SITE INFORMATION

Report Type: Closure Report

General Site Information:						
Site:	Myox 31 State Com #13H Tank Battery					
Company:	COG Operating LLC					
Section, Township and Range	Sec 31	T 25S	R 28E			
Lease Number:	API-30-015-37497					
County:	Eddy County					
GPS:	32 04.736° N			104 07.075° W		
Surface Owner:	State					
Mineral Owner:						
Directions:	In Malaga, from the intersection of CR 720 and HWY 285 head SOUTH on Hwy 285 for 11.2 miles, turn WEST onto C.R. 724 (Whites City Road) and continue for approximately 2.0 miles, turn NORTH onto lease road for 1.1 miles, turn West onto lease road for .9 miles to location.					

Release Data:	
Date Released:	11/19/2013
Type Release:	Produced Water
Source of Contamination:	4" main line
Fluid Released:	100 bbls
Fluids Recovered:	0 bbls

Official Communication:			
Name:	Robert McNeil		Ike Tavarez
Company:	COG Operating, LLC		Tetra Tech
Address:	One Concho Center		4000 N. Big Spring
	600 W. Illinois Ave.		Ste 401
City:	Midland Texas, 79701		Midland, Texas
Phone number:	(432) 686-3023		(432) 687-8110
Fax:	(432) 684-7137		
Email:	rmcneil@conchoresources.com		Ike.Tavarez@tetratech.com

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

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

TETRA TECH

October 6, 2014

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

Re: Closure Report for the COG Operating LLC., Myox 31 State Com #13H Tank Battery, 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 State Com #13H, Unit P, Section 31, Township 25 South, Range 28 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32 04.736°, W 104 07.075°. The site location is shown on Figures 1 and 2.

Background

According to the State of New Mexico C-141 Initial Report, the leak was discovered on November 19, 2013, and released approximately one hundred (100) barrels of produced fluid from a check valve on a 4' main line. To alleviate the problem, COG personnel replaced the check valve. None of the standing fluids were recovered. The spill initiated north of the lease road affecting an area approximately 5' x 1,235' on and along the side of the lease road measuring approximately 35' x 300' in the pasture. The initial C-141 form is enclosed in Appendix A.

Groundwater

No water wells were listed within Section 31. According to the NMOCD groundwater map, the average depth to groundwater in this area is less than 50.0' below surface. The groundwater data is shown in Appendix B.

Tetra Tech
4000 North Big Spring, Ste 401 Midland, TX 79705
Tel 432.682.4559 Fax 432.682.3946 www.tetratech.com

Regulatory

A risk-based evaluation was performed for the Site in accordance with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and Releases, dated August 13, 1993. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene and xylene (collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) in soil. The proposed RRAL for benzene was determined to be 10 parts per million (ppm) or milligrams per kilogram (mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene, and xylene). Based upon the depth to groundwater, the proposed RRAL for TPH is 100 mg/kg.

Soil Assessment and Analytical Results

On December 19, 2013, Tetra Tech personnel inspected and sampled the spill area. Six (6) auger holes (AH-1 through AH-6) were installed using a stainless steel hand auger to assess the impacted soils. In addition, a total of five (5) surface samples (Road 1 through Road 5) were collected to evaluate the spill area along the edge of the road. Selected samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The sampling results are summarized in Table 1. The auger hole locations are shown on Figure 3.

Referring to Table 1, none of the samples exceeded the TPH or BTEX RRAL's. The areas of AH-1 and AH-2 did not show any significant chloride impact to the soils. The area of AH-3 showed a shallow impact to the soils of 13,100 mg/kg at 0-1' and declined <20.0 mg/kg at 1.1.5' below surface. Elevated chlorides were detected in the areas of AH-4, AH-5 and AH-6 and not vertically defined with bottom auger holes samples of 2,420 mg/kg at 2-2.5', 2,430 mg/kg at 5-5.5' and 2,230 mg/kg at 5-5.5', respectively.

The samples (Road 1 through Road 5) did not show any significant chlorides in the subsurface soils. Road 1 showed a chloride of 1,480 mg/kg at 0-1' below surface.

To evaluate the background chlorides, In addition, one auger hole was installed in native soil to determine natural chloride concentrations in the area. The background results showed chloride highs of 1,730 mg/kg (1-1.5'), 1,650 mg/kg (2-2.5') and 1,780 mg/kg (3'- 3.5') below surface.

TETRA TECH

Remedial Activities

On March 26, 2014, Tetra Tech supervised the removal of the impacted material highlighted (green) in Table 1 and shown on Figure 4. Based on the background concentrations detected in the areas, the impacted areas were excavated to the appropriate depths. The area of AH-3 was excavated to a depth of 1.0' below surface. The additional areas (AH-4, AH-5 and AH-6) were assessed by installing backhoe trenches to define extents.

Referring to Table 1, the trenches (T-1, T-2 and T-3) all declined with depth to background concentrations from 6.0' to 10.0 below surface. Based on the data, these impacted areas were excavated 6.0', 4.0', and 8.0', respectively. Once the areas were excavated to the appropriate depths, the excavations were backfilled with clean soil to surface grade. Approximately 916 cubic yards of soil was hauled to proper disposal.

