 39-40'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91023	Date Analyzed:	2012-05-09	Analyzed By:	AR
Prep Batch:	77160	Sample Preparation:	2012-05-04	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**304**	mg/Kg	5	4.00

Sample: 294591 - BH-4 @ AH-6 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	90653	Date Analyzed:	2012-04-26	Analyzed By:	AR
Prep Batch:	76803	Sample Preparation:	2012-04-24	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**17600**	mg/Kg	100	4.00

Sample: 294592 - BH-4 @ AH-6 2-3'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	90654	Date Analyzed:	2012-04-26	Analyzed By:	AR
Prep Batch:	76803	Sample Preparation:	2012-04-24	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**13200**	mg/Kg	100	4.00

Sample: 294593 - BH-4 @ AH-6 4-5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	90654	Date Analyzed:	2012-04-26	Analyzed By:	AR
Prep Batch:	76803	Sample Preparation:	2012-04-24	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1560**	mg/Kg	100	4.00

Sample: 294594 - BH-4 @ AH-6 6-7'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	90654	Date Analyzed:	2012-04-26	Analyzed By:	AR
Prep Batch:	76803	Sample Preparation:	2012-04-24	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2380**	mg/Kg	100	4.00

Sample: 294595 - BH-4 @ AH-6 9-10'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	90654	Date Analyzed:	2012-04-26	Analyzed By:	AR
Prep Batch:	76803	Sample Preparation:	2012-04-24	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1110**	mg/Kg	100	4.00

Sample: 294596 - BH-4 @ AH-6 14-15'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	90654	Date Analyzed:	2012-04-26	Analyzed By:	AR
Prep Batch:	76803	Sample Preparation:	2012-04-24	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1050**	mg/Kg	50	4.00

Sample: 294597 - BH-4 @ AH-6 19-20'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	90654	Date Analyzed:	2012-04-26	Analyzed By:	AR
Prep Batch:	76803	Sample Preparation:	2012-04-24	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**849**	mg/Kg	100	4.00

Sample: 294598 - BH-4 @ AH-6 24-25'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	90654	Date Analyzed:	2012-04-26	Analyzed By:	AR
Prep Batch:	76803	Sample Preparation:	2012-04-24	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**679**	mg/Kg	50	4.00

Sample: 294599 - BH-4 @ AH-6 29-30'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91023	Date Analyzed:	2012-05-09	Analyzed By:	AR
Prep Batch:	77160	Sample Preparation:	2012-05-04	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**506**	mg/Kg	5	4.00

Sample: 294600 - BH-4 @ AH-6 39-40'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91023	Date Analyzed:	2012-05-09	Analyzed By:	AR
Prep Batch:	77160	Sample Preparation:	2012-05-04	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**288**	mg/Kg	5	4.00

Method Blanks

Method Blank (1) QC Batch: 90550

QC Batch:	90550	Date Analyzed:	2012-04-24	Analyzed By:	AR
Prep Batch:	76803	QC Preparation:	2012-04-24	Prepared By:	AR

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Method Blank (1) QC Batch: 90652

QC Batch:	90652	Date Analyzed:	2012-04-26	Analyzed By:	AR
Prep Batch:	76803	QC Preparation:	2012-04-24	Prepared By:	AR

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Method Blank (1) QC Batch: 90653

QC Batch:	90653	Date Analyzed:	2012-04-26	Analyzed By:	AR
Prep Batch:	76803	QC Preparation:	2012-04-24	Prepared By:	AR

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Method Blank (1) QC Batch: 90654

QC Batch:	90654	Date Analyzed:	2012-04-26	Analyzed By:	AR
Prep Batch:	76803	QC Preparation:	2012-04-24	Prepared By:	AR

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Method Blank (1) QC Batch: 91023

QC Batch:	91023	Date Analyzed:	2012-05-09	Analyzed By:	AR
Prep Batch:	77160	QC Preparation:	2012-05-04	Prepared By:	AR

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 90550 Date Analyzed: 2012-04-24 Analyzed By: AR
Prep Batch: 76803 QC Preparation: 2012-04-24 Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			99.7	mg/Kg	1	100	<3.85	100	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			104	mg/Kg	1	100	<3.85	104	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: 90652 Date Analyzed: 2012-04-26 Analyzed By: AR
Prep Batch: 76803 QC Preparation: 2012-04-24 Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			98.2	mg/Kg	1	100	<3.85	98	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			100	mg/Kg	1	100	<3.85	100	85 - 115	2	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: 90653 Date Analyzed: 2012-04-26 Analyzed By: AR
Prep Batch: 76803 QC Preparation: 2012-04-24 Prepared By: AR

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

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			98.3	mg/Kg	1	100	<3.85	98	85 - 115	1	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: 90654 | Date Analyzed: 2012-04-26 | Analyzed By: AR
Prep Batch: 76803 | QC Preparation: 2012-04-24 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			101	mg/Kg	1	100	<3.85	101	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			99.8	mg/Kg	1	100	<3.85	100	85 - 115	1	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: 91023 | Date Analyzed: 2012-05-09 | Analyzed By: AR
Prep Batch: 77160 | QC Preparation: 2012-05-04 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2480	mg/Kg	1	2500	<3.85	99	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2560	mg/Kg	1	2500	<3.85	102	85 - 115	3	20

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

Matrix Spike (MS-1) Spiked Sample: 294565

QC Batch: 90550 | Date Analyzed: 2012-04-24 | Analyzed By: AR
Prep Batch: 76803 | QC Preparation: 2012-04-24 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			12000	mg/Kg	100	10000	1470	105	79.4 - 120.6

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			11900	mg/Kg	100	10000	1470	104	79.4 - 120.6	1	20

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

Matrix Spike (MS-1) Spiked Sample: 294577

QC Batch: 90652 | Date Analyzed: 2012-04-26 | Analyzed By: AR
Prep Batch: 76803 | QC Preparation: 2012-04-24 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			10900	mg/Kg	100	10000	991	99	79.4 - 120.6

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			11400	mg/Kg	100	10000	991	104	79.4 - 120.6	4	20

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

Matrix Spike (MS-1) Spiked Sample: 294591

QC Batch: 90653 | Date Analyzed: 2012-04-26 | Analyzed By: AR
Prep Batch: 76803 | QC Preparation: 2012-04-24 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			27400	mg/Kg	100	10000	17600	98	79.4 - 120.6

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			27900	mg/Kg	100	10000	17600	103	79.4 - 120.6	2	20

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

Matrix Spike (MS-1) Spiked Sample: 294598

QC Batch: 90654 | Date Analyzed: 2012-04-26 | Analyzed By: AR
Prep Batch: 76803 | QC Preparation: 2012-04-24 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			11800	mg/Kg	100	10000	679	111	79.4 - 120.6

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			12000	mg/Kg	100	10000	679	113	79.4 - 120.6	2	20

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

Matrix Spike (MS-1) Spiked Sample: 294600

QC Batch: 91023 | Date Analyzed: 2012-05-09 | Analyzed By: AR
Prep Batch: 77160 | QC Preparation: 2012-05-04 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			3100	mg/Kg	5	2500	288	112	79.4 - 120.6

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			3230	mg/Kg	5	2500	288	118	79.4 - 120.6	4	20

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

Calibration Standards

Standard (CCV-1)

QC Batch: 90550 Date Analyzed: 2012-04-24 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	98.2	98	85 - 115	2012-04-24

Standard (CCV-2)

QC Batch: 90550 Date Analyzed: 2012-04-24 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	102	102	85 - 115	2012-04-24

Standard (CCV-1)

QC Batch: 90652 Date Analyzed: 2012-04-26 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.7	100	85 - 115	2012-04-26

Standard (CCV-2)

QC Batch: 90652 Date Analyzed: 2012-04-26 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2012-04-26

Standard (CCV-1)

QC Batch: 90653 | Date Analyzed: 2012-04-26 | Analyzed By: AR

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	2012-04-26

Standard (CCV-2)

QC Batch: 90653 | Date Analyzed: 2012-04-26 | Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.4	99	85 - 115	2012-04-26

Standard (CCV-1)

QC Batch: 90654 | Date Analyzed: 2012-04-26 | Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.6	100	85 - 115	2012-04-26

Standard (CCV-2)

QC Batch: 90654 | Date Analyzed: 2012-04-26 | Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2012-04-26

Standard (CCV-1)

QC Batch: 91023 | Date Analyzed: 2012-05-09 | Analyzed By: AR

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	2012-05-09

Standard (CCV-2)

