SITE INFORMATION

Report Type: Closure Report 2RP-4868

General Site Information:						
Site:	**Myox 28 State Com #004H**					
Company:	**COG Operating LLC**					
Section, Township and Range	**Unit B**	**Sec. 28**	**T 25S**	**R 28E**		
Lease Number:	**API No. 30-015-41606**					
County:	**Eddy County**					
GPS:	**32.107286**			**-104.090843**		
Surface Owner:	**Private**					
Mineral Owner:	**State**					
Directions:	From the intersection of Hwy 285 and Cr 722 Turn West on Cr 722 and go approx. .78 miles and turn North and go .27 miles and the area is to the west.					

Release Data:	
Date Released:	7/12/2018
Type Release:	Produced Water
Source of Contamination:	Flowline Rupture
Fluid Released:	60 bbl
Fluids Recovered:	0 bbl

Official Communication:			
Name:	Ike Tavarez		Clair Gonzales
Company:	COG Operating, LLC		Tetra Tech
Address:	One Concho Center		901 West Wall Street
	600 W. Illinois Ave.		Suite 100
City:	Midland Texas, 79701		Midland, Texas
Phone number:	(432) 686-3023		(432) 687-8110
Fax:	(432) 684-7137		
Email:	itavarez@concho.com		Clair.Gonzales@tetratech.com

Site Characterization	
Depth to Groundwater:	*Less than 25'*
Karst Potential:	*Medium*

Recommended Remedial Action Levels (RRALs)			
Benzene	***Total BTEX***	***TPH (GRO+DRO+MRO)***	***Chlorides***
10 mg/kg	*50 mg/kg*	*100 mg/kg*	*600 mg/kg*

TETRA TECH

February 7, 2019

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

Re: Closure Report for the COG Operating, LLC, Myox 28 State Com #004H, Unit B, Section 28, Township 25 South, Range 28 East, Eddy County, New Mexico. 2RP-4868

Mr. Bratcher:

Tetra Tech, Inc. (Tetra Tech) was contacted by COG Operating, LLC (COG) to assess a release that occurred at the Myox 28 State Com #004H, Unit B, Section 28, Township 25 South, Range 28 East, Eddy County, New Mexico (Site). The spill site coordinates are 32.107286°, -104.090843°. 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 July 12, 2018, and released approximately 60 barrels of produced water due to a flowline rupture. The release migrated onto the pasture impacting an area measuring approximately 150' x 72'. The C-141 Form is included in Appendix A.

Site Characterization

A site characterization was performed for the site, and no watercourses, lakebeds, sinkholes, playa lakes, residences, schools, hospitals, institutions, churches, springs, private domestic water wells, springs, wetlands, incorporated municipal boundaries, subsurface mines, or floodplains are located within the specified distances. However, the site is located in a medium karst potential area. One water well is listed within Section 28 on the New Mexico Office of the State Engineer's (NMOSE) database with a depth to groundwater of 90' below surface. No water wells are listed in the Geology and Groundwater Resources of Eddy County (Report 3), or the USGS National Water Information database. The nearest well is listed in Section 29 on the USGS database, approximately 1.01 miles southwest of the site, and has a reported depth to groundwater of 20' below surface. According to the Chevron Texaco Groundwater Trend map, the average depth to groundwater in the area is approximately 25' below surface. The groundwater data is shown in Appendix B.

Tetra Tech
901 West Wall, Suite 100, Midland, TX 79701
Tel 432.682.4559 Fax 432.682.3946 www.tetratech.com

TETRA TECH

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, updated August 14, 2018. 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 the 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 site characterization, and the area being a medium Karst potential the proposed RRAL for TPH is 100 mg/kg (GRO+DRO+MRO). Additionally, the proposed RRAL for chlorides is 600 mg/kg.

Remediation Activities

Initial Sampling

On January 8, 2019, COG personnel were onsite to evaluate the release in the pasture. A total of twenty (20) bottom hole samples (Bottom Hole-1 through Bottom Hole-20) and ten (10) sidewall samples (SW-1 through SW-10) were installed in the release area to total depths ranging from 1.5' to 2.5' below surface. The soil samples were collected and submitted to the laboratory 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 D. The results of the sampling are summarized in Table 1. The sample location is shown on Figure 3.

Referring to Table 1, none of the samples analyzed showed benzene, TPH, or total BTEX above the laboratory reporting limits. The areas of Bottom Hole (Bottom Hole-1, Bottom Hole-5 through Bottom Hole-13, Bottom Hole-15,16,17,18, and Bottom Hole-20) showed chloride concentrations below the 600 mg/kg RRAL with concentrations ranging from <5.00 mg/kg to 543 mg/kg. However, the areas of bottom holes (Bottom hole-2, Bottom hole-3, Bottom Hole-4, Bottom Hole-14, and Bottom Hole-19) showed chloride concentrations of 1,340 mg/kg, 4,160 mg/kg, 1,720 mg/kg, 849 mg/kg, and 813 mg/kg, respectively at a depth of 2.5' below surface. The areas of sidewall samples (SW-1 through SW-6, SW-9, and SW-10) showed high chloride concentrations ranging from 714 mg/kg to 4,760 mg/kg, above the RRALs of 600 mg/kg.

Additional Sampling

On January 16-21, 2019, Tetra Tech personnel were onsite to evaluate the remediation activities that were above the RRALs and collect confirmation and sidewall samples. A total of five (5) Bottom Hole samples (Bottom Hole-2, Bottom Hole-3, Bottom Hole-4, Bottom Hole-14, and Bottom Hole-19) and eight (8) sidewall samples (SW-1, SW-2, SW-3, SW-4, SW-5, SW-6, SW-9, and SW-10) were installed in the release area to total depths ranging from 1.5' to 4.5' below surface. The areas of Bottom Hole (Bottom Hole-2 and Bottom Hole-4) were further excavated to 3.5' below surface. The area of Bottom Hole-3 was excavated to 4.5' below surface and Bottom Hole-14, and Bottom Hole-19 were resampled at a depth of 3.0' below surface. The soil samples were collected and submitted to the laboratory for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B, and chloride

TETRA TECH

by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix D. The results of the sampling are summarized in Table 1. The sample location is shown on Figure 3.

Referring to Table 1, all of the samples analyzed showed benzene, TPH, and total BTEX below the laboratory reporting limits. Additionally, none of the bottom hole or sidewall samples collected showed chloride concentrations above the 600 mg/kg RRAL with concentrations ranging from <16.0 mg/kg to 543 mg/kg.

Approximately 800 cubic yards of contaminated soil was transported offsite for proper disposal and the areas were backfilled with clean material to surface grade.

Revegetation

Reseeding will be performed in June 2019 to coincide with the rainy season in Southeastern New Mexico and aid in revegetation. Based on the soils at the site, the BLM Seed Mixture 1 for Loamy Sites (3.1) will be used and will be planted in the amount specified in the pounds pure live seed (PLS) per acre. The seed mixture will be spread by a drill equipped with a depth regulator or a handheld broadcaster and raked. If a hand-held broadcaster is used for dispersal, the pounds PLS per acre will be doubled.

Site inspections will be performed to assess the revegetation progress and evaluate the site for the presence of primary or secondary noxious weeds. If noxious weeds are identified, the BLM will be contacted to determine an effective method for eradication. If the site does not show revegetation after one growing season, the area will be reseeded as appropriate. The BLM seed mixture details and corresponding pounds PLS Per acre are included in Appendix C.

Conclusion

Based on the remediation activities performed and laboratory data, COG requests closure of this spill issue. If you have any questions or comments concerning the assessment or remediation activities for this site, please call at (432) 682-4559.

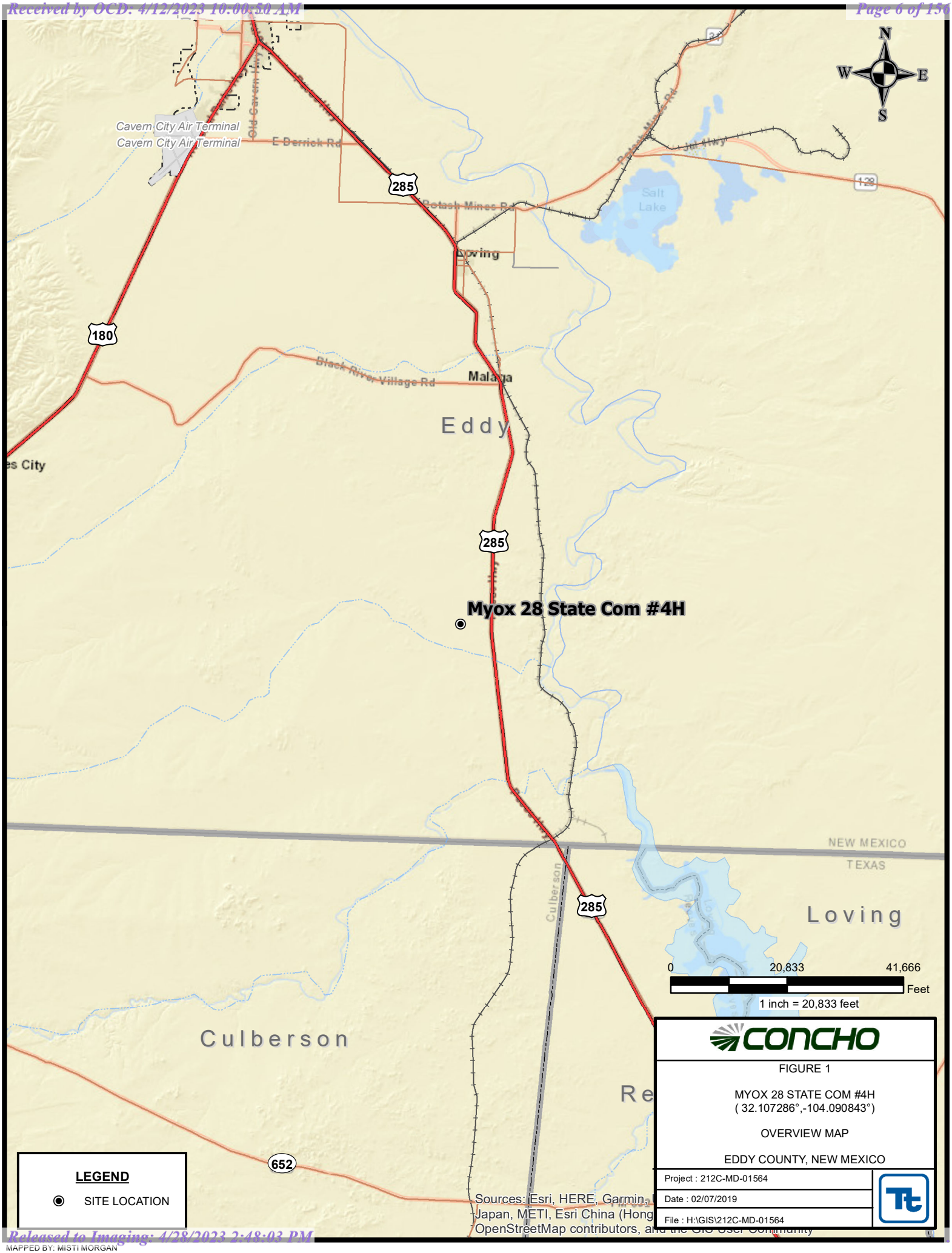
Respectfully submitted,
TETRA TECH

Clair Gonzales,
Project Manager

Mike Carmona,
Geologist

cc: Ike Tavarez - COG
Dakota Neel - COG
Rebecca Haskell - COG
Sheldon Hitchcock - COG
DeAnn Grant - COG

Figures



CONCHO

FIGURE 1

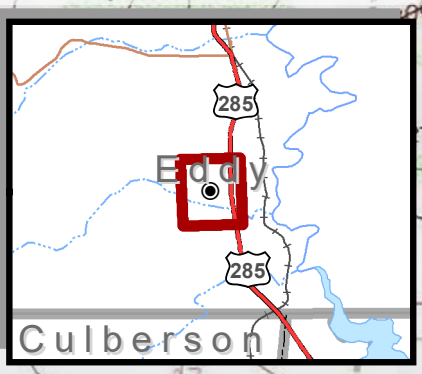
MYOX 28 STATE COM #4H
(32.107286°,-104.090843°)

OVERVIEW MAP

EDDY COUNTY, NEW MEXICO

Project : 212C-MD-01564	
Date : 02/07/2019	
File : H:\GIS\212C-MD-01564	

MAPPED BY: MISTI MORGAN



OVERALL VIEW 1:731,589

Myox 28 State Com #4H

N
W
E
S

0 2,000 4,000 Feet

1 inch = 2,000 feet

LEGEND

SITE LOCATION

CONCHO

FIGURE 2

MYOX 28 STATE COM #4H
(32.107286°,-104.090843°)

TOPOGRAPHIC MAP

EDDY COUNTY, NEW MEXICO

Project : 212C-MD-01564	
Date : 02/07/2019	
File : H:\GIS\212C-MD-01564	

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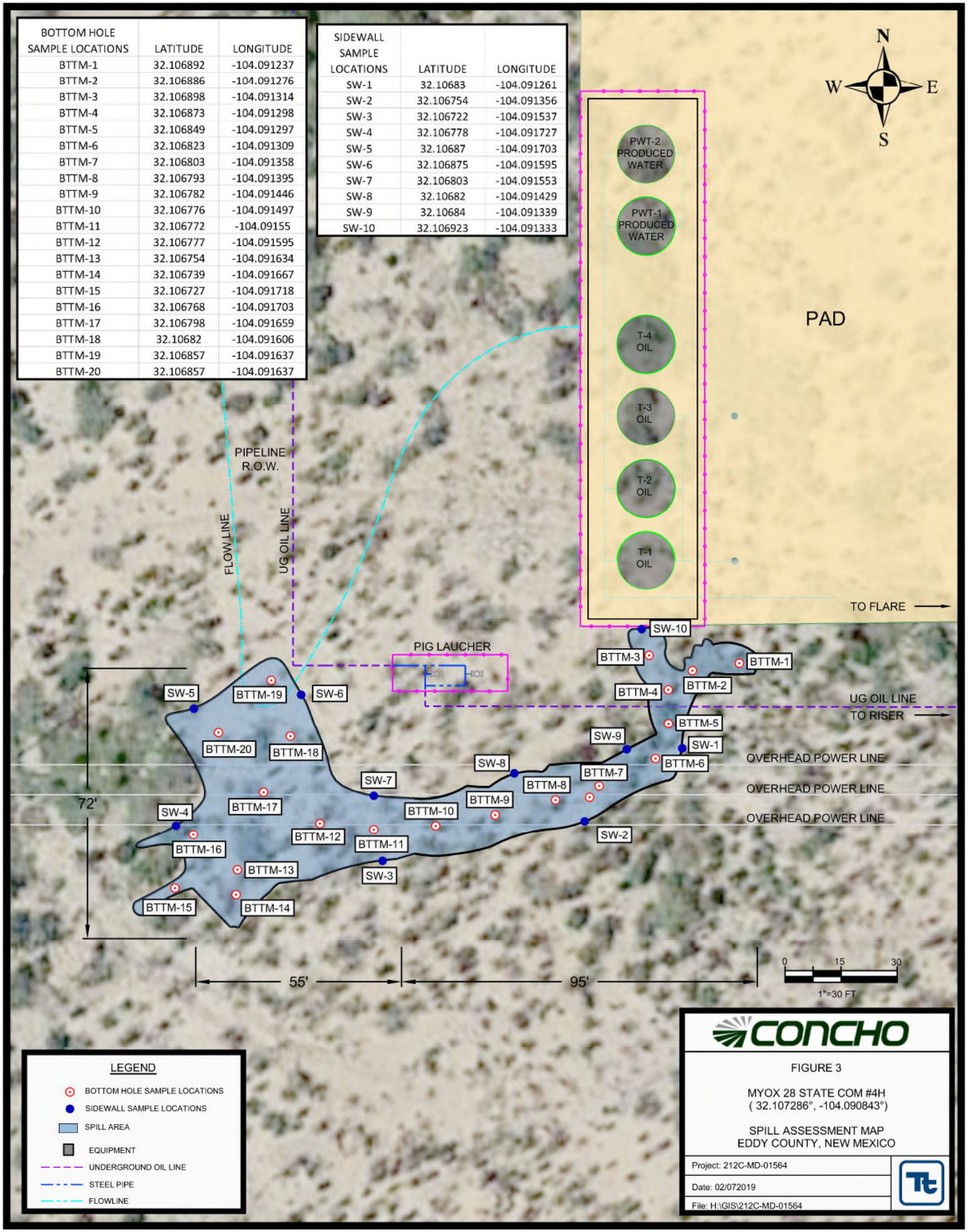
MAPPED BY: MISTI MORGAN

BOTTOM HOLE SAMPLE LOCATIONS	LATITUDE	LONGITUDE
BTTM-1	32.106892	-104.091237
BTTM-2	32.106886	-104.091276
BTTM-3	32.106898	-104.091314
BTTM-4	32.106873	-104.091298
BTTM-5	32.106849	-104.091297
BTTM-6	32.106823	-104.091309
BTTM-7	32.106803	-104.091358
BTTM-8	32.106793	-104.091395
BTTM-9	32.106782	-104.091446
BTTM-10	32.106776	-104.091497
BTTM-11	32.106772	-104.09155
BTTM-12	32.106777	-104.091595
BTTM-13	32.106754	-104.091634
BTTM-14	32.106739	-104.091667
BTTM-15	32.106727	-104.091718
BTTM-16	32.106768	-104.091703
BTTM-17	32.106798	-104.091659
BTTM-18	32.10682	-104.091606
BTTM-19	32.106857	-104.091637
BTTM-20	32.106857	-104.091637

SIDEWALL SAMPLE LOCATIONS	LATITUDE	LONGITUDE
SW-1	32.10683	-104.091261
SW-2	32.106754	-104.091356
SW-3	32.106722	-104.091537
SW-4	32.106778	-104.091727
SW-5	32.10687	-104.091703
SW-6	32.106875	-104.091595
SW-7	32.106803	-104.091553
SW-8	32.10682	-104.091429
SW-9	32.10684	-104.091339
SW-10	32.106923	-104.091333



CONCHO

FIGURE 3

MYOX 28 STATE COM #4H
(32.107286°, -104.090843°)

