



October 23, 2015

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

Re: Willow State #3
30-015-33371
Sec. 3, T25S-R28E
Eddy County, NM

Mr. Mike Bratcher,

COG Operating LLC would like to submit for your consideration the enclosed work plan for the above captioned well. The plan is in response to the C-141 Initial report dated July 8, 2015.

Background

The release was caused by a corroded 4" ball valve on a flow line resulting in the release of 15 barrels of produced water of which 15 barrels were recovered. The release impacted an area in the pasture measuring approximately 25' wide by 60' in length.

Groundwater

Based on the information obtained on the NMOSE website (Sec. 4, T25S-R28E), the release area would be classified at a site ranking of Twenty with depth to groundwater at approximately <50'.

Soil Assessment and Analytical Results

Sample points labeled as S1 and S2 on the attached site diagram depict the approximate sample locations within the release area along with a summary of the analytical results. Sample results show TPH and BTEX to be non-detect for both sample points at a depth of 1'. Chloride results were elevated for both sample points to a depth of 12' which was the extent of the back hoe used to sample. On July 15, 2015, a soil coring unit was brought in to further delineate the impacted (labeled as B on the site diagram). Sample point B1 was taken to a depth of ~40' with no visible signs of moisture or groundwater thus proving that the change in elevation would increase the depth to groundwater.

Work Plan

COG Operating LLC proposes that the release area be excavated to depth of approximately 3' and capped with a synthetic liner prior to backfill with like materials. This method has been approved in a previous remediation (2RP-1541) just east of the location in question. The excavation of impacted material will be handled with respect to safety and the associate hazards with power lines and existing flow lines.

If there are no objections or further stipulations, COG Operating LLC would like to begin the remediation process based on approval of this work plan. Please feel free to contact me with any questions or concerns at (575) 748-6940.

Sincerely,



Lupe Carrasco
Environmental Coordinator

Enclosure(s): Site Diagram
Analytical Results
C-141 Initial (Copy)

Willow State #3

June 24, 2015

Sec. 3, T25S-R28E

30-015-33371

32.15770.-104.07320

Released: 15 B/PW

Recovered: 14 B/PW

Legend

Willow State #3

S1	CI-
1'	9460
2'	19200
3'	14800
5'	12400
7'	17600
9'	14000
10'	16100
12'	9730
B1	CI-
15'	1520
20'	960
25'	288
30'	256
35'	352
40'	224
S2	CI-
1'	17800
2'	13900
3'	15600
5'	20200
7'	21200
9'	25200
10'	18800
12'	9730
B2	CI-
15'	12300
20'	2040
25'	880
30'	672
35'	352



Google earth

© 2015 Google



August 06, 2015

LUPE CARRASCO
COG Operating, LLC
500 W. ILLINOIS
Midland, TX 79701

RE: WILLOW #3

Enclosed are the results of analyses for samples received by the laboratory on 07/15/15 16:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene
Lab Director/Quality Manager

Analytical Results For:

 COG Operating, LLC
 LUPE CARRASCO
 500 W. ILLINOIS
 Midland TX, 79701
 Fax To: None

 Received: 07/15/2015
 Reported: 08/06/2015
 Project Name: WILLOW #3
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 07/15/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Judy Garcia

Sample ID: S1-1 (H501818-01)

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	07/21/2015	ND	2.04	102	2.00	2.59		
Toluene*	<0.050	0.050	07/21/2015	ND	2.06	103	2.00	4.16		
Ethylbenzene*	<0.050	0.050	07/21/2015	ND	2.25	113	2.00	3.74		
Total Xylenes*	<0.150	0.150	07/21/2015	ND	5.91	98.4	6.00	3.95		
Total BTEX	<0.300	0.300	07/21/2015	ND						

Surrogate: 4-Bromofluorobenzene (PID) 116 % 85.6-137

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	9460	16.0	07/20/2015	ND	432	108	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	07/18/2015	ND	183	91.3	200	5.04		
DRO >C10-C28	<10.0	10.0	07/18/2015	ND	189	94.6	200	7.58		

Surrogate: 1-Chlorooctane 81.3 % 47.2-157

Surrogate: 1-Chlorooctadecane 85.4 % 52.1-176


Sample ID: S1-2 (H501818-02)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	19200	16.0	07/20/2015	ND	432	108	400	3.77		

Cardinal Laboratories

* = Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 COG Operating, LLC
 LUPE CARRASCO
 500 W. ILLINOIS
 Midland TX, 79701
 Fax To: None

 Received: 07/15/2015
 Reported: 08/06/2015
 Project Name: WILLOW #3
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 07/15/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Judy Garcia

Sample ID: S1-3 (H501818-03)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	14800	16.0	07/22/2015	ND	416	104	400	0.00		

Sample ID: S1-5 (H501818-04)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	12400	16.0	07/26/2015	ND	400	100	400	7.69		

Sample ID: S1-7 (H501818-05)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	17600	16.0	07/28/2015	ND	400	100	400	3.92		

Sample ID: S1-9 (H501818-06)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	14000	16.0	07/30/2015	ND	416	104	400	0.00		

Sample ID: S1-10 (H501818-07)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16100	16.0	08/03/2015	ND	400	100	400	3.92		

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 COG Operating, LLC
 LUPE CARRASCO
 500 W. ILLINOIS
 Midland TX, 79701
 Fax To: None

 Received: 07/15/2015
 Reported: 08/06/2015
 Project Name: WILLOW #3
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 07/15/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Judy Garcia

Sample ID: S1-12 (H501818-08)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	9730	16.0	08/06/2015	ND	416	104	400	0.00		

Sample ID: S2-1 (H501818-09)

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	07/21/2015	ND	2.04	102	2.00	2.59		
Toluene*	<0.050	0.050	07/21/2015	ND	2.06	103	2.00	4.16		
Ethylbenzene*	<0.050	0.050	07/21/2015	ND	2.25	113	2.00	3.74		
Total Xylenes*	<0.150	0.150	07/21/2015	ND	5.91	98.4	6.00	3.95		
Total BTEX	<0.300	0.300	07/21/2015	ND						

Surrogate: 4-Bromofluorobenzene (PIL) 112 % 85.6-137

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	17800	16.0	07/20/2015	ND	432	108	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	07/18/2015	ND	183	91.3	200	5.04		
DRO >C10-C28	<10.0	10.0	07/18/2015	ND	189	94.6	200	7.58		

Surrogate: 1-Chlorooctane 81.6 % 47.2-157

Surrogate: 1-Chlorooctadecane 86.9 % 52.1-176

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* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 COG Operating, LLC
 LUPE CARRASCO
 500 W. ILLINOIS
 Midland TX, 79701
 Fax To: None

 Received: 07/15/2015
 Reported: 08/06/2015
 Project Name: WILLOW #3
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 07/15/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Judy Garcia

Sample ID: S2-2 (H501818-10)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	13900	16.0	07/20/2015	ND	432	108	400	3.77		

Sample ID: S2-3 (H501818-11)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	15600	16.0	07/22/2015	ND	416	104	400	3.92		

Sample ID: S2-5 (H501818-12)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	20200	16.0	07/26/2015	ND	400	100	400	7.69		

Sample ID: S2-7 (H501818-13)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	21200	16.0	07/28/2015	ND	400	100	400	3.92		

Sample ID: S2-9 (H501818-14)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	25200	16.0	07/30/2015	ND	416	104	400	0.00		

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 COG Operating, LLC
 LUPE CARRASCO
 500 W. ILLINOIS
 Midland TX, 79701
 Fax To: None

 Received: 07/15/2015
 Reported: 08/06/2015
 Project Name: WILLOW #3
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 07/15/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Judy Garcia

Sample ID: S2-10 (H501818-15)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	18800	16.0	08/03/2015	ND	400	100	400	3.92		

Sample ID: S2-12 (H501818-16)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	9730	16.0	08/06/2015	ND	416	104	400	0.00		

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

- QM-4X The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.
- 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 SM4500CI-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

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name: COG Operating LLC
 Project Manager: Lupe Carrasco
 Address: 2208 West Main
 City: Artesia State: NM Zip: 88210
 Phone #: (575) 748-6940 Fax #: [blank]
 Project #: [blank] Project Owner: [blank]
 Project Name: Willow #3
 Project Location: [blank]
 Sampler Name: Lupe Carrasco
 P.O. #: [blank] Company: COG Operating LLC
 Attn: Robert McNeill
 Address: 600 W Illinois
 City: Midland
 State: TX Zip: 79701
 Phone #: (432) 221-0388 Fax #: [blank]

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX						DATE	TIME	BTEX	TPH	Chloride	Remarks	
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER							ACID/BASE
4501818	S1-1									7/15/15	X		X			
	S1-2									7/15/15	X		X			
	S1-3									7/15/15			X			
	S1-5									7/15/15			X			
	S1-7									7/15/15			X			
	S1-9									7/15/15			X			
	S1-10									7/15/15			X			
	S1-12									7/15/15			X			

PLEASE NOTE: Liability and Damages, Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analysis. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: [Signature]
 Date: 7/15/15
 Time: 10:05
 Received By: Judy Garcia
 Date: 7/15/15
 Time: 11:15 AM

Delivered By: (Circle One)
 Sampler - UPS - Bus - Other: 54c
 Sample Condition: Good Impair
 Checked By: [Signature]

Phone Result: Yes No Add'l Phone #: [blank]
 Fax Result: Yes No Add'l Fax #: [blank]
 REMARKS: 9carrasco@concho.com
 Run chlorides until samples fall below 1000ppm

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476



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: COG Operating LLC
 Project Manager: Lupe Carrasco
 Address: 2208 West Main
 City: Artesia State: NM Zip: 88210
 Phone #: (575) 748-6940 Fax #:
 Project #: Project Owner:
 Project Name: Willow #3
 Project Location:
 Sampler Name: Lupe Carrasco
 P.O. #:
 Company: COG Operating LLC
 Attn: Robert McNeill
 Address: 600 W Illinois
 City: Midland
 State: TX Zip: 79701
 Phone #: (432) 221-0388
 Fax #:

FOR LAB USE ONLY	MATRIX	PRESERV	SAMPLING	BTEX	TPH	Chloride	Other
Lab I.D. #501818	(G)RAB OR (C)OMP	# CONTAINERS	DATE				
9			7/15/15	X	X	X	Cl added 7/21
10			7/15/15			X	" " 7/22
11			7/15/15			X	Cl added 7/27
12			7/15/15			X	Cl added 7/28
13			7/15/15			X	Cl added 7/30
14			7/15/15			X	Cl added 8/5
15			7/15/15			X	
16			7/15/15				

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based on contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruption, loss of use, or loss of profits, incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated remedies or otherwise.

Relinquished By: [Signature] Date: 7/15/15
 Received By: Judy Perica Date: 7/15/15
 Time: 11:15 AM
 Title: [Signature]
 Tip: 10:05

Delivered By: (Circle One) UPS - Bus - Other: 5.4c
 FORM-008 R 2.0

Sample Condition: Cool Impact
 Yes No

CHECKED BY: [Signature]

Phone Result: Yes No Add'l Phone #:
 Fax Result: Yes No Add'l Fax #:
 REMARKS: jcarrasco@concho.com
 atutililio@concho.com Run chlorides until samples fall below 1000ppm

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476

August 27, 2015

LUPE CARRASCO

COG OPERATING

P. O. BOX 1630

ARTESIA, NM 88210

RE: WILLOW STATE #3

Enclosed are the results of analyses for samples received by the laboratory on 08/21/15 11:07.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

 COG OPERATING
 LUPE CARRASCO
 P. O. BOX 1630
 ARTESIA NM, 88210
 Fax To: NONE

 Received: 08/21/2015
 Reported: 08/27/2015
 Project Name: WILLOW STATE #3
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 08/18/2015
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Judy Garcia

Sample ID: B1-15' (H502218-01)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1520	16.0	08/26/2015	ND	432	108	400	0.00		

Sample ID: B1-20' (H502218-02)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	960	16.0	08/26/2015	ND	432	108	400	0.00		

Sample ID: B1-25' (H502218-03)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	288	16.0	08/26/2015	ND	416	104	400	0.00		

Sample ID: B2-15' (H502218-04)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	12300	16.0	08/26/2015	ND	416	104	400	0.00		

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 COG OPERATING
 LUPE CARRASCO
 P. O. BOX 1630
 ARTESIA NM, 88210
 Fax To: NONE

Received:	08/21/2015	Sampling Date:	08/18/2015
Reported:	08/27/2015	Sampling Type:	Soil
Project Name:	WILLOW STATE #3	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Judy Garcia
Project Location:	NOT GIVEN		

Sample ID: B2-20' (H502218-05)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2040	16.0	08/26/2015	ND	416	104	400	0.00		

Sample ID: B2-25 (H502218-06)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	880	16.0	08/26/2015	ND	416	104	400	0.00		

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

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

Cardinal Laboratories

*=Accredited Analyte

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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: COG Operating LLC	P.O. #:
Project Manager: Lupe Carrasco	Company: COG Operating LLC
Address: 2208 West Main	Attn: Robert McNeill
City: Artesia	Address: 600 W Illinois
State: NM	City: Midland
Zip: 88210	State: TX
Phone #: (575) 748-6940	Zip: 79701
Fax #: (575) 748-6940	Phone #: (432) 221-0388
Project #: Willow State #3	Fax #:
Project Name: Willow State #3	
Project Location:	
Sampler Name: Lupe Carrasco	

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV/			DATE	TIME	BTEX	TPH	Chloride
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE	ICE / COOL	OTHER :					
H502218													8/18/15				X
1	B1-15'												8/18/15				X
2	B1-20'												8/18/15				X
3	B1-25'												8/18/15				X
4	B2-15'												8/18/15				X
5	B2-20'												8/18/15				X
6	B2-25'												8/18/15				X

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Relinquished By: *[Signature]* Date: *8/21/15* Received By: *[Signature]* Date: *8/21/15*

Relinquished By: *[Signature]* Date: *8/21/15* Received By: *[Signature]* Date: *8/21/15*

Delivered By: (Circle One)
 Sampler - UPS - Bus - Other: *7:20*

Checked By: *[Signature]* (Initials)

REMARKS: *gcarasco@concho.com*

Phone Result: Yes No Add'l Phone #:
 Fax Result: Yes No Add'l Fax #:
 alrujillo@concho.com

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476

#511

August 27, 2015

LUPE CARRASCO

COG OPERATING

P. O. BOX 1630

ARTESIA, NM 88210

RE: WILLOW STATE #3

Enclosed are the results of analyses for samples received by the laboratory on 08/21/15 11:07.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

 COG OPERATING
 LUPE CARRASCO
 P. O. BOX 1630
 ARTESIA NM, 88210
 Fax To: NONE

 Received: 08/21/2015
 Reported: 08/27/2015
 Project Name: WILLOW STATE #3
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 08/18/2015
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Judy Garcia

Sample ID: B1-30' (H502217-01)

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	256	16.0	08/24/2015	ND	432	108	400	0.00		

Sample ID: B1-35' (H502217-02)

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	352	16.0	08/24/2015	ND	432	108	400	0.00		

Sample ID: B1-40' (H502217-03)

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	224	16.0	08/24/2015	ND	432	108	400	0.00		

Sample ID: B2-30' (H502217-04)

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	672	16.0	08/24/2015	ND	432	108	400	0.00		

Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 COG OPERATING
 LUPE CARRASCO
 P. O. BOX 1630
 ARTESIA NM, 88210
 Fax To: NONE

 Received: 08/21/2015
 Reported: 08/27/2015
 Project Name: WILLOW STATE #3
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 08/18/2015
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Judy Garcia

Sample ID: B2-35' (H502217-05)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	352	16.0	08/24/2015	ND	432	108	400	0.00	

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

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

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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

Separate COC

BILL TO

ANALYSIS REQUEST

Company Name: COG Operating LLC
 Project Manager: Lupe Carrasco
 Address: 2208 West Main
 City: Artesia State: NM Zip: 88210
 Phone #: (575) 748-6940 Fax #: _____
 Project #: _____ Project Owner: _____
 Project Name: WILLOW STATE #3
 Project Location: _____
 Sampler Name: Lupe Carrasco

P.O. #: _____
 Company: COG Operating LLC
 Attn: Robert McNeill
 Address: 600 W Illinois
 City: Midland
 State: TX Zip: 79701
 Phone #: (432) 221-0388
 Fax #: _____

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	BTX	TPH	Chloride	
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:						ICE / COOL
H50217	1	B1-30'									8/18/15			X		
	2	B1-35'									8/18/15			X		
	3	B1-40'									8/18/15			X		
	4	B2-30'									8/18/15			X		
	5	B2-35'									8/18/15			X		

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Relinquished By: _____
 Date: 8/15
 Time: 11:07
 Received By: _____
 Date: 8/15
 Time: 11:07

Phone Result: Yes No Add'l Phone #: _____
 Fax Result: Yes No Add'l Fax #: _____
 REMARKS: gcarasco@concho.com
 atrujillo@concho.com

Delivered By: (Circle One)
 Sampler - UPS - Bus - Other: _____
 FORM-006 R 2.0

Sample Condition: _____
 Cool (check) Yes No
 Checked By: _____
 (Initials)

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476

#54

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	Contact: Robert McNeill
Address: 600 West Illinois Avenue, Midland TX 79701	Telephone No. 432-230-0077
Facility Name: WILLOW A STATE #003	Facility Type: Well
Surface Owner: State	Mineral Owner: State
API No. 30-015-33371	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	3	25S	28E	2570	South	1650	East	Eddy

Latitude 32.1589088 Longitude -104.0718384

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: 15 bbls	Volume Recovered: 14 bbls
Source of Release: Ball Valve	Date and Hour of Occurrence: 6/24/2015 2:00 pm	Date and Hour of Discovery: 6/24/2015 2:00 pm
Was Immediate Notice Given? <input type="checkbox"/> Yes <input 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 was caused when a 4" ball valve corroded on a flowline. A vacuum truck was dispatched to recover the standing fluid.		
Describe Area Affected and Cleanup Action Taken.* This release impacted the pasture in approximately a 25' x 60' area. Concho will have the spill site sampled to delineate any possible contamination from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation work.		
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: Amanda Trujillo	Approved by Environmental Specialist:	
Title: Senior Environmental Coordinator	Approval Date:	Expiration Date:
E-mail Address: atrujillo@concho.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: July 8, 2015	Phone: 575-748-6940	

* Attach Additional Sheets If Necessary