QC Batch: 91023 | Date Analyzed: 2012-05-09 | Analyzed By: AR

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	2012-05-09

Appendix

Report Definitions

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

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis

Standard Flags

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

Attachments

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

12041901

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 4

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-6401312

PROJECT NAME: Myox 31-13

Eddy Co., NM

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
94561	4/16		S		X	BH-1 @ AH-3 0-1'	1				X													X				
562						2-3'																		X				
563						4-5'																		X				
564						6-7'																		X				
565						9-10'																		X				
566						14-15'																		X				
567						19-20'																		X				
568						24-25'																		X				
569						29-30'																						
570						39-40'																						

RELINQUISHED BY: (Signature)	Date: / Time:	RECEIVED BY: (Signature) Jeanne Fitch	Date: 04-18-12 Time: 0900
RELINQUISHED BY: (Signature) Jeanne Fitch	Date: 04-18-12 Time: 1448	RECEIVED BY: (Signature)	Date: 4/18/12 Time: 1448
RELINQUISHED BY: (Signature)	Date: / Time:	RECEIVED BY: (Signature)	Date: / Time:

SAMPLED BY: (Print & Initial) Kim — Date: 4/17/12 Time:

SAMPLE SHIPPED BY: (Circle) FEDEX HAND DELIVERED BUS UPS — AIRBILL #: — OTHER:

TETRA TECH CONTACT PERSON: Ike Tavarez — Results by:

RUSH Charges Authorized: Yes No

RECEIVING LABORATORY: TRACE
ADDRESS:
CITY: MIDLAND STATE: TX ZIP:
CONTACT: PHONE: DATE: TIME:
RECEIVED BY: (Signature)

SAMPLE CONDITION WHEN RECEIVED: 5.7° intact

REMARKS: all to Midland

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

12041901

Analysis Request of Chain of Custody Record

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: COG

SITE MANAGER: Ike

PROJECT NO.: 114-640 1312

PROJECT NAME: Mayox 31-13

Eddy Co., NM

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
571	4/16		S	X		BH-2 @ AH-4 0-1'	1				X	
572						2-3'						
573						4-5'						
574						6-7'						
575						9-10'						
576						14-15'						
578						19-20'						
578						24-25'						
579						29-30'						
580						39-40'						

ANALYSIS REQUEST (Circle or Specify Method No.)

BTEX 8021B; TPH 8015 MOD. TX1005 (Ext. to C35); PAH 8270; RCRA Metals Ag As Ba Cd Cr Pb Hg Se; TCLP Metals Ag As Ba Cd Vr Pd Hg Se; TCLP Volatiles; TCLP Semi Volatiles; RCI; GC.MS Vol. 8240/8260/624; GC.MS Semi. Vol. 8270/625; PCB's 8080/608; Pest. 808/608; Chloride; Gamma Spec.; Alpha Beta (Air); PLM (Asbestos); Major Anions/Cations, pH, TDS

RELINQUISHED BY: (Signature)	Date: / Time:	RECEIVED BY: (Signature) Jeanne Fitch	Date: 04-18-12 Time: 0900
RELINQUISHED BY: (Signature) Jeanne Fitch	Date: 04-18-12 Time: 1448	RECEIVED BY: (Signature)	Date: 4/18/12 Time: 14:48
RELINQUISHED BY: (Signature)	Date: / Time:	RECEIVED BY: (Signature)	Date: / Time:

SAMPLED BY: (Print & Initial) Kim — Date: 4/17/12 Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS — AIRBILL #: — OTHER:

TETRA TECH CONTACT PERSON: Ike Tavarez — Results by:

RUSH Charges Authorized: Yes No

RECEIVING LABORATORY: TRACE — RECEIVED BY: (Signature)

ADDRESS:

CITY: MIDLAND STATE: TX ZIP:

CONTACT: PHONE: DATE: TIME:

SAMPLE CONDITION WHEN RECEIVED: 5.7° Intact

REMARKS:

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

1204901

Analysis Request of Chain of Custody Record

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: COG
SITE MANAGER: Ike Tavarez
PROJECT NO.: 114-6401312
PROJECT NAME: M-Tox 31-13
Eddy Co., NM

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
581	4/16		S		X	BH-3 @ AH-5 0-1'	1				X														X				
582						2-3'																			X				
583						4-5'																			X				
584						6-7'																			X				
585						9-10'																			X				
586						14-15'																			X				
587						19-20'																			X				
588						24-25'																			X				
589						29-30'																							
590						39-40'																							

RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Jeanne Fitch Date: 04-18-12 Time: 0800
SAMPLED BY: (Print & Initial) Kim Date: 4/17/12 Time:

RELINQUISHED BY: (Signature) Jeanne Fitch Date: 04-18-12 Time: 1448
RECEIVED BY: (Signature) [signature] Date: 4/18/12 Time: 14:48
SAMPLE SHIPPED BY: (Circle) FEDEX BUS ~~HAND DELIVERED~~ UPS AIRBILL #: OTHER:

RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: Time:
TETRA TECH CONTACT PERSON: Ike Tavarez
Results by:

RECEIVING LABORATORY: TRACE
ADDRESS:
CITY: MIDLAND STATE: TX ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: TIME:
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 5.7° intact
REMARKS:

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

1204901

Analysis Request of Chain of Custody Record

PAGE: 4 OF: 4

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-6401312

PROJECT NAME: Myox 31-13

Eddy Co, NM

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
591	4/16		S	X	BH-4 @ AH-6	0-1'	1				X	
592						2-3'						
593						4-5'						
594						6-7'						
595						9-10'						
596						14-15'						
597						19-20'						
598						24-25'						
599						29-30'						
600						39-40'						

BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride (C)	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
												X				

RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Jeanne Fitch Date: 04-18-12 Time: 0800

RELINQUISHED BY: (Signature) Jeanne Fitch Date: 04-18-12 Time: 1448
RECEIVED BY: (Signature) Date: 4/18/12 Time: 1448

RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: Time:

SAMPLED BY: (Print & Initial) Kim Date: 4/17/12 Time:

SAMPLE SHIPPED BY: (Circle)
FEDEX BUS
HAND DELIVERED UPS
AIRBILL #:
OTHER:

RECEIVING LABORATORY: TRACE
ADDRESS:
CITY: MIDLAND STATE: TX ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: TIME:

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 5.7° Intact

REMARKS:

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

12041901

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 4

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-6401312

PROJECT NAME: Myox 31-13

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride (Perri Jeans 4/30/12)	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
94561	4/16		S		X	BH-1 @ AH-3 0-1'	1				X													X				
562						2-3'																		X				
563						4-5'																		X				
564						6-7'																		X				
565						9-10'																		X				
566						14-15'																		X				
567						19-20'																		X				
568						24-25'																		X				
569						29-30'																		X				
570						39-40'																		X				

RELINQUISHED BY: (Signature)	Date: / Time:	RECEIVED BY: (Signature) Jeanne Fitch	Date: 04-18-12 Time: 0900
RELINQUISHED BY: (Signature) Jeanne Fitch	Date: 04-18-12 Time: 1445	RECEIVED BY: (Signature)	Date: 4/18/12 Time: 1445
RELINQUISHED BY: (Signature)	Date: / Time:	RECEIVED BY: (Signature)	Date: / Time:

SAMPLED BY: (Print & Initial) Kim Date: 4/17/12 Time:

SAMPLE SHIPPED BY: (Circle) FEDEX HAND DELIVERED BUS UPS

AIRBILL #:

OTHER:

RECEIVING LABORATORY: TRACE
ADDRESS:
CITY: MIDLAND STATE: TX ZIP:
CONTACT: PHONE:

RECEIVED BY: (Signature)
DATE: TIME:

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 5.7° intact

REMARKS: all tests Midland

APR 30 2012

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

1204901

Analysis Request of Chain of Custody Record

PAGE: 2 OF: 4

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: COG

SITE MANAGER: Ike

PROJECT NO.: 114-640 1312

PROJECT NAME: Mayox 31-13

Eddy Co., NM

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
571	4/16		S	X		BH-2 @ AH-4 0-1'	1				X	
572						2-3'						
573						4-5'						
574						6-7'						
575						9-10'						
576						14-15'						
577						19-20'						
578						24-25'						
579						29-30'						
580						39-40'						

ANALYSIS REQUEST (Circle or Specify Method No.)

BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride Cheri Jeanne 4/30/12	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
											X	X				
											X	X				
											X	X				
											X	X				
											X	X				
											X	X				
											X	X				
											X	X				
											X	X				

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: 04-18-12 Time: 0800

SAMPLED BY: (Print & Initial) Kim Date: 4/17/12 Time:

RELINQUISHED BY: (Signature) Date: 04-18-12 Time: 1448

RECEIVED BY: (Signature) Date: 4/18/12 Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS

AIRBILL #:

OTHER:

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

RECEIVING LABORATORY: TRACE

ADDRESS:

CITY: MIDLAND STATE: TX ZIP:

CONTACT: PHONE:

RECEIVED BY: (Signature)

DATE: TIME:

SAMPLE CONDITION WHEN RECEIVED: 5.0° Intact

REMARKS:

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

1204901

Analysis Request of Chain of Custody Record

PAGE: 3 OF: 4

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114640131 2

PROJECT NAME: M-YOX 31-13

Eddy Co., NM

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
581	4/16		S	X		BH-3 @ AH-5 0-1'	1				X	
582						2-3'						
583						4-5'						
584						6-7'						
585						9-10'						
586						14-15'						
587						19-20'						
588						24-25'						
589						29-30'						
590						39-40'						

BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride (Peri Jeanne 4/30/12)	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
												X				
												X				
												X				
												X				
												X				
												X				
												X				
												X				
												X				
												X				

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Jeanne Mitch Date: 04-19-12 Time: 0800

SAMPLED BY: (Print & Initial) Kim Date: 4/17/12 Time:

RELINQUISHED BY: (Signature) Jeanne Mitch Date: 04-19-12 Time: 1445

RECEIVED BY: (Signature) Date: 4/18/12 Time: 14:45

SAMPLE SHIPPED BY: (Circle)
FEDEX BUS
HAND DELIVERED UPS

AIRBILL #:

OTHER:

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RECEIVING LABORATORY: TRACE

ADDRESS:

CITY: MIDLAND STATE: TX ZIP:

CONTACT: PHONE:

RECEIVED BY: (Signature)

DATE: TIME:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 5.7° intact

REMARKS:

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

1204190I

Analysis Request of Chain of Custody Record

PAGE: 4 OF: 4

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-6401312

PROJECT NAME: Myox 31-13

Eddy Co, NM

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
591	4/16		S	X		BH-4 @ AH-6 0-1'	1				X	
592						2-3'						
593						4-5'						
594						6-7'						
595						9-10'						
596						14-15'						
597						19-20'						
598						24-25'						
~~599~~ 599						29-30'						
600						39-40'						

BTEX 8021B; TPH 8015 MOD. TX1005 (Ext. to C35); PAH 8270; RCRA Metals Ag As Ba Cd Cr Pb Hg Se; TCLP Metals Ag As Ba Cd Vr Pd Hg Se; TCLP Volatiles; TCLP Semi Volatiles; RCI; GC.MS Vol. 8240/8260/624; GC.MS Semi. Vol. 8270/625; PCB's 8080/608; Pest. 808/608; Chloride) Peri Jeanne 4/30/12; Gamma Spec.; Alpha Beta (Air); PLM (Asbestos); Major Anions/Cations, pH, TDS

RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Jeanne Fitch Date: 04-18-12 Time: 0800
SAMPLED BY: (Print & Initial) Kim Date: 4/17/12 Time:

RELINQUISHED BY: (Signature) Jeanne Fitch Date: 04-18-12 Time: 1448
RECEIVED BY: (Signature) Date: 4/18/12 Time: 1448
SAMPLE SHIPPED BY: (Circle) FEDEX HAND DELIVERED BUS UPS AIRBILL #: OTHER:

RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: Time:
TETRA TECH CONTACT PERSON: Ike Tavarez
Results by:

RECEIVING LABORATORY: TRACE
ADDRESS:
CITY: MIDLAND STATE: TX ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: TIME:
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 5.7° Intact
REMARKS:

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

Summary Report

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

Report Date: March 16, 2012

Work Order: 12030929

Project Location: Eddy Co., NM
Project Name: COG/Myox 31-13 Well Site
Project Number: 114-6401312

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
290984	AH-1 0-1'	soil	2012-03-07	00:00	2012-03-09
290985	AH-1 1-1.5'	soil	2012-03-07	00:00	2012-03-09
290986	AH-1 2-2.5'	soil	2012-03-07	00:00	2012-03-09
290987	AH-1 3-3.5'	soil	2012-03-07	00:00	2012-03-09
290988	AH-1 4-4.5'	soil	2012-03-07	00:00	2012-03-09
290989	AH-1 5-5.5'	soil	2012-03-07	00:00	2012-03-09
290990	AH-2 0-1'	soil	2012-03-07	00:00	2012-03-09
290991	AH-2 1-1.5'	soil	2012-03-07	00:00	2012-03-09
290992	AH-2 2-2.5'	soil	2012-03-07	00:00	2012-03-09
290993	AH-2 3-3.5'	soil	2012-03-07	00:00	2012-03-09
290994	AH-2 4-4.5'	soil	2012-03-07	00:00	2012-03-09
290995	AH-2 5-5.5'	soil	2012-03-07	00:00	2012-03-09
290996	AH-3 0-1'	soil	2012-03-07	00:00	2012-03-09
290997	AH-3 1-1.5'	soil	2012-03-07	00:00	2012-03-09
290998	AH-3 2-2.5'	soil	2012-03-07	00:00	2012-03-09
290999	AH-3 3-3.5'	soil	2012-03-07	00:00	2012-03-09
291000	AH-3 4-4.5'	soil	2012-03-07	00:00	2012-03-09
291001	AH-3 5-5.5'	soil	2012-03-07	00:00	2012-03-09
291002	AH-4 0-1'	soil	2012-03-07	00:00	2012-03-09
291003	AH-4 1-1.5'	soil	2012-03-07	00:00	2012-03-09
291004	AH-4 2-2.5'	soil	2012-03-07	00:00	2012-03-09
291005	AH-4 3-3.5'	soil	2012-03-07	00:00	2012-03-09
291006	AH-4 4-4.5'	soil	2012-03-07	00:00	2012-03-09
291007	AH-4 5-5.5'	soil	2012-03-07	00:00	2012-03-09
291008	AH-5 0-1'	soil	2012-03-07	00:00	2012-03-09
291009	AH-5 1-1.5'	soil	2012-03-07	00:00	2012-03-09
291010	AH-5 2-2.5'	soil	2012-03-07	00:00	2012-03-09
291011	AH-5 3-3.5'	soil	2012-03-07	00:00	2012-03-09
291012	AH-5 4-4.5'	soil	2012-03-07	00:00	2012-03-09
291013	AH-5 5-5.5'	soil	2012-03-07	00:00	2012-03-09

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
291014	AH-6 0-1'	soil	2012-03-07	00:00	2012-03-09
291015	AH-6 1-1.5'	soil	2012-03-07	00:00	2012-03-09
291016	AH-6 2-2.5'	soil	2012-03-07	00:00	2012-03-09
291017	AH-6 3-3.5'	soil	2012-03-07	00:00	2012-03-09
291018	AH-6 4-4.5'	soil	2012-03-07	00:00	2012-03-09
291019	AH-6 5-5.5'	soil	2012-03-07	00:00	2012-03-09
291020	AH-7 0-1'	soil	2012-03-07	00:00	2012-03-09
291021	AH-7 1-1.5'	soil	2012-03-07	00:00	2012-03-09
291022	AH-7 2-2.5'	soil	2012-03-07	00:00	2012-03-09
291023	AH-7 3-3.5'	soil	2012-03-07	00:00	2012-03-09
291024	AH-7 4-4.5'	soil	2012-03-07	00:00	2012-03-09
291025	AH-7 5-5.5'	soil	2012-03-07	00:00	2012-03-09

	BTEX				TPH DRO - NEW	TPH GRO
Sample - Field Code	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
290984 - AH-1 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
290990 - AH-2 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
290996 - AH-3 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
291002 - AH-4 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
291008 - AH-5 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
291014 - AH-6 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
291020 - AH-7 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00

Sample: 290984 - AH-1 0-1'

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

Sample: 290985 - AH-1 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**207**	mg/Kg	4

Sample: 290986 - AH-1 2-2.5'

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

Sample: 290987 - AH-1 3-3.5'

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

Sample: 290988 - AH-1 4-4.5'

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

Sample: 290989 - AH-1 5-5.5'

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

Sample: 290990 - AH-2 0-1'

