2057 Commerce Drive
Midland, TX 79703

432.520.7720 PHONE
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www.trcsolutions.com

February 27, 2018

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

Mark Naranjo
Roswell Field Office
New Mexico State Land Office
1001 South Atkinson Ave.
Roswell, NM 88203

Re: **Remediation Summary and Closure Report**
State GQ Com #003 H
API No. 30-015-40867
GPS: 32.1509857, -104.1195908
UL "A", Sec. 7, T25S, R28E
Eddy Co, NM
NMOCD Ref. No. 2RP-4139

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 State GQ Com #003H Details of the release are summarized below:

RELEASE DETAILS					
Type of Release:	Produced Water	**Volume of Release:**	20 bbls	**Volume Recovered:**	18 bbls
Source of Release:	3" Steel Pipeline	**Date of Release:**	03/03/17	**Date of Discovery:**	03/03/17
Was Immediate Notice Given?	Not Required	**If YES, to Whom?**	Not Applicable		
Was a Watercoure Reached?	No	**Volume Impacted the Watercourse:**		Not Applicable	
Cause of Problem and Remedial Action Taken: The release was attributed to a failure in the middle of a three (3) inch steel line.					

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). Contamination of soil due to a surface release of 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 extrapulated 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	40 to 50 Feet	**20**
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		**20**

The NMOCD guidelines indicated that the Site has an initial ranking score of 20 points. The NMOCD Recommended Remediation Action Levels (RRAL) for a Site with a ranking score of 20 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)	**100 mg/kg**
Chloride	**600 mg/kg**

INITIAL INVESTIGATION

On March 16, 2017, COG representative conducted an initial investigation at the Site. During the initial investigation, twenty (20) representative soil samples were collected from multiple locations within the release margins in an effort to determine the vertical extent of soil impacts. The collected soil samples were submitted to Xenco Laboratories of Midland, Texas for analysis of chloride concentrations. A table summarizing laboratory analytical results from soil samples collected during the initial assessment is provided below:

Sample ID	Depth	Soil Status	SW 846-8021b		SW-846 8015M				E300.1/ 4500 Cl-b
			Benzene	Total BTEX	TPH GRO C_6-C_{10}	TPH DRO C_{10}-C_{28}	TPH ORO C_{28} C_{35}	TOTAL TPH C_6-C_{35}	CHLORIDE
T1-Surface	Surf.	Excavated	-	-	-	-	-	-	**7,070**
T1-1'	1'	Excavated	-	-	-	-	-	-	**957**
T1-2'	2'	In-Situ	-	-	-	-	-	-	<10.0
T1-3'	3'	In-Situ	-	-	-	-	-	-	24.4
T1-4'	4'	In-Situ	-	-	-	-	-	-	55.2
T1-6'	6'	In-Situ	-	-	-	-	-	-	46.5
T1-8'	8'	In-Situ	-	-	-	-	-	-	127
T1-10'	10'	In-Situ	-	-	-	-	-	-	329
T1-12'	12'	In-Situ	-	-	-	-	-	-	120
T1-14'	14'	In-Situ	-	-	-	-	-	-	66.7
T2-Surface	Surf.	Excavated	-	-	-	-	-	-	**5,920**
T2-1'	1'	Excavated	-	-	-	-	-	-	**997**
T2-2'	2'	In-Situ	-	-	-	-	-	-	126
T2-3'	3'	In-Situ	-	-	-	-	-	-	46.6
T2-4'	4'	In-Situ	-	-	-	-	-	-	35.4
T2-6'	6'	In-Situ	-	-	-	-	-	-	12.7
T2-8'	8'	In-Situ	-	-	-	-	-	-	17.4
T2-10'	10'	In-Situ	-	-	-	-	-	-	53.2
T2-12'	12'	In-Situ	-	-	-	-	-	-	75.0
T2-14'	14'	In-Situ	-	-	-	-	-	-	196
NMOCD RRAL			**10**	**50**	**-**	**-**	**-**	**100**	**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 approved closure:

- Utilizing a backhoe, excavate the Release Site to a depth of approximately one and one half (1.5) ft. bgs and stockpile impacted soil on a plastic liner adjacent to the excavation pending tranportation to an NMOCD-approved disposal facility.
- Collect an appropriate number of excavation floor soil samples, spaced at approximately every fifty (50) feet, and submit the soil samples to the laboratory for determination of concentrations of BTEX and TPH. In addition, a minimum of four (4) soil samples will be collected to the north, south, east and west of the excavated area to confirm horizontal delineation of the impacted soil and submitted for BTEX, TPH, and chloride analysis.
- On receipt of favorable analytical results (Below the NMOCD RRAL), backfill the excavation with locally sourced, non-impacted "like" soil.
- Prepare and submit and Remediaiton Summary and Site Closure Request to the NMOCD and NMSLO.

The *Workplan* was subsequently approved.

SUMMARY OF FIELD ACTIVITIES

On October 26, 2017, remediaiton activities commenced at the release site. As per the approved *Workplan,* impacted soil within the release margins was excavated to depth of approximately one and one half (1.5) ft. bgs. Excavated soil was transported to an NMOCD-approved disposal facility. Upon excavating impacted soil from within the release margins, six (6) confirmaiton soil samples were collected from the floor and sidewalls of the excavated area and submitted to the laboratory for analysis of benzene, BTEX, TPH and/or Chloride. A table summarizing laboratory analytical results from confirmation soil samples is provided below:

Sample ID	Depth	Soil Status	SW 846-8021b		SW-846 8015M				E300.1
			Benzene	Total BTEX	TPH GRO C_6-C_{10}	TPH DRO C_{10}-C_{28}	TPH ORO C_{28}-C_{35}	TOTAL TPH C_6-C_{35}	CHLORIDE
BH-1 1.5'	1.5'	In-Situ	<0.00200	<0.002	<15.0	<15.0	<15.0	<15.0	-
BH-2 1.5'	1.5'	In-Situ	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	-
NW-1 6"	6"	In-Situ	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	166
EW-1 6"	6"	In-Situ	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	161
WW-1 6"	6"	In-Situ	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	57.9
SW-1 6"	6"	In-Situ	<0.00200	<0.002	<15.0	<15.0	<15.0	<15.0	59.2
NMOCD RRAL			**10**	**50**	**-**	**-**	**-**	**100**	**600**

On February 5, 2018, upon receiving laboratory analytical results from confirmation soil samples, the excavated area was backfilled with imported, non-impacted "like" material. A Photographic Log is provided as Attachment #5.

