

February 20, 2018

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

Mark Naranjo
New Mexico State Land Office
1001 S. Atkinson
Roswell, NM 88230

Re: Work Plan (Revised)
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 eighty (80) feet below ground surface (BGS) (Appendix II). No water well or surface water was observed within one-thousand (1,000) feet of the release site. Therefore the site ranking for this release is ten (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

October 2, 2017

Sample ID	Depth (feet)	Benzene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)	Total TPH (mg/kg)
AH-1	0	<0.050	7.14	304	8102
AH-1	0.5	<0.050	<0.300	352	40
AH-1	1	--	--	110	--
AH-2	0	<0.050	<0.300	32	850
AH-2	0.5	<0.050	<0.300	16	14.4
AH-3	0	<0.050	0.433	16	930
AH-3	0.5	<0.050	<0.300	<16	15
AH-4	0	<0.050	<0.300	<16	<10.0
AH-4	0	<0.050	<0.300	16	<10.0

(--) Analysis not requested

January 4, 2018

Sample ID	Depth (feet)	Benzene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)	Total TPH (mg/kg)
AH-1	0	<0.050	--	--	2780
AH-6	0	<0.00199	0.0638	--	6490
AH-6	0.5	<0.00199	<0.00199	--	<15.0

PROPOSED REMEDIAL ACTIONS

- The impacted area in the vicinity of sample locations AH-1 and AH-6 will be excavated to a depth of one-half (0.5) feet BGS.
- All of the excavated material will be hauled to an NMOCD approved solid waste disposal facility.
- The excavated area will be backfilled with clean “like” material and contoured to match the surrounding terrain.

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

Sincerely,



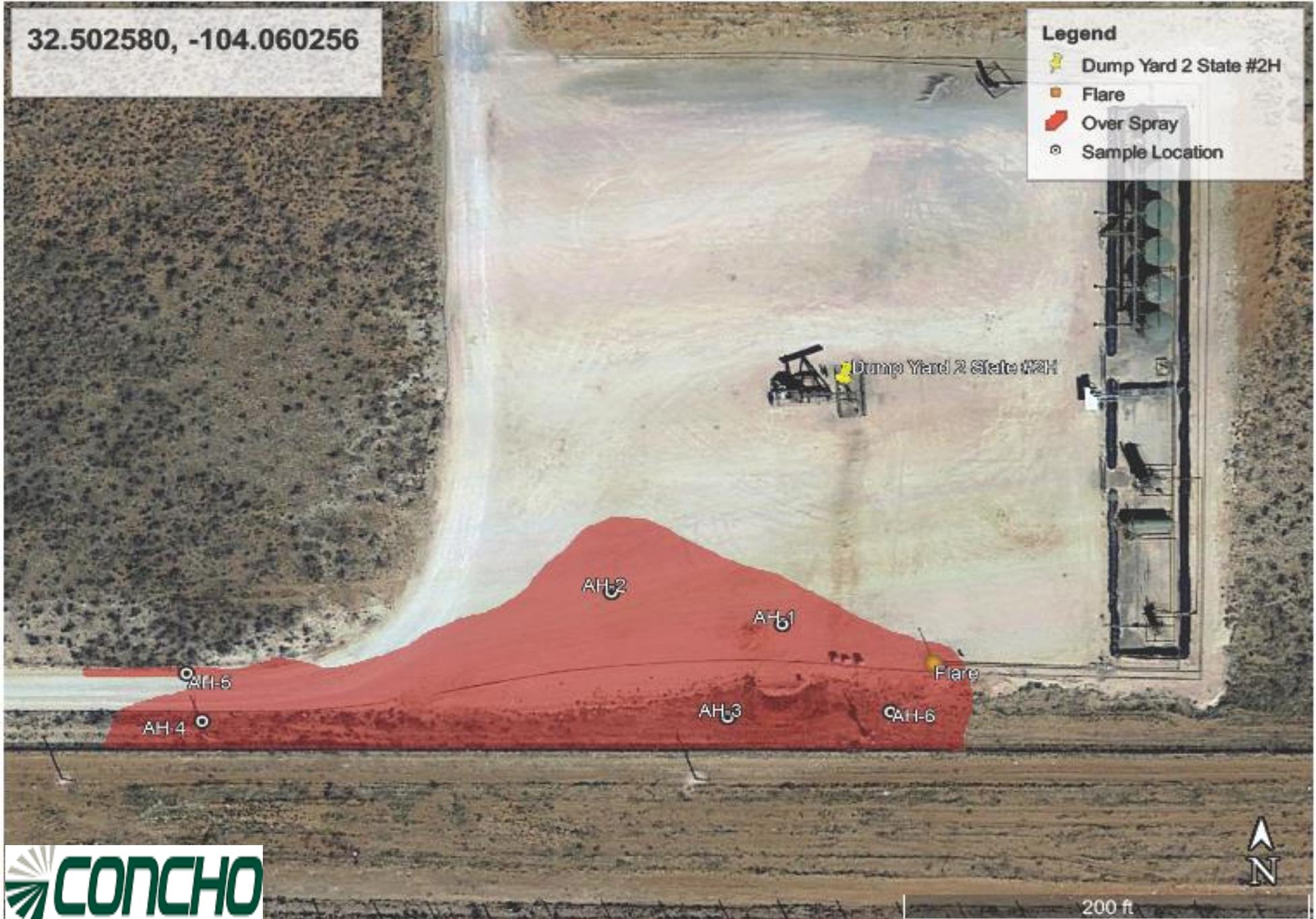
Sheldon L. Hitchcock
HSE Coordinator
slhitchcock@concho.com

