



March 29, 2021

Oil Conservation Division, District II
811 S. First St.
Artesia, NM 88210

Closure Report

Myox 28 State Com 006H

Incident #NRM2027645649

GPS: 32.0943, -104.0946

Unit Letter N, Section 28, Township 25 South, Range 28 East

Eddy County, New Mexico

To Whom It May Concern,

COG Operating, LLC (COG) is pleased to submit the following Closure Report in response to a release that occurred in the pasture and on the pad due casing pressure that sent fluids out to the flare at the Myox 28 State Com 006H. The release is located in Unit Letter N, Section 28, Township 25 South, Range 28 East Eddy County, New Mexico. The release occurred at latitude 32.0943, longitude -104.0949.

BACKGROUND

On September 21, 2020, a release was discovered and a C-141 initial report was submitted and approved by the New Mexico Oil Conservation Division (NMOCD). The initial C-141 is presented in Appendix A. The casing pressure that sent fluids out to the flare resulted in the release of approximately fifteen (15) barrels (barrels of produced water with ten (10) barrels being recovered.

GROUNDWATER AND REGULATORY FRAMEWORK

According to the New Mexico Office of the State Engineer (NMOSE) the nearest water well (POD # C 01278 POD1) is located approximately 3.5 miles southeast of the release point and indicates that groundwater in the project vicinity is ninety (90) feet below ground surface (BGS). According to the United States Geological Survey (USGS) 2 wells are located approximately 0.6 miles southeast of the release point and indicates that groundwater in the project vicinity. One well dated in 2003 showed a depth of twenty (20) below ground surface (BGS) and a second well dated in 2018 showed a depth of one hundred and fifty (150) below ground surface. The water well information is shown in Appendix B.

A risk-based evaluation and site determination was performed in accordance to the New Mexico Oil Conservation Division (NMOCD) Rule (Title 19 Chapter 15 Part 29) for releases on oil and gas development and production in New Mexico (effective August 14, 2018). According to the site characterization evaluation, this release site is located within high karst.. The groundwater data and the site characterization evaluation data are summarized in Appendix B. The delineation and closure criteria are listed below:

General Site Characterization and Groundwater:

Site Characterization	Average Groundwater Depth (ft.)
High Karst	<50 ft

Delineation and Closure Criteria:

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

ASSESSMENT

On November 11, 2020, a backhoe was utilized to collect soil samples to delineate the impacted area. A total of four (4) backhoe trenches were installed to assess the impact. In addition, a total of six (6) samples were collected from the overspray area. The sampling results are summarized in Table 1. The analytical reports are shown in Appendix B.

REMEDIATION ACTIVITIES

Based on the assessment results, the area of T-2 did not show any impact above the RRALs. The impacted material in the areas of T-1 and T-3 were excavated to a depth of one (1) foot below ground surface. In the area of T-4 the impacted material was excavated to a depth of five (5) foot below ground surface. The overspray areas were treated with micro-blaze. All of the samples from the overspray area showed concentrations below the RRAL. Approximately 120 cubic yards were transported to proper disposal.

SAMPLING

Once the excavation is complete, confirmation soil samples were collected from the excavated areas. To collect representative samples, composite samples (5-point composite) were collected every 200 square feet from the bottom and sidewalls of the excavated areas. The soil samples were analyzed for the constituents of concern. Discrete soil samples were collected from the excavation if any "hot spots"

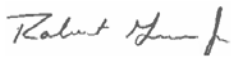
are encountered during the excavation.

SITE RECLAMATION AND RESTORATION

Upon completion of the remediation the excavation was backfilled with top soil and contoured to match the surrounding terrain. The surface was left in a rough condition to approximate natural surface deviations. The site will be mechanically seeded with the soil specific State Land seed mixture once proper seasonal conditions exist.

Should you have any questions or concerns on the remediation activities, please do not hesitate to contact me.

Sincerely,



Robert Grubbs Jr.
HSE Coordinator
robert.d.grubbs@conocophillips.com

Maps

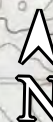
COG Operating LLC.

Myox 28 State Com 006H
32.0943 -104.0949
Eddy County, NM

Legend

↓ Myox 28 State Com 006H

Myox 28 State Com 006H

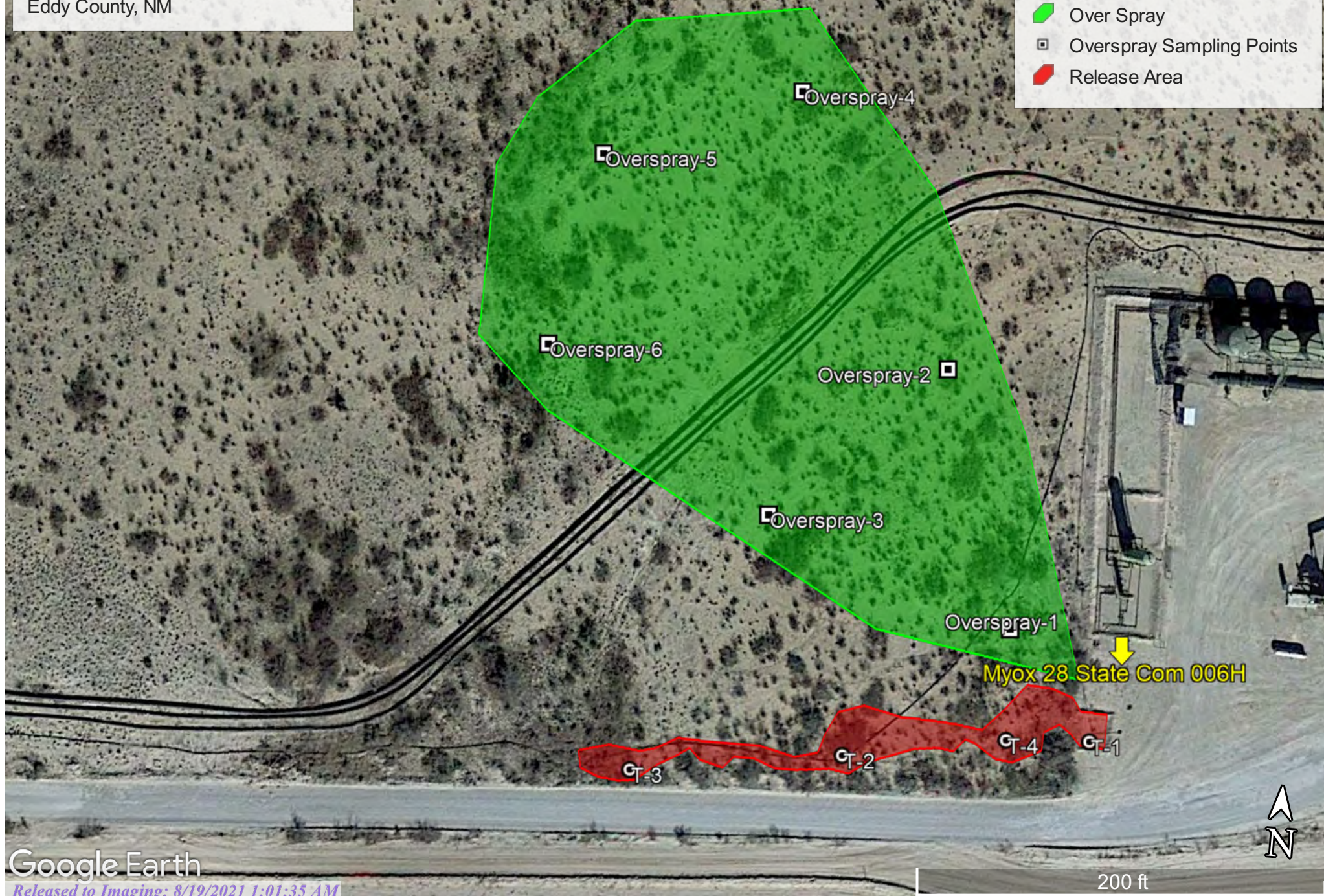


COG Operating LLC.

Myox 28 State Com 006H
32.0943 -104.0949
Eddy County, NM

Legend

- Trench Sampling Points
- ↓ Myox 28 State Com 006H
- Over Spray
- Overspray Sampling Points
- Release Area



COG Operating LLC.

Myox 28 State Com 006H
32.0943 -104.0949
Eddy County, NM

Legend

- 1.5' Excavation
- 2' Excavation
- 5' Excavation
- Confirmation Sample Points
- Myox 28 State Com 006H



Table of Analytical Data

SUMMARY OF ANALYTICAL RESULTS

Myox 28 State Com#006H (9/21/20)

Eddy Co, NM

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Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)							Benzene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	MRO	Total	GRO	DRO	Total			
Average Depth to Groundwater (ft) 50 -100'														
NMOCD RRAL Limits (mg/kg)					-	-	-	2,500	-	-	1,000	10	50	600
T-1 0-1'	11/11/2020	0-1'		X	<50.0	1150	173	1320	<50.0	1150	1150	<0.00201	0.0118	3130
T-1 2'	11/11/2020	2'	X		<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	<0.00202	<0.00202	25.8
T-1 3'	11/11/2020	3'	X		<49.8	<49.8	<49.8	<49.8	<49.8	<49.8	<49.8	<0.00200	<0.00200	405
T-1 4'	11/11/2020	4'	X		<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	375
T-1 5'	11/11/2020	5'	X		<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	<0.00198	<0.00198	97.4
T-1 6'	11/11/2020	6'	X		<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	59.3
T-1 7'	11/11/2020	7'	X		<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	6.41
CS-1 North Sidewall	1/21/2021			X	<50.0	211	<50.0	211	<50.0	211	211	<0.00200	<0.00200	7.91
CS-1 South Sidewall	1/21/2021			X	<50.0	247	<50.0	247	<50.0	247	247	<0.00200	<0.00200	7.33
CS-1 East Sidewall	1/21/2021			X	<50.0	210	<50.0	210	<50.0	210	210	<0.00200	<0.00200	6.74
CS-1 West Sidewall	1/21/2021			X	<49.9	227	<49.9	227	<49.9	227	227	<0.00200	<0.00200	6.59
CS-1 Bottom Hole 1 1.5'	1/21/2021	1.5'		X	<49.9	253	51.1	304	<49.9	253	253	<0.00200	<0.00200	6.38
CS-1A North Sidewall	1/26/2021		X		<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	-	-	-
CS-1A South Sidewall	1/26/2021		X		<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	-	-	-
CS-1A East Sidewall	1/26/2021		X		<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	-	-	-
CS-1A West Sidewall	1/26/2021		X		<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	-	-	-
CS-1A Bottom Hole 2'	1/26/2021	2'	X		<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	-	-	-
T-2 0-1'	11/11/2020	0-1'	X		<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	<0.00198	<0.00198	46.3
T-2 2'	11/11/2020	2'	X		<49.8	<49.8	<49.8	<49.8	<49.8	<49.8	<49.8	<0.00200	<0.00200	46.4
T-2 3'	11/11/2020	3'	X		<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	18.9
T-2 4'	11/11/2020	4'	X		<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	<0.00198	<0.00198	122
T-2 5'	11/11/2020	5'	X		<49.8	<49.8	<49.8	<49.8	<49.8	<49.8	<49.8	<0.00199	0.00217	12.3
T-2 6'	11/11/2020	6'	X		<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	175
T-3 0-1'	11/11/2020	0-1'		X	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<0.00201	<0.00201	2630
T-3 2'	11/11/2020	2'	X		<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	17.0
T-3 3'	11/11/2020	3'	X		<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	12.5
T-3 4'	11/11/2020	4'	X		<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	23.0
CS-3 North Sidewall	1/21/2021		X		<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	137
CS-3 South Sidewall	1/21/2021		X		<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	129
CS-3 East Sidewall	1/21/2021		X		<49.8	<49.8	<49.8	<49.8	<49.8	<49.8	<49.8	<0.00200	<0.00200	137
CS-3 West Sidewall	1/21/2021		X		<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	139
CS-3 Bottom Hole 1 1.5'	1/21/2021	1.5'	X		<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	131
CS-3 Bottom Hole 2 1.5'	1/21/2021	1.5'		X	<50.0	205	<50.0	205	<50.0	205	205	<0.00200	<0.00200	6.79
CS-3A Bottom Hole 2 2'	1/26/2021	2'	X		<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	-	-	-
T-4 0-1'	11/11/2020	0-1'		X	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<0.00201	0.0908	13.7
T-4 2'	11/11/2020	2'		X	<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	<0.00199	0.0148	8.68
T-4 3'	11/11/2020	3'		X	<49.8	<49.8	<49.8	<49.8	<49.8	<49.8	<49.8	<0.00199	<0.00199	775
CS-4 North Sidewall	1/21/2021		X		<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	126
CS-4 South Sidewall	1/21/2021		X		<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	124
CS-4 EastSidewall	1/21/2021		X		<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	124
CS-4 West Sidewall	1/21/2021		X		<49.8	<49.8	<49.8	<49.8	<49.8	<49.8	<49.8	<0.00200	<0.00200	160
CS-4 Bottom Hole 1 4'	1/21/2021	4'		X	<50.0	215	<50.0	215	<50.0	215	215	<0.00200	<0.00200	13.7
CS-4 Bottom Hole 2 4'	1/21/2021	4'		X	<49.9	210	<49.9	210	<49.9	210	210	<0.00200	<0.00200	13.7
CS-4A Bottom Hole 1 5'	1/26/2021	5'	X		<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	-	-	-
CS-4A Bottom Hole 2 5'	1/26/2021	5'	X		<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	-	-	-

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Overspray 1 0.5' - 1'	11/11/2020	0.5' - 1'	X		<49.9	99.6	<49.9	99.6	<49.9	99.6	99.6	<0.00200	0.0488	38.4
CS-Overspray 1A 0-5'	1/26/2021	0.5'			<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	-	-	-
Overspray 2 0.5'	11/11/2020	0.5'	X		<49.8	<49.8	<49.8	<49.8	<49.8	<49.8	<49.8	<0.00201	<0.00201	12.7
Overspray 2 0.5' - 1'	11/11/2020	0.5' - 1'	X		<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	13.0
Overspray 3 0.5'	11/11/2020	0.5'	X		<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	25.9
Overspray 3 0.5' - 1'	11/11/2020	0.5' - 1'	X		<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<0.00198	<0.00198	46.5
Overspray 4 0.5'	11/11/2020	0.5'	X		<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	10.1
Overspray 4 0.5' - 1'	11/11/2020	0.5' - 1'	X		<49.8	<49.8	<49.8	<49.8	<49.8	<49.8	<49.8	<0.00199	<0.00199	8.06
Overspray 5 0.5'	11/11/2020	0.5'	X		<50.0	76.4	<50.0	76.4	<50.0	76.4	76.4	<0.00202	<0.00202	8.35
Overspray 5 0.5' - 1'	11/11/2020	0.5' - 1'	X		<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<0.00202	<0.00202	10.7
Overspray 6 0.5'	11/11/2020	0.5'	X		<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	<0.00199	<0.00199	9.29
Overspray 6 0.5' - 1'	11/11/2020	0.5' - 1'	X		<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	12.8

*CS Confirmation Sample

Excavated and removed

Received by OCD: 4/28/2021 8:24:09 AM

Appendix A

C-141

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 Department

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	OGRID
Contact Name	Contact Telephone
Contact email	Incident # (assigned by OCD)
Contact mailing address	

Location of Release Source

Latitude _____ Longitude _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Site Type
Date Release Discovered	API# (if applicable)

Unit Letter	Section	Township	Range	County

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☐ Private (Name: _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

☐ The source of the release has been stopped.	
☐ The impacted area has been secured to protect human health and the environment.	
☐ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.	
☐ All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
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 _____	Title: _____
Signature: <u>Battani Espinoza</u>	Date: _____
email: _____	Telephone: _____
<u>OCD Only</u>	
Received by: _____	Date: _____

***** LIQUID SPILLS - VOLUME CALCULATIONS *****

Location of spill: Myox 28 State Com 6H

Date of Spill: 21-Sep-2020

If the leak/spill is associated with production equipment, i.e. - wellhead, stuffing box, flowline, tank battery, production vessel, transfer pump, or storage tank place an "X" here: ☒

Input Data:

If spill volumes from measurement, i.e. metering, tank volumes, etc. are known enter the volumes here: OIL: 0.0 BBL WATER: 0.0 BBL

If "known" spill volumes are given, input data for the following "Area Calculations" is optional. The above will override the calculated volumes.

Total Area Calculations							Standing Liquid Calculations						
Total Surface Area		width	length	wet soil		oil (%)	Standing Liquid Area		width	length	liquid depth	oil (%)	
				depth									
Rectangle Area #1	20 ft		200 ft	X	0.25 in	0%	Rectangle Area #1	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #2	200 ft	X	350 0	X	0.02 in	0%	Rectangle Area #2	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #3	0 ft	X	0 ft	X	0.00 in	0%	Rectangle Area #3	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #4	0 ft	X	0 ft	X	0 in	0%	Rectangle Area #4	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #5	0 ft	X	0 ft	X	0 in	0%	Rectangle Area #5	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #6	0 ft	X	0 ft	X	0 in	0%	Rectangle Area #6	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #7	0 ft	X	0 ft	X	0 in	0%	Rectangle Area #7	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #8	0 ft	X	0 ft	X	2 in	0%	Rectangle Area #8	0 ft	X	0 ft	X	0 in	0%

okay

production system leak - DAILY PRODUCTION DATA REQUIRED

Average Daily Production: Oil 0 BBL Water 0 BBL 0 Gas (MCFD)

Total Hydrocarbon Content in gas: 0% (percentage)

Did leak occur before the separator?: ☒ YES ☒ N/A (place an "X")

H2S Content in Produced Gas: 0 PPM

H2S Content in Tank Vapors: 0 PPM

Amount of Free Liquid Recovered: 0 BBL okay

Percentage of Oil in Free Liquid Recovered: 0% (percentage)

Liquid holding factor *: 0.14 gal per gal

Use the following when the spill wets the grains of the soil.

* Sand = 0.08 gallon (gal.) liquid per gal. volume of soil.

* Gravelly (caliche) loam = 0.14 gal. liquid per gal. volume of soil.

* Sandy clay loam soil = 0.14 gal liquid per gal. volume of soil.

* Clay loam = 0.16 gal. liquid per gal. volume of soil.

Use the following when the liquid completely fills the pore space of the soil:

Occurs when the spill soaked soil is contained by barriers, natural (or not).

* Clay loam = 0.20 gal. liquid per gal. volume of soil.

* Gravelly (caliche) loam = 0.25 gal. liquid per gal. volume of soil.

* Sandy loam = 0.5 gal. liquid per gal. volume of soil.

Total Solid/Liquid Volume: 74,000 sq. ft.	200 cu. ft.	cu. ft.	Total Free Liquid Volume: sq. ft.	cu. ft.	cu. ft.
Estimated Volumes Spilled			Estimated Production Volumes Lost		
Liquid in Soil:	H2O 5.0 BBL	OIL 0.0 BBL	Estimated Production Spilled:	H2O 0.0 BBL	OIL 0.0 BBL
Free Liquid:	0.0 BBL	0.0 BBL			
Totals:	5.0 BBL	0.0 BBL			
Total Liquid Spill Liquid:	5.0 BBL	0.00 BBL			
Recovered Volumes			Estimated Surface Damage		
Estimated oil recovered:	BBL	check - okay	Surface Area: 74,000 sq. ft.		
Estimated water recovered:	BBL	check - okay	Surface Area: 1.6988 acre		
			Estimated Weights, and Volumes		
			Saturated Soil = 22,400 lbs	200 cu. ft.	7 cu. yds.
			Total Liquid = 5 BBL	209 gallon	1,743 lbs

Air Emission from flowline leaks:

Volume of oil spill: - BBL
 Separator gas calculated: - MCF
 Separator gas released: - MCF
 Gas released from oil: - lb
 H2S released: - lb
 Total HC gas released: - lb
 Total HC gas released: - MCF

Air Emission of Reporting Requirements:

New Mexico
 HC gas release reportable? NO
 H2S release reportable? NO
 Texas
 NO
 NO

Incident ID	
District RP	
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?	_____ (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.

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	
District RP	
Facility ID	
Application ID	

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: _____ Title: _____

Signature: Robert J. [Signature] Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: *Each of the following items must be included in the plan.*

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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: _____ Title: _____

Signature:  Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: _____ Date: _____

Incident ID	
District RP	
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: _____ Title: _____

Signature: Robert J. Smith Date: _____

email: _____ Telephone: _____

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: _____ Date: _____

Printed Name: _____ Title: _____

Appendix B

Site Assessment Data

COG Operating LLC.

Myox 28 State Com 006H
32.0943 -104.0949
Eddy County, NM

Legend

- High Karst
- Low Karst
- Malaga
- Medium Karst

Malaga

Myox 28 State Com 006H

Google Earth

© 2021 Google

Released to Imaging: 8/19/2021 1:01:35 AM



6 mi

National Flood Hazard Layer FIRMette



104°6'3"W 32°5'55"N



0 250 500 1,000 1,500 2,000 Feet 1:6,000 104°5'26"W 32°5'25"N

Released to Imaging: 8/19/2021 1:01:35 AM

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 3/29/2021 at 9:39 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

COG Operating LLC.

Myox 28 State Com 006H
32.0943 -104.0949
Eddy County, NM

Legend

- Myox 28 State Com 006H
- Well (3.5 Miles Away)

Myox 28 State Com 006H



Well

Google Earth



1 mi



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 Q Q	64	16	4	Sec	Tws	Rng	X	Y	DepthWell	DepthWater	Water Column
C 01278		C	ED		4	3	28	25S	28E		585470	3551338*	205	90	115

Average Depth to Water: 90 feet

Minimum Depth: 90 feet

Maximum Depth: 90 feet

Record Count: 1

PLSS Search:

Section(s): 28

Township: 25S

Range: 28E

*UTM location was derived from PLSS - see Help

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

4/19/21 6:28 AM

WATER COLUMN/ AVERAGE DEPTH
TO WATER



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[Contact USGS](#)
[Search USGS](#)

National Water Information System: Web Interface

[USGS Water Resources](#)

Data Category:

Groundwater

Geographic Area:

United States

GO



Click for News Bulletins

Groundwater levels for the Nation

* IMPORTANT: [Next Generation Station Page](#)

Search Results -- 1 sites found

site_no list =

• 320309104020401

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

USGS 320309104020401 26S.28E.14.11111

Groundwater: Field measurements

GO

Eddy County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°02'59.0", Longitude 104°03'58.7" NAD83

Land-surface elevation 2,972.00 feet above NGVD29

This well is completed in the Other aquifers (N9999OTHER) national aquifer.