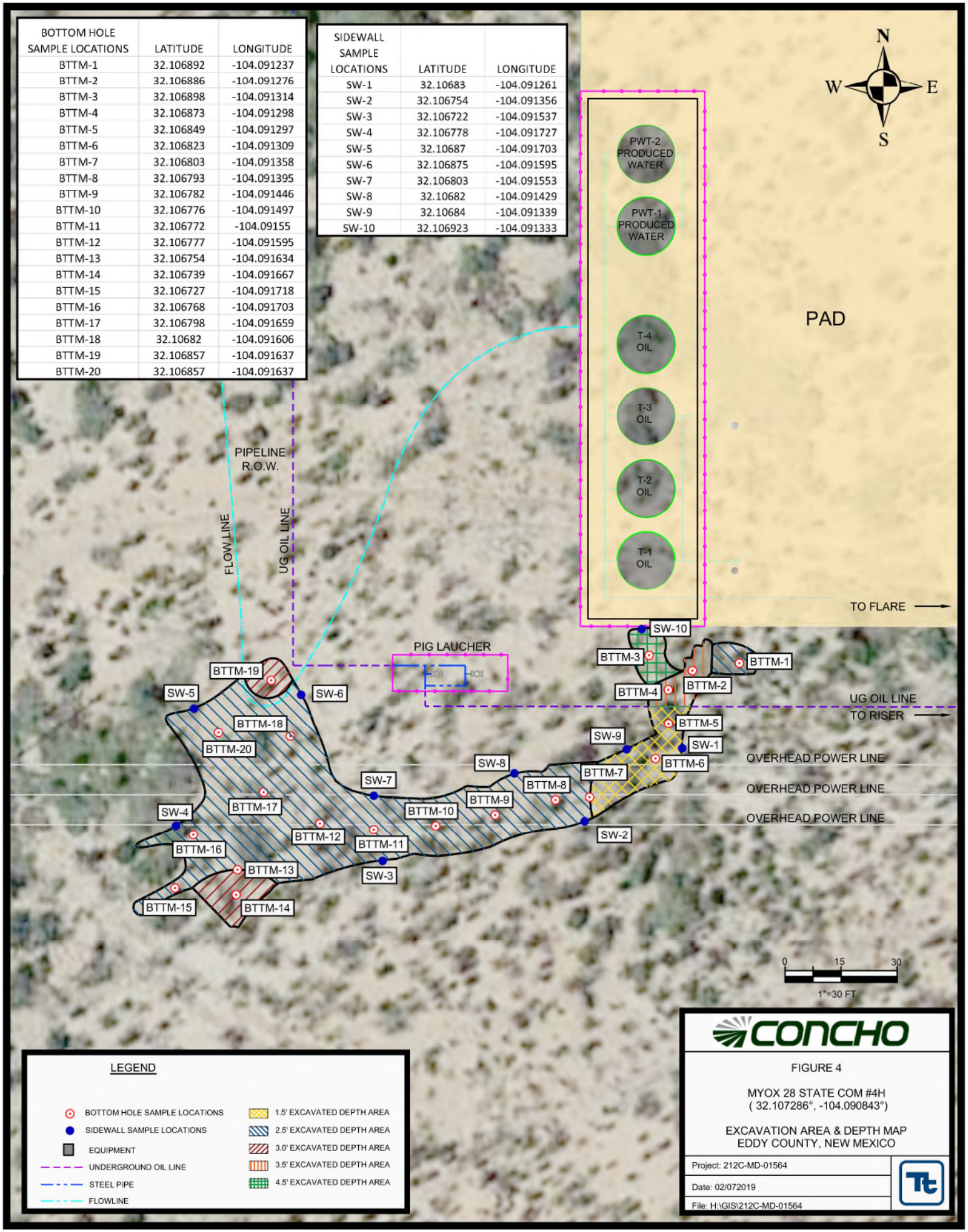
SPILL ASSESSMENT MAP
EDDY COUNTY, NEW MEXICO

Project: 212C-MD-01564
Date: 02/072019
File: H:\GIS\212C-MD-01564

Drawn By: MISTI MORGAN

BOTTOM HOLE SAMPLE LOCATIONS	LATITUDE	LONGITUDE
BTTM-1	32.106892	-104.091237
BTTM-2	32.106886	-104.091276
BTTM-3	32.106898	-104.091314
BTTM-4	32.106873	-104.091298
BTTM-5	32.106849	-104.091297
BTTM-6	32.106823	-104.091309
BTTM-7	32.106803	-104.091358
BTTM-8	32.106793	-104.091395
BTTM-9	32.106782	-104.091446
BTTM-10	32.106776	-104.091497
BTTM-11	32.106772	-104.09155
BTTM-12	32.106777	-104.091595
BTTM-13	32.106754	-104.091634
BTTM-14	32.106739	-104.091667
BTTM-15	32.106727	-104.091718
BTTM-16	32.106768	-104.091703
BTTM-17	32.106798	-104.091659
BTTM-18	32.10682	-104.091606
BTTM-19	32.106857	-104.091637
BTTM-20	32.106857	-104.091637

SIDEWALL SAMPLE LOCATIONS	LATITUDE	LONGITUDE
SW-1	32.10683	-104.091261
SW-2	32.106754	-104.091356
SW-3	32.106722	-104.091537
SW-4	32.106778	-104.091727
SW-5	32.10687	-104.091703
SW-6	32.106875	-104.091595
SW-7	32.106803	-104.091553
SW-8	32.10682	-104.091429
SW-9	32.10684	-104.091339
SW-10	32.106923	-104.091333



LEGEND

- BOTTOM HOLE SAMPLE LOCATIONS
- SIDEWALL SAMPLE LOCATIONS
- EQUIPMENT
- UNDERGROUND OIL LINE
- STEEL PIPE
- FLOWLINE
- 1.5' EXCAVATED DEPTH AREA
- 2.5' EXCAVATED DEPTH AREA
- 3.0' EXCAVATED DEPTH AREA
- 3.5' EXCAVATED DEPTH AREA
- 4.5' EXCAVATED DEPTH AREA

CONCHO

FIGURE 4

MYOX 28 STATE COM #4H
(32.107286°, -104.090843°)

EXCAVATION AREA & DEPTH MAP
EDDY COUNTY, NEW MEXICO

Project: 212C-MD-01564
Date: 02/072019
File: H:\GIS\212C-MD-01564

Drawn By: MISTI MORGAN

Tables

Table 1
COG
Myox 28 State Com #4
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	BEB 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	ORO	Total						
SW-1	1/8/2019	-	-		X	<15.0	<15.0	<15.0	<15.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	**921**
	1/18/2019	-	-	X		<10.0	10.5	10.4	20.9	<0.050	<0.050	<0.050	<0.150	<0.300	96.0
SW-2	1/8/2019	-	-		X	<15.0	<15.0	<15.0	<15.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	**714**
	1/18/2019	-	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	160
SW-3	1/8/2019	-	-		X	<15.0	<15.0	<15.0	<15.0	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	**1,490**
	1/18/2019	-	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	16.0
SW-4	1/8/2019	-	-		X	<15.0	<15.0	<15.0	<15.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	**940**
	1/17/2019	-	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	48.0
SW-5	1/8/2019	-	-		X	<15.0	<15.0	<15.0	<15.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	**2,250**
	1/17/2019	-	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	128
SW-6	1/8/2019	-	-		X	<15.0	<15.0	<15.0	<15.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	**1,630**
	1/17/2019	-	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	32.0
SW-7	1/8/2019	-	-	X		21.1	<15.0	<15.0	21.2	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	363
SW-8	1/8/2019	-	-	X		<15.0	<15.0	<15.0	<15.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	205
SW-9	1/8/2019	-	-		X	<15.0	<15.0	<15.0	<15.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	**1,890**
	1/21/2019	-	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	64.0
SW-10	1/8/2019	-	-			<15.0	<15.0	<15.0	<15.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	**4,760**
	1/21/2019	-	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	80.0
Bttm-1	1/8/2019	-	2.5	X		<15.0	<15.0	<15.0	<15.0	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	158
Bttm-2	1/8/2019	-	2.5		X	-	-	-	-	-	-	-	-	-	**1,340**
	1/21/2019	-	3.5	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	48.0
Bttm-3	1/8/2019	-	2.5		X	<15.0	<15.0	<15.0	<15.0	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	**4,160**
	1/21/2019	-	4.5	X		<10.0	<10.0	16.7	16.7	<0.050	<0.050	<0.050	<0.150	<0.300	176
Bttm-4	1/8/2019	-	2.5		X	-	-	-	-	-	-	-	-	-	**1,720**
	1/21/2019	-	3.5	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	32.0
Bttm-5	1/8/2019	-	2.5	X		<15.0	<15.0	<15.0	<15.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	429
Bttm-6	1/8/2019	-	1.5	X		-	-	-	-	-	-	-	-	-	543

Table 1
COG
Myox 28 State Com #4
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	BEB 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	ORO	Total						
Bttm-7	1/8/2019	-	2.5	X		<15.0	<15.0	<15.0	<15.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<5.00
Bttm-8	1/8/2019	-	2.5	X		-	-	-	-	-	-	-	-	-	19.3
Bttm-9	1/8/2019	-	2.5	X		<15.0	<15.0	<15.0	<15.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	29.9
Bttm-10	1/8/2019	-	2.5	X		-	-	-	-	-	-	-	-	-	388
Bttm-11	1/8/2019	-	2.5	X		<15.0	<15.0	<15.0	<15.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	261
Bttm-12	1/8/2019	-	2.5	X		-	-	-	-	-	-	-	-	-	193
Bttm-13	1/8/2019	-	2.5	X		<15.0	<15.0	<15.0	<15.0	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	411
Bttm-14	1/8/2019	-	2.5		X	-	-	-	-	-	-	-	-	-	**849**
	1/17/2019	-	3.0	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	288
Bttm-15	1/8/2019	-	2.5	X		<15.0	<15.0	<15.0	<15.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	141
Bttm-16	1/8/2019	-	2.5	X		-	-	-	-	-	-	-	-	-	23.8
Bttm-17	1/8/2019	-	2.5	X		<15.0	<15.0	<15.0	<15.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	223
Bttm-18	1/8/2019	-	2.5	X		-	-	-	-	-	-	-	-	-	537
Bttm-19	1/8/2019	-	2.5		X	<15.0	<15.0	<15.0	<15.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	**813**
	1/17/2019	-	3.0	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	96.0
Bttm-20	1/8/2019	-	2.5	X		-	-	-	-	-	-	-	-	-	212

(-) Not Analyzed

Excavation Depths

Photos

COG
Myox 28 State Com #4
Eddy County, New Mexico

TETRA TECH

View North – Area of Bottom hole-1 -4

View Southwest– Area of Bottom hole-5 and Bottom hole-6

COG
Myox 28 State Com #4H
Eddy County, New Mexico

View West – Area of Bottom hole 7-12

View Southwest– Area of Bottom hole 12-20

COG
Myox 28 State Com #4H
Eddy County, New Mexico

TETRA TECH

View West – Area of Bottom hole 15-20

Appendix A

NMOCD
Rec'd: 7/16/18 MP

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., 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 April 3, 2017

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

nAB1820736673

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: COG Operating, LLC (OGRID #229137)	Contact: Robert McNeill
Address: 600 West Illinois Avenue, Midland, TX 79701	Telephone No. 432-683-7443
Facility Name: **Myox 28 State Com #004H Battery**	Facility Type: Flowline

Surface Owner: Private	Mineral Owner: State	API No. 30-015-41606

LOCATION OF RELEASE

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

Latitude 32.1072 **Longitude** -104.0912 NAD83

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 60 bbl.	Volume Recovered 0 bbl.
Source of Release Flowline Rupture	Date and Hour of Occurrence July 12, 2018 3:00pm	Date and Hour of Discovery July 12, 2018 3:00pm
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher – NMOCD	
By Whom? DeAnn Grant	Date and Hour July 13, 2018 9:25am	
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.*

The release was caused by a damaged flowline rupturing. The flowline is being replaced.

Describe Area Affected and Cleanup Action Taken.*

The release was in the pasture. A vacuum truck was dispatched to remove all freestanding fluids. Concho will have the spill area sampled to delineate any possible impact from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation activities.

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: DeAnn Grant	OIL CONSERVATION DIVISION
Printed Name: DeAnn Grant	Approved by Environmental Specialist:
Title: HSE Administrative Assistant	Approval Date: 7/20/18 Expiration Date: N/A
E-mail Address: agrant@concho.com	Conditions of Approval: See attached Attached ☒ 2RP-4818
Date: July 16, 2018 Phone: (432) 253-4513	

* Attach Additional Sheets If Necessary

Operator/Responsible Party,

The OCD has received the form C-141 you provided on 7/16/18 regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number nDRP-4818 has been assigned. **Please refer to this case number in all future correspondence.**

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

> *The responsible person shall complete division-approved corrective action for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC.* [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District _2__ office in Artesia_ on or before __08/12/18____. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.

- Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.

- Nominal detection limits for field and laboratory analyses must be provided.

- Composite sampling is not generally allowed.

- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

•Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

• If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

• Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold
OCD Environmental Bureau Chief
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505-476-3465
jim.griswold@state.nm.us

Pruett, Maria, EMNRD

From: Bratcher, Mike, EMNRD
Sent: Tuesday, July 17, 2018 11:44 AM
To: Pruett, Maria, EMNRD
Subject: FW: (C-141 Initial) Myox 28 State Com #004H (30-015-41606) 07-12-2018
Attachments: (C-141 Initial) Myox 28 State Com #004H (30-015-41606) 07-12-2018.pdf

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From: DeAnn Grant <agrant@concho.com>
Sent: Monday, July 16, 2018 1:29 PM
To: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Mann, Ryan <rmann@slo.state.nm.us>
Cc: Weaver, Crystal, EMNRD <Crystal.Weaver@state.nm.us>; Sheldon Hitchcock <SLHitchcock@concho.com>; Dakota Neel <DNeel2@concho.com>; Rebecca Haskell <RHaskell@concho.com>; DeAnn Grant <agrant@concho.com>
Subject: (C-141 Initial) Myox 28 State Com #004H (30-015-41606) 07-12-2018

Mr. Bratcher/Mr. Mann,

Please find the attached Initial C-141 for your consideration. If you have any questions or concerns please contact me.

Thank you,

DeAnn Grant
HSE Administrative Assistant
agrant@concho.com
COG Operating LLC
600 W Illinois Avenue | Midland, TX 79701
Direct: 432-253-4513 | Main: 432.683.7443
CONCHO

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Bratcher, Mike, EMNRD

From: DeAnn Grant <agrant@concho.com>
Sent: Friday, July 13, 2018 8:25 AM
To: Bratcher, Mike, EMNRD
Cc: Weaver, Crystal, EMNRD; Sheldon Hitchcock; Dakota Neel; Rebecca Haskell; DeAnn Grant
Subject: (Notification) Myox 28 State Com #004H (30-015-41606) 07-12-2018

Mr. Bratcher,

COG Operating, LLC (OGRID# 229137) is reporting a produced water release at the Myox 28 State Com #004H (30-015-41606).

Release Location:
ULSTR: B-28-25S-28E
Lat/Long: 32.1072, -104.0912

Date of Release: July 12, 2018

Release Volume: >25bbls

Recovery Volume: On going

COG will have the release evaluated and will submit an initial C-141. If you have any questions or concerns please do not hesitate to contact me.

Thank you,

DeAnn Grant
HSE Administrative Assistant
agrant@concho.com
COG Operating LLC
600 W Illinois Avenue | Midland, TX 79701
Direct: 432-253-4513 | Main: 432.683.7443
CONCHO

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State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-4868
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	>25' (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☑ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☑ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☑ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☑ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☑ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☑ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☑ Yes ☐ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☑ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☑ Yes ☐ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

- ☑ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☐ Field data
- ☑ Data table of soil contaminant concentration data
- ☑ Depth to water determination
- ☑ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☐ Boring or excavation logs
- ☑ Photographs including date and GIS information
- ☑ Topographic/Aerial maps
- ☑ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

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Page 4

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-4868
Facility ID	
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I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

Printed Name: Ike Tavarez Title: Senior HSE Supervisor

Signature: Date: 2-8-19

email: itavarez@concho.com Telephone: 432-685-2573

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-4868
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☑ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☑ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☑ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☑ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Ike Tavarez Title: Senior HSE Supervisor

Signature: Date: 2-8-19

email: itavarez@concho.com Telephone: 432-685-2573

OCD Only

Received by: Date:

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Ashley Maxwell Date: 4/28/2023

Printed Name: Ashley Maxwell Title: Environmental Specialist

Appendix B

Water Well Data
Average Depth to Groundwater (ft)
COG- Myox 28 State Com #4
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

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 20	28 90	27	26 40	25
31	32	33	34	35 55	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

88 New Mexico State Engineers Well Reports

105 USGS Well Reports

90 Geology and Groundwater Conditions in Southern Lea, County, NM (Report 6)

Geology and Groundwater Resources of Eddy County, NM (Report 3)

34 NMOCD - Groundwater Data

123 Tetra Tech installed temporary wells and field water level

143 NMOCD Groundwater map well location

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	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Twn	Rng	X	Y		DepthWell	DepthWater	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		CUB	ED	1	1	1	07	25S	28E	581628	3557501*		133		
C 03836 POD1		C	ED	2	2	4	29	25S	28E	584682	3551934		300	30	270
C 03861 POD1		C	ED	4	2	3	18	25S	28E	582266	3554864		91	63	28

Average Depth to Water: **59 feet**

Minimum Depth: **30 feet**

Maximum Depth: **96 feet**

Record Count: 9

PLSS Search:

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

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

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

2/4/19 10:11 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER

Search Results -- 1 sites found

genc code usgs
site no list
- 320557104061501

Minimum number of levels 1
Save file of selected sites to local disk for future upload