Enclosed:

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

APPENDIX I

Dump Yard 2 State #002H



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 64	Q 16	Q 4	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
CP 00516	CP	ED	4	4	4	12	21S	28E	590901	3594984*		3045	275	205	70

Average Depth to Water: **142 feet**

Minimum Depth: **80 feet**

Maximum Depth: **205 feet**

Record Count: 2

Basin/County Search:

County: Eddy

UTMNAD83 Radius Search (in meters):

Easting (X): 588368

Northing (Y): 3596674

Radius: 3500

*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

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

Form C-141
Revised April 3, 2017

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

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

Release Notification and Corrective Action

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	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
N	02	21S	28E	190	North	1700	West	Eddy

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.

Signature: 	<u>OIL CONSERVATION DIVISION</u>	
	Approved by Environmental Specialist:	
Printed Name: Dakota Neel	Approval Date:	Expiration Date:
Title: HSE Coordinator	Conditions of Approval:	
E-mail Address: dneel2@concho.com	Attached <input type="checkbox"/>	
Date: October 4, 2017 Phone: 575-746-2010		

* Attach Additional Sheets If Necessary

APPENDIX IV



January 02, 2018

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 T104704398-17-10. 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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive 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: 01/02/2018
 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 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*	0.496	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 (PID) 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						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		
EXT DRO >C28-C36	1220	50.0	10/05/2017	ND						

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: 01/02/2018
 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 (PID) 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	
EXT DRO >C28-C36	17.1	10.0	10/05/2017	ND					

Surrogate: 1-Chlorooctane 81.5 % 28.3-164

Surrogate: 1-Chlorooctadecane 76.2 % 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: 01/02/2018
 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 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 (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		
EXT DRO >C28-C36	172	10.0	10/05/2017	ND						

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: 01/02/2018
 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 (PID) 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	
EXT DRO >C28-C36	14.4	10.0	10/05/2017	ND					

Surrogate: 1-Chlorooctane 74.1 % 28.3-164

Surrogate: 1-Chlorooctadecane 77.1 % 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: 01/02/2018
 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 (PID) 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	
EXT DRO >C28-C36	157	10.0	10/05/2017	ND					

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: 01/02/2018
 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 (PID) 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	
EXT DRO >C28-C36	15.0	10.0	10/05/2017	ND					

Surrogate: 1-Chlorooctane 81.0 % 28.3-164

Surrogate: 1-Chlorooctadecane 81.7 % 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: 01/02/2018
 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 (PID) 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	
EXT DRO >C28-C36	<10.0	10.0	10/05/2017	ND					

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: 01/02/2018
 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 (PID) 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		
EXT DRO >C28-C36	<10.0	10.0	10/05/2017	ND						

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



Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name: Concho Resources	P.O. #:
Project Manager: Sheldon Hitchcock	Company: COG
Address: 2407 Pecos Avenue	Attn: Sheldon Hitchcock
City: Artesia	Address:
Phone #: 575-703-6475	City:
Fax #:	State:
Project #: Project Owner: Concho	Zip:
Project Name: Dump Yard 2 St. #2H	Phone #:
Project Location: N-2-21S-28E	Fax #:
Sampler Name: Sheldon Hitchcock	