Conclusion

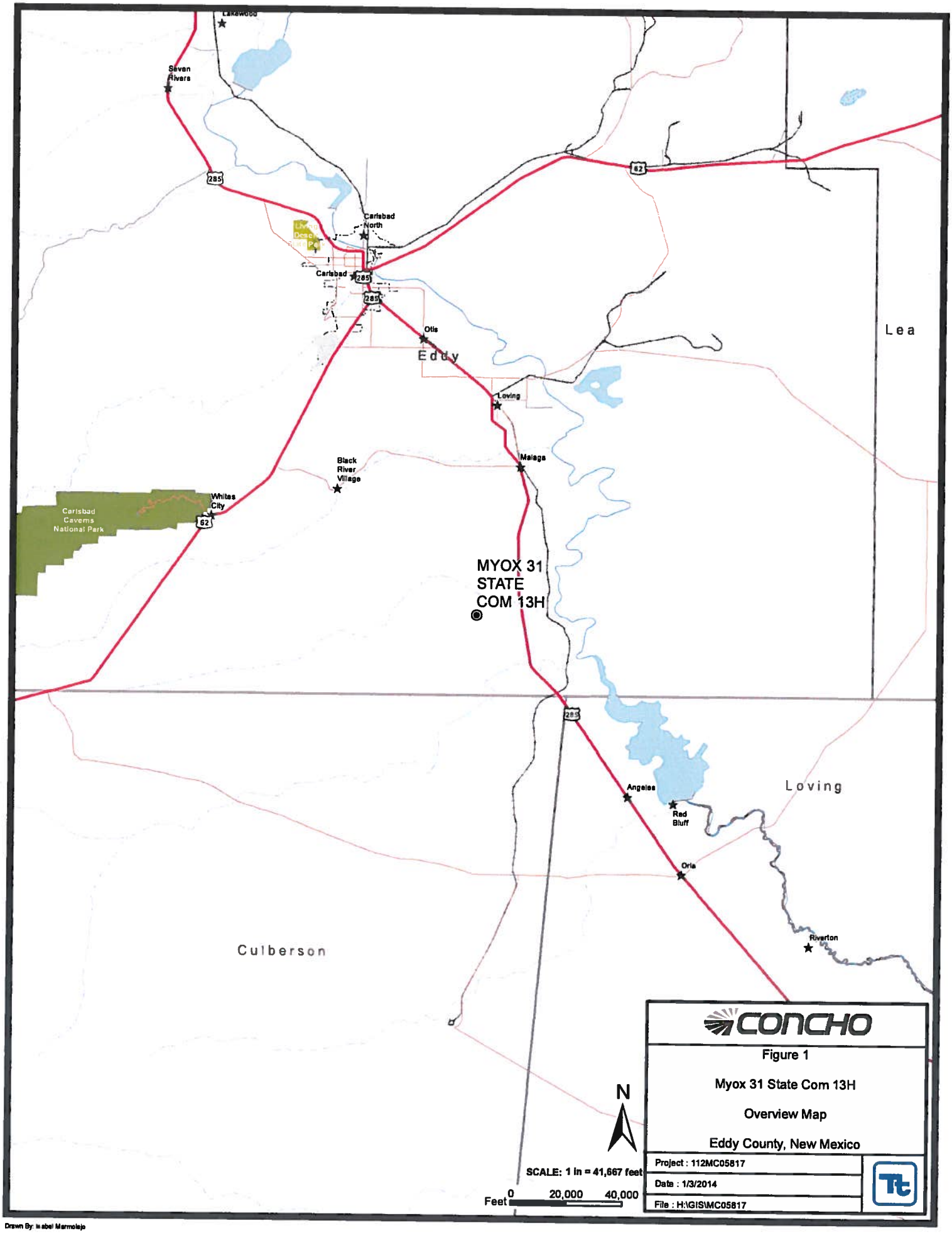
Based on the remedial work performed at this site, COG requests closure of this spill issue. A Final C-141 is enclosed in Appendix A. If you have any questions or comments concerning the assessment or the remediation activities for this site, please call me at (432) 682-4559.