US S 3 055 104061501 5S 9 41 43

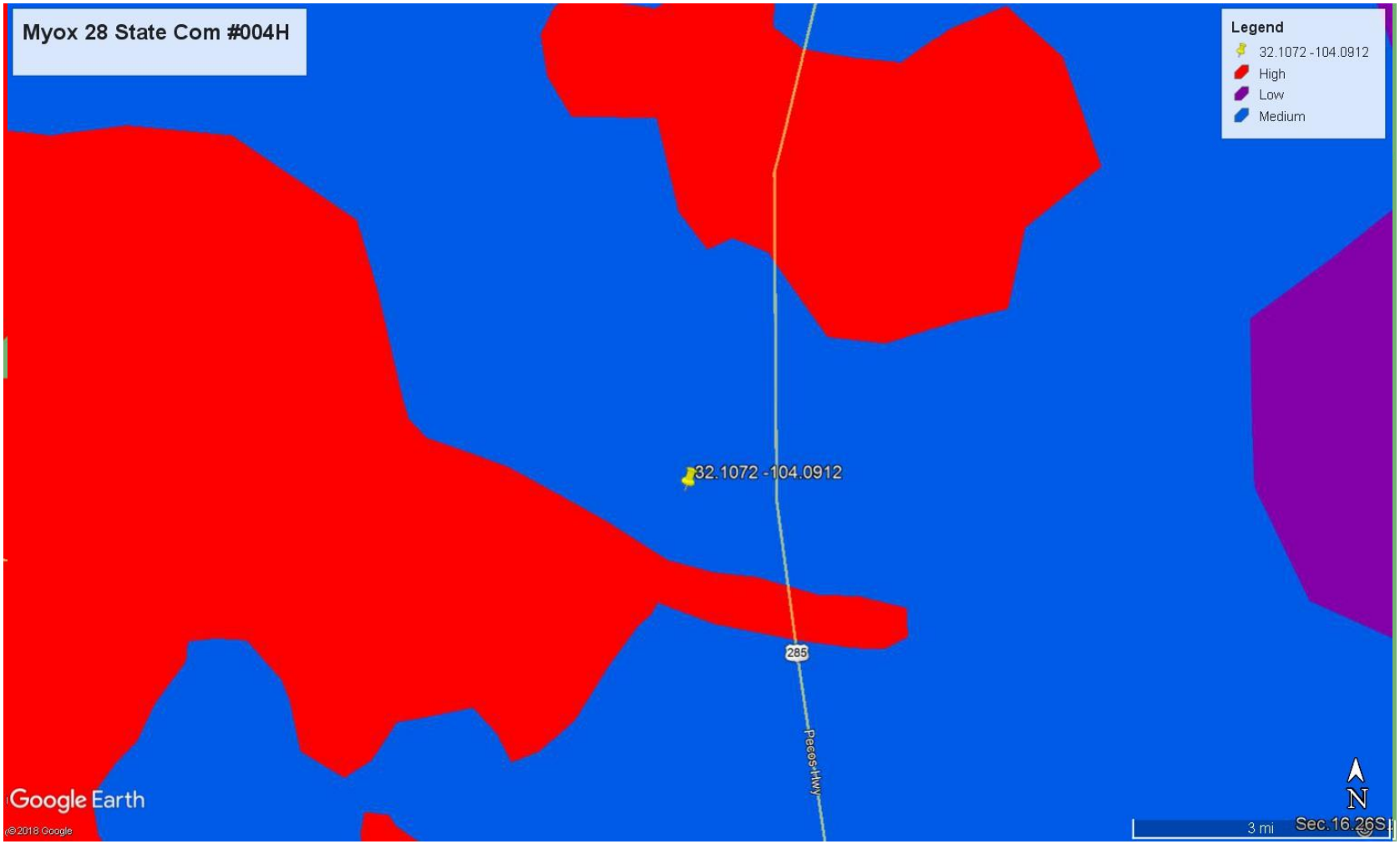
Eddy County, New Mexico
Latitude 32 05 56.0 , Longitude 104 06 22.6 NAD83
Land surface elevation 2,968.90 feet above NGVD29
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

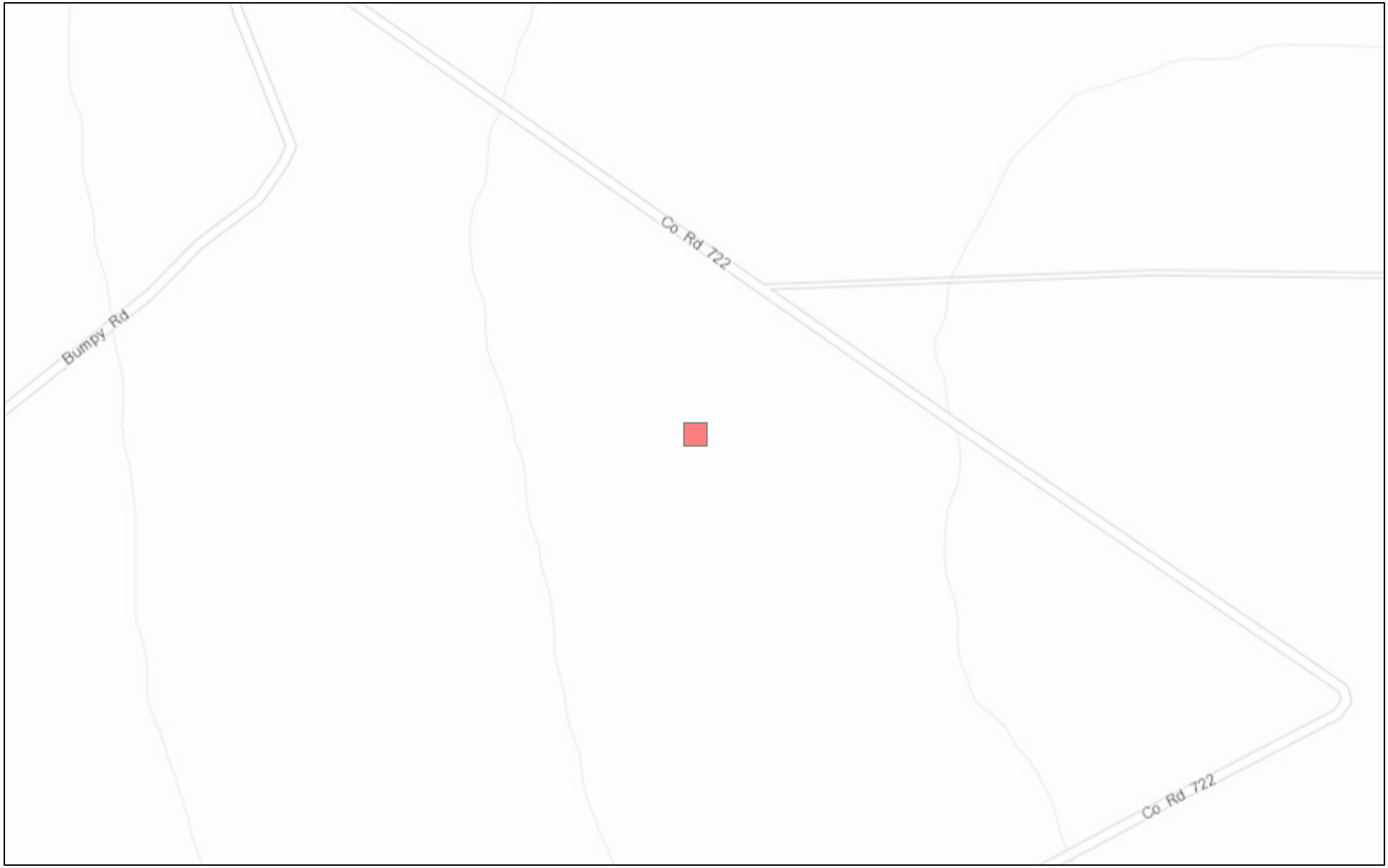
Table of data
Tab-separated data
Graph of data
Reselect period

1983-02-01		D	13.00		2		U		U		A
1992-11-04		D	15.23		2	P	S		U		A
2003-01-28		D	20.33		2		S	USGS	A		A

Water-level date-time accuracy	m	Date is accurate to the Minute
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status	O	Obstruction was encountered in the well (no water level was recorded).
Status	R	Site had been pumped recently.
Method of measurement	U	Unknown method.
Measuring agency	USGS	U.S. Geological Survey
Source of measurement	R	Reported by person other than the owner, driller, or another government agency.


Myox 28 State Com #004H
Legend
32.1072 -104.0912
High
Low
Medium
32.1072 -104.0912
285
Pecos Hwy
Google Earth
© 2018 Google
3 mi
N
Sec.16.26S

New Mexico NFHL Data



February 4, 2019

1:4,514

0 0.0375 0.075 0.15 mi

0 0.05 0.1 0.2 km

FEMA

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS,

nmflood.org is made possible through a collaboration with NMDHSEM, EDAC, and FEMA

This is a non-regulatory product for informational use only. Please consult your local floodplain administrator for further information.

Appendix C

BLM SERIAL #:

COMPANY REFERENCE:

3.1 Seed Mixture 1, for Loamy Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (small/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Plains lovegrass (Eragrostis intermedia)	0.5
Sand dropseed (Sporobolus cryptandrus)	1.0
Sideoats grama (Bouteloua curtipendula)	5.0
Plains bristlegrass (Setaria macrostachya)	2.0

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed

Received by OCD: 4/12/2023 10:00:50 AM

Eddy Area, New Mexico

RU—Russler-Ector association, 0 to 9 percent slopes

Map Unit Setting

National map unit symbol: 1w5k
Elevation: 1,250 to 4,800 feet
Mean annual precipitation: 10 to 25 inches
Mean annual air temperature: 57 to 66 degrees F
Frost-free period: 195 to 225 days
Farmland classification: Not prime farmland

Map Unit Composition

Russler and similar soils: 60 percent
Ector and similar soils: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Russler

Setting

Landform: Alluvial fans, plains
Landform position (three-dimensional): Rise
Down-slope shape: Linear, convex
Across-slope shape: Linear
Parent material: Alluvium

Typical profile

H1 - 0 to 11 inches: loam
H2 - 11 to 45 inches: clay loam
H3 - 45 to 60 inches: gypsiferous material

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: 20 to 47 inches to paralithic bedrock
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Gypsum, maximum in profile: 40 percent
Salinity, maximum in profile: Moderately saline to strongly saline (8.0 to 16.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 4.0
Available water storage in profile: Low (about 4.4 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 7e

Released to Imaging: 4/28/2023 2:48:03 PM

Received by OCD: 4/12/2023 10:00:50 AM

Hydrologic Soil Group: C
Ecological site: Loamy (R070DY153NM)
Hydric soil rating: No

Description of Ector

Setting

Landform: Ridges, hills
Landform position (two-dimensional): Backslope, footslope, shoulder, toeslope
Landform position (three-dimensional): Side slope, crest, nose slope, head slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Residuum weathered from limestone

Typical profile

H1 - 0 to 8 inches: very cobbly loam
H2 - 8 to 60 inches: bedrock

Properties and qualities

Slope: 0 to 9 percent
Depth to restrictive feature: 4 to 20 inches to lithic bedrock
Natural drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 60 percent
Salinity, maximum in profile: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 1.0
Available water storage in profile: Very low (about 0.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: Very Shallow (R070DY158NM)
Hydric soil rating: No

Minor Components

Cottonwood

Percent of map unit:
Ecological site: Gyp Upland (R042XC006NM)
Hydric soil rating: No

Gypsum land

Percent of map unit:

Released to Imaging: 4/28/2023 2:48:03 PM

Received by OCD: 4/12/2023 10:00:50 AM

Hydric soil rating: No

Data Source Information

Soil Survey Area: Eddy Area, New Mexico
Survey Area Data: Version 14, Sep 12, 2018

Released to Imaging: 4/28/2023 2:48:03 PM

Appendix D

Analytical Report 611112

for

COG Operating LLC

Project Manager: Sheldon Hitchcock

Myox 28 St. #4

21-JAN-19

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

21-JAN-19

Project Manager: **Sheldon Hitchcock**
COG Operating LLC
2407 Pecos Avenue
Artesia, NM 88210

Reference: XENCO Report No(s): **611112**
Myox 28 St. #4
Project Address: Eddy Co.NM

Sheldon Hitchcock:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 611112. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 611112 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Certificate of Analysis Summary 611112

COG Operating LLC, Artesia, NM

Project Name: Myox 28 St. #4

Project Id:

Contact: Sheldon Hitchcock

Project Location: Eddy Co.NM

Date Received in Lab: Fri Jan-11-19 01:15 pm

Report Date: 21-JAN-19

Project Manager: Jessica Kramer

Analysis Requested		611112-001		611112-002		611112-003		611112-004		611112-005		611112-006	
	Field Id:	SW-1		SW-2		SW-3		SW-4		SW-5		SW-6	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-08-19 11:00		Jan-08-19 11:05		Jan-08-19 11:10		Jan-08-19 11:15		Jan-08-19 11:20		Jan-08-19 11:25	
BTEX by EPA 8021B	*Extracted:*	Jan-16-19 12:00		Jan-16-19 12:00		Jan-16-19 12:00		Jan-16-19 12:00		Jan-16-19 12:00		Jan-17-19 17:00	
	Analyzed:	Jan-16-19 17:13		Jan-16-19 17:32		Jan-16-19 17:50		Jan-16-19 18:09		Jan-16-19 18:28		Jan-18-19 17:44	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199
Toluene		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199
Ethylbenzene		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199
m,p-Xylenes		<0.00398	0.00398	<0.00400	0.00400	<0.00402	0.00402	<0.00401	0.00401	<0.00398	0.00398	<0.00398	0.00398
o-Xylene		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199
Total Xylenes		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199
Total BTEX		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199
Chloride by EPA 300	*Extracted:*	Jan-11-19 14:30		Jan-11-19 14:30		Jan-11-19 14:30		Jan-11-19 14:30		Jan-11-19 14:30		Jan-11-19 14:30	
	Analyzed:	Jan-11-19 22:04		Jan-11-19 22:10		Jan-11-19 22:16		Jan-11-19 22:22		Jan-11-19 22:41		Jan-11-19 22:47	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		921	4.98	714	4.98	1490	24.9	940	4.98	2250	24.9	1630	24.9
TPH By SW8015 Mod	*Extracted:*	Jan-18-19 08:30		Jan-18-19 08:30		Jan-18-19 08:30		Jan-18-19 08:30		Jan-18-19 15:00		Jan-18-19 15:00	
	Analyzed:	Jan-18-19 15:18		Jan-18-19 15:37		Jan-18-19 15:57		Jan-18-19 16:18		Jan-19-19 04:36		Jan-19-19 04:16	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
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Jessica Kramer
Project Assistant

Final 1.001

Certificate of Analysis Summary 611112

COG Operating LLC, Artesia, NM

Project Name: Myox 28 St. #4

Project Id:
Contact: Sheldon Hitchcock
Project Location: Eddy Co.NM

Date Received in Lab: Fri Jan-11-19 01:15 pm
Report Date: 21-JAN-19
Project Manager: Jessica Kramer

Analysis Requested		Lab Id:	611112-007		611112-008		611112-009		611112-010			
		Field Id:	SW-7		SW-8		SW-9		SW-10			
		Depth:										
		Matrix:	SOIL		SOIL		SOIL		SOIL			
		Sampled:	Jan-08-19 11:30		Jan-08-19 11:35		Jan-08-19 11:40		Jan-08-19 11:45			
BTEX by EPA 8021B		Extracted:	Jan-18-19 13:00		Jan-18-19 13:00		Jan-18-19 13:00		Jan-18-19 13:00			
		Analyzed:	Jan-18-19 16:49		Jan-18-19 17:10		Jan-18-19 17:31		Jan-18-19 17:53			
		Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene			<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200		
Toluene			<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200		
Ethylbenzene			<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200		
m,p-Xylenes			<0.00403	0.00403	<0.00401	0.00401	<0.00398	0.00398	<0.00400	0.00400		
o-Xylene			<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200		
Total Xylenes			<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200		
Total BTEX			<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200		
Chloride by EPA 300		Extracted:	Jan-11-19 14:30		Jan-11-19 14:30		Jan-11-19 14:30		Jan-11-19 14:30			
		Analyzed:	Jan-11-19 23:08		Jan-11-19 23:15		Jan-11-19 23:21		Jan-11-19 23:27			
		Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride			363	4.99	205	4.97	1890	24.9	4760	49.7		
TPH By SW8015 Mod		Extracted:	Jan-18-19 15:00		Jan-18-19 15:00		Jan-18-19 15:00		Jan-18-19 15:00			
		Analyzed:	Jan-19-19 03:57		Jan-19-19 03:37		Jan-19-19 03:17		Jan-19-19 02:57			
		Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons			21.2	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0		
Diesel Range Organics			<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0		
Motor Oil Range Hydrocarbons (MRO)			<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0		
Total TPH			21.2	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
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Jessica Kramer
Project Assistant

Final 1.001

Sample Cross Reference 611112

COG Operating LLC, Artesia, NM

Myox 28 St. #4

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW-1	S	01-08-19 11:00		611112-001
SW-2	S	01-08-19 11:05		611112-002
SW-3	S	01-08-19 11:10		611112-003
SW-4	S	01-08-19 11:15		611112-004
SW-5	S	01-08-19 11:20		611112-005
SW-6	S	01-08-19 11:25		611112-006
SW-7	S	01-08-19 11:30		611112-007
SW-8	S	01-08-19 11:35		611112-008
SW-9	S	01-08-19 11:40		611112-009
SW-10	S	01-08-19 11:45		611112-010

CASE NARRATIVE

Client Name: COG Operating LLC

Project Name: Myox 28 St. #4

Project ID:
Work Order Number(s): *611112*

Report Date: *21-JAN-19*
Date Received: *01/11/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3075627 Chloride by EPA 300
Lab Sample ID 611112-004 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 611112-001, -002, -003, -004, -005, -006, -007, -008, -009, -010.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3076047 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3076351 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3076360 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analytical Results 611112

COG Operating LLC, Artesia, NM

Myox 28 St. #4

Sample Id:	**SW-1**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611112-001	Date Collected:	01.08.19 11.00		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.11.19 14.30	Basis:	Wet Weight
Seq Number:	3075627				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**921**	4.98	mg/kg	01.11.19 22.04		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.18.19 08.30	Basis:	Wet Weight
Seq Number:	3076301				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	01.18.19 15.18	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	01.18.19 15.18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.18.19 15.18	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.18.19 15.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	01.18.19 15.18	
o-Terphenyl	84-15-1	97	%	70-135	01.18.19 15.18	

Certificate of Analytical Results 611112

COG Operating LLC, Artesia, NM

Myox 28 St. #4

Sample Id:	**SW-1**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611112-001	Date Collected:	01.08.19 11.00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.16.19 12.00	Basis:	Wet Weight
Seq Number:	3076047				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.16.19 17.13	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.16.19 17.13	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.16.19 17.13	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.16.19 17.13	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.16.19 17.13	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.16.19 17.13	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.16.19 17.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	113	%	70-130	01.16.19 17.13	
1,4-Difluorobenzene	540-36-3	107	%	70-130	01.16.19 17.13	

Certificate of Analytical Results 611112

COG Operating LLC, Artesia, NM

Myox 28 St. #4

Sample Id:	**SW-2**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611112-002	Date Collected:	01.08.19 11.05		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.11.19 14.30	Basis:	Wet Weight
Seq Number:	3075627				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**714**	4.98	mg/kg	01.11.19 22.10		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.18.19 08.30	Basis:	Wet Weight
Seq Number:	3076301				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	01.18.19 15.37	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	01.18.19 15.37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.18.19 15.37	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.18.19 15.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	01.18.19 15.37	
o-Terphenyl	84-15-1	93	%	70-135	01.18.19 15.37	

Certificate of Analytical Results 611112

COG Operating LLC, Artesia, NM

Myox 28 St. #4

Sample Id:	**SW-2**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611112-002	Date Collected:	01.08.19 11.05		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.16.19 12.00	Basis:	Wet Weight
Seq Number:	3076047				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.16.19 17.32	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.16.19 17.32	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.16.19 17.32	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.16.19 17.32	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.16.19 17.32	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.16.19 17.32	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.16.19 17.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	113	%	70-130	01.16.19 17.32	
1,4-Difluorobenzene	540-36-3	107	%	70-130	01.16.19 17.32	