Lab I.D.	Sample I.D.	FOR LAB USE ONLY		DATE	TIME	TPH	BTEX	Chlorides						
		(G)RAB OR (C)OMP.	# CONTAINERS											
HT021684	1 AH-1 Surface	C	1	10/21/17	9:00	/	/	/						
	2 AH-1 0.5'	C	1		9:05	/	/	/						
	3 AH-2 Surface	C	1		9:10	/	/	/						
	4 AH-2 0.5'	C	1		9:12	/	/	/						
	5 AH-3 Surface	C	1		9:20	/	/	/						
	6 AH-3 0.5'	C	1		9:22	/	/	/						
	7 AH-4 Surface	C	1		9:30	/	/	/						
	8 AH-5 Surface	C	1		9:32	/	/	/						

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Relinquished By: <i>DHS</i>	Date: 10-4-17	Received By: <i>Shelton Hitchcock</i>
Time: 11:45		
Delivered By: (Circle One) #75	Sample Condition	CHECKED BY: <i>[Signature]</i>
Sampler - UPS - Bus - Other:	Cool Hitach <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	(Initials)

REMARKS: *3.350/8.1pc*
corrected 7.250

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: TNI02385): 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-1 1'				
	Depth:	1-				
	Matrix:	SOIL				
	Sampled:	Oct-16-17 08:00				
Chloride by EPA 300	Extracted:	Oct-25-17 15:20				
	Analyzed:	Oct-26-17 12:34				
	Units/RL:	mg/kg RL				
Chloride		110 4.95				

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.

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Kelsey Brooks
 Project Manager

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

+ 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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1211 W Florida Ave, Midland, TX 79701
2525 W. Huntington Dr. - Suite 102, Tempe AZ 85282

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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

Project ID:

Analyst: MNV

Date Prepared: 10/25/2017

Date Analyzed: 10/26/2017

Lab Batch ID: 3031640

Sample: 7633224-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

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

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

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

Lab Batch ID: 3031640
Date Analyzed: 10/26/2017
Reporting Units: mg/kg

QC- Sample ID: 566220-008 S **Batch #:** 1 **Matrix:** Soil
Date Prepared: 10/25/2017 **Analyst:** MNV

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
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)

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

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.



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 Dallas, Texas (214-902-0300)

CHAIN OF CUSTODY

Page 1 of 1

San Antonio, Texas (210-509-3334)
 Midland, Texas (432-704-5251)

www.xenco.com

Phoenix, Arizona (480-355-0900)

Client / Reporting Information		Project Information		Analytical Information		Matrix Codes									
Company Name / Branch: COG Operating, LLC Company Address: 2407 Pecora Ave. Artesia NM 88210 Phone No: 575-703-4475 Email: shhitchcock@concho.com dneel2@concho.com; allehb@concho.com; haskell@concho.com		Project Name/Number: Dump Yard St. # 2H Project Location:		Invoice To: COG Operating, LLC Attn: Robert McNeill 600 W. Illinois Ave. Midland TX, 79701		Xenco Quote # 5160222									
Project Contact: Sheldon Hitchcock Samplers Name: Sheldon Hitchcock		PO Number:		TPH EXTENDED BTEX CHLORIDES		Xenco Job # 5160222									
No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Field Comments
1	AH-1 Y	1'	10/14/17	8:00	S	1									
2					S	1									
3					S	1									
4					S	1									
5					S	1									
6					S	1									
7					S	1									
8					S	1									
9					S	1									
10					S	1									
Turnaround Time (Business days)															
Data Deliverable Information															
Notes: Temp: 3.2 IR ID: R-8 CF: (0-6: -0.2°C) (6-23: +0.2°C) Corrected Temp: 3															
FED-EX / UPS: Tracking #															
TAT Starts Day received by Lab, if received by 5:00 pm															
SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY															
Relinquished by Sampler:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
Sheldon Hitchcock		10/12/17		Daneel Dineen		10-15-17		Sheldon Hitchcock		10-15-17		Daneel Dineen		10-15-17	
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
3		10/12/17		3		10/15/17		3		10/15/17		4		10/15/17	
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
5		10/12/17		5		10/15/17		5		10/15/17		5		10/15/17	

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

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



Certificate of Analysis Summary 573121

COG Operating LLC, Artesia, NM

Project Name: Dump Yard St. #2



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

Date Received in Lab: Tue Jan-09-18 12:30 pm
Report Date: 16-JAN-18
Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	573121-001				
	Field Id:	AH-1 0'				
	Depth:					
	Matrix:	SOIL				
	Sampled:	Jan-04-18 13:12				
TPH By SW8015 Mod	Extracted:	Jan-12-18 10:00				
	Analyzed:	Jan-13-18 03:25				
	Units/RL:	mg/kg RL				
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0				
Diesel Range Organics (DRO)		1860 15.0				
Oil Range Hydrocarbons (ORO)		920 15.0				
Total TPH		2780 15.0				