This well is completed in the Rustler Formation (312RSLR) local aquifer.

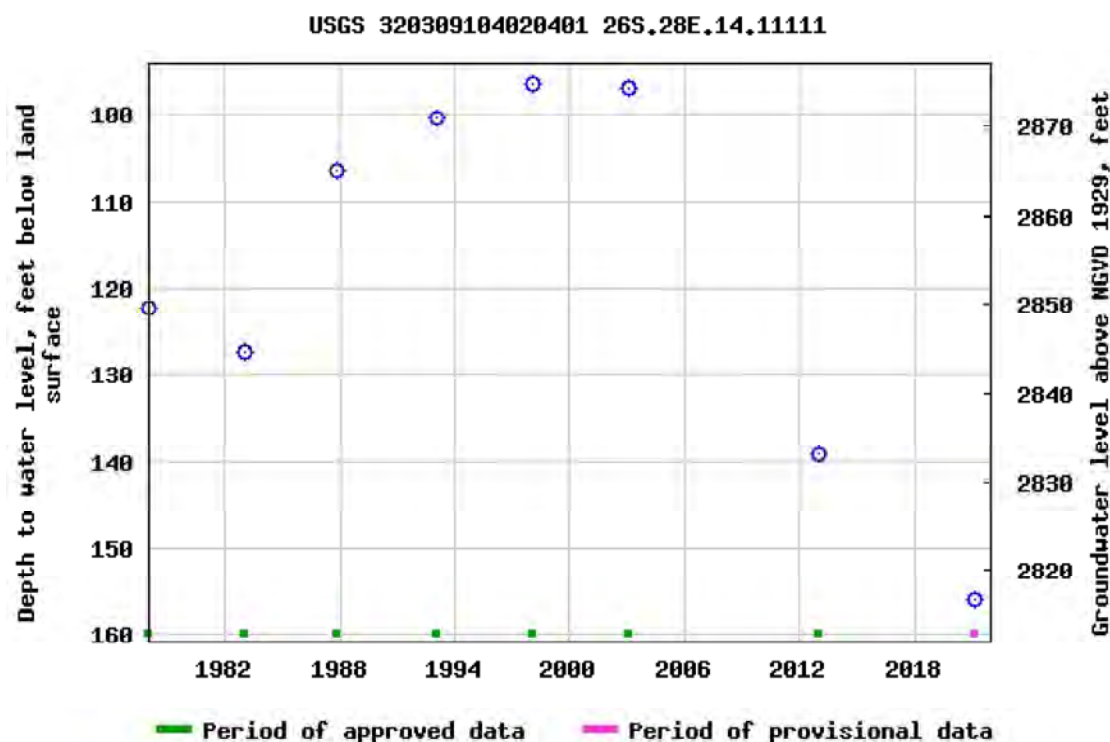
Output formats

[Table of data](#)

[Tab-separated data](#)

[Graph of data](#)

[Reselect period](#)



Breaks in the plot represent a gap of at least one year between field measurements.

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Title: Groundwater for USA: Water Levels

URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>



Page Contact Information: [USGS Water Data Support Team](#)

Page Last Modified: 2021-04-19 09:40:32 EDT

0.66 0.59 nadww02



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Data Category:

Groundwater

Geographic Area:

United States

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Search Results -- 1 sites found

site_no list =

• 320557104061501

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

USGS 320557104061501 25S.28E.29.41243A

Groundwater: Field measurements

GO

Eddy County, New Mexico

Hydrologic Unit Code 13060011

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 Other aquifers (N9999OTHER) national aquifer.

This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

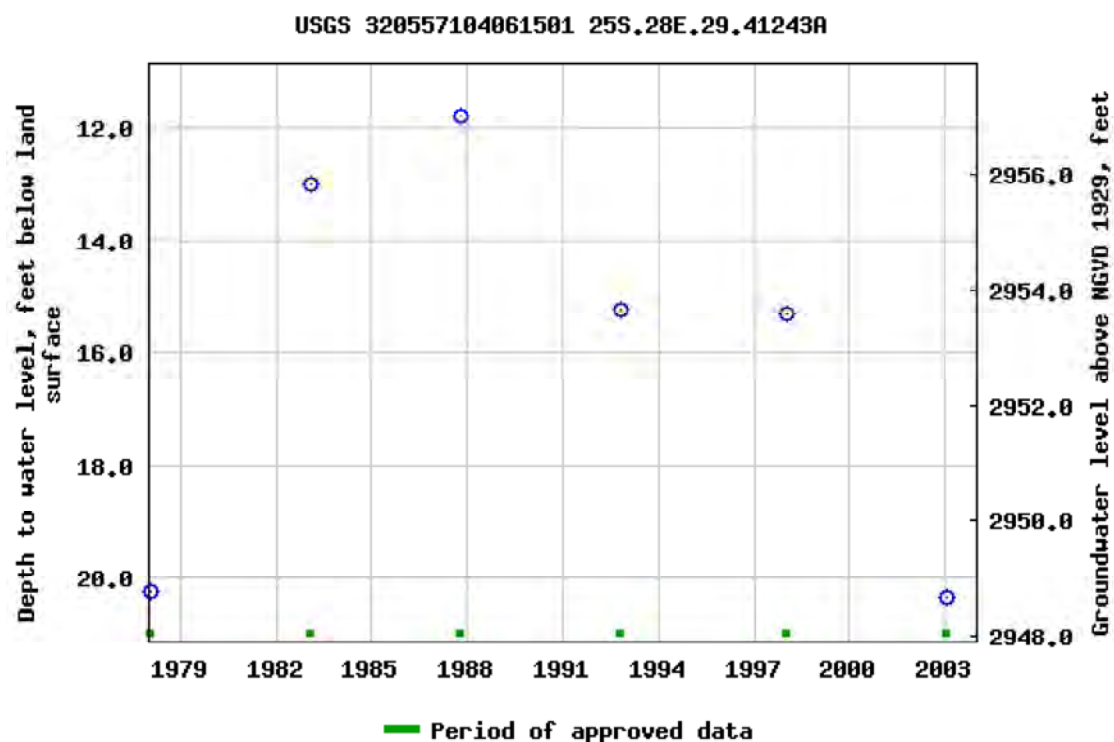
Output formats

[Table of data](#)

[Tab-separated data](#)

[Graph of data](#)

[Reselect period](#)



Breaks in the plot represent a gap of at least one year between field measurements.

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Title: Groundwater for USA: Water Levels

URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>



Page Contact Information: [USGS Water Data Support Team](#)

Page Last Modified: 2021-04-19 12:26:03 EDT

0.68 0.59 nadww02

Appendix C

Analytical Reports

Certificate of Analysis Summary 677689



COG Operating LLC, Artesia, NM

Project Name: Myox 28 State Com #006H (9/21/20)

Project Id:

Date Received in Lab: Thu 11.12.2020 10:51

Contact: Ike Tavaréz

Report Date: 11.23.2020 11:54

Project Location: Eddy County, NM

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	677689-001	677689-002	677689-003	677689-004	677689-005	677689-006
	<i>Field Id:</i>	T-1 0-1'	T-1 2'	T-1 3'	T-1 4'	T-1 5'	T-1 6'
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	11.11.2020 00:00	11.11.2020 00:00	11.11.2020 00:00	11.11.2020 00:00	11.11.2020 00:00	11.11.2020 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	11.15.2020 14:00	11.14.2020 07:15	11.14.2020 07:30	11.14.2020 07:30	11.14.2020 07:30	11.14.2020 07:30
	<i>Analyzed:</i>	11.16.2020 11:05	11.15.2020 07:18	11.15.2020 10:45	11.15.2020 11:05	11.15.2020 11:26	11.15.2020 11:46
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00201 0.00201	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200
Toluene		<0.00201 0.00201	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200
Ethylbenzene		<0.00201 0.00201	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200
m,p-Xylenes		0.00875 0.00402	<0.00404 0.00404	<0.00399 0.00399	<0.00399 0.00399	<0.00397 0.00397	<0.00401 0.00401
o-Xylene		0.00306 0.00201	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200
Total Xylenes		0.0118 0.00201	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200
Total BTEX		0.0118 0.00201	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i>	11.12.2020 18:05	11.12.2020 18:05	11.12.2020 18:05	11.12.2020 18:05	11.12.2020 18:05	11.12.2020 18:05
	<i>Analyzed:</i>	11.13.2020 10:53	11.13.2020 13:08	11.13.2020 11:46	11.13.2020 11:52	11.13.2020 11:59	11.13.2020 12:06
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		3130 50.4	25.8 5.05	405 50.0	375 24.9	97.4 49.9	59.3 49.9
TPH By SW8015 Mod	<i>Extracted:</i>	11.12.2020 11:00	11.12.2020 11:00	11.12.2020 11:00	11.12.2020 11:00	11.12.2020 11:00	11.12.2020 11:00
	<i>Analyzed:</i>	11.12.2020 22:26	11.12.2020 23:33	11.12.2020 23:55	11.13.2020 00:17	11.13.2020 00:40	11.13.2020 01:02
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons		<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0
Diesel Range Organics		1150 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		173 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0
Total TPH		1320 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 677689



COG Operating LLC, Artesia, NM

Project Name: Myox 28 State Com #006H (9/21/20)

Project Id:

Date Received in Lab: Thu 11.12.2020 10:51

Contact: Ike Tavaréz

Report Date: 11.23.2020 11:54

Project Location: Eddy County, NM

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	677689-007	677689-008	677689-009	677689-010		
	<i>Field Id:</i>	T-1 7'	T-2 0-1'	T-2 2'	T-2 3'		
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	11.11.2020 00:00	11.11.2020 00:00	11.11.2020 00:00	11.11.2020 00:00		
BTEX by EPA 8021B	<i>Extracted:</i>	11.14.2020 07:30	11.14.2020 07:30	11.14.2020 07:30	11.14.2020 07:30		
	<i>Analyzed:</i>	11.15.2020 12:07	11.15.2020 12:28	11.15.2020 12:48	11.15.2020 13:09		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199		
Toluene		<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199		
Ethylbenzene		<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199		
m,p-Xylenes		<0.00398 0.00398	<0.00397 0.00397	<0.00400 0.00400	<0.00398 0.00398		
o-Xylene		<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199		
Total Xylenes		<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199		
Total BTEX		<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199		
Chloride by EPA 300	<i>Extracted:</i>	11.12.2020 18:05	11.12.2020 18:05	11.12.2020 18:05	11.12.2020 19:10		
	<i>Analyzed:</i>	11.13.2020 13:28	11.13.2020 12:19	11.13.2020 13:35	11.13.2020 08:39		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		6.41 4.99	46.3 25.0	46.4 4.97	18.9 5.01		
TPH By SW8015 Mod	<i>Extracted:</i>	11.12.2020 11:00	11.12.2020 11:00	11.12.2020 11:00	11.12.2020 11:00		
	<i>Analyzed:</i>	11.13.2020 01:23	11.13.2020 01:45	11.13.2020 02:07	11.13.2020 02:29		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons		<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0		
Diesel Range Organics		<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0		
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0		
Total TPH		<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0		

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Analytical Report 677689

for

COG Operating LLC

Project Manager: Ike Tavaréz

Myox 28 State Com #006H (9/21/20)

11.23.2020

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



11.23.2020

Project Manager: **Ike Tavaréz**

COG Operating LLC

2407 Pecos Avenue

Artesia, NM 88210

Reference: Eurofins Xenco, LLC Report No(s): **677689**

Myox 28 State Com #006H (9/21/20)

Project Address: Eddy County, NM

Ike Tavaréz:

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 Eurofins Xenco, LLC Report Number(s) 677689. 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 Eurofins Xenco, LLC. 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. 677689 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 Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads "Jessica Kramer".

Jessica Kramer

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

**Sample Cross Reference 677689****COG Operating LLC, Artesia, NM**

Myox 28 State Com #006H (9/21/20)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
T-1 0-1'	S	11.11.2020 00:00		677689-001
T-1 2'	S	11.11.2020 00:00		677689-002
T-1 3'	S	11.11.2020 00:00		677689-003
T-1 4'	S	11.11.2020 00:00		677689-004
T-1 5'	S	11.11.2020 00:00		677689-005
T-1 6'	S	11.11.2020 00:00		677689-006
T-1 7'	S	11.11.2020 00:00		677689-007
T-2 0-1'	S	11.11.2020 00:00		677689-008
T-2 2'	S	11.11.2020 00:00		677689-009
T-2 3'	S	11.11.2020 00:00		677689-010

**CASE NARRATIVE****Client Name: COG Operating LLC****Project Name: Myox 28 State Com #006H (9/21/20)**

Project ID:
Work Order Number(s): 677689

Report Date: 11.23.2020
Date Received: 11.12.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3142328 BTEX by EPA 8021B

Lab Sample ID 677689-003 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Ethylbenzene, m,p-Xylenes, o-Xylene 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: 677689-003, -004, -005, -006, -007, -008, -009, -010.

The Laboratory Control Sample for m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Surrogate 4-Bromofluorobenzene recovered below QC limits. Matrix interferences is suspected. Samples affected are: 677689-006.



Certificate of Analytical Results 677689

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **T-1 0-1'**
Lab Sample Id: 677689-001

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 11.12.2020 18:05

% Moisture:
Basis: Wet Weight

Seq Number: 3142228

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3130	50.4	mg/kg	11.13.2020 10:53		10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 11.12.2020 11:00

% Moisture:
Basis: Wet Weight

Seq Number: 3142203

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	11.12.2020 22:26	U	1
Diesel Range Organics	C10C28DRO	1150	50.0	mg/kg	11.12.2020 22:26		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	173	50.0	mg/kg	11.12.2020 22:26		1
Total TPH	PHC635	1320	50.0	mg/kg	11.12.2020 22:26		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-130	11.12.2020 22:26	
o-Terphenyl	84-15-1	91	%	70-130	11.12.2020 22:26	



Certificate of Analytical Results 677689

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **T-1 0-1'**
Lab Sample Id: 677689-001

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 11.15.2020 14:00

% Moisture:
Basis: Wet Weight

Seq Number: 3142351

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	11.16.2020 11:05	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	11.16.2020 11:05	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	11.16.2020 11:05	U	1
m,p-Xylenes	179601-23-1	0.00875	0.00402	mg/kg	11.16.2020 11:05		1
o-Xylene	95-47-6	0.00306	0.00201	mg/kg	11.16.2020 11:05		1
Total Xylenes	1330-20-7	0.0118	0.00201	mg/kg	11.16.2020 11:05		1
Total BTEX		0.0118	0.00201	mg/kg	11.16.2020 11:05		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	11.16.2020 11:05	
1,4-Difluorobenzene	540-36-3	101	%	70-130	11.16.2020 11:05	



Certificate of Analytical Results 677689

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: T-1 2'
Lab Sample Id: 677689-002

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 11.12.2020 18:05

% Moisture:
Basis: Wet Weight

Seq Number: 3142228

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	25.8	5.05	mg/kg	11.13.2020 13:08		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 11.12.2020 11:00

% Moisture:
Basis: Wet Weight

Seq Number: 3142203

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	11.12.2020 23:33	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	11.12.2020 23:33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.12.2020 23:33	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	11.12.2020 23:33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-130	11.12.2020 23:33	
o-Terphenyl	84-15-1	89	%	70-130	11.12.2020 23:33	



Certificate of Analytical Results 677689

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **T-1 2'**
Lab Sample Id: 677689-002

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 11.14.2020 07:15

% Moisture:
Basis: Wet Weight

Seq Number: 3142327

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	11.15.2020 07:18	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	11.15.2020 07:18	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	11.15.2020 07:18	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	11.15.2020 07:18	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	11.15.2020 07:18	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	11.15.2020 07:18	U	1
Total BTEX		<0.00202	0.00202	mg/kg	11.15.2020 07:18	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	98	%	70-130	11.15.2020 07:18		
4-Bromofluorobenzene	460-00-4	106	%	70-130	11.15.2020 07:18		



Certificate of Analytical Results 677689

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **T-1 3'**
Lab Sample Id: 677689-003

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 11.12.2020 18:05

% Moisture:
Basis: Wet Weight

Seq Number: 3142228

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	405	50.0	mg/kg	11.13.2020 11:46		10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 11.12.2020 11:00

% Moisture:
Basis: Wet Weight

Seq Number: 3142203

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	11.12.2020 23:55	U	1
Diesel Range Organics	C10C28DRO	<49.8	49.8	mg/kg	11.12.2020 23:55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	11.12.2020 23:55	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	11.12.2020 23:55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-130	11.12.2020 23:55	
o-Terphenyl	84-15-1	90	%	70-130	11.12.2020 23:55	



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **T-1 3'**
Lab Sample Id: 677689-003

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 11.14.2020 07:30

% Moisture:
Basis: Wet Weight

Seq Number: 3142328

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.15.2020 10:45	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.15.2020 10:45	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.15.2020 10:45	UX	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	11.15.2020 10:45	UX	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	11.15.2020 10:45	UX	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	11.15.2020 10:45	U	1
Total BTEX		<0.00200	0.00200	mg/kg	11.15.2020 10:45	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	126	%	70-130	11.15.2020 10:45		
1,4-Difluorobenzene	540-36-3	87	%	70-130	11.15.2020 10:45		



Certificate of Analytical Results 677689

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **T-1 4'**
Lab Sample Id: 677689-004

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 11.12.2020 18:05

% Moisture:
Basis: Wet Weight

Seq Number: 3142228

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	375	24.9	mg/kg	11.13.2020 11:52		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 11.12.2020 11:00

% Moisture:
Basis: Wet Weight

Seq Number: 3142203

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	11.13.2020 00:17	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	11.13.2020 00:17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.13.2020 00:17	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.13.2020 00:17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-130	11.13.2020 00:17	
o-Terphenyl	84-15-1	87	%	70-130	11.13.2020 00:17	



Certificate of Analytical Results 677689

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **T-1 4'**
Lab Sample Id: 677689-004

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 11.14.2020 07:30

% Moisture:
Basis: Wet Weight

Seq Number: 3142328

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.15.2020 11:05	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.15.2020 11:05	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.15.2020 11:05	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	11.15.2020 11:05	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	11.15.2020 11:05	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	11.15.2020 11:05	U	1
Total BTEX		<0.00200	0.00200	mg/kg	11.15.2020 11:05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	123	%	70-130	11.15.2020 11:05	
1,4-Difluorobenzene	540-36-3	88	%	70-130	11.15.2020 11:05	



Certificate of Analytical Results 677689

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: T-1 5'
Lab Sample Id: 677689-005

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 11.12.2020 18:05

% Moisture:
Basis: Wet Weight

Seq Number: 3142228

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	97.4	49.9	mg/kg	11.13.2020 11:59		10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 11.12.2020 11:00

% Moisture:
Basis: Wet Weight

Seq Number: 3142203

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	11.13.2020 00:40	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	11.13.2020 00:40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.13.2020 00:40	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	11.13.2020 00:40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-130	11.13.2020 00:40	
o-Terphenyl	84-15-1	82	%	70-130	11.13.2020 00:40	



Certificate of Analytical Results 677689

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: T-1 5'
Lab Sample Id: 677689-005

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 11.14.2020 07:30

% Moisture:
Basis: Wet Weight

Seq Number: 3142328

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	11.15.2020 11:26	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	11.15.2020 11:26	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	11.15.2020 11:26	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	11.15.2020 11:26	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	11.15.2020 11:26	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	11.15.2020 11:26	U	1
Total BTEX		<0.00198	0.00198	mg/kg	11.15.2020 11:26	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	122	%	70-130	11.15.2020 11:26		
1,4-Difluorobenzene	540-36-3	106	%	70-130	11.15.2020 11:26		



Certificate of Analytical Results 677689

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **T-1 6'**
Lab Sample Id: 677689-006

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 11.12.2020 18:05

% Moisture:
Basis: Wet Weight

Seq Number: 3142228

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	59.3	49.9	mg/kg	11.13.2020 12:06		10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 11.12.2020 11:00

% Moisture:
Basis: Wet Weight

Seq Number: 3142203

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	11.13.2020 01:02	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	11.13.2020 01:02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.13.2020 01:02	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.13.2020 01:02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-130	11.13.2020 01:02	
o-Terphenyl	84-15-1	79	%	70-130	11.13.2020 01:02	



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **T-1 6'**
Lab Sample Id: 677689-006

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 11.14.2020 07:30

% Moisture:
Basis: Wet Weight

Seq Number: 3142328

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.15.2020 11:46	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.15.2020 11:46	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.15.2020 11:46	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	11.15.2020 11:46	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	11.15.2020 11:46	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	11.15.2020 11:46	U	1
Total BTEX		<0.00200	0.00200	mg/kg	11.15.2020 11:46	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	65	%	70-130	11.15.2020 11:46	**	
1,4-Difluorobenzene	540-36-3	94	%	70-130	11.15.2020 11:46		



Certificate of Analytical Results 677689

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: T-1 7'
Lab Sample Id: 677689-007

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 11.12.2020 18:05

% Moisture:
Basis: Wet Weight

Seq Number: 3142228

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6.41	4.99	mg/kg	11.13.2020 13:28		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 11.12.2020 11:00

% Moisture:
Basis: Wet Weight

Seq Number: 3142203

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	11.13.2020 01:23	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	11.13.2020 01:23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.13.2020 01:23	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.13.2020 01:23	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	86	%	70-130	11.13.2020 01:23		
o-Terphenyl	84-15-1	74	%	70-130	11.13.2020 01:23		



Certificate of Analytical Results 677689

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: T-1 7'
Lab Sample Id: 677689-007

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 11.14.2020 07:30

% Moisture:
Basis: Wet Weight

Seq Number: 3142328

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	11.15.2020 12:07	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	11.15.2020 12:07	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	11.15.2020 12:07	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	11.15.2020 12:07	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	11.15.2020 12:07	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	11.15.2020 12:07	U	1
Total BTEX		<0.00199	0.00199	mg/kg	11.15.2020 12:07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	11.15.2020 12:07	
1,4-Difluorobenzene	540-36-3	96	%	70-130	11.15.2020 12:07	



