

November 15, 2017

Crystal Weaver
Oil Conservation Division, District 2
811 S First St.
Artesia, NM 88210

Amber Groves
Hobbs Field Office
New Mexico State Land Office
2827 N. Dal Paso St. Suite 117
Hobbs, NM 88240

**Re: Work Plan
Dump Yard 2 State #002H
API #: 30-015-42518
RP#: 2RP-4424
Unit Letter N Section 02, Township 21S, Range 28E
Eddy County, NM**

Ms. Weaver,

COG Operating, LLC (COG) is pleased to submit for your consideration the following remediation work plan for the Dump Yard 2 State #002H. This plan is in response to an oil release that occurred on September 29, 2017. Subsequent to the release a C-141 initial report was submitted to the New Mexico Oil Conservation Division (NMOCD) on October 4, 2017.

BACKGROUND

The Dump Yard 2 State #002H release located in Unit Letter N, Section 2, Township 21 South, and Range 28 East in Eddy County New Mexico. More specifically the latitude and longitude for this release are 32.502168 North and -104.060126 West.

On September 29, 2017, the gas supply was closed from the free water knockout to the heater treater. This resulted in the free water knockout and the heater treater equalizing and sending fluid to the flare resulting in the release of approximately eleven (11) barrels (bbls) of oil. A vacuum truck was utilized to recover free standing fluids. Approximately nine (9) bbls of oil were recovered. Following the recovery of the free standing fluids the impacted area was treated with Micro-Blaze.

On October 4, 2017, a site assessment was conducted in order to vertically and horizontally define the impacted area. A site diagram is included in Appendix I. The analytical results from the site assessment activities are summarized in the table below.

GROUNDWATER AND SITE RANKING

According to the New Mexico Office of the State Engineer (NMOSE) groundwater in the project vicinity is approximately 80-feet below ground surface (BGS) (Appendix II). No water well or surface water was observed within 1,000-feet of the release site. Therefore the site ranking for this release is zero (10) based on the following:

Depth to ground water	50-100-feet
Distance to surface water body	>1000-feet
Wellhead Protection Area	>1000-feet

Analytical Results

Sample ID	Depth (feet)	Benzene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	Total TPH (mg/kg)
AH-1	0	<0.050	7.14	304	132	6750	6882
AH-1	0.5	<0.050	<0.300	352	<10.0	22.9	22.9
AH-1	1	--	--	110	--	--	--
AH-2	0	<0.050	<0.300	32	<10.0	678	678
AH-2	0.5	<0.050	<0.300	16	<10.0	<10.0	<10.0
AH-3	0	<0.050	0.433	16	<10.0	773	773
AH-3	0.5	<0.050	<0.300	<16	<10.0	<10.0	<10.0
AH-4	0	<0.050	<0.300	<16	<10.0	<10.0	<10.0
AH-4	0	<0.050	<0.300	16	<10.0	<10.0	<10.0


(--) Analysis not requested

PROPOSED REMEDIAL ACTIONS

- The overspray that resulted from the flare release was treated with Micro-Blaze on November 14, 2017 as part of the initial remedial actions.
- 90-days from the date of the above mentioned Micro-Blaze event a surface soil sample will be collected from sample location AH-1 and analyzed for Total Petroleum Hydrocarbons (TPH) to determine if TPH concentrations have attenuated below NMOCD Recommended Remedial Action Levels (RRAL's).
- If TPH levels remain elevated above NMOCD RRAL's the area in the vicinity of sample location AH-1 will be excavated to a depth of 0.5-feet BGS and hauled to an NMOCD approved disposal facility. The excavation will then be backfilled with caliche.

Should you have any questions or concerns please do not hesitate to contact me.