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

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Kelsey Brooks
Project Manager

Analytical Report 573121

for
COG Operating LLC

Project Manager: Sheldon Hitchcock

Dump Yard St. #2

16-JAN-18

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: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)



16-JAN-18

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

Reference: XENCO Report No(s): **573121**
Dump Yard St. #2
Project Address: Eddy County NM

Sheldon Hitchcock:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 573121. 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. 573121 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 573121



COG Operating LLC, Artesia, NM

Dump Yard St. #2

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
AH-1 0'	S	01-04-18 13:12		573121-001



CASE NARRATIVE

Client Name: COG Operating LLC

Project Name: Dump Yard St. #2

Project ID:
Work Order Number(s): 573121

Report Date: 16-JAN-18
Date Received: 01/09/2018

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

COG Operating LLC, Artesia, NM

Dump Yard St. #2

Sample Id: AH-1 0'	Matrix: Soil	Date Received: 01.09.18 12.30
Lab Sample Id: 573121-001	Date Collected: 01.04.18 13.12	
Analytical Method: TPH By SW8015 Mod		Prep Method: TX1005P
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 01.12.18 10.00	Basis: Wet Weight
Seq Number: 3038390		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.13.18 03.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	1860	15.0	mg/kg	01.13.18 03.25		1
Oil Range Hydrocarbons (ORO)	PHCG2835	920	15.0	mg/kg	01.13.18 03.25		1
Total TPH	PHC635	2780	15.0	mg/kg	01.13.18 03.25		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	82	%	70-135	01.13.18 03.25		
o-Terphenyl	84-15-1	106	%	70-135	01.13.18 03.25		

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

+ 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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9701 Harry Hines Blvd , Dallas, TX 75220	(281) 240-4200	(281) 240-4280
5332 Blackberry Drive, San Antonio TX 78238	(214) 902 0300	(214) 351-9139
1211 W Florida Ave, Midland, TX 79701	(210) 509-3334	(210) 509-3335
2525 W. Huntington Dr. - Suite 102, Tempe AZ 85282	(432) 563-1800	(432) 563-1713
	(602) 437-0330	



COG Operating LLC

Dump Yard St. #2

Analytical Method: TPH By SW8015 Mod

Seq Number: 3038390

MB Sample Id: 7637443-1-BLK

Matrix: Solid

LCS Sample Id: 7637443-1-BKS

Prep Method: TX1005P

Date Prep: 01.12.18

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	862	86	70-135	mg/kg	01.12.18 19:11	
Diesel Range Organics (DRO)	<15.0	1000	861	86	70-135	mg/kg	01.12.18 19:11	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	Limits	Units	Analysis Date
1-Chlorooctane	91		80		70-135	%	01.12.18 19:11
o-Terphenyl	96		95		70-135	%	01.12.18 19:11

Analytical Method: TPH By SW8015 Mod

Seq Number: 3038390

Parent Sample Id: 573261-001

Matrix: Soil

MS Sample Id: 573261-001 S

Prep Method: TX1005P

Date Prep: 01.12.18

MSD Sample Id: 573261-001 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 (GRO)	23.0	1000	796	77	831	81	70-135	4	35		mg/kg	01.13.18 02:42	
Diesel Range Organics (DRO)	120	1000	856	74	870	75	70-135	2	35		mg/kg	01.13.18 02:42	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	85		88		70-135	%	01.13.18 02:42
o-Terphenyl	101		81		70-135	%	01.13.18 02:42

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

$$[D] = 100 * (C - A) / B$$

$$RPD = 200 * | (C - E) / (C + E) |$$

$$[D] = 100 * (C) / [B]$$

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



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 Stafford, Texas (281-240-4200)
 Dallas Texas (214-902-0300)

San Antonio, Texas (210-509-3334)
 Midland, Texas (432-704-5251)
www.xenco.com

Phoenix, Arizona (480-355-0900)

