2057 Commerce Drive
Midland, TX 79703

432.520.7720 PHONE
432.520.7701 FAX

www.trcsolutions.com

September 7, 2017

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

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

Re: Soil Investigation Summary and Proposed Remediation Workplan
SRO State Com #064H (2RP-3974)
GPS: N 32.0576019° W 104.0815811°
Unit Letter "E", Section 10, Township 26 South, Range 28 East
Eddy County, New Mexico

Dear Mr. Bratcher and Ms. Groves,

TRC Environmental Corporation (TRC), on behalf of COG Operating, LLC (COG), has prepared this Soil Investigation Summary and Proposed Remediation Workplan (Workplan) for the SRO State Com #064H Release Site (Release Site). The purpose of this Workplan is to propose remediation activities designed to advance the SRO State Com #064H Release Site toward a New Mexico Oil Conservation Division (NMOCD) approved Site Closure Status. The legal description of the Release Site is Unit Letter "E", Section 10, Township 26 South, Range 28 East, in Eddy County, New Mexico. The GPS coordinates for the site are N 32.0576019° W 104.0815811°. The subject property is administered by the New Mexico State Land Office (NMSLO). A Site Location Map and Site Map are provided as Figure 1 and Figure 2, respectively.

On October 28, 2016, COG discovered a produced water release from a quarter (1/4) inch nipple. The release measured approximately 2,605 square feet in area. On October 29, 2016, COG notified the NMOCD and NMSLO of the release via email and submitted a Release Notification and Corrective Action (Form C-141) to the NMOCD on November 1, 2016. During initial response activities, COG replaced the damaged quarter (1/4) inch nipple. Approximately thirty (30) barrels of fluid was released from the nipple, with twenty-five (25) barrels recovered. The Form C-141 is attached to this report.

A groundwater database maintained by The New Mexico Office of the State Engineer (NMOSE) identified two (2) registered water wells in Section 10, Township 26 South, Range 28 East. However, information on the wells listed installation depths and dates for the wells with no reference to the observed depth of groundwater. A reference map utilized by the NMOCD Hobbs District Office indicates groundwater should be encountered at approximately seventy-five (75) feet to eighty (80) feet below ground surface (bgs). Based on the NMOCD site classification system, ten (10) points will be assigned to the subject area ranking as a result of this criterion.

No water wells were observed within one-thousand (1,000) feet of the Release Site. Based on the NMOCD site classification system, zero (0) points will be assigned to the subject area ranking as a result of this criterion.

No surface water was observed within one-thousand (1,000) feet of the release. Based on the NMOCD site classification system, zero (0) points will be assigned to the subject area ranking as a result of this criterion.

Based on the NMOCD Site Classification criteria, the Release Site soil remediation levels are 10 milligrams per Kilogram (mg/Kg) for benzene, 50 mg/Kg for benzene, toluene, ethylbenzene and xylenes (BTEX), and one thousand (1,000) mg/Kg for total petroleum hydrocarbons (TPH). Per NMOCD request, chloride remediation levels for the Release Site will be 600 mg/Kg.

On January 11, 2017, a COG representative collected thirty-two (32) delineation soil samples from the impacted area (see attached Figure 2 and Table 1 for sample locations and analytical results). The soil samples were submitted to Xenco Laboratories in Midland, Texas for determination of concentration of chloride using Method 300/300.1. Chloride concentrations ranged from 8.35 mg/Kg for soil sample T3-2' to 14,000 mg/Kg for soil sample T2-3'. A review of laboratory analytical results indicated chloride concentrations were below NMOCD regulatory guidelines for the submitted soil samples, with the exception of soil samples T1-1' (6,720 mg/Kg), T2-1' (4,210 mg/Kg), T2-2' (3,050 mg/Kg), T2-3' (14,000 mg/Kg), and T3-1' (4,890 mg/Kg).

Based on the analytical results of the soil samples collected on January 11, 2017, COG proposes the following field activities designed to remediate the SRO State Com #064H:

- Utilizing a backhoe, excavate the Release Site to a depth of approximately three and one half (3.5) feet below ground surface (bgs) in the area represented by soil sample T2 and to approximately one and one half (1.5) feet bgs in the areas represented by soil samples T1 and T3. The excavated soils will be stockpiled on a plastic liner adjacent to the excavation pending transportation to a NMOCD approved disposal facility.
- Collect an appropriate number of excavation floor soil samples, to be collected 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 to the north, south, east, and west of the excavated area will be collected 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 regulatory guidelines referenced above), the excavation will be backfilled with locally purchased non-impacted "like" soil.
- The excavated soil will be transported under manifest to an NMOCD approved disposal facility.

