



DELINEATION WORKPLAN

COG – MYOX 28 STATE COM #004H (Leak Date: 7/12/18)

RP # 2RP-4868

This delineation workplan and remediation proposal addresses the release associated with RP # 2RP-4868.

The following information includes:

1. Scaled digital site map with spill area demarcated and leak point identified along with sample point locations and areas of remediation at appropriate depths.
2. GPS information for sample points and sample methodology
3. Depth to groundwater information (i.e., pdf of OSE search results and/or copy of Chevron groundwater trend map).
4. Laboratory analysis results summary table and original laboratory analysis reports
5. A copy of the initial C-141
6. Potentially other pertinent information as necessary for site specific purposes.

Based on the information included in this package and the NMOCD guidelines, the following remediation is proposed:

COG will excavate the spill area as depicted on the following site diagram. The leak area near SP1 – SP3 (PURPLE shade on diagram) will be excavated to a depth of 2.5 feet. The leak area near SP4 and SP6 (GREEN shade on diagram) will be excavated to a depth of 1.5 feet. The leak area near SP5 (PINK shade on diagram) will be excavated to a depth of 6 inches.

The entire site will then be backfilled with clean soil and revegetated (if warranted) to the standards of the appropriate regulatory agency or private surface owner.

All excavated materials will be disposed of at an NMOCD-approved disposal facility.

COG, Myox 28 State Com #004H

Leak date: 07/12/2018
Eddy County, NM
AP# 30-015-41606

Legend

- 1.5 FT EXCAVATION
- 2.5 FT EXCAVATION
- 6 IN EXCAVATION
- BATTERY
- Leak Area
- LOCATION PAD
- Sample points