Respectfully submitted,
TETRA TECH

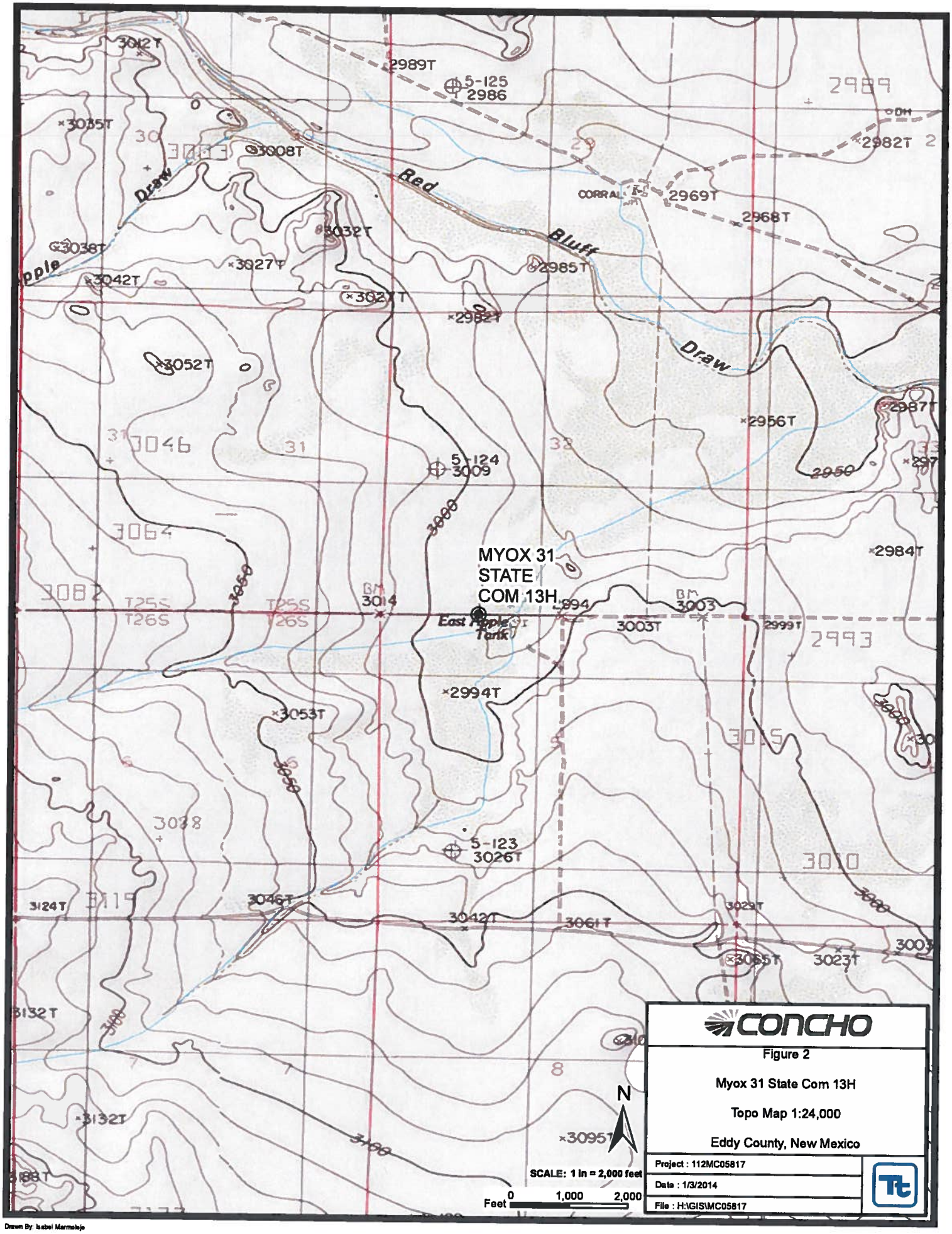
Ike Tavarez, PG
Senior Project Manager

cc: Robert McNeil – COG

Figures



Drawn By: Isabel Marmolejo



CONCHO

Figure 2

Myox 31 State Com 13H

Topo Map 1:24,000

Eddy County, New Mexico

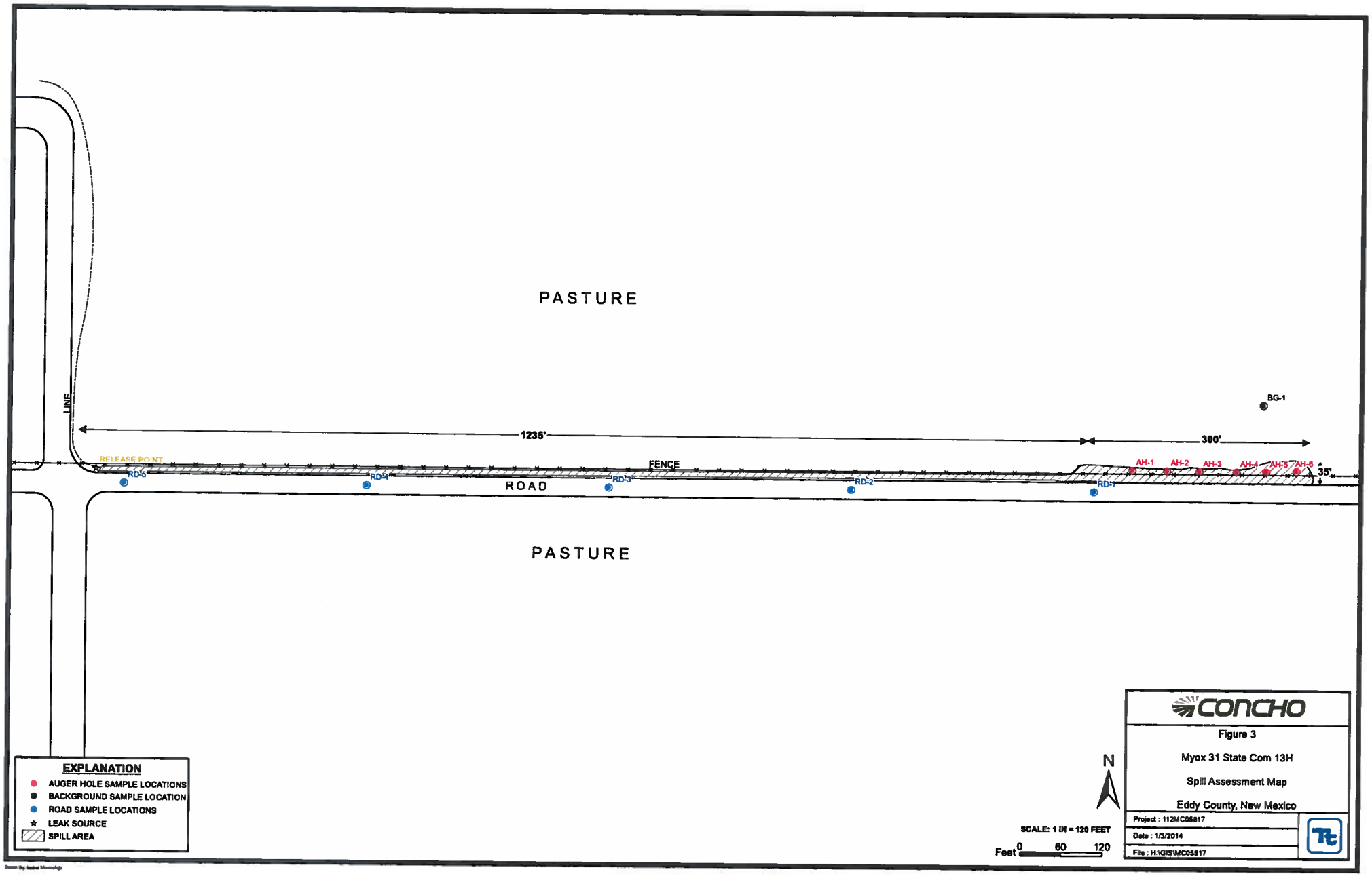
Project : 112MC05817

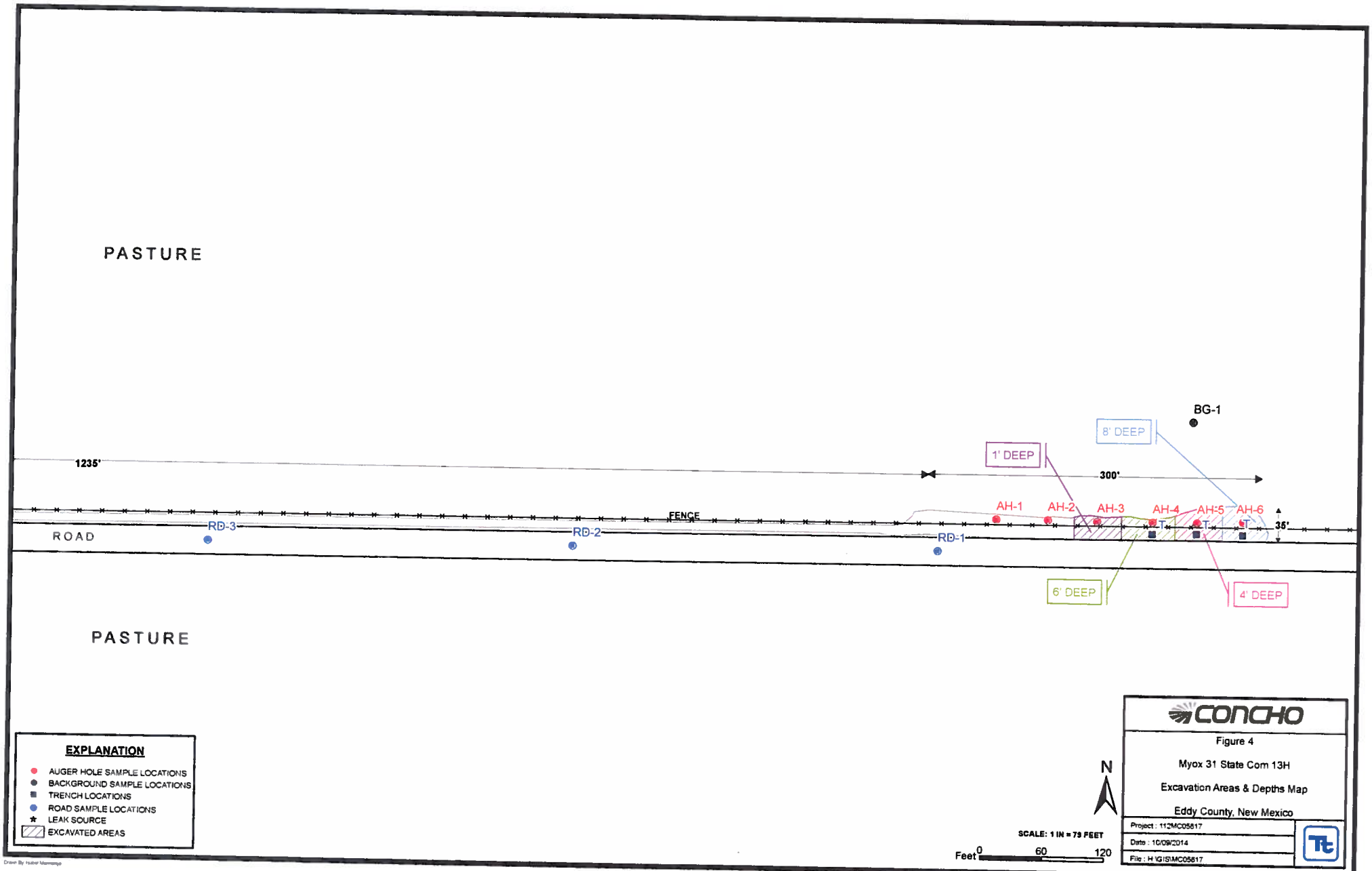
Date : 1/3/2014

File : H:\GIS\MC05817

Drawn By: Isabel Marmolejo


PASTURE
LINE
1235'
300'
BG-1
RELEASE POINT
RD-5
RD-4
RD-3
RD-2
RD-1
FENCE
ROAD
AH-1
AH-2
AH-3
AH-4
AH-5
AH-6
35'
PASTURE
EXPLANATION
AUGER HOLE SAMPLE LOCATIONS
BACKGROUND SAMPLE LOCATION
ROAD SAMPLE LOCATIONS
LEAK SOURCE
SPILL AREA
N
SCALE: 1 IN = 120 FEET
Feet 0 60 120
CONCHO
Figure 3
Myox 31 State Com 13H
Spill Assessment Map
Eddy County, New Mexico
Project : 112MC05817
Date : 1/3/2014
File : H:\GIS\MC05817


PASTURE
LINE
BG-1
1235'
300'
RELEASE POINT
RD-5
RD-4
RD-3
RD-2
RD-1
FENCE
ROAD
AH-1
AH-2
AH-3
AH-4
AH-5
AH-6
35'
PASTURE
EXPLANATION
AUGER HOLE SAMPLE LOCATIONS
BACKGROUND SAMPLE LOCATION
ROAD SAMPLE LOCATIONS
LEAK SOURCE
SPILL AREA
N
SCALE: 1 IN = 120 FEET
Feet 0 60 120
CONCHO
Figure 3
Myox 31 State Com 13H
Spill Assessment Map
Eddy County, New Mexico
Project : 112MC05817
Date : 1/3/2014
File : H:\GIS\MC05817


PASTURE
BG-1
8' DEEP
1' DEEP
1235'
300'
AH-1
AH-2
AH-3
AH-4
AH-5
AH-6
FENCE
ROAD
RD-3
RD-2
RD-1
35'
6' DEEP
4' DEEP
PASTURE
EXPLANATION
AUGER HOLE SAMPLE LOCATIONS
BACKGROUND SAMPLE LOCATIONS