- Prepare and submit a "Remediation Summary and Site Closure Request" to the NMOCD and NMSLO.

COG is prepared to begin the activities outlined in this Proposed Remediation Workplan on NMOCD and NMSLO approval.

If you have any questions, or if additional information is required, please feel free to call me at 432-520-7720 (office) or 432-664-6699 (cell).
Thank you,

Nikki Green
Project Manager
TRC Environmental Corporation

Jeffrey Kindley, PG
Senior Project Manager
TRC Environmental Corporation

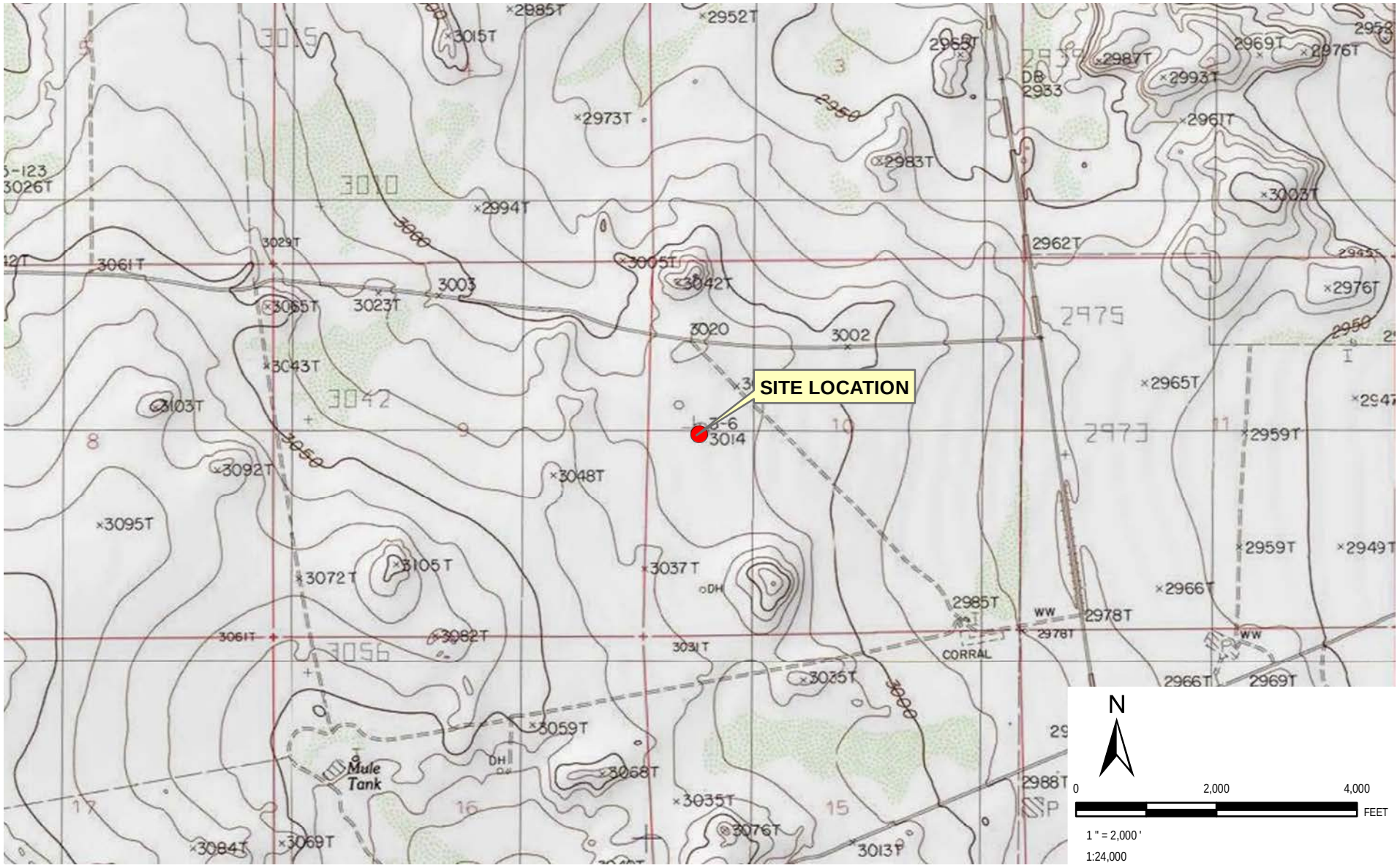
Attachments:

Figure 1 - Site Location Map
Figure 2 - Site Map
Table 1 - Concentration of Chloride in Soil
Laboratory Analytical Results
Release Notification and Corrective Action (Form C-141)

cc: Rebecca Haskell
COG Operating, LLC
600 W. Illinois Avenue
Midland, Texas 79701

File

J:\Concho\279785_SRO\279785_1.mxd -- Saved By: MLOVELACE on 7/18/2017, 16:17:01 PM



TRC
2075 Commerce Drive
Midland, TX 79703
Phone: 432.520.770
TRC - GIS

TITLE:

FIGURE 1
SITE LOCATION MAP

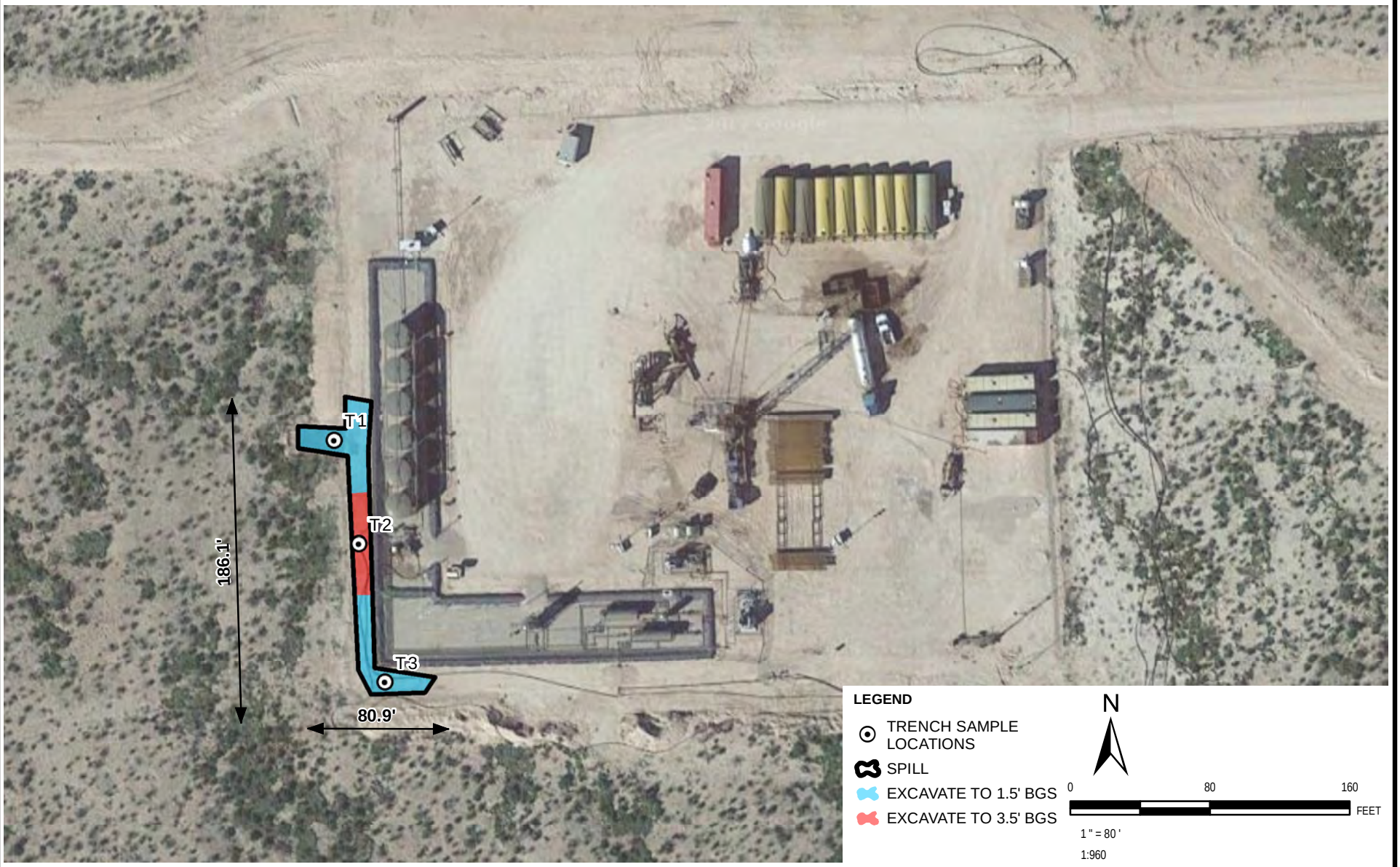
PROJECT:

SRO STATE COM #064H
EDDY COUNTY, NEW MEXICO
COG OPERATING, LLC

DRAWN BY:	MLOVELACE
CHECKED BY:	NGREEN
APPROVED BY:	NGREEN
DATE:	JULY 2017
PROJ. NO.:	279785
GPS:	LAT. N 32.0576019, LONG. W 104.0815811

SW1/4 NW1/4 SEC 10 T26S R28E

J:\Concho\279785_SRO\279785_2.mxd -- Saved By: MLOVELACE on 8/7/2017, 14:07:16 PM



TRC

2075 Commerce Drive
Midland, TX 79703
Phone: 432.520.770

TRC - GIS

TITLE:

FIGURE 2
SITE MAP

PROJECT:

SRO STATE COM #064H
EDDY COUNTY, NEW MEXICO
COG OPERATING, LLC.

DRAWN BY:	MLOVELACE
CHECKED BY:	NGREEN
APPROVED BY:	NGREEN
DATE:	AUGUST 2017
PROJ. NO.:	279785
GPS:	LAT. N 32.0576019, LONG. W 104.0815811

SW1/4 NW1/4 SEC 10 T26S R28E

TABLE 1

CONCENTRATION OF CHLORIDE IN SOIL

COG Operating LLC
SRO State Com #064H
EDDY COUNTY, NEW MEXICO

All concentrations are reported in mg/Kg

SAMPLE LOCATION	SAMPLE DATE	SOIL STATUS	E 300.1 CHLORIDE
NMOCD Site Classification Criteria			**600**
T1-1'	1/11/2017	Trench	**6,720**
T1-2'	1/11/2017	Trench	46.9
T1-3'	1/11/2017	Trench	39.7
T1-4'	1/11/2017	Trench	56.4
T1-5'	1/11/2017	Trench	44.6
T1-6'	1/11/2017	Trench	123
T1-8'	1/11/2017	Trench	177
T1-10'	1/11/2017	Trench	160
T1-12'	1/11/2017	Trench	16.6
T1-14'	1/11/2017	Trench	55.2
T1-15.5'	1/11/2017	Trench	164
T2-1'	1/11/2017	Trench	**4,210**
T2-2'	1/11/2017	Trench	**3,050**
T2-3'	1/11/2017	Trench	**14,000**
T2-4'	1/11/2017	Trench	44.7
T2-5'	1/11/2017	Trench	44.5
T2-6'	1/11/2017	Trench	62.1
T2-8'	1/11/2017	Trench	75.2
T2-10'	1/11/2017	Trench	59.7
T2-12'	1/11/2017	Trench	80.3
T2-14'	1/11/2017	Trench	176
T2-16'	1/11/2017	Trench	335
T3-1'	1/11/2017	Trench	**4,890**
T3-2'	1/11/2017	Trench	8.35
T3-3'	1/11/2017	Trench	10.5
T3-4'	1/11/2017	Trench	55.9
T3-5'	1/11/2017	Trench	34.7
T3-6'	1/11/2017	Trench	43.9
T3-8'	1/11/2017	Trench	133
T3-12'	1/11/2017	Trench	62.6
T3-14'	1/11/2017	Trench	225
T3-16'	1/11/2017	Trench	309

Certificate of Analysis Summary 544227

COG Operating LLC, Artesia, NM

Project Name: SRO State Com #064H

Project Id:

Contact: Dakota Neel

Project Location: 32.0576019,-104.0815811

Date Received in Lab: Mon Jan-16-17 12:00 pm

Report Date: 23-JAN-17

Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	544227-001		544227-002		544227-003		544227-004		544227-005		544227-006	
	Field Id:	T1 - 1'		T1 - 2'		T1 - 3'		T1 - 4'		T1 - 5'		T1 - 6'	
	Depth:	1- ft		5- ft		3- ft		4- ft		5- ft		6- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-11-17 10:00		Jan-11-17 10:00		Jan-11-17 10:00		Jan-11-17 10:00		Jan-11-17 10:00		Jan-11-17 10:00	
Inorganic Anions by EPA 300/300.1	***Extracted:***	Jan-19-17 11:00		Jan-19-17 11:00		Jan-19-17 11:00		Jan-19-17 11:00		Jan-19-17 11:00		Jan-19-17 11:00	
	Analyzed:	Jan-19-17 16:37		Jan-19-17 17:10		Jan-19-17 17:21		Jan-19-17 17:32		Jan-19-17 17:43		Jan-19-17 17:54	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		6720	50.0	46.9	5.00	39.7	5.00	56.4	5.00	44.6	25.0	123	25.0