Certificate of Analytical Results 677689

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **T-2 0-1'**
Lab Sample Id: 677689-008

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 11.12.2020 18:05

% Moisture:
Basis: Wet Weight

Seq Number: 3142228

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	46.3	25.0	mg/kg	11.13.2020 12:19		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 11.12.2020 11:00

% Moisture:
Basis: Wet Weight

Seq Number: 3142203

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	11.13.2020 01:45	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	11.13.2020 01:45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.13.2020 01:45	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	11.13.2020 01:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-130	11.13.2020 01:45	
o-Terphenyl	84-15-1	86	%	70-130	11.13.2020 01:45	



Certificate of Analytical Results 677689

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **T-2 0-1'**
Lab Sample Id: 677689-008

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 11.14.2020 07:30

% Moisture:
Basis: Wet Weight

Seq Number: 3142328

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	11.15.2020 12:28	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	11.15.2020 12:28	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	11.15.2020 12:28	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	11.15.2020 12:28	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	11.15.2020 12:28	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	11.15.2020 12:28	U	1
Total BTEX		<0.00198	0.00198	mg/kg	11.15.2020 12:28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	107	%	70-130	11.15.2020 12:28		
1,4-Difluorobenzene	540-36-3	92	%	70-130	11.15.2020 12:28		



Certificate of Analytical Results 677689

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: T-2 2'
Lab Sample Id: 677689-009

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 11.12.2020 18:05

% Moisture:
Basis: Wet Weight

Seq Number: 3142228

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	46.4	4.97	mg/kg	11.13.2020 13:35		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 11.12.2020 11:00

% Moisture:
Basis: Wet Weight

Seq Number: 3142203

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	11.13.2020 02:07	U	1
Diesel Range Organics	C10C28DRO	<49.8	49.8	mg/kg	11.13.2020 02:07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	11.13.2020 02:07	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	11.13.2020 02:07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-130	11.13.2020 02:07	
o-Terphenyl	84-15-1	82	%	70-130	11.13.2020 02:07	



Certificate of Analytical Results 677689

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: T-2 2'
Lab Sample Id: 677689-009

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 11.14.2020 07:30

% Moisture:
Basis: Wet Weight

Seq Number: 3142328

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.15.2020 12:48	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.15.2020 12:48	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.15.2020 12:48	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	11.15.2020 12:48	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	11.15.2020 12:48	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	11.15.2020 12:48	U	1
Total BTEX		<0.00200	0.00200	mg/kg	11.15.2020 12:48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	110	%	70-130	11.15.2020 12:48		
1,4-Difluorobenzene	540-36-3	94	%	70-130	11.15.2020 12:48		



Certificate of Analytical Results 677689

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: T-2 3'
Lab Sample Id: 677689-010

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

Analyst: CHE

Date Prep: 11.12.2020 19:10

% Moisture:
Basis: Wet Weight

Seq Number: 3142168

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	18.9	5.01	mg/kg	11.13.2020 08:39		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 11.12.2020 11:00

% Moisture:
Basis: Wet Weight

Seq Number: 3142203

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	11.13.2020 02:29	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	11.13.2020 02:29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.13.2020 02:29	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.13.2020 02:29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-130	11.13.2020 02:29	
o-Terphenyl	84-15-1	86	%	70-130	11.13.2020 02:29	



Certificate of Analytical Results 677689

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: T-2 3'
Lab Sample Id: 677689-010

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 11.14.2020 07:30

% Moisture:
Basis: Wet Weight

Seq Number: 3142328

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	11.15.2020 13:09	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	11.15.2020 13:09	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	11.15.2020 13:09	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	11.15.2020 13:09	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	11.15.2020 13:09	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	11.15.2020 13:09	U	1
Total BTEX		<0.00199	0.00199	mg/kg	11.15.2020 13:09	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	103	%	70-130	11.15.2020 13:09		
1,4-Difluorobenzene	540-36-3	101	%	70-130	11.15.2020 13:09		



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. **ND** Not Detected.

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



COG Operating LLC
Myox 28 State Com #006H (9/21/20)

Analytical Method: Chloride by EPA 300

Seq Number: 3142228

MB Sample Id: 7715103-1-BLK

Matrix: Solid

LCS Sample Id: 7715103-1-BKS

Prep Method: E300P

Date Prep: 11.12.2020

LCSD Sample Id: 7715103-1-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	256	102	256	102	90-110	0	20	mg/kg	11.13.2020 09:13	

Analytical Method: Chloride by EPA 300

Seq Number: 3142168

MB Sample Id: 7715104-1-BLK

Matrix: Solid

LCS Sample Id: 7715104-1-BKS

Prep Method: E300P

Date Prep: 11.12.2020

LCSD Sample Id: 7715104-1-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	262	105	262	105	90-110	0	20	mg/kg	11.13.2020 01:39	

Analytical Method: Chloride by EPA 300

Seq Number: 3142228

Parent Sample Id: 677687-006

Matrix: Soil

MS Sample Id: 677687-006 S

Prep Method: E300P

Date Prep: 11.12.2020

MSD Sample Id: 677687-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	5.04	250	262	103	262	103	90-110	0	20	mg/kg	11.13.2020 09:33	

Analytical Method: Chloride by EPA 300

Seq Number: 3142228

Parent Sample Id: 677689-002

Matrix: Soil

MS Sample Id: 677689-002 S

Prep Method: E300P

Date Prep: 11.12.2020

MSD Sample Id: 677689-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	25.8	253	303	110	299	108	90-110	1	20	mg/kg	11.13.2020 13:15	

Analytical Method: Chloride by EPA 300

Seq Number: 3142168

Parent Sample Id: 677689-010

Matrix: Soil

MS Sample Id: 677689-010 S

Prep Method: E300P

Date Prep: 11.12.2020

MSD Sample Id: 677689-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	18.9	251	279	104	279	104	90-110	0	20	mg/kg	11.13.2020 08:44	

Analytical Method: Chloride by EPA 300

Seq Number: 3142168

Parent Sample Id: 677690-010

Matrix: Soil

MS Sample Id: 677690-010 S

Prep Method: E300P

Date Prep: 11.12.2020

MSD Sample Id: 677690-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	775	2490	3540	111	3550	111	90-110	0	20	mg/kg	11.13.2020 03:09	X

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



COG Operating LLC
Myox 28 State Com #006H (9/21/20)

Analytical Method: TPH By SW8015 Mod

Seq Number: 3142203

MB Sample Id: 7715107-1-BLK

Matrix: Solid

LCS Sample Id: 7715107-1-BKS

Prep Method: SW8015P

Date Prep: 11.12.2020

LCSD Sample Id: 7715107-1-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	<50.0	1000	952	95	913	91	70-130	4	20	mg/kg	11.12.2020 21:42	
Diesel Range Organics	<50.0	1000	909	91	837	84	70-130	8	20	mg/kg	11.12.2020 21:42	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	90		111		100		70-130	%	11.12.2020 21:42
o-Terphenyl	84		96		87		70-130	%	11.12.2020 21:42

Analytical Method: TPH By SW8015 Mod

Seq Number: 3142203

MB Sample Id: 7715107-1-BLK

Matrix: Solid

Prep Method: SW8015P

Date Prep: 11.12.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	11.12.2020 21:20	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3142203

Parent Sample Id: 677689-001

Matrix: Soil

MS Sample Id: 677689-001 S

Prep Method: SW8015P

Date Prep: 11.12.2020

MSD Sample Id: 677689-001 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	<50.0	999	964	96	939	94	70-130	3	20	mg/kg	11.12.2020 22:48	
Diesel Range Organics	1150	999	2010	86	2030	88	70-130	1	20	mg/kg	11.12.2020 22:48	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		103		70-130	%	11.12.2020 22:48
o-Terphenyl	82		85		70-130	%	11.12.2020 22:48

Analytical Method: BTEX by EPA 8021B

Seq Number: 3142327

MB Sample Id: 7715225-1-BLK

Matrix: Solid

LCS Sample Id: 7715225-1-BKS

Prep Method: SW5035A

Date Prep: 11.14.2020

LCSD Sample Id: 7715225-1-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	0.119	119	0.112	112	70-130	6	35	mg/kg	11.14.2020 21:20	
Toluene	<0.00200	0.100	0.105	105	0.0996	100	70-130	5	35	mg/kg	11.14.2020 21:20	
Ethylbenzene	<0.00200	0.100	0.0965	97	0.0925	93	70-130	4	35	mg/kg	11.14.2020 21:20	
m,p-Xylenes	<0.00400	0.200	0.184	92	0.176	88	70-130	4	35	mg/kg	11.14.2020 21:20	
o-Xylene	<0.00200	0.100	0.0910	91	0.0874	87	70-130	4	35	mg/kg	11.14.2020 21:20	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		103		93		70-130	%	11.14.2020 21:20
4-Bromofluorobenzene	104		90		92		70-130	%	11.14.2020 21:20

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



COG Operating LLC
Myox 28 State Com #006H (9/21/20)

Analytical Method: BTEX by EPA 8021B

Seq Number: 3142328

Matrix: Solid

Prep Method: SW5035A

Date Prep: 11.14.2020

MB Sample Id: 7715227-1-BLK

LCS Sample Id: 7715227-1-BKS

LCSD Sample Id: 7715227-1-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	0.100	100	0.107	107	70-130	7	35	mg/kg	11.15.2020 08:21	
Toluene	<0.00200	0.100	0.0988	99	0.104	104	70-130	5	35	mg/kg	11.15.2020 08:21	
Ethylbenzene	<0.00200	0.100	0.0936	94	0.0983	98	70-130	5	35	mg/kg	11.15.2020 08:21	
m,p-Xylenes	<0.00400	0.200	0.180	90	0.190	95	70-130	5	35	mg/kg	11.15.2020 08:21	
o-Xylene	<0.00200	0.100	0.0905	91	0.0950	95	70-130	5	35	mg/kg	11.15.2020 08:21	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	96		102		100		70-130	%	11.15.2020 08:21
4-Bromofluorobenzene	106		98		100		70-130	%	11.15.2020 08:21

Analytical Method: BTEX by EPA 8021B

Seq Number: 3142351

Matrix: Solid

Prep Method: SW5035A

Date Prep: 11.15.2020

MB Sample Id: 7715268-1-BLK

LCS Sample Id: 7715268-1-BKS

LCSD Sample Id: 7715268-1-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	0.0800	80	0.0754	75	70-130	6	35	mg/kg	11.16.2020 03:05	
Toluene	<0.00200	0.100	0.0879	88	0.0803	80	70-130	9	35	mg/kg	11.16.2020 03:05	
Ethylbenzene	<0.00200	0.100	0.0970	97	0.0885	89	70-130	9	35	mg/kg	11.16.2020 03:05	
m,p-Xylenes	<0.00400	0.200	0.189	95	0.171	86	70-130	10	35	mg/kg	11.16.2020 03:05	
o-Xylene	<0.00200	0.100	0.0957	96	0.0867	87	70-130	10	35	mg/kg	11.16.2020 03:05	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		99		99		70-130	%	11.16.2020 03:05
4-Bromofluorobenzene	122		105		100		70-130	%	11.16.2020 03:05

Analytical Method: BTEX by EPA 8021B

Seq Number: 3142327

Matrix: Soil

Prep Method: SW5035A

Date Prep: 11.14.2020

Parent Sample Id: 677687-001

MS Sample Id: 677687-001 S

MSD Sample Id: 677687-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0966	97	0.0952	94	70-130	1	35	mg/kg	11.14.2020 22:01	
Toluene	<0.00200	0.100	0.0749	75	0.0751	74	70-130	0	35	mg/kg	11.14.2020 22:01	
Ethylbenzene	<0.00200	0.100	0.0681	68	0.0674	67	70-130	1	35	mg/kg	11.14.2020 22:01	X
m,p-Xylenes	<0.00401	0.200	0.115	58	0.115	57	70-130	0	35	mg/kg	11.14.2020 22:01	X
o-Xylene	<0.00200	0.100	0.0649	65	0.0635	63	70-130	2	35	mg/kg	11.14.2020 22:01	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		96		70-130	%	11.14.2020 22:01
4-Bromofluorobenzene	98		97		70-130	%	11.14.2020 22:01

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



COG Operating LLC
Myox 28 State Com #006H (9/21/20)

Analytical Method: BTEX by EPA 8021B

Seq Number: 3142328

Parent Sample Id: 677689-003

Matrix: Soil

MS Sample Id: 677689-003 S

Prep Method: SW5035A

Date Prep: 11.14.2020

MSD Sample Id: 677689-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0990	0.0968	98	0.0973	98	70-130	1	35	mg/kg	11.15.2020 09:02	
Toluene	<0.00198	0.0990	0.0751	76	0.0765	77	70-130	2	35	mg/kg	11.15.2020 09:02	
Ethylbenzene	<0.00198	0.0990	0.0618	62	0.0628	63	70-130	2	35	mg/kg	11.15.2020 09:02	X
m,p-Xylenes	<0.00396	0.198	0.115	58	0.117	59	70-130	2	35	mg/kg	11.15.2020 09:02	X
o-Xylene	<0.00198	0.0990	0.0568	57	0.0582	59	70-130	2	35	mg/kg	11.15.2020 09:02	X

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		104		70-130	%	11.15.2020 09:02
4-Bromofluorobenzene	99		97		70-130	%	11.15.2020 09:02

Analytical Method: BTEX by EPA 8021B

Seq Number: 3142351

Parent Sample Id: 677754-008

Matrix: Soil

MS Sample Id: 677754-008 S

Prep Method: SW5035A

Date Prep: 11.15.2020

MSD Sample Id: 677754-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0992	0.0547	55	0.0657	66	70-130	18	35	mg/kg	11.16.2020 03:46	X
Toluene	<0.00198	0.0992	0.0607	61	0.0718	72	70-130	17	35	mg/kg	11.16.2020 03:46	X
Ethylbenzene	<0.00198	0.0992	0.0681	69	0.0793	80	70-130	15	35	mg/kg	11.16.2020 03:46	X
m,p-Xylenes	<0.00397	0.198	0.133	67	0.157	79	70-130	17	35	mg/kg	11.16.2020 03:46	X
o-Xylene	<0.00198	0.0992	0.0678	68	0.0793	80	70-130	16	35	mg/kg	11.16.2020 03:46	X

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		99		70-130	%	11.16.2020 03:46
4-Bromofluorobenzene	111		110		70-130	%	11.16.2020 03:46

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC

Date/ Time Received: 11.12.2020 10.51.00 AM

Work Order #: 677689

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	0
#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: 11.12.2020

Checklist reviewed by:



Jessica Kramer

Date: 11.13.2020

Certificate of Analysis Summary 677690

COG Operating LLC, Artesia, NM

Project Name: Myox 28 State Com #006H (9/21/20)

Project Id:

Date Received in Lab: Thu 11.12.2020 10:51

Contact: Ike Tavaréz

Report Date: 11.23.2020 11:56

Project Location: Eddy County, NM

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	677690-001	677690-002	677690-003	677690-004	677690-005	677690-006
	<i>Field Id:</i>	T-2 4'	T-2 5'	T-2 6'	T-3 0-1'	T-3 2'	T-3 3'
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	11.11.2020 00:00	11.11.2020 00:00	11.11.2020 00:00	11.11.2020 00:00	11.11.2020 00:00	11.11.2020 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	11.16.2020 16:00	11.16.2020 16:00	11.14.2020 07:00	11.14.2020 07:00	11.14.2020 07:00	11.14.2020 07:00
	<i>Analyzed:</i>	11.16.2020 21:54	11.16.2020 22:14	11.14.2020 12:55	11.14.2020 13:16	11.14.2020 13:36	11.14.2020 13:57
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200
Toluene		<0.00198 0.00198	<0.00217 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200
Ethylbenzene		<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200
m,p-Xylenes		<0.00397 0.00397	<0.00398 0.00398	<0.00401 0.00401	<0.00402 0.00402	<0.00400 0.00400	<0.00399 0.00399
o-Xylene		<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200
Total Xylenes		<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200
Total BTEX		<0.00198 0.00198	0.00217 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i>	11.12.2020 19:10	11.12.2020 19:10	11.12.2020 19:10	11.12.2020 19:10	11.12.2020 19:10	11.12.2020 19:10
	<i>Analyzed:</i>	11.13.2020 02:05	11.13.2020 02:11	11.13.2020 02:16	11.13.2020 02:21	11.13.2020 08:55	11.13.2020 09:00
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		122 50.3	12.3 5.02	175 49.8	2630 24.9	17.0 4.98	12.5 4.98
TPH By SW8015 Mod	<i>Extracted:</i>	11.12.2020 11:00	11.12.2020 11:00	11.12.2020 11:00	11.12.2020 11:00	11.12.2020 11:00	11.12.2020 11:00
	<i>Analyzed:</i>	11.13.2020 03:12	11.13.2020 03:33	11.13.2020 03:54	11.13.2020 04:16	11.13.2020 04:37	11.13.2020 04:59
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons		<49.9 49.9	<49.8 49.8	<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0
Diesel Range Organics		<49.9 49.9	<49.8 49.8	<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<49.8 49.8	<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0
Total TPH		<49.9 49.9	<49.8 49.8	<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Certificate of Analysis Summary 677690

COG Operating LLC, Artesia, NM

Project Name: Myox 28 State Com #006H (9/21/20)

Project Id:

Date Received in Lab: Thu 11.12.2020 10:51

Contact: Ike Tavaréz

Report Date: 11.23.2020 11:56

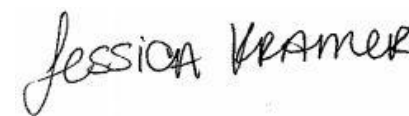
Project Location: Eddy County, NM

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	677690-007	677690-008	677690-009	677690-010		
	<i>Field Id:</i>	T-3 4'	T-4 0-1'	T-4 2'	T-4 3'		
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	11.11.2020 00:00	11.11.2020 00:00	11.11.2020 00:00	11.11.2020 00:00		
BTEX by EPA 8021B	<i>Extracted:</i>	11.14.2020 07:00	11.14.2020 07:00	11.14.2020 07:00	11.14.2020 07:00		
	<i>Analyzed:</i>	11.14.2020 14:17	11.14.2020 14:38	11.14.2020 14:58	11.14.2020 15:19		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199		
Toluene		<0.00199 0.00199	0.00396 0.00201	<0.00199 0.00199	<0.00199 0.00199		
Ethylbenzene		<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199		
m,p-Xylenes		<0.00398 0.00398	0.0586 0.00402	0.00824 0.00398	<0.00398 0.00398		
o-Xylene		<0.00199 0.00199	0.0282 0.00201	0.00657 0.00199	<0.00199 0.00199		
Total Xylenes		<0.00199 0.00199	0.0868 0.00201	0.0148 0.00199	<0.00199 0.00199		
Total BTEX		<0.00199 0.00199	0.0908 0.00201	0.0148 0.00199	<0.00199 0.00199		
Chloride by EPA 300	<i>Extracted:</i>	11.12.2020 19:10	11.12.2020 19:10	11.12.2020 19:10	11.12.2020 19:10		
	<i>Analyzed:</i>	11.13.2020 09:05	11.13.2020 09:10	11.13.2020 09:16	11.13.2020 03:03		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		23.0 4.96	13.7 5.04	8.68 4.99	775 X 49.7		
TPH By SW8015 Mod	<i>Extracted:</i>	11.12.2020 11:00	11.12.2020 11:00	11.12.2020 11:00	11.12.2020 11:00		
	<i>Analyzed:</i>	11.13.2020 05:20	11.13.2020 05:42	11.13.2020 06:03	11.13.2020 06:25		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons		<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8		
Diesel Range Organics		<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8		
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8		
Total TPH		<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8		

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Analytical Report 677690

for

COG Operating LLC

Project Manager: Ike Tavaréz

Myox 28 State Com #006H (9/21/20)

11.23.2020

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



11.23.2020

Project Manager: **Ike Tavaréz**

COG Operating LLC

2407 Pecos Avenue

Artesia, NM 88210

Reference: Eurofins Xenco, LLC Report No(s): **677690**

Myox 28 State Com #006H (9/21/20)

Project Address: Eddy County, NM

Ike Tavaréz:

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 Eurofins Xenco, LLC Report Number(s) 677690. 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 Eurofins Xenco, LLC. 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. 677690 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 Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads "Jessica Kramer".

Jessica Kramer

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

**Sample Cross Reference 677690****COG Operating LLC, Artesia, NM**

Myox 28 State Com #006H (9/21/20)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
T-2 4'	S	11.11.2020 00:00		677690-001
T-2 5'	S	11.11.2020 00:00		677690-002
T-2 6'	S	11.11.2020 00:00		677690-003
T-3 0-1'	S	11.11.2020 00:00		677690-004
T-3 2'	S	11.11.2020 00:00		677690-005
T-3 3'	S	11.11.2020 00:00		677690-006
T-3 4'	S	11.11.2020 00:00		677690-007
T-4 0-1'	S	11.11.2020 00:00		677690-008
T-4 2'	S	11.11.2020 00:00		677690-009
T-4 3'	S	11.11.2020 00:00		677690-010

**CASE NARRATIVE****Client Name: COG Operating LLC****Project Name: Myox 28 State Com #006H (9/21/20)**Project ID:
Work Order Number(s): 677690Report Date: 11.23.2020
Date Received: 11.12.2020**Sample receipt non conformances and comments:****Sample receipt non conformances and comments per sample:**

None

Analytical non conformances and comments:

Batch: LBA-3142168 Chloride by EPA 300

Lab Sample ID 677690-010 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 677690-001, -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-3142330 BTEX by EPA 8021B

Lab Sample ID 677690-003 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Ethylbenzene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Benzene, Toluene recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 677690-003, -004, -005, -006, -007, -008, -009, -010.

The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Surrogate 4-Bromofluorobenzene recovered below QC limits. Matrix interferences is suspected. Samples affected are: 677690-003 S.

Ethylbenzene, m,p-Xylenes, o-Xylene Relative Percent Difference (RPD) between matrix spike and duplicate were above quality control limits.