Param	Flag	Result	Units	RL
Chloride		**11800**	mg/Kg	4

Sample: 290991 - AH-2 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**10600**	mg/Kg	4

Sample: 290992 - AH-2 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**608**	mg/Kg	4

Sample: 290993 - AH-2 3-3.5'

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

Sample: 290994 - AH-2 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**218**	mg/Kg	4

Sample: 290995 - AH-2 5-5.5'

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

Sample: 290996 - AH-3 0-1'

Param	Flag	Result	Units	RL
Chloride		**15700**	mg/Kg	4

Sample: 290997 - AH-3 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**13300**	mg/Kg	4

Sample: 290998 - AH-3 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**11700**	mg/Kg	4

Sample: 290999 - AH-3 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**11600**	mg/Kg	4

Sample: 291000 - AH-3 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**8310**	mg/Kg	4

Sample: 291001 - AH-3 5-5.5'

Param	Flag	Result	Units	RL
Chloride		**1280**	mg/Kg	4

Sample: 291002 - AH-4 0-1'

Param	Flag	Result	Units	RL
Chloride		**16000**	mg/Kg	4

Sample: 291003 - AH-4 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**17600**	mg/Kg	4

Sample: 291004 - AH-4 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**15700**	mg/Kg	4

Sample: 291005 - AH-4 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**12600**	mg/Kg	4

Sample: 291006 - AH-4 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**10300**	mg/Kg	4

Sample: 291007 - AH-4 5-5.5'

Param	Flag	Result	Units	RL
Chloride		**2580**	mg/Kg	4

Sample: 291008 - AH-5 0-1'

Param	Flag	Result	Units	RL
Chloride		**12700**	mg/Kg	4

Sample: 291009 - AH-5 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**14800**	mg/Kg	4

Sample: 291010 - AH-5 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**14800**	mg/Kg	4

Sample: 291011 - AH-5 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**9350**	mg/Kg	4

Sample: 291012 - AH-5 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**7230**	mg/Kg	4

Sample: 291013 - AH-5 5-5.5'

Param	Flag	Result	Units	RL
Chloride		**9830**	mg/Kg	4

Sample: 291014 - AH-6 0-1'

Param	Flag	Result	Units	RL
Chloride		**14600**	mg/Kg	4

Sample: 291015 - AH-6 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**14000**	mg/Kg	4

Sample: 291016 - AH-6 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**10200**	mg/Kg	4

Sample: 291017 - AH-6 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**5570**	mg/Kg	4

Sample: 291018 - AH-6 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**696**	mg/Kg	4

Sample: 291019 - AH-6 5-5.5'

Param	Flag	Result	Units	RL
Chloride		**1190**	mg/Kg	4

Sample: 291020 - AH-7 0-1'

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

Sample: 291021 - AH-7 1-1.5'

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

Sample: 291022 - AH-7 2-2.5'

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

Sample: 291023 - AH-7 3-3.5'

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

Sample: 291024 - AH-7 4-4.5'

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

Sample: 291025 - AH-7 5-5.5'

Param	Flag	Result	Units	RL
Chloride		**330**	mg/Kg	4

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800-378-1296 806-794-1296 FAX 806-794-1298
200 East Sunset Road, Suite E El Paso, Texas 79922 915-585-3443 FAX 915-585-4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432-689-6301 FAX 432-689-6313
(BioAquatic) 2501 Mayes Rd., Suite 100 Carrollton, Texas 75006 972-242-7750
E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

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

Report Date: March 16, 2012

Work Order: 12030929

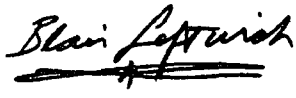
Project Location: Eddy Co., NM
Project Name: COG/Myox 31-13 Well Site
Project Number: 114-6401312

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

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
290984	AH-1 0-1'	soil	2012-03-07	00:00	2012-03-09
290985	AH-1 1-1.5'	soil	2012-03-07	00:00	2012-03-09
290986	AH-1 2-2.5'	soil	2012-03-07	00:00	2012-03-09
290987	AH-1 3-3.5'	soil	2012-03-07	00:00	2012-03-09
290988	AH-1 4-4.5'	soil	2012-03-07	00:00	2012-03-09
290989	AH-1 5-5.5'	soil	2012-03-07	00:00	2012-03-09
290990	AH-2 0-1'	soil	2012-03-07	00:00	2012-03-09
290991	AH-2 1-1.5'	soil	2012-03-07	00:00	2012-03-09
290992	AH-2 2-2.5'	soil	2012-03-07	00:00	2012-03-09
290993	AH-2 3-3.5'	soil	2012-03-07	00:00	2012-03-09
290994	AH-2 4-4.5'	soil	2012-03-07	00:00	2012-03-09
290995	AH-2 5-5.5'	soil	2012-03-07	00:00	2012-03-09
290996	AH-3 0-1'	soil	2012-03-07	00:00	2012-03-09
290997	AH-3 1-1.5'	soil	2012-03-07	00:00	2012-03-09
290998	AH-3 2-2.5'	soil	2012-03-07	00:00	2012-03-09
290999	AH-3 3-3.5'	soil	2012-03-07	00:00	2012-03-09
291000	AH-3 4-4.5'	soil	2012-03-07	00:00	2012-03-09
291001	AH-3 5-5.5'	soil	2012-03-07	00:00	2012-03-09

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
291002	AH-4 0-1'	soil	2012-03-07	00:00	2012-03-09
291003	AH-4 1-1.5'	soil	2012-03-07	00:00	2012-03-09
291004	AH-4 2-2.5'	soil	2012-03-07	00:00	2012-03-09
291005	AH-4 3-3.5'	soil	2012-03-07	00:00	2012-03-09
291006	AH-4 4-4.5'	soil	2012-03-07	00:00	2012-03-09
291007	AH-4 5-5.5'	soil	2012-03-07	00:00	2012-03-09
291008	AH-5 0-1'	soil	2012-03-07	00:00	2012-03-09
291009	AH-5 1-1.5'	soil	2012-03-07	00:00	2012-03-09
291010	AH-5 2-2.5'	soil	2012-03-07	00:00	2012-03-09
291011	AH-5 3-3.5'	soil	2012-03-07	00:00	2012-03-09
291012	AH-5 4-4.5'	soil	2012-03-07	00:00	2012-03-09
291013	AH-5 5-5.5'	soil	2012-03-07	00:00	2012-03-09
291014	AH-6 0-1'	soil	2012-03-07	00:00	2012-03-09
291015	AH-6 1-1.5'	soil	2012-03-07	00:00	2012-03-09
291016	AH-6 2-2.5'	soil	2012-03-07	00:00	2012-03-09
291017	AH-6 3-3.5'	soil	2012-03-07	00:00	2012-03-09
291018	AH-6 4-4.5'	soil	2012-03-07	00:00	2012-03-09
291019	AH-6 5-5.5'	soil	2012-03-07	00:00	2012-03-09
291020	AH-7 0-1'	soil	2012-03-07	00:00	2012-03-09
291021	AH-7 1-1.5'	soil	2012-03-07	00:00	2012-03-09
291022	AH-7 2-2.5'	soil	2012-03-07	00:00	2012-03-09
291023	AH-7 3-3.5'	soil	2012-03-07	00:00	2012-03-09
291024	AH-7 4-4.5'	soil	2012-03-07	00:00	2012-03-09
291025	AH-7 5-5.5'	soil	2012-03-07	00:00	2012-03-09

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.



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

Report Contents

Case Narrative

Samples for project COG/Myox 31-13 Well Site were received by TraceAnalysis, Inc. on 2012-03-09 and assigned to work order 12030929. Samples for work order 12030929 were received intact at a temperature of 0.8 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	75875	2012-03-14 at 11:37	89384	2012-03-14 at 12:29
Chloride (Titration)	SM 4500-Cl B	75814	2012-03-10 at 07:48	89332	2012-03-13 at 14:26
Chloride (Titration)	SM 4500-Cl B	75814	2012-03-10 at 07:48	89333	2012-03-13 at 14:27
Chloride (Titration)	SM 4500-Cl B	75814	2012-03-10 at 07:48	89393	2012-03-14 at 11:06
Chloride (Titration)	SM 4500-Cl B	75814	2012-03-10 at 07:48	89395	2012-03-14 at 11:07
Chloride (Titration)	SM 4500-Cl B	75814	2012-03-10 at 07:48	89396	2012-03-14 at 11:08
TPH DRO - NEW	S 8015 D	75807	2012-03-12 at 12:24	89298	2012-03-12 at 12:29
TPH GRO	S 8015 D	75875	2012-03-14 at 11:37	89385	2012-03-14 at 12:56

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 12030929 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.