Sincerely,



Sheldon L. Hitchcock
HSE Coordinator
slhitchcock@concho.com

Enclosed:

Appendix I: Site Diagram
Appendix II: Groundwater Data
Appendix III: Initial C-141
Appendix IV: Analytical Reports and Chain-of-Custody Forms

APPENDIX I

October 30, 2017

Dump Yard 2 State #2H



APPENDIX II



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	Q	Q	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 03266 POD1	CUB	ED		3	4	4	04	21S	28E	585844	3596555*	2526	260	80	180

Average Depth to Water: 80 feet

Minimum Depth: 80 feet

Maximum Depth: 80 feet

Record Count: 1

Basin/County Search:

County: Eddy

UTMNAD83 Radius Search (in meters):

Easting (X): 588368

Northing (Y): 3596674

Radius: 3000

*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.

APPENDIX III

NM OIL CONSERVATION

ARTESIA DISTRICT

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

OCT 04 2017

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

NAB1727834995

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. 432-230-0077
Facility Name: DUMP YARD 2 STATE #002H	Facility Type: Battery

Surface Owner: State	Mineral Owner: State	API No. 30-015-42518
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LOCATION OF RELEASE

Unit Letter N	Section 02	Township 21S	Range 28E	Feet from the 190	North/South Line North	Feet from the 1700	East/West Line West	County Eddy
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Latitude **32.502168** Longitude - **104.060126**

NATURE OF RELEASE

Type of Release: Oil	Volume of Release: 11 bbls Oil	Volume Recovered: 9 bbls Oil
Source of Release: Flare	Date and Hour of Occurrence: 9-29-2017 9:00 am	Date and Hour of Discovery: 9-29-2017 9:00 am
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour:	
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.* This release occurred when the gas supply was closed from the free water knockout to the heater treater. This resulted in the knockout and heater equalizing and sending fluid to the flare. The gas supply was opened back up.		
Describe Area Affected and Cleanup Action Taken.* The release occurred on location and a small portion of pasture adjacent to the flare. Vacuum trucks were dispatched to recover all standing fluid. Concho will have the spill area evaluated for 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.		

OIL CONSERVATION DIVISION

Signed By *Mike Brannigan*

Approved by Environmental Specialist:

Signature:

Printed Name: **Dakota Neel**

Title: **HSE Coordinator**

E-mail Address: **dneel2@concho.com**

Date: **October 4, 2017** Phone: **575-746-2010**

Approval Date: **10/5/17**

Expiration Date: **N/A**

Conditions of Approval:

See attached

Attached ☐ **2 RP-4424**

* Attach Additional Sheets If Necessary

APPENDIX IV



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

October 09, 2017

SHELDON HITCHCOCK

COG OPERATING

P. O. BOX 1630

ARTESIA, NM 88210

RE: DUMP YARD 2 ST. #2H

Enclosed are the results of analyses for samples received by the laboratory on 10/04/17 11:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. 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/ga/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,

A handwritten signature in black ink that reads "Coley D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
SHELDON HITCHCOCK
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 10/04/2017
Reported: 10/09/2017
Project Name: DUMP YARD 2 ST. #2H
Project Number: NOT GIVEN
Project Location: N-2-21S-28E

Sampling Date: 10/02/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: AH -1 SURFACE (H702689-01)

BTEX 80218		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/05/2017	ND	1.96	98.2	2.00	0.906	
Toluene*	0.496	0.050	10/05/2017	ND	1.82	90.8	2.00	0.651	
Ethylbenzene*	0.908	0.050	10/05/2017	ND	1.85	92.5	2.00	0.436	
Total Xylenes*	5.74	0.150	10/05/2017	ND	5.67	94.5	6.00	0.0592	
Total BTEX	7.14	0.300	10/05/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 131 % 72-148

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	10/05/2017	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	132	50.0	10/05/2017	ND	209	104	200	1.07	
DRO >C10-C28	6750	50.0	10/05/2017	ND	216	108	200	6.46	

TPH 8015M mg/kg Analyzed By: MS S-06

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	132	50.0	10/05/2017	ND	209	104	200	1.07	
DRO >C10-C28	6750	50.0	10/05/2017	ND	216	108	200	6.46	

Surrogate: 1-Chlorooctane 105 % 28.3-164

Surrogate: 1-Chlorooctadecane 192 % 34.7-157

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
SHELDON HITCHCOCK
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 10/04/2017
Reported: 10/09/2017
Project Name: DUMP YARD 2 ST. #2H
Project Number: NOT GIVEN
Project Location: N-2-21S-28E