Samples in the analytical batch are: 677690-003, -004, -005, -006, -007, -008, -009, -010

**CASE NARRATIVE****Client Name: COG Operating LLC****Project Name: Myox 28 State Com #006H (9/21/20)**Project ID:
Work Order Number(s): 677690Report Date: 11.23.2020
Date Received: 11.12.2020

Batch: LBA-3142442 BTEX by EPA 8021B

Lab Sample ID 677690-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Ethylbenzene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike. Benzene, Toluene 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: 677690-001, -002.

The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Benzene, Toluene, m,p-Xylenes Relative Percent Difference (RPD) between matrix spike and duplicate were above quality control limits.

Samples in the analytical batch are: 677690-001, -002



Certificate of Analytical Results 677690

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **T-2 4'**
Lab Sample Id: 677690-001

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

Analyst: CHE

Date Prep: 11.12.2020 19:10

% Moisture:
Basis: Wet Weight

Seq Number: 3142168

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	122	50.3	mg/kg	11.13.2020 02:05		10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 11.12.2020 11:00

% Moisture:
Basis: Wet Weight

Seq Number: 3142203

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	11.13.2020 03:12	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	11.13.2020 03:12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.13.2020 03:12	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	11.13.2020 03:12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-130	11.13.2020 03:12	
o-Terphenyl	84-15-1	84	%	70-130	11.13.2020 03:12	



Certificate of Analytical Results 677690

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **T-2 4'**
Lab Sample Id: 677690-001

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 11.16.2020 16:00

% Moisture:
Basis: Wet Weight

Seq Number: 3142442

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	11.16.2020 21:54	UXF	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	11.16.2020 21:54	UXF	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	11.16.2020 21:54	UX	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	11.16.2020 21:54	UXF	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	11.16.2020 21:54	UX	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	11.16.2020 21:54	U	1
Total BTEX		<0.00198	0.00198	mg/kg	11.16.2020 21:54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	98	%	70-130	11.16.2020 21:54		
4-Bromofluorobenzene	460-00-4	119	%	70-130	11.16.2020 21:54		



Certificate of Analytical Results 677690

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: T-2 5'
Lab Sample Id: 677690-002

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

Analyst: CHE

Date Prep: 11.12.2020 19:10

% Moisture:
Basis: Wet Weight

Seq Number: 3142168

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12.3	5.02	mg/kg	11.13.2020 02:11		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 11.12.2020 11:00

% Moisture:
Basis: Wet Weight

Seq Number: 3142203

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	11.13.2020 03:33	U	1
Diesel Range Organics	C10C28DRO	<49.8	49.8	mg/kg	11.13.2020 03:33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	11.13.2020 03:33	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	11.13.2020 03:33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-130	11.13.2020 03:33	
o-Terphenyl	84-15-1	76	%	70-130	11.13.2020 03:33	



Certificate of Analytical Results 677690

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: T-2 5'
Lab Sample Id: 677690-002

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 11.16.2020 16:00

% Moisture:
Basis: Wet Weight

Seq Number: 3142442

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	11.16.2020 22:14	U	1
Toluene	108-88-3	0.00217	0.00199	mg/kg	11.16.2020 22:14		1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	11.16.2020 22:14	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	11.16.2020 22:14	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	11.16.2020 22:14	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	11.16.2020 22:14	U	1
Total BTEX		0.00217	0.00199	mg/kg	11.16.2020 22:14		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	11.16.2020 22:14		
4-Bromofluorobenzene	460-00-4	110	%	70-130	11.16.2020 22:14		



Certificate of Analytical Results 677690

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **T-2 6'**
Lab Sample Id: 677690-003

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

Analyst: CHE

Date Prep: 11.12.2020 19:10

% Moisture:
Basis: Wet Weight

Seq Number: 3142168

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	175	49.8	mg/kg	11.13.2020 02:16		10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 11.12.2020 11:00

% Moisture:
Basis: Wet Weight

Seq Number: 3142203

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	11.13.2020 03:54	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	11.13.2020 03:54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.13.2020 03:54	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.13.2020 03:54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	99	%	70-130	11.13.2020 03:54		
o-Terphenyl	84-15-1	88	%	70-130	11.13.2020 03:54		



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **T-2 6'**
Lab Sample Id: 677690-003

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 11.14.2020 07:00

% Moisture:
Basis: Wet Weight

Seq Number: 3142330

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.14.2020 12:55	UX	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.14.2020 12:55	UX	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.14.2020 12:55	UXF	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	11.14.2020 12:55	UXF	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	11.14.2020 12:55	UXF	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	11.14.2020 12:55	U	1
Total BTEX		<0.00200	0.00200	mg/kg	11.14.2020 12:55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	95	%	70-130	11.14.2020 12:55	
4-Bromofluorobenzene	460-00-4	116	%	70-130	11.14.2020 12:55	



Certificate of Analytical Results 677690

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **T-3 0-1'**
Lab Sample Id: 677690-004

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

Analyst: CHE

Date Prep: 11.12.2020 19:10

% Moisture:
Basis: Wet Weight

Seq Number: 3142168

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2630	24.9	mg/kg	11.13.2020 02:21		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 11.12.2020 11:00

% Moisture:
Basis: Wet Weight

Seq Number: 3142203

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	11.13.2020 04:16	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	11.13.2020 04:16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.13.2020 04:16	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.13.2020 04:16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-130	11.13.2020 04:16	
o-Terphenyl	84-15-1	94	%	70-130	11.13.2020 04:16	



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **T-3 0-1'**
Lab Sample Id: 677690-004

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 11.14.2020 07:00

% Moisture:
Basis: Wet Weight

Seq Number: 3142330

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	11.14.2020 13:16	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	11.14.2020 13:16	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	11.14.2020 13:16	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	11.14.2020 13:16	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	11.14.2020 13:16	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	11.14.2020 13:16	U	1
Total BTEX		<0.00201	0.00201	mg/kg	11.14.2020 13:16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	11.14.2020 13:16	
1,4-Difluorobenzene	540-36-3	90	%	70-130	11.14.2020 13:16	



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: T-3 2'
Lab Sample Id: 677690-005

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

Analyst: CHE

Date Prep: 11.12.2020 19:10

% Moisture:
Basis: Wet Weight

Seq Number: 3142168

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	17.0	4.98	mg/kg	11.13.2020 08:55		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 11.12.2020 11:00

% Moisture:
Basis: Wet Weight

Seq Number: 3142203

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	11.13.2020 04:37	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	11.13.2020 04:37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.13.2020 04:37	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	11.13.2020 04:37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-130	11.13.2020 04:37	
o-Terphenyl	84-15-1	80	%	70-130	11.13.2020 04:37	



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: T-3 2'
Lab Sample Id: 677690-005

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 11.14.2020 07:00

% Moisture:
Basis: Wet Weight

Seq Number: 3142330

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.14.2020 13:36	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.14.2020 13:36	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.14.2020 13:36	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	11.14.2020 13:36	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	11.14.2020 13:36	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	11.14.2020 13:36	U	1
Total BTEX		<0.00200	0.00200	mg/kg	11.14.2020 13:36	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	82	%	70-130	11.14.2020 13:36		
1,4-Difluorobenzene	540-36-3	91	%	70-130	11.14.2020 13:36		



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: T-3 3'
Lab Sample Id: 677690-006

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

Analyst: CHE

Date Prep: 11.12.2020 19:10

% Moisture:
Basis: Wet Weight

Seq Number: 3142168

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12.5	4.98	mg/kg	11.13.2020 09:00		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 11.12.2020 11:00

% Moisture:
Basis: Wet Weight

Seq Number: 3142203

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	11.13.2020 04:59	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	11.13.2020 04:59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.13.2020 04:59	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.13.2020 04:59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-130	11.13.2020 04:59	
o-Terphenyl	84-15-1	87	%	70-130	11.13.2020 04:59	



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **T-3 3'**
Lab Sample Id: 677690-006

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 11.14.2020 07:00

% Moisture:
Basis: Wet Weight

Seq Number: 3142330

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.14.2020 13:57	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.14.2020 13:57	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.14.2020 13:57	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	11.14.2020 13:57	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	11.14.2020 13:57	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	11.14.2020 13:57	U	1
Total BTEX		<0.00200	0.00200	mg/kg	11.14.2020 13:57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	70-130	11.14.2020 13:57	
4-Bromofluorobenzene	460-00-4	118	%	70-130	11.14.2020 13:57	



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **T-3 4'**
Lab Sample Id: 677690-007

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

Analyst: CHE

Date Prep: 11.12.2020 19:10

% Moisture:
Basis: Wet Weight

Seq Number: 3142168

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	23.0	4.96	mg/kg	11.13.2020 09:05		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 11.12.2020 11:00

% Moisture:
Basis: Wet Weight

Seq Number: 3142203

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	11.13.2020 05:20	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	11.13.2020 05:20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.13.2020 05:20	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.13.2020 05:20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-130	11.13.2020 05:20	
o-Terphenyl	84-15-1	96	%	70-130	11.13.2020 05:20	



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **T-3 4'**
Lab Sample Id: 677690-007

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 11.14.2020 07:00

% Moisture:
Basis: Wet Weight

Seq Number: 3142330

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	11.14.2020 14:17	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	11.14.2020 14:17	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	11.14.2020 14:17	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	11.14.2020 14:17	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	11.14.2020 14:17	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	11.14.2020 14:17	U	1
Total BTEX		<0.00199	0.00199	mg/kg	11.14.2020 14:17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	11.14.2020 14:17	
1,4-Difluorobenzene	540-36-3	100	%	70-130	11.14.2020 14:17	



Certificate of Analytical Results 677690

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **T-4 0-1'**
Lab Sample Id: 677690-008

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

Analyst: CHE

Date Prep: 11.12.2020 19:10

% Moisture:
Basis: Wet Weight

Seq Number: 3142168

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	13.7	5.04	mg/kg	11.13.2020 09:10		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 11.12.2020 11:00

% Moisture:
Basis: Wet Weight

Seq Number: 3142203

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	11.13.2020 05:42	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	11.13.2020 05:42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.13.2020 05:42	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.13.2020 05:42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-130	11.13.2020 05:42	
o-Terphenyl	84-15-1	92	%	70-130	11.13.2020 05:42	



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **T-4 0-1'**
Lab Sample Id: 677690-008

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 11.14.2020 07:00

% Moisture:
Basis: Wet Weight

Seq Number: 3142330

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	11.14.2020 14:38	U	1
Toluene	108-88-3	0.00396	0.00201	mg/kg	11.14.2020 14:38		1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	11.14.2020 14:38	U	1
m,p-Xylenes	179601-23-1	0.0586	0.00402	mg/kg	11.14.2020 14:38		1
o-Xylene	95-47-6	0.0282	0.00201	mg/kg	11.14.2020 14:38		1
Total Xylenes	1330-20-7	0.0868	0.00201	mg/kg	11.14.2020 14:38		1
Total BTEX		0.0908	0.00201	mg/kg	11.14.2020 14:38		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	121	%	70-130	11.14.2020 14:38	
1,4-Difluorobenzene	540-36-3	91	%	70-130	11.14.2020 14:38	



Certificate of Analytical Results 677690

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: T-4 2'
Lab Sample Id: 677690-009

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

Analyst: CHE

Date Prep: 11.12.2020 19:10

% Moisture:
Basis: Wet Weight

Seq Number: 3142168

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.68	4.99	mg/kg	11.13.2020 09:16		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 11.12.2020 11:00

% Moisture:
Basis: Wet Weight

Seq Number: 3142203

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	11.13.2020 06:03	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	11.13.2020 06:03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.13.2020 06:03	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	11.13.2020 06:03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-130	11.13.2020 06:03	
o-Terphenyl	84-15-1	83	%	70-130	11.13.2020 06:03	



Certificate of Analytical Results 677690

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **T-4 2'**
Lab Sample Id: 677690-009

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 11.14.2020 07:00

% Moisture:
Basis: Wet Weight

Seq Number: 3142330

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	11.14.2020 14:58	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	11.14.2020 14:58	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	11.14.2020 14:58	U	1
m,p-Xylenes	179601-23-1	0.00824	0.00398	mg/kg	11.14.2020 14:58		1
o-Xylene	95-47-6	0.00657	0.00199	mg/kg	11.14.2020 14:58		1
Total Xylenes	1330-20-7	0.0148	0.00199	mg/kg	11.14.2020 14:58		1
Total BTEX		0.0148	0.00199	mg/kg	11.14.2020 14:58		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	90	%	70-130	11.14.2020 14:58	
4-Bromofluorobenzene	460-00-4	110	%	70-130	11.14.2020 14:58	



Certificate of Analytical Results 677690

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **T-4 3'**
Lab Sample Id: 677690-010

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

Analyst: CHE

Date Prep: 11.12.2020 19:10

% Moisture:
Basis: Wet Weight

Seq Number: 3142168

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	775	49.7	mg/kg	11.13.2020 03:03	X	10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 11.12.2020 11:00

% Moisture:
Basis: Wet Weight

Seq Number: 3142203

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	11.13.2020 06:25	U	1
Diesel Range Organics	C10C28DRO	<49.8	49.8	mg/kg	11.13.2020 06:25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	11.13.2020 06:25	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	11.13.2020 06:25	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	101	%	70-130	11.13.2020 06:25		
o-Terphenyl	84-15-1	89	%	70-130	11.13.2020 06:25		



Certificate of Analytical Results 677690

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **T-4 3'**
Lab Sample Id: 677690-010

Matrix: Soil
Date Collected: 11.11.2020 00:00

Date Received: 11.12.2020 10:51

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 11.14.2020 07:00

% Moisture:
Basis: Wet Weight

Seq Number: 3142330

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	11.14.2020 15:19	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	11.14.2020 15:19	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	11.14.2020 15:19	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	11.14.2020 15:19	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	11.14.2020 15:19	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	11.14.2020 15:19	U	1
Total BTEX		<0.00199	0.00199	mg/kg	11.14.2020 15:19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	11.14.2020 15:19	
4-Bromofluorobenzene	460-00-4	108	%	70-130	11.14.2020 15:19	



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. **ND** Not Detected.

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



COG Operating LLC
Myox 28 State Com #006H (9/21/20)

Analytical Method: Chloride by EPA 300

Seq Number: 3142168

MB Sample Id: 7715104-1-BLK

Matrix: Solid

LCS Sample Id: 7715104-1-BKS

Prep Method: E300P

Date Prep: 11.12.2020

LCSD Sample Id: 7715104-1-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	262	105	262	105	90-110	0	20	mg/kg	11.13.2020 01:39	

Analytical Method: Chloride by EPA 300

Seq Number: 3142168

Parent Sample Id: 677689-010

Matrix: Soil

MS Sample Id: 677689-010 S

Prep Method: E300P

Date Prep: 11.12.2020

MSD Sample Id: 677689-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	18.9	251	279	104	279	104	90-110	0	20	mg/kg	11.13.2020 08:44	

Analytical Method: Chloride by EPA 300

Seq Number: 3142168

Parent Sample Id: 677690-010

Matrix: Soil

MS Sample Id: 677690-010 S

Prep Method: E300P

Date Prep: 11.12.2020

MSD Sample Id: 677690-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	775	2490	3540	111	3550	111	90-110	0	20	mg/kg	11.13.2020 03:09	X

Analytical Method: TPH By SW8015 Mod

Seq Number: 3142203

MB Sample Id: 7715107-1-BLK

Matrix: Solid

LCS Sample Id: 7715107-1-BKS

Prep Method: SW8015P

Date Prep: 11.12.2020

LCSD Sample Id: 7715107-1-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	<50.0	1000	952	95	913	91	70-130	4	20	mg/kg	11.12.2020 21:42	
Diesel Range Organics	<50.0	1000	909	91	837	84	70-130	8	20	mg/kg	11.12.2020 21:42	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	90		111		100		70-130	%	11.12.2020 21:42
o-Terphenyl	84		96		87		70-130	%	11.12.2020 21:42

Analytical Method: TPH By SW8015 Mod

Seq Number: 3142203

Matrix: Solid

MB Sample Id: 7715107-1-BLK

Prep Method: SW8015P

Date Prep: 11.12.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	11.12.2020 21:20	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



COG Operating LLC
Myox 28 State Com #006H (9/21/20)

Analytical Method: TPH By SW8015 Mod

Seq Number: 3142203

Parent Sample Id: 677689-001

Matrix: Soil

MS Sample Id: 677689-001 S

Prep Method: SW8015P

Date Prep: 11.12.2020

MSD Sample Id: 677689-001 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	<50.0	999	964	96	939	94	70-130	3	20	mg/kg	11.12.2020 22:48	
Diesel Range Organics	1150	999	2010	86	2030	88	70-130	1	20	mg/kg	11.12.2020 22:48	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		103		70-130	%	11.12.2020 22:48
o-Terphenyl	82		85		70-130	%	11.12.2020 22:48

Analytical Method: BTEX by EPA 8021B

Seq Number: 3142330

MB Sample Id: 7715232-1-BLK

Matrix: Solid

LCS Sample Id: 7715232-1-BKS

Prep Method: SW5035A

Date Prep: 11.14.2020

LCSD Sample Id: 7715232-1-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	0.0770	77	0.0765	77	70-130	1	35	mg/kg	11.14.2020 08:46	
Toluene	<0.00200	0.100	0.0796	80	0.0809	81	70-130	2	35	mg/kg	11.14.2020 08:46	
Ethylbenzene	<0.00200	0.100	0.0857	86	0.0880	88	70-130	3	35	mg/kg	11.14.2020 08:46	
m,p-Xylenes	<0.00400	0.200	0.165	83	0.171	86	70-130	4	35	mg/kg	11.14.2020 08:46	
o-Xylene	<0.00200	0.100	0.0818	82	0.0853	85	70-130	4	35	mg/kg	11.14.2020 08:46	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		100		99		70-130	%	11.14.2020 08:46
4-Bromofluorobenzene	104		96		99		70-130	%	11.14.2020 08:46

Analytical Method: BTEX by EPA 8021B

Seq Number: 3142442

MB Sample Id: 7715327-1-BLK

Matrix: Solid

LCS Sample Id: 7715327-1-BKS

Prep Method: SW5035A

Date Prep: 11.16.2020

LCSD Sample Id: 7715327-1-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	0.0813	81	0.0842	84	70-130	4	35	mg/kg	11.16.2020 16:06	
Toluene	<0.00200	0.100	0.0846	85	0.0887	89	70-130	5	35	mg/kg	11.16.2020 16:06	
Ethylbenzene	<0.00200	0.100	0.0930	93	0.0976	98	70-130	5	35	mg/kg	11.16.2020 16:06	
m,p-Xylenes	<0.00400	0.200	0.179	90	0.190	95	70-130	6	35	mg/kg	11.16.2020 16:06	
o-Xylene	<0.00200	0.100	0.0896	90	0.0950	95	70-130	6	35	mg/kg	11.16.2020 16:06	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	93		100		101		70-130	%	11.16.2020 16:06
4-Bromofluorobenzene	111		99		99		70-130	%	11.16.2020 16:06

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



COG Operating LLC
Myox 28 State Com #006H (9/21/20)

Analytical Method: BTEX by EPA 8021B

Seq Number: 3142330

Parent Sample Id: 677690-003

Matrix: Soil

MS Sample Id: 677690-003 S

Prep Method: SW5035A

Date Prep: 11.14.2020

MSD Sample Id: 677690-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0732	72	0.0571	57	70-130	25	35	mg/kg	11.14.2020 09:27	X
Toluene	<0.00202	0.101	0.0747	74	0.0523	53	70-130	35	35	mg/kg	11.14.2020 09:27	X
Ethylbenzene	<0.00202	0.101	<0.00202	0	0.0541	54	70-130	200	35	mg/kg	11.14.2020 09:27	XF
m,p-Xylenes	<0.00403	0.202	<0.00403	0	0.0947	48	70-130	200	35	mg/kg	11.14.2020 09:27	XF
o-Xylene	<0.00202	0.101	<0.00202	0	0.0496	50	70-130	200	35	mg/kg	11.14.2020 09:27	XF

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		100		70-130	%	11.14.2020 09:27
4-Bromofluorobenzene	0	**	94		70-130	%	11.14.2020 09:27

Analytical Method: BTEX by EPA 8021B

Seq Number: 3142442

Parent Sample Id: 677690-001

Matrix: Soil

MS Sample Id: 677690-001 S

Prep Method: SW5035A

Date Prep: 11.16.2020

MSD Sample Id: 677690-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0376	38	0.0639	64	70-130	52	35	mg/kg	11.16.2020 16:47	XF
Toluene	<0.00200	0.100	0.0432	43	0.0684	69	70-130	45	35	mg/kg	11.16.2020 16:47	XF
Ethylbenzene	<0.00200	0.100	0.0555	56	0.0759	76	70-130	31	35	mg/kg	11.16.2020 16:47	X
m,p-Xylenes	<0.00400	0.200	0.103	52	0.148	74	70-130	36	35	mg/kg	11.16.2020 16:47	XF
o-Xylene	<0.00200	0.100	0.0534	53	0.0747	75	70-130	33	35	mg/kg	11.16.2020 16:47	X

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		99		70-130	%	11.16.2020 16:47
4-Bromofluorobenzene	92		104		70-130	%	11.16.2020 16:47

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



One Concho Center/600/Illinois
Avenue/Midland, Texas
Tel (432) 683-7443

Client Name: COG
Site Manager: Ike Tavarez itavarez@concho.com
Robert Grubbs Jr rgrubbs@concho.com

Project Name: Myox 28 State Com #006H (9/21/20)

Project Location: (county, state) Eddy County, NM
Project #:

Invoice to: COG

Receiving Laboratory: Xenco
Sampler Signature: Robert Grubbs Jr

Comments:

LAB # (USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX			PRESERVATIVE METHOD				# CONTAINERS	FILTERED (Y/N)	
		YEAR: 2020		WATER	SOIL		HCL	HNO ₃	ICE				
		DATE	TIME										
	T-2 4'	11/11/2020			X				X			1	
	T-2 5'	11/11/2020			X				X			1	
	T-2 6'	11/11/2020			X				X			1	
	T-3 1'	11/11/2020			X				X			1	
	T-3 2'	11/11/2020			X				X			1	
	T-3 3'	11/11/2020			X				X			1	
	T-3 4'	11/11/2020			X				X			1	
	T-4 1'	11/11/2020			X				X			1	
	T-4 2'	11/11/2020			X				X			1	
	T-4 3'	11/11/2020			X				X			1	