Analytical Report

Sample: 290984 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	89384	Date Analyzed:	2012-03-14	Analyzed By:	tc
Prep Batch:	75875	Sample Preparation:	2012-03-14	Prepared By:	tc

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	1	<0.0200	mg/Kg	1	0.0200
Toluene	U	1	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1	<0.0200	mg/Kg	1	0.0200
Xylene	U	1	<0.0200	mg/Kg	1	0.0200

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr		3.00	mg/Kg	1	2.00	150	75 - 135.4
4-Bromofluorobenzene (4-BFB)				2.08	mg/Kg	1	2.00	104	63.6 - 158.9

Sample: 290984 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89332	Date Analyzed:	2012-03-13	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

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

Sample: 290984 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	89298	Date Analyzed:	2012-03-12	Analyzed By:	DA
Prep Batch:	75807	Sample Preparation:	2012-03-12	Prepared By:	DA

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			101	mg/Kg	1	100	101	49.3 - 157.5

Sample: 290984 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	89385	Date Analyzed:	2012-03-14	Analyzed By:	tc
Prep Batch:	75875	Sample Preparation:	2012-03-14	Prepared By:	tc

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.79	mg/Kg	1	2.00	140	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)			1.98	mg/Kg	1	2.00	99	45.1 - 162.2

Sample: 290985 - AH-1 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89332	Date Analyzed:	2012-03-13	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**207**	mg/Kg	50	4.00

Sample: 290986 - AH-1 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89332	Date Analyzed:	2012-03-13	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

continued ...

sample 290986 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL

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

Sample: 290987 - AH-1 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89332	Date Analyzed:	2012-03-13	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

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

Sample: 290988 - AH-1 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89332	Date Analyzed:	2012-03-13	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

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

Sample: 290989 - AH-1 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89332	Date Analyzed:	2012-03-13	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

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

Sample: 290990 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	89384	Date Analyzed:	2012-03-14	Analyzed By:	tc
Prep Batch:	75875	Sample Preparation:	2012-03-14	Prepared By:	tc

Parameter	Flag	Cert	RL 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	U	1	<0.0200	mg/Kg	1	0.0200
Xylene	U	1	<0.0200	mg/Kg	1	0.0200

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr		3.20	mg/Kg	1	2.00	160	75 - 135.4
4-Bromofluorobenzene (4-BFB)				2.34	mg/Kg	1	2.00	117	63.6 - 158.9

Sample: 290990 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	Chloride-(Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89332	Date Analyzed:	2012-03-13	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**11800**	mg/Kg	100	4.00

Sample: 290990 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	89298	Date Analyzed:	2012-03-12	Analyzed By:	DA
Prep Batch:	75807	Sample Preparation:	2012-03-12	Prepared By:	DA

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			103	mg/Kg	1	100	103	49.3 - 157.5

Sample: 290990 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	89385	Date Analyzed:	2012-03-14	Analyzed By:	tc
Prep Batch:	75875	Sample Preparation:	2012-03-14	Prepared By:	tc

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			3.08	mg/Kg	1	2.00	154	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)			2.19	mg/Kg	1	2.00	110	45.1 - 162.2

Sample: 290991 - AH-2 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89333	Date Analyzed:	2012-03-13	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**10600**	mg/Kg	100	4.00

Sample: 290992 - AH-2 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89333	Date Analyzed:	2012-03-13	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**608**	mg/Kg	50	4.00

Sample: 290993 - AH-2 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89333	Date Analyzed:	2012-03-13	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

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

Sample: 290994 - AH-2 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89333	Date Analyzed:	2012-03-13	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**218**	mg/Kg	50	4.00

Sample: 290995 - AH-2 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89333	Date Analyzed:	2012-03-13	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

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

Sample: 290996 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	89384	Date Analyzed:	2012-03-14	Analyzed By:	tc
Prep Batch:	75875	Sample Preparation:	2012-03-14	Prepared By:	tc

Parameter	Flag	Cert	RL 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	U	1	<0.0200	mg/Kg	1	0.0200
Xylene	U	1	<0.0200	mg/Kg	1	0.0200

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr		3.37	mg/Kg	1	2.00	168	75 - 135.4
4-Bromofluorobenzene (4-BFB)				2.35	mg/Kg	1	2.00	118	63.6 - 158.9

Sample: 290996 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89333	Date Analyzed:	2012-03-13	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**15700**	mg/Kg	100	4.00

Sample: 290996 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	89298	Date Analyzed:	2012-03-12	Analyzed By:	DA
Prep Batch:	75807	Sample Preparation:	2012-03-12	Prepared By:	DA

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			101	mg/Kg	1	100	101	49.3 - 157.5

Sample: 290996 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	89385	Date Analyzed:	2012-03-14	Analyzed By:	tc
Prep Batch:	75875	Sample Preparation:	2012-03-14	Prepared By:	tc

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr	3.18	mg/Kg	1	2.00	159	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)			2.19	mg/Kg	1	2.00	110	45.1 - 162.2

Sample: 290997 - AH-3 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89333	Date Analyzed:	2012-03-13	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**13300**	mg/Kg	100	4.00

Sample: 290998 - AH-3 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89333	Date Analyzed:	2012-03-13	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**11700**	mg/Kg	100	4.00

Sample: 290999 - AH-3 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89333	Date Analyzed:	2012-03-13	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**11600**	mg/Kg	100	4.00

Sample: 291000 - AH-3 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89333	Date Analyzed:	2012-03-13	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**8310**	mg/Kg	100	4.00

Sample: 291001 - AH-3 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89393	Date Analyzed:	2012-03-14	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1280**	mg/Kg	100	4.00

Sample: 291002 - AH-4 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	89384	Date Analyzed:	2012-03-14	Analyzed By:	tc
Prep Batch:	75875	Sample Preparation:	2012-03-14	Prepared By:	tc

Parameter	Flag	Cert	RL 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	U	1	<0.0200	mg/Kg	1	0.0200
Xylene	U	1	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.62	mg/Kg	1	2.00	131	75 - 135.4
4-Bromofluorobenzene (4-BFB)			1.62	mg/Kg	1	2.00	81	63.6 - 158.9

Sample: 291002 - AH-4 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89393	Date Analyzed:	2012-03-14	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**16000**	mg/Kg	100	4.00

Sample: 291002 - AH-4 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	89298	Date Analyzed:	2012-03-12	Analyzed By:	DA
Prep Batch:	75807	Sample Preparation:	2012-03-12	Prepared By:	DA

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			101	mg/Kg	1	100	101	49.3 - 157.5

Sample: 291002 - AH-4 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	89385	Date Analyzed:	2012-03-14	Analyzed By:	tc
Prep Batch:	75875	Sample Preparation:	2012-03-14	Prepared By:	tc

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.49	mg/Kg	1	2.00	124	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)			1.53	mg/Kg	1	2.00	76	45.1 - 162.2

Sample: 291003 - AH-4 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89393	Date Analyzed:	2012-03-14	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**17600**	mg/Kg	100	4.00

Sample: 291004 - AH-4 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89393	Date Analyzed:	2012-03-14	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**15700**	mg/Kg	100	4.00

Sample: 291005 - AH-4 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89393	Date Analyzed:	2012-03-14	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**12600**	mg/Kg	100	4.00

Sample: 291006 - AH-4 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89393	Date Analyzed:	2012-03-14	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**10300**	mg/Kg	100	4.00

Sample: 291007 - AH-4 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89393	Date Analyzed:	2012-03-14	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2580**	mg/Kg	100	4.00

Sample: 291008 - AH-5 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	89384	Date Analyzed:	2012-03-14	Analyzed By:	tc
Prep Batch:	75875	Sample Preparation:	2012-03-14	Prepared By:	tc

Parameter	Flag	Cert	RL 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	U	1	<0.0200	mg/Kg	1	0.0200

continued ...

sample 291008 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Xylene	U	1	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.08	mg/Kg	1	2.00	104	75 - 135.4
4-Bromofluorobenzene (4-BFB)			1.39	mg/Kg	1	2.00	70	63.6 - 158.9

Sample: 291008 - AH-5 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89393	Date Analyzed:	2012-03-14	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**12700**	mg/Kg	100	4.00