EXCAVATION/REMEDIATION DETAIL SUMMARY					
Date Remediation Activities Began:	October 26, 2017		**Type of Remediation:**	Dig and Haul	
Excavation Dimensions:	112 Ft.	**Length**	30 Ft.	**Width**	1.5 Ft. **Depth**
Soil Transportation Start Date:	February 6, 2018		**Backfill Date:**	February 2, 2018	
Total Yards Transported to Disposal:	260		**Disposal Facility:**	R360 Red Bluff 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- and NMSLO-approved *Workplan* . Excavated impacted material was transported to an NMOCD-approved disposal facility and the site was backfilled with imported, non-impacted "like" material. TRC on behalf of COG Operating, LLC respectfully requests the NMOCD and NMSLO grant closure approval for the State GQ Com #003H release which occurred on March 3, 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,

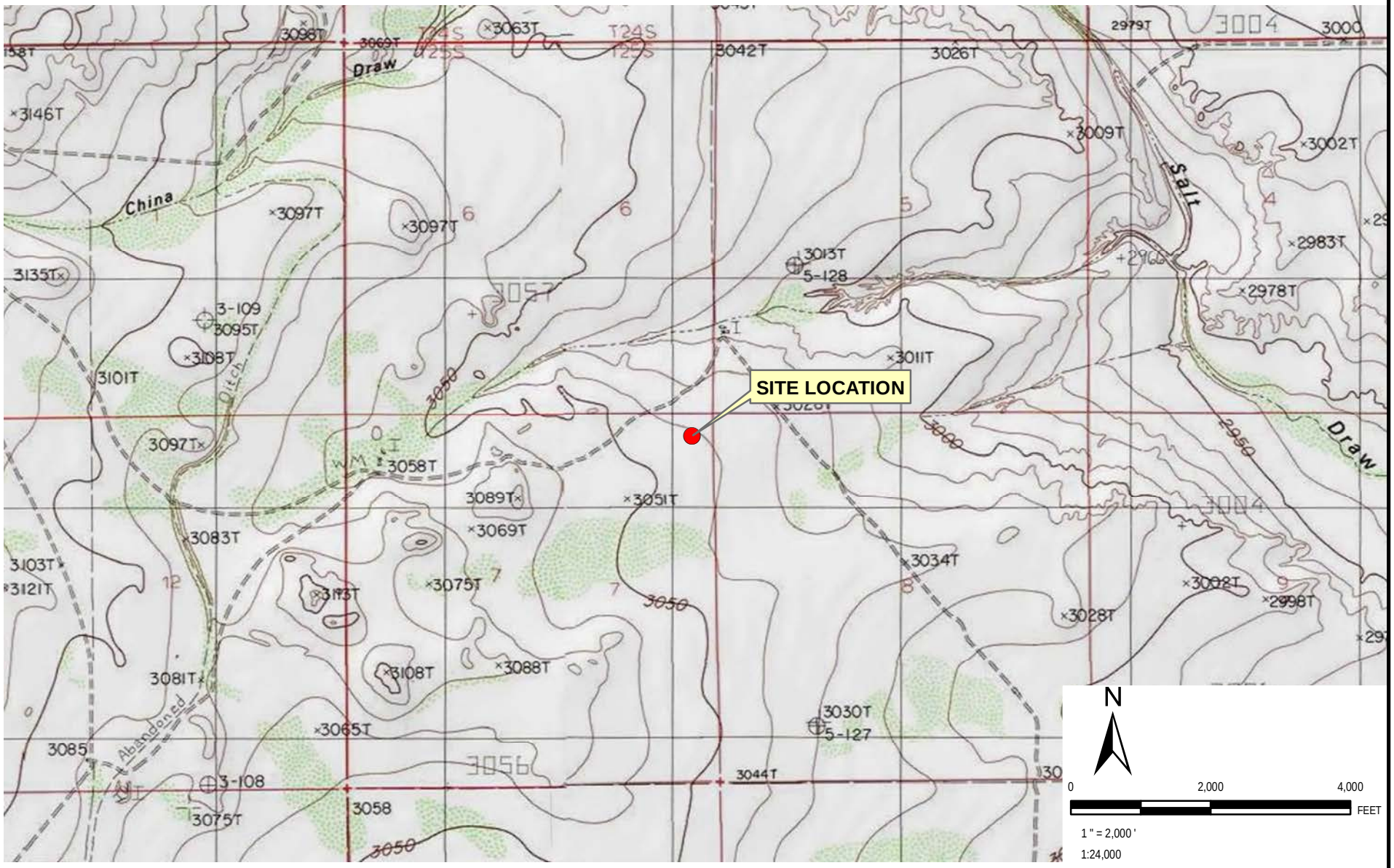
Joel Lowry
Senior Project Manager
TRC Environmental Corp.

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)

J:\Concho\279786_StateGQ\279786_1.mxd -- Saved By: MLOVELACE on 7/18/2017, 14:54:09 PM



TRC

2075 Commerce Drive
Midland, TX 79703
Phone: 432.520.770

TRC - GIS

TITLE:

FIGURE 1
SITE LOCATION MAP

PROJECT:

STATE GQ COM #003H
EDDY COUNTY, NEW MEXICO
COG OPERATING, LLC

DRAWN BY:	MLOVELACE
CHECKED BY:	NGREEN
APPROVED BY:	NGREEN
DATE:	JULY 2017
PROJ. NO.:	279786
GPS:	LAT. N 32.1509857, LONG. W 104.1195908

NE1/4 NE1/4 SEC 7 T25S R28E

LEGEND:

- Confirmation Floor Sample Location
- Confirmation Sidewall Sample Location
- Excavated Area

Figure 2

Site & Sample Location Map
COG Operating, LLC
State GQ Com #003H

Eddy County, New Mexico

Scale 1" = 45'	
Drafted by: ZC	Checked by: JL
Draft: February 19, 2018	
Lat. N 32.1509857 Long. W 104.1195908	
UL "A", Sec. 7, T25S, R28E	
TRC Proj. No.:279786	

TRC
Results you can rely on
2057 Commerce Drive
Midland, Texas 79703
432.520.7720

New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

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

(NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Twws	Rng	X	Y	Depth Well	Depth Water	Water Column
C 03263 POD1		C	ED	1	1	1	07	25S	28E	581628	3557501*	133		

Average Depth to Water: --

Minimum Depth: --

Maximum Depth: --

Record Count: 1

PLSS Search:

Section(s): 7 **Township:** 25S **Range:** 28E

***UTM location was derived from PLSS - see Help**

2/19/18 12:47 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER

Certificate of Analysis Summary 549471

COG Operating LLC, Artesia, NM

Project Name: State GC #3

Project Id:
Contact: Dakota Neel
Project Location:

Date Received in Lab: Sat Mar-25-17 10:30 am
Report Date: 06-APR-17
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	549471-001		549471-002		549471-003		549471-004		549471-005		549471-006	
	Field Id:	T1 - Surface		T1 - 1'		T1 - 2'		T1 - 3'		T1 - 4'		T1 - 6'	
	Depth:			1 ft		2 ft		3 ft		4 ft		6 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-16-17 12:30		Mar-16-17 12:31		Mar-16-17 12:35		Mar-16-17 12:40		Mar-16-17 12:45		Mar-16-17 12:50	
Inorganic Anions by EPA 300/300.1 SUB: TX104704215	***Extracted:***	Apr-03-17 18:00		Apr-03-17 18:00		Apr-03-17 17:00		Apr-03-17 17:00		Apr-03-17 17:00		Apr-03-17 17:00	
	Analyzed:	Apr-04-17 01:44		Apr-04-17 01:54		Apr-04-17 03:46		Apr-04-17 04:14		Apr-04-17 04:23		Apr-04-17 04:33	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		7070 D	100	957	10.0	<10.0	10.0	24.4	10.0	55.2	10.0	46.5	10.0

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 549471

COG Operating LLC, Artesia, NM

Project Name: State GC #3

Project Id:
Contact: Dakota Neel
Project Location:

Date Received in Lab: Sat Mar-25-17 10:30 am
Report Date: 06-APR-17
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	549471-007		549471-008		549471-009		549471-010		549471-011		549471-012	
	Field Id:	T1 - 8'		T1 - 10'		T1 - 12'		T1 - 14'		T2 - Surface		T2 - 1'	
	Depth:	8 ft		10 ft		12 ft		14 ft				1 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-16-17 12:53		Mar-16-17 12:57		Mar-16-17 13:00		Mar-16-17 13:05		Mar-16-17 13:20		Mar-16-17 13:25	
Inorganic Anions by EPA 300/300.1 SUB: TX104704215	***Extracted:***	Apr-03-17 17:00		Apr-03-17 17:00		Apr-03-17 17:00		Apr-03-17 17:00		Apr-03-17 17:00		Apr-03-17 17:00	
	Analyzed:	Apr-04-17 04:42		Apr-04-17 02:50		Apr-04-17 03:18		Apr-04-17 03:27		Apr-04-17 03:36		Apr-04-17 04:51	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		127	10.0	329	10.0	120	10.0	66.7	10.0	5920 D	100	997	10.0

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 549471

COG Operating LLC, Artesia, NM

Project Name: State GC #3

Project Id:
Contact: Dakota Neel
Project Location:

Date Received in Lab: Sat Mar-25-17 10:30 am
Report Date: 06-APR-17
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	549471-013		549471-014		549471-015		549471-016		549471-017		549471-018	
	Field Id:	T2 - 2'		T2 - 3'		T2 - 4'		T2 - 6'		T2 - 8'		T2 - 10'	
	Depth:	2 ft		3 ft		4 ft		6 ft		8 ft		10 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-16-17 13:30		Mar-16-17 13:33		Mar-16-17 13:37		Mar-16-17 13:42		Mar-16-17 13:48		Mar-16-17 13:55	
Inorganic Anions by EPA 300/300.1 SUB: TX104704215	***Extracted:***	Apr-03-17 17:00		Apr-03-17 17:00		Apr-03-17 17:00		Apr-03-17 17:00		Apr-03-17 17:00		Apr-03-17 17:00	
	Analyzed:	Apr-04-17 05:01		Apr-04-17 05:29		Apr-04-17 05:38		Apr-04-17 06:06		Apr-04-17 06:15		Apr-04-17 06:25	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		126	10.0	46.6	10.0	35.4	10.0	12.7	10.0	17.4	10.0	53.2	10.0

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 549471

COG Operating LLC, Artesia, NM

Project Name: State GC #3

Project Id:
Contact: Dakota Neel
Project Location:

Date Received in Lab: Sat Mar-25-17 10:30 am
Report Date: 06-APR-17
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	549471-019				549471-020							
	Field Id:	T2 - 12'				T2 - 14'							
	Depth:	12 ft				14 ft							
	Matrix:	SOIL				SOIL							
	Sampled:	Mar-16-17 14:00				Mar-16-17 14:05							
Inorganic Anions by EPA 300/300.1 SUB: TX104704215	***Extracted:***	Apr-03-17 17:00				Apr-03-17 17:00							
	Analyzed:	Apr-04-17 06:34				Apr-04-17 06:43							
	Units/RL:	mg/kg	RL			mg/kg	RL						
Chloride		75.0	10.0			196	10.0						

Kelsey Brooks
Project Manager

Analytical Report 549471

for

COG Operating LLC

Project Manager: Dakota Neel

State GC #3

06-APR-17

Collected By: Dakota Neel

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)
Xenco-San Antonio: Texas (T104704534)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

06-APR-17

Project Manager: **Dakota Neel**
COG Operating LLC
2407 Pecos Avenue
Artesia, NM 88210

Reference: XENCO Report No(s): **549471**
State GC #3
Project Address:

Dakota Neel:

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) 549471. 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. 549471 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kelsey Brooks
Project Manager

Sample Cross Reference 549471

COG Operating LLC, Artesia, NM

State GC #3

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
T1 - Surface	S	03-16-17 12:30	N/A	549471-001
T1 - 1'	S	03-16-17 12:31	- 1 ft	549471-002
T1 - 2'	S	03-16-17 12:35	- 2 ft	549471-003
T1 - 3'	S	03-16-17 12:40	- 3 ft	549471-004
T1 - 4'	S	03-16-17 12:45	- 4 ft	549471-005
T1 - 6'	S	03-16-17 12:50	- 6 ft	549471-006
T1 - 8'	S	03-16-17 12:53	- 8 ft	549471-007
T1 - 10'	S	03-16-17 12:57	- 10 ft	549471-008
T1 - 12'	S	03-16-17 13:00	- 12 ft	549471-009
T1 - 14'	S	03-16-17 13:05	- 14 ft	549471-010
T2 - Surface	S	03-16-17 13:20	N/A	549471-011
T2 - 1'	S	03-16-17 13:25	- 1 ft	549471-012
T2 - 2'	S	03-16-17 13:30	- 2 ft	549471-013
T2 - 3'	S	03-16-17 13:33	- 3 ft	549471-014
T2 - 4'	S	03-16-17 13:37	- 4 ft	549471-015
T2 - 6'	S	03-16-17 13:42	- 6 ft	549471-016
T2 - 8'	S	03-16-17 13:48	- 8 ft	549471-017
T2 - 10'	S	03-16-17 13:55	- 10 ft	549471-018
T2 - 12'	S	03-16-17 14:00	- 12 ft	549471-019
T2 - 14'	S	03-16-17 14:05	- 14 ft	549471-020

Client Name: COG Operating LLC

Project Name: State GC #3

Project ID:
Work Order Number(s): *549471*

Report Date: *06-APR-17*
Date Received: *03/25/2017*

Sample receipt non conformances and comments:

please email results to:
rgrubbs@concho.com rhaskell@concho.com alieb@concho.com

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 549471

COG Operating LLC, Artesia, NM

State GC #3

Sample Id:	**T1 - Surface**	Matrix:	Soil	Date Received:	03.25.17 10.30
Lab Sample Id:	549471-001	Date Collected:	03.16.17 12.30		
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	ALA			% Moisture:	
Analyst:	ALA	Date Prep:	04.03.17 18.00	Basis:	Wet Weight
Seq Number:	3014002			SUB:	TX104704215

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7070**	100	mg/kg	04.05.17 16.34	D	10

Certificate of Analytical Results 549471

COG Operating LLC, Artesia, NM

State GC #3

Sample Id:	**T1 - 1'**	Matrix:	Soil	Date Received:	03.25.17 10.30
Lab Sample Id:	549471-002	Date Collected:	03.16.17 12.31	Sample Depth:	1 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	ALA			% Moisture:	
Analyst:	ALA	Date Prep:	04.03.17 18.00	Basis:	Wet Weight
Seq Number:	3014002			SUB:	TX104704215

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**957**	10.0	mg/kg	04.04.17 01.54		1

Certificate of Analytical Results 549471

COG Operating LLC, Artesia, NM

State GC #3

Sample Id:	**T1 - 2'**	Matrix:	Soil	Date Received:	03.25.17 10.30
Lab Sample Id:	549471-003	Date Collected:	03.16.17 12.35	Sample Depth:	2 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	ALA			% Moisture:	
Analyst:	ALA	Date Prep:	04.03.17 17.00	Basis:	Wet Weight
Seq Number:	3014044			SUB:	TX104704215

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<10.0	10.0	mg/kg	04.04.17 03.46	U	1