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 544227

COG Operating LLC, Artesia, NM

Project Name: SRO State Com #064H

Project Id:

Contact: Dakota Neel

Project Location: 32.0576019,-104.0815811

Date Received in Lab: Mon Jan-16-17 12:00 pm

Report Date: 23-JAN-17

Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	544227-007		544227-008		544227-009		544227-010		544227-011		544227-012	
	Field Id:	T1 - 8'		T1 - 10'		T1 - 12'		T1 - 14'		T1 - 15.5'		T2 - 1'	
	Depth:	8- ft		10- ft		12- ft		14- ft		15.5- ft		1- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-11-17 10:00		Jan-11-17 10:00		Jan-11-17 10:00		Jan-11-17 10:00		Jan-11-17 10:00		Jan-11-17 10:45	
Inorganic Anions by EPA 300/300.1	***Extracted:***	Jan-19-17 11:00		Jan-19-17 11:00		Jan-19-17 11:00		Jan-19-17 11:00		Jan-19-17 11:00		Jan-19-17 11:00	
	Analyzed:	Jan-19-17 18:05		Jan-19-17 18:17		Jan-20-17 14:42		Jan-19-17 19:01		Jan-19-17 19:12		Jan-19-17 19:45	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		177	50.0	160	50.0	16.6	5.00	55.2	25.0	164	25.0	4210	25.0

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 544227

COG Operating LLC, Artesia, NM

Project Name: SRO State Com #064H

Project Id:

Contact: Dakota Neel

Project Location: 32.0576019,-104.0815811

Date Received in Lab: Mon Jan-16-17 12:00 pm

Report Date: 23-JAN-17

Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	544227-013		544227-014		544227-015		544227-016		544227-017		544227-018	
	Field Id:	T2 - 2'		T2 - 3'		T2 - 4'		T2 - 5'		T2 - 6'		T2 - 8'	
	Depth:	2- ft		3- ft		4- ft		5- ft		6- ft		8- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-11-17 10:45		Jan-11-17 10:45		Jan-11-17 10:45		Jan-11-17 10:45		Jan-11-17 10:45		Jan-11-17 10:45	
Inorganic Anions by EPA 300/300.1	***Extracted:***	Jan-19-17 11:00		Jan-19-17 11:00		Jan-19-17 11:00		Jan-19-17 11:00		Jan-19-17 11:00		Jan-19-17 11:00	
	Analyzed:	Jan-19-17 19:56		Jan-19-17 20:07		Jan-19-17 20:18		Jan-19-17 20:29		Jan-19-17 20:40		Jan-19-17 20:51	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		3050	25.0	14000	100	44.7	25.0	44.5	25.0	62.1	25.0	75.2	25.0

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 544227

COG Operating LLC, Artesia, NM

Project Name: SRO State Com #064H

Project Id:

Contact: Dakota Neel

Project Location: 32.0576019,-104.0815811

Date Received in Lab: Mon Jan-16-17 12:00 pm

Report Date: 23-JAN-17

Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	544227-019		544227-020		544227-021		544227-022		544227-023		544227-024	
	Field Id:	T2 - 10'		T2 - 12'		T2 - 14'		T2 - 16'		T3 - 1'		T3 - 2'	
	Depth:	10- ft		12- ft		14- ft		16- ft		1- ft		2- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-11-17 10:45		Jan-11-17 10:45		Jan-11-17 10:45		Jan-11-17 10:45		Jan-11-17 11:30		Jan-11-17 11:30	
Inorganic Anions by EPA 300/300.1	***Extracted:***	Jan-20-17 09:00		Jan-20-17 09:00		Jan-20-17 09:00		Jan-20-17 09:00		Jan-20-17 09:00		Jan-20-17 09:00	
	Analyzed:	Jan-20-17 12:07		Jan-20-17 12:14		Jan-20-17 12:21		Jan-20-17 12:28		Jan-20-17 12:35		Jan-20-17 12:42	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		59.7	25.0	80.3	5.00	176	25.0	335	25.0	4890	50.0	8.35	5.00