Sample: 291008 - AH-5 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	89298	Date Analyzed:	2012-03-12	Analyzed By:	DA
Prep Batch:	75807	Sample Preparation:	2012-03-12	Prepared By:	DA

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			106	mg/Kg	1	100	106	49.3 - 157.5

Sample: 291008 - AH-5 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	89385	Date Analyzed:	2012-03-14	Analyzed By:	tc
Prep Batch:	75875	Sample Preparation:	2012-03-14	Prepared By:	tc

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.99	mg/Kg	1	2.00	100	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)			1.31	mg/Kg	1	2.00	66	45.1 - 162.2

Sample: 291009 - AH-5 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89393	Date Analyzed:	2012-03-14	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**14800**	mg/Kg	100	4.00

Sample: 291010 - AH-5 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89393	Date Analyzed:	2012-03-14	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**14800**	mg/Kg	100	4.00

Sample: 291011 - AH-5 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89395	Date Analyzed:	2012-03-14	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**9350**	mg/Kg	100	4.00

Sample: 291012 - AH-5 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89395	Date Analyzed:	2012-03-14	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**7230**	mg/Kg	100	4.00

Sample: 291013 - AH-5 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89395	Date Analyzed:	2012-03-14	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**9830**	mg/Kg	100	4.00

Sample: 291014 - AH-6 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	89384	Date Analyzed:	2012-03-14	Analyzed By:	tc
Prep Batch:	75875	Sample Preparation:	2012-03-14	Prepared By:	tc

Parameter	Flag	Cert	RL 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	U	1	<0.0200	mg/Kg	1	0.0200

continued ...

sample 291014 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Xylene	U	1	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.31	mg/Kg	1	2.00	116	75 - 135.4
4-Bromofluorobenzene (4-BFB)			1.52	mg/Kg	1	2.00	76	63.6 - 158.9

Sample: 291014 - AH-6 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89395	Date Analyzed:	2012-03-14	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**14600**	mg/Kg	100	4.00

Sample: 291014 - AH-6 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	89298	Date Analyzed:	2012-03-12	Analyzed By:	DA
Prep Batch:	75807	Sample Preparation:	2012-03-12	Prepared By:	DA

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			105	mg/Kg	1	100	105	49.3 - 157.5

Sample: 291014 - AH-6 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	89385	Date Analyzed:	2012-03-14	Analyzed By:	tc
Prep Batch:	75875	Sample Preparation:	2012-03-14	Prepared By:	tc

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.20	mg/Kg	1	2.00	110	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)			1.44	mg/Kg	1	2.00	72	45.1 - 162.2

Sample: 291015 - AH-6 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89395	Date Analyzed:	2012-03-14	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Chloride			**14000**		mg/Kg	100	4.00

Sample: 291016 - AH-6 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89395	Date Analyzed:	2012-03-14	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Chloride			**10200**		mg/Kg	100	4.00

Sample: 291017 - AH-6 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89395	Date Analyzed:	2012-03-14	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**5570**	mg/Kg	100	4.00

Sample: 291018 - AH-6 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89395	Date Analyzed:	2012-03-14	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**696**	mg/Kg	50	4.00

Sample: 291019 - AH-6 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89395	Date Analyzed:	2012-03-14	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1190**	mg/Kg	50	4.00

Sample: 291020 - AH-7 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	89384	Date Analyzed:	2012-03-14	Analyzed By:	tc
Prep Batch:	75875	Sample Preparation:	2012-03-14	Prepared By:	tc

Parameter	Flag	Cert	RL 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	U	1	<0.0200	mg/Kg	1	0.0200

continued ...

sample 291020 continued ...

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Xylene	U	1	<0.0200		mg/Kg	1	0.0200

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr		2.81	mg/Kg	1	2.00	140	75 - 135.4
4-Bromofluorobenzene (4-BFB)				1.89	mg/Kg	1	2.00	94	63.6 - 158.9

Sample: 291020 - AH-7 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89395	Date Analyzed:	2012-03-14	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

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

Sample: 291020 - AH-7 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	89298	Date Analyzed:	2012-03-12	Analyzed By:	DA
Prep Batch:	75807	Sample Preparation:	2012-03-12	Prepared By:	DA

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			107	mg/Kg	1	100	107	49.3 - 157.5

Sample: 291020 - AH-7 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	89385	Date Analyzed:	2012-03-14	Analyzed By:	tc
Prep Batch:	75875	Sample Preparation:	2012-03-14	Prepared By:	tc

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.67	mg/Kg	1	2.00	134	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)			1.79	mg/Kg	1	2.00	90	45.1 - 162.2

Sample: 291021 - AH-7 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89396	Date Analyzed:	2012-03-14	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

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

Sample: 291022 - AH-7 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89396	Date Analyzed:	2012-03-14	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

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

Sample: 291023 - AH-7 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89396	Date Analyzed:	2012-03-14	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

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

Sample: 291024 - AH-7 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89396	Date Analyzed:	2012-03-14	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

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

Sample: 291025 - AH-7 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89396	Date Analyzed:	2012-03-14	Analyzed By:	AR
Prep Batch:	75814	Sample Preparation:	2012-03-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**330**	mg/Kg	50	4.00

Method Blanks

Method Blank (1) QC Batch: 89298

QC Batch:	89298	Date Analyzed:	2012-03-12	Analyzed By:	DA
Prep Batch:	75807	QC Preparation:	2012-03-12	Prepared By:	DA

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	<14.5	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			93.1	mg/Kg	1	100	93	52 - 140.8

Method Blank (1) QC Batch: 89332

QC Batch:	89332	Date Analyzed:	2012-03-13	Analyzed By:	AR
Prep Batch:	75814	QC Preparation:	2012-03-10	Prepared By:	AR

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Method Blank (1) QC Batch: 89333

QC Batch:	89333	Date Analyzed:	2012-03-13	Analyzed By:	AR
Prep Batch:	75814	QC Preparation:	2012-03-10	Prepared By:	AR

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Method Blank (1) QC Batch: 89384

QC Batch: 89384 | Date Analyzed: 2012-03-14 | Analyzed By: tc
Prep Batch: 75875 | QC Preparation: 2012-03-14 | Prepared By: tc

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.00470	mg/Kg	0.02
Toluene		1	<0.00980	mg/Kg	0.02
Ethylbenzene		1	<0.00500	mg/Kg	0.02
Xylene		1	<0.0170	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.73	mg/Kg	1	2.00	86	78 - 123.6
4-Bromofluorobenzene (4-BFB)			1.39	mg/Kg	1	2.00	70	55.9 - 112.4

Method Blank (1) QC Batch: 89385

QC Batch: 89385 | Date Analyzed: 2012-03-14 | Analyzed By: tc
Prep Batch: 75875 | QC Preparation: 2012-03-14 | Prepared By: tc

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1	<1.22	mg/Kg	2

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.65	mg/Kg	1	2.00	82	78.6 - 109
4-Bromofluorobenzene (4-BFB)			1.32	mg/Kg	1	2.00	66	55 - 100

Method Blank (1) QC Batch: 89393

QC Batch: 89393 | Date Analyzed: 2012-03-14 | Analyzed By: AR
Prep Batch: 75814 | QC Preparation: 2012-03-10 | Prepared By: AR

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 89298 | Date Analyzed: 2012-03-12 | Analyzed By: DA
Prep Batch: 75807 | QC Preparation: 2012-03-12 | Prepared By: DA

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	240	mg/Kg	1	250	<14.5	96	62 - 128.3

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	245	mg/Kg	1	250	<14.5	98	62 - 128.3	2	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	95.5	97.4	mg/Kg	1	100	96	97	58.6 - 149.6

Laboratory Control Spike (LCS-1)

QC Batch: 89332 | Date Analyzed: 2012-03-13 | Analyzed By: AR
Prep Batch: 75814 | QC Preparation: 2012-03-10 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			96.7	mg/Kg	1	100	<3.85	97	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			103	mg/Kg	1	100	<3.85	103	85 - 115	6	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: 89333 | Date Analyzed: 2012-03-13 | Analyzed By: AR
Prep Batch: 75814 | QC Preparation: 2012-03-10 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			97.9	mg/Kg	1	100	<3.85	98	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			103	mg/Kg	1	100	<3.85	103	85 - 115	5	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: 89384 | Date Analyzed: 2012-03-14 | Analyzed By: tc
Prep Batch: 75875 | QC Preparation: 2012-03-14 | Prepared By: tc