Certificate of Analytical Results 549471

COG Operating LLC, Artesia, NM

State GC #3

Sample Id:	**T1 - 3'**	Matrix:	Soil	Date Received:	03.25.17 10.30
Lab Sample Id:	549471-004	Date Collected:	03.16.17 12.40	Sample Depth:	3 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	ALA			% Moisture:	
Analyst:	ALA	Date Prep:	04.03.17 17.00	Basis:	Wet Weight
Seq Number:	3014044			SUB:	TX104704215

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**24.4**	10.0	mg/kg	04.04.17 04.14		1

Certificate of Analytical Results 549471

COG Operating LLC, Artesia, NM

State GC #3

Sample Id:	**T1 - 4'**	Matrix:	Soil	Date Received:	03.25.17 10.30
Lab Sample Id:	549471-005	Date Collected:	03.16.17 12.45	Sample Depth:	4 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	ALA			% Moisture:	
Analyst:	ALA	Date Prep:	04.03.17 17.00	Basis:	Wet Weight
Seq Number:	3014044			SUB:	TX104704215

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**55.2**	10.0	mg/kg	04.04.17 04.23		1

Certificate of Analytical Results 549471

COG Operating LLC, Artesia, NM

State GC #3

Sample Id:	**T1 - 6'**	Matrix:	Soil	Date Received:	03.25.17 10.30
Lab Sample Id:	549471-006	Date Collected:	03.16.17 12.50	Sample Depth:	6 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	ALA			% Moisture:	
Analyst:	ALA	Date Prep:	04.03.17 17.00	Basis:	Wet Weight
Seq Number:	3014044			SUB:	TX104704215

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**46.5**	10.0	mg/kg	04.04.17 04.33		1

Certificate of Analytical Results 549471

COG Operating LLC, Artesia, NM

State GC #3

Sample Id:	**T1 - 8'**	Matrix:	Soil	Date Received:	03.25.17 10.30
Lab Sample Id:	549471-007	Date Collected:	03.16.17 12.53	Sample Depth:	8 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	ALA			% Moisture:	
Analyst:	ALA	Date Prep:	04.03.17 17.00	Basis:	Wet Weight
Seq Number:	3014044			SUB:	TX104704215

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**127**	10.0	mg/kg	04.04.17 04.42		1

Certificate of Analytical Results 549471

COG Operating LLC, Artesia, NM

State GC #3

Sample Id:	**T1 - 10'**	Matrix:	Soil	Date Received:	03.25.17 10.30
Lab Sample Id:	549471-008	Date Collected:	03.16.17 12.57	Sample Depth:	10 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	ALA			% Moisture:	
Analyst:	ALA	Date Prep:	04.03.17 17.00	Basis:	Wet Weight
Seq Number:	3014044			SUB:	TX104704215

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**329**	10.0	mg/kg	04.04.17 02.50		1

Certificate of Analytical Results 549471

COG Operating LLC, Artesia, NM

State GC #3

Sample Id:	**T1 - 12'**	Matrix:	Soil	Date Received:	03.25.17 10.30
Lab Sample Id:	549471-009	Date Collected:	03.16.17 13.00	Sample Depth:	12 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	ALA			% Moisture:	
Analyst:	ALA	Date Prep:	04.03.17 17.00	Basis:	Wet Weight
Seq Number:	3014044			SUB:	TX104704215

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**120**	10.0	mg/kg	04.04.17 03.18		1

Certificate of Analytical Results 549471

COG Operating LLC, Artesia, NM

State GC #3

Sample Id:	**T1 - 14'**	Matrix:	Soil	Date Received:	03.25.17 10.30
Lab Sample Id:	549471-010	Date Collected:	03.16.17 13.05	Sample Depth:	14 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	ALA			% Moisture:	
Analyst:	ALA	Date Prep:	04.03.17 17.00	Basis:	Wet Weight
Seq Number:	3014044			SUB:	TX104704215

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**66.7**	10.0	mg/kg	04.04.17 03.27		1

Certificate of Analytical Results 549471

COG Operating LLC, Artesia, NM

State GC #3

Sample Id:	**T2 - Surface**	Matrix:	Soil	Date Received:	03.25.17 10.30
Lab Sample Id:	549471-011	Date Collected:	03.16.17 13.20		
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	ALA			% Moisture:	
Analyst:	ALA	Date Prep:	04.03.17 17.00	Basis:	Wet Weight
Seq Number:	3014044			SUB:	TX104704215

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5920**	100	mg/kg	04.05.17 16.42	D	10

Certificate of Analytical Results 549471

COG Operating LLC, Artesia, NM

State GC #3

Sample Id:	**T2 - 1'**	Matrix:	Soil	Date Received:	03.25.17 10.30
Lab Sample Id:	549471-012	Date Collected:	03.16.17 13.25	Sample Depth:	1 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	ALA			% Moisture:	
Analyst:	ALA	Date Prep:	04.03.17 17.00	Basis:	Wet Weight
Seq Number:	3014044			SUB:	TX104704215

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**997**	10.0	mg/kg	04.04.17 04.51		1

Certificate of Analytical Results 549471

COG Operating LLC, Artesia, NM

State GC #3

Sample Id:	**T2 - 2'**	Matrix:	Soil	Date Received:	03.25.17 10.30
Lab Sample Id:	549471-013	Date Collected:	03.16.17 13.30	Sample Depth:	2 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	ALA			% Moisture:	
Analyst:	ALA	Date Prep:	04.03.17 17.00	Basis:	Wet Weight
Seq Number:	3014044			SUB:	TX104704215

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**126**	10.0	mg/kg	04.04.17 05.01		1

Certificate of Analytical Results 549471

COG Operating LLC, Artesia, NM

State GC #3

Sample Id:	**T2 - 3'**	Matrix:	Soil	Date Received:	03.25.17 10.30
Lab Sample Id:	549471-014	Date Collected:	03.16.17 13.33	Sample Depth:	3 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	ALA			% Moisture:	
Analyst:	ALA	Date Prep:	04.03.17 17.00	Basis:	Wet Weight
Seq Number:	3014044			SUB:	TX104704215

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**46.6**	10.0	mg/kg	04.04.17 05.29		1

Certificate of Analytical Results 549471

COG Operating LLC, Artesia, NM

State GC #3

Sample Id:	**T2 - 4'**	Matrix:	Soil	Date Received:	03.25.17 10.30
Lab Sample Id:	549471-015	Date Collected:	03.16.17 13.37	Sample Depth:	4 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	ALA			% Moisture:	
Analyst:	ALA	Date Prep:	04.03.17 17.00	Basis:	Wet Weight
Seq Number:	3014044			SUB:	TX104704215

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**35.4**	10.0	mg/kg	04.04.17 05.38		1

COG Operating LLC, Artesia, NM

State GC #3

Sample Id:	**T2 - 6'**	Matrix:	Soil	Date Received:	03.25.17 10.30
Lab Sample Id:	549471-016	Date Collected:	03.16.17 13.42	Sample Depth:	6 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	ALA			% Moisture:	
Analyst:	ALA	Date Prep:	04.03.17 17.00	Basis:	Wet Weight
Seq Number:	3014044			SUB:	TX104704215

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**12.7**	10.0	mg/kg	04.04.17 06.06		1