TRENCH LOCATIONS
ROAD SAMPLE LOCATIONS
LEAK SOURCE
EXCAVATED AREAS
N
SCALE: 1 IN = 79 FEET
Feet 0 60 120
CONCHO
Figure 4
Myox 31 State Com 13H
Excavation Areas & Depths Map
Eddy County, New Mexico
Project : 112MC05617
Date : 10/09/2014
File : H:\GIS\MC05617

Tables

Table 1
COG Operating LLC.
Myox 31 State Com #13H
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	BEB 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	12/9/2013	0-1	-	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<20.0
	"	1-1.5	-	X		-	-	-	-	-	-	-	-	77.7
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	121
	"	3-3.5	-	X		-	-	-	-	-	-	-	-	107
	"	4-4.5	-	X		-	-	-	-	-	-	-	-	82.5
AH-2	12/9/2013	0-1	-	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	72.8
	"	1-1.5	-	X		-	-	-	-	-	-	-	-	<20.0
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	77.7
	"	3-3.5	-	X		-	-	-	-	-	-	-	-	277
AH-3	12/9/2013	0-1	-		X	<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	**13,100**
	"	1-1.5	-	X		-	-	-	-	-	-	-	-	<20.0
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	93.6
	"	3-3.5	-	X		-	-	-	-	-	-	-	-	177
AH-4	12/9/2013	0-1	-		X	<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	**15,900**
	"	1-1.5	-		X	-	-	-	-	-	-	-	-	**2,180**
	"	2-2.5	-		X	-	-	-	-	-	-	-	-	**2,420**
T-1	3/27/2014	0	-		X	-	-	-	-	-	-	-	-	64.0
	"	2	-		X	-	-	-	-	-	-	-	-	**2,000**
	"	4	-		X	-	-	-	-	-	-	-	-	**1,650**
	"	6	-	X		-	-	-	-	-	-	-	-	976
	"	8	-	X		-	-	-	-	-	-	-	-	848
	"	10	-	X		-	-	-	-	-	-	-	-	528