Certificate of Analytical Results 611112

COG Operating LLC, Artesia, NM

Myox 28 St. #4

Sample Id:	**SW-3**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611112-003	Date Collected:	01.08.19 11.10		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.11.19 14.30	Basis:	Wet Weight
Seq Number:	3075627				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1490**	24.9	mg/kg	01.11.19 22.16		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.18.19 08.30	Basis:	Wet Weight
Seq Number:	3076301				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	01.18.19 15.57	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	01.18.19 15.57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.18.19 15.57	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.18.19 15.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	01.18.19 15.57	
o-Terphenyl	84-15-1	99	%	70-135	01.18.19 15.57	

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Myox 28 St. #4

Sample Id:	**SW-3**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611112-003	Date Collected:	01.08.19 11.10		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.16.19 12.00	Basis:	Wet Weight
Seq Number:	3076047				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.16.19 17.50	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.16.19 17.50	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.16.19 17.50	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.16.19 17.50	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.16.19 17.50	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.16.19 17.50	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.16.19 17.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	01.16.19 17.50	
4-Bromofluorobenzene	460-00-4	116	%	70-130	01.16.19 17.50	

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Myox 28 St. #4

Sample Id:	**SW-4**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611112-004	Date Collected:	01.08.19 11.15		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.11.19 14.30	Basis:	Wet Weight
Seq Number:	3075627				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**940**	4.98	mg/kg	01.11.19 22.22		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.18.19 08.30	Basis:	Wet Weight
Seq Number:	3076301				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	01.18.19 16.18	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	01.18.19 16.18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.18.19 16.18	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.18.19 16.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	01.18.19 16.18	
o-Terphenyl	84-15-1	91	%	70-135	01.18.19 16.18	

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Myox 28 St. #4

Sample Id:	**SW-4**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611112-004	Date Collected:	01.08.19 11.15		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.16.19 12.00	Basis:	Wet Weight
Seq Number:	3076047				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.16.19 18.09	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.16.19 18.09	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.16.19 18.09	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.16.19 18.09	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.16.19 18.09	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.16.19 18.09	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.16.19 18.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	115	%	70-130	01.16.19 18.09	
1,4-Difluorobenzene	540-36-3	107	%	70-130	01.16.19 18.09	

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Myox 28 St. #4

Sample Id:	**SW-5**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611112-005	Date Collected:	01.08.19 11.20		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.11.19 14.30	Basis:	Wet Weight
Seq Number:	3075627				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2250**	24.9	mg/kg	01.11.19 22.41		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.18.19 15.00	Basis:	Wet Weight
Seq Number:	3076398				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	01.19.19 04.36	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	01.19.19 04.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.19.19 04.36	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.19.19 04.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	01.19.19 04.36	
o-Terphenyl	84-15-1	89	%	70-135	01.19.19 04.36	

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Myox 28 St. #4

Sample Id:	**SW-5**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611112-005	Date Collected:	01.08.19 11.20		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.16.19 12.00	Basis:	Wet Weight
Seq Number:	3076047				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.16.19 18.28	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.16.19 18.28	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.16.19 18.28	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.16.19 18.28	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.16.19 18.28	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.16.19 18.28	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.16.19 18.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	01.16.19 18.28	
4-Bromofluorobenzene	460-00-4	117	%	70-130	01.16.19 18.28	

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Myox 28 St. #4

Sample Id:	**SW-6**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611112-006	Date Collected:	01.08.19 11.25		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.11.19 14.30	Basis:	Wet Weight
Seq Number:	3075627				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1630**	24.9	mg/kg	01.11.19 22.47		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.18.19 15.00	Basis:	Wet Weight
Seq Number:	3076398				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	01.19.19 04.16	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	01.19.19 04.16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.19.19 04.16	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.19.19 04.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	01.19.19 04.16	
o-Terphenyl	84-15-1	88	%	70-135	01.19.19 04.16	

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Myox 28 St. #4

Sample Id:	**SW-6**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611112-006	Date Collected:	01.08.19 11.25		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.17.19 17.00	Basis:	Wet Weight
Seq Number:	3076351				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.18.19 17.44	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.18.19 17.44	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.18.19 17.44	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.18.19 17.44	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.18.19 17.44	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.18.19 17.44	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.18.19 17.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	70-130	01.18.19 17.44	
1,4-Difluorobenzene	540-36-3	116	%	70-130	01.18.19 17.44	

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Myox 28 St. #4

Sample Id:	**SW-7**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611112-007	Date Collected:	01.08.19 11.30		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.11.19 14.30	Basis:	Wet Weight
Seq Number:	3075627				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**363**	4.99	mg/kg	01.11.19 23.08		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.18.19 15.00	Basis:	Wet Weight
Seq Number:	3076398				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	**21.2**	15.0	mg/kg	01.19.19 03.57		1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	01.19.19 03.57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.19.19 03.57	U	1
Total TPH	PHC635	**21.2**	15.0	mg/kg	01.19.19 03.57		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	01.19.19 03.57	
o-Terphenyl	84-15-1	88	%	70-135	01.19.19 03.57	

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Myox 28 St. #4

Sample Id:	**SW-7**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611112-007	Date Collected:	01.08.19 11.30		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.18.19 13.00	Basis:	Wet Weight
Seq Number:	3076360				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.18.19 16.49	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.18.19 16.49	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.18.19 16.49	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.18.19 16.49	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.18.19 16.49	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.18.19 16.49	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.18.19 16.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	01.18.19 16.49	
1,4-Difluorobenzene	540-36-3	93	%	70-130	01.18.19 16.49	

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Myox 28 St. #4

Sample Id:	**SW-8**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611112-008	Date Collected:	01.08.19 11.35		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.11.19 14.30	Basis:	Wet Weight
Seq Number:	3075627				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**205**	4.97	mg/kg	01.11.19 23.15		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.18.19 15.00	Basis:	Wet Weight
Seq Number:	3076398				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	01.19.19 03.37	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	01.19.19 03.37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.19.19 03.37	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.19.19 03.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	01.19.19 03.37	
o-Terphenyl	84-15-1	72	%	70-135	01.19.19 03.37	

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Myox 28 St. #4

Sample Id:	**SW-8**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611112-008	Date Collected:	01.08.19 11.35		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.18.19 13.00	Basis:	Wet Weight
Seq Number:	3076360				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.18.19 17.10	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.18.19 17.10	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.18.19 17.10	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.18.19 17.10	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.18.19 17.10	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.18.19 17.10	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.18.19 17.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	01.18.19 17.10	
1,4-Difluorobenzene	540-36-3	93	%	70-130	01.18.19 17.10	

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Myox 28 St. #4

Sample Id:	**SW-9**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611112-009	Date Collected:	01.08.19 11.40		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.11.19 14.30	Basis:	Wet Weight
Seq Number:	3075627				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1890**	24.9	mg/kg	01.11.19 23.21		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.18.19 15.00	Basis:	Wet Weight
Seq Number:	3076398				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	01.19.19 03.17	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	01.19.19 03.17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.19.19 03.17	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.19.19 03.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	01.19.19 03.17	
o-Terphenyl	84-15-1	90	%	70-135	01.19.19 03.17	

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Myox 28 St. #4

Sample Id:	**SW-9**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611112-009	Date Collected:	01.08.19 11.40		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.18.19 13.00	Basis:	Wet Weight
Seq Number:	3076360				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.18.19 17.31	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.18.19 17.31	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.18.19 17.31	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.18.19 17.31	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.18.19 17.31	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.18.19 17.31	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.18.19 17.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	70-130	01.18.19 17.31	
4-Bromofluorobenzene	460-00-4	105	%	70-130	01.18.19 17.31	

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Myox 28 St. #4

Sample Id:	**SW-10**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611112-010	Date Collected:	01.08.19 11.45		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.11.19 14.30	Basis:	Wet Weight
Seq Number:	3075627				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4760**	49.7	mg/kg	01.11.19 23.27		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.18.19 15.00	Basis:	Wet Weight
Seq Number:	3076398				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	01.19.19 02.57	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	01.19.19 02.57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.19.19 02.57	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.19.19 02.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	01.19.19 02.57	
o-Terphenyl	84-15-1	92	%	70-135	01.19.19 02.57	

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Myox 28 St. #4

Sample Id:	**SW-10**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611112-010	Date Collected:	01.08.19 11.45		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.18.19 13.00	Basis:	Wet Weight
Seq Number:	3076360				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.18.19 17.53	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.18.19 17.53	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.18.19 17.53	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.18.19 17.53	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.18.19 17.53	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.18.19 17.53	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.18.19 17.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	01.18.19 17.53	
4-Bromofluorobenzene	460-00-4	103	%	70-130	01.18.19 17.53	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 611112

COG Operating LLC

Myox 28 St. #4

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3075627 — Matrix: Solid — Date Prep: 01.11.19
MB Sample Id: 7669643-1-BLK — LCS Sample Id: 7669643-1-BKS — LCSD Sample Id: 7669643-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	247	99	232	93	90-110	6	20	mg/kg	01.11.19 20:40	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3075627 — Matrix: Soil — Date Prep: 01.11.19
Parent Sample Id: 611109-018 — MS Sample Id: 611109-018 S — MSD Sample Id: 611109-018 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	243	97	233	93	90-110	4	20	mg/kg	01.11.19 20:59	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3075627 — Matrix: Soil — Date Prep: 01.11.19
Parent Sample Id: 611112-004 — MS Sample Id: 611112-004 S — MSD Sample Id: 611112-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	940	249	1150	84	1170	92	90-110	2	20	mg/kg	01.11.19 22:28	X

Analytical Method: TPH By SW8015 Mod — Prep Method: TX1005P
Seq Number: 3076301 — Matrix: Solid — Date Prep: 01.18.19
MB Sample Id: 7670031-1-BLK — LCS Sample Id: 7670031-1-BKS — LCSD Sample Id: 7670031-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	<8.00	1000	810	81	812	81	70-135	0	20	mg/kg	01.18.19 11:03	
Diesel Range Organics	<8.13	1000	889	89	897	90	70-135	1	20	mg/kg	01.18.19 11:03	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	88		125		124		70-135	%	01.18.19 11:03
o-Terphenyl	89		121		120		70-135	%	01.18.19 11:03

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 611112

COG Operating LLC

Myox 28 St. #4

Analytical Method: TPH By SW8015 Mod — Prep Method: TX1005P
Seq Number: 3076398 — Matrix: Solid — Date Prep: 01.18.19
MB Sample Id: 7670057-1-BLK — LCS Sample Id: 7670057-1-BKS — LCSD Sample Id: 7670057-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	<8.00	1000	834	83	840	84	70-135	1	20	mg/kg	01.18.19 21:01	
Diesel Range Organics	<8.13	1000	929	93	929	93	70-135	0	20	mg/kg	01.18.19 21:01	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	91		128		131		70-135	%	01.18.19 21:01
o-Terphenyl	92		123		131		70-135	%	01.18.19 21:01

Analytical Method: TPH By SW8015 Mod — Prep Method: TX1005P
Seq Number: 3076301 — Matrix: Soil — Date Prep: 01.18.19
Parent Sample Id: 611644-001 — MS Sample Id: 611644-001 S — MSD Sample Id: 611644-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	<8.00	1000	939	94	844	84	70-135	11	20	mg/kg	01.18.19 12:03	
Diesel Range Organics	13.1	1000	1020	101	936	92	70-135	9	20	mg/kg	01.18.19 12:03	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	130		118		70-135	%	01.18.19 12:03
o-Terphenyl	126		109		70-135	%	01.18.19 12:03

Analytical Method: TPH By SW8015 Mod — Prep Method: TX1005P
Seq Number: 3076398 — Matrix: Soil — Date Prep: 01.18.19
Parent Sample Id: 611308-025 — MS Sample Id: 611308-025 S — MSD Sample Id: 611308-025 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	<8.00	1000	895	90	901	90	70-135	1	20	mg/kg	01.18.19 22:01	
Diesel Range Organics	<8.13	1000	983	98	990	99	70-135	1	20	mg/kg	01.18.19 22:01	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	129		129		70-135	%	01.18.19 22:01
o-Terphenyl	122		125		70-135	%	01.18.19 22:01

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 611112

COG Operating LLC

Myox 28 St. #4

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3076047 — Matrix: Solid — Date Prep: 01.16.19
MB Sample Id: 7669891-1-BLK — LCS Sample Id: 7669891-1-BKS — LCSD Sample Id: 7669891-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000387	0.101	0.104	103	0.101	101	70-130	3	35	mg/kg	01.16.19 14:04	
Toluene	<0.000458	0.101	0.101	100	0.0975	98	70-130	4	35	mg/kg	01.16.19 14:04	
Ethylbenzene	<0.000568	0.101	0.0982	97	0.0949	95	70-130	3	35	mg/kg	01.16.19 14:04	
m,p-Xylenes	<0.00102	0.201	0.195	97	0.188	94	70-130	4	35	mg/kg	01.16.19 14:04	
o-Xylene	<0.000346	0.101	0.0986	98	0.0956	96	70-130	3	35	mg/kg	01.16.19 14:04	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		103		103		70-130	%	01.16.19 14:04
4-Bromofluorobenzene	90		95		94		70-130	%	01.16.19 14:04

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3076351 — Matrix: Solid — Date Prep: 01.17.19
MB Sample Id: 7670053-1-BLK — LCS Sample Id: 7670053-1-BKS — LCSD Sample Id: 7670053-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.114	114	0.115	115	70-130	1	35	mg/kg	01.18.19 09:42	
Toluene	<0.000457	0.100	0.0992	99	0.0983	98	70-130	1	35	mg/kg	01.18.19 09:42	
Ethylbenzene	<0.000566	0.100	0.0903	90	0.0893	89	70-130	1	35	mg/kg	01.18.19 09:42	
m,p-Xylenes	<0.00102	0.200	0.180	90	0.177	89	70-130	2	35	mg/kg	01.18.19 09:42	
o-Xylene	<0.000345	0.100	0.0909	91	0.0899	90	70-130	1	35	mg/kg	01.18.19 09:42	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		108		110		70-130	%	01.18.19 09:42
4-Bromofluorobenzene	95		108		108		70-130	%	01.18.19 09:42

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3076360 — Matrix: Solid — Date Prep: 01.18.19
MB Sample Id: 7670054-1-BLK — LCS Sample Id: 7670054-1-BKS — LCSD Sample Id: 7670054-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.105	105	0.111	111	70-130	6	35	mg/kg	01.18.19 14:31	
Toluene	<0.00200	0.100	0.0943	94	0.0957	96	70-130	1	35	mg/kg	01.18.19 14:31	
Ethylbenzene	<0.00200	0.100	0.121	121	0.115	115	70-130	5	35	mg/kg	01.18.19 14:31	
m,p-Xylenes	<0.00400	0.200	0.240	120	0.229	114	70-130	5	35	mg/kg	01.18.19 14:31	
o-Xylene	<0.00200	0.100	0.113	113	0.108	108	70-130	5	35	mg/kg	01.18.19 14:31	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	93		109		115		70-130	%	01.18.19 14:31
4-Bromofluorobenzene	100		112		104		70-130	%	01.18.19 14:31

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 611112

COG Operating LLC

Myox 28 St. #4

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3076047 — Matrix: Soil — Date Prep: 01.16.19
Parent Sample Id: 611241-001 — MS Sample Id: 611241-001 S — MSD Sample Id: 611241-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.00185	0.200	0.0978	48	0.0964	47	70-130	1	35	mg/kg	01.16.19 14:42	X
Toluene	<0.000911	0.200	0.0829	41	0.0794	40	70-130	4	35	mg/kg	01.16.19 14:42	X
Ethylbenzene	<0.00113	0.200	0.0687	34	0.0660	33	70-130	4	35	mg/kg	01.16.19 14:42	X
m,p-Xylenes	<0.00203	0.400	0.139	35	0.134	34	70-130	4	35	mg/kg	01.16.19 14:42	X
o-Xylene	<0.000689	0.200	0.0698	35	0.0671	34	70-130	4	35	mg/kg	01.16.19 14:42	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		105		70-130	%	01.16.19 14:42
4-Bromofluorobenzene	101		104		70-130	%	01.16.19 14:42

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3076351 — Matrix: Soil — Date Prep: 01.17.19
Parent Sample Id: 611433-005 — MS Sample Id: 611433-005 S — MSD Sample Id: 611433-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.000719	0.101	0.104	102	0.101	101	70-130	3	35	mg/kg	01.18.19 10:20	
Toluene	0.00219	0.101	0.0909	88	0.0881	86	70-130	3	35	mg/kg	01.18.19 10:20	
Ethylbenzene	0.000579	0.101	0.0734	72	0.0727	73	70-130	1	35	mg/kg	01.18.19 10:20	
m,p-Xylenes	<0.00102	0.202	0.143	71	0.142	71	70-130	1	35	mg/kg	01.18.19 10:20	
o-Xylene	0.00110	0.101	0.0710	69	0.0707	70	70-130	0	35	mg/kg	01.18.19 10:20	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	112		110		70-130	%	01.18.19 10:20
4-Bromofluorobenzene	109		111		70-130	%	01.18.19 10:20

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3076360 — Matrix: Soil — Date Prep: 01.18.19
Parent Sample Id: 611308-001 — MS Sample Id: 611308-001 S — MSD Sample Id: 611308-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0834	84	0.0971	97	70-130	15	35	mg/kg	01.18.19 15:14	
Toluene	<0.00199	0.0996	0.0713	72	0.0846	85	70-130	17	35	mg/kg	01.18.19 15:14	
Ethylbenzene	<0.00199	0.0996	0.0853	86	0.0972	97	70-130	13	35	mg/kg	01.18.19 15:14	
m,p-Xylenes	<0.00398	0.199	0.164	82	0.189	95	70-130	14	35	mg/kg	01.18.19 15:14	
o-Xylene	<0.00199	0.0996	0.0801	80	0.0921	92	70-130	14	35	mg/kg	01.18.19 15:14	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	113		121		70-130	%	01.18.19 15:14
4-Bromofluorobenzene	107		111		70-130	%	01.18.19 15:14

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

XENCO LABORATORIES

Setting the Standard since 1990

CHAIN OF CUSTODY

Page 1 Of 1

Revision 2016.1

Stafford, TX (281) 240-4200 · Dallas, TX (214) 902-0300 · El Paso, TX (915) 585-3443 · Lubbock, TX (806) 794-1296 · Midland, TX (432) 704-5440 · San Antonio, TX (210) 509-3334 · Phoenix, AZ (480) 355-0900 · Service Center - Baton Rouge, LA (832) 712-8143 · Service Center- Amarillo, TX (806)678-4514 · Service Center- Hobbs, NM (575) 392-7550

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Xenco Quote #:

Xenco Job #: 611112

Client / Reporting Information

Company Name / Branch: COG Artesia

Company Address:

Email:

Phone No:

Project Contact: Sheldon Hitchcock

Samplers's Name: Sheldon Hitchcock

Project Information

Project Name/Number: MYOX 28 St. #4

Project Location: Eddy co. NM

Invoice To: Sheldon Hitchcock

PO Number:

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW = Ground Water
DW = Drinking Water
P = Product
SW = Surface Water
SL - Sludge
OW = Ocean/Sea Water
WI = Wipe
O = Oil
WW = Waste Water
A = Air

No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Chlorides	Field Comments
1	SW-1	N/A	1/8/19	11:00	S	1								/	X	
2	SW-2			11:05	S	1								/	X	
3	SW-3			11:10	S	1								/	X	
4	SW-4			11:15	S	1								/	X	
5	SW-5			11:20	S	1								/	X	
6	SW-6			11:25	S	1								/	X	
7	SW-7			11:30	S	1								/	X	
8	SW-8			11:35	S	1								/	X	
9	SW-9			11:40	S	1								/	X	
10	SW-10			11:45	S	1								/	X	

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [x] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] Level II Report with TRRP checklist

Notes:

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 Sheldon Hitchcock	1/9/19 3:41	1 Timothy P. Elliott	2 Chad Pulked	1/10/19 15:30	2 [signature] 1/11/19 1315
Relinquished by: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable / On Ice	Cooler Temp: 0.3 / Thermo. Corr. Factor: 0.2 -0.1

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the Client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of $75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC

Date/ Time Received: 01/11/2019 01:15:00 PM

Work Order #: 611112

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	.2
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 01/11/2019
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 01/11/2019
Jessica Kramer

Analytical Report 611113

for

COG Operating LLC

Project Manager: Sheldon Hitchcock

Myox 28 St. #4

21-JAN-19

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

21-JAN-19

Project Manager: **Sheldon Hitchcock**
COG Operating LLC
2407 Pecos Avenue
Artesia, NM 88210

Reference: XENCO Report No(s): **611113**
Myox 28 St. #4
Project Address: Eddy County, NM

Sheldon Hitchcock:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 611113. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 611113 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Certificate of Analysis Summary 611113

COG Operating LLC, Artesia, NM

Project Name: Myox 28 St. #4

Project Id:

Contact: Sheldon Hitchcock

Project Location: Eddy County, NM

Date Received in Lab: Fri Jan-11-19 01:15 pm

Report Date: 21-JAN-19

Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	611113-001		611113-002		611113-003		611113-004		611113-005		611113-006	
	Field Id:	Bttm-1		Bttm-2		Bttm-3		Bttm-4		Bttm-5		Bttm-6	
	Depth:	2.5-		2.5-		2.5-		2.5-		2.5-		2.5-	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-08-19 09:00		Jan-08-19 09:05		Jan-08-19 09:10		Jan-08-19 09:15		Jan-08-19 09:20		Jan-08-19 09:25	
BTEX by EPA 8021B	*Extracted:*	Jan-18-19 13:00				Jan-18-19 13:00				Jan-18-19 13:00			
	Analyzed:	Jan-18-19 18:14				Jan-18-19 18:36				Jan-18-19 18:58			
	Units/RL:	mg/kg	RL			mg/kg	RL			mg/kg	RL		
Benzene		<0.00201	0.00201			<0.00201	0.00201			<0.00199	0.00199		
Toluene		<0.00201	0.00201			<0.00201	0.00201			<0.00199	0.00199		
Ethylbenzene		<0.00201	0.00201			<0.00201	0.00201			<0.00199	0.00199		
m,p-Xylenes		<0.00402	0.00402			<0.00402	0.00402			<0.00398	0.00398		
o-Xylene		<0.00201	0.00201			<0.00201	0.00201			<0.00199	0.00199		
Total Xylenes		<0.00201	0.00201			<0.00201	0.00201			<0.00199	0.00199		
Total BTEX		<0.00201	0.00201			<0.00201	0.00201			<0.00199	0.00199		
Chloride by EPA 300	*Extracted:*	Jan-11-19 14:30		Jan-11-19 14:30		Jan-11-19 14:30		Jan-11-19 16:00		Jan-11-19 16:00		Jan-11-19 16:00	
	Analyzed:	Jan-11-19 23:33		Jan-11-19 23:39		Jan-11-19 23:46		Jan-12-19 00:44		Jan-12-19 00:26		Jan-12-19 00:50	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		158	4.99	1340	24.8	4160	24.9	1720	24.8	429	4.96	543	4.99
TPH By SW8015 Mod	*Extracted:*	Jan-18-19 08:30				Jan-18-19 08:30				Jan-18-19 08:30			
	Analyzed:	Jan-18-19 16:58				Jan-18-19 17:19				Jan-18-19 17:39			
	Units/RL:	mg/kg	RL			mg/kg	RL			mg/kg	RL		
Gasoline Range Hydrocarbons		<15.0	15.0			<15.0	15.0			<15.0	15.0		
Diesel Range Organics		<15.0	15.0			<15.0	15.0			<15.0	15.0		
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0			<15.0	15.0			<15.0	15.0		
Total TPH		<15.0	15.0			<15.0	15.0			<15.0	15.0		

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Jessica Kramer
Project Assistant

Final 1.001

Certificate of Analysis Summary 611113

COG Operating LLC, Artesia, NM

Project Name: Myox 28 St. #4

Project Id:

Contact: Sheldon Hitchcock

Project Location: Eddy County, NM

Date Received in Lab: Fri Jan-11-19 01:15 pm

Report Date: 21-JAN-19

Project Manager: Jessica Kramer

Analysis Requested		611113-007		611113-008		611113-009		611113-010		611113-011		611113-012	
	Field Id:	Bttm-7		Bttm-8		Bttm-9		Bttm-10		Bttm-11		Bttm-12	
	Depth:	2.5-		2.5-		2.5-		2.5-		2.5-		2.5-	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-08-19 09:30		Jan-08-19 09:35		Jan-08-19 09:40		Jan-08-19 09:45		Jan-08-19 09:50		Jan-08-19 09:55	
BTEX by EPA 8021B	*Extracted:*	Jan-18-19 13:00				Jan-18-19 13:00				Jan-18-19 13:00			
	Analyzed:	Jan-18-19 19:20				Jan-18-19 19:42				Jan-18-19 20:04			
	Units/RL:	mg/kg	RL			mg/kg	RL			mg/kg	RL		
Benzene		<0.00200	0.00200			<0.00200	0.00200			<0.00200	0.00200		
Toluene		<0.00200	0.00200			<0.00200	0.00200			<0.00200	0.00200		
Ethylbenzene		<0.00200	0.00200			<0.00200	0.00200			<0.00200	0.00200		
m,p-Xylenes		<0.00401	0.00401			<0.00400	0.00400			<0.00399	0.00399		
o-Xylene		<0.00200	0.00200			<0.00200	0.00200			<0.00200	0.00200		
Total Xylenes		<0.00200	0.00200			<0.00200	0.00200			<0.00200	0.00200		
Total BTEX		<0.00200	0.00200			<0.00200	0.00200			<0.00200	0.00200		
Chloride by EPA 300	*Extracted:*	Jan-11-19 16:00		Jan-11-19 16:00		Jan-11-19 16:00		Jan-11-19 16:00		Jan-11-19 16:00		Jan-11-19 16:00	
	Analyzed:	Jan-12-19 00:57		Jan-12-19 01:03		Jan-12-19 01:24		Jan-12-19 01:30		Jan-12-19 01:37		Jan-12-19 01:43	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<5.00	5.00	19.3	5.00	29.9	5.00	388	5.00	26.1	4.99	193	4.95
TPH By SW8015 Mod	*Extracted:*	Jan-18-19 08:30				Jan-18-19 08:30				Jan-18-19 08:30			
	Analyzed:	Jan-18-19 18:00				Jan-18-19 18:20				Jan-18-19 18:40			
	Units/RL:	mg/kg	RL			mg/kg	RL			mg/kg	RL		
Gasoline Range Hydrocarbons		<15.0	15.0			<15.0	15.0			<15.0	15.0		
Diesel Range Organics		<15.0	15.0			<15.0	15.0			<15.0	15.0		
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0			<15.0	15.0			<15.0	15.0		
Total TPH		<15.0	15.0			<15.0	15.0			<15.0	15.0		

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Jessica Kramer
Project Assistant

Certificate of Analysis Summary 611113

COG Operating LLC, Artesia, NM

Project Name: Myox 28 St. #4

Project Id:
Contact: Sheldon Hitchcock
Project Location: Eddy County, NM

Date Received in Lab: Fri Jan-11-19 01:15 pm
Report Date: 21-JAN-19
Project Manager: Jessica Kramer

Analysis Requested		611113-013		611113-014		611113-015		611113-016		611113-017		611113-018	
	Field Id:	Bttm-13		Bttm-14		Bttm-15		Bttm-16		Bttm-17		Bttm-18	
	Depth:	2.5-		2.5-		2.5-		2.5-		2.5-		2.5-	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-08-19 10:00		Jan-08-19 10:05		Jan-08-19 10:10		Jan-08-19 10:15		Jan-08-19 10:20		Jan-08-19 10:25	
BTEX by EPA 8021B	*Extracted:*	Jan-18-19 13:00				Jan-18-19 13:00				Jan-18-19 13:00			
	Analyzed:	Jan-18-19 21:29				Jan-18-19 21:51				Jan-18-19 22:12			
	Units/RL:	mg/kg	RL			mg/kg	RL			mg/kg	RL		
Benzene		<0.00201	0.00201			<0.00199	0.00199			<0.00200	0.00200		
Toluene		<0.00201	0.00201			<0.00199	0.00199			<0.00200	0.00200		
Ethylbenzene		<0.00201	0.00201			<0.00199	0.00199			<0.00200	0.00200		
m,p-Xylenes		<0.00402	0.00402			<0.00398	0.00398			<0.00400	0.00400		
o-Xylene		<0.00201	0.00201			<0.00199	0.00199			<0.00200	0.00200		
Total Xylenes		<0.00201	0.00201			<0.00199	0.00199			<0.00200	0.00200		
Total BTEX		<0.00201	0.00201			<0.00199	0.00199			<0.00200	0.00200		
Chloride by EPA 300	*Extracted:*	Jan-11-19 16:00		Jan-11-19 16:00		Jan-11-19 16:00		Jan-11-19 16:00		Jan-11-19 16:00		Jan-11-19 16:00	
	Analyzed:	Jan-12-19 01:49		Jan-12-19 01:55		Jan-12-19 02:14		Jan-12-19 02:20		Jan-12-19 02:41		Jan-12-19 02:48	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		411	4.97	849	5.00	141	5.00	23.8	4.96	223	4.96	537	5.00
TPH By SW8015 Mod	*Extracted:*	Jan-18-19 08:30				Jan-18-19 08:30				Jan-18-19 08:30			
	Analyzed:	Jan-18-19 19:01				Jan-18-19 19:21				Jan-18-19 19:41			
	Units/RL:	mg/kg	RL			mg/kg	RL			mg/kg	RL		
Gasoline Range Hydrocarbons		<15.0	15.0			<15.0	15.0			<15.0	15.0		
Diesel Range Organics		<15.0	15.0			<15.0	15.0			<15.0	15.0		
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0			<15.0	15.0			<15.0	15.0		
Total TPH		<15.0	15.0			<15.0	15.0			<15.0	15.0		

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Jessica Kramer
Project Assistant

Certificate of Analysis Summary 611113

COG Operating LLC, Artesia, NM

Project Name: Myox 28 St. #4

Project Id:

Contact: Sheldon Hitchcock

Project Location: Eddy County, NM

Date Received in Lab: Fri Jan-11-19 01:15 pm

Report Date: 21-JAN-19

Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	611113-019		611113-020			
	Field Id:	Bttm-19		Bttm-20			
	Depth:	2.5-		2.5-			
	Matrix:	SOIL		SOIL			
	Sampled:	Jan-08-19 10:30		Jan-08-19 10:35			
BTEX by EPA 8021B	***Extracted:***	Jan-18-19 13:00					
	Analyzed:	Jan-18-19 22:34					
	Units/RL:	mg/kg	RL				
Benzene		<0.00200	0.00200				
Toluene		<0.00200	0.00200				
Ethylbenzene		<0.00200	0.00200				
m,p-Xylenes		<0.00399	0.00399				
o-Xylene		<0.00200	0.00200				
Total Xylenes		<0.00200	0.00200				
Total BTEX		<0.00200	0.00200				
Chloride by EPA 300	***Extracted:***	Jan-11-19 16:00		Jan-11-19 16:00			
	Analyzed:	Jan-12-19 02:54		Jan-12-19 03:00			
	Units/RL:	mg/kg	RL	mg/kg	RL		
Chloride		813	4.95	212	4.98		
TPH By SW8015 Mod	***Extracted:***	Jan-18-19 08:30					
	Analyzed:	Jan-18-19 20:01					
	Units/RL:	mg/kg	RL				
Gasoline Range Hydrocarbons		<15.0	15.0				
Diesel Range Organics		<15.0	15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0				
Total TPH		<15.0	15.0				

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Jessica Kramer
Project Assistant

Final 1.001

Sample Cross Reference 611113

COG Operating LLC, Artesia, NM

Myox 28 St. #4

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Bttm-1	S	01-08-19 09:00	2.5	611113-001
Bttm-2	S	01-08-19 09:05	2.5	611113-002
Bttm-3	S	01-08-19 09:10	2.5	611113-003
Bttm-4	S	01-08-19 09:15	2.5	611113-004
Bttm-5	S	01-08-19 09:20	2.5	611113-005
Bttm-6	S	01-08-19 09:25	2.5	611113-006
Bttm-7	S	01-08-19 09:30	2.5	611113-007
Bttm-8	S	01-08-19 09:35	2.5	611113-008
Bttm-9	S	01-08-19 09:40	2.5	611113-009
Bttm-10	S	01-08-19 09:45	2.5	611113-010
Bttm-11	S	01-08-19 09:50	2.5	611113-011
Bttm-12	S	01-08-19 09:55	2.5	611113-012
Bttm-13	S	01-08-19 10:00	2.5	611113-013
Bttm-14	S	01-08-19 10:05	2.5	611113-014
Bttm-15	S	01-08-19 10:10	2.5	611113-015
Bttm-16	S	01-08-19 10:15	2.5	611113-016
Bttm-17	S	01-08-19 10:20	2.5	611113-017
Bttm-18	S	01-08-19 10:25	2.5	611113-018
Bttm-19	S	01-08-19 10:30	2.5	611113-019
Bttm-20	S	01-08-19 10:35	2.5	611113-020

CASE NARRATIVE

Client Name: COG Operating LLC

Project Name: Myox 28 St. #4

Project ID:
Work Order Number(s): *611113*

Report Date: *21-JAN-19*
Date Received: *01/11/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3075630 Chloride by EPA 300
Lab Sample ID 611113-014 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 611113-004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -017, -018, -019, -020.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3076301 TPH By SW8015 Mod
Surrogate 1-Chlorooctane, Surrogate o-Terphenyl recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 611113-007.

Batch: LBA-3076360 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analytical Results 611113

COG Operating LLC, Artesia, NM

Myox 28 St. #4

Sample Id:	**Bttm-1**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611113-001	Date Collected:	01.08.19 09.00	Sample Depth:	2.5

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.11.19 14.30	Basis:	Wet Weight
Seq Number:	3075627				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**158**	4.99	mg/kg	01.11.19 23.33		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.18.19 08.30	Basis:	Wet Weight
Seq Number:	3076301				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	01.18.19 16.58	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	01.18.19 16.58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.18.19 16.58	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.18.19 16.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	01.18.19 16.58	
o-Terphenyl	84-15-1	98	%	70-135	01.18.19 16.58	

Certificate of Analytical Results 611113

COG Operating LLC, Artesia, NM

Myox 28 St. #4

Sample Id:	**Bttm-1**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611113-001	Date Collected:	01.08.19 09.00	Sample Depth:	2.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.18.19 13.00	Basis:	Wet Weight
Seq Number:	3076360				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.18.19 18.14	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.18.19 18.14	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.18.19 18.14	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.18.19 18.14	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.18.19 18.14	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.18.19 18.14	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.18.19 18.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	01.18.19 18.14	
1,4-Difluorobenzene	540-36-3	83	%	70-130	01.18.19 18.14	

Certificate of Analytical Results 611113

COG Operating LLC, Artesia, NM

Myox 28 St. #4

Sample Id:	**Bttm-2**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611113-002	Date Collected:	01.08.19 09.05	Sample Depth:	2.5
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.11.19 14.30	Basis:	Wet Weight
Seq Number:	3075627				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1340**	24.8	mg/kg	01.11.19 23.39		5

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COG Operating LLC, Artesia, NM

Myox 28 St. #4

Sample Id:	**Bttm-3**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611113-003	Date Collected:	01.08.19 09.10	Sample Depth:	2.5

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.11.19 14.30	Basis:	Wet Weight
Seq Number:	3075627				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4160**	24.9	mg/kg	01.11.19 23.46		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.18.19 08.30	Basis:	Wet Weight
Seq Number:	3076301				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	01.18.19 17.19	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	01.18.19 17.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.18.19 17.19	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.18.19 17.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	82	%	70-135	01.18.19 17.19	
o-Terphenyl	84-15-1	81	%	70-135	01.18.19 17.19	

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COG Operating LLC, Artesia, NM

Myox 28 St. #4

Sample Id:	**Bttm-3**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611113-003	Date Collected:	01.08.19 09.10	Sample Depth:	2.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.18.19 13.00	Basis:	Wet Weight
Seq Number:	3076360				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.18.19 18.36	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.18.19 18.36	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.18.19 18.36	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.18.19 18.36	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.18.19 18.36	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.18.19 18.36	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.18.19 18.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	70-130	01.18.19 18.36	
1,4-Difluorobenzene	540-36-3	94	%	70-130	01.18.19 18.36	

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COG Operating LLC, Artesia, NM

Myox 28 St. #4

Sample Id:	**Bttm-4**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611113-004	Date Collected:	01.08.19 09.15	Sample Depth:	2.5
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.11.19 16.00	Basis:	Wet Weight
Seq Number:	3075630				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1720**	24.8	mg/kg	01.12.19 00.44		5

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COG Operating LLC, Artesia, NM

Myox 28 St. #4

Sample Id:	**Bttm-5**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611113-005	Date Collected:	01.08.19 09.20	Sample Depth:	2.5

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.11.19 16.00	Basis:	Wet Weight
Seq Number:	3075630				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**429**	4.96	mg/kg	01.12.19 00.26		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.18.19 08.30	Basis:	Wet Weight
Seq Number:	3076301				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	01.18.19 17.39	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	01.18.19 17.39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.18.19 17.39	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.18.19 17.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	01.18.19 17.39	
o-Terphenyl	84-15-1	87	%	70-135	01.18.19 17.39	

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COG Operating LLC, Artesia, NM