Certificate of Analytical Results 549471

COG Operating LLC, Artesia, NM

State GC #3

Sample Id:	**T2 - 8'**	Matrix:	Soil	Date Received:	03.25.17 10.30
Lab Sample Id:	549471-017	Date Collected:	03.16.17 13.48	Sample Depth:	8 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	ALA			% Moisture:	
Analyst:	ALA	Date Prep:	04.03.17 17.00	Basis:	Wet Weight
Seq Number:	3014044			SUB:	TX104704215

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**17.4**	10.0	mg/kg	04.04.17 06.15		1

Certificate of Analytical Results 549471

COG Operating LLC, Artesia, NM

State GC #3

Sample Id:	**T2 - 10'**	Matrix:	Soil	Date Received:	03.25.17 10.30
Lab Sample Id:	549471-018	Date Collected:	03.16.17 13.55	Sample Depth:	10 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	ALA			% Moisture:	
Analyst:	ALA	Date Prep:	04.03.17 17.00	Basis:	Wet Weight
Seq Number:	3014044			SUB:	TX104704215

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**53.2**	10.0	mg/kg	04.04.17 06.25		1

Certificate of Analytical Results 549471

COG Operating LLC, Artesia, NM

State GC #3

Sample Id:	**T2 - 12'**	Matrix:	Soil	Date Received:	03.25.17 10.30
Lab Sample Id:	549471-019	Date Collected:	03.16.17 14.00	Sample Depth:	12 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	ALA			% Moisture:	
Analyst:	ALA	Date Prep:	04.03.17 17.00	Basis:	Wet Weight
Seq Number:	3014044			SUB:	TX104704215

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**75.0**	10.0	mg/kg	04.04.17 06.34		1

Certificate of Analytical Results 549471

COG Operating LLC, Artesia, NM

State GC #3

Sample Id:	**T2 - 14'**	Matrix:	Soil	Date Received:	03.25.17 10.30
Lab Sample Id:	549471-020	Date Collected:	03.16.17 14.05	Sample Depth:	14 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	ALA			% Moisture:	
Analyst:	ALA	Date Prep:	04.03.17 17.00	Basis:	Wet Weight
Seq Number:	3014044			SUB:	TX104704215

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**196**	10.0	mg/kg	04.04.17 06.43		1

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 **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

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

QC Summary 549471

COG Operating LLC

State GC #3

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 3014044 Matrix: Solid Date Prep: 04.03.17
MB Sample Id: 722517-1-BLK LCS Sample Id: 722517-1-BKS LCSD Sample Id: 722517-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<2.00	20.0	19.7	99	20.0	100	80-120	2	20	mg/kg	04.04.17 02:31	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 3014002 Matrix: Solid Date Prep: 04.03.17
MB Sample Id: 722515-1-BLK LCS Sample Id: 722515-1-BKS LCSD Sample Id: 722515-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<2.00	20.0	20.2	101	19.8	99	80-120	2	20	mg/kg	04.03.17 21:23	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 3014044 Matrix: Soil Date Prep: 04.03.17
Parent Sample Id: 549471-008 MS Sample Id: 549471-008 S MSD Sample Id: 549471-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	329	100	425	96	424	95	80-120	0	20	mg/kg	04.04.17 02:59	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 3014044 Matrix: Soil Date Prep: 04.03.17
Parent Sample Id: 549471-013 MS Sample Id: 549471-013 S MSD Sample Id: 549471-013 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	126	100	228	102	227	101	80-120	0	20	mg/kg	04.04.17 05:10	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 3014002 Matrix: Solid Date Prep: 04.03.17
Parent Sample Id: 549470-012 MS Sample Id: 549470-012 S MSD Sample Id: 549470-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	8090	100	7970	0	7980	0	80-120	0	20	mg/kg	04.03.17 22:09	X

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 3014002 Matrix: Solid Date Prep: 04.03.17
Parent Sample Id: 549470-020 MS Sample Id: 549470-020 S MSD Sample Id: 549470-020 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	43.6	100	148	104	147	103	80-120	1	20	mg/kg	04.04.17 00:20	

CHAIN OF CUSTODY

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San Antonio, Texas (210-509-3334)
Midland, Texas (432-704-5251)
www.xenco.com
Phoenix, Arizona (480-355-0900)

Xenco Quote # | Xenco Job # 549471

Client / Reporting Information

Company Name / Branch: COG Operating LLC
Company Address: 2407 PECOS Avenue Artesia NM 88210
Email: alieb@concho.com dneel2@concho.com rhaskell@concho.com
Phone No: 575-748-1553
Project Contact: Aaron Lieb
Samplers's Name- Aaron Lieb

Project Information

Project Name/Number: State GQ #3
Project Location: Eddy County,NM
Invoice To: COG Operating LLC, Attn: Robert Mcneill, 600 W. Illinois, Midland TX 79701
PO Number:

Analytical Information

Chloride

Matrix Codes

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

No.	Field ID / Point of Collection	Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Chloride	Field Comments
1	T1 - SURFACE	-	3/16/17	12:30 Pm	S	1									✓	
2	T1 - 1	1		12:31 Pm		1									✓	
3	T1 - 2	2		12:35 Pm		1									✓	
4	T1 - 3	3		12:40 Pm		1									✓	
5	T1 - 4	4		12:45 Pm		1									✓	
6	T1 - 6	6		12:50 Pm		1									✓	
7	T1 - 8	8		12:53 Pm		1									✓	
8	T1 - 10	10		12:57 Pm		1									✓	
9	T1 - 12	12		1:00 Pm		1									✓	
10	T1 - 14	14		1:05 Pm		1									✓	

Turnaround Time (Business days)

- ☐ Same Day TAT
- ☐ 5 Day TAT
- ☐ Next Day EMERGENCY
- ☐ 7 Day TAT
- ☐ 2 Day EMERGENCY
- ☐ Contract TAT
- ☐ 3 Day EMERGENCY

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

Data Deliverable Information

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

Notes:

FED-EX / UPS: Tracking #

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

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	DAKOTA NEEL	3/24/17	A. Bullin 1100 3/24/17	2	03-25-17 10:30	2 Julia Martinez
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable ☐	On Ice ✓

Temp: 1.8 IR ID:R-8
CF: +0.1
Corrected Temp: 1.9

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Midland, Texas (432-704-5251)
www.xenco.com
Phoenix, Arizona (480-355-0900)

Xenco Quote # | Xenco Job # 549471

Client / Reporting Information

Company Name / Branch: COG Operating LLC
Company Address: 2407 PECOS Avenue Artesia NM 88210
Email: alieb@concho.com dneel2@concho.com rhaskell@concho.com
Phone No: 575-748-1553
Project Contact: Aaron Lieb
Samplers's Name- Aaron Lieb

Project Information

Project Name/Number: State GQ #3
Project Location: Eddy County,NM
Invoice To: COG Operating LLC, Attn: Robert Mcneill, 600 W. Illinois, Midland TX 79701
PO Number:

Analytical Information

Chloride

Matrix Codes

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

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Chloride	Field Comments
1	T2 - SURFACE	—	3/16/17	1:20 PM	S	1									✓	
2	T2 - 1'	1		1:25 PM		1									✓	
3	T2 - 2'	2		1:30 PM		1									✓	
4	T2 - 3'	3		1:33 PM		1									✓	
5	T2 - 4'	4		1:37 PM		1									✓	
6	T2 - 6'	6		1:42 PM		1									✓	
7	T2 - 8'	8		1:48 PM		1									✓	
8	T2 - 10'	10		1:55 PM		1									✓	
9	T2 - 12'	12		2:00 PM		1									✓	
10	T2 - 14'	14		2:05 PM		1									✓	