Table 1
COG Operating LLC.
Myox 31 State Com #13H
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	BEB 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	12/9/2013	0-1	-		X	<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	11,700
	"	1-1.5	-		X	-	-	-	-	-	-	-	-	1,480
	"	2-2.5	-		X	-	-	-	-	-	-	-	-	2,130
	"	3-3.5	-		X	-	-	-	-	-	-	-	-	1,840
	"	4-4.5	-		X	-	-	-	-	-	-	-	-	1,830
	"	5-5.5	-	X		-	-	-	-	-	-	-	-	2,430
T-2	3/27/2014	0	-		X	-	-	-	-	-	-	-	-	272
	"	2	-		X	-	-	-	-	-	-	-	-	1,920
	"	4	-		X	-	-	-	-	-	-	-	-	1,010
	"	6	-	X		-	-	-	-	-	-	-	-	1,060
	"	8	-	X		-	-	-	-	-	-	-	-	1,070
	"	10	-	X		-	-	-	-	-	-	-	-	832
AH-6	12/9/2013	0-1	-		X	<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	6,560
	"	1-1.5	-		X	-	-	-	-	-	-	-	-	311
	"	2-2.5	-		X	-	-	-	-	-	-	-	-	2,150
	"	3-3.5	-		X	-	-	-	-	-	-	-	-	3,810
	"	4-4.5	-		X	-	-	-	-	-	-	-	-	3,090
	"	5-5.5	-		X	-	-	-	-	-	-	-	-	2,230
T-3	3/27/2014	0	-		X	-	-	-	-	-	-	-	-	672
	"	2	-		X	-	-	-	-	-	-	-	-	2,760
	"	4	-		X	-	-	-	-	-	-	-	-	2,880
	"	6	-		X	-	-	-	-	-	-	-	-	2,560
	"	8	-		X	-	-	-	-	-	-	-	-	1,010
	"	10	-	X		-	-	-	-	-	-	-	-	1,170

Table 1
COG Operating LLC.
Myox 31 State Com #13H
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	BEB 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						
Background	12/9/2013	0-1	-	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	195
	"	1-1.5	-	X		-	-	-	-	-	-	-	-	1,730
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	1,670
	"	3-3.5	-	X		-	-	-	-	-	-	-	-	1,780
	"	4-4.5	-	X		-	-	-	-	-	-	-	-	925
	"	5-5.5	-	X		-	-	-	-	-	-	-	-	738
Road 1	12/9/2013	0-1	-	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	1,480
Road 2	12/9/2013	0-1	-	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	527
Road 3	12/9/2013	0-1	-	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	217
Road 4	12/9/2013	0-1	-	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	177
Road 5	12/9/2013	0-1	-	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	743

(-) Not Analyzed

(BEB) Below Excavation Bottom

Excavated Depths

Date Modified: 01/02/2014

112MC05817

Photos

COG Operating LLC
Myox 31 State Com #13H
Tank Battery
Eddy County, New Mexico

TETRA TECH

View West – T-1 in area of AH-4

View East – T-3 in area of AH-6 at 10'

COG Operating LLC
Myox 31 State Com #13H
Tank Battery
Eddy County, New Mexico

TETRA TECH

View West – Area of AH-3 at 1.0'

View West – Areas of AH-4, AH-5, and AH-6 Excavated

COG Operating LLC
Myox 31 State Com #13H
Tank Battery
Eddy County, New Mexico

TETRA TECH

View East – Area of AH-6 at 8.0'

View West – Excavation Backfilled

Appendix A

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company **COG Operating LLC**	Contact **Robert McNeill**
Address **600 W. Illinois Ave, Midland, Texas 79701**	Telephone No. **(432) 685-4332**
Facility Name **Myox 31 State Com #13H**	Facility Type **Tank Battery**

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 32 04.736° N **Longitude** 104 07.075° W

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release 100 bbls	Volume Recovered 0 bbls
Source of Release: 4" Main Line	Date and Hour of Occurrence 11/19/2013	Date and Hour of Discovery 11/19/2013 12:00pm
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? **James Amos – BLM, Mike Bratcher - NMOCD**	
By Whom? Michelle Mullins	Date and Hour 11/20/2013 8:17am	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*

N/A

Describe Cause of Problem and Remedial Action Taken.*

Check valve corroded in convergence point in flow stream. Replaced the check valve to prevent re-occurrence.

Describe Area Affected and Cleanup Action Taken.*

Initially an estimated 100bbls were released from a check valve that corroded. COG was unable to recover any fluids. The spill area is located along the side of the lease road. Tetra Tech inspected site and collected samples to define spills extent. Soil that exceeded RRAL was removed and hauled away for proper disposal. Site was then brought up to surface grade with clean backfill material. Tetra Tech prepared closure report and submitted 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 (agent for COG)	Approved by District Supervisor:	
Title: Project Manager	Approval Date:	Expiration Date:
E-mail Address: Ike.Tavarez@TetraTech.com	Conditions of Approval:	Attached ☐
Date 10-9-14 Phone: (432) 682-4559		

* Attach Additional Sheets If Necessary

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

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	Robert McNeill
Address	600 West Illinois Avenue, Midland, TX 79701	Telephone No.	432-230-0077
Facility Name	Myox 31 State Com #013H	Facility Type	Tank Battery

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 32 04.736 **Longitude** 104 07.075

NATURE OF RELEASE

Type of Release Produced water	Volume of Release 100bbls	Volume Recovered 0bbls
Source of Release 4'' main line	Date and Hour of Occurrence 11-19-2013	Date and Hour of Discovery 11-19-2013 12:00p.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? James Amos – BLM / Mike Bratcher - NMOCD	
By Whom? Michelle Mullins	Date and Hour 11-20-2013 08:17a.m.	
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.*

Check valve corroded in convergence point in flow stream. Replaced the check valve to prevent reoccurrence.