TPH TX1005 (Ext to C35)

BTEX 8021B

TPH 8015M (GRO - DRO - MRO)

Chloride

Hold

Relinquished by: Robert Grubbs Jr
Date: 11/12/2020
Time: 1051

Received by: [Signature]
Date: 11/12/2020
Time: 1051

LAB USE ONLY

REMARKS:

X

RUSH: Same Day 24 hr 48 hr 72 hr

Sample Temperature

Rush Charges Authorized

-0.5/0

Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

ORIGINAL COPY

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC

Date/ Time Received: 11.12.2020 10.51.00 AM

Work Order #: 677690

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	0
#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: 11.12.2020

Checklist reviewed by:



Jessica Kramer

Date: 11.13.2020

Certificate of Analysis Summary 677719

COG Operating LLC, Artesia, NM

Project Name: Myox 28 State Com #006H (9/21/20)

Project Id:

Date Received in Lab: Thu 11.12.2020 10:51

Contact: Ike Tavaréz

Report Date: 11.23.2020 11:53

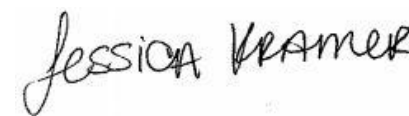
Project Location: Eddy County, NM

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i> <i>Field Id:</i> <i>Depth:</i> <i>Matrix:</i> <i>Sampled:</i>	677719-001 Overspray-1 0-0.5' SOIL 11.11.2020 00:00	677719-002 Overspray--1 0.5'-1' SOIL 11.11.2020 00:00	677719-003 Overspray--2 0-0.5' SOIL 11.11.2020 00:00	677719-004 Overspray--2 0.5' -1' SOIL 11.11.2020 00:00	677719-005 Overspray--3 0-0.5' SOIL 11.11.2020 00:00	677719-006 Overspray--3 0.5'-1' SOIL 11.11.2020 00:00
BTEX by EPA 8021B	<i>Extracted:</i> <i>Analyzed:</i> <i>Units/RL:</i>	11.14.2020 07:00 11.14.2020 15:39 mg/kg RL	11.14.2020 07:00 11.14.2020 16:00 mg/kg RL	11.14.2020 07:00 11.14.2020 17:24 mg/kg RL	11.14.2020 07:00 11.14.2020 17:44 mg/kg RL	11.14.2020 07:00 11.14.2020 18:05 mg/kg RL	11.14.2020 07:00 11.14.2020 18:25 mg/kg RL
Benzene		<0.00198 0.00198	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198
Toluene		0.00995 0.00198	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198
Ethylbenzene		<0.00198 0.00198	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198
m,p-Xylenes		0.230 0.00396	0.0192 0.00399	<0.00402 0.00402	<0.00400 0.00400	<0.00398 0.00398	<0.00397 0.00397
o-Xylene		0.0961 0.00198	0.0296 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198
Total Xylenes		0.326 0.00198	0.0488 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198
Total BTEX		0.336 0.00198	0.0488 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198
Chloride by EPA 300	<i>Extracted:</i> <i>Analyzed:</i> <i>Units/RL:</i>	11.12.2020 19:10 11.13.2020 03:19 mg/kg RL	11.12.2020 19:10 11.13.2020 09:21 mg/kg RL	11.12.2020 19:10 11.13.2020 03:40 mg/kg RL	11.12.2020 19:10 11.13.2020 03:46 mg/kg RL	11.12.2020 19:10 11.13.2020 03:51 mg/kg RL	11.12.2020 19:10 11.13.2020 03:56 mg/kg RL
Chloride		11.2 4.99	38.4 5.04	12.7 5.01	13.0 5.00	25.9 5.00	46.5 25.0
TPH By SW8015 Mod	<i>Extracted:</i> <i>Analyzed:</i> <i>Units/RL:</i>	11.12.2020 16:00 11.13.2020 06:03 mg/kg RL	11.12.2020 16:00 11.13.2020 07:01 mg/kg RL	11.12.2020 16:00 11.13.2020 07:21 mg/kg RL	11.12.2020 16:00 11.13.2020 07:40 mg/kg RL	11.12.2020 16:00 11.13.2020 07:59 mg/kg RL	11.12.2020 16:00 11.13.2020 08:18 mg/kg RL
Gasoline Range Hydrocarbons		83.6 50.0	<49.9 49.9	<49.8 49.8	<49.9 49.9	<50.0 50.0	<50.0 50.0
Diesel Range Organics		220 50.0	99.6 49.9	<49.8 49.8	<49.9 49.9	<50.0 50.0	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.9 49.9	<49.8 49.8	<49.9 49.9	<50.0 50.0	<50.0 50.0
Total TPH		304 50.0	99.6 49.9	<49.8 49.8	<49.9 49.9	<50.0 50.0	<50.0 50.0

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Certificate of Analysis Summary 677719

COG Operating LLC, Artesia, NM

Project Name: Myox 28 State Com #006H (9/21/20)

Project Id:

Date Received in Lab: Thu 11.12.2020 10:51

Contact: Ike Tavaréz

Report Date: 11.23.2020 11:53

Project Location: Eddy County, NM

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i> <i>Field Id:</i> <i>Depth:</i> <i>Matrix:</i> <i>Sampled:</i>	677719-007 Overspray--4 0-0.5'	677719-008 Overspray--4 0.5' -1	677719-009 Overspray--5 0-0.5'	677719-010 Overspray--5 0.5'-1'	677719-011 Overspray--6 0-0.5'	677719-012 Overspray--6 0.5'-1'
		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		11.11.2020 00:00	11.11.2020 00:00	11.11.2020 00:00	11.11.2020 00:00	11.11.2020 00:00	11.11.2020 00:00
BTEX by EPA 8021B	<i>Extracted:</i> <i>Analyzed:</i> <i>Units/RL:</i>	11.14.2020 07:00 11.14.2020 18:46 mg/kg RL	11.14.2020 07:00 11.14.2020 19:06 mg/kg RL	11.14.2020 07:00 11.14.2020 19:27 mg/kg RL	11.14.2020 07:00 11.14.2020 19:47 mg/kg RL	11.14.2020 07:00 11.14.2020 20:08 mg/kg RL	11.14.2020 07:00 11.14.2020 20:28 mg/kg RL
Benzene		<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200
Toluene		<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200
Ethylbenzene		<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200
m,p-Xylenes		<0.00400 0.00400	<0.00398 0.00398	<0.00403 0.00403	<0.00404 0.00404	<0.00398 0.00398	<0.00399 0.00399
o-Xylene		<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200
Total Xylenes		<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200
Total BTEX		<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i> <i>Analyzed:</i> <i>Units/RL:</i>	11.12.2020 19:10 11.13.2020 04:01 mg/kg RL	11.12.2020 19:10 11.13.2020 04:07 mg/kg RL	11.12.2020 19:10 11.13.2020 04:12 mg/kg RL	11.13.2020 10:00 11.13.2020 10:52 mg/kg RL	11.13.2020 10:00 11.13.2020 11:08 mg/kg RL	11.13.2020 10:00 11.13.2020 11:13 mg/kg RL
Chloride		10.1 4.98	8.06 4.98	8.35 4.98	10.7 4.99	9.29 4.98	12.8 4.96
TPH By SW8015 Mod	<i>Extracted:</i> <i>Analyzed:</i> <i>Units/RL:</i>	11.12.2020 16:00 11.13.2020 08:38 mg/kg RL	11.12.2020 16:00 11.13.2020 08:57 mg/kg RL	11.12.2020 16:00 11.13.2020 09:17 mg/kg RL	11.12.2020 16:00 11.13.2020 09:36 mg/kg RL	11.12.2020 16:00 11.13.2020 09:55 mg/kg RL	11.12.2020 16:00 11.13.2020 10:15 mg/kg RL
Gasoline Range Hydrocarbons		<49.9 49.9	<49.8 49.8	<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.9 49.9
Diesel Range Organics		<49.9 49.9	<49.8 49.8	76.4 50.0	<50.0 50.0	<49.9 49.9	<49.9 49.9
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<49.8 49.8	<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.9 49.9
Total TPH		<49.9 49.9	<49.8 49.8	76.4 50.0	<50.0 50.0	<49.9 49.9	<49.9 49.9

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Analytical Report 677719

for

COG Operating LLC

Project Manager: Ike Tavaréz

Myox 28 State Com #006H (9/21/20)

11.23.2020

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



11.23.2020

Project Manager: **Ike Tavaréz**

COG Operating LLC

2407 Pecos Avenue

Artesia, NM 88210

Reference: Eurofins Xenco, LLC Report No(s): **677719**

Myox 28 State Com #006H (9/21/20)

Project Address: Eddy County, NM

Ike Tavaréz:

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 Eurofins Xenco, LLC Report Number(s) 677719. 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 Eurofins Xenco, LLC. 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. 677719 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 Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads "Jessica Kramer".

Jessica Kramer

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

**Sample Cross Reference 677719****COG Operating LLC, Artesia, NM**

Myox 28 State Com #006H (9/21/20)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Overspray-1 0-0.5'	S	11.11.2020 00:00		677719-001
Overspray--1 0.5'-1'	S	11.11.2020 00:00		677719-002
Overspray--2 0-0.5'	S	11.11.2020 00:00		677719-003
Overspray--2 0.5' -1'	S	11.11.2020 00:00		677719-004
Overspray--3 0-0.5'	S	11.11.2020 00:00		677719-005
Overspray--3 0.5'-1'	S	11.11.2020 00:00		677719-006
Overspray--4 0-0.5'	S	11.11.2020 00:00		677719-007
Overspray--4 0.5' -1	S	11.11.2020 00:00		677719-008
Overspray--5 0-0.5'	S	11.11.2020 00:00		677719-009
Overspray--5 0.5'-1'	S	11.11.2020 00:00		677719-010
Overspray--6 0-0.5'	S	11.11.2020 00:00		677719-011
Overspray--6 0.5'-1'	S	11.11.2020 00:00		677719-012



CASE NARRATIVE

Client Name: COG Operating LLC

Project Name: Myox 28 State Com #006H (9/21/20)

Project ID:
Work Order Number(s): 677719

Report Date: 11.23.2020
Date Received: 11.12.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3142330 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered below QC limits. Matrix interferences is suspected.

Samples affected are: 677690-003 S.



Certificate of Analytical Results 677719

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **Overspray-1 0-0.5'**

Matrix: Soil

Date Received: 11.12.2020 10:51

Lab Sample Id: 677719-001

Date Collected: 11.11.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

Analyst: CHE

Date Prep: 11.12.2020 19:10

% Moisture:

Seq Number: 3142168

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11.2	4.99	mg/kg	11.13.2020 03:19		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 11.12.2020 16:00

% Moisture:

Seq Number: 3142211

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	83.6	50.0	mg/kg	11.13.2020 06:03		1
Diesel Range Organics	C10C28DRO	220	50.0	mg/kg	11.13.2020 06:03		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.13.2020 06:03	U	1
Total TPH	PHC635	304	50.0	mg/kg	11.13.2020 06:03		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	101	%	70-130	11.13.2020 06:03		
o-Terphenyl	84-15-1	113	%	70-130	11.13.2020 06:03		



Certificate of Analytical Results 677719

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **Overspray-1 0-0.5'**

Matrix: Soil

Date Received: 11.12.2020 10:51

Lab Sample Id: 677719-001

Date Collected: 11.11.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 11.14.2020 07:00

% Moisture:

Seq Number: 3142330

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	11.14.2020 15:39	U	1
Toluene	108-88-3	0.00995	0.00198	mg/kg	11.14.2020 15:39		1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	11.14.2020 15:39	U	1
m,p-Xylenes	179601-23-1	0.230	0.00396	mg/kg	11.14.2020 15:39		1
o-Xylene	95-47-6	0.0961	0.00198	mg/kg	11.14.2020 15:39		1
Total Xylenes	1330-20-7	0.326	0.00198	mg/kg	11.14.2020 15:39		1
Total BTEX		0.336	0.00198	mg/kg	11.14.2020 15:39		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	85	%	70-130	11.14.2020 15:39		
4-Bromofluorobenzene	460-00-4	121	%	70-130	11.14.2020 15:39		



Certificate of Analytical Results 677719

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **Overspray--1 0.5'-1'**

Matrix: Soil

Date Received: 11.12.2020 10:51

Lab Sample Id: 677719-002

Date Collected: 11.11.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

Analyst: CHE

Date Prep: 11.12.2020 19:10

% Moisture:

Seq Number: 3142168

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	38.4	5.04	mg/kg	11.13.2020 09:21		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 11.12.2020 16:00

% Moisture:

Seq Number: 3142211

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	11.13.2020 07:01	U	1
Diesel Range Organics	C10C28DRO	99.6	49.9	mg/kg	11.13.2020 07:01		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.13.2020 07:01	U	1
Total TPH	PHC635	99.6	49.9	mg/kg	11.13.2020 07:01		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	90	%	70-130	11.13.2020 07:01		
o-Terphenyl	84-15-1	102	%	70-130	11.13.2020 07:01		



Certificate of Analytical Results 677719

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **Overspray--1 0.5'-1'**

Matrix: Soil

Date Received: 11.12.2020 10:51

Lab Sample Id: 677719-002

Date Collected: 11.11.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 11.14.2020 07:00

% Moisture:

Seq Number: 3142330

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.14.2020 16:00	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.14.2020 16:00	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.14.2020 16:00	U	1
m,p-Xylenes	179601-23-1	0.0192	0.00399	mg/kg	11.14.2020 16:00		1
o-Xylene	95-47-6	0.0296	0.00200	mg/kg	11.14.2020 16:00		1
Total Xylenes	1330-20-7	0.0488	0.00200	mg/kg	11.14.2020 16:00		1
Total BTEX		0.0488	0.00200	mg/kg	11.14.2020 16:00		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	89	%	70-130	11.14.2020 16:00	
4-Bromofluorobenzene	460-00-4	103	%	70-130	11.14.2020 16:00	



Certificate of Analytical Results 677719

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **Overspray--2 0-0.5'**

Matrix: Soil

Date Received: 11.12.2020 10:51

Lab Sample Id: 677719-003

Date Collected: 11.11.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

Analyst: CHE

Date Prep: 11.12.2020 19:10

% Moisture:

Seq Number: 3142168

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12.7	5.01	mg/kg	11.13.2020 03:40		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 11.12.2020 16:00

% Moisture:

Seq Number: 3142211

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	11.13.2020 07:21	U	1
Diesel Range Organics	C10C28DRO	<49.8	49.8	mg/kg	11.13.2020 07:21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	11.13.2020 07:21	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	11.13.2020 07:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-130	11.13.2020 07:21	
o-Terphenyl	84-15-1	95	%	70-130	11.13.2020 07:21	



Certificate of Analytical Results 677719

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **Overspray--2 0-0.5'**

Matrix: Soil

Date Received: 11.12.2020 10:51

Lab Sample Id: 677719-003

Date Collected: 11.11.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 11.14.2020 07:00

% Moisture:

Seq Number: 3142330

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	11.14.2020 17:24	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	11.14.2020 17:24	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	11.14.2020 17:24	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	11.14.2020 17:24	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	11.14.2020 17:24	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	11.14.2020 17:24	U	1
Total BTEX		<0.00201	0.00201	mg/kg	11.14.2020 17:24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	11.14.2020 17:24	
4-Bromofluorobenzene	460-00-4	107	%	70-130	11.14.2020 17:24	



Certificate of Analytical Results 677719

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **Overspray--2 0.5' -1'**

Matrix: Soil

Date Received: 11.12.2020 10:51

Lab Sample Id: 677719-004

Date Collected: 11.11.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

Analyst: CHE

Date Prep: 11.12.2020 19:10

% Moisture:

Seq Number: 3142168

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	13.0	5.00	mg/kg	11.13.2020 03:46		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 11.12.2020 16:00

% Moisture:

Seq Number: 3142211

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	11.13.2020 07:40	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	11.13.2020 07:40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.13.2020 07:40	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	11.13.2020 07:40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-130	11.13.2020 07:40	
o-Terphenyl	84-15-1	99	%	70-130	11.13.2020 07:40	



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **Overspray--2 0.5' -1'**

Matrix: Soil

Date Received: 11.12.2020 10:51

Lab Sample Id: 677719-004

Date Collected: 11.11.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 11.14.2020 07:00

% Moisture:

Seq Number: 3142330

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.14.2020 17:44	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.14.2020 17:44	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.14.2020 17:44	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	11.14.2020 17:44	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	11.14.2020 17:44	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	11.14.2020 17:44	U	1
Total BTEX		<0.00200	0.00200	mg/kg	11.14.2020 17:44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	11.14.2020 17:44	
1,4-Difluorobenzene	540-36-3	103	%	70-130	11.14.2020 17:44	



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **Overspray--3 0-0.5'**

Matrix: Soil

Date Received: 11.12.2020 10:51

Lab Sample Id: 677719-005

Date Collected: 11.11.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

Analyst: CHE

Date Prep: 11.12.2020 19:10

% Moisture:

Seq Number: 3142168

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	25.9	5.00	mg/kg	11.13.2020 03:51		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 11.12.2020 16:00

% Moisture:

Seq Number: 3142211

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	11.13.2020 07:59	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	11.13.2020 07:59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.13.2020 07:59	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.13.2020 07:59	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	87	%	70-130	11.13.2020 07:59		
o-Terphenyl	84-15-1	98	%	70-130	11.13.2020 07:59		



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **Overspray--3 0-0.5'**

Matrix: Soil

Date Received: 11.12.2020 10:51

Lab Sample Id: 677719-005

Date Collected: 11.11.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 11.14.2020 07:00

% Moisture:

Seq Number: 3142330

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	11.14.2020 18:05	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	11.14.2020 18:05	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	11.14.2020 18:05	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	11.14.2020 18:05	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	11.14.2020 18:05	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	11.14.2020 18:05	U	1
Total BTEX		<0.00199	0.00199	mg/kg	11.14.2020 18:05	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	70-130	11.14.2020 18:05		
4-Bromofluorobenzene	460-00-4	104	%	70-130	11.14.2020 18:05		



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **Overspray--3 0.5'-1'**

Matrix: Soil

Date Received: 11.12.2020 10:51

Lab Sample Id: 677719-006

Date Collected: 11.11.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

Analyst: CHE

Date Prep: 11.12.2020 19:10

% Moisture:

Seq Number: 3142168

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	46.5	25.0	mg/kg	11.13.2020 03:56		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 11.12.2020 16:00

% Moisture:

Seq Number: 3142211

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	11.13.2020 08:18	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	11.13.2020 08:18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.13.2020 08:18	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.13.2020 08:18	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	89	%	70-130	11.13.2020 08:18		
o-Terphenyl	84-15-1	104	%	70-130	11.13.2020 08:18		



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **Overspray--3 0.5'-1'**

Matrix: Soil

Date Received: 11.12.2020 10:51

Lab Sample Id: 677719-006

Date Collected: 11.11.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 11.14.2020 07:00

% Moisture:

Seq Number: 3142330

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	11.14.2020 18:25	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	11.14.2020 18:25	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	11.14.2020 18:25	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	11.14.2020 18:25	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	11.14.2020 18:25	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	11.14.2020 18:25	U	1
Total BTEX		<0.00198	0.00198	mg/kg	11.14.2020 18:25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	108	%	70-130	11.14.2020 18:25	
1,4-Difluorobenzene	540-36-3	102	%	70-130	11.14.2020 18:25	



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **Overspray--4 0-0.5'**

Matrix: Soil

Date Received: 11.12.2020 10:51

Lab Sample Id: 677719-007

Date Collected: 11.11.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

Analyst: CHE

Date Prep: 11.12.2020 19:10

% Moisture:

Seq Number: 3142168

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	10.1	4.98	mg/kg	11.13.2020 04:01		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 11.12.2020 16:00

% Moisture:

Seq Number: 3142211

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	11.13.2020 08:38	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	11.13.2020 08:38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.13.2020 08:38	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	11.13.2020 08:38	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	92	%	70-130	11.13.2020 08:38		
o-Terphenyl	84-15-1	102	%	70-130	11.13.2020 08:38		



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **Overspray--4 0-0.5'**

Matrix: Soil

Date Received: 11.12.2020 10:51

Lab Sample Id: 677719-007

Date Collected: 11.11.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 11.14.2020 07:00

% Moisture:

Seq Number: 3142330

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.14.2020 18:46	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.14.2020 18:46	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.14.2020 18:46	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	11.14.2020 18:46	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	11.14.2020 18:46	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	11.14.2020 18:46	U	1
Total BTEX		<0.00200	0.00200	mg/kg	11.14.2020 18:46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	70-130	11.14.2020 18:46	
1,4-Difluorobenzene	540-36-3	102	%	70-130	11.14.2020 18:46	



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **Overspray--4 0.5' -1**

Matrix: Soil

Date Received: 11.12.2020 10:51

Lab Sample Id: 677719-008

Date Collected: 11.11.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

Analyst: CHE

Date Prep: 11.12.2020 19:10

% Moisture:

Seq Number: 3142168

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.06	4.98	mg/kg	11.13.2020 04:07		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 11.12.2020 16:00

% Moisture:

Seq Number: 3142211

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	11.13.2020 08:57	U	1
Diesel Range Organics	C10C28DRO	<49.8	49.8	mg/kg	11.13.2020 08:57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	11.13.2020 08:57	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	11.13.2020 08:57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-130	11.13.2020 08:57	
o-Terphenyl	84-15-1	96	%	70-130	11.13.2020 08:57	



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **Overspray--4 0.5' -1**

Matrix: Soil

Date Received: 11.12.2020 10:51

Lab Sample Id: 677719-008

Date Collected: 11.11.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 11.14.2020 07:00

% Moisture:

Seq Number: 3142330

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	11.14.2020 19:06	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	11.14.2020 19:06	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	11.14.2020 19:06	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	11.14.2020 19:06	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	11.14.2020 19:06	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	11.14.2020 19:06	U	1
Total BTEX		<0.00199	0.00199	mg/kg	11.14.2020 19:06	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	70-130	11.14.2020 19:06		
1,4-Difluorobenzene	540-36-3	101	%	70-130	11.14.2020 19:06		