Turnaround Time (Business days)

- ☐ Same Day TAT
- ☐ 5 Day TAT
- ☐ Next Day EMERGENCY
- ☐ 7 Day TAT
- ☐ 2 Day EMERGENCY
- ☐ Contract TAT
- ☐ 3 Day EMERGENCY

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

Data Deliverable Information

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

Notes:

FED-EX / UPS: Tracking #

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

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	DANOTA NELL	3/24/17 11:00	A. Butler 11:00 A 3/24/17	2	03-25-17 1030	2 Julian Martinez
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable ☐	On Ice ✓

Temp: 1.8 IR ID:R-8
CF: +0.1
Corrected Temp: 1.9

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC

Date/ Time Received: 03/25/2017 10:30:00 AM

Work Order #: 549471

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)?	1.9
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seal present on shipping container/ cooler?	**N/A**
#5 *Custody Seals intact on shipping container/ cooler?	**N/A**
#6 Custody Seals intact on sample bottles?	**N/A**
#7 *Custody Seals Signed and dated?	**N/A**
#8 *Chain of Custody present?	**Yes**
#9 Sample instructions complete on Chain of Custody?	**Yes**
#10 Any missing/extra samples?	**No**
#11 Chain of Custody signed when relinquished/ received?	**Yes**
#12 Chain of Custody agrees with sample label(s)?	**Yes**
#13 Container label(s) legible and intact?	**Yes**
#14 Sample matrix/ properties agree with Chain of Custody?	**Yes**
#15 Samples in proper container/ bottle?	**Yes**
#16 Samples properly preserved?	**Yes**
#17 Sample container(s) intact?	**Yes**
#18 Sufficient sample amount for indicated test(s)?	**Yes**
#19 All samples received within hold time?	**Yes**
#20 Subcontract of sample(s)?	**N/A**
#21 VOC samples have zero headspace?	**N/A**
#22 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	**N/A**
#23 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:

PH Device/Lot#:

Checklist completed by: Jessica Kramer
Jessica Kramer
Date: 03/27/2017

Checklist reviewed by: Kelsey Brooks
Kelsey Brooks
Date: 03/27/2017

Certificate of Analysis Summary 567042

TRC Solutions, Inc, Midland, TX

Project Name: State GQ Com #003H (3/3/17)

Project Id: 8021
Contact: Nikki Green
Project Location: Eddy County, NM

Date Received in Lab: Tue Oct-31-17 03:54 pm
Report Date: 09-NOV-17
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	567042-001		567042-002		567042-003		567042-004		567042-005		567042-006	
	Field Id:	BH-1 1.5'		BH-2 1.5'		NW-1 6'		EW-1 6'		WW-1 6'		SW-1 6'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Oct-27-17 10:00		Oct-27-17 10:05		Oct-27-17 10:10		Oct-27-17 10:15		Oct-27-17 10:20		Oct-27-17 10:30	
BTEX by EPA 8021B	***Extracted:***	Nov-01-17 08:00		Nov-01-17 08:00		Nov-01-17 08:00		Nov-01-17 08:00		Nov-01-17 08:00		Nov-01-17 08:00	
	Analyzed:	Nov-01-17 16:06		Nov-01-17 16:25		Nov-01-17 16:44		Nov-01-17 17:03		Nov-01-17 17:22		Nov-01-17 17:41	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
Toluene		<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
Ethylbenzene		<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
Xylenes, Total		<0.002	0.002	<0.00201	0.00201	<0.00202	0.00202	<0.00201	0.00201	<0.00199	0.00199	<0.002	0.002
Total BTEX		<0.002	0.002	<0.00201	0.00201	<0.00202	0.00202	<0.00201	0.00201	<0.00199	0.00199	<0.002	0.002
Chloride by EPA 300	***Extracted:***					Nov-07-17 11:00		Nov-07-17 11:00		Nov-07-17 11:00		Nov-07-17 11:00	
	Analyzed:					Nov-07-17 14:51		Nov-07-17 15:11		Nov-07-17 15:17		Nov-07-17 15:36	
	Units/RL:					mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride						166	4.96	161	4.93	57.9	4.99	59.2	4.96
TPH by SW8015 Mod	***Extracted:***	Nov-03-17 16:00		Nov-03-17 16:00		Nov-03-17 16:00		Nov-03-17 16:00		Nov-03-17 16:00		Nov-03-17 16:00	
	Analyzed:	Nov-04-17 06:31		Nov-04-17 07:33		Nov-04-17 07:53		Nov-04-17 08:13		Nov-04-17 08:34		Nov-04-17 08:55	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<15	15	<15	15	<15	15	<15	15	<15	15	<15	15

Mike Kimmel
Client Services Manager

Analytical Report 567042

for

TRC Solutions, Inc

Project Manager: Nikki Green

State GQ Com #003H (3/3/17)

09-NOV-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)

09-NOV-17

Project Manager: **Nikki Green**
TRC Solutions, Inc
2057 Commerce
Midland, TX 79703

Reference: XENCO Report No(s): **567042**
State GQ Com #003H (3/3/17)
Project Address: Eddy County, NM

Nikki Green:

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) 567042. 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. 567042 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,

Mike Kimmel
Client Services Manager

Sample Cross Reference 567042

TRC Solutions, Inc, Midland, TX

State GQ Com #003H (3/3/17)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH-1 1.5'	S	10-27-17 10:00		567042-001
BH-2 1.5'	S	10-27-17 10:05		567042-002
NW-1 6'	S	10-27-17 10:10		567042-003
EW-1 6'	S	10-27-17 10:15		567042-004
WW-1 6'	S	10-27-17 10:20		567042-005
SW-1 6'	S	10-27-17 10:30		567042-006

Client Name: TRC Solutions, Inc

Project Name: State GQ Com #003H (3/3/17)

Project ID: *8021*
Work Order Number(s): *567042*

Report Date: *09-NOV-17*
Date Received: *10/31/2017*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3032144 BTEX by EPA 8021B

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

Certificate of Analytical Results 567042

TRC Solutions, Inc, Midland, TX

State GQ Com #003H (3/3/17)

Sample Id:	**BH-1 1.5'**	Matrix:	Soil	Date Received:	10.31.17 15.54
Lab Sample Id:	567042-001	Date Collected:	10.27.17 10.00		

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.03.17 16.00	Basis:	Wet Weight
Seq Number:	3032398				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	11.04.17 06.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	11.04.17 06.31	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	11.04.17 06.31	U	1
Total TPH	PHC635	<15	15	mg/kg	11.04.17 06.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	11.04.17 06.31	
o-Terphenyl	84-15-1	103	%	70-135	11.04.17 06.31	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	11.01.17 08.00	Basis:	Wet Weight
Seq Number:	3032144				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.01.17 16.06	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.01.17 16.06	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.01.17 16.06	U	1
Xylenes, Total	1330-20-7	<0.002	0.002	mg/kg	11.01.17 16.06	U	1
Total BTEX		<0.002	0.002	mg/kg	11.01.17 16.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	80-120	11.01.17 16.06	
1,4-Difluorobenzene	540-36-3	96	%	80-120	11.01.17 16.06	

Certificate of Analytical Results 567042

TRC Solutions, Inc, Midland, TX

State GQ Com #003H (3/3/17)