Describe Area Affected and Cleanup Action Taken.*

Initially an estimated 100bbls were released from a check valve that corroded. We were unable to recover any fluids. The spill area is located along the side of the lease road. Tetra Tech will sample the spill site area to delineate any possible contamination from the release and we will present a 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: Robert Grubbs Jr.	Approved by District Supervisor:
Title: Senior Environmental Coordinator	Approval Date: / Expiration Date:
E-mail Address: rgrubbs@concho.com	Conditions of Approval: / Attached ☐
Date: 11-27-2013 Phone: 432-661-6601	

* Attach Additional Sheets If Necessary

Appendix B

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

24 South 27 East

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

24 South 28 East

Carlsbad

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

24 South 29 East

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

25 South 27 East

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

25 South 28 East

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

25 South 29 East

6 40	5	4	3	2	1
7	8	9	10 40	11	12
18	17	16	15 60	14	13
19	20	21	22	23	24
30 30	29	28	27	26	25
31	32 115	33	34	35	36

26 South 27 East

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

26 South 28 East

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

26 South 29 East

6	5 78	4	3	2	1
7	8	9	10	11	12
18	17	16 125	15	14	13
19	20	21	22 57 69	23	24
30	29	28	27	26	25
31	32	33	34	35	36

- New Mexico State Engineers Well Reports
- USGS Well Reports
- Geology and Groundwater Conditions in Southern Eddy, County, NM
- NMOCD - Groundwater Data
- Field water level
- New Mexico Water and Infrastructure Data System

Appendix C

Summary Report

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

Report Date: December 18, 2013

Work Order: 13121205

Project Location: Eddy Co, NM
Project Name: COG/Myox 31 State Com #13H
Project Number: 112MC05817

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
348548	AH-1 0-1'	soil	2013-12-09	00:00	2013-12-12
348549	AH-1 1-1.5'	soil	2013-12-09	00:00	2013-12-12
348550	AH-1 2-2.5'	soil	2013-12-09	00:00	2013-12-12
348551	AH-1 3-3.5'	soil	2013-12-09	00:00	2013-12-12
348552	AH-1 4-4.5'	soil	2013-12-09	00:00	2013-12-12
348553	AH-2 0-1'	soil	2013-12-09	00:00	2013-12-12
348554	AH-2 1-1.5'	soil	2013-12-09	00:00	2013-12-12
348555	AH-2 2-2.5'	soil	2013-12-09	00:00	2013-12-12
348556	AH-2 3-3.5'	soil	2013-12-09	00:00	2013-12-12
348557	AH-3 0-1'	soil	2013-12-09	00:00	2013-12-12
348558	AH-3 1-1.5'	soil	2013-12-09	00:00	2013-12-12
348559	AH-3 2-2.5'	soil	2013-12-09	00:00	2013-12-12
348560	AH-3 3-3.5'	soil	2013-12-09	00:00	2013-12-12
348561	AH-4 0-1'	soil	2013-12-09	00:00	2013-12-12
348562	AH-4 1-1.5'	soil	2013-12-09	00:00	2013-12-12
348563	AH-4 2-2.5'	soil	2013-12-09	00:00	2013-12-12
348564	AH-5 0-1'	soil	2013-12-09	00:00	2013-12-12
348565	AH-5 1-1.5'	soil	2013-12-09	00:00	2013-12-12
348566	AH-5 2-2.5'	soil	2013-12-09	00:00	2013-12-12
348567	AH-5 3-3.5'	soil	2013-12-09	00:00	2013-12-12
348568	AH-5 4-4.5'	soil	2013-12-09	00:00	2013-12-12
348569	AH-5 5-5.5'	soil	2013-12-09	00:00	2013-12-12
348570	AH-6 0-1'	soil	2013-12-09	00:00	2013-12-12
348571	AH-6 1-1.5'	soil	2013-12-09	00:00	2013-12-12
348572	AH-6 2-2.5'	soil	2013-12-09	00:00	2013-12-12
348573	AH-6 3-3.5'	soil	2013-12-09	00:00	2013-12-12
348574	AH-6 4-4.5'	soil	2013-12-09	00:00	2013-12-12
348575	AH-6 5-5.5'	soil	2013-12-09	00:00	2013-12-12
348576	Background 0-1'	soil	2013-12-09	00:00	2013-12-12
348577	Background 1-1.5'	soil	2013-12-09	00:00	2013-12-12

This is only a summary. Please, refer to the complete report package for quality control data.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
348578	Background 2-2.5'	soil	2013-12-09	00:00	2013-12-12
348579	Background 3-3.5'	soil	2013-12-09	00:00	2013-12-12
348580	Background 4-4.5'	soil	2013-12-09	00:00	2013-12-12
348581	Background 5-5.5'	soil	2013-12-09	00:00	2013-12-12
348582	Road 1	soil	2013-12-09	00:00	2013-12-12
348583	Road 2	soil	2013-12-09	00:00	2013-12-12
348584	Road 3	soil	2013-12-09	00:00	2013-12-12
348585	Road 4	soil	2013-12-09	00:00	2013-12-12
348586	Road 5	soil	2013-12-09	00:00	2013-12-12

	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)
348548 - AH-1 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
348553 - AH-2 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
348557 - AH-3 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
348561 - AH-4 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
348564 - AH-5 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
348570 - AH-6 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
348576 - Background 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
348582 - Road 1	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
348583 - Road 2	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
348584 - Road 3	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
348585 - Road 4	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
348586 - Road 5	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00

Sample: 348548 - AH-1 0-1'

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

Sample: 348549 - AH-1 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**77.7**	mg/Kg	4

Sample: 348550 - AH-1 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**121**	mg/Kg	4

Sample: 348551 - AH-1 3-3.5'

Param	Flag	Result	Units	RL
Chloride		107	mg/Kg	4

Sample: 348552 - AH-1 4-4.5'

Param	Flag	Result	Units	RL
Chloride		82.5	mg/Kg	4

Sample: 348553 - AH-2 0-1'

Param	Flag	Result	Units	RL
Chloride		72.8	mg/Kg	4

Sample: 348554 - AH-2 1-1.5'

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

Sample: 348555 - AH-2 2-2.5'

Param	Flag	Result	Units	RL
Chloride		77.7	mg/Kg	4

Sample: 348556 - AH-2 3-3.5'

Param	Flag	Result	Units	RL
Chloride		277	mg/Kg	4

Sample: 348557 - AH-3 0-1'

Param	Flag	Result	Units	RL
Chloride		13100	mg/Kg	4

Sample: 348558 - AH-3 1-1.5'

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

Sample: 348559 - AH-3 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**93.6**	mg/Kg	4

Sample: 348560 - AH-3 3-3.5'

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

Sample: 348561 - AH-4 0-1'

Param	Flag	Result	Units	RL
Chloride		**15900**	mg/Kg	4

Sample: 348562 - AH-4 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**2180**	mg/Kg	4

Sample: 348563 - AH-4 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**2420**	mg/Kg	4

Sample: 348564 - AH-5 0-1'

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

Sample: 348565 - AH-5 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**1480**	mg/Kg	4

Sample: 348566 - AH-5 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**2130**	mg/Kg	4

Sample: 348567 - AH-5 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**1840**	mg/Kg	4

Sample: 348568 - AH-5 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**1830**	mg/Kg	4