Sampling Date: 10/02/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: AH -1 0.5' (H702689-02)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/05/2017	ND	1.96	98.2	2.00	0.906	
Toluene*	<0.050	0.050	10/05/2017	ND	1.82	90.8	2.00	0.651	
Ethylbenzene*	<0.050	0.050	10/05/2017	ND	1.85	92.5	2.00	0.436	
Total Xylenes*	<0.150	0.150	10/05/2017	ND	5.67	94.5	6.00	0.0592	
Total BTEX	<0.300	0.300	10/05/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 108 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	352	16.0	10/05/2017	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	10/05/2017	ND	209	104	200	1.07	
DRO >C10-C28	22.9	10.0	10/05/2017	ND	216	108	200	6.46	

Surrogate: 1-Chlorooctane 81.5 % 28.3-164

Surrogate: 1-Chlorooctadecane 76.2 % 34.7-157

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
SHELDON HITCHCOCK
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 10/04/2017
Reported: 10/09/2017
Project Name: DUMP YARD 2 ST. #2H
Project Number: NOT GIVEN
Project Location: N-2-21S-28E

Sampling Date: 10/02/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: AH -2 SURFACE (H702689-03)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/05/2017	ND	1.96	98.2	2.00	0.906	
Toluene*	<0.050	0.050	10/05/2017	ND	1.82	90.8	2.00	0.651	
Ethylbenzene*	<0.050	0.050	10/05/2017	ND	1.85	92.5	2.00	0.436	
Total Xylenes*	<0.150	0.150	10/05/2017	ND	5.67	94.5	6.00	0.0592	
Total BTEX	<0.300	0.300	10/05/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 121 % 72-148

Chloride, SM4500Cl-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	10/05/2017	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	10/05/2017	ND	209	104	200	1.07	
DRO >C10-C28	678	10.0	10/05/2017	ND	216	108	200	6.46	

Surrogate: 1-Chlorooctane 74.2 % 28.3-164

Surrogate: 1-Chlorooctadecane 80.3 % 34.7-157

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
SHELDON HITCHCOCK
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 10/04/2017
Reported: 10/09/2017
Project Name: DUMP YARD 2 ST. #2H
Project Number: NOT GIVEN
Project Location: N-2-21S-28E

Sampling Date: 10/02/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: AH -2 0.5' (H702689-04)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/05/2017	ND	1.96	98.2	2.00	0.906	
Toluene*	<0.050	0.050	10/05/2017	ND	1.82	90.8	2.00	0.651	
Ethylbenzene*	<0.050	0.050	10/05/2017	ND	1.85	92.5	2.00	0.436	
Total Xylenes*	<0.150	0.150	10/05/2017	ND	5.67	94.5	6.00	0.0592	
Total BTEX	<0.300	0.300	10/05/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 117 % 72-148

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	10/05/2017	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	10/05/2017	ND	209	104	200	1.07	
DRO >C10-C28	<10.0	10.0	10/05/2017	ND	216	108	200	6.46	

Surrogate: 1-Chlorooctane 74.1 % 28.3-164

Surrogate: 1-Chlorooctadecane 77.1 % 34.7-157

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
SHELDON HITCHCOCK
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 10/04/2017
Reported: 10/09/2017
Project Name: DUMP YARD 2 ST. #2H
Project Number: NOT GIVEN
Project Location: N-2-21S-28E

Sampling Date: 10/02/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: AH -3 SURFACE (H702689-05)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/05/2017	ND	1.96	98.2	2.00	0.906	
Toluene*	<0.050	0.050	10/05/2017	ND	1.82	90.8	2.00	0.651	
Ethylbenzene*	0.053	0.050	10/05/2017	ND	1.85	92.5	2.00	0.436	
Total Xylenes*	0.380	0.150	10/05/2017	ND	5.67	94.5	6.00	0.0592	
Total BTEX	0.433	0.300	10/05/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 116 % 72-148

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	10/05/2017	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	10/05/2017	ND	209	104	200	1.07	
DRO >C10-C28	773	10.0	10/05/2017	ND	216	108	200	6.46	