Myox 28 St. #4

Sample Id:	**Bttm-5**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611113-005	Date Collected:	01.08.19 09.20	Sample Depth:	2.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.18.19 13.00	Basis:	Wet Weight
Seq Number:	3076360				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.18.19 18.58	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.18.19 18.58	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.18.19 18.58	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.18.19 18.58	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.18.19 18.58	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.18.19 18.58	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.18.19 18.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	01.18.19 18.58	
1,4-Difluorobenzene	540-36-3	101	%	70-130	01.18.19 18.58	

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COG Operating LLC, Artesia, NM

Myox 28 St. #4

Sample Id:	**Bttm-6**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611113-006	Date Collected:	01.08.19 09.25	Sample Depth:	2.5
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.11.19 16.00	Basis:	Wet Weight
Seq Number:	3075630				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**543**	4.99	mg/kg	01.12.19 00.50		1

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COG Operating LLC, Artesia, NM

Myox 28 St. #4

Sample Id:	**Bttm-7**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611113-007	Date Collected:	01.08.19 09.30	Sample Depth:	2.5

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.11.19 16.00	Basis:	Wet Weight
Seq Number:	3075630				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	01.12.19 00.57	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.18.19 08.30	Basis:	Wet Weight
Seq Number:	3076301				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	01.18.19 18.00	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	01.18.19 18.00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.18.19 18.00	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.18.19 18.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	68	%	70-135	01.18.19 18.00	**
o-Terphenyl	84-15-1	66	%	70-135	01.18.19 18.00	**

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COG Operating LLC, Artesia, NM

Myox 28 St. #4

Sample Id:	**Bttm-7**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611113-007	Date Collected:	01.08.19 09.30	Sample Depth:	2.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.18.19 13.00	Basis:	Wet Weight
Seq Number:	3076360				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.18.19 19.20	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.18.19 19.20	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.18.19 19.20	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.18.19 19.20	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.18.19 19.20	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.18.19 19.20	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.18.19 19.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	70-130	01.18.19 19.20	
1,4-Difluorobenzene	540-36-3	84	%	70-130	01.18.19 19.20	

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COG Operating LLC, Artesia, NM

Myox 28 St. #4

Sample Id:	**Bttm-8**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611113-008	Date Collected:	01.08.19 09.35	Sample Depth:	2.5
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.11.19 16.00	Basis:	Wet Weight
Seq Number:	3075630				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**19.3**	5.00	mg/kg	01.12.19 01.03		1

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COG Operating LLC, Artesia, NM

Myox 28 St. #4

Sample Id:	**Bttm-9**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611113-009	Date Collected:	01.08.19 09.40	Sample Depth:	2.5

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.11.19 16.00	Basis:	Wet Weight
Seq Number:	3075630				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**29.9**	5.00	mg/kg	01.12.19 01.24		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.18.19 08.30	Basis:	Wet Weight
Seq Number:	3076301				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	01.18.19 18.20	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	01.18.19 18.20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.18.19 18.20	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.18.19 18.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	01.18.19 18.20	
o-Terphenyl	84-15-1	101	%	70-135	01.18.19 18.20	

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COG Operating LLC, Artesia, NM

Myox 28 St. #4

Sample Id:	**Bttm-9**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611113-009	Date Collected:	01.08.19 09.40	Sample Depth:	2.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.18.19 13.00	Basis:	Wet Weight
Seq Number:	3076360				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.18.19 19.42	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.18.19 19.42	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.18.19 19.42	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.18.19 19.42	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.18.19 19.42	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.18.19 19.42	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.18.19 19.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	112	%	70-130	01.18.19 19.42	
1,4-Difluorobenzene	540-36-3	100	%	70-130	01.18.19 19.42	

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COG Operating LLC, Artesia, NM

Myox 28 St. #4

Sample Id:	**Bttm-10**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611113-010	Date Collected:	01.08.19 09.45	Sample Depth:	2.5
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.11.19 16.00	Basis:	Wet Weight
Seq Number:	3075630				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**388**	5.00	mg/kg	01.12.19 01.30		1

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COG Operating LLC, Artesia, NM

Myox 28 St. #4

Sample Id:	**Bttm-11**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611113-011	Date Collected:	01.08.19 09.50	Sample Depth:	2.5

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.11.19 16.00	Basis:	Wet Weight
Seq Number:	3075630				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**26.1**	4.99	mg/kg	01.12.19 01.37		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.18.19 08.30	Basis:	Wet Weight
Seq Number:	3076301				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	01.18.19 18.40	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	01.18.19 18.40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.18.19 18.40	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.18.19 18.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	01.18.19 18.40	
o-Terphenyl	84-15-1	112	%	70-135	01.18.19 18.40	

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COG Operating LLC, Artesia, NM

Myox 28 St. #4

Sample Id:	**Bttm-11**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611113-011	Date Collected:	01.08.19 09.50	Sample Depth:	2.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.18.19 13.00	Basis:	Wet Weight
Seq Number:	3076360				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.18.19 20.04	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.18.19 20.04	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.18.19 20.04	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.18.19 20.04	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.18.19 20.04	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.18.19 20.04	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.18.19 20.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	70-130	01.18.19 20.04	
4-Bromofluorobenzene	460-00-4	108	%	70-130	01.18.19 20.04	

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Myox 28 St. #4

Sample Id:	**Bttm-12**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611113-012	Date Collected:	01.08.19 09.55	Sample Depth:	2.5
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.11.19 16.00	Basis:	Wet Weight
Seq Number:	3075630				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**193**	4.95	mg/kg	01.12.19 01.43		1

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Myox 28 St. #4

Sample Id:	**Bttm-13**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611113-013	Date Collected:	01.08.19 10.00	Sample Depth:	2.5

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.11.19 16.00	Basis:	Wet Weight
Seq Number:	3075630				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**411**	4.97	mg/kg	01.12.19 01.49		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.18.19 08.30	Basis:	Wet Weight
Seq Number:	3076301				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	01.18.19 19.01	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	01.18.19 19.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.18.19 19.01	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.18.19 19.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	136	%	70-135	01.18.19 19.01	**
o-Terphenyl	84-15-1	135	%	70-135	01.18.19 19.01	

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Myox 28 St. #4

Sample Id:	**Bttm-13**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611113-013	Date Collected:	01.08.19 10.00	Sample Depth:	2.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.18.19 13.00	Basis:	Wet Weight
Seq Number:	3076360				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.18.19 21.29	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.18.19 21.29	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.18.19 21.29	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.18.19 21.29	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.18.19 21.29	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.18.19 21.29	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.18.19 21.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	01.18.19 21.29	
1,4-Difluorobenzene	540-36-3	100	%	70-130	01.18.19 21.29	

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Myox 28 St. #4

Sample Id:	**Bttm-14**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611113-014	Date Collected:	01.08.19 10.05	Sample Depth:	2.5
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.11.19 16.00	Basis:	Wet Weight
Seq Number:	3075630				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**849**	5.00	mg/kg	01.12.19 01.55		1

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COG Operating LLC, Artesia, NM

Myox 28 St. #4

Sample Id:	**Bttm-15**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611113-015	Date Collected:	01.08.19 10.10	Sample Depth:	2.5

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.11.19 16.00	Basis:	Wet Weight
Seq Number:	3075630				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**141**	5.00	mg/kg	01.12.19 02.14		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.18.19 08.30	Basis:	Wet Weight
Seq Number:	3076301				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	01.18.19 19.21	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	01.18.19 19.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.18.19 19.21	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.18.19 19.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	01.18.19 19.21	
o-Terphenyl	84-15-1	103	%	70-135	01.18.19 19.21	

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COG Operating LLC, Artesia, NM

Myox 28 St. #4

Sample Id:	**Bttm-15**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611113-015	Date Collected:	01.08.19 10.10	Sample Depth:	2.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.18.19 13.00	Basis:	Wet Weight
Seq Number:	3076360				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.18.19 21.51	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.18.19 21.51	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.18.19 21.51	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.18.19 21.51	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.18.19 21.51	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.18.19 21.51	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.18.19 21.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	01.18.19 21.51	
1,4-Difluorobenzene	540-36-3	99	%	70-130	01.18.19 21.51	

Certificate of Analytical Results 611113

COG Operating LLC, Artesia, NM

Myox 28 St. #4

Sample Id:	**Bttm-16**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611113-016	Date Collected:	01.08.19 10.15	Sample Depth:	2.5
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.11.19 16.00	Basis:	Wet Weight
Seq Number:	3075630				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**23.8**	4.96	mg/kg	01.12.19 02.20		1

Certificate of Analytical Results 611113

COG Operating LLC, Artesia, NM

Myox 28 St. #4

Sample Id:	**Bttm-17**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611113-017	Date Collected:	01.08.19 10.20	Sample Depth:	2.5

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.11.19 16.00	Basis:	Wet Weight
Seq Number:	3075630				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**223**	4.96	mg/kg	01.12.19 02.41		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.18.19 08.30	Basis:	Wet Weight
Seq Number:	3076301				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	01.18.19 19.41	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	01.18.19 19.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.18.19 19.41	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.18.19 19.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	80	%	70-135	01.18.19 19.41	
o-Terphenyl	84-15-1	80	%	70-135	01.18.19 19.41	

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COG Operating LLC, Artesia, NM

Myox 28 St. #4

Sample Id:	**Bttm-17**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611113-017	Date Collected:	01.08.19 10.20	Sample Depth:	2.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.18.19 13.00	Basis:	Wet Weight
Seq Number:	3076360				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.18.19 22.12	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.18.19 22.12	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.18.19 22.12	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.18.19 22.12	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.18.19 22.12	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.18.19 22.12	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.18.19 22.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	01.18.19 22.12	
4-Bromofluorobenzene	460-00-4	108	%	70-130	01.18.19 22.12	

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COG Operating LLC, Artesia, NM

Myox 28 St. #4

Sample Id:	**Bttm-18**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611113-018	Date Collected:	01.08.19 10.25	Sample Depth:	2.5
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.11.19 16.00	Basis:	Wet Weight
Seq Number:	3075630				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**537**	5.00	mg/kg	01.12.19 02.48		1

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COG Operating LLC, Artesia, NM

Myox 28 St. #4

Sample Id:	**Bttm-19**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611113-019	Date Collected:	01.08.19 10.30	Sample Depth:	2.5

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.11.19 16.00	Basis:	Wet Weight
Seq Number:	3075630				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**813**	4.95	mg/kg	01.12.19 02.54		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.18.19 08.30	Basis:	Wet Weight
Seq Number:	3076301				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	01.18.19 20.01	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	01.18.19 20.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	01.18.19 20.01	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.18.19 20.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	01.18.19 20.01	
o-Terphenyl	84-15-1	99	%	70-135	01.18.19 20.01	

Certificate of Analytical Results 611113

COG Operating LLC, Artesia, NM

Myox 28 St. #4

Sample Id:	**Bttm-19**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611113-019	Date Collected:	01.08.19 10.30	Sample Depth:	2.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	01.18.19 13.00	Basis:	Wet Weight
Seq Number:	3076360				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.18.19 22.34	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.18.19 22.34	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.18.19 22.34	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.18.19 22.34	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.18.19 22.34	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.18.19 22.34	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.18.19 22.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	118	%	70-130	01.18.19 22.34	
1,4-Difluorobenzene	540-36-3	108	%	70-130	01.18.19 22.34	

Certificate of Analytical Results 611113

COG Operating LLC, Artesia, NM

Myox 28 St. #4

Sample Id:	**Bttm-20**	Matrix:	Soil	Date Received:	01.11.19 13.15
Lab Sample Id:	611113-020	Date Collected:	01.08.19 10.35	Sample Depth:	2.5
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	01.11.19 16.00	Basis:	Wet Weight
Seq Number:	3075630				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**212**	4.98	mg/kg	01.12.19 03.00		1

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 611113

COG Operating LLC

Myox 28 St. #4

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3075627 — Matrix: Solid — Date Prep: 01.11.19
MB Sample Id: 7669643-1-BLK — LCS Sample Id: 7669643-1-BKS — LCSD Sample Id: 7669643-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	247	99	232	93	90-110	6	20	mg/kg	01.11.19 20:40	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3075630 — Matrix: Solid — Date Prep: 01.11.19
MB Sample Id: 7669644-1-BLK — LCS Sample Id: 7669644-1-BKS — LCSD Sample Id: 7669644-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	242	97	247	99	90-110	2	20	mg/kg	01.12.19 00:13	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3075627 — Matrix: Soil — Date Prep: 01.11.19
Parent Sample Id: 611109-018 — MS Sample Id: 611109-018 S — MSD Sample Id: 611109-018 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	243	97	233	93	90-110	4	20	mg/kg	01.11.19 20:59	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3075627 — Matrix: Soil — Date Prep: 01.11.19
Parent Sample Id: 611112-004 — MS Sample Id: 611112-004 S — MSD Sample Id: 611112-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	940	249	1150	84	1170	92	90-110	2	20	mg/kg	01.11.19 22:28	X

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3075630 — Matrix: Soil — Date Prep: 01.11.19
Parent Sample Id: 611113-005 — MS Sample Id: 611113-005 S — MSD Sample Id: 611113-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	429	248	670	97	655	91	90-110	2	20	mg/kg	01.12.19 00:32	

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 611113

COG Operating LLC

Myox 28 St. #4

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3075630 Matrix: Soil Date Prep: 01.11.19
Parent Sample Id: 611113-014 MS Sample Id: 611113-014 S MSD Sample Id: 611113-014 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	849	250	999	60	1020	68	90-110	2	20	mg/kg	01.12.19 02:01	X

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3076301 Matrix: Solid Date Prep: 01.18.19
MB Sample Id: 7670031-1-BLK LCS Sample Id: 7670031-1-BKS LCSD Sample Id: 7670031-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	<8.00	1000	810	81	812	81	70-135	0	20	mg/kg	01.18.19 11:03	
Diesel Range Organics	<8.13	1000	889	89	897	90	70-135	1	20	mg/kg	01.18.19 11:03	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	88		125		124		70-135	%	01.18.19 11:03
o-Terphenyl	89		121		120		70-135	%	01.18.19 11:03

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3076301 Matrix: Soil Date Prep: 01.18.19
Parent Sample Id: 611644-001 MS Sample Id: 611644-001 S MSD Sample Id: 611644-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	<8.00	1000	939	94	844	84	70-135	11	20	mg/kg	01.18.19 12:03	
Diesel Range Organics	13.1	1000	1020	101	936	92	70-135	9	20	mg/kg	01.18.19 12:03	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	130		118		70-135	%	01.18.19 12:03
o-Terphenyl	126		109		70-135	%	01.18.19 12:03

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike
Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added
LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

QC Summary 611113

COG Operating LLC

Myox 28 St. #4

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3076360 Matrix: Solid Date Prep: 01.18.19

MB Sample Id: 7670054-1-BLK LCS Sample Id: 7670054-1-BKS LCSD Sample Id: 7670054-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.105	105	0.111	111	70-130	6	35	mg/kg	01.18.19 14:31	
Toluene	<0.00200	0.100	0.0943	94	0.0957	96	70-130	1	35	mg/kg	01.18.19 14:31	
Ethylbenzene	<0.00200	0.100	0.121	121	0.115	115	70-130	5	35	mg/kg	01.18.19 14:31	
m,p-Xylenes	<0.00400	0.200	0.240	120	0.229	114	70-130	5	35	mg/kg	01.18.19 14:31	
o-Xylene	<0.00200	0.100	0.113	113	0.108	108	70-130	5	35	mg/kg	01.18.19 14:31	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	93		109		115		70-130	%	01.18.19 14:31
4-Bromofluorobenzene	100		112		104		70-130	%	01.18.19 14:31

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3076360 Matrix: Soil Date Prep: 01.18.19

Parent Sample Id: 611308-001 MS Sample Id: 611308-001 S MSD Sample Id: 611308-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0834	84	0.0971	97	70-130	15	35	mg/kg	01.18.19 15:14	
Toluene	<0.00199	0.0996	0.0713	72	0.0846	85	70-130	17	35	mg/kg	01.18.19 15:14	
Ethylbenzene	<0.00199	0.0996	0.0853	86	0.0972	97	70-130	13	35	mg/kg	01.18.19 15:14	
m,p-Xylenes	<0.00398	0.199	0.164	82	0.189	95	70-130	14	35	mg/kg	01.18.19 15:14	
o-Xylene	<0.00199	0.0996	0.0801	80	0.0921	92	70-130	14	35	mg/kg	01.18.19 15:14	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	113		121		70-130	%	01.18.19 15:14
4-Bromofluorobenzene	107		111		70-130	%	01.18.19 15:14

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

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Xenco Job #: 611113

Client / Reporting Information
Company Name / Branch: COG Artesia
Company Address:
Email:
Phone No:
Project Contact: Sheldon Hitchcock
Samplers's Name: Sheldon Hitchcock

Project Information
Project Name/Number: Myox 28 St. #4
Project Location: Eddy Co. NM
Invoice To: Sheldon Hitchcock
PO Number:

Matrix Codes
W = Water
S = Soil/Sed/Solid
GW = Ground Water
DW = Drinking Water
P = Product
SW = Surface Water
SL - Sludge
OW = Ocean/Sea Water
WI = Wipe
O = Oil
WW = Waste Water
A = Air

No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Chlorides	Field Comments
1	Bttm-1	2.5	1/8/19	9:00	S	1								/	X	
2	Bttm-2	2.5		9:05		1								/	X	
3	Bttm-3	2.5		9:10		1								/	X	
4	Bttm-4	2.5		9:15		1								/	X	
5	Bttm-5	2.5		9:20		1								/	X	
6	Bttm-6	1.5		9:25		1								/	X	
7	Bttm-7	2.5		9:30		1								/	X	
8	Bttm-8	2.5		9:35		1								/	X	
9	Bttm-9	2.5		9:40		1								/	X	
10	Bttm-10	2.5		9:45		1								/	X	

Turnaround Time (Business days)
- [ ] Same Day TAT
- [ ] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [x] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information
- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] Level II Report with TRRP checklist

Notes:

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 Sheldon Hitchcock (signature)	1/9/19 3:43	1 [signature]	2 [signature]	1/10/19 15:30	2 [signature] 1/11/19 1315
Relinquished by: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable / On Ice	Cooler Temp. 0.3/0.2 Thermo. Corr. Factor -0.1

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the Client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of $75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

XENCO LABORATORIES

Setting the Standard since 1990

CHAIN OF CUSTODY

Page 2 Of 2

Revision 2016.1

Stafford, TX (281) 240-4200
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El Paso, TX (915) 585-3443
Lubbock, TX (806) 794-1296
Midland, TX (432) 704-5440
San Antonio, TX (210) 509-3334
Phoenix, AZ (480) 355-0900
Service Center - Baton Rouge, LA (832) 712-8143
Service Center- Amarillo, TX (806)678-4514
Service Center- Hobbs, NM (575) 392-7550
www.xenco.com

Xenco Quote #:
Xenco Job #: 611113

Client / Reporting Information

Company Name / Branch: GOG Artesia
Company Address:
Email:
Phone No:
Project Contact: Sheldon Hitchcock
Samplers's Name: Sheldon Hitchcock