Sample: 348569 - AH-5 5-5.5'

Param	Flag	Result	Units	RL
Chloride		**2430**	mg/Kg	4

Sample: 348570 - AH-6 0-1'

Param	Flag	Result	Units	RL
Chloride		**6560**	mg/Kg	4

Sample: 348571 - AH-6 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**311**	mg/Kg	4

Sample: 348572 - AH-6 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**2150**	mg/Kg	4

Sample: 348573 - AH-6 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**3810**	mg/Kg	4

Sample: 348574 - AH-6 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**3090**	mg/Kg	4

Sample: 348575 - AH-6 5-5.5'

Param	Flag	Result	Units	RL
Chloride		**2230**	mg/Kg	4

Sample: 348576 - Background 0-1'

Param	Flag	Result	Units	RL
Chloride		**195**	mg/Kg	4

Sample: 348577 - Background 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**1730**	mg/Kg	4

Sample: 348578 - Background 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**1670**	mg/Kg	4

Sample: 348579 - Background 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**1780**	mg/Kg	4

Sample: 348580 - Background 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**925**	mg/Kg	4

Sample: 348581 - Background 5-5.5'

Param	Flag	Result	Units	RL
Chloride		**738**	mg/Kg	4

Sample: 348582 - Road 1

Param	Flag	Result	Units	RL
Chloride		**1480**	mg/Kg	4

Sample: 348583 - Road 2

Param	Flag	Result	Units	RL
Chloride		**527**	mg/Kg	4

Sample: 348584 - Road 3

Param	Flag	Result	Units	RL
Chloride		**217**	mg/Kg	4

Sample: 348585 - Road 4

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

Sample: 348586 - Road 5

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

13121205

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: OF: 4

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 112MC05817

PROJECT NAME: Myox 31 State Com #13H

LAB I.D. NUMBER	DATE 2013	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
548	12/9		S		X	AH-1 0-1					X		X	X												X				
549						" 1-1.5					X															X				
550						" 2-2.5					X															X				
551						" 3-3.5					X															X				
552						" 4-4.5					X															X				
553						AH-2 0-1					X		X	X												X				
554						" Dup 1-1.5					X															X				
555						" 2-2.5					X															X				
556						" 3-3.5					X															X				
557						AH-3 0-1					X		X	X												X				

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature)	Date: 12/11/13 Time: 09:24	RECEIVED BY: (Signature)	Date: 12/11/13 Time: 9:24
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:

SAMPLED BY: (Print & Initial) IG / RP — Date: 12/9/13 Time:

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

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

TETRA TECH CONTACT PERSON:

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 2.4°

REMARKS: Run deeper samples if Benzene exceeds 10, total BTEX exceeds 50, or TPH exceeds 100. Chlorides on all

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

1312120S

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.: 112MC05817

PROJECT NAME: Myox 31 State Com #13H

LAB I.D. NUMBER	DATE 2013	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)	PART 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
558	12/9		S		X	AH-3 1-1.5					X													X				
559						" 2-2.5					X													X				
560						" 3-3.5					X													X				
561						AH-4 0-1					X		X	X										X				
562						" 1-1.5					X													X				
563						" 2-2.5					X													X				
564						AH-5 0-1					X		X	X										X				
565						" 1-1.5					X													X				
566						" 2-2.5					X													X				
567						" 3-3.5					X													X				

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature) — Date: 12/12/13 Time: 0924 — RECEIVED BY: (Signature) — Date: 12/12/13 Time: 4:24

SAMPLED BY: (Print & Initial) CG & RR — Date: 12/9/13 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: — Results by:

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

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 2.4°

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.

13121205

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.: 112MC058117

PROJECT NAME: Myox 31 State Com #134H

LAB I.D. NUMBER	DATE 2013	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
568	12/9		S		X	AH-5 4-4.5					X														X				
569						" 5-5.5					X														X				
570						AH-6 0-1					X		X	X											X				
571						" 1-1.5					X														X				
572						" 2-2.5					X														X				
573						" 3-3.5					X														X				
574						" 4-4.5					X														X				
575						" 5-5.5					X														X				
576						Background 0-1					X		X	X											X				
577	↓		↓		↓	" 1-1.5					X														X				

RELINQUISHED BY: (Signature)	Date: 12/11/13 Time: 0924	RECEIVED BY: (Signature)	Date: 12/12/13 Time: 9:24
SAMPLED BY: (Print & Initial) CG B RR	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:	Results by:		
RECEIVING LABORATORY: ADDRESS: CITY: STATE: ZIP: CONTACT: PHONE:	RECEIVED BY: (Signature) DATE: TIME:		RUSH Charges Authorized: Yes No
SAMPLE CONDITION WHEN RECEIVED: 2 4°	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.

13121205

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

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 112MC05817

PROJECT NAME: Myox 31 State Com #13H

LAB I.D. NUMBER	DATE 2013	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
578	12/9		S	X		Background 2-2.5					X	
579						" 3-3.5					X	
580						" 4-4.5					X	
581						" 5-5.5					X	
582						Road 1					X	
583						Road 2					X	
584						Road 3					X	
585						Road 4					X	
586						Road 5					X	

ANALYSIS REQUEST (Circle or Specify Method No.)

BTEX 8021B; TPH TX1005 (Ext. to C35); 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

RELINQUISHED BY: (Signature)	Date: 12/12/13 Time: 0924	RECEIVED BY: (Signature)	Date: 12/12/13 Time: 1:24
SAMPLED BY: (Print & Initial) CG KR	Date: 12/9/13 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:	Results by:		
RECEIVING LABORATORY: ADDRESS: CITY: STATE: ZIP: CONTACT: PHONE:	RECEIVED BY: (Signature) DATE: TIME:		RUSH Charges Authorized: Yes No
SAMPLE CONDITION WHEN RECEIVED: 2 2°	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.