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 544227

COG Operating LLC, Artesia, NM

Project Name: SRO State Com #064H

Project Id:
Contact: Dakota Neel
Project Location: 32.0576019,-104.0815811

Date Received in Lab: Mon Jan-16-17 12:00 pm
Report Date: 23-JAN-17
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	544227-025		544227-026		544227-027		544227-028		544227-029		544227-030	
	Field Id:	T3 - 3'		T3 - 4'		T3 - 5'		T3 - 6'		T3 - 8'		T3 - 12'	
	Depth:	3- ft		4- ft		5- ft		6- ft		8- ft		12- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-11-17 11:30		Jan-11-17 11:30		Jan-11-17 11:30		Jan-11-17 11:30		Jan-11-17 11:30		Jan-11-17 11:30	
Inorganic Anions by EPA 300/300.1	***Extracted:***	Jan-20-17 09:00		Jan-20-17 09:00		Jan-20-17 09:00		Jan-20-17 09:00		Jan-20-17 09:00		Jan-20-17 09:00	
	Analyzed:	Jan-20-17 12:49		Jan-20-17 13:25		Jan-20-17 13:32		Jan-20-17 13:39		Jan-20-17 13:46		Jan-20-17 13:53	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		10.5	5.00	55.9	25.0	34.7	25.0	43.9	25.0	133	25.0	62.6	25.0

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 544227

COG Operating LLC, Artesia, NM

Project Name: SRO State Com #064H

Project Id:
Contact: Dakota Neel
Project Location: 32.0576019,-104.0815811

Date Received in Lab: Mon Jan-16-17 12:00 pm
Report Date: 23-JAN-17
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	544227-031		544227-032									
	Field Id:	T3 - 14'		T3 - 16'									
	Depth:	14- ft		16- ft									
	Matrix:	SOIL		SOIL									
	Sampled:	Jan-11-17 11:30		Jan-11-17 11:30									
Inorganic Anions by EPA 300/300.1	***Extracted:***	Jan-20-17 09:00		Jan-20-17 09:00									
	Analyzed:	Jan-20-17 14:00		Jan-20-17 14:07									
	Units/RL:	mg/kg	RL	mg/kg	RL								
Chloride		225	25.0	309	25.0								

Kelsey Brooks
Project Manager

Analytical Report 544227

for

COG Operating LLC

Project Manager: Dakota Neel

SRO State Com #064H

23-JAN-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)

23-JAN-17

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

Reference: XENCO Report No(s): **544227**
SRO State Com #064H
Project Address: 32.0576019,-104.0815811

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) 544227. 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. 544227 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 544227

COG Operating LLC, Artesia, NM

SRO State Com #064H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
T1 - 1'	S	01-11-17 10:00	1 ft	544227-001
T1 - 2'	S	01-11-17 10:00	5 ft	544227-002
T1 - 3'	S	01-11-17 10:00	3 ft	544227-003
T1 - 4'	S	01-11-17 10:00	4 ft	544227-004
T1 - 5'	S	01-11-17 10:00	5 ft	544227-005
T1 - 6'	S	01-11-17 10:00	6 ft	544227-006
T1 - 8'	S	01-11-17 10:00	8 ft	544227-007
T1 - 10'	S	01-11-17 10:00	10 ft	544227-008
T1 - 12'	S	01-11-17 10:00	12 ft	544227-009
T1 - 14'	S	01-11-17 10:00	14 ft	544227-010
T1 - 15.5'	S	01-11-17 10:00	15.5 ft	544227-011
T2 - 1'	S	01-11-17 10:45	1 ft	544227-012
T2 - 2'	S	01-11-17 10:45	2 ft	544227-013
T2 - 3'	S	01-11-17 10:45	3 ft	544227-014
T2 - 4'	S	01-11-17 10:45	4 ft	544227-015
T2 - 5'	S	01-11-17 10:45	5 ft	544227-016
T2 - 6'	S	01-11-17 10:45	6 ft	544227-017
T2 - 8'	S	01-11-17 10:45	8 ft	544227-018
T2 - 10'	S	01-11-17 10:45	10 ft	544227-019
T2 - 12'	S	01-11-17 10:45	12 ft	544227-020
T2 - 14'	S	01-11-17 10:45	14 ft	544227-021
T2 - 16'	S	01-11-17 10:45	16 ft	544227-022
T3 - 1'	S	01-11-17 11:30	1 ft	544227-023
T3 - 2'	S	01-11-17 11:30	2 ft	544227-024
T3 - 3'	S	01-11-17 11:30	3 ft	544227-025
T3 - 4'	S	01-11-17 11:30	4 ft	544227-026
T3 - 5'	S	01-11-17 11:30	5 ft	544227-027
T3 - 6'	S	01-11-17 11:30	6 ft	544227-028
T3 - 8'	S	01-11-17 11:30	8 ft	544227-029
T3 - 12'	S	01-11-17 11:30	12 ft	544227-030
T3 - 14'	S	01-11-17 11:30	14 ft	544227-031
T3 - 16'	S	01-11-17 11:30	16 ft	544227-032