Project Information

Project Name/Number: Myox 28 St. #4
Project Location: Eddy Co. NM
Invoice To: Sheldon Hitchcock
PO Number:

Matrix Codes

W = Water
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DW = Drinking Water
P = Product
SW = Surface Water
SL - Sludge
OW = Ocean/Sea Water
WI = Wipe
O = Oil
WW = Waste Water
A = Air

No.	Field ID / Point of Collection	Sample Depth	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Chlorides	Field Comments
1	Bttm - 11	2.5	1/8/19	9:50	S	1								/	X	
2	Bttm - 12	2.5		9:55		1								/	X	
3	Bttm - 13	2.5		10:00		1								/	X	
4	Bttm - 14	2.5		10:05		1								/	X	
5	Bttm - 15	2.5		10:10		1								/	X	
6	Bttm - 16	2.5		10:15		1								/	X	
7	Bttm - 17	2.5		10:20		1								/	X	
8	Bttm - 18	2.5		10:25		1								/	X	
9	Bttm - 19	2.5		10:30		1								/	X	
10	Bttm - 20	2.5		10:35		1								/	X	

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [x] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] Level II Report with TRRP checklist

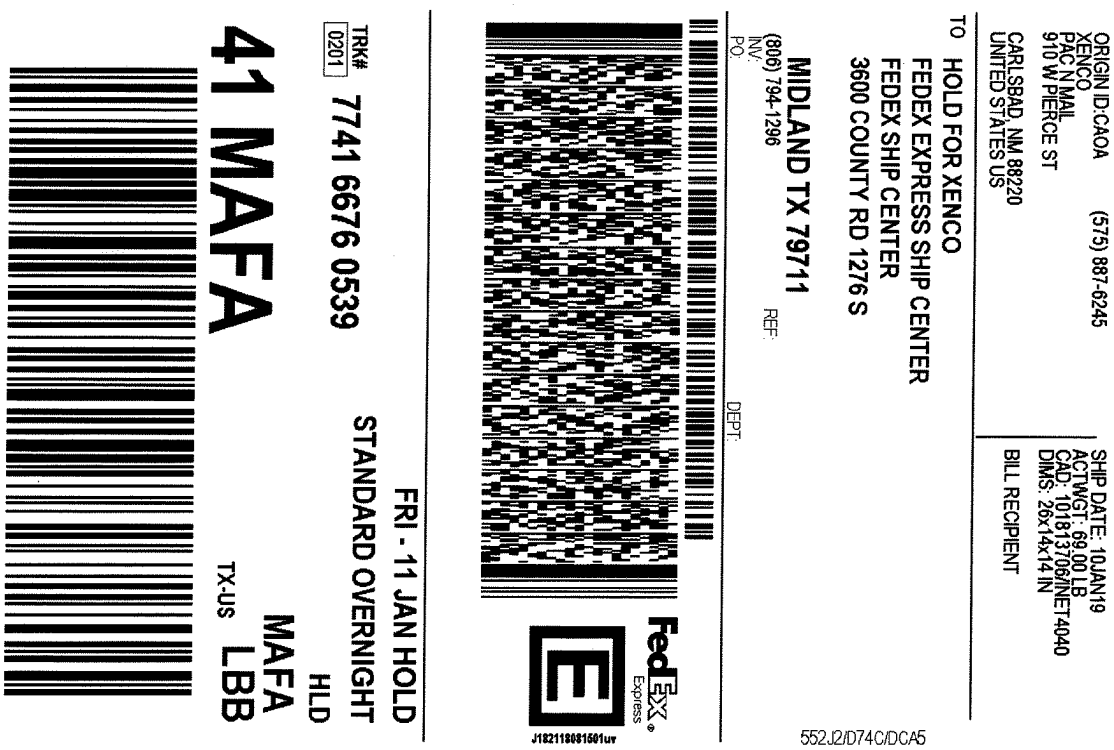
Notes:

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

Relinquished by	Date Time	Received By	Relinquished By	Date Time	Received By
1 Relinquished by Sampler: [signature]	1/4/19 7:43	1 [signature]	2 [signature]	1/10/19 15:30	2 [signature] 1/11/19 1315
3		3	4		4
5		5	Custody Seal #	Preserved where applicable	On Ice; Cooler Temp. 0.3/0.2; Thermo. Corr. Factor R8 -0.1

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the Client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of $75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.



After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC

Date/ Time Received: 01/11/2019 01:15:00 PM

Work Order #: 611113

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	.2
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 01/11/2019
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 01/11/2019
Jessica Kramer

CARDINAL Laboratories

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

January 22, 2019

CLAIR GONZALES

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: MYOX 28 STATE COM #4H

Enclosed are the results of analyses for samples received by the laboratory on 01/21/19 16:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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	Total Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

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 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: MYOX 28 STATE COM #4H Project Number: 212C - MD - 01564 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 22-Jan-19 18:13

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BOTTOM-2 (3.5' BEB)	H900206-01	Soil	21-Jan-19 00:00	21-Jan-19 16:30
BOTTOM-3 (4.5' BEB)	H900206-02	Soil	21-Jan-19 00:00	21-Jan-19 16:30
BOTTOM-4 (3.5' BEB)	H900206-03	Soil	21-Jan-19 00:00	21-Jan-19 16:30
SW -9	H900206-04	Soil	21-Jan-19 00:00	21-Jan-19 16:30

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: MYOX 28 STATE COM #4H Project Number: 212C - MD - 01564 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 22-Jan-19 18:13

BOTTOM-2 (3.5' BEB)

H900206-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**48.0**		16.0	mg/kg	4	9012210	AC	22-Jan-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9012202	MS	22-Jan-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9012202	MS	22-Jan-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9012202	MS	22-Jan-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9012202	MS	22-Jan-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9012202	MS	22-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*101 %*	*73.3-129*		*9012202*	MS	*22-Jan-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9012119	MS	22-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9012119	MS	22-Jan-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9012119	MS	22-Jan-19	8015B	
Surrogate: 1-Chlorooctane			*80.7 %*	*41-142*		*9012119*	MS	*22-Jan-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*78.2 %*	*37.6-147*		*9012119*	MS	*22-Jan-19*	*8015B*	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: MYOX 28 STATE COM #4H Project Number: 212C - MD - 01564 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 22-Jan-19 18:13

BOTTOM-3 (4.5' BEB)

H900206-02 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**176**		16.0	mg/kg	4	9012210	AC	22-Jan-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9012202	MS	22-Jan-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9012202	MS	22-Jan-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9012202	MS	22-Jan-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9012202	MS	22-Jan-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9012202	MS	22-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*96.7 %*	*73.3-129*		*9012202*	MS	*22-Jan-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9012119	MS	22-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9012119	MS	22-Jan-19	8015B	
EXT DRO >C28-C36	**16.7**		10.0	mg/kg	1	9012119	MS	22-Jan-19	8015B	
Surrogate: 1-Chlorooctane			*81.9 %*	*41-142*		*9012119*	MS	*22-Jan-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*79.0 %*	*37.6-147*		*9012119*	MS	*22-Jan-19*	*8015B*	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: MYOX 28 STATE COM #4H Project Number: 212C - MD - 01564 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 22-Jan-19 18:13

BOTTOM-4 (3.5' BEB)

H900206-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**32.0**		16.0	mg/kg	4	9012210	AC	22-Jan-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9012202	MS	22-Jan-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9012202	MS	22-Jan-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9012202	MS	22-Jan-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9012202	MS	22-Jan-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9012202	MS	22-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*103 %*	*73.3-129*		*9012202*	MS	*22-Jan-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9012119	MS	22-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9012119	MS	22-Jan-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9012119	MS	22-Jan-19	8015B	
Surrogate: 1-Chlorooctane			*85.8 %*	*41-142*		*9012119*	MS	*22-Jan-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*81.6 %*	*37.6-147*		*9012119*	MS	*22-Jan-19*	*8015B*	

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: MYOX 28 STATE COM #4H Project Number: 212C - MD - 01564 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 22-Jan-19 18:13

SW -9

H900206-04 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**64.0**		16.0	mg/kg	4	9012210	AC	22-Jan-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9012202	MS	22-Jan-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9012202	MS	22-Jan-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9012202	MS	22-Jan-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9012202	MS	22-Jan-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9012202	MS	22-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*98.6 %*	*73.3-129*		*9012202*	MS	*22-Jan-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9012203	MS	22-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9012203	MS	22-Jan-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9012203	MS	22-Jan-19	8015B	
Surrogate: 1-Chlorooctane			*86.1 %*	*41-142*		*9012203*	MS	*22-Jan-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*88.2 %*	*37.6-147*		*9012203*	MS	*22-Jan-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: MYOX 28 STATE COM #4H Project Number: 212C - MD - 01564 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 22-Jan-19 18:13

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9012210 - General Prep - Wet Chem										
Blank (9012210-BLK1)				Prepared & Analyzed: 22-Jan-19						
Chloride	ND	16.0	mg/kg							
LCS (9012210-BS1)				Prepared & Analyzed: 22-Jan-19						
Chloride	432	16.0	mg/kg	400		108	80-120			
LCS Dup (9012210-BSD1)				Prepared & Analyzed: 22-Jan-19						
Chloride	432	16.0	mg/kg	400		108	80-120	0.00	20	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: MYOX 28 STATE COM #4H Project Number: 212C - MD - 01564 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 22-Jan-19 18:13

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9012202 - Volatiles										
Blank (9012202-BLK1)				Prepared & Analyzed: 22-Jan-19						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.103*		mg/kg	*0.100*		*103*	*73.3-129*			
LCS (9012202-BS1)				Prepared & Analyzed: 22-Jan-19						
Benzene	1.80	0.050	mg/kg	2.00		90.0	72.2-131			
Toluene	1.89	0.050	mg/kg	2.00		94.4	71.7-126			
Ethylbenzene	1.90	0.050	mg/kg	2.00		95.0	68.9-126			
Total Xylenes	5.57	0.150	mg/kg	6.00		92.8	71.4-125			
Surrogate: 4-Bromofluorobenzene (PID)	*0.104*		mg/kg	*0.100*		*104*	*73.3-129*			
LCS Dup (9012202-BSD1)				Prepared & Analyzed: 22-Jan-19						
Benzene	1.82	0.050	mg/kg	2.00		91.1	72.2-131	1.14	6.91	
Toluene	1.90	0.050	mg/kg	2.00		95.2	71.7-126	0.832	7.12	
Ethylbenzene	1.83	0.050	mg/kg	2.00		91.6	68.9-126	3.64	7.88	
Total Xylenes	5.44	0.150	mg/kg	6.00		90.7	71.4-125	2.34	7.46	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0968*		mg/kg	*0.100*		*96.8*	*73.3-129*			

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: MYOX 28 STATE COM #4H Project Number: 212C - MD - 01564 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 22-Jan-19 18:13

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9012119 - General Prep - Organics										
Blank (9012119-BLK1)				Prepared: 21-Jan-19 Analyzed: 22-Jan-19						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Total TPH C6-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*48.9*		mg/kg	*50.0*		*97.9*	*41-142*			
Surrogate: 1-Chlorooctadecane	*48.9*		mg/kg	*50.0*		*97.7*	*37.6-147*			
LCS (9012119-BS1)				Prepared: 21-Jan-19 Analyzed: 22-Jan-19						
GRO C6-C10	187	10.0	mg/kg	200		93.4	76.5-133			
DRO >C10-C28	209	10.0	mg/kg	200		104	72.9-138			
Total TPH C6-C28	396	10.0	mg/kg	400		98.9	78-132			
Surrogate: 1-Chlorooctane	*52.9*		mg/kg	*50.0*		*106*	*41-142*			
Surrogate: 1-Chlorooctadecane	*52.0*		mg/kg	*50.0*		*104*	*37.6-147*			
LCS Dup (9012119-BSD1)				Prepared: 21-Jan-19 Analyzed: 22-Jan-19						
GRO C6-C10	185	10.0	mg/kg	200		92.3	76.5-133	1.23	20.6	
DRO >C10-C28	207	10.0	mg/kg	200		104	72.9-138	0.684	20.6	
Total TPH C6-C28	392	10.0	mg/kg	400		98.0	78-132	0.940	18	
Surrogate: 1-Chlorooctane	*49.6*		mg/kg	*50.0*		*99.1*	*41-142*			
Surrogate: 1-Chlorooctadecane	*50.7*		mg/kg	*50.0*		*101*	*37.6-147*			
Batch 9012203 - General Prep - Organics										
Blank (9012203-BLK1)				Prepared & Analyzed: 22-Jan-19						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Total TPH C6-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*47.7*		mg/kg	*50.0*		*95.5*	*41-142*			
Surrogate: 1-Chlorooctadecane	*48.2*		mg/kg	*50.0*		*96.3*	*37.6-147*			

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: MYOX 28 STATE COM #4H Project Number: 212C - MD - 01564 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 22-Jan-19 18:13

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9012203 - General Prep - Organics										
LCS (9012203-BS1)				Prepared & Analyzed: 22-Jan-19						
GRO C6-C10	212	10.0	mg/kg	200		106	76.5-133			
DRO >C10-C28	218	10.0	mg/kg	200		109	72.9-138			
Total TPH C6-C28	430	10.0	mg/kg	400		107	78-132			
Surrogate: 1-Chlorooctane	*48.2*		mg/kg	*50.0*		*96.3*	*41-142*			
Surrogate: 1-Chlorooctadecane	*48.6*		mg/kg	*50.0*		*97.1*	*37.6-147*			
LCS Dup (9012203-BSD1)				Prepared & Analyzed: 22-Jan-19						
GRO C6-C10	211	10.0	mg/kg	200		105	76.5-133	0.401	20.6	
DRO >C10-C28	204	10.0	mg/kg	200		102	72.9-138	6.50	20.6	
Total TPH C6-C28	415	10.0	mg/kg	400		104	78-132	3.45	18	
Surrogate: 1-Chlorooctane	*47.2*		mg/kg	*50.0*		*94.4*	*41-142*			
Surrogate: 1-Chlorooctadecane	*47.7*		mg/kg	*50.0*		*95.4*	*37.6-147*			

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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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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name: Tetra Tech	**BILL TO**
Project Manager: Clair Gonzales	P.O. #:
Address: 901 W. Wall St.	Company: COG
City: Midland State: TX Zip: 79701	Attn: Ike Tavarez
Phone #: 432-260-8634 Fax #:	Address: 600 W. Illinois
Project #: 212C-MD-01564 Project Owner: COG	City: Midland
Project Name: Myox 28 State Com #4H	State: TX Zip: 79701
Project Location: Eddy Co., NM	Phone #: 432-683-7443
Sampler Name: Stephen Reyes	Fax #:

FOR LAB USE ONLY				MATRIX							PRESERV.			SAMPLING		ANALYSIS REQUEST											
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	BTEX 8021B	TPH 8015M	Chloride										
H900206																											
1	BTTM-2 (3.5' BEB)		1			X					X		1-21-19		X	X	X										
2	BTTM-3 (4.5' BEB)		1			X					X		1-21-19		X	X	X										
3	BTTM-4 (3.5' BEB)		1			X					X		1-21-19		X	X	X										
4	SW-9		1			X					X		1-21-19		X	X	X										

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Relinquished By:	Date: 1-21-19	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 16:30		Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS: Clair.gonzales@tetratech.com
	Time:		RUSH Stephen.reyes@tetratech.com

Delivered By: (Circle One)
Sampler - UPS - Bus - Other: #97 4.8°C

Sample Condition: Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No

CHECKED BY: (Initials) TO.

+ Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

Received by OCD: 4/12/2023 10:00:50 AM

Released to Imaging: 4/28/2023 2:48:03 PM

CARDINAL Laboratories

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January 22, 2019

CLAIR GONZALES

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: MYOX 28 STATE COM #4H

Enclosed are the results of analyses for samples received by the laboratory on 01/21/19 16:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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	Total Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

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

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: MYOX 28 STATE COM #4H Project Number: 212C - MD - 01564 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 22-Jan-19 18:19

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SW-10	H900207-01	Soil	21-Jan-19 00:00	21-Jan-19 16:30

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: MYOX 28 STATE COM #4H Project Number: 212C - MD - 01564 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 22-Jan-19 18:19

SW-10

H900207-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**80.0**		16.0	mg/kg	4	9012210	AC	22-Jan-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9012201	ms	22-Jan-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9012201	ms	22-Jan-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9012201	ms	22-Jan-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9012201	ms	22-Jan-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9012201	ms	22-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*105 %*	*73.3-129*		*9012201*	ms	*22-Jan-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9012203	MS	22-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9012203	MS	22-Jan-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9012203	MS	22-Jan-19	8015B	
Surrogate: 1-Chlorooctane			*88.7 %*	*41-142*		*9012203*	MS	*22-Jan-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*92.5 %*	*37.6-147*		*9012203*	MS	*22-Jan-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: MYOX 28 STATE COM #4H Project Number: 212C - MD - 01564 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 22-Jan-19 18:19

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9012210 - General Prep - Wet Chem										
Blank (9012210-BLK1)				Prepared & Analyzed: 22-Jan-19						
Chloride	ND	16.0	mg/kg							
LCS (9012210-BS1)				Prepared & Analyzed: 22-Jan-19						
Chloride	432	16.0	mg/kg	400		108	80-120			
LCS Dup (9012210-BSD1)				Prepared & Analyzed: 22-Jan-19						
Chloride	432	16.0	mg/kg	400		108	80-120	0.00	20	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: MYOX 28 STATE COM #4H Project Number: 212C - MD - 01564 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 22-Jan-19 18:19

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9012201 - Volatiles										
Blank (9012201-BLK1)				Prepared & Analyzed: 22-Jan-19						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.101*		mg/kg	*0.100*		*101*	*73.3-129*			
LCS (9012201-BS1)				Prepared & Analyzed: 22-Jan-19						
Benzene	2.18	0.050	mg/kg	2.00		109	72.2-131			
Toluene	2.10	0.050	mg/kg	2.00		105	71.7-126			
Ethylbenzene	2.11	0.050	mg/kg	2.00		106	68.9-126			
Total Xylenes	6.46	0.150	mg/kg	6.00		108	71.4-125			
Surrogate: 4-Bromofluorobenzene (PID)	*0.101*		mg/kg	*0.100*		*101*	*73.3-129*			
LCS Dup (9012201-BSD1)				Prepared & Analyzed: 22-Jan-19						
Benzene	2.13	0.050	mg/kg	2.00		107	72.2-131	2.04	6.91	
Toluene	2.08	0.050	mg/kg	2.00		104	71.7-126	1.06	7.12	
Ethylbenzene	2.06	0.050	mg/kg	2.00		103	68.9-126	2.32	7.88	
Total Xylenes	6.23	0.150	mg/kg	6.00		104	71.4-125	3.61	7.46	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0979*		mg/kg	*0.100*		*97.9*	*73.3-129*			