COG, Myox 28 State Com #004H

Sample points

SP1, N 32.10680 W-104.09168

SP2, N 32.10674 W-104.09171

SP3, N 32.10673 W-104.09162

SP4, N 32.10674 W-104.09147

SP5, N 32.10678 W-104.09133

SP6, N 32.10688 W-104.09129

NORTH, N 32.10693 W-104.09131

SOUTH, N 32.10667 W-104.09166

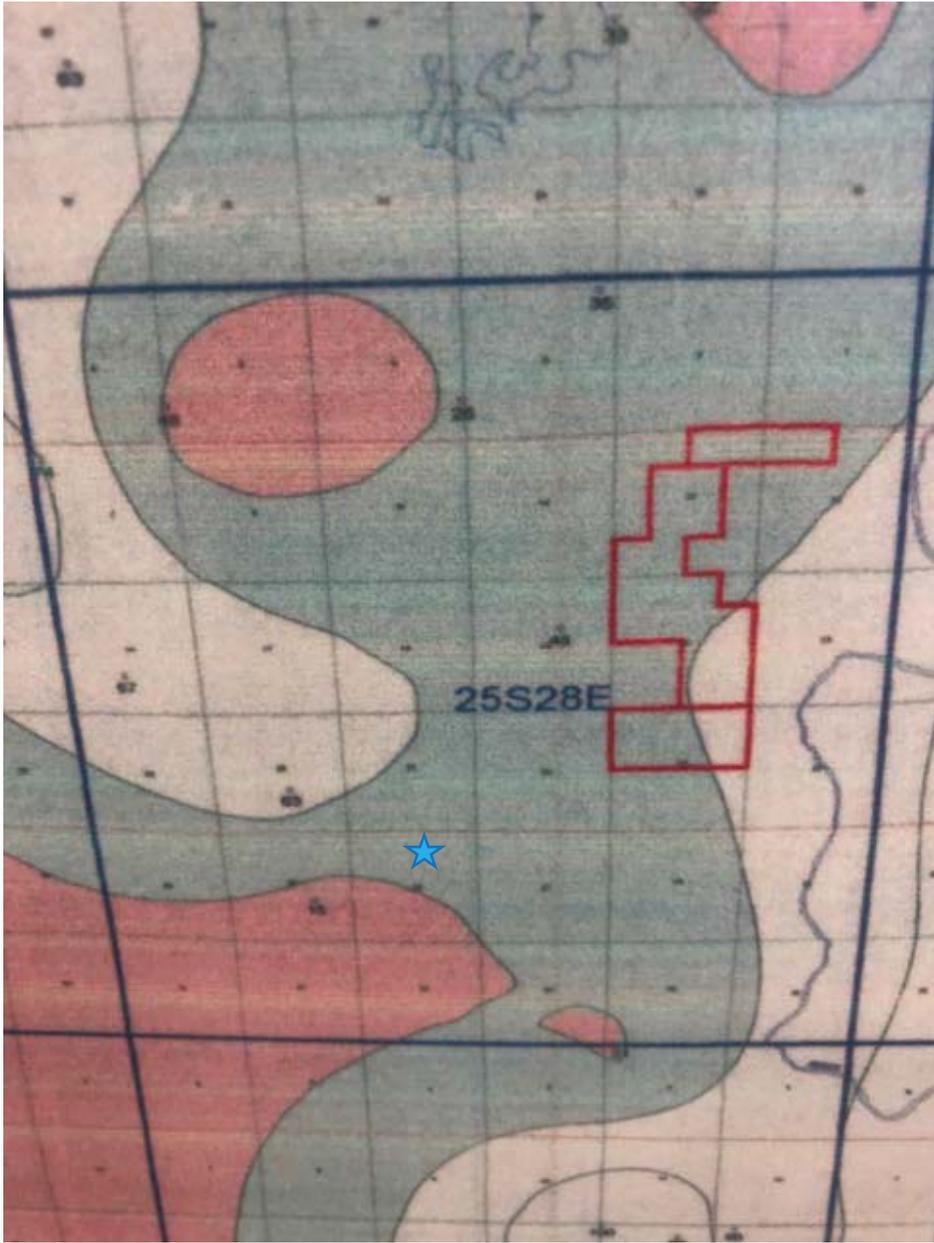
EAST, N 32.10688 W-104.09122

WEST, N 32.10675 W-104.09176

COG, Myox 28 State Com #004H Battery

U/L B, Section 28, T25S, R28E

Groundwater: <50'





New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

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

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 01278	C	ED		4	3	28	25S	28E		585470	3551338*	1296	205	90	115
C 03836 POD1	C	ED		2	2	4	29	25S	28E	584682	3551934	1335	300	30	270

Average Depth to Water: **60 feet**

Minimum Depth: **30 feet**

Maximum Depth: **90 feet**

Record Count: 2

UTMNAD83 Radius Search (in meters):

Easting (X): 585853

Northing (Y): 3552577

Radius: 1700

*UTM location was derived from PLSS - see Help

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

Laboratory Analytical Results Summary
Myox 28 State Com #004H Battery (7/12/18)

		Sample ID	SP1 @ SURFACE	SP1 @ 1'	SP1 @ 2'	SP1 @ 3'
Analyte	Method	Date	8/10/18	8/10/18	8/10/18	8/10/18
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	n/a	n/a	n/a
Toluene	BTEX 8021B		<0.050	n/a	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.050	n/a	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	n/a	n/a	n/a
Total BTEX	BTEX 8021B		<0.300	n/a	n/a	n/a
Chloride	SM4500Cl-B		7520	384	1390	16
GRO	TPH 8015M		<10.0	n/a	n/a	n/a
DRO	TPH 8015M		<10.0	n/a	n/a	n/a
EXT DRO	TPH 8015M		<10.0	n/a	n/a	n/a

		Sample ID	SP2 @ SURFACE	SP2 @ 1'	SP2 @ 2'	SP2 @ 3'
Analyte	Method	Date	8/10/18	8/10/18	8/10/18	8/10/18
			mg/kg	mg/kg	mg/kg	mg/kg
Chloride	SM4500Cl-B		1580	208	1360	64

		Sample ID	SP3 @ SURFACE	SP3 @ 1'	SP3 @ 2'	SP3 @ 3'
Analyte	Method	Date	8/10/18	8/10/18	8/10/18	8/10/18
			mg/kg	mg/kg	mg/kg	mg/kg
Chloride	SM4500Cl-B		4320	288	1560	64