Client Name: COG Operating LLC

Project Name: SRO State Com #064H

Project ID:
Work Order Number(s): *544227*

Report Date: *23-JAN-17*
Date Received: *01/16/2017*

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 544227

COG Operating LLC, Artesia, NM

SRO State Com #064H

Sample Id:	**T1 - 1'**	Matrix:	Soil	Date Received:	01.16.17 12.00
Lab Sample Id:	544227-001	Date Collected:	01.11.17 10.00	Sample Depth:	1 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	01.19.17 11.00	Basis:	Wet Weight
Seq Number:	3008055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6720**	50.0	mg/kg	01.19.17 16.37		10

Certificate of Analytical Results 544227

COG Operating LLC, Artesia, NM

SRO State Com #064H

Sample Id:	**T1 - 2'**	Matrix:	Soil	Date Received:	01.16.17 12.00
Lab Sample Id:	544227-002	Date Collected:	01.11.17 10.00	Sample Depth:	5 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	01.19.17 11.00	Basis:	Wet Weight
Seq Number:	3008055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**46.9**	5.00	mg/kg	01.19.17 17.10		1

Certificate of Analytical Results 544227

COG Operating LLC, Artesia, NM

SRO State Com #064H

Sample Id:	**T1 - 3'**	Matrix:	Soil	Date Received:	01.16.17 12.00
Lab Sample Id:	544227-003	Date Collected:	01.11.17 10.00	Sample Depth:	3 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	01.19.17 11.00	Basis:	Wet Weight
Seq Number:	3008055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**39.7**	5.00	mg/kg	01.19.17 17.21		1

Certificate of Analytical Results 544227

COG Operating LLC, Artesia, NM

SRO State Com #064H

Sample Id:	**T1 - 4'**	Matrix:	Soil	Date Received:	01.16.17 12.00
Lab Sample Id:	544227-004	Date Collected:	01.11.17 10.00	Sample Depth:	4 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	01.19.17 11.00	Basis:	Wet Weight
Seq Number:	3008055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**56.4**	5.00	mg/kg	01.19.17 17.32		1

Certificate of Analytical Results 544227

COG Operating LLC, Artesia, NM

SRO State Com #064H

Sample Id:	**T1 - 5'**	Matrix:	Soil	Date Received:	01.16.17 12.00
Lab Sample Id:	544227-005	Date Collected:	01.11.17 10.00	Sample Depth:	5 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	01.19.17 11.00	Basis:	Wet Weight
Seq Number:	3008055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**44.6**	25.0	mg/kg	01.19.17 17.43		5

Certificate of Analytical Results 544227

COG Operating LLC, Artesia, NM

SRO State Com #064H

Sample Id:	**T1 - 6'**	Matrix:	Soil	Date Received:	01.16.17 12.00
Lab Sample Id:	544227-006	Date Collected:	01.11.17 10.00	Sample Depth:	6 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	01.19.17 11.00	Basis:	Wet Weight
Seq Number:	3008055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**123**	25.0	mg/kg	01.19.17 17.54		5

Certificate of Analytical Results 544227

COG Operating LLC, Artesia, NM

SRO State Com #064H

Sample Id:	**T1 - 8'**	Matrix:	Soil	Date Received:	01.16.17 12.00
Lab Sample Id:	544227-007	Date Collected:	01.11.17 10.00	Sample Depth:	8 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	01.19.17 11.00	Basis:	Wet Weight
Seq Number:	3008055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**177**	50.0	mg/kg	01.19.17 18.05		10

Certificate of Analytical Results 544227

COG Operating LLC, Artesia, NM

SRO State Com #064H

Sample Id:	**T1 - 10'**	Matrix:	Soil	Date Received:	01.16.17 12.00
Lab Sample Id:	544227-008	Date Collected:	01.11.17 10.00	Sample Depth:	10 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	01.19.17 11.00	Basis:	Wet Weight
Seq Number:	3008055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**160**	50.0	mg/kg	01.19.17 18.17		10