CHAIN OF CUSTODY

Page 1 of 1

Xenco Quote # 573121
 Xenco Job # 573121

Client / Reporting Information		Project Information		Analytical Information										Matrix Codes	
Company Name / Branch: COG Operating, LLC		Project Name/Number: Damp yard 5t. #2		TPH EXTENDED BTEX CHLORIDES										W = Water S = Soil/Sed/Solid GW = Ground Water DW = Drinking Water P = Product SW = Surface water SL = Sludge OW = Ocean/Sea Water WI = Wipe O = Oil WW = Waste Water A = Air	
Company Address: 2407 Pecos Ave. Artesia NM 88210		Project Location: Eddy Co., NM													
Email: shitchcock@concho.com dneel2@concho.com; cgray@concho.com; raskell@concho.com		Invoice To: COG Operating, LLC Attn: Robert McNeill 600 W. Illinois Ave. Midland TX, 79701													
Phone No: 575-703-4475		PO Number:													
Project contact: Sheldon Hitchcock		Sampers Name: Sheldon Hitchcock													
No.	Field ID / Point of Collection	Sample Depth	Collection Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	Field Comments	
1	AH-1 B	0	4/19/12		S	1									
2					S	1									
3					S	1									
4					S	1									
5					S	1									
6					S	1									
7					S	1									
8					S	1									
9					S	1									
10					S	1									
Data Deliverable Information															
Turnaround Time (Business days)															
<input type="checkbox"/> Same Day TAT <input type="checkbox"/> 5 Day TAT <input type="checkbox"/> Level II Std QC <input type="checkbox"/> Level IV (Full Data Pkg/raw data) <input type="checkbox"/> Next Day EMERGENCY <input type="checkbox"/> 7 Day TAT <input type="checkbox"/> Level III Std QC+ Forms <input type="checkbox"/> TRRP Level IV <input type="checkbox"/> 2 Day EMERGENCY <input checked="" type="checkbox"/> Contract TAT <input type="checkbox"/> Level 3 (CLP Forms) <input type="checkbox"/> UST / RG -411 <input type="checkbox"/> 3 Day EMERGENCY <input type="checkbox"/> TRRP Checklist															
TAT Starts Day received by Lab, if received by 5:00 pm															
SAMPLE CUSTODY MUST BE DOCUMENTED BEYOND EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING CARRIER DELIVERY															
Relinquished by Sampler:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
1 Sheldon McNeill		4/19/12 11:12 AM		3 Sheldon McNeill		4/19/12 12:00 PM		4 Sheldon McNeill		4/19/12 12:00 PM		4 Sheldon McNeill		4/19/12 12:00 PM	
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
3 Sheldon McNeill		4/19/12 12:00 PM		4 Sheldon McNeill		4/19/12 12:00 PM		4 Sheldon McNeill		4/19/12 12:00 PM		4 Sheldon McNeill		4/19/12 12:00 PM	
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
5 Sheldon McNeill		4/19/12 12:00 PM		4 Sheldon McNeill		4/19/12 12:00 PM		4 Sheldon McNeill		4/19/12 12:00 PM		4 Sheldon McNeill		4/19/12 12:00 PM	

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



Inter-Office Shipment

IOS Number 1054394

Date/Time: 01/10/18 13:09 Created by: Shawnee Smith

Please send report to: Kelsey Brooks

Lab# From: Midland Delivery Priority:

Address: 1211 W. Florida Ave, Midland TX 79701

Lab# To: Houston Air Bill No.:

Phone:

E-Mail: kelsey.brooks@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
573121-001	S	AH-1 0'	01/04/18 13:12	TX1005	TPH by Texas1005	01/15/18	01/18/18	KEB	PHCC12C28 PHCC28C35 1	

Inter Office Shipment or Sample Comments:

Relinquished By Shawnee Smith
Shawnee Smith

Received By: _____

Date Relinquished: 01/10/2018

Date Received: _____

Cooler Temperature: _____

Client: COG Operating LLC

Date/ Time Received: 01/09/2018 12:30:00 PM

Work Order #: 573121

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)?	10.2
#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)?	Yes
#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: Shawnee Smith Date: 01/10/2018
Shawnee Smith