		Sample ID	SP4 @ SURFACE	SP4 @ 1'	SP4 @ 2'	SP4 @ 3'
Analyte	Method	Date	8/10/18	8/10/18	8/10/18	8/10/18
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	n/a	n/a	n/a
Toluene	BTEX 8021B		<0.050	n/a	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.050	n/a	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	n/a	n/a	n/a
Total BTEX	BTEX 8021B		<0.300	n/a	n/a	n/a
Chloride	SM4500Cl-B		4800	784	208	48
GRO	TPH 8015M		<10.0	n/a	n/a	n/a
DRO	TPH 8015M		<10.0	n/a	n/a	n/a
EXT DRO	TPH 8015M		<10.0	n/a	n/a	n/a

		Sample ID	SP5 @ SURFACE	SP5 @ 1'	SP5 @ 2'
Analyte	Method	Date	8/10/18	8/13/18	8/13/18
			mg/kg	mg/kg	mg/kg
Chloride	SM4500Cl-B		6930	400	16

		Sample ID	SP6 @ SURFACE	SP6 @ 1'	SP6 @ 2'
Analyte	Method	Date	8/13/18	8/13/18	8/13/18
			mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	n/a	n/a
Toluene	BTEX 8021B		<0.050	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.050	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	n/a	n/a
Total BTEX	BTEX 8021B		<0.300	n/a	n/a
Chloride	SM4500Cl-B		15200	624	160
GRO	TPH 8015M		<10.0	n/a	n/a
DRO	TPH 8015M		<10.0	n/a	n/a
EXT DRO	TPH 8015M		<10.0	n/a	n/a

Cardinal		Sample ID	North @ Surface	East @ Surface	West @ Surface	South @ Surface
Analyte	Method	Date	8/13/18	8/13/18	8/13/18	8/13/18
			mg/kg	mg/kg	mg/kg	mg/kg
Chloride	SM4500Cl-B		16	<16.0	32	16

August 17, 2018

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: MYOX 28 STATE COM #004H BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 08/15/18 11:27.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

 BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	08/15/2018	Sampling Date:	08/10/2018
Reported:	08/17/2018	Sampling Type:	Soil
Project Name:	MYOX 28 STATE COM #004H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	07/12/18	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

Sample ID: SP 1 @ SURFACE (H802270-01)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/16/2018	ND	1.98	99.1	2.00	1.06	
Toluene*	<0.050	0.050	08/16/2018	ND	2.04	102	2.00	0.603	
Ethylbenzene*	<0.050	0.050	08/16/2018	ND	2.08	104	2.00	0.561	
Total Xylenes*	<0.150	0.150	08/16/2018	ND	6.03	100	6.00	0.595	
Total BTEX	<0.300	0.300	08/16/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 112 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7520	16.0	08/16/2018	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/16/2018	ND	210	105	200	1.21	
DRO >C10-C28*	<10.0	10.0	08/16/2018	ND	217	108	200	0.193	
EXT DRO >C28-C36	<10.0	10.0	08/16/2018	ND					

Surrogate: 1-Chlorooctane 102 % 41-142

Surrogate: 1-Chlorooctadecane 97.6 % 37.6-147

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Analytical Results For:

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 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	08/15/2018	Sampling Date:	08/10/2018
Reported:	08/17/2018	Sampling Type:	Soil
Project Name:	MYOX 28 STATE COM #004H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	07/12/18	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

Sample ID: SP 1 @ 1' (H802270-02)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	384	16.0	08/16/2018	ND	400	100	400	3.92	

Sample ID: SP 1 @ 2' (H802270-03)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1390	16.0	08/16/2018	ND	400	100	400	3.92	

Sample ID: SP 1 @ 3' (H802270-04)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/16/2018	ND	400	100	400	3.92	

Sample ID: SP 2 @ SURFACE (H802270-05)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1580	16.0	08/16/2018	ND	400	100	400	3.92	

Sample ID: SP 2 @ 1' (H802270-06)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	08/16/2018	ND	400	100	400	3.92	

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Received:	08/15/2018	Sampling Date:	08/10/2018
Reported:	08/17/2018	Sampling Type:	Soil
Project Name:	MYOX 28 STATE COM #004H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	07/12/18	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

Sample ID: SP 2 @ 2' (H802270-07)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1360	16.0	08/16/2018	ND	400	100	400	3.92	