Sample Id:	**BH-2 1.5'**	Matrix:	Soil	Date Received:	10.31.17 15.54
Lab Sample Id:	567042-002	Date Collected:	10.27.17 10.05		

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.03.17 16.00	Basis:	Wet Weight
Seq Number:	3032398				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	11.04.17 07.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	11.04.17 07.33	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	11.04.17 07.33	U	1
Total TPH	PHC635	<15	15	mg/kg	11.04.17 07.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	11.04.17 07.33	
o-Terphenyl	84-15-1	93	%	70-135	11.04.17 07.33	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	11.01.17 08.00	Basis:	Wet Weight
Seq Number:	3032144				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	11.01.17 16.25	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	11.01.17 16.25	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	11.01.17 16.25	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	11.01.17 16.25	U	1
Total BTEX		<0.00201	0.00201	mg/kg	11.01.17 16.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	81	%	80-120	11.01.17 16.25	
4-Bromofluorobenzene	460-00-4	84	%	80-120	11.01.17 16.25	

TRC Solutions, Inc, Midland, TX

State GQ Com #003H (3/3/17)

Sample Id: **NW-1 6'** Matrix: Soil Date Received:10.31.17 15.54
Lab Sample Id: 567042-003 Date Collected: 10.27.17 10.10

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MNV % Moisture:
Analyst: MNV Date Prep: 11.07.17 11.00 Basis: Wet Weight
Seq Number: 3032690

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**166**	4.96	mg/kg	11.07.17 14.51		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 11.03.17 16.00 Basis: Wet Weight
Seq Number: 3032398

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	11.04.17 07.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	11.04.17 07.53	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	11.04.17 07.53	U	1
Total TPH	PHC635	<15	15	mg/kg	11.04.17 07.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	11.04.17 07.53	
o-Terphenyl	84-15-1	109	%	70-135	11.04.17 07.53	

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
Tech: ALJ % Moisture:
Analyst: ALJ Date Prep: 11.01.17 08.00 Basis: Wet Weight
Seq Number: 3032144

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	11.01.17 16.44	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	11.01.17 16.44	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	11.01.17 16.44	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	11.01.17 16.44	U	1
Total BTEX		<0.00202	0.00202	mg/kg	11.01.17 16.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	80-120	11.01.17 16.44	
1,4-Difluorobenzene	540-36-3	95	%	80-120	11.01.17 16.44	

TRC Solutions, Inc, Midland, TX

State GQ Com #003H (3/3/17)

Sample Id: **EW-1 6'** Matrix: Soil Date Received:10.31.17 15.54
Lab Sample Id: 567042-004 Date Collected: 10.27.17 10.15

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MNV % Moisture:
Analyst: MNV Date Prep: 11.07.17 11.00 Basis: Wet Weight
Seq Number: 3032690

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**161**	4.93	mg/kg	11.07.17 15.11		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 11.03.17 16.00 Basis: Wet Weight
Seq Number: 3032398

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	11.04.17 08.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	11.04.17 08.13	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	11.04.17 08.13	U	1
Total TPH	PHC635	<15	15	mg/kg	11.04.17 08.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	11.04.17 08.13	
o-Terphenyl	84-15-1	96	%	70-135	11.04.17 08.13	

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
Tech: ALJ % Moisture:
Analyst: ALJ Date Prep: 11.01.17 08.00 Basis: Wet Weight
Seq Number: 3032144

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	11.01.17 17.03	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	11.01.17 17.03	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	11.01.17 17.03	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	11.01.17 17.03	U	1
Total BTEX		<0.00201	0.00201	mg/kg	11.01.17 17.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	80-120	11.01.17 17.03	
4-Bromofluorobenzene	460-00-4	98	%	80-120	11.01.17 17.03	

TRC Solutions, Inc, Midland, TX

State GQ Com #003H (3/3/17)

Sample Id: **WW-1 6'** Matrix: Soil Date Received:10.31.17 15.54
Lab Sample Id: 567042-005 Date Collected: 10.27.17 10.20

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MNV % Moisture:
Analyst: MNV Date Prep: 11.07.17 11.00 Basis: Wet Weight
Seq Number: 3032690

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**57.9**	4.99	mg/kg	11.07.17 15.17		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 11.03.17 16.00 Basis: Wet Weight
Seq Number: 3032398

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	11.04.17 08.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	11.04.17 08.34	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	11.04.17 08.34	U	1
Total TPH	PHC635	<15	15	mg/kg	11.04.17 08.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	11.04.17 08.34	
o-Terphenyl	84-15-1	96	%	70-135	11.04.17 08.34	

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
Tech: ALJ % Moisture:
Analyst: ALJ Date Prep: 11.01.17 08.00 Basis: Wet Weight
Seq Number: 3032144

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	11.01.17 17.22	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	11.01.17 17.22	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	11.01.17 17.22	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	11.01.17 17.22	U	1
Total BTEX		<0.00199	0.00199	mg/kg	11.01.17 17.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	80-120	11.01.17 17.22	
4-Bromofluorobenzene	460-00-4	91	%	80-120	11.01.17 17.22	

Certificate of Analytical Results 567042

TRC Solutions, Inc, Midland, TX

State GQ Com #003H (3/3/17)

Sample Id:	**SW-1 6'**	Matrix:	Soil	Date Received:	10.31.17 15.54
Lab Sample Id:	567042-006	Date Collected:	10.27.17 10.30		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MNV			% Moisture:	
Analyst:	MNV	Date Prep:	11.07.17 11.00	Basis:	Wet Weight
Seq Number:	3032690				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**59.2**	4.96	mg/kg	11.07.17 15.36		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.03.17 16.00	Basis:	Wet Weight
Seq Number:	3032398				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	11.04.17 08.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	11.04.17 08.55	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	11.04.17 08.55	U	1
Total TPH	PHC635	<15	15	mg/kg	11.04.17 08.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	11.04.17 08.55	
o-Terphenyl	84-15-1	98	%	70-135	11.04.17 08.55	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	11.01.17 08.00	Basis:	Wet Weight
Seq Number:	3032144				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.01.17 17.41	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.01.17 17.41	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.01.17 17.41	U	1
Xylenes, Total	1330-20-7	<0.002	0.002	mg/kg	11.01.17 17.41	U	1
Total BTEX		<0.002	0.002	mg/kg	11.01.17 17.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	80-120	11.01.17 17.41	
1,4-Difluorobenzene	540-36-3	94	%	80-120	11.01.17 17.41	

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 **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

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

QC Summary 567042

TRC Solutions, Inc

State GQ Com #003H (3/3/17)

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3032690 Matrix: Solid Date Prep: 11.07.17
MB Sample Id: 7633933-1-BLK LCS Sample Id: 7633933-1-BKS LCSD Sample Id: 7633933-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	252	101	253	101	90-110	0	20	mg/kg	11.07.17 13:09	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3032690 Matrix: Soil Date Prep: 11.07.17
Parent Sample Id: 567041-001 MS Sample Id: 567041-001 S MSD Sample Id: 567041-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	86.4	250	359	109	348	105	90-110	3	20	mg/kg	11.07.17 13:29	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3032690 Matrix: Soil Date Prep: 11.07.17
Parent Sample Id: 567042-003 MS Sample Id: 567042-003 S MSD Sample Id: 567042-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	166	248	410	98	414	100	90-110	1	20	mg/kg	11.07.17 14:58	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3032398 Matrix: Solid Date Prep: 11.03.17
MB Sample Id: 7633807-1-BLK LCS Sample Id: 7633807-1-BKS LCSD Sample Id: 7633807-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	1060	106	1030	103	70-135	3	35	mg/kg	11.04.17 05:49	
Diesel Range Organics (DRO)	<15.0	1000	1120	112	1080	108	70-135	4	35	mg/kg	11.04.17 05:49	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	107		112		112		70-135	%	11.04.17 05:49
o-Terphenyl	102		106		104		70-135	%	11.04.17 05:49