Checklist reviewed by: Kelsey Brooks Date: 01/11/2018
Kelsey Brooks



Certificate of Analysis Summary 573124

COG Operating LLC, Artesia, NM

Project Name: Dump Yard St. #2



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

Date Received in Lab: Tue Jan-09-18 12:30 pm
Report Date: 16-JAN-18
Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	573124-001	573124-002			
	<i>Field Id:</i>	AH-6 0'	AH-6 0.5'			
	<i>Depth:</i>					
	<i>Matrix:</i>	SOIL	SOIL			
	<i>Sampled:</i>	Jan-04-18 13:15	Jan-04-18 13:20			
BTEX by EPA 8021B	<i>Extracted:</i>	Jan-15-18 11:00	Jan-12-18 16:00			
	<i>Analyzed:</i>	Jan-15-18 16:57	Jan-12-18 21:59			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL			
Benzene		<0.00199 0.00199	<0.00199 0.00199			
Toluene		<0.00199 0.00199	<0.00199 0.00199			
Ethylbenzene		<0.00199 0.00199	<0.00199 0.00199			
m,p-Xylenes		0.0434 0.00398	<0.00398 0.00398			
o-Xylene		0.0204 0.00199	<0.00199 0.00199			
Total Xylenes		0.0638 0.00199	<0.00199 0.00199			
Total BTEX		0.0638 0.00199	<0.00199 0.00199			
TPH By SW8015 Mod	<i>Extracted:</i>	Jan-12-18 10:00	Jan-12-18 10:00			
	<i>Analyzed:</i>	Jan-13-18 03:45	Jan-13-18 02:00			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)		183 15.0	<15.0 15.0			
Diesel Range Organics (DRO)		4810 15.0	<15.0 15.0			
Oil Range Hydrocarbons (ORO)		1500 15.0	<15.0 15.0			
Total TPH		6490 15.0	<15.0 15.0			

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

Analytical Report 573124

for
COG Operating LLC

Project Manager: Sheldon Hitchcock

Dump Yard St. #2

16-JAN-18

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)
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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: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)



16-JAN-18

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

Reference: XENCO Report No(s): **573124**
Dump Yard St. #2
Project Address: Eddy County NM

Sheldon Hitchcock:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 573124. 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. 573124 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 573124



COG Operating LLC, Artesia, NM

Dump Yard St. #2

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
AH-6 0'	S	01-04-18 13:15		573124-001
AH-6 0.5'	S	01-04-18 13:20		573124-002



CASE NARRATIVE

Client Name: COG Operating LLC

Project Name: Dump Yard St. #2

Project ID:
Work Order Number(s): 573124

Report Date: 16-JAN-18
Date Received: 01/09/2018

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3038355 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3038367 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

COG Operating LLC, Artesia, NM

Dump Yard St. #2

Sample Id: AH-6 0'	Matrix: Soil	Date Received: 01.09.18 12.30
Lab Sample Id: 573124-001	Date Collected: 01.04.18 13.15	
Analytical Method: TPH By SW8015 Mod		Prep Method: TX1005P
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 01.12.18 10.00	Basis: Wet Weight
Seq Number: 3038390		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	183	15.0	mg/kg	01.13.18 03.45		1
Diesel Range Organics (DRO)	C10C28DRO	4810	15.0	mg/kg	01.13.18 03.45		1
Oil Range Hydrocarbons (ORO)	PHCG2835	1500	15.0	mg/kg	01.13.18 03.45		1
Total TPH	PHC635	6490	15.0	mg/kg	01.13.18 03.45		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	80	%	70-135	01.13.18 03.45		
o-Terphenyl	84-15-1	107	%	70-135	01.13.18 03.45		

Analytical Method: BTEX by EPA 8021B	Prep Method: SW5030B
Tech: ALJ	% Moisture:
Analyst: ALJ	Date Prep: 01.15.18 11.00
Seq Number: 3038367	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.15.18 16.57	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.15.18 16.57	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.15.18 16.57	U	1
m,p-Xylenes	179601-23-1	0.0434	0.00398	mg/kg	01.15.18 16.57		1
o-Xylene	95-47-6	0.0204	0.00199	mg/kg	01.15.18 16.57		1
Total Xylenes	1330-20-7	0.0638	0.00199	mg/kg	01.15.18 16.57		1
Total BTEX		0.0638	0.00199	mg/kg	01.15.18 16.57		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	89	%	80-120	01.15.18 16.57		
4-Bromofluorobenzene	460-00-4	117	%	80-120	01.15.18 16.57		

COG Operating LLC, Artesia, NM

Dump Yard St. #2

Sample Id: AH-6 0.5'	Matrix: Soil	Date Received: 01.09.18 12.30
Lab Sample Id: 573124-002	Date Collected: 01.04.18 13.20	
Analytical Method: TPH By SW8015 Mod		Prep Method: TX1005P
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 01.12.18 10.00	Basis: Wet Weight
Seq Number: 3038390		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.13.18 02.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.13.18 02.00	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.13.18 02.00	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.13.18 02.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	01.13.18 02.00	
o-Terphenyl	84-15-1	91	%	70-135	01.13.18 02.00	