Sample ID: SP 2 @ 3' (H802270-08)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	08/16/2018	ND	400	100	400	3.92	

Sample ID: SP 3 @ SURFACE (H802270-09)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4320	16.0	08/16/2018	ND	400	100	400	3.92	

Sample ID: SP 3 @ 1' (H802270-10)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	08/16/2018	ND	400	100	400	3.92	

Sample ID: SP 3 @ 2' (H802270-11)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1560	16.0	08/16/2018	ND	400	100	400	3.92	

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Received:	08/15/2018	Sampling Date:	08/10/2018
Reported:	08/17/2018	Sampling Type:	Soil
Project Name:	MYOX 28 STATE COM #004H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	07/12/18	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

Sample ID: SP 3 @ 3' (H802270-12)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	08/16/2018	ND	400	100	400	3.92	

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Received:	08/15/2018	Sampling Date:	08/10/2018
Reported:	08/17/2018	Sampling Type:	Soil
Project Name:	MYOX 28 STATE COM #004H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	07/12/18	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

Sample ID: SP 4 @ SURFACE (H802270-13)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/16/2018	ND	1.98	99.1	2.00	1.06		
Toluene*	<0.050	0.050	08/16/2018	ND	2.04	102	2.00	0.603		
Ethylbenzene*	<0.050	0.050	08/16/2018	ND	2.08	104	2.00	0.561		
Total Xylenes*	<0.150	0.150	08/16/2018	ND	6.03	100	6.00	0.595		
Total BTEX	<0.300	0.300	08/16/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4800	16.0	08/16/2018	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	08/16/2018	ND	210	105	200	1.21		
DRO >C10-C28*	<10.0	10.0	08/16/2018	ND	217	108	200	0.193		
EXT DRO >C28-C36	<10.0	10.0	08/16/2018	ND						

Surrogate: 1-Chlorooctane 104 % 41-142

Surrogate: 1-Chlorooctadecane 97.0 % 37.6-147

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Received:	08/15/2018	Sampling Date:	08/10/2018
Reported:	08/17/2018	Sampling Type:	Soil
Project Name:	MYOX 28 STATE COM #004H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	07/12/18	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

Sample ID: SP 4 @ 1' (H802270-14)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	784	16.0	08/16/2018	ND	400	100	400	3.92	

Sample ID: SP 4 @ 2' (H802270-15)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	08/16/2018	ND	416	104	400	0.00	

Sample ID: SP 4 @ 3' (H802270-16)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/16/2018	ND	416	104	400	0.00	

Sample ID: SP 5 @ SURFACE (H802270-17)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6930	16.0	08/16/2018	ND	416	104	400	0.00	

Sample ID: SP 5 @ 1' (H802270-18)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	08/16/2018	ND	416	104	400	0.00	

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Received:	08/15/2018	Sampling Date:	08/13/2018
Reported:	08/17/2018	Sampling Type:	Soil
Project Name:	MYOX 28 STATE COM #004H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	07/12/18	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

Sample ID: SP 5 @ 2' (H802270-19)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/16/2018	ND	416	104	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	08/15/2018	Sampling Date:	08/13/2018
Reported:	08/17/2018	Sampling Type:	Soil
Project Name:	MYOX 28 STATE COM #004H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	07/12/18	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

Sample ID: SP 6 @ SURFACE (H802270-20)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/16/2018	ND	1.98	99.1	2.00	1.06		
Toluene*	<0.050	0.050	08/16/2018	ND	2.04	102	2.00	0.603		
Ethylbenzene*	<0.050	0.050	08/16/2018	ND	2.08	104	2.00	0.561		
Total Xylenes*	<0.150	0.150	08/16/2018	ND	6.03	100	6.00	0.595		
Total BTEX	<0.300	0.300	08/16/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	15200	16.0	08/16/2018	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	08/16/2018	ND	210	105	200	1.21		
DRO >C10-C28*	<10.0	10.0	08/16/2018	ND	217	108	200	0.193		
EXT DRO >C28-C36	<10.0	10.0	08/16/2018	ND						