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	2.02	mg/Kg	1	2.00	<0.00470	101	86.5 - 124.9
Toluene		1	2.04	mg/Kg	1	2.00	<0.00980	102	84.7 - 122.5
Ethylbenzene		1	2.00	mg/Kg	1	2.00	<0.00500	100	79.4 - 118.9
Xylene		1	6.07	mg/Kg	1	6.00	<0.0170	101	79.5 - 118.9

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	2.05	mg/Kg	1	2.00	<0.00470	102	86.5 - 124.9	2	20
Toluene		1	2.07	mg/Kg	1	2.00	<0.00980	104	84.7 - 122.5	1	20
Ethylbenzene		1	2.05	mg/Kg	1	2.00	<0.00500	102	79.4 - 118.9	2	20
Xylene		1	6.16	mg/Kg	1	6.00	<0.0170	103	79.5 - 118.9	2	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.28	2.08	mg/Kg	1	2.00	114	104	73.9 - 127
4-Bromofluorobenzene (4-BFB)	2.38	2.15	mg/Kg	1	2.00	119	108	70.4 - 119.9

Laboratory Control Spike (LCS-1)

QC Batch: 89385 Date Analyzed: 2012-03-14 Analyzed By: tc
Prep Batch: 75875 QC Preparation: 2012-03-14 Prepared By: tc

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	17.6	mg/Kg	1	20.0	<1.22	88	68.3 - 105.7

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	19.7	mg/Kg	1	20.0	<1.22	98	68.3 - 105.7	11	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.92	2.18	mg/Kg	1	2.00	96	109	80 - 111.2
4-Bromofluorobenzene (4-BFB)	1.70	2.02	mg/Kg	1	2.00	85	101	66.4 - 106.6

Laboratory Control Spike (LCS-1)

QC Batch: 89393 Date Analyzed: 2012-03-14 Analyzed By: AR
Prep Batch: 75814 QC Preparation: 2012-03-10 Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			96.9	mg/Kg	1	100	<3.85	97	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			102	mg/Kg	1	100	<3.85	102	85 - 115	5	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: 89395 Date Analyzed: 2012-03-14 Analyzed By: AR
Prep Batch: 75814 QC Preparation: 2012-03-10 Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			96.1	mg/Kg	1	100	<3.85	96	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			101	mg/Kg	1	100	<3.85	101	85 - 115	5	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: 89396 Date Analyzed: 2012-03-14 Analyzed By: AR
Prep Batch: 75814 QC Preparation: 2012-03-10 Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			95.4	mg/Kg	1	100	<3.85	95	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			102	mg/Kg	1	100	<3.85	102	85 - 115	7	20

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

Matrix Spike (MS-1) Spiked Sample: 290978

QC Batch: 89298 Date Analyzed: 2012-03-12 Analyzed By: DA
Prep Batch: 75807 QC Preparation: 2012-03-12 Prepared By: DA

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	256	mg/Kg	1	250	<14.5	102	45.5 - 127

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	259	mg/Kg	1	250	<14.5	104	45.5 - 127	1	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	91.0	94.2	mg/Kg	1	100	91	94	45.4 - 145.8

Matrix Spike (MS-1) Spiked Sample: 290990

QC Batch: 89332 | Date Analyzed: 2012-03-13 | Analyzed By: AR
Prep Batch: 75814 | QC Preparation: 2012-03-10 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			21800	mg/Kg	100	10000	11800	100	79.4 - 120.6

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			22500	mg/Kg	100	10000	11800	107	79.4 - 120.6	3	20

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

Matrix Spike (MS-1) Spiked Sample: 291000

QC Batch: 89333 | Date Analyzed: 2012-03-13 | Analyzed By: AR
Prep Batch: 75814 | QC Preparation: 2012-03-10 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			18200	mg/Kg	100	10000	8310	99	79.4 - 120.6

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			19000	mg/Kg	100	10000	8310	107	79.4 - 120.6	4	20

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

Matrix Spike (MS-1) Spiked Sample: 290978

QC Batch: 89384 | Date Analyzed: 2012-03-14 | Analyzed By: tc
Prep Batch: 75875 | QC Preparation: 2012-03-14 | Prepared By: tc

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	2.77	mg/Kg	1	2.00	<0.00470	138	69.3 - 159.2
Toluene		1	2.86	mg/Kg	1	2.00	<0.00980	143	68.7 - 157
Ethylbenzene		1	2.95	mg/Kg	1	2.00	<0.00500	148	71.6 - 158.2
Xylene		1	8.71	mg/Kg	1	6.00	<0.0170	145	70.8 - 159.8

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	2.40	mg/Kg	1	2.00	<0.00470	120	69.3 - 159.2	14	20
Toluene		1	2.50	mg/Kg	1	2.00	<0.00980	125	68.7 - 157	13	20
Ethylbenzene		1	2.56	mg/Kg	1	2.00	<0.00500	128	71.6 - 158.2	14	20
Xylene		1	7.52	mg/Kg	1	6.00	<0.0170	125	70.8 - 159.8	15	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.61	3.07	mg/Kg	1	2	130	154	71.4 - 133.9
4-Bromofluorobenzene (4-BFB)	2.15	2.52	mg/Kg	1	2	108	126	72.6 - 144.1

Matrix Spike (MS-1) Spiked Sample: 290982

QC Batch: 89385 | Date Analyzed: 2012-03-14 | Analyzed By: tc
Prep Batch: 75875 | QC Preparation: 2012-03-14 | Prepared By: tc

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	21.1	mg/Kg	1	20.0	1.8991	96	28.2 - 157.2

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	22.0	mg/Kg	1	20.0	1.8991	100	28.2 - 157.2	4	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.44	2.48	mg/Kg	1	2	122	124	75.5 - 122.3
4-Bromofluorobenzene (4-BFB)	1.93	1.97	mg/Kg	1	2	96	98	77.9 - 122.4

Matrix Spike (MS-1) Spiked Sample: 291010

QC Batch: 89393 | Date Analyzed: 2012-03-14 | Analyzed By: AR
Prep Batch: 75814 | QC Preparation: 2012-03-10 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			24300	mg/Kg	100	10000	14800	95	79.4 - 120.6

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			25500	mg/Kg	100	10000	14800	107	79.4 - 120.6	5	20

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

Matrix Spike (MS-1) Spiked Sample: 291020

QC Batch: 89395 | Date Analyzed: 2012-03-14 | Analyzed By: AR
Prep Batch: 75814 | QC Preparation: 2012-03-10 | Prepared By: AR

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

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			10600	mg/Kg	100	10000	<385	106	79.4 - 120.6	4	20

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

Matrix Spike (MS-1) Spiked Sample: 291025

QC Batch: 89396 | Date Analyzed: 2012-03-14 | Analyzed By: AR
Prep Batch: 75814 | QC Preparation: 2012-03-10 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			10100	mg/Kg	100	10000	<385	98	79.4 - 120.6

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			10600	mg/Kg	100	10000	<385	103	79.4 - 120.6	5	20

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

Calibration Standards

Standard (CCV-2)

QC Batch: 89298 | Date Analyzed: 2012-03-12 | Analyzed By: DA

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	285	114	80 - 120	2012-03-12

Standard (CCV-3)

QC Batch: 89298 | Date Analyzed: 2012-03-12 | Analyzed By: DA

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	264	106	80 - 120	2012-03-12

Standard (CCV-4)

QC Batch: 89298 | Date Analyzed: 2012-03-12 | Analyzed By: DA

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	258	103	80 - 120	2012-03-12

Standard (ICV-1)

QC Batch: 89332 | Date Analyzed: 2012-03-13 | Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2012-03-13

Standard (CCV-1)

QC Batch: 89332 | Date Analyzed: 2012-03-13 | Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.4	99	85 - 115	2012-03-13

Standard (ICV-1)

QC Batch: 89333 | Date Analyzed: 2012-03-13 | Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2012-03-13

Standard (CCV-1)

QC Batch: 89333 | Date Analyzed: 2012-03-13 | Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2012-03-13

Standard (CCV-1)

QC Batch: 89384 | Date Analyzed: 2012-03-14 | Analyzed By: tc

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0951	95	80 - 120	2012-03-14
Toluene		1	mg/kg	0.100	0.0944	94	80 - 120	2012-03-14
Ethylbenzene		1	mg/kg	0.100	0.0901	90	80 - 120	2012-03-14
Xylene		1	mg/kg	0.300	0.265	88	80 - 120	2012-03-14

Standard (CCV-2)