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

Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: MYOX 28 STATE COM #4H Project Number: 212C - MD - 01564 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 22-Jan-19 18:19

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9012203 - General Prep - Organics										
Blank (9012203-BLK1)				Prepared & Analyzed: 22-Jan-19						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Total TPH C6-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*47.7*		mg/kg	*50.0*		*95.5*	*41-142*			
Surrogate: 1-Chlorooctadecane	*48.2*		mg/kg	*50.0*		*96.3*	*37.6-147*			
LCS (9012203-BS1)				Prepared & Analyzed: 22-Jan-19						
GRO C6-C10	212	10.0	mg/kg	200		106	76.5-133			
DRO >C10-C28	218	10.0	mg/kg	200		109	72.9-138			
Total TPH C6-C28	430	10.0	mg/kg	400		107	78-132			
Surrogate: 1-Chlorooctane	*48.2*		mg/kg	*50.0*		*96.3*	*41-142*			
Surrogate: 1-Chlorooctadecane	*48.6*		mg/kg	*50.0*		*97.1*	*37.6-147*			
LCS Dup (9012203-BSD1)				Prepared & Analyzed: 22-Jan-19						
GRO C6-C10	211	10.0	mg/kg	200		105	76.5-133	0.401	20.6	
DRO >C10-C28	204	10.0	mg/kg	200		102	72.9-138	6.50	20.6	
Total TPH C6-C28	415	10.0	mg/kg	400		104	78-132	3.45	18	
Surrogate: 1-Chlorooctane	*47.2*		mg/kg	*50.0*		*94.4*	*41-142*			
Surrogate: 1-Chlorooctadecane	*47.7*		mg/kg	*50.0*		*95.4*	*37.6-147*			

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Celey D. Keene, Lab Director/Quality Manager

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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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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name: Tetra Tech	BILL TO
Project Manager: Claior Gonzales	P.O. #:
Address: 901 W. Wall St.	Company: COG
City: Midland State: TX Zip: 79701	Attn: Ike Tavarez
Phone #: 432-260-8634 Fax #:	Address: 600 W. Illinois
Project #: 212C-MD-01564 Project Owner: COG	City: Midland
Project Name: Myers 28 State Com #414	State: TX Zip: 79701
Project Location: Eddy Co., NM	Phone #: 432-683-7443
Sampler Name: Stephen Reyes	Fax #:

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST										
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	BTEX 8021 B	TPH 8015 M	Chloride								
H900207																									
1	SW-10		1			X					X		1-21-19		X	X	X								

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Relinquished By:	Date: 1-21-19	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 16:30		Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS: RUSH
	Time:		Claior.gonzales@tetratech.com
Delivered By: (Circle One)	Sample Condition Cool Intact	CHECKED BY: (Initials)	Stephen.reyes@tetratech.com
Sampler - UPS - Bus - Other: #97 4.8°C	☑ Yes ☑ Yes ☐ No ☐ No	TO	

+ Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

Received by OCD: 4/12/2023 10:00:50 AM

Released to Imaging: 4/28/2023 2:48:03 PM

CARDINAL Laboratories

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

January 18, 2019

CLAIR GONZALES

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: MYOX 28 STATE COM #4H

Enclosed are the results of analyses for samples received by the laboratory on 01/17/19 16:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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
CLAIR GONZALES
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	01/17/2019	Sampling Date:	01/17/2019
Reported:	01/18/2019	Sampling Type:	Soil
Project Name:	MYOX 28 STATE COM #4H	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 01564	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NM		

Sample ID: BOTTOM-14 (3' BEB) (H900175-01)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/18/2019	ND	1.90	94.9	2.00	3.85	
Toluene*	<0.050	0.050	01/18/2019	ND	2.10	105	2.00	3.13	
Ethylbenzene*	<0.050	0.050	01/18/2019	ND	1.94	96.8	2.00	8.73	
Total Xylenes*	<0.150	0.150	01/18/2019	ND	5.69	94.8	6.00	5.30	
Total BTEX	<0.300	0.300	01/18/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.8 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**288**	16.0	01/18/2019	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/18/2019	ND	182	90.8	200	6.58	
DRO >C10-C28*	<10.0	10.0	01/18/2019	ND	195	97.7	200	4.93	
EXT DRO >C28-C36	<10.0	10.0	01/18/2019	ND					

Surrogate: 1-Chlorooctane *87.5 %* *41-142*

Surrogate: 1-Chlorooctadecane *87.9 %* *37.6-147*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

TETRA TECH
CLAIR GONZALES
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	01/17/2019	Sampling Date:	01/17/2019
Reported:	01/18/2019	Sampling Type:	Soil
Project Name:	MYOX 28 STATE COM #4H	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 01564	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NM		

Sample ID: BOTTOM-19 (3' BEB) (H900175-02)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/18/2019	ND	1.90	94.9	2.00	3.85	
Toluene*	<0.050	0.050	01/18/2019	ND	2.10	105	2.00	3.13	
Ethylbenzene*	<0.050	0.050	01/18/2019	ND	1.94	96.8	2.00	8.73	
Total Xylenes*	<0.150	0.150	01/18/2019	ND	5.69	94.8	6.00	5.30	
Total BTEX	<0.300	0.300	01/18/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	01/18/2019	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/18/2019	ND	182	90.8	200	6.58	
DRO >C10-C28*	<10.0	10.0	01/18/2019	ND	195	97.7	200	4.93	
EXT DRO >C28-C36	<10.0	10.0	01/18/2019	ND					

Surrogate: 1-Chlorooctane *89.5 %* *41-142*

Surrogate: 1-Chlorooctadecane *89.4 %* *37.6-147*

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

TETRA TECH
CLAIR GONZALES
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	01/17/2019	Sampling Date:	01/17/2019
Reported:	01/18/2019	Sampling Type:	Soil
Project Name:	MYOX 28 STATE COM #4H	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 01564	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NM		

Sample ID: SW-4 (H900175-03)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/18/2019	ND	1.90	94.9	2.00	3.85	
Toluene*	<0.050	0.050	01/18/2019	ND	2.10	105	2.00	3.13	
Ethylbenzene*	<0.050	0.050	01/18/2019	ND	1.94	96.8	2.00	8.73	
Total Xylenes*	<0.150	0.150	01/18/2019	ND	5.69	94.8	6.00	5.30	
Total BTEX	<0.300	0.300	01/18/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.4 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	01/18/2019	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/18/2019	ND	182	90.8	200	6.58	
DRO >C10-C28*	<10.0	10.0	01/18/2019	ND	195	97.7	200	4.93	
EXT DRO >C28-C36	<10.0	10.0	01/18/2019	ND					

Surrogate: 1-Chlorooctane *87.9 %* *41-142*

Surrogate: 1-Chlorooctadecane *88.0 %* *37.6-147*

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

TETRA TECH
CLAIR GONZALES
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	01/17/2019	Sampling Date:	01/17/2019
Reported:	01/18/2019	Sampling Type:	Soil
Project Name:	MYOX 28 STATE COM #4H	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 01564	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NM		

Sample ID: SW-5 (H900175-04)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/18/2019	ND	1.90	94.9	2.00	3.85	
Toluene*	<0.050	0.050	01/18/2019	ND	2.10	105	2.00	3.13	
Ethylbenzene*	<0.050	0.050	01/18/2019	ND	1.94	96.8	2.00	8.73	
Total Xylenes*	<0.150	0.150	01/18/2019	ND	5.69	94.8	6.00	5.30	
Total BTEX	<0.300	0.300	01/18/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.5 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**128**	16.0	01/18/2019	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/18/2019	ND	182	90.8	200	6.58	
DRO >C10-C28*	<10.0	10.0	01/18/2019	ND	195	97.7	200	4.93	
EXT DRO >C28-C36	<10.0	10.0	01/18/2019	ND					

Surrogate: 1-Chlorooctane *88.6 %* *41-142*

Surrogate: 1-Chlorooctadecane *90.9 %* *37.6-147*

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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
CLAIR GONZALES
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	01/17/2019	Sampling Date:	01/17/2019
Reported:	01/18/2019	Sampling Type:	Soil
Project Name:	MYOX 28 STATE COM #4H	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 01564	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NM		

Sample ID: SW-6 (H900175-05)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/18/2019	ND	2.47	124	2.00	1.91	
Toluene*	<0.050	0.050	01/18/2019	ND	2.36	118	2.00	1.61	
Ethylbenzene*	<0.050	0.050	01/18/2019	ND	2.35	117	2.00	0.714	
Total Xylenes*	<0.150	0.150	01/18/2019	ND	7.13	119	6.00	0.567	
Total BTEX	<0.300	0.300	01/18/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	01/18/2019	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/18/2019	ND	188	94.0	200	1.09	
DRO >C10-C28*	<10.0	10.0	01/18/2019	ND	206	103	200	2.39	
EXT DRO >C28-C36	<10.0	10.0	01/18/2019	ND					

Surrogate: 1-Chlorooctane *86.9 %* *41-142*

Surrogate: 1-Chlorooctadecane *90.5 %* *37.6-147*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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

Page 145 of 156

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name: Tetra Tech	**BILL TO**
Project Manager: Clair Gonzales	P.O. #:
Address: 901 W. Wall St.	Company: COG
City: Midland State: TX Zip: 79701	Attn: Ike Tavarez
Phone #: 432-260-8634 Fax #:	Address: 600 W. Illinois Ave
Project #: Project Owner: COG	City: Midland
Project Name: Mayox 28 State Com #4H	State: TX Zip: 79701
Project Location: Eddy Co., NM	Phone #: 432-683-7443
Sampler Name: Stephen Reyes	Fax #:

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST		
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	BTEX 8021B	TPH 8015M	Chloride
H200175																	
1	BTTM-14 (3' BEB)		1			X					X		1-17-19		X	X	X
2	BTTM-19 (3' BEB)		1			X					X		1-17-19		X	X	X
3	SW-4		1			X					X		1-17-19		X	X	X
4	SW-5		1			X					X		1-17-19		X	X	X
5	SW-6		1			X					X		1-17-19		X	X	X

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Relinquished By:	Date: 1-17-19	Received By:	Tamara Oldaker
	Time: 16:40		
Relinquished By:	Date:	Received By:	
	Time:		

Delivered By: (Circle One)
Sampler - UPS - Bus - Other: 2.4° #97

Sample Condition: Cool ~~Yes~~ No; Intact ~~Yes~~ No

CHECKED BY: (Initials) TO

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS: Rush

Clair.gonzales@tetratech.com
Stephen.reyes@tetratech.com

+ Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

Received by OCD: 4/12/2023 10:00:50 AM

Released to Imaging: 4/28/2023 2:48:03 PM

CARDINAL Laboratories

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

January 21, 2019

CLAIR GONZALES

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: MYOX 28 STATE COM #4H

Enclosed are the results of analyses for samples received by the laboratory on 01/18/19 16:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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	Total Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

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 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: MYOX 28 STATE COM #4H Project Number: 212C - MD - 01564 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 21-Jan-19 10:28

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SW - 1	H900185-01	Soil	18-Jan-19 00:00	18-Jan-19 16:25
SW - 2	H900185-02	Soil	18-Jan-19 00:00	18-Jan-19 16:25
SW - 3	H900185-03	Soil	18-Jan-19 00:00	18-Jan-19 16:25

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: MYOX 28 STATE COM #4H Project Number: 212C - MD - 01564 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 21-Jan-19 10:28

SW - 1

H900185-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**96.0**		16.0	mg/kg	4	9012107	AC	21-Jan-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9011802	ms	19-Jan-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9011802	ms	19-Jan-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9011802	ms	19-Jan-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9011802	ms	19-Jan-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9011802	ms	19-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*101 %*	*73.3-129*		*9011802*	ms	*19-Jan-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9011810	MS	18-Jan-19	8015B	
DRO >C10-C28*	**10.5**		10.0	mg/kg	1	9011810	MS	18-Jan-19	8015B	
EXT DRO >C28-C36	**10.4**		10.0	mg/kg	1	9011810	MS	18-Jan-19	8015B	
Surrogate: 1-Chlorooctane			*82.8 %*	*41-142*		*9011810*	MS	*18-Jan-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*82.4 %*	*37.6-147*		*9011810*	MS	*18-Jan-19*	*8015B*	

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: MYOX 28 STATE COM #4H Project Number: 212C - MD - 01564 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 21-Jan-19 10:28

SW - 2

H900185-02 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**160**		16.0	mg/kg	4	9012107	AC	21-Jan-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9011802	ms	19-Jan-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9011802	ms	19-Jan-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9011802	ms	19-Jan-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9011802	ms	19-Jan-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9011802	ms	19-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*101 %*	*73.3-129*		*9011802*	ms	*19-Jan-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9011810	MS	18-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9011810	MS	18-Jan-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9011810	MS	18-Jan-19	8015B	
Surrogate: 1-Chlorooctane			*82.0 %*	*41-142*		*9011810*	MS	*18-Jan-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*78.3 %*	*37.6-147*		*9011810*	MS	*18-Jan-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: MYOX 28 STATE COM #4H Project Number: 212C - MD - 01564 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 21-Jan-19 10:28

SW - 3

H900185-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**16.0**		16.0	mg/kg	4	9012107	AC	21-Jan-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9011802	ms	19-Jan-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9011802	ms	19-Jan-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9011802	ms	19-Jan-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9011802	ms	19-Jan-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9011802	ms	19-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*102 %*	*73.3-129*		*9011802*	ms	*19-Jan-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9011810	MS	19-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9011810	MS	19-Jan-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9011810	MS	19-Jan-19	8015B	
Surrogate: 1-Chlorooctane			*81.6 %*	*41-142*		*9011810*	MS	*19-Jan-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*74.5 %*	*37.6-147*		*9011810*	MS	*19-Jan-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: MYOX 28 STATE COM #4H Project Number: 212C - MD - 01564 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 21-Jan-19 10:28

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9012107 - General Prep - Wet Chem										
Blank (9012107-BLK1)				Prepared & Analyzed: 21-Jan-19						
Chloride	ND	16.0	mg/kg							
LCS (9012107-BS1)				Prepared & Analyzed: 21-Jan-19						
Chloride	432	16.0	mg/kg	400		108	80-120			
LCS Dup (9012107-BSD1)				Prepared & Analyzed: 21-Jan-19						
Chloride	432	16.0	mg/kg	400		108	80-120	0.00	20	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: MYOX 28 STATE COM #4H Project Number: 212C - MD - 01564 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 21-Jan-19 10:28

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9011802 - Volatiles										
Blank (9011802-BLK1)				Prepared: 18-Jan-19 Analyzed: 19-Jan-19						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0998*		mg/kg	*0.100*		*99.8*	*73.3-129*			
LCS (9011802-BS1)				Prepared: 18-Jan-19 Analyzed: 19-Jan-19						
Benzene	1.88	0.050	mg/kg	2.00		94.0	72.2-131			
Toluene	1.80	0.050	mg/kg	2.00		89.8	71.7-126			
Ethylbenzene	1.79	0.050	mg/kg	2.00		89.6	68.9-126			
Total Xylenes	5.40	0.150	mg/kg	6.00		90.0	71.4-125			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0988*		mg/kg	*0.100*		*98.8*	*73.3-129*			
LCS Dup (9011802-BSD1)				Prepared: 18-Jan-19 Analyzed: 19-Jan-19						
Benzene	1.84	0.050	mg/kg	2.00		92.2	72.2-131	1.97	6.91	
Toluene	1.79	0.050	mg/kg	2.00		89.5	71.7-126	0.340	7.12	
Ethylbenzene	1.76	0.050	mg/kg	2.00		88.0	68.9-126	1.79	7.88	
Total Xylenes	5.32	0.150	mg/kg	6.00		88.6	71.4-125	1.54	7.46	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0982*		mg/kg	*0.100*		*98.2*	*73.3-129*			

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: MYOX 28 STATE COM #4H Project Number: 212C - MD - 01564 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 21-Jan-19 10:28

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9011810 - General Prep - Organics										
Blank (9011810-BLK1)				Prepared & Analyzed: 18-Jan-19						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Total TPH C6-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*48.6*		mg/kg	*50.0*		*97.3*	*41-142*			
Surrogate: 1-Chlorooctadecane	*48.0*		mg/kg	*50.0*		*95.9*	*37.6-147*			
LCS (9011810-BS1)				Prepared & Analyzed: 18-Jan-19						
GRO C6-C10	240	10.0	mg/kg	200		120	76.5-133			
DRO >C10-C28	231	10.0	mg/kg	200		116	72.9-138			
Total TPH C6-C28	471	10.0	mg/kg	400		118	78-132			
Surrogate: 1-Chlorooctane	*52.4*		mg/kg	*50.0*		*105*	*41-142*			
Surrogate: 1-Chlorooctadecane	*49.5*		mg/kg	*50.0*		*99.1*	*37.6-147*			
LCS Dup (9011810-BSD1)				Prepared & Analyzed: 18-Jan-19						
GRO C6-C10	239	10.0	mg/kg	200		120	76.5-133	0.290	20.6	
DRO >C10-C28	231	10.0	mg/kg	200		116	72.9-138	0.112	20.6	
Total TPH C6-C28	470	10.0	mg/kg	400		118	78-132	0.203	18	
Surrogate: 1-Chlorooctane	*52.3*		mg/kg	*50.0*		*105*	*41-142*			
Surrogate: 1-Chlorooctadecane	*49.7*		mg/kg	*50.0*		*99.4*	*37.6-147*			

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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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Page 155 of 156

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name: Tetra Tech	**BILL TO**	P.O. #:	
Project Manager: Clair Gonzales		Company: COG	
Address: 901 W. Wall St.		Attn: Ike Tavarez	
City: Midland State: TX Zip: 79701		Address: 600 W. Illinois	
Phone #: 432-760-8634 Fax #:		City: Midland	
Project #: 212C-MD-01564 Project Owner: COG		State: TX Zip: 79701	
Project Name: Myox 28 State Com #4H		Phone #: 432-683-7443	
Project Location: Eddy Co., NM		Fax #:	
Sampler Name: Stephen Reyes			

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST		
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	BTEX 8021 B	TPH 8015M	Chloride
H900185																	
1	SW-1		1			X					X		1-18-19		X	X	X
2	SW-2		1			X					X		1-18-19		X	X	X
3	SW-3		1			X					X		1-18-19		X	X	X

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Relinquished By:	Date: 1-18-19	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 16:25		Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS: Rush
	Time:		Clair.gonzales@tetratech.com
Delivered By: (Circle One)	Sample Condition	CHECKED BY:	Stephen.reyes@tetratech.com
Sampler - UPS - Bus - Other: 2.8° #97	Cool: Yes / No Intact: Yes / No	(Initials) TO	

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

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Released to Imaging: 4/28/2023 2:48:03 PM

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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
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CONDITIONS

Action 206740

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 206740
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	None	4/28/2023