Surrogate: 1-Chlorooctane 95.8 % 41-142

Surrogate: 1-Chlorooctadecane 88.6 % 37.6-147

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 Cliff Brunson
 P.O. Box 805
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Received:	08/15/2018	Sampling Date:	08/13/2018
Reported:	08/17/2018	Sampling Type:	Soil
Project Name:	MYOX 28 STATE COM #004H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	07/12/18	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

Sample ID: SP 6 @ 1' (H802270-21)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	624	16.0	08/16/2018	ND	416	104	400	0.00	

Sample ID: SP 6 @ 2' (H802270-22)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	08/16/2018	ND	416	104	400	0.00	

Sample ID: NORTH @ SURFACE (H802270-23)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/16/2018	ND	416	104	400	0.00	

Sample ID: EAST @ SURFACE (H802270-24)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/16/2018	ND	416	104	400	0.00	

Sample ID: WEST @ SURFACE (H802270-25)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/16/2018	ND	416	104	400	0.00	

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Analytical Results For:

 BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	08/15/2018	Sampling Date:	08/13/2018
Reported:	08/17/2018	Sampling Type:	Soil
Project Name:	MYOX 28 STATE COM #004H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	07/12/18	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

Sample ID: SOUTH @ SURFACE (H802270-26)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/16/2018	ND	416	104	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

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



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

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

NMOCD
Rec'd: 7/16/18 MP

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

NAB1820736673

OPERATOR

Initial Report Final Report

Name of Company: COG Operating, LLC (OGRID #229137)	Contact: Robert McNeill
Address: 600 West Illinois Avenue, Midland, TX 79701	Telephone No. 432-683-7443
Facility Name: Myox 28 State Com #004H Battery	Facility Type: Flowline
Surface Owner: Private	Mineral Owner: State
API No. 30-015-41606	

LOCATION OF RELEASE

Unit Letter B	Section 28	Township 25S	Range 28E	Feet from the	North/South Line	Feet from the	East/West Line	County Eddy
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Latitude 32.1072 Longitude -104.0912 NAD83

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 60 bbl.	Volume Recovered 0 bbl.
Source of Release Flowline Rupture	Date and Hour of Occurrence July 12, 2018 3:00pm	Date and Hour of Discovery July 12, 2018 3:00pm
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Bratcher - NMOCD	
By Whom? DeAnn Grant	Date and Hour July 13, 2018 9:25am	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
The release was caused by a damaged flowline rupturing. The flowline is being replaced.

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

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

Signature: <i>DeAnn Grant</i>	OIL CONSERVATION DIVISION	
Printed Name: DeAnn Grant	Approved by Environmental Specialist: <i>[Signature]</i>	
Title: HSE Administrative Assistant	Approval Date: 7/20/18	Expiration Date: N/A
E-mail Address: agrant@concho.com	Conditions of Approval: <i>See attached</i>	
Date: July 16, 2018	Phone: (432) 253-4513	Attached <input checked="" type="checkbox"/> <i>APP-48618</i>

* Attach Additional Sheets If Necessary

Operator/Responsible Party,

The OCD has received the form C-141 you provided on 7/16/18 regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number ORP-4918 has been assigned. **Please refer to this case number in all future correspondence.**

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

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

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District 2 office in Artesia on or before 08/12/18. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

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

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.
- Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.
- Nominal detection limits for field and laboratory analyses must be provided.
- Composite sampling is not generally allowed.
- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

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

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

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

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

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

Jim Griswold

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

Pruett, Maria, EMNRD

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

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

Mr. Bratcher/Mr. Mann,

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

Thank you,

DeAnn Grant

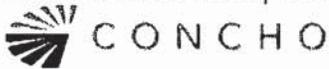
HSE Administrative Assistant

agrant@concho.com

COG Operating LLC

600 W Illinois Avenue | Midland, TX 79701

Direct: 432-253-4513 | Main: 432.683.7443



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Bratcher, Mike, EMNRD

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

Mr. Bratcher,

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

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

Date of Release: July 12, 2018

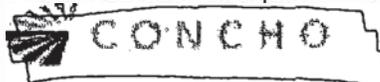
Release Volume: >25bbls

Recovery Volume: On going

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

Thank you,

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



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