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **Overspray--5 0-0.5'**

Matrix: Soil

Date Received: 11.12.2020 10:51

Lab Sample Id: 677719-009

Date Collected: 11.11.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

Analyst: CHE

Date Prep: 11.12.2020 19:10

% Moisture:

Seq Number: 3142168

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.35	4.98	mg/kg	11.13.2020 04:12		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 11.12.2020 16:00

% Moisture:

Seq Number: 3142211

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	11.13.2020 09:17	U	1
Diesel Range Organics	C10C28DRO	76.4	50.0	mg/kg	11.13.2020 09:17		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.13.2020 09:17	U	1
Total TPH	PHC635	76.4	50.0	mg/kg	11.13.2020 09:17		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-130	11.13.2020 09:17	
o-Terphenyl	84-15-1	101	%	70-130	11.13.2020 09:17	



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **Overspray--5 0-0.5'**

Matrix: Soil

Date Received: 11.12.2020 10:51

Lab Sample Id: 677719-009

Date Collected: 11.11.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 11.14.2020 07:00

% Moisture:

Seq Number: 3142330

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	11.14.2020 19:27	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	11.14.2020 19:27	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	11.14.2020 19:27	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	11.14.2020 19:27	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	11.14.2020 19:27	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	11.14.2020 19:27	U	1
Total BTEX		<0.00202	0.00202	mg/kg	11.14.2020 19:27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	11.14.2020 19:27	
4-Bromofluorobenzene	460-00-4	104	%	70-130	11.14.2020 19:27	



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **Overspray--5 0.5'-1'**

Matrix: Soil

Date Received: 11.12.2020 10:51

Lab Sample Id: 677719-010

Date Collected: 11.11.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 11.13.2020 10:00

% Moisture:

Seq Number: 3142299

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	10.7	4.99	mg/kg	11.13.2020 10:52		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 11.12.2020 16:00

% Moisture:

Seq Number: 3142211

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	11.13.2020 09:36	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	11.13.2020 09:36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.13.2020 09:36	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.13.2020 09:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-130	11.13.2020 09:36	
o-Terphenyl	84-15-1	107	%	70-130	11.13.2020 09:36	



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **Overspray--5 0.5'-1'**

Matrix: Soil

Date Received: 11.12.2020 10:51

Lab Sample Id: 677719-010

Date Collected: 11.11.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 11.14.2020 07:00

% Moisture:

Seq Number: 3142330

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	11.14.2020 19:47	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	11.14.2020 19:47	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	11.14.2020 19:47	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	11.14.2020 19:47	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	11.14.2020 19:47	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	11.14.2020 19:47	U	1
Total BTEX		<0.00202	0.00202	mg/kg	11.14.2020 19:47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	11.14.2020 19:47	
4-Bromofluorobenzene	460-00-4	111	%	70-130	11.14.2020 19:47	



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **Overspray--6 0-0.5'**

Matrix: Soil

Date Received: 11.12.2020 10:51

Lab Sample Id: 677719-011

Date Collected: 11.11.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 11.13.2020 10:00

% Moisture:

Seq Number: 3142299

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9.29	4.98	mg/kg	11.13.2020 11:08		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 11.12.2020 16:00

% Moisture:

Seq Number: 3142211

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	11.13.2020 09:55	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	11.13.2020 09:55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.13.2020 09:55	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	11.13.2020 09:55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	91	%	70-130	11.13.2020 09:55		
o-Terphenyl	84-15-1	105	%	70-130	11.13.2020 09:55		



Certificate of Analytical Results 677719

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **Overspray--6 0-0.5'**

Matrix: Soil

Date Received: 11.12.2020 10:51

Lab Sample Id: 677719-011

Date Collected: 11.11.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 11.14.2020 07:00

% Moisture:

Seq Number: 3142330

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	11.14.2020 20:08	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	11.14.2020 20:08	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	11.14.2020 20:08	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	11.14.2020 20:08	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	11.14.2020 20:08	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	11.14.2020 20:08	U	1
Total BTEX		<0.00199	0.00199	mg/kg	11.14.2020 20:08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	108	%	70-130	11.14.2020 20:08	
1,4-Difluorobenzene	540-36-3	100	%	70-130	11.14.2020 20:08	



Certificate of Analytical Results 677719

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **Overspray--6 0.5'-1'**

Matrix: Soil

Date Received: 11.12.2020 10:51

Lab Sample Id: 677719-012

Date Collected: 11.11.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 11.13.2020 10:00

% Moisture:

Seq Number: 3142299

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12.8	4.96	mg/kg	11.13.2020 11:13		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 11.12.2020 16:00

% Moisture:

Seq Number: 3142211

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	11.13.2020 10:15	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	11.13.2020 10:15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.13.2020 10:15	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	11.13.2020 10:15	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	86	%	70-130	11.13.2020 10:15		
o-Terphenyl	84-15-1	99	%	70-130	11.13.2020 10:15		



Certificate of Analytical Results 677719

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **Overspray--6 0.5'-1'**

Matrix: Soil

Date Received: 11.12.2020 10:51

Lab Sample Id: 677719-012

Date Collected: 11.11.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 11.14.2020 07:00

% Moisture:

Seq Number: 3142330

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.14.2020 20:28	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.14.2020 20:28	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.14.2020 20:28	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	11.14.2020 20:28	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	11.14.2020 20:28	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	11.14.2020 20:28	U	1
Total BTEX		<0.00200	0.00200	mg/kg	11.14.2020 20:28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	11.14.2020 20:28	
4-Bromofluorobenzene	460-00-4	111	%	70-130	11.14.2020 20:28	



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. **ND** Not Detected.

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



COG Operating LLC
Myox 28 State Com #006H (9/21/20)

Analytical Method: Chloride by EPA 300

Seq Number: 3142168

MB Sample Id: 7715104-1-BLK

Matrix: Solid

LCS Sample Id: 7715104-1-BKS

Prep Method: E300P

Date Prep: 11.12.2020

LCSD Sample Id: 7715104-1-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	262	105	262	105	90-110	0	20	mg/kg	11.13.2020 01:39	

Analytical Method: Chloride by EPA 300

Seq Number: 3142299

MB Sample Id: 7715119-1-BLK

Matrix: Solid

LCS Sample Id: 7715119-1-BKS

Prep Method: E300P

Date Prep: 11.13.2020

LCSD Sample Id: 7715119-1-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	259	104	259	104	90-110	0	20	mg/kg	11.13.2020 10:41	

Analytical Method: Chloride by EPA 300

Seq Number: 3142168

Parent Sample Id: 677689-010

Matrix: Soil

MS Sample Id: 677689-010 S

Prep Method: E300P

Date Prep: 11.12.2020

MSD Sample Id: 677689-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	18.9	251	279	104	279	104	90-110	0	20	mg/kg	11.13.2020 08:44	

Analytical Method: Chloride by EPA 300

Seq Number: 3142168

Parent Sample Id: 677690-010

Matrix: Soil

MS Sample Id: 677690-010 S

Prep Method: E300P

Date Prep: 11.12.2020

MSD Sample Id: 677690-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	775	2490	3540	111	3550	111	90-110	0	20	mg/kg	11.13.2020 03:09	X

Analytical Method: Chloride by EPA 300

Seq Number: 3142299

Parent Sample Id: 677653-008

Matrix: Soil

MS Sample Id: 677653-008 S

Prep Method: E300P

Date Prep: 11.13.2020

MSD Sample Id: 677653-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	46.6	249	305	104	306	104	90-110	0	20	mg/kg	11.13.2020 12:11	

Analytical Method: Chloride by EPA 300

Seq Number: 3142299

Parent Sample Id: 677719-010

Matrix: Soil

MS Sample Id: 677719-010 S

Prep Method: E300P

Date Prep: 11.13.2020

MSD Sample Id: 677719-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	10.7	250	272	105	272	105	90-110	0	20	mg/kg	11.13.2020 10:57	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



COG Operating LLC
Myox 28 State Com #006H (9/21/20)

Analytical Method: TPH By SW8015 Mod

Seq Number: 3142211

MB Sample Id: 7715111-1-BLK

Matrix: Solid

LCS Sample Id: 7715111-1-BKS

Prep Method: SW8015P

Date Prep: 11.12.2020

LCSD Sample Id: 7715111-1-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	<50.0	1000	1040	104	1030	103	70-130	1	20	mg/kg	11.13.2020 05:25	
Diesel Range Organics	<50.0	1000	1030	103	1010	101	70-130	2	20	mg/kg	11.13.2020 05:25	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	86		119		116		70-130	%	11.13.2020 05:25
o-Terphenyl	104		128		129		70-130	%	11.13.2020 05:25

Analytical Method: TPH By SW8015 Mod

Seq Number: 3142211

Matrix: Solid

MB Sample Id: 7715111-1-BLK

Prep Method: SW8015P

Date Prep: 11.12.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	11.13.2020 05:06	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3142211

Matrix: Soil

Parent Sample Id: 677719-001

MS Sample Id: 677719-001 S

Prep Method: SW8015P

Date Prep: 11.12.2020

MSD Sample Id: 677719-001 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	83.6	996	981	90	905	82	70-130	8	20	mg/kg	11.13.2020 06:22	
Diesel Range Organics	220	996	1100	88	985	77	70-130	11	20	mg/kg	11.13.2020 06:22	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	114		94		70-130	%	11.13.2020 06:22
o-Terphenyl	111		95		70-130	%	11.13.2020 06:22

Analytical Method: BTEX by EPA 8021B

Seq Number: 3142330

Matrix: Solid

MB Sample Id: 7715232-1-BLK

LCS Sample Id: 7715232-1-BKS

Prep Method: SW5035A

Date Prep: 11.14.2020

LCSD Sample Id: 7715232-1-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	0.0770	77	0.0765	77	70-130	1	35	mg/kg	11.14.2020 08:46	
Toluene	<0.00200	0.100	0.0796	80	0.0809	81	70-130	2	35	mg/kg	11.14.2020 08:46	
Ethylbenzene	<0.00200	0.100	0.0857	86	0.0880	88	70-130	3	35	mg/kg	11.14.2020 08:46	
m,p-Xylenes	<0.00400	0.200	0.165	83	0.171	86	70-130	4	35	mg/kg	11.14.2020 08:46	
o-Xylene	<0.00200	0.100	0.0818	82	0.0853	85	70-130	4	35	mg/kg	11.14.2020 08:46	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		100		99		70-130	%	11.14.2020 08:46
4-Bromofluorobenzene	104		96		99		70-130	%	11.14.2020 08:46

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



COG Operating LLC
Myox 28 State Com #006H (9/21/20)

Analytical Method: BTEX by EPA 8021B

Seq Number: 3142330

Parent Sample Id: 677690-003

Matrix: Soil

MS Sample Id: 677690-003 S

Prep Method: SW5035A

Date Prep: 11.14.2020

MSD Sample Id: 677690-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0732	72	0.0571	57	70-130	25	35	mg/kg	11.14.2020 09:27	X
Toluene	<0.00202	0.101	0.0747	74	0.0523	53	70-130	35	35	mg/kg	11.14.2020 09:27	X
Ethylbenzene	<0.00202	0.101	<0.00202	0	0.0541	54	70-130	200	35	mg/kg	11.14.2020 09:27	XF
m,p-Xylenes	<0.00403	0.202	<0.00403	0	0.0947	48	70-130	200	35	mg/kg	11.14.2020 09:27	XF
o-Xylene	<0.00202	0.101	<0.00202	0	0.0496	50	70-130	200	35	mg/kg	11.14.2020 09:27	XF

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		100		70-130	%	11.14.2020 09:27
4-Bromofluorobenzene	0	**	94		70-130	%	11.14.2020 09:27

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



**One Concho Center/600/Illinois
Avenue/Midland, Texas
Tel (432) 683-7443**

677710

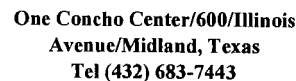
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Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC

Date/ Time Received: 11.12.2020 10.51.00 AM

Work Order #: 677719

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR-8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	0
#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?	Yes
#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: 11.12.2020

Checklist reviewed by:



Jessica Kramer

Date: 11.13.2020

Certificate of Analysis Summary 685691



COG Operating LLC, Artesia, NM

Project Name: Myox 28 State Com #006H (9/21/20)

Project Id:

Date Received in Lab: Fri 01.22.2021 11:08

Contact: Ike Tavaréz

Report Date: 01.25.2021 14:58

Project Location: Eddy County, NM

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i> <i>Field Id:</i> <i>Depth:</i> <i>Matrix:</i> <i>Sampled:</i>	685691-001 CS-1 North Sidewall SOIL 01.21.2021 00:00	685691-002 CS-1 South Sidewall SOIL 01.21.2021 00:00	685691-003 CS-1 East Sidewall SOIL 01.21.2021 00:00	685691-004 CS-1 West Sidewall SOIL 01.21.2021 00:00	685691-005 CS-1 Bottom Hole 1 1.5' SOIL 01.21.2021 00:00	685691-006 CS-1 Bottom Hole 2 1.5' SOIL 01.21.2021 00:00
BTEX by EPA 8021B	<i>Extracted:</i> <i>Analyzed:</i> <i>Units/RL:</i>	01.22.2021 16:45 01.24.2021 01:02 mg/kg RL	01.22.2021 16:45 01.24.2021 01:22 mg/kg RL	01.22.2021 16:45 01.24.2021 01:43 mg/kg RL	01.22.2021 16:45 01.24.2021 02:03 mg/kg RL	01.22.2021 16:45 01.24.2021 02:23 mg/kg RL	01.22.2021 16:45 01.24.2021 02:44 mg/kg RL
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<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	<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	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
m,p-Xylenes		<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<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	<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	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i> <i>Analyzed:</i> <i>Units/RL:</i>	01.22.2021 14:15 01.22.2021 14:57 mg/kg RL	01.22.2021 14:15 01.22.2021 15:13 mg/kg RL	01.22.2021 14:15 01.22.2021 15:18 mg/kg RL	01.22.2021 14:15 01.22.2021 15:23 mg/kg RL	01.22.2021 14:15 01.22.2021 15:29 mg/kg RL	01.22.2021 14:15 01.22.2021 15:44 mg/kg RL
Chloride		7.91 5.02	7.33 4.98	6.74 5.00	6.59 5.03	6.38 4.98	6.56 5.00
TPH By SW8015 Mod	<i>Extracted:</i> <i>Analyzed:</i> <i>Units/RL:</i>	01.22.2021 17:00 01.22.2021 23:13 mg/kg RL	01.22.2021 17:00 01.23.2021 00:09 mg/kg RL	01.22.2021 17:00 01.23.2021 00:28 mg/kg RL	01.22.2021 17:00 01.23.2021 00:46 mg/kg RL	01.22.2021 17:00 01.23.2021 01:05 mg/kg RL	01.22.2021 17:00 01.23.2021 01:24 mg/kg RL
Gasoline Range Hydrocarbons		<50.0 50.0	<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.9 49.9	<50.0 50.0
Diesel Range Organics		211 50.0	247 50.0	210 50.0	227 49.9	253 49.9	190 50.0
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.0 50.0	<50.0 50.0	<49.9 49.9	51.1 49.9	<50.0 50.0
Total TPH		211 50.0	247 50.0	210 50.0	227 49.9	304 49.9	190 50.0

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 685691



COG Operating LLC, Artesia, NM

Project Name: Myox 28 State Com #006H (9/21/20)

Project Id:

Date Received in Lab: Fri 01.22.2021 11:08

Contact: Ike Tavaréz

Report Date: 01.25.2021 14:58

Project Location: Eddy County, NM

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i> <i>Field Id:</i> <i>Depth:</i> <i>Matrix:</i> <i>Sampled:</i>	685691-007 CS-3 North Sidewall SOIL 01.21.2021 00:00	685691-008 CS-3 South Sidewall SOIL 01.21.2021 00:00	685691-009 CS-3 East Sidewall SOIL 01.21.2021 00:00	685691-010 CS-3 West Sidewall SOIL 01.21.2021 00:00	685691-011 CS-3 Bottom Hole 1 1.5' SOIL 01.21.2021 00:00	685691-012 CS-3 Bottom Hole 2 1.5' SOIL 01.21.2021 00:00
BTEX by EPA 8021B	<i>Extracted:</i> <i>Analyzed:</i> <i>Units/RL:</i>	01.22.2021 16:45 01.24.2021 03:04 mg/kg RL	01.22.2021 16:45 01.24.2021 03:25 mg/kg RL	01.22.2021 16:45 01.24.2021 04:47 mg/kg RL	01.22.2021 16:45 01.24.2021 05:07 mg/kg RL	01.22.2021 16:45 01.24.2021 05:27 mg/kg RL	01.22.2021 16:45 01.24.2021 05:48 mg/kg RL
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<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	<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	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
m,p-Xylenes		<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<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	<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	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i> <i>Analyzed:</i> <i>Units/RL:</i>	01.22.2021 14:15 01.22.2021 15:49 mg/kg RL	01.22.2021 14:15 01.22.2021 15:55 mg/kg RL	01.22.2021 14:15 01.22.2021 16:00 mg/kg RL	01.22.2021 14:15 01.22.2021 16:05 mg/kg RL	01.22.2021 14:15 01.22.2021 16:10 mg/kg RL	01.22.2021 14:15 01.22.2021 16:26 mg/kg RL
Chloride		137 25.3	129 25.3	137 25.0	139 25.1	131 24.8	6.79 4.97
TPH By SW8015 Mod	<i>Extracted:</i> <i>Analyzed:</i> <i>Units/RL:</i>	01.22.2021 17:00 01.23.2021 01:43 mg/kg RL	01.22.2021 17:00 01.23.2021 02:02 mg/kg RL	01.22.2021 17:00 01.23.2021 02:21 mg/kg RL	01.22.2021 17:00 01.23.2021 02:40 mg/kg RL	01.22.2021 17:00 01.23.2021 03:18 mg/kg RL	01.22.2021 17:00 01.23.2021 03:37 mg/kg RL
Gasoline Range Hydrocarbons		<49.9 49.9	<49.9 49.9	<49.8 49.8	<49.9 49.9	<50.0 50.0	<50.0 50.0
Diesel Range Organics		<49.9 49.9	<49.9 49.9	<49.8 49.8	<49.9 49.9	<50.0 50.0	205 50.0
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<49.9 49.9	<49.8 49.8	<49.9 49.9	<50.0 50.0	<50.0 50.0
Total TPH		<49.9 49.9	<49.9 49.9	<49.8 49.8	<49.9 49.9	<50.0 50.0	205 50.0

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 685691



COG Operating LLC, Artesia, NM

Project Name: Myox 28 State Com #006H (9/21/20)

Project Id:

Date Received in Lab: Fri 01.22.2021 11:08

Contact: Ike Tavaréz

Report Date: 01.25.2021 14:58

Project Location: Eddy County, NM

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	685691-013	685691-014	685691-015	685691-016	685691-017	685691-018
	<i>Field Id:</i>	CS-4 North Sidewall	CS-4 South Sidewall	CS-4 EastSidewall	CS-4 West Sidewall	CS-4 Bottom Hole 1 4'	CS-4 Bottom Hole 2 4'
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	01.21.2021 00:00	01.21.2021 00:00	01.21.2021 00:00	01.21.2021 00:00	01.21.2021 00:00	01.21.2021 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	01.22.2021 16:45	01.22.2021 16:45	01.22.2021 16:45	01.22.2021 16:45	01.22.2021 16:45	01.22.2021 16:45
	<i>Analyzed:</i>	01.24.2021 06:08	01.24.2021 06:29	01.24.2021 06:49	01.24.2021 07:09	01.24.2021 07:30	01.24.2021 07:50
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<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	<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	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
m,p-Xylenes		<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<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	<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	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i>	01.22.2021 14:15	01.22.2021 14:15	01.22.2021 14:15	01.23.2021 14:22	01.23.2021 14:22	01.23.2021 14:22
	<i>Analyzed:</i>	01.22.2021 16:31	01.22.2021 16:47	01.22.2021 16:52	01.23.2021 15:04	01.24.2021 11:50	01.24.2021 11:55
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		126 25.2	124 25.0	124 24.9	160 25.2	13.7 4.98	13.7 5.00
TPH By SW8015 Mod	<i>Extracted:</i>	01.22.2021 17:00	01.22.2021 17:00	01.22.2021 17:00	01.22.2021 17:00	01.22.2021 17:00	01.22.2021 17:00
	<i>Analyzed:</i>	01.23.2021 03:55	01.23.2021 04:14	01.23.2021 04:33	01.23.2021 04:52	01.23.2021 05:11	01.23.2021 05:30
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons		<50.0 50.0	<49.9 49.9	<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9
Diesel Range Organics		<50.0 50.0	<49.9 49.9	<49.9 49.9	<49.8 49.8	215 50.0	210 49.9
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.9 49.9	<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9
Total TPH		<50.0 50.0	<49.9 49.9	<49.9 49.9	<49.8 49.8	215 50.0	210 49.9

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Analytical Report 685691

for

COG Operating LLC

Project Manager: Ike Tavaréz

Myox 28 State Com #006H (9/21/20)

01.25.2021

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



01.25.2021

Project Manager: **Ike Tavaréz**

COG Operating LLC

2407 Pecos Avenue

Artesia, NM 88210

Reference: Eurofins Xenco, LLC Report No(s): **685691**

Myox 28 State Com #006H (9/21/20)

Project Address: Eddy County, NM

Ike Tavaréz:

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 Eurofins Xenco, LLC Report Number(s) 685691. 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 Eurofins Xenco, LLC. 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. 685691 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 Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads "Jessica Kramer".