Analytical Method: BTEX by EPA 8021B	Prep Method: SW5030B
Tech: ALJ	% Moisture:
Analyst: ALJ	Date Prep: 01.12.18 16.00
Seq Number: 3038355	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.12.18 21.59	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.12.18 21.59	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.12.18 21.59	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.12.18 21.59	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.12.18 21.59	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.12.18 21.59	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.12.18 21.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	80-120	01.12.18 21.59	
1,4-Difluorobenzene	540-36-3	98	%	80-120	01.12.18 21.59	

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

+ 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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COG Operating LLC

Dump Yard St. #2

Analytical Method: TPH By SW8015 Mod

Seq Number: 3038390

MB Sample Id: 7637443-1-BLK

Matrix: Solid

LCS Sample Id: 7637443-1-BKS

Prep Method: TX1005P

Date Prep: 01.12.18

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	862	86	70-135	mg/kg	01.12.18 19:11	
Diesel Range Organics (DRO)	<15.0	1000	861	86	70-135	mg/kg	01.12.18 19:11	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	Limits	Units	Analysis Date	Flag
1-Chlorooctane	91		80		70-135	%	01.12.18 19:11	
o-Terphenyl	96		95		70-135	%	01.12.18 19:11	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3038390

Parent Sample Id: 573261-001

Matrix: Soil

MS Sample Id: 573261-001 S

Prep Method: TX1005P

Date Prep: 01.12.18

MSD Sample Id: 573261-001 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 (GRO)	23.0	1000	796	77	831	81	70-135	4	35	mg/kg	01.13.18 02:42	
Diesel Range Organics (DRO)	120	1000	856	74	870	75	70-135	2	35	mg/kg	01.13.18 02:42	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date	Flag
1-Chlorooctane	85		88		70-135	%	01.13.18 02:42	
o-Terphenyl	101		81		70-135	%	01.13.18 02:42	

Analytical Method: BTEX by EPA 8021B

Seq Number: 3038355

MB Sample Id: 7637493-1-BLK

Matrix: Solid

LCS Sample Id: 7637493-1-BKS

Prep Method: SW5030B

Date Prep: 01.12.18

LCSD Sample Id: 7637493-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0948	95	0.0882	88	70-130	7	35	mg/kg	01.12.18 17:29	
Toluene	<0.00201	0.100	0.0928	93	0.0864	87	70-130	7	35	mg/kg	01.12.18 17:29	
Ethylbenzene	<0.00201	0.100	0.0908	91	0.0848	85	71-129	7	35	mg/kg	01.12.18 17:29	
m,p-Xylenes	<0.00402	0.201	0.182	91	0.170	85	70-135	7	35	mg/kg	01.12.18 17:29	
o-Xylene	<0.00201	0.100	0.0902	90	0.0854	86	71-133	5	35	mg/kg	01.12.18 17:29	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	100		99		98		80-120	%	01.12.18 17:29	
4-Bromofluorobenzene	92		93		95		80-120	%	01.12.18 17:29	

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

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]

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

Dump Yard St. #2

Analytical Method: BTEX by EPA 8021B

Seq Number: 3038367

MB Sample Id: 7637511-1-BLK

Matrix: Solid

LCS Sample Id: 7637511-1-BKS

Prep Method: SW5030B

Date Prep: 01.15.18

LCSD Sample Id: 7637511-1-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	0.0986	99	0.0974	97	70-130	1	35	mg/kg	01.15.18 13:44	
Toluene	<0.00200	0.100	0.0970	97	0.0958	96	70-130	1	35	mg/kg	01.15.18 13:44	
Ethylbenzene	<0.00200	0.100	0.0953	95	0.0927	93	71-129	3	35	mg/kg	01.15.18 13:44	
m,p-Xylenes	<0.00401	0.200	0.190	95	0.185	93	70-135	3	35	mg/kg	01.15.18 13:44	
o-Xylene	<0.00200	0.100	0.0942	94	0.0931	93	71-133	1	35	mg/kg	01.15.18 13:44	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	93		103		104		80-120	%	01.15.18 13:44
4-Bromofluorobenzene	81		99		101		80-120	%	01.15.18 13:44

