



June 26, 2018

Mike Bratcher
New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division, District 2
811 S. First Street
Artesia, NM 88210

Ryan Mann
Hobbs Field Office
New Mexico State Land Office
2827 N. Dal Paso Suite 117
Hobbs, NM 88240

Re: Remediation Summary and Closure Report
Dump Yard 2 State #002H
API No. 30-015-42518
GPS: 32.502168, -104.060126
UL "N", Sec. 2, T21S, R28E
Eddy Co, NM
NMOCD Ref. No. 2RP-4424

TRC Environmental Corporation (TRC), on behalf of COG Operating, LLC (COG), has prepared this *Remediation Summary and Closure Report* for the Release Site known as the Dump Yard 2 State #002H. Details of the release are summarized below:

RELEASE DETAILS			
Type of Release:	Crude Oil	Volume of Release: 11 bbls	
		Volume Recovered: 9 bbls	
Source of Release: Flare		Date of Release: 09/29/17	Date of Discovery: 09/29/17
Was Immediate Notice Given? Not Required		If YES, to Whom? Not Applicable	
Was a Watercourse Reached? No		Volume Impacted the Watercourse: Not Applicable	
Cause of Problem and Remedial Action Taken:			
The release was attributed to the gas supply being closed from the free water knockout to the heater treater, resulting in the knockout and heater treater equalizing and sending fluid to the flare.			

A Site Location Map is provided as Attachment #1. A copy of the initial Release Notification and Corrective Action (NMOCD Form C-141) is provided as Attachment #6.

REGULATORY FRAMEWORK

Crude oil facilities in New Mexico are generally regulated by the New Mexico Oil Conservation Division (NMOCD). Impact of soil due to a surface release is addressed in the NMOCD guidance document titled *Guidelines for Remediation of Leaks, Spills and Releases*, dated August 13, 1993.

The guidance document provides direction for initial response actions, site assessment, sampling procedures and provides a total ranking score based on the depth to groundwater, distance to private and domestic water sources, and the distance to the nearest surface water body as follows:

RANKING SCORE CRITERIA		
General Site Characteristics		Score
Depth to Groundwater	< 50 Feet	20
	50-99 Feet	10
	> 100 Feet	0
Well Head Protection Area, <1,000 Feet from water source, or <200 Feet from private domestic water source	Yes	20
	No	0
Distance to Surface Water Body	< 200 Feet	20
	200 - 1,000 Feet	10
	> 1,000 Feet	0

A search of a groundwater database maintained by The New Mexico Office of the State Engineer (NMOSE) was conducted to determine the average depth to groundwater within the Section and identify any registered water wells within 1,000 ft. of the release site. If none were identified, the approximate depth to groundwater was extrapolated from a Depth to Groundwater Map utilized by the NMOCD. The results of the groundwater database search are provided as Attachment #3.

TOTAL RANKING SCORE FOR SITE		
Ranking Score Criteria		Score
Depth to Groundwater	50-100 Feet	10
Well Head Protection Area, <1,000 Feet from water source, or <200 Feet from private domestic water source	No	0
Distance to Surface Water Body	> 1,000 Feet	0
TOTAL RANKING SCORE FOR SITE		10

The NMOCD guidelines indicated the Site has an initial ranking score of 10 points. The NMOCD Recommended Remediation Action Levels (RRAL) for a Site with a ranking score of 10 points are as follows:

RECOMMENDED REMEDIATION ACTION LEVELS	
Benzene	10 mg/kg
Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX)	50 mg/kg
Total Petroleum Hydrocarbons (TPH)	1,000 mg/kg
Chloride	600 mg/kg

INITIAL INVESTIGATION

On October 2, 2018, and January 4, 2018, initial soil investigations were conducted at the Release Site by COG representatives. During the initial soil investigation, six (6) representative soil samples were collected from within the affected area in an effort to determine the vertical and horizontal extent of soil impacts. The collected soil samples were submitted to an NMOCD-approved laboratory for analysis of benzene, BTEX, TPH and chloride concentrations. A table summarizing laboratory analytical results from soil samples collected during the initial assessment is provided below:

Sample ID	Depth	Sample Date	Soil Status	SW 846-8021b		SW-846 8015M				E300
				Benzene	Total BTEX	TPH GRO C ₆ -C ₁₀	TPH DRO C ₁₀ -C ₂₈	TPH ORO C ₂₈ C ₃₆	TOTAL TPH C ₆ -C ₃₆	CHLORIDE
AH-1 Surface	Surf.	10/2/2017	Excavated	<0.050	7.14	132	6,750	1,220	8,102	304
AH-1 0.5'	0.5'	10/2/2017	In-Situ	<0.050	<0.300	<10.0	22.9	17.1	40.0	352
AH-1 1'	1'	10/16/2017	In-Situ	-	-	-	-	-	-	110
AH-1 0'	0'	1/4/2018	Excavated	-	-	<15.0	1,860	920	2,780	-
AH-2 Surface	Surf.	10/2/2017	In-Situ	<0.050	<0.300	<10.0	678	172	850	32.0
AH-2 0.5'	2.5'	10/2/2017	In-Situ	<0.050	<0.300	<10.0	<10.0	14.4	14.4	16.0
AH-3 Surface	Surf.	10/2/2017	In-Situ	<0.050	0.433	<10.0	773	157	930	16.0
AH-3 0.5'	0.5'	10/2/2017	In-Situ	<0.050	<0.300	<10.0	<10.0	15.0	15	<16.0
AH-4 Surface	Surf.	10/2/2017	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<16.0
AH-5 Surface	Surf.	10/2/2017	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	16.0
AH-6 0'	Surf.	1/4/2018	Excavated	<0.00199	0.0638	183	4,810	1,500	6,490	-
AH-6 0.5'	0.5'	1/4/2018	In-Situ	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	-
NMOCD RRAL			10	50	-	-	-	-	1,000	600

Laboratory analytical reports are provided as Attachment #4. A "Site & Sample Location Map" is provided as Attachment #2.

PROPOSED REMEDIATION ACTIVITIES AND REMEDIATION WORKPLAN

Based on laboratory analytical results, site conditions and field observations made during the initial release assessment, COG proposed the following remediation activities designed to advance the Release Site toward an NMOCD and NMSLO approved closure:

- Excavate the impacted area in the vicinity of sample locations AH-1 and AH-6 to a depth of one-half (0.5) ft. bgs.
- Transport excavated soil to and NMOCD-approved soil waste disposal facility.
- Upon completion of excavation activities, backfill the excavated area with locally sourced, non-impacted "like" material
- Prepare and submit a "Remediation Summary and Site Closure Request" to the NMOCD and NMSLO.

The *Workplan* was subsequently approved.

SUMMARY OF FIELD ACTIVITIES

On May 30, 2018, remediation activities commenced at the release site. As per the approved *Workplan*, impacted soil in the areas characterize by sample points AH-1 and AH-6 was excavated to a depth of approximately one-half (0.5) ft bgs. Excavation sidewalls were advanced until field observations suggested hydrocarbon impacts had been mitigated. Excavated soil was temporarily stockpiled on-site, atop an impermeable liner, pending final disposition. A Photographic Log is provided as Attachment #5.

EXCAVATION/REMEDATION DETAIL SUMMARY			
Type of Remediation:		Dig and Haul	
Date Remediation Activities Began:		May 30, 2018	
Excavation Dimensions:		Length: 90 Ft.	Width: 20 to 40 Ft. Depth: 1.5 Ft.
Soil Transportation Start Date:		June 1, 2018	Backfill Date: June 4, 2018
Total Yards Transported to Disposal:		160	Disposal Facility: R360 Halfway Bar Facility

LIMITATIONS

TRC has prepared this Remediation Summary and Soil Closure Request to the best of its ability. No other warranty, expressed or implied, is made or intended.

TRC has examined and relied upon documents referenced in the report and has relied on oral statements made by certain individuals. TRC has not conducted an independent examination of the facts contained in referenced materials and statements. We have presumed the genuineness of the documents and that the information provided in documents or statements is true and accurate. TRC has prepared this report, in a professional manner, using the degree of skill and care exercised by similar environmental consultants. TRC also notes that the facts and conditions referenced in this report may change over time and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

This report has been prepared for the benefit of COG Operating, LLC. The information contained in this report, including all exhibits and attachments, may not be used by any other party without the express consent of TRC and/or COG Operating, LLC.

SITE CLOSURE REQUEST

Remediation activities were conducted in accordance with the NMOCD-approved *Workplan*. Based on laboratory analytical results from soil samples collected during the initial soil investigation, impacted soil was excavated and transported to an NMOCD-approved disposal facility and the site was backfilled with locally sourced, non-impacted "like" material. TRC on behalf of COG Operating, LLC respectfully requests the NMOCD and NMSLO grant closure approval for the Dump Yard 2 State #002H release which occurred on September 29, 2017.

If you have any questions, or if additional is required, please feel free to contact Becky Haskell or either of the undersigned by phone or email.

Respectfully,

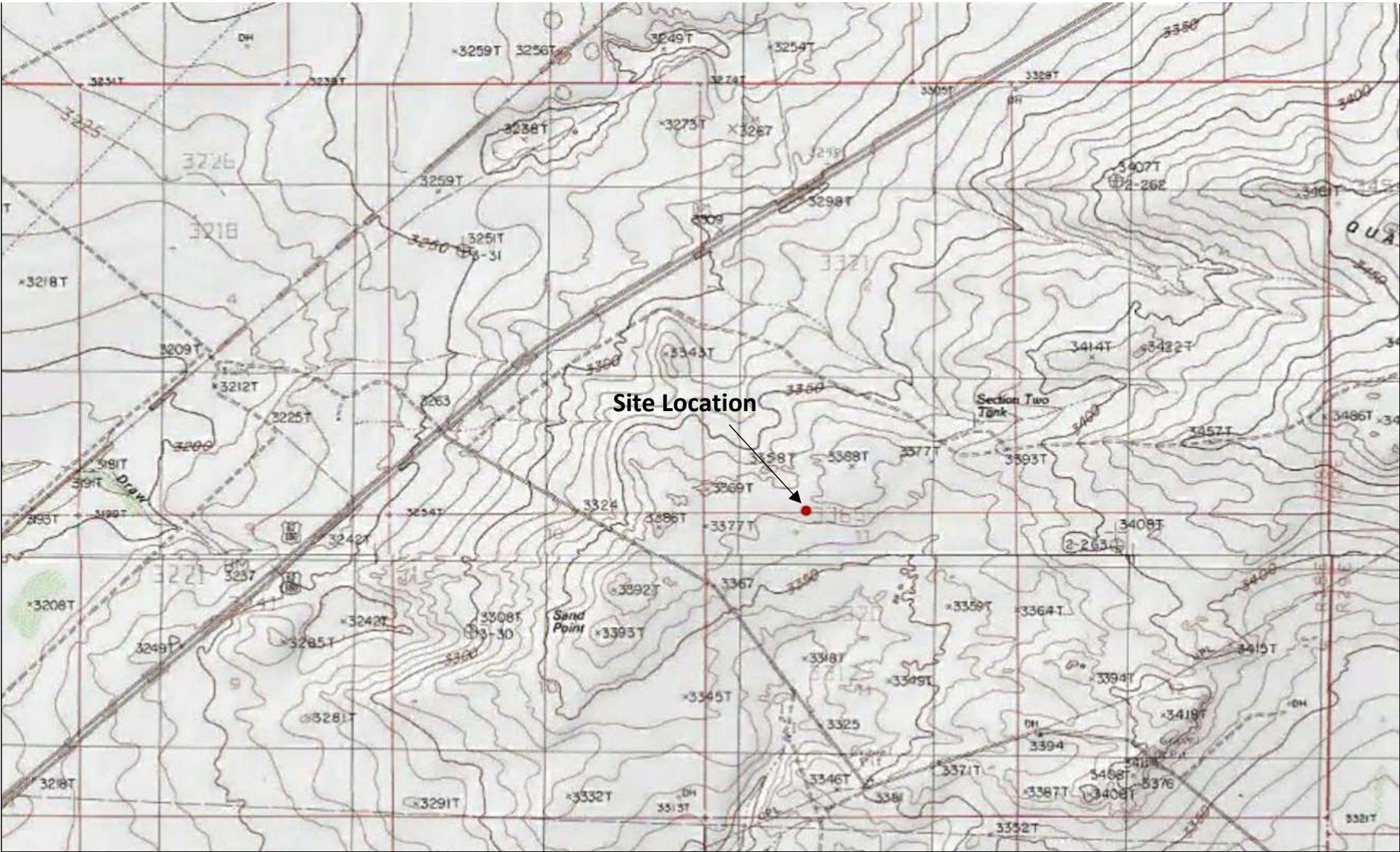


Joel Lowry
Senior Project Manager
TRC Environmental Corp.

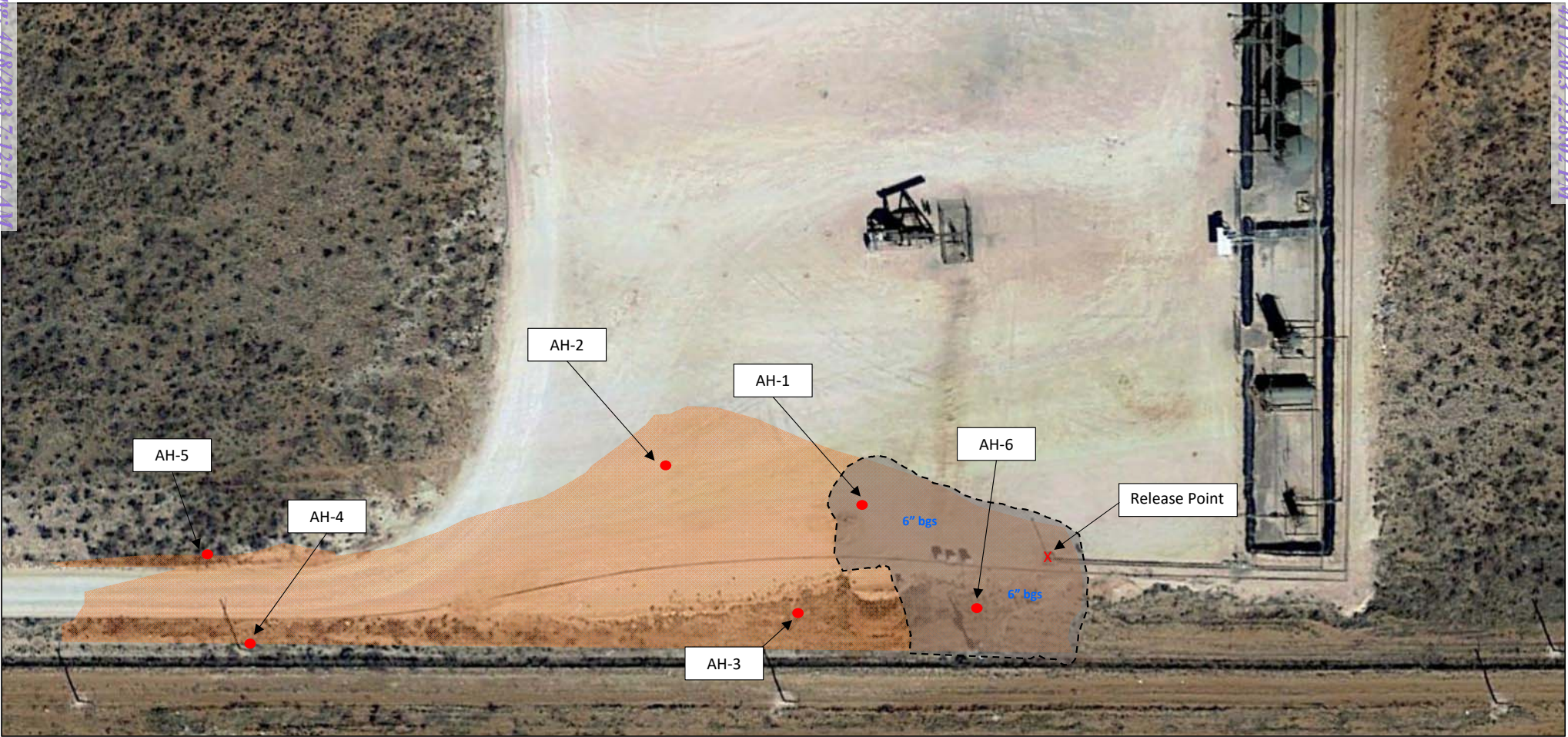


Curt Stanley
Senior Project Manager
TRC Environmental Corp.

Attachments:	Attachment #1-	Figure 1 - Site Location Map
	Attachment #2-	Figure 2 - Site & Sample Location Map
	Attachment #3-	Groundwater Database Search
	Attachment #4-	Laboratory Analytical Reports
	Attachment #5-	Photographic Log
	Attachment #6-	Release Notification and Corrective Action (FORM C-141)



LEGEND: ● Site Location	Figure 1 Site Location Map COG Operating, LLC Dump Yard 2 State #002H Eddy Co, NM	Scale 1" = 2,500'	
		Drafted by: ZC Checked by: JL	
		Draft: April 20, 2018	
		GPS: 32.502168, -104.060126	
		UL "N", Sec. 2, T21S, R28E	
		TRC Proj. No: 302166	



LEGEND: <div><div><div></div></div> Sample Locations</div> <div><div><div></div></div> Excavated Area</div>	Figure 2 Site & Sample Location Map COG Operating, LLC Dump Yard 2 State #002H Eddy Co, New Mexico	Scale 1" = ~10'	
		Drafted by: BC	Checked by: JL
		Draft: June 18, 2018	
		Lat. N 32.502168 Long. W 104.060126	
		UL "N", Sec. 2, T21S, R28E	
		TRC Proj. No.: 302166	
		<div><div><div></div><div>TRC</div></div><div>Results you can rely on</div></div> <div>2057 Commerce Drive Midland, Texas 79703 432.520.7720</div>	



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

(quarters are smallest to largest) (NAD83 UTM in meters)

No records found.

UTMNAD83 Radius Search (in meters):

Easting (X): 588278.3

Northing (Y): 3596488.4

Radius: 1610

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.

6/19/18 3:31 PM

WATER COLUMN/ AVERAGE
DEPTH TO WATER



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

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, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

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)

BTX 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 BTX	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

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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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



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

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, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	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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Celey D. Keene, Lab Director/Quality Manager



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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



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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

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

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, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	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



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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



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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

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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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A handwritten signature in black ink, appearing to read "Celey D. Keene", is written over a horizontal line.

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

Company Name: Concho Resources		BILL TO		ANALYSIS REQUEST																											
Project Manager: Sheldon Hitchcock		P.O. #:																													
Address: 2407 Pecos Avenue		Company: COG																													
City: Artesia		Attn: Sheldon Hitchcock																													
Phone #: 575-703-6475		Address:																													
Fax #: Project Owner: Concho		City:																													
Project Name: Dump Yard 2 St. #2H		State:																													
Project Location: N-2-21S-28E		Phone #:																													
Sampler Name: Sheldon Hitchcock		Fax #:																													
FOR LAB USE ONLY																															
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX				PRESERV	SAMPLING																						
		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :		ACID/BASE:		ICE / COOL		OTHER :		DATE	TIME	TPH	BTEX	Chlorides							
H702689	AH-1 Surface		1																	10/2/17	9:00	/	/	/							
1	AH-1 0.5'		1																		9:05	/	/	/							
2	AH-2 Surface		1																		9:10	/	/	/							
3	AH-2 0.5'		1																		9:12	/	/	/							
4	AH-3 Surface		1																		9:20	/	/	/							
5	AH-3 0.5'		1																		9:22	/	/	/							
6	AH-4 Surface		1																		9:30	/	/	/							
7	AH-4 0.5'		1																		9:32	/	/	/							
8	AH-5 Surface		1																												
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Relinquished By: <i>DHS</i>		Date: 10-4-17	Received By: <i>Shelton Hitchcock</i>		REMARKS:																										
Relinquished By:		Date:	Received By:																												
Time: 11:45		Time:																													
Delivered By: (Circle One) #75		Sample Condition		CHECKED BY: <i>(initials)</i>																											
Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																													
Sampler - UPS - Bus - Other:		3.350/3.10																													

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

corrected 1.250

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,

A handwritten signature in black ink, appearing to read 'Kelsey Brooks', written over a horizontal line.

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

<i>Analysis Requested</i>	<i>Lab Id:</i>	566222-001					
	<i>Field Id:</i>	AH-1 1'					
	<i>Depth:</i>	1-					
	<i>Matrix:</i>	SOIL					
	<i>Sampled:</i>	Oct-16-17 08:00					
Chloride by EPA 300	<i>Extracted:</i>	Oct-25-17 15:20					
	<i>Analyzed:</i>	Oct-26-17 12:34					
	<i>Units/RL:</i>	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.

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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 9701 Harry Hines Blvd, Dallas, TX 75220
 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
(281) 240-4200	(281) 240-4280
(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

Project ID:

Lab Batch ID: 3031640

QC- Sample ID: 566219-004 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 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

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 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 $[D] = 100 \times (C-A)/B$
 Relative Percent Difference $RPD = 200 \times |(C-F)/(C+F)|$

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

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.

[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



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.

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

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,

A handwritten signature in black ink, appearing to read 'Kelsey Brooks', written over a horizontal line.

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



Certificate of Analytical Results 573121



COG Operating LLC, Artesia, NM

Dump Yard St. #2

Sample Id: **AH-1 0'**
Lab Sample Id: 573121-001

Matrix: Soil
Date Collected: 01.04.18 13.12

Date Received: 01.09.18 12.30

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		



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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 9701 Harry Hines Blvd, Dallas, TX 75220
 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
(281) 240-4200	(281) 240-4280
(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(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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Xenco Quote #

Xenco Job #

CS 72

CHAIN OF CUSTODY

Page 1 Of 1[illegible]



Inter-Office Shipment

Page 1 of 1

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

Received By: _____

Date Relinquished: 01/10/2018

Date Received: _____

Cooler Temperature: _____



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



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

Checklist reviewed by:

Kelsey Brooks

Date: 01/11/2018



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

Analysis Requested	Lab Id:	573124-001	573124-002				
	Field Id:	AH-6 0'	AH-6 0.5'				
	Depth:						
	Matrix:	SOIL	SOIL				
	Sampled:	Jan-04-18 13:15	Jan-04-18 13:20				
BTEX by EPA 8021B	Extracted:	Jan-15-18 11:00	Jan-12-18 16:00				
	Analyzed:	Jan-15-18 16:57	Jan-12-18 21:59				
	Units/RL:	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	Extracted:	Jan-12-18 10:00	Jan-12-18 10:00				
	Analyzed:	Jan-13-18 03:45	Jan-13-18 02:00				
	Units/RL:	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)
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): **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,

A handwritten signature in black ink, appearing to read 'Kelsey Brooks', written over a horizontal line.

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.



Certificate of Analytical Results 573124



COG Operating LLC, Artesia, NM

Dump Yard St. #2

Sample Id: **AH-6 0'**
Lab Sample Id: 573124-001

Matrix: Soil
Date Collected: 01.04.18 13.15

Date Received: 01.09.18 12.30

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

Basis: Wet Weight

Seq Number: 3038367

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	



Certificate of Analytical Results 573124



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

Basis: Wet Weight

Seq Number: 3038355

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	



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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(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(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	

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	
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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Client / Reporting Information						Project Information						Analytical Information						Matrix Codes																													
Company Name / Branch: COG Operating, LLC Company Address: 2407 Pecos Ave. Artesia NM 88210						Project Name/Number: Dump Yard Str. #2 Project Location: Eddy Co., NM																																									
Email: silitchcock@concho.com Phone No: 575-703-6475 dneel2@concho.com; cgray@concho.com; rhaskell@concho.com						Invoice To: COG Operating, LLC Attn: Robert McNeill 600 W. Illinois Ave. Midland Tx, 79701																																									
Project Contact: Sheldon Hitchcock						PO Number:																																									
Samplers Name: Sheldon Hitchcock																																															
No.	Field ID / Point of Collection					Collection		Number of preserved bottles		TPH EXTENDED						BTEX						CHLORIDES						Field Comments																			
1	AH-6 d'	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	TOTAL																																	
2	AH-6 0.5'	0.5'	11/18	1:15	S	1								1																																	
3					S	1								1																																	
4					S	1								1																																	
5					S	1								1																																	
6					S	1								1																																	
7					S	1								1																																	
8					S	1								1																																	
9					S	1								1																																	
10					S	1								1																																	
Turnaround Time (Business days)						Data Deliverable Information																																									
<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																																															
Relinquished by Sampler:						SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING REQUIRER DELIVERY																																									
Date Time: 1-9-19						Received By: [Signature]						Relinquished By: [Signature]						Date Time: 1-9-19																													
Relinquished by:						Date Time: 1-9-19						Received By: [Signature]						Relinquished By: [Signature]						Date Time: 1-9-19																							
3						Date Time:						3						Custody Seal #						Preserved where applicable						On Ice						Cooler Temp.						Thermo. Corr. Factor					



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



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

Checklist reviewed by:

Kelsey Brooks

Date: 01/11/2018



Photographic Log

Client: COG Operating, LLC
Project Name: Dump Yard 2 State #002H

Prepared by: TRC Environmental Corp.
Location: Eddy County, NM

Photograph No. 1

Description:
View of the
affected area.

Direction:
South



Photograph No. 2

Description:
View of portion of
the excavated
area.

Direction:
West





Photographic Log

Client: COG Operating, LLC
Project Name: Dump Yard 2 State #002H

Prepared by: TRC Environmental Corp.
Location: Eddy County, NM

Photograph No. 3

Description:
View of portion of
the excavated
area.

Direction:
North



Photograph No. 4

Description:
View of portion of
the excavated
area.

Direction:
West





Photographic Log

Client: COG Operating, LLC
Project Name: Dump Yard 2 State #002H

Prepared by: TRC Environmental Corp.
Location: Eddy County, NM

Photograph No. 5

Description:
View of the
affected area after
remediation
activities.

Direction:
East



Photograph No. 6

Description:
View of the
affected area after
remediation
activities.

Direction:
Southwest



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

NM OIL CONSERVATION

ARTESIA DISTRICT

OCT 04 2017

Form C-141
Revised April 3, 2017

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

RECEIVED

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
----------------------	----------------------	----------------------

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.*

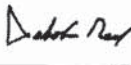

Describe Cause of Problem and Remedial Action Taken.*

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: 	OIL CONSERVATION DIVISION	
Printed Name: Dakota Neel	Signed By: 	
Title: HSE Coordinator	Approved by Environmental Specialist:	
E-mail Address: dneel2@concho.com	Approval Date: 10/5/17	Expiration Date: N/A
Date: October 4, 2017 Phone: 575-746-2010	Conditions of Approval: See attached	Attached <input type="checkbox"/> 2 RP-4424

* Attach Additional Sheets If Necessary

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

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 (2RP-4424)	Facility Type: Battery

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

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
------------------	---------------	-----------------	--------------	----------------------	---------------------------	-----------------------	------------------------	----------------

Latitude 32.5025635 Longitude - 104.0603485

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. Vacuum trucks were dispatched to recover all standing fluid.

Remediation activities were conducted in accordance with an NMOCD and NMSLO-approved *Workplan* and/or associated correspondence with respective regulatory representatives. Please reference the *Workplan* dated February 20, 2018, and *Remediation Summary and Closure Report* dated June 26, 2018 for additional details regarding 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: 		OIL CONSERVATION DIVISION	
Printed Name: Rebecca Haskell		Approved by Environmental Specialist: 	
Title: HSE Coordinator	Approval Date: 4/18/2023	Expiration Date: N/A	
E-mail Address: rhaskell@concho.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: June 29, 2018 Phone: 432-818-2372	none		

* Attach Additional Sheets If Necessary

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

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

CONDITIONS

Action 206443

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 206443
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
bhall	None	4/18/2023