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

April 02, 2014

IKE TAVAREZ

TETRA TECH

1910 N. BIG SPRING STREET

MIDLAND, TX 79705

RE: MYOX 31 STATE COM #13H

Enclosed are the results of analyses for samples received by the laboratory on 03/28/14 10:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TETRA TECH
IKE TAVAREZ
1910 N. BIG SPRING STREET
MIDLAND TX, 79705
Fax To: (432) 682-3946

Received:	03/28/2014	Sampling Date:	03/27/2014
Reported:	04/02/2014	Sampling Type:	Soil
Project Name:	MYOX 31 STATE COM #13H	Sampling Condition:	** (See Notes)
Project Number:	112MC05817	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: T-1 (AH-4) 0' (H400927-01)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	04/01/2014	ND	400	100	400	0.00	

Sample ID: T-1 (AH-4) 2' (H400927-02)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2000**	16.0	04/01/2014	ND	400	100	400	0.00	

Sample ID: T-1 (AH-4) 4' (H400927-03)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1650**	16.0	04/01/2014	ND	400	100	400	0.00	

Sample ID: T-1 (AH-4) 6' (H400927-04)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**976**	16.0	04/01/2014	ND	400	100	400	0.00	

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

TETRA TECH
IKE TAVAREZ
1910 N. BIG SPRING STREET
MIDLAND TX, 79705
Fax To: (432) 682-3946

Received:	03/28/2014	Sampling Date:	03/27/2014
Reported:	04/02/2014	Sampling Type:	Soil
Project Name:	MYOX 31 STATE COM #13H	Sampling Condition:	** (See Notes)
Project Number:	112MC05817	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: T-1 (AH-4) 8' (H400927-05)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**848**	16.0	04/01/2014	ND	400	100	400	0.00	

Sample ID: T-1 (AH-4) 10' (H400927-06)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**528**	16.0	04/01/2014	ND	400	100	400	0.00	

Sample ID: T-2 (AH-5) 0' (H400927-07)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**272**	16.0	04/01/2014	ND	400	100	400	0.00	

Sample ID: T-2 (AH-5) 2' (H400927-08)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1920**	16.0	04/01/2014	ND	400	100	400	0.00	

Sample ID: T-2 (AH-5) 4' (H400927-09)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1010**	16.0	04/01/2014	ND	400	100	400	0.00	

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

TETRA TECH
IKE TAVAREZ
1910 N. BIG SPRING STREET
MIDLAND TX, 79705
Fax To: (432) 682-3946

Received:	03/28/2014	Sampling Date:	03/27/2014
Reported:	04/02/2014	Sampling Type:	Soil
Project Name:	MYOX 31 STATE COM #13H	Sampling Condition:	** (See Notes)
Project Number:	112MC05817	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: T-2 (AH-5) 6' (H400927-10)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1060**	16.0	04/01/2014	ND	400	100	400	0.00	

Sample ID: T-2 (AH-5) 8' (H400927-11)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1070**	16.0	04/01/2014	ND	400	100	400	0.00	

Sample ID: T-2 (AH-5) 10' (H400927-12)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**832**	16.0	04/01/2014	ND	400	100	400	0.00	

Sample ID: T-3 (AH-6) 0' (H400927-13)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**672**	16.0	04/01/2014	ND	400	100	400	0.00	

Sample ID: T-3 (AH-6) 2' (H400927-14)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2760**	16.0	04/01/2014	ND	400	100	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

TETRA TECH
IKE TAVAREZ
1910 N. BIG SPRING STREET
MIDLAND TX, 79705
Fax To: (432) 682-3946

Received:	03/28/2014	Sampling Date:	03/27/2014
Reported:	04/02/2014	Sampling Type:	Soil
Project Name:	MYOX 31 STATE COM #13H	Sampling Condition:	** (See Notes)
Project Number:	112MC05817	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: T-3 (AH-6) 4' (H400927-15)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2880**	16.0	04/01/2014	ND	400	100	400	0.00	

Sample ID: T-3 (AH-6) 6' (H400927-16)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2560**	16.0	04/01/2014	ND	400	100	400	0.00	

Sample ID: T-3 (AH-6) 8' (H400927-17)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1010**	16.0	04/01/2014	ND	400	100	400	0.00	

Sample ID: T-3 (AH-6) 10' (H400927-18)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1170**	16.0	04/01/2014	ND	400	100	400	0.00	

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

Analysis Request of Chain of Custody Record

PAGE:

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

H4D0927

CLIENT NAME: COG

SITE MANAGER: I Ka Tavarez

PROJECT NO.: 112MC05817

PROJECT NAME: Mayo 31 Stk Com #13H

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB I.D. NUMBER	DATE	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
1						T-1 (AH-4) 0'																			✓				
2						T-1 (AH-4) 3'																			✓				
3						T-1 (AH-4) 4'																			✓				
4						T-1 (AH-4) 6'																			✓				
5						T-1 (AH-4) 8'																			✓				
6						T-1 (AH-4) 10'																			✓				
7						T-2 (AH-5) 0'																			✓				
8						T-2 (AH-5) 2'																			✓				
9						T-2 (AH-5) 4'																			✓				
10						T-2 (AH-5) 6'																			✓				

RELINQUISHED BY: (Signature) Date: 3-28-14 Time: 10:30 AM

RECEIVED BY: (Signature) Date: 3/28/14 Time: 10:30

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

RECEIVING LABORATORY:
ADDRESS:
CITY: STATE: ZIP:
CONTACT: PHONE:

RECEIVED BY: (Signature)
DATE: TIME:

SAMPLED BY: (Print & Initial) Date: Time:

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

AIRBILL #:
OTHER:

TETRA TECH CONTACT PERSON:

Results by:

RUSH Charges Authorized:
Yes No

SAMPLE CONDITION WHEN RECEIVED:
18.8°C #54

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.

Analysis Request of Chain of Custody Record

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

H4D0927

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 112C05817

PROJECT NAME: Myox 31 State Com #13H

PAGE:

LAB I.D. NUMBER	DATE	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
11						T-2 (AH-5) 8'																						
12						T-2 (AH-5) 10'																						
13						T-3 (AH-6) 0'																						
14						T-3 (AH-6) 2'																						
15						T-3 (AH-6) 4'																						
16						T-3 (AH-6) 6'																						
17						T-3 (AH-6) 8'																						
18						T-3 (AH-6) 10'																						

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature)	Date: 3-28-14 Time: 10:30 hrs	RECEIVED BY: (Signature) Debbi Henson	Date: 3/28/14 Time: 10:30
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:

SAMPLED BY: (Print & Initial) Date: Time:

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

TETRA TECH CONTACT PERSON: Results by:

RUSH Charges Authorized: Yes No

RECEIVING LABORATORY:
ADDRESS:
CITY: STATE: ZIP:
CONTACT: PHONE:

RECEIVED BY: (Signature)
DATE: TIME:

SAMPLE CONDITION WHEN RECEIVED: 18.8°C #54

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.