Certificate of Analytical Results 544227

COG Operating LLC, Artesia, NM

SRO State Com #064H

Sample Id:	**T1 - 12'**	Matrix:	Soil	Date Received:	01.16.17 12.00
Lab Sample Id:	544227-009	Date Collected:	01.11.17 10.00	Sample Depth:	12 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	01.19.17 11.00	Basis:	Wet Weight
Seq Number:	3008055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**16.6**	5.00	mg/kg	01.20.17 14.42		1

Certificate of Analytical Results 544227

COG Operating LLC, Artesia, NM

SRO State Com #064H

Sample Id:	**T1 - 14'**	Matrix:	Soil	Date Received:	01.16.17 12.00
Lab Sample Id:	544227-010	Date Collected:	01.11.17 10.00	Sample Depth:	14 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	01.19.17 11.00	Basis:	Wet Weight
Seq Number:	3008055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**55.2**	25.0	mg/kg	01.19.17 19.01		5

Certificate of Analytical Results 544227

COG Operating LLC, Artesia, NM

SRO State Com #064H

Sample Id:	**T1 - 15.5'**	Matrix:	Soil	Date Received:	01.16.17 12.00
Lab Sample Id:	544227-011	Date Collected:	01.11.17 10.00	Sample Depth:	15.5 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	01.19.17 11.00	Basis:	Wet Weight
Seq Number:	3008055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**164**	25.0	mg/kg	01.19.17 19.12		5

Certificate of Analytical Results 544227

COG Operating LLC, Artesia, NM

SRO State Com #064H

Sample Id:	**T2 - 1'**	Matrix:	Soil	Date Received:	01.16.17 12.00
Lab Sample Id:	544227-012	Date Collected:	01.11.17 10.45	Sample Depth:	1 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	01.19.17 11.00	Basis:	Wet Weight
Seq Number:	3008055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4210**	25.0	mg/kg	01.19.17 19.45		5

Certificate of Analytical Results 544227

COG Operating LLC, Artesia, NM

SRO State Com #064H

Sample Id:	**T2 - 2'**	Matrix:	Soil	Date Received:	01.16.17 12.00
Lab Sample Id:	544227-013	Date Collected:	01.11.17 10.45	Sample Depth:	2 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	01.19.17 11.00	Basis:	Wet Weight
Seq Number:	3008055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3050**	25.0	mg/kg	01.19.17 19.56		5

Certificate of Analytical Results 544227

COG Operating LLC, Artesia, NM

SRO State Com #064H

Sample Id:	**T2 - 3'**	Matrix:	Soil	Date Received:	01.16.17 12.00
Lab Sample Id:	544227-014	Date Collected:	01.11.17 10.45	Sample Depth:	3 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	01.19.17 11.00	Basis:	Wet Weight
Seq Number:	3008055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**14000**	100	mg/kg	01.19.17 20.07		20

Certificate of Analytical Results 544227

COG Operating LLC, Artesia, NM

SRO State Com #064H

Sample Id:	**T2 - 4'**	Matrix:	Soil	Date Received:	01.16.17 12.00
Lab Sample Id:	544227-015	Date Collected:	01.11.17 10.45	Sample Depth:	4 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	01.19.17 11.00	Basis:	Wet Weight
Seq Number:	3008055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**44.7**	25.0	mg/kg	01.19.17 20.18		5

Certificate of Analytical Results 544227

COG Operating LLC, Artesia, NM

SRO State Com #064H

Sample Id:	**T2 - 5'**	Matrix:	Soil	Date Received:	01.16.17 12.00
Lab Sample Id:	544227-016	Date Collected:	01.11.17 10.45	Sample Depth:	5 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	01.19.17 11.00	Basis:	Wet Weight
Seq Number:	3008055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**44.5**	25.0	mg/kg	01.19.17 20.29		5

Certificate of Analytical Results 544227

COG Operating LLC, Artesia, NM

SRO State Com #064H

Sample Id:	**T2 - 6'**	Matrix:	Soil	Date Received:	01.16.17 12.00
Lab Sample Id:	544227-017	Date Collected:	01.11.17 10.45	Sample Depth:	6 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	01.19.17 11.00	Basis:	Wet Weight
Seq Number:	3008055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**62.1**	25.0	mg/kg	01.19.17 20.40		5

Certificate of Analytical Results 544227

COG Operating LLC, Artesia, NM

SRO State Com #064H

Sample Id:	**T2 