Surrogate: 1-Chlorooctane 77.6 % 28.3-164

Surrogate: 1-Chlorooctadecane 80.6 % 34.7-157

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
SHELDON HITCHCOCK
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 10/04/2017
Reported: 10/09/2017
Project Name: DUMP YARD 2 ST. #2H
Project Number: NOT GIVEN
Project Location: N-2-21S-28E

Sampling Date: 10/02/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: AH -3 0.5' (H702689-06)

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	10/05/2017	ND	1.96	98.2	2.00	0.906	
Toluene*	<0.050	0.050	10/05/2017	ND	1.82	90.8	2.00	0.651	
Ethylbenzene*	<0.050	0.050	10/05/2017	ND	1.85	92.5	2.00	0.436	
Total Xylenes*	<0.150	0.150	10/05/2017	ND	5.67	94.5	6.00	0.0592	
Total BTEX	<0.300	0.300	10/05/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 109 % 72-148

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	10/05/2017	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	10/05/2017	ND	209	104	200	1.07	
DRO >C10-C28	<10.0	10.0	10/05/2017	ND	216	108	200	6.46	

Surrogate: 1-Chlorooctane 81.0 % 28.3-164

Surrogate: 1-Chlorooctadecane 81.7 % 34.7-157

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
SHELDON HITCHCOCK
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 10/04/2017
Reported: 10/09/2017
Project Name: DUMP YARD 2 ST. #2H
Project Number: NOT GIVEN
Project Location: N-2-21S-28E

Sampling Date: 10/02/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: AH -4 SURFACE (H702689-07)

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	10/05/2017	ND	1.96	98.2	2.00	0.906	
Toluene*	<0.050	0.050	10/05/2017	ND	1.82	90.8	2.00	0.651	
Ethylbenzene*	<0.050	0.050	10/05/2017	ND	1.85	92.5	2.00	0.436	
Total Xylenes*	<0.150	0.150	10/05/2017	ND	5.67	94.5	6.00	0.0592	
Total BTEX	<0.300	0.300	10/05/2017	ND					

Surrogate 4-Bromofluorobenzene (PIC) 119 % 72-148

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	10/05/2017	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	10/05/2017	ND	209	104	200	1.07	
DRO >C10-C28	<10.0	10.0	10/05/2017	ND	216	108	200	6.46	

Surrogate 1-Chlorooctane 80.6 % 28.3-164

Surrogate 1-Chlorooctadecane 83.3 % 34.7-157

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
SHELDON HITCHCOCK
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 10/04/2017
Reported: 10/09/2017
Project Name: DUMP YARD 2 ST. #2H
Project Number: NOT GIVEN
Project Location: N-2-21S-28E

Sampling Date: 10/02/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: AH -5 SURFACE (H702689-08)
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	10/05/2017	ND	1.96	98.2	2.00	0.906	
Toluene*	<0.050	0.050	10/05/2017	ND	1.82	90.8	2.00	0.651	
Ethylbenzene*	<0.050	0.050	10/05/2017	ND	1.85	92.5	2.00	0.436	
Total Xylenes*	<0.150	0.150	10/05/2017	ND	5.67	94.5	6.00	0.0592	
Total BTEX	<0.300	0.300	10/05/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 112 % 72-148

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	10/05/2017	ND	416	104	400	3.77	

TPH 8015M
mg/kg
Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/05/2017	ND	209	104	200	1.07	
DRO >C10-C28	<10.0	10.0	10/05/2017	ND	216	108	200	6.46	

Surrogate: 1-Chlorooctane 67.1 % 28.3-164

Surrogate: 1-Chlorooctadecane 66.8 % 34.7-157

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

- S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

[illegible]

Analytical Report 566222

**for
COG Operating, LLC**

Project Manager: Sheldon Hitchcock

Dump Yard St #2H

27-OCT-17

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-17-23), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab code: TX01468):
Texas (T104704295-17-15), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-17-13)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)



27-OCT-17

Project Manager: **Sheldon Hitchcock**
COG Operating, LLC
600 W Illinois
Midland, TX 79701