Jessica Kramer

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Sample Cross Reference 685691

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
CS-1 North Sidewall	S	01.21.2021 00:00		685691-001
CS-1 South Sidewall	S	01.21.2021 00:00		685691-002
CS-1 East Sidewall	S	01.21.2021 00:00		685691-003
CS-1 West Sidewall	S	01.21.2021 00:00		685691-004
CS-1 Bottom Hole 1 1.5'	S	01.21.2021 00:00		685691-005
CS-1 Bottom Hole 2 1.5'	S	01.21.2021 00:00		685691-006
CS-3 North Sidewall	S	01.21.2021 00:00		685691-007
CS-3 South Sidewall	S	01.21.2021 00:00		685691-008
CS-3 East Sidewall	S	01.21.2021 00:00		685691-009
CS-3 West Sidewall	S	01.21.2021 00:00		685691-010
CS-3 Bottom Hole 1 1.5'	S	01.21.2021 00:00		685691-011
CS-3 Bottom Hole 2 1.5'	S	01.21.2021 00:00		685691-012
CS-4 North Sidewall	S	01.21.2021 00:00		685691-013
CS-4 South Sidewall	S	01.21.2021 00:00		685691-014
CS-4 EastSidewall	S	01.21.2021 00:00		685691-015
CS-4 West Sidewall	S	01.21.2021 00:00		685691-016
CS-4 Bottom Hole 1 4'	S	01.21.2021 00:00		685691-017
CS-4 Bottom Hole 2 4'	S	01.21.2021 00:00		685691-018



CASE NARRATIVE

Client Name: COG Operating LLC

Project Name: Myox 28 State Com #006H (9/21/20)

Project ID:

Work Order Number(s): 685691

Report Date: 01.25.2021

Date Received: 01.22.2021

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3148755 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered below QC limits. Matrix interferences is suspected.

Samples affected are: 685691-013.



Certificate of Analytical Results 685691

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **CS-1 North Sidewall**

Matrix: Soil

Date Received: 01.22.2021 11:08

Lab Sample Id: 685691-001

Date Collected: 01.21.2021 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 01.22.2021 14:15

% Moisture:

Seq Number: 3148735

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7.91	5.02	mg/kg	01.22.2021 14:57		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.22.2021 17:00

% Moisture:

Seq Number: 3148773

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	01.22.2021 23:13	U	1
Diesel Range Organics	C10C28DRO	211	50.0	mg/kg	01.22.2021 23:13		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.22.2021 23:13	U	1
Total TPH	PHC635	211	50.0	mg/kg	01.22.2021 23:13		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	77	%	70-130	01.22.2021 23:13		
o-Terphenyl	84-15-1	95	%	70-130	01.22.2021 23:13		



Certificate of Analytical Results 685691

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **CS-1 North Sidewall**

Matrix: Soil

Date Received: 01.22.2021 11:08

Lab Sample Id: 685691-001

Date Collected: 01.21.2021 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.22.2021 16:45

% Moisture:

Seq Number: 3148755

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.24.2021 01:02	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.24.2021 01:02	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.24.2021 01:02	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.24.2021 01:02	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.24.2021 01:02	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.24.2021 01:02	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.24.2021 01:02	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	111	%	70-130	01.24.2021 01:02		
1,4-Difluorobenzene	540-36-3	93	%	70-130	01.24.2021 01:02		



Certificate of Analytical Results 685691

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **CS-1 South Sidewall**

Matrix: Soil

Date Received: 01.22.2021 11:08

Lab Sample Id: 685691-002

Date Collected: 01.21.2021 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 01.22.2021 14:15

% Moisture:

Seq Number: 3148735

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7.33	4.98	mg/kg	01.22.2021 15:13		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.22.2021 17:00

% Moisture:

Seq Number: 3148773

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	01.23.2021 00:09	U	1
Diesel Range Organics	C10C28DRO	247	50.0	mg/kg	01.23.2021 00:09		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.23.2021 00:09	U	1
Total TPH	PHC635	247	50.0	mg/kg	01.23.2021 00:09		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	96	%	70-130	01.23.2021 00:09		
o-Terphenyl	84-15-1	114	%	70-130	01.23.2021 00:09		



Certificate of Analytical Results 685691

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **CS-1 South Sidewall**

Matrix: Soil

Date Received: 01.22.2021 11:08

Lab Sample Id: 685691-002

Date Collected: 01.21.2021 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.22.2021 16:45

% Moisture:

Seq Number: 3148755

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.24.2021 01:22	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.24.2021 01:22	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.24.2021 01:22	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.24.2021 01:22	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.24.2021 01:22	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.24.2021 01:22	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.24.2021 01:22	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	111	%	70-130	01.24.2021 01:22		
1,4-Difluorobenzene	540-36-3	88	%	70-130	01.24.2021 01:22		



Certificate of Analytical Results 685691

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **CS-1 East Sidewall**

Matrix: Soil

Date Received: 01.22.2021 11:08

Lab Sample Id: 685691-003

Date Collected: 01.21.2021 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 01.22.2021 14:15

% Moisture:

Seq Number: 3148735

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6.74	5.00	mg/kg	01.22.2021 15:18		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.22.2021 17:00

% Moisture:

Seq Number: 3148773

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	01.23.2021 00:28	U	1
Diesel Range Organics	C10C28DRO	210	50.0	mg/kg	01.23.2021 00:28		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.23.2021 00:28	U	1
Total TPH	PHC635	210	50.0	mg/kg	01.23.2021 00:28		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	85	%	70-130	01.23.2021 00:28		
o-Terphenyl	84-15-1	103	%	70-130	01.23.2021 00:28		



Certificate of Analytical Results 685691

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **CS-1 East Sidewall**

Matrix: Soil

Date Received: 01.22.2021 11:08

Lab Sample Id: 685691-003

Date Collected: 01.21.2021 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.22.2021 16:45

% Moisture:

Seq Number: 3148755

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.24.2021 01:43	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.24.2021 01:43	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.24.2021 01:43	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.24.2021 01:43	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.24.2021 01:43	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.24.2021 01:43	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.24.2021 01:43	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	111	%	70-130	01.24.2021 01:43		
1,4-Difluorobenzene	540-36-3	89	%	70-130	01.24.2021 01:43		



Certificate of Analytical Results 685691

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **CS-1 West Sidewall**

Matrix: Soil

Date Received: 01.22.2021 11:08

Lab Sample Id: 685691-004

Date Collected: 01.21.2021 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 01.22.2021 14:15

% Moisture:

Seq Number: 3148735

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6.59	5.03	mg/kg	01.22.2021 15:23		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.22.2021 17:00

% Moisture:

Seq Number: 3148773

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	01.23.2021 00:46	U	1
Diesel Range Organics	C10C28DRO	227	49.9	mg/kg	01.23.2021 00:46		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.23.2021 00:46	U	1
Total TPH	PHC635	227	49.9	mg/kg	01.23.2021 00:46		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-130	01.23.2021 00:46	
o-Terphenyl	84-15-1	97	%	70-130	01.23.2021 00:46	



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **CS-1 West Sidewall**

Matrix: Soil

Date Received: 01.22.2021 11:08

Lab Sample Id: 685691-004

Date Collected: 01.21.2021 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.22.2021 16:45

% Moisture:

Seq Number: 3148755

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.24.2021 02:03	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.24.2021 02:03	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.24.2021 02:03	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.24.2021 02:03	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.24.2021 02:03	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.24.2021 02:03	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.24.2021 02:03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	79	%	70-130	01.24.2021 02:03	
1,4-Difluorobenzene	540-36-3	110	%	70-130	01.24.2021 02:03	



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **CS-1 Bottom Hole 1 1.5'**

Matrix: Soil

Date Received: 01.22.2021 11:08

Lab Sample Id: 685691-005

Date Collected: 01.21.2021 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 01.22.2021 14:15

% Moisture:

Seq Number: 3148735

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6.38	4.98	mg/kg	01.22.2021 15:29		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.22.2021 17:00

% Moisture:

Seq Number: 3148773

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	01.23.2021 01:05	U	1
Diesel Range Organics	C10C28DRO	253	49.9	mg/kg	01.23.2021 01:05		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	51.1	49.9	mg/kg	01.23.2021 01:05		1
Total TPH	PHC635	304	49.9	mg/kg	01.23.2021 01:05		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	90	%	70-130	01.23.2021 01:05		
o-Terphenyl	84-15-1	109	%	70-130	01.23.2021 01:05		



Certificate of Analytical Results 685691

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **CS-1 Bottom Hole 1 1.5'**

Matrix: Soil

Date Received: 01.22.2021 11:08

Lab Sample Id: 685691-005

Date Collected: 01.21.2021 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.22.2021 16:45

% Moisture:

Seq Number: 3148755

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.24.2021 02:23	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.24.2021 02:23	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.24.2021 02:23	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.24.2021 02:23	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.24.2021 02:23	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.24.2021 02:23	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.24.2021 02:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	89	%	70-130	01.24.2021 02:23	
4-Bromofluorobenzene	460-00-4	114	%	70-130	01.24.2021 02:23	



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **CS-1 Bottom Hole 2 1.5'**

Matrix: Soil

Date Received: 01.22.2021 11:08

Lab Sample Id: 685691-006

Date Collected: 01.21.2021 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 01.22.2021 14:15

% Moisture:

Seq Number: 3148735

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6.56	5.00	mg/kg	01.22.2021 15:44		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.22.2021 17:00

% Moisture:

Seq Number: 3148773

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	01.23.2021 01:24	U	1
Diesel Range Organics	C10C28DRO	190	50.0	mg/kg	01.23.2021 01:24		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.23.2021 01:24	U	1
Total TPH	PHC635	190	50.0	mg/kg	01.23.2021 01:24		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	83	%	70-130	01.23.2021 01:24		
o-Terphenyl	84-15-1	98	%	70-130	01.23.2021 01:24		



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **CS-1 Bottom Hole 2 1.5'**

Matrix: Soil

Date Received: 01.22.2021 11:08

Lab Sample Id: 685691-006

Date Collected: 01.21.2021 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.22.2021 16:45

% Moisture:

Seq Number: 3148755

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.24.2021 02:44	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.24.2021 02:44	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.24.2021 02:44	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.24.2021 02:44	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.24.2021 02:44	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.24.2021 02:44	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.24.2021 02:44	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	70-130	01.24.2021 02:44		
1,4-Difluorobenzene	540-36-3	89	%	70-130	01.24.2021 02:44		



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **CS-3 North Sidewall**

Matrix: Soil

Date Received: 01.22.2021 11:08

Lab Sample Id: 685691-007

Date Collected: 01.21.2021 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 01.22.2021 14:15

% Moisture:

Seq Number: 3148735

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	137	25.3	mg/kg	01.22.2021 15:49		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.22.2021 17:00

% Moisture:

Seq Number: 3148773

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	01.23.2021 01:43	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	01.23.2021 01:43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.23.2021 01:43	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.23.2021 01:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-130	01.23.2021 01:43	
o-Terphenyl	84-15-1	88	%	70-130	01.23.2021 01:43	



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **CS-3 North Sidewall**

Matrix: Soil

Date Received: 01.22.2021 11:08

Lab Sample Id: 685691-007

Date Collected: 01.21.2021 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.22.2021 16:45

% Moisture:

Seq Number: 3148755

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.24.2021 03:04	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.24.2021 03:04	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.24.2021 03:04	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.24.2021 03:04	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.24.2021 03:04	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.24.2021 03:04	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.24.2021 03:04	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	79	%	70-130	01.24.2021 03:04		
1,4-Difluorobenzene	540-36-3	94	%	70-130	01.24.2021 03:04		



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **CS-3 South Sidewall**

Matrix: Soil

Date Received: 01.22.2021 11:08

Lab Sample Id: 685691-008

Date Collected: 01.21.2021 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 01.22.2021 14:15

% Moisture:

Seq Number: 3148735

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	129	25.3	mg/kg	01.22.2021 15:55		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.22.2021 17:00

% Moisture:

Seq Number: 3148773

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	01.23.2021 02:02	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	01.23.2021 02:02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.23.2021 02:02	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.23.2021 02:02	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	78	%	70-130	01.23.2021 02:02		
o-Terphenyl	84-15-1	85	%	70-130	01.23.2021 02:02		



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **CS-3 South Sidewall**

Matrix: Soil

Date Received: 01.22.2021 11:08

Lab Sample Id: 685691-008

Date Collected: 01.21.2021 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.22.2021 16:45

% Moisture:

Seq Number: 3148755

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.24.2021 03:25	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.24.2021 03:25	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.24.2021 03:25	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.24.2021 03:25	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.24.2021 03:25	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.24.2021 03:25	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.24.2021 03:25	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	117	%	70-130	01.24.2021 03:25		
1,4-Difluorobenzene	540-36-3	93	%	70-130	01.24.2021 03:25		



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **CS-3 East Sidewall**

Matrix: Soil

Date Received: 01.22.2021 11:08

Lab Sample Id: 685691-009

Date Collected: 01.21.2021 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 01.22.2021 14:15

% Moisture:

Seq Number: 3148735

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	137	25.0	mg/kg	01.22.2021 16:00		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.22.2021 17:00

% Moisture:

Seq Number: 3148773

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	01.23.2021 02:21	U	1
Diesel Range Organics	C10C28DRO	<49.8	49.8	mg/kg	01.23.2021 02:21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	01.23.2021 02:21	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	01.23.2021 02:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-130	01.23.2021 02:21	
o-Terphenyl	84-15-1	99	%	70-130	01.23.2021 02:21	



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **CS-3 East Sidewall**

Matrix: Soil

Date Received: 01.22.2021 11:08

Lab Sample Id: 685691-009

Date Collected: 01.21.2021 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.22.2021 16:45

% Moisture:

Seq Number: 3148755

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.24.2021 04:47	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.24.2021 04:47	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.24.2021 04:47	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.24.2021 04:47	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.24.2021 04:47	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.24.2021 04:47	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.24.2021 04:47	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	99	%	70-130	01.24.2021 04:47		
1,4-Difluorobenzene	540-36-3	71	%	70-130	01.24.2021 04:47		



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **CS-3 West Sidewall**

Matrix: Soil

Date Received: 01.22.2021 11:08

Lab Sample Id: 685691-010

Date Collected: 01.21.2021 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 01.22.2021 14:15

% Moisture:

Seq Number: 3148735

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	139	25.1	mg/kg	01.22.2021 16:05		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.22.2021 17:00

% Moisture:

Seq Number: 3148773

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	01.23.2021 02:40	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	01.23.2021 02:40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.23.2021 02:40	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.23.2021 02:40	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	75	%	70-130	01.23.2021 02:40		
o-Terphenyl	84-15-1	82	%	70-130	01.23.2021 02:40		



Certificate of Analytical Results 685691

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **CS-3 West Sidewall**

Matrix: Soil

Date Received: 01.22.2021 11:08

Lab Sample Id: 685691-010

Date Collected: 01.21.2021 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.22.2021 16:45

% Moisture:

Seq Number: 3148755

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.24.2021 05:07	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.24.2021 05:07	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.24.2021 05:07	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.24.2021 05:07	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.24.2021 05:07	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.24.2021 05:07	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.24.2021 05:07	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	85	%	70-130	01.24.2021 05:07		
4-Bromofluorobenzene	460-00-4	92	%	70-130	01.24.2021 05:07		



Certificate of Analytical Results 685691

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **CS-3 Bottom Hole 1 1.5'**

Matrix: Soil

Date Received: 01.22.2021 11:08

Lab Sample Id: 685691-011

Date Collected: 01.21.2021 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 01.22.2021 14:15

% Moisture:

Seq Number: 3148735

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	131	24.8	mg/kg	01.22.2021 16:10		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.22.2021 17:00

% Moisture:

Seq Number: 3148773

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	01.23.2021 03:18	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	01.23.2021 03:18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.23.2021 03:18	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.23.2021 03:18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-130	01.23.2021 03:18	
o-Terphenyl	84-15-1	94	%	70-130	01.23.2021 03:18	



Certificate of Analytical Results 685691

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **CS-3 Bottom Hole 1 1.5'**

Matrix: Soil

Date Received: 01.22.2021 11:08

Lab Sample Id: 685691-011

Date Collected: 01.21.2021 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.22.2021 16:45

% Moisture:

Seq Number: 3148755

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.24.2021 05:27	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.24.2021 05:27	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.24.2021 05:27	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.24.2021 05:27	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.24.2021 05:27	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.24.2021 05:27	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.24.2021 05:27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	70-130	01.24.2021 05:27	
1,4-Difluorobenzene	540-36-3	85	%	70-130	01.24.2021 05:27	



Certificate of Analytical Results 685691

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **CS-3 Bottom Hole 2 1.5'**

Matrix: Soil

Date Received: 01.22.2021 11:08

Lab Sample Id: 685691-012

Date Collected: 01.21.2021 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 01.22.2021 14:15

% Moisture:

Seq Number: 3148735

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6.79	4.97	mg/kg	01.22.2021 16:26		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.22.2021 17:00

% Moisture:

Seq Number: 3148773

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	01.23.2021 03:37	U	1
Diesel Range Organics	C10C28DRO	205	50.0	mg/kg	01.23.2021 03:37		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.23.2021 03:37	U	1
Total TPH	PHC635	205	50.0	mg/kg	01.23.2021 03:37		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	76	%	70-130	01.23.2021 03:37		
o-Terphenyl	84-15-1	93	%	70-130	01.23.2021 03:37		



Certificate of Analytical Results 685691

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **CS-3 Bottom Hole 2 1.5'**

Matrix: Soil

Date Received: 01.22.2021 11:08

Lab Sample Id: 685691-012

Date Collected: 01.21.2021 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.22.2021 16:45

% Moisture:

Seq Number: 3148755

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.24.2021 05:48	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.24.2021 05:48	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.24.2021 05:48	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.24.2021 05:48	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.24.2021 05:48	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.24.2021 05:48	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.24.2021 05:48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	81	%	70-130	01.24.2021 05:48	
4-Bromofluorobenzene	460-00-4	100	%	70-130	01.24.2021 05:48	



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **CS-4 North Sidewall**

Matrix: Soil

Date Received: 01.22.2021 11:08

Lab Sample Id: 685691-013

Date Collected: 01.21.2021 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 01.22.2021 14:15

% Moisture:

Seq Number: 3148735

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	126	25.2	mg/kg	01.22.2021 16:31		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.22.2021 17:00

% Moisture:

Seq Number: 3148773

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	01.23.2021 03:55	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	01.23.2021 03:55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.23.2021 03:55	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.23.2021 03:55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	76	%	70-130	01.23.2021 03:55		
o-Terphenyl	84-15-1	83	%	70-130	01.23.2021 03:55		



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **CS-4 North Sidewall**

Matrix: Soil

Date Received: 01.22.2021 11:08

Lab Sample Id: 685691-013

Date Collected: 01.21.2021 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.22.2021 16:45

% Moisture:

Seq Number: 3148755

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.24.2021 06:08	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.24.2021 06:08	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.24.2021 06:08	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.24.2021 06:08	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.24.2021 06:08	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.24.2021 06:08	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.24.2021 06:08	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	59	%	70-130	01.24.2021 06:08	**	
1,4-Difluorobenzene	540-36-3	111	%	70-130	01.24.2021 06:08		



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **CS-4 South Sidewall**

Matrix: Soil

Date Received: 01.22.2021 11:08

Lab Sample Id: 685691-014

Date Collected: 01.21.2021 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 01.22.2021 14:15

% Moisture:

Seq Number: 3148735

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	124	25.0	mg/kg	01.22.2021 16:47		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.22.2021 17:00

% Moisture:

Seq Number: 3148773

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	01.23.2021 04:14	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	01.23.2021 04:14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.23.2021 04:14	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.23.2021 04:14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	76	%	70-130	01.23.2021 04:14		
o-Terphenyl	84-15-1	82	%	70-130	01.23.2021 04:14		



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **CS-4 South Sidewall**

Matrix: Soil

Date Received: 01.22.2021 11:08

Lab Sample Id: 685691-014

Date Collected: 01.21.2021 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.22.2021 16:45

% Moisture:

Seq Number: 3148755

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.24.2021 06:29	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.24.2021 06:29	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.24.2021 06:29	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.24.2021 06:29	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.24.2021 06:29	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.24.2021 06:29	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.24.2021 06:29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	85	%	70-130	01.24.2021 06:29	
4-Bromofluorobenzene	460-00-4	104	%	70-130	01.24.2021 06:29	



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **CS-4 EastSidewall** Matrix: Soil Date Received: 01.22.2021 11:08
 Lab Sample Id: 685691-015 Date Collected: 01.21.2021 00:00
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE
 Analyst: CHE Date Prep: 01.22.2021 14:15 % Moisture:
 Seq Number: 3148735 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	124	24.9	mg/kg	01.22.2021 16:52		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: DVM
 Analyst: ARM Date Prep: 01.22.2021 17:00 % Moisture:
 Seq Number: 3148773 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	01.23.2021 04:33	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	01.23.2021 04:33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.23.2021 04:33	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.23.2021 04:33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-130	01.23.2021 04:33	
o-Terphenyl	84-15-1	91	%	70-130	01.23.2021 04:33	



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **CS-4 EastSidewall**

Matrix: Soil

Date Received: 01.22.2021 11:08

Lab Sample Id: 685691-015

Date Collected: 01.21.2021 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.22.2021 16:45

% Moisture:

Seq Number: 3148755

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.24.2021 06:49	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.24.2021 06:49	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.24.2021 06:49	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.24.2021 06:49	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.24.2021 06:49	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.24.2021 06:49	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.24.2021 06:49	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	70	%	70-130	01.24.2021 06:49		
1,4-Difluorobenzene	540-36-3	102	%	70-130	01.24.2021 06:49		



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **CS-4 West Sidewall**

Matrix: Soil

Date Received: 01.22.2021 11:08

Lab Sample Id: 685691-016

Date Collected: 01.21.2021 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 01.23.2021 14:22

% Moisture:

Seq Number: 3148740

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	160	25.2	mg/kg	01.23.2021 15:04		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.22.2021 17:00

% Moisture:

Seq Number: 3148773

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	01.23.2021 04:52	U	1
Diesel Range Organics	C10C28DRO	<49.8	49.8	mg/kg	01.23.2021 04:52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	01.23.2021 04:52	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	01.23.2021 04:52	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	76	%	70-130	01.23.2021 04:52		
o-Terphenyl	84-15-1	82	%	70-130	01.23.2021 04:52		



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **CS-4 West Sidewall**

Matrix: Soil

Date Received: 01.22.2021 11:08

Lab Sample Id: 685691-016

Date Collected: 01.21.2021 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.22.2021 16:45

% Moisture:

Seq Number: 3148755

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.24.2021 07:09	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.24.2021 07:09	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.24.2021 07:09	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.24.2021 07:09	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.24.2021 07:09	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.24.2021 07:09	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.24.2021 07:09	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	95	%	70-130	01.24.2021 07:09		
4-Bromofluorobenzene	460-00-4	74	%	70-130	01.24.2021 07:09		



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **CS-4 Bottom Hole 1 4'**

Matrix: Soil

Date Received: 01.22.2021 11:08

Lab Sample Id: 685691-017

Date Collected: 01.21.2021 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 01.23.2021 14:22

% Moisture:

Seq Number: 3148740

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	13.7	4.98	mg/kg	01.24.2021 11:50		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.22.2021 17:00

% Moisture:

Seq Number: 3148773

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	01.23.2021 05:11	U	1
Diesel Range Organics	C10C28DRO	215	50.0	mg/kg	01.23.2021 05:11		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.23.2021 05:11	U	1
Total TPH	PHC635	215	50.0	mg/kg	01.23.2021 05:11		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	81	%	70-130	01.23.2021 05:11		
o-Terphenyl	84-15-1	95	%	70-130	01.23.2021 05:11		



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **CS-4 Bottom Hole 1 4'**

Matrix: Soil

Date Received: 01.22.2021 11:08

Lab Sample Id: 685691-017

Date Collected: 01.21.2021 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.22.2021 16:45

% Moisture:

Seq Number: 3148755

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.24.2021 07:30	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.24.2021 07:30	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.24.2021 07:30	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.24.2021 07:30	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.24.2021 07:30	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.24.2021 07:30	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.24.2021 07:30	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	90	%	70-130	01.24.2021 07:30		
4-Bromofluorobenzene	460-00-4	94	%	70-130	01.24.2021 07:30		



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COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **CS-4 Bottom Hole 2 4'**

Matrix: Soil

Date Received: 01.22.2021 11:08

Lab Sample Id: 685691-018

Date Collected: 01.21.2021 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 01.23.2021 14:22

% Moisture:

Seq Number: 3148740

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	13.7	5.00	mg/kg	01.24.2021 11:55		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.22.2021 17:00

% Moisture:

Seq Number: 3148773

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	01.23.2021 05:30	U	1
Diesel Range Organics	C10C28DRO	210	49.9	mg/kg	01.23.2021 05:30		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.23.2021 05:30	U	1
Total TPH	PHC635	210	49.9	mg/kg	01.23.2021 05:30		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	74	%	70-130	01.23.2021 05:30		
o-Terphenyl	84-15-1	89	%	70-130	01.23.2021 05:30		



Certificate of Analytical Results 685691

COG Operating LLC, Artesia, NM

Myox 28 State Com #006H (9/21/20)

Sample Id: **CS-4 Bottom Hole 2 4'**

Matrix: Soil

Date Received: 01.22.2021 11:08

Lab Sample Id: 685691-018

Date Collected: 01.21.2021 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.22.2021 16:45

% Moisture:

Seq Number: 3148755

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.24.2021 07:50	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.24.2021 07:50	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.24.2021 07:50	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.24.2021 07:50	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.24.2021 07:50	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.24.2021 07:50	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.24.2021 07:50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	90	%	70-130	01.24.2021 07:50	
4-Bromofluorobenzene	460-00-4	96	%	70-130	01.24.2021 07:50	



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. **ND** Not Detected.