QC Batch: 89384 Date Analyzed: 2012-03-14 Analyzed By: tc

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0959	96	80 - 120	2012-03-14
Toluene		1	mg/kg	0.100	0.0966	97	80 - 120	2012-03-14
Ethylbenzene		1	mg/kg	0.100	0.0943	94	80 - 120	2012-03-14
Xylene		1	mg/kg	0.300	0.273	91	80 - 120	2012-03-14

Standard (CCV-3)

QC Batch: 89384 Date Analyzed: 2012-03-14 Analyzed By: tc

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0946	95	80 - 120	2012-03-14
Toluene		1	mg/kg	0.100	0.0932	93	80 - 120	2012-03-14
Ethylbenzene		1	mg/kg	0.100	0.0874	87	80 - 120	2012-03-14
Xylene		1	mg/kg	0.300	0.254	85	80 - 120	2012-03-14

Standard (CCV-1)

QC Batch: 89385 Date Analyzed: 2012-03-14 Analyzed By: tc

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	1.11	111	80 - 120	2012-03-14

Standard (CCV-2)

QC Batch: 89385 Date Analyzed: 2012-03-14 Analyzed By: tc

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.966	97	80 - 120	2012-03-14

Standard (CCV-3)

QC Batch: 89385 Date Analyzed: 2012-03-14 Analyzed By: tc

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.992	99	80 - 120	2012-03-14

Standard (ICV-1)

QC Batch: 89393 Date Analyzed: 2012-03-14 Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.6	100	85 - 115	2012-03-14

Standard (CCV-1)

QC Batch: 89393 Date Analyzed: 2012-03-14 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2012-03-14

Standard (ICV-1)

QC Batch: 89395 Date Analyzed: 2012-03-14 Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2012-03-14

Standard (CCV-1)

QC Batch: 89395 Date Analyzed: 2012-03-14 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.9	100	85 - 115	2012-03-14

Standard (ICV-1)

QC Batch: 89396 Date Analyzed: 2012-03-14 Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.1	99	85 - 115	2012-03-14

Standard (CCV-1)

QC Batch: 89396 Date Analyzed: 2012-03-14 Analyzed By: AR

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	2012-03-14

Appendix

Report Definitions

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

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704392-11-3	Midland

Standard Flags

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

Attachments

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

#12030929

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 5

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-640312

PROJECT NAME: Myox 31-13 Well site Eddy Co NM

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH TX1005 (Ext. to C35)	TPH 8015 Mod.	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
290984	3/7		S		X	AH-1 0-1'	1				X		X	X	X											X				
985						1-1.5'																				Y				
986						2-2.5'																				Y				
987						3-3.5'																				Y				
988						4-4.5'																				Y				
989						5-5.5'																				Y				
990						AH-2 0-1'							X	X	X											X				
991						1-1.5'																				Y				
992						2-2.5'																				Y				
993						3-3.5'																				Y				

RELINQUISHED BY: (Signature)	Date: 3/9/12 Time: 3:07 P.M.	RECEIVED BY: (Signature)	Date: 3/9/12 Time: 15:07
SAMPLED BY: (Print & Initial) TT	Date: 3-7-12 Time:		
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
SAMPLE SHIPPED BY: (Circle) FEDEX HAND DELIVERED BUS UPS	AIRBILL #: OTHER:		
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
TETRA TECH CONTACT PERSON: Ike Tavarez	Results by:		
RECEIVING LABORATORY: Trace ADDRESS: CITY: Midland STATE: TX ZIP: CONTACT: PHONE:	RECEIVED BY: (Signature) DATE: TIME:		RUSH Charges Authorized: Yes No
SAMPLE CONDITION WHEN RECEIVED: 8°	REMARKS: Run deeper samples if TPH exceeds 100 mg/kg (AH-1 → 7)		

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

Run deeper samples if benzene exceed 10 mg/kg or total BTEX exceeds 50 mg/kg.

#120309Z4

Analysis Request of Chain of Custody Record

PAGE: 2 OF: 5

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-6401312

PROJECT NAME: Myox 31-13

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/824	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
994	3/7		S		X	AH-2 4-4.5'	1				X														X			
995						5-5.5'																			X			
996						AH-3 0-1'								X	X										X			
997						1-1.5'																			X			
998						2-2.5'																			X			
999						3-3.5'																			X			
2911000						4-4.5'																			X			
001						5-5.5'																			X			
002						AH-4 0-1'								X	X										X			
003						0.5'																			X			

RELINQUISHED BY: (Signature)	Date: 3/8/12 Time: 3:30 P.M.	RECEIVED BY: (Signature)	Date: 3/9/12 Time: 15:00
SAMPLED BY: (Print & Initial) TF	Date: 3-7-12 Time:		
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS	AIRBILL #: OTHER:		
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
TETRA TECH CONTACT PERSON: Ike Tavarez	Results by: RUSH Charges Authorized: Yes No		

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: TX ZIP:
CONTACT: PHONE: DATE: TIME: RECEIVED BY: (Signature)

SAMPLE CONDITION WHEN RECEIVED: Good Intact

REMARKS:

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

#12030929

Analysis Request of Chain of Custody Record

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-6401312

PROJECT NAME: Myox 31-13

Eddy Co NM

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 Mod. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC:MS Vol. 8240/8260/624	GC:MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
004	3/7		S		X	AH-4 2-2.5'	1				X													X				
005						3-3.5'																		X				
006						4-4.5'																		X				
007						5-5.5'																		X				
008						AH-5 0-1'							X	X										X				
009						1-1.5'																		X				
010						2-2.5'																		X				
011						3-3.5'																		X				
012						4-4.5'																		X				
013						5-5.5'																		X				

RELINQUISHED BY: (Signature) Date: 3/8/12 Time: 3:67 P.M. RECEIVED BY: (Signature) Date: 3/9/12 Time: 8:00

RELINQUISHED BY: (Signature) Date: Time: RECEIVED BY: (Signature) Date: Time:

RELINQUISHED BY: (Signature) Date: Time: RECEIVED BY: (Signature) Date: Time:

SAMPLED BY: (Print & Initial) TF Date: 3-7-12 Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS AIRBILL #: OTHER:

RECEIVING LABORATORY: Trace RECEIVED BY: (Signature)

ADDRESS: CITY: Midland STATE: TX ZIP: CONTACT: PHONE: DATE: TIME:

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: Cool Intact

REMARKS:

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

#12030429

Analysis Request of Chain of Custody Record

PAGE: 4 OF: 5

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: COG
SITE MANAGER: Ike Tavarez
PROJECT NO.: 114-6401312
PROJECT NAME: Myox 31-13 Eddy Co NM

ANALYSIS REQUEST (Circle or Specify Method No.)

PRESERVATIVE METHOD

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chlorides	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
014	3/7		S		X	AH-6 0-1'	1				Y		X	Y											Y				
015						1-1.5'																			Y				
016						2-2.5'																			Y				
017						3-3.5'																			Y				
018						4-4.5'																			Y				
019						5-5.5'																			X				
020						AH-7 0-1'							X	X											Y				
021						1-1.5'																			Y				
022						2-2.5'																			Y				
023						3-3.5'																			Y				

RELINQUISHED BY: (Signature) [signature] Date: 3/8/12 Time: 3:07pm
RECEIVED BY: (Signature) [signature] Date: 3/8/12 Time: 15:07
SAMPLED BY: (Print & Initial) Date: Time:

RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS
AIRBILL #: OTHER:

RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: Time:

TETRA TECH CONTACT PERSON: Ike Tavarez
Results by:
RUSH Charges Authorized: Yes No

RECEIVING LABORATORY:
ADDRESS:
CITY: STATE: ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: TIME:

SAMPLE CONDITION WHEN RECEIVED: 8° intact
REMARKS:

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

#1203929

Analysis Request of Chain of Custody Record

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

PAGE: 5 OF: 5

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-6401312

PROJECT NAME: Myox 31-13

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
024	3/7		S		X	AH-7 4-4.5'	1				X													X				
025	3/7		S		X	5-5.5'	1				X													X				

RELINQUISHED BY: (Signature) Date: 3/8/12 Time: 3:07 p.m.

RECEIVED BY: (Signature) Date: 3/9/12 Time: 15:07

SAMPLED BY: (Print & Initial) TF Date: 3-7-12 Time:

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS

AIRBILL #:

OTHER:

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

RECEIVING LABORATORY: Trace

ADDRESS:

CITY: Midland STATE: TX ZIP:

CONTACT: PHONE:

RECEIVED BY: (Signature)

DATE: TIME:

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: OK Intact

REMARKS:

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