Reference: XENCO Report No(s): **566222**
Dump Yard St #2H
Project Address:

Sheldon Hitchcock:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 566222. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 566222 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kelsey Brooks
Project Manager

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Sample Cross Reference 566222



COG Operating, LLC, Midland, TX

Dump Yard St #2H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
AH-1 1'	S	10-16-17 08:00	1	566222-001



CASE NARRATIVE

Client Name: COG Operating, LLC

Project Name: Dump Yard St #2H

Project ID:

Work Order Number(s): 566222

Report Date: 27-OCT-17

Date Received: 10/19/2017

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analysis Summary 566222
COG Operating, LLC, Midland, TX
Project Name: Dump Yard St #2H



Project Id:
Contact: Sheldon Hitchcock
Project Location:

Date Received in Lab: Thu Oct-19-17 11:45 am
Report Date: 27-OCT-17
Project Manager: Kelsey Brooks

Analysis Requested		Lab Id:	566222-001						
		Field Id:	AH-11'						
		Depth:	1-						
		Matrix:	SOIL						
		Sampled:	Oct-16-17 08:00						
		Extracted:	Oct-25-17 15:20						
		Analyzed:	Oct-26-17 12:34						
		Units/RL:	mg/kg RL						
			110 4.95						
Chloride									

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Kelsey Brooks
Project Manager



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

****** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

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

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5332 Blackberry Drive, San Antonio TX 78238
1211 W Florida Ave, Midland, TX 79701
2525 W. Huntington Dr. - Suite 102, Tempe AZ 85282

Phone	Fax
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(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(432) 563-1800	(432) 563-1713
(602) 437-0330	



BS / BSD Recoveries



Project Name: Dump Yard St #2H

Work Order #: 566222

Analyst: MNV

Lab Batch ID: 3031640

Units: mg/kg

Date Prepared: 10/25/2017

Sample: 7633224-1-BKS

Batch #: 1

Project ID:

Date Analyzed: 10/26/2017

Matrix: Solid

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY													
Units:	mg/kg	Chloride by EPA 300	Analytes	Blank	Spike	Blank	Blank	Spike	Blank	Blk. Spk	Control	Control	Flag
				Sample Result [A]	Added [B]	Spike Result [C]	Spike %R [D]	Added [E]	Spike Duplicate Result [F]	Dup. %R [G]	Limits %R	Limits %RPD	
				<5.00	250	242	97	250	242	97	0	90-110	20

Relative Percent Difference RPD = $200 \cdot (C-F) / (C+F)$
Blank Spike Recovery [D] = $100 \cdot (C) / (B)$
Blank Spike Duplicate Recovery [G] = $100 \cdot (F) / (E)$
All results are based on MDL and Validated for QC Purposes



Form 3 - MS / MSD Recoveries



Project Name: Dump Yard St #2H

Work Order #: 566222

Lab Batch ID: 3031640

Date Analyzed: 10/26/2017

Reporting Units: mg/kg

Project ID:

QC- Sample ID: 566219-004 S Batch #: 1 Matrix: Soil

Date Prepared: 10/25/2017 Analyst: MNV

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300		Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes												
Chloride		<1.99	99.6	101	101	99.6	101	101	0	90-110	20	

Lab Batch ID: 3031640 QC- Sample ID: 566220-008 S Batch #: 1 Matrix: Soil

Date Analyzed: 10/26/2017 Date Prepared: 10/25/2017 Analyst: MNV

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300		Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes												
Chloride		9.02	247	258	101	247	261	102	1	90-110	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*(C-F)/(C+F)

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

CHAIN OF CUSTODY

Page 1 of 1

San Antonio, Texas (210-509-3334)

Midland, Texas (432-704-5251)

Phoenix, Arizona (480-355-0900)

[illegible]



XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In



Client: COG Operating, LLC

Date/ Time Received: 10/19/2017 11:45:00 AM

Work Order #: 566222

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	13.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#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:

Connie Hernandez

Date: 10/23/2017

Checklist reviewed by:

Kelsey Brooks

Date: 10/23/2017