QC Summary 567042

TRC Solutions, Inc

State GQ Com #003H (3/3/17)

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3032398 Matrix: Soil Date Prep: 11.03.17
Parent Sample Id: 567042-001 MS Sample Id: 567042-001 S MSD Sample Id: 567042-001 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)	<15.0	999	1060	106	1000	100	70-135	6	35	mg/kg	11.04.17 06:51	
Diesel Range Organics (DRO)	<15.0	999	1080	108	1040	104	70-135	4	35	mg/kg	11.04.17 06:51	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	110		102		70-135	%	11.04.17 06:51
o-Terphenyl	100		95		70-135	%	11.04.17 06:51

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3032144 Matrix: Solid Date Prep: 11.01.17
MB Sample Id: 7633643-1-BLK LCS Sample Id: 7633643-1-BKS LCSD Sample Id: 7633643-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0992	0.0924	93	0.0922	92	70-130	0	35	mg/kg	11.01.17 10:06	
Toluene	<0.00198	0.0992	0.0961	97	0.0952	95	70-130	1	35	mg/kg	11.01.17 10:06	
Ethylbenzene	<0.00198	0.0992	0.110	111	0.107	107	71-129	3	35	mg/kg	11.01.17 10:06	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		102		100		80-120	%	11.01.17 10:06
4-Bromofluorobenzene	82		111		103		80-120	%	11.01.17 10:06

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3032144 Matrix: Soil Date Prep: 11.01.17
Parent Sample Id: 567041-001 MS Sample Id: 567041-001 S MSD Sample Id: 567041-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0720	72	0.0675	68	70-130	6	35	mg/kg	11.01.17 10:44	X
Toluene	<0.00199	0.0996	0.0709	71	0.0648	65	70-130	9	35	mg/kg	11.01.17 10:44	X
Ethylbenzene	<0.00199	0.0996	0.0745	75	0.0662	67	71-129	12	35	mg/kg	11.01.17 10:44	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	109		114		80-120	%	11.01.17 10:44
4-Bromofluorobenzene	117		120		80-120	%	11.01.17 10:44

CHAIN OF CUSTODY

XENCO LABORATORIES
Setting the Standard since 1990

Page 1 Of 1

Stafford,Texas (281-240-4200) | San Antonio, Texas (210-509-3334) | Phoenix, Arizona (480-355-0900)
Dallas Texas (214-902-0300) | Midland, Texas (432-704-5251)

www.xenco.com

Xenco Quote #: | Xenco Job #: 567042

Client / Reporting Information

Company Name / Branch: TRC
Company Address: 2057 Commerce Drive, Midland, Texas 79703
Email: ngreen@trcsolutions.com
Phone No: 432-664-6699
Project Contact: Nikki Green
Samplers's Name: Nikki Green

Project Information

Project Name/Number: State GQ Com #003H (3/3/17)
Project Location: Eddy County, NM
Invoice To: Rebecca Haskell with COG Operating LLC rhaskell@concho.com
600 W Illinois Avenue | Midland, TX 79701
Direct: 432-818-2372 | Main: 432.683.7443
PO Number:

No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH 8015M EXT 36	BTEX 8021B	Chloride E300.0	Field Comments
1	BH-1 1.5'		27-Oct	1000	S	1								x	X	X		
2	BH-2 1.5'		27-Oct	1005	S	1								x	X	X		
3	NW-1 6"		27-Oct	1010	S	1								x	X	X	x	
4	EW-1 6"		27-Oct	1015	S	1								x	X	X	x	
5	WW-1 6"		27-Oct	1020	S	1								x	X	X	x	
6	SW-1 6"		27-Oct	1030	S	1								x	X	X	x	
7																		
8																		
9																		
10																		

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

Turnaround Time (Business days)
- [ ] Same Day TAT
- [ ] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [X] Contract TAT
- [ ] 3 Day EMERGENCY

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

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

Temp: 3.3 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 3.1

FED-EX / UPS: Tracking #

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

Relinquished by Sampler: 1 Nikki Green	Date Time: 10/31/17	Received By: 1 J. Reed	Relinquished By: 2 J. Reed	Date Time: 10/31/17 1550	Received By: 2 [signature] 10-31-17 1554	
Relinquished by: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4	
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice X	Cooler Temp. / Thermo. Corr. Factor

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

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: TRC Solutions, Inc

Date/ Time Received: 10/31/2017 03:54:00 PM

Work Order #: 567042

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)?	3.1
#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: 10/31/2017

Shawnee Smith

Checklist reviewed by: Kelsey Brooks Date: 10/31/2017

Kelsey Brooks

Photographic Documentation

Client: COG Operating, LLC
Project Name: State GQ Com #003H

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

Photograph No. 1 **Description:** **View of surface staining from initial release.** **Direction:** **South**	
Photograph No. 2 **Description:** **View of surface staining from initial release.** **Direction:** **North**	

Photographic Documentation

Client: COG Operating, LLC
Project Name: State GQ Com #003H

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

Photograph No. 3 **Description:** **View of the excavated area.** **Direction:** **Southwest**	
Photograph No. 4 **Description:** **View of affected area after remediation activities.** **Direction:** **Southwest**	

Photographic Documentation

Client: COG Operating, LLC
Project Name: State GQ Com #003H

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

Photograph No. 5 **Description:** **View of affected area after remediation activities.** **Direction:** **West**	

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
MAR 07 2017
RECEIVED

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

nAB1706941748

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: COG Operating LLC 229137		Contact:	Robert McNeill
Address: 600 West Illinois Avenue, Midland TX 79701		Telephone No.	432-683-7443
Facility Name: STATE GQ COM #003H		Facility Type:	Tank Battery

Surface Owner: State	Mineral Owner:	API No. 30-015-40867

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	07	25S	28E	330'	North	380'	East	Eddy

Latitude 32.1509857 **Longitude** 104.1195908

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: 20bbls	Volume Recovered: 18bbls
Source of Release: 3''Steel Line	Date and Hour of Occurrence: 03/03/17 3:10 pm	Date and Hour of Discovery: 03/03/17 3:10 pm
Was Immediate Notice Given? ☐ Yes ☒ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour:	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

A hole developed in the middle of a 3'' steel line. Replace the steel joint with a new section of steel pipe.

Describe Area Affected and Cleanup Action Taken.*

This release was contained on the pad in front of the berm. An estimated area of 20'x 20'. 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: Robert Grubbs Jr.	Approved by Environmental Specialist: Crystal Weaver
Title: Senior HSE Coordinator	Approval Date: 3/10/17 Expiration Date: N/A
E-mail Address: rgrubbs@concho.com	Conditions of Approval: COAs attached Attached ☒
Date: March 7, 2017 Phone: 432-683-7443	

* Attach Additional Sheets If Necessary

2RP-4139