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



COG Operating LLC
Myox 28 State Com #006H (9/21/20)

Analytical Method: Chloride by EPA 300

Seq Number: 3148735

MB Sample Id: 7719795-1-BLK

Matrix: Solid

LCS Sample Id: 7719795-1-BKS

Prep Method: E300P

Date Prep: 01.22.2021

LCSD Sample Id: 7719795-1-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	264	106	264	106	90-110	0	20	mg/kg	01.22.2021 14:47	

Analytical Method: Chloride by EPA 300

Seq Number: 3148740

MB Sample Id: 7719833-1-BLK

Matrix: Solid

LCS Sample Id: 7719833-1-BKS

Prep Method: E300P

Date Prep: 01.23.2021

LCSD Sample Id: 7719833-1-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	258	103	256	102	90-110	1	20	mg/kg	01.23.2021 14:53	

Analytical Method: Chloride by EPA 300

Seq Number: 3148735

Parent Sample Id: 685691-001

Matrix: Soil

MS Sample Id: 685691-001 S

Prep Method: E300P

Date Prep: 01.22.2021

MSD Sample Id: 685691-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	7.91	251	265	102	265	102	90-110	0	20	mg/kg	01.22.2021 15:03	

Analytical Method: Chloride by EPA 300

Seq Number: 3148735

Parent Sample Id: 685691-011

Matrix: Soil

MS Sample Id: 685691-011 S

Prep Method: E300P

Date Prep: 01.22.2021

MSD Sample Id: 685691-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	131	1240	1410	103	1410	103	90-110	0	20	mg/kg	01.22.2021 16:15	

Analytical Method: Chloride by EPA 300

Seq Number: 3148740

Parent Sample Id: 685674-002

Matrix: Soil

MS Sample Id: 685674-002 S

Prep Method: E300P

Date Prep: 01.23.2021

MSD Sample Id: 685674-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	54.9	250	314	104	317	105	90-110	1	20	mg/kg	01.24.2021 12:53	

Analytical Method: Chloride by EPA 300

Seq Number: 3148740

Parent Sample Id: 685691-016

Matrix: Soil

MS Sample Id: 685691-016 S

Prep Method: E300P

Date Prep: 01.23.2021

MSD Sample Id: 685691-016 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	160	1260	1430	101	1390	98	90-110	3	20	mg/kg	01.23.2021 15:09	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



COG Operating LLC
Myox 28 State Com #006H (9/21/20)

Analytical Method: TPH By SW8015 Mod

Seq Number: 3148773

MB Sample Id: 7719878-1-BLK

Matrix: Solid

LCS Sample Id: 7719878-1-BKS

Prep Method: SW8015P

Date Prep: 01.22.2021

LCSD Sample Id: 7719878-1-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	<50.0	1000	807	81	876	88	70-130	8	20	mg/kg	01.22.2021 22:34	
Diesel Range Organics	<50.0	1000	804	80	828	83	70-130	3	20	mg/kg	01.22.2021 22:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	84		102		103		70-130	%	01.22.2021 22:34
o-Terphenyl	95		96		101		70-130	%	01.22.2021 22:34

Analytical Method: TPH By SW8015 Mod

Seq Number: 3148773

Matrix: Solid

MB Sample Id: 7719878-1-BLK

Prep Method: SW8015P

Date Prep: 01.22.2021

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	01.22.2021 22:15	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3148773

Matrix: Soil

Parent Sample Id: 685691-001

MS Sample Id: 685691-001 S

Prep Method: SW8015P

Date Prep: 01.22.2021

MSD Sample Id: 685691-001 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	<49.8	996	842	85	847	85	70-130	1	20	mg/kg	01.22.2021 23:31	
Diesel Range Organics	211	996	1040	83	1000	79	70-130	4	20	mg/kg	01.22.2021 23:31	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		96		70-130	%	01.22.2021 23:31
o-Terphenyl	100		98		70-130	%	01.22.2021 23:31

Analytical Method: BTEX by EPA 8021B

Seq Number: 3148755

Matrix: Solid

MB Sample Id: 7719872-1-BLK

LCS Sample Id: 7719872-1-BKS

Prep Method: SW5035A

Date Prep: 01.22.2021

LCSD Sample Id: 7719872-1-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	0.0988	99	0.105	105	70-130	6	35	mg/kg	01.23.2021 22:00	
Toluene	<0.00200	0.100	0.0933	93	0.100	100	70-130	7	35	mg/kg	01.23.2021 22:00	
Ethylbenzene	<0.00200	0.100	0.0952	95	0.103	103	70-130	8	35	mg/kg	01.23.2021 22:00	
m,p-Xylenes	<0.00400	0.200	0.187	94	0.203	102	70-130	8	35	mg/kg	01.23.2021 22:00	
o-Xylene	<0.00200	0.100	0.0927	93	0.100	100	70-130	8	35	mg/kg	01.23.2021 22:00	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	90		100		101		70-130	%	01.23.2021 22:00
4-Bromofluorobenzene	111		92		96		70-130	%	01.23.2021 22:00

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



COG Operating LLC
Myox 28 State Com #006H (9/21/20)

Analytical Method: BTEX by EPA 8021B

Seq Number: 3148755

Parent Sample Id: 685628-015

Matrix: Soil

MS Sample Id: 685628-015 S

Prep Method: SW5035A

Date Prep: 01.22.2021

MSD Sample Id: 685628-015 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0865	87	0.0979	98	70-130	12	35	mg/kg	01.23.2021 22:41	
Toluene	<0.00200	0.100	0.0738	74	0.0810	81	70-130	9	35	mg/kg	01.23.2021 22:41	
Ethylbenzene	<0.00200	0.100	0.0758	76	0.0833	83	70-130	9	35	mg/kg	01.23.2021 22:41	
m,p-Xylenes	<0.00400	0.200	0.153	77	0.167	84	70-130	9	35	mg/kg	01.23.2021 22:41	
o-Xylene	<0.00200	0.100	0.0814	81	0.0902	90	70-130	10	35	mg/kg	01.23.2021 22:41	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		102		70-130	%	01.23.2021 22:41
4-Bromofluorobenzene	99		98		70-130	%	01.23.2021 22:41

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



**One Concho Center/600/Illinois
Avenue/Midland, Texas
Tel (432) 683-7443**

48549

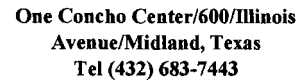
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Page 48 of 50

Released to Imaging: 8/19/2021 1:01:35 AM



485691

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Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC

Date/ Time Received: 01.22.2021 11.08.00 AM

Work Order #: 685691

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	-.4
#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: 01.22.2021

Checklist reviewed by:



Jessica Kramer

Date: 01.25.2021

Certificate of Analysis Summary 686572



COG Operating LLC, Artesia, NM

Project Name: Myrox 28 State Com #006H (9/21/20)

Project Id:

Date Received in Lab: Fri 01.29.2021 11:02

Contact: Ike Tavarez

Report Date: 02.02.2021 11:36

Project Location: Eddy County, NM

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	686572-001	686572-002	686572-003	686572-004	686572-005	686572-007
	Field Id:	CS-1A North Sidewall	CS-1A South Sidewall	CS-1A East Sidewall	CS-1A West Sidewall	CS-1A Bottom Hole 1 2'	CS-3A Bottom Hole 2 2'
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	01.26.2021 00:00	01.26.2021 00:00	01.26.2021 00:00	01.26.2021 00:00	01.26.2021 00:00	01.26.2021 00:00
TPH By SW8015 Mod	Extracted:	01.30.2021 12:00	01.30.2021 12:00	01.30.2021 12:00	01.30.2021 12:00	01.30.2021 12:00	01.30.2021 12:00
	Analyzed:	01.30.2021 13:28	01.30.2021 14:31	01.30.2021 14:52	01.30.2021 15:13	01.30.2021 15:35	01.30.2021 15:55
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons		<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0	<50.0 50.0
Diesel Range Organics		<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0	<50.0 50.0
Total TPH		<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0	<50.0 50.0

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 686572



COG Operating LLC, Artesia, NM

Project Name: Myrox 28 State Com #006H (9/21/20)

Project Id:

Date Received in Lab: Fri 01.29.2021 11:02

Contact: Ike Tavaréz

Report Date: 02.02.2021 11:36

Project Location: Eddy County, NM

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	686572-008	686572-009	686572-010			
	Field Id:	CS-4A Bottom Hole 2 5'	CS-4A Bottom Hole 2 5'	CS-Overspray 1 0-5'			
	Depth:						
	Matrix:	SOIL	SOIL	SOIL			
	Sampled:	01.26.2021 00:00	01.26.2021 00:00	01.26.2021 00:00			
TPH By SW8015 Mod	Extracted:	01.30.2021 12:00	01.30.2021 12:00	01.30.2021 12:00			
	Analyzed:	01.30.2021 16:16	01.30.2021 16:38	01.30.2021 16:59			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Gasoline Range Hydrocarbons		<49.9 49.9	<50.0 50.0	<49.9 49.9			
Diesel Range Organics		<49.9 49.9	<50.0 50.0	<49.9 49.9			
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<50.0 50.0	<49.9 49.9			
Total TPH		<49.9 49.9	<50.0 50.0	<49.9 49.9			

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Analytical Report 686572

for

COG Operating LLC

Project Manager: Ike Tavaréz

Myrox 28 State Com #006H (9/21/20)

02.02.2021

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



02.02.2021

Project Manager: **Ike Tavaréz**

COG Operating LLC

2407 Pecos Avenue

Artesia, NM 88210

Reference: Eurofins Xenco, LLC Report No(s): **686572**

Myrox 28 State Com #006H (9/21/20)

Project Address: Eddy County, NM

Ike Tavaréz:

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 Eurofins Xenco, LLC Report Number(s) 686572. 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 Eurofins Xenco, LLC. 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. 686572 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 Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads "Jessica Kramer".

Jessica Kramer

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

**Sample Cross Reference 686572****COG Operating LLC, Artesia, NM**

Myrox 28 State Com #006H (9/21/20)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
CS-1A North Sidewall	S	01.26.2021 00:00		686572-001
CS-1A South Sidewall	S	01.26.2021 00:00		686572-002
CS-1A East Sidewall	S	01.26.2021 00:00		686572-003
CS-1A West Sidewall	S	01.26.2021 00:00		686572-004
CS-1A Bottom Hole 1 2'	S	01.26.2021 00:00		686572-005
CS-3A Bottom Hole 2 2'	S	01.26.2021 00:00		686572-007
CS-4A Bottom Hole 2 5'	S	01.26.2021 00:00		686572-008
CS-4A Bottom Hole 2 5'	S	01.26.2021 00:00		686572-009
CS-Overspray 1 0-5'	S	01.26.2021 00:00		686572-010
CS-1A Bottom Hole 2 2'	S	01.26.2021 00:00		Not Analyzed



CASE NARRATIVE

Client Name: COG Operating LLC

Project Name: Myrox 28 State Com #006H (9/21/20)

Project ID:

Work Order Number(s): 686572

Report Date: 02.02.2021

Date Received: 01.29.2021

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 686572

COG Operating LLC, Artesia, NM

Myrox 28 State Com #006H (9/21/20)

Sample Id: **CS-1A North Sidewall**

Matrix: Soil

Date Received: 01.29.2021 11:02

Lab Sample Id: 686572-001

Date Collected: 01.26.2021 00:00

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.30.2021 12:00

% Moisture:

Seq Number: 3149653

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	01.30.2021 13:28	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	01.30.2021 13:28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.30.2021 13:28	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.30.2021 13:28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	109	%	70-130	01.30.2021 13:28		
o-Terphenyl	84-15-1	123	%	70-130	01.30.2021 13:28		



Certificate of Analytical Results 686572

COG Operating LLC, Artesia, NM

Myrox 28 State Com #006H (9/21/20)

Sample Id: **CS-1A South Sidewall**

Matrix: Soil

Date Received: 01.29.2021 11:02

Lab Sample Id: 686572-002

Date Collected: 01.26.2021 00:00

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.30.2021 12:00

% Moisture:

Seq Number: 3149653

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	01.30.2021 14:31	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	01.30.2021 14:31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.30.2021 14:31	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.30.2021 14:31	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	106	%	70-130	01.30.2021 14:31		
o-Terphenyl	84-15-1	117	%	70-130	01.30.2021 14:31		



Certificate of Analytical Results 686572

COG Operating LLC, Artesia, NM

Myrox 28 State Com #006H (9/21/20)

Sample Id: **CS-1A East Sidewall**

Matrix: Soil

Date Received: 01.29.2021 11:02

Lab Sample Id: 686572-003

Date Collected: 01.26.2021 00:00

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.30.2021 12:00

% Moisture:
Basis: Wet Weight

Seq Number: 3149653

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	01.30.2021 14:52	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	01.30.2021 14:52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.30.2021 14:52	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.30.2021 14:52	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	103	%	70-130	01.30.2021 14:52		
o-Terphenyl	84-15-1	116	%	70-130	01.30.2021 14:52		



Certificate of Analytical Results 686572

COG Operating LLC, Artesia, NM

Myrox 28 State Com #006H (9/21/20)

Sample Id: **CS-1A West Sidewall**

Matrix: Soil

Date Received: 01.29.2021 11:02

Lab Sample Id: 686572-004

Date Collected: 01.26.2021 00:00

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.30.2021 12:00

% Moisture:

Seq Number: 3149653

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	01.30.2021 15:13	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	01.30.2021 15:13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.30.2021 15:13	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.30.2021 15:13	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	100	%	70-130	01.30.2021 15:13		
o-Terphenyl	84-15-1	115	%	70-130	01.30.2021 15:13		



Certificate of Analytical Results 686572

COG Operating LLC, Artesia, NM

Myrox 28 State Com #006H (9/21/20)

Sample Id: **CS-1A Bottom Hole 1 2'**

Matrix: Soil

Date Received: 01.29.2021 11:02

Lab Sample Id: 686572-005

Date Collected: 01.26.2021 00:00

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.30.2021 12:00

% Moisture:

Seq Number: 3149653

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	01.30.2021 15:35	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	01.30.2021 15:35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.30.2021 15:35	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.30.2021 15:35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	108	%	70-130	01.30.2021 15:35		
o-Terphenyl	84-15-1	120	%	70-130	01.30.2021 15:35		



Certificate of Analytical Results 686572

COG Operating LLC, Artesia, NM

Myrox 28 State Com #006H (9/21/20)

Sample Id: **CS-3A Bottom Hole 2 2'**

Matrix: Soil

Date Received: 01.29.2021 11:02

Lab Sample Id: 686572-007

Date Collected: 01.26.2021 00:00

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.30.2021 12:00

% Moisture:

Seq Number: 3149653

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	01.30.2021 15:55	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	01.30.2021 15:55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.30.2021 15:55	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.30.2021 15:55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	80	%	70-130	01.30.2021 15:55		
o-Terphenyl	84-15-1	98	%	70-130	01.30.2021 15:55		



Certificate of Analytical Results 686572

COG Operating LLC, Artesia, NM

Myrox 28 State Com #006H (9/21/20)

Sample Id: **CS-4A Bottom Hole 2 5'**

Matrix: Soil

Date Received: 01.29.2021 11:02

Lab Sample Id: 686572-008

Date Collected: 01.26.2021 00:00

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.30.2021 12:00

% Moisture:

Seq Number: 3149653

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	01.30.2021 16:16	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	01.30.2021 16:16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.30.2021 16:16	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.30.2021 16:16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	115	%	70-130	01.30.2021 16:16		
o-Terphenyl	84-15-1	127	%	70-130	01.30.2021 16:16		



Certificate of Analytical Results 686572

COG Operating LLC, Artesia, NM

Myrox 28 State Com #006H (9/21/20)

Sample Id: **CS-4A Bottom Hole 2 5'**

Matrix: Soil

Date Received: 01.29.2021 11:02

Lab Sample Id: 686572-009

Date Collected: 01.26.2021 00:00

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.30.2021 12:00

% Moisture:

Seq Number: 3149653

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	01.30.2021 16:38	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	01.30.2021 16:38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.30.2021 16:38	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.30.2021 16:38	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	108	%	70-130	01.30.2021 16:38		
o-Terphenyl	84-15-1	123	%	70-130	01.30.2021 16:38		



Certificate of Analytical Results 686572

COG Operating LLC, Artesia, NM

Myrox 28 State Com #006H (9/21/20)

Sample Id: **CS-Overspray 1 0-5'**

Matrix: Soil

Date Received: 01.29.2021 11:02

Lab Sample Id: 686572-010

Date Collected: 01.26.2021 00:00

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 01.30.2021 12:00

% Moisture:

Seq Number: 3149653

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	01.30.2021 16:59	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	01.30.2021 16:59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.30.2021 16:59	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.30.2021 16:59	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	101	%	70-130	01.30.2021 16:59		
o-Terphenyl	84-15-1	117	%	70-130	01.30.2021 16:59		



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. **ND** Not Detected.

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



COG Operating LLC
Myrox 28 State Com #006H (9/21/20)

Analytical Method: TPH By SW8015 Mod

Seq Number: 3149653

MB Sample Id: 7720495-1-BLK

Matrix: Solid

LCS Sample Id: 7720495-1-BKS

Prep Method: SW8015P

Date Prep: 01.30.2021

LCSD Sample Id: 7720495-1-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	<50.0	1000	1010	101	1050	105	70-130	4	20	mg/kg	01.30.2021 12:45	
Diesel Range Organics	<50.0	1000	970	97	1000	100	70-130	3	20	mg/kg	01.30.2021 12:45	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		104		113		70-130	%	01.30.2021 12:45
o-Terphenyl	113		119		120		70-130	%	01.30.2021 12:45

Analytical Method: TPH By SW8015 Mod

Seq Number: 3149653

Matrix: Solid

MB Sample Id: 7720495-1-BLK

Prep Method: SW8015P

Date Prep: 01.30.2021

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	01.30.2021 12:24	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3149653

Matrix: Soil

Parent Sample Id: 686572-001

MS Sample Id: 686572-001 S

Prep Method: SW8015P

Date Prep: 01.30.2021

MSD Sample Id: 686572-001 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	<49.9	997	1030	103	1050	105	70-130	2	20	mg/kg	01.30.2021 13:49	
Diesel Range Organics	<49.9	997	1060	106	913	91	70-130	15	20	mg/kg	01.30.2021 13:49	

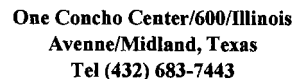
Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	106		89		70-130	%	01.30.2021 13:49
o-Terphenyl	118		104		70-130	%	01.30.2021 13:49

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



ANALYSIS REQUEST
(Circle or Specify Method No.)

[illegible]TPH TX1005 (Ext to C35)

LAB USE ONLY	REMARKS	
	X	RUSH: Same Day <u>24 hr</u> 48 hr 72 hr
Sample Temperature		Rush Charges Authorized
-3.6		Special Report Limits or TRRP Report

ORIGINAL COPY

(Circle) HAND DELIVERED FEDEX UPS Tracking #

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC

Date/ Time Received: 01.29.2021 11.02.00 AM

Work Order #: 686572

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	-3.6
#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?	Yes
#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

DID NOT RECEIVE SAMPLE 006

*** 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: 01.29.2021

Checklist reviewed by:



Jessica Kramer

Date: 01.29.2021

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 25941

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 25941
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
chensley	None	6/23/2021