Analytical Method: BTEX by EPA 8021B

Seq Number: 3038355

Parent Sample Id: 573116-003

Matrix: Soil

MS Sample Id: 573116-003 S

Prep Method: SW5030B

Date Prep: 01.12.18

MSD Sample Id: 573116-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0868	87	0.0896	90	70-130	3	35	mg/kg	01.12.18 18:09	
Toluene	<0.00199	0.0996	0.0852	86	0.0865	87	70-130	2	35	mg/kg	01.12.18 18:09	
Ethylbenzene	<0.00199	0.0996	0.0806	81	0.0824	83	71-129	2	35	mg/kg	01.12.18 18:09	
m,p-Xylenes	<0.00398	0.199	0.162	81	0.165	83	70-135	2	35	mg/kg	01.12.18 18:09	
o-Xylene	<0.00199	0.0996	0.0818	82	0.0824	83	71-133	1	35	mg/kg	01.12.18 18:09	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		117		80-120	%	01.12.18 18:09
4-Bromofluorobenzene	97		111		80-120	%	01.12.18 18:09

Analytical Method: BTEX by EPA 8021B

Seq Number: 3038367

Parent Sample Id: 573485-001

Matrix: Soil

MS Sample Id: 573485-001 S

Prep Method: SW5030B

Date Prep: 01.15.18

MSD Sample Id: 573485-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0771	77	0.0778	78	70-130	1	35	mg/kg	01.15.18 14:22	
Toluene	<0.00201	0.100	0.0758	76	0.0767	77	70-130	1	35	mg/kg	01.15.18 14:22	
Ethylbenzene	<0.00201	0.100	0.0719	72	0.0733	73	71-129	2	35	mg/kg	01.15.18 14:22	
m,p-Xylenes	<0.00402	0.201	0.146	73	0.147	74	70-135	1	35	mg/kg	01.15.18 14:22	
o-Xylene	<0.00201	0.100	0.0743	74	0.0737	74	71-133	1	35	mg/kg	01.15.18 14:22	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		99		80-120	%	01.15.18 14:22
4-Bromofluorobenzene	103		99		80-120	%	01.15.18 14:22

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

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]

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



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CHAIN OF CUSTODY

Page 1 of 2

Xenco Quote #

Xenco Job #

573124

Client / Reporting Information

Project Information

Company Name / Branch:
 COG Operating, LLC
 Company Address:
 2407 Pecos Ave, Artesia NM 88210
 Email: sjlhitchcock@concho.com
 Phone No: 575-703-6475
 dneel2@concho.com, cgray@concho.com, rhaskell@concho.com
 Project Contact: Sheldon Hitchcock
 Samplers Name: Sheldon Hitchcock

Project Name/Number: **Dump Yard Str. #2**
 Project Location: **Edley Co., NM**
 Invoice To: COG Operating, LLC
 Attn: Robert McNeill
 600 W. Illinois Ave.
 Midland Tx, 79701
 PO Number:

Analytical Information

Matrix Codes

TPH EXTENDED
 BTEX
 CHLORIDES

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

No. Field ID / Point of Collection

No.	Field ID / Point of Collection	Collection			Matrix	# of bottles	Number of preserved bottles							TPH EXTENDED	BTEX	CHLORIDES	Field Comments
		Sample Depth	Date	Time			HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH				
1	AH-6 0'	0'	1/4/19	11:15	S	1											
2	AH-6 0.5'	0.5'	1/4/19	11:20	S	1											
3					S	1											
4					S	1											
5					S	1											
6					S	1											
7					S	1											
8					S	1											
9					S	1											
10					S	1											

Data Deliverable Information

Turnaround Time (Business days)
 Same Day TAT
 5 Day TAT
 Next Day EMERGENCY
 7 Day TAT
 2 Day EMERGENCY
 Contract TAT
 3 Day EMERGENCY
 TRRP Checklist

Level II Std QC
 Level III Std QC+ Forms
 Level IV (Full Data Pkg /raw data)
 TRRP Level IV
 Level 3 (CLP Forms)
 UST /RG -411
 TRRP Checklist

Temp: **3.2** IR ID: R-8
 CF: (0-6: -0.2°C)
 (6-23: +0.2°C)
 Corrected Temp: **3.0**
 FED-EX / UPS: Tracking #

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

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

Relinquished by Sampler:

Date Time:

Received By:

Relinquished By:

Preserved where applicable

On Ice

Cooler Temp.

Thermo. Corr. Factor

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

Client: COG Operating LLC

Date/ Time Received: 01/09/2018 12:30:00 PM

Work Order #: 573124

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)?	10.7
#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: Shawnee Smith Date: 01/10/2018
 Shawnee Smith

Checklist reviewed by: Kelsey Brooks Date: 01/11/2018
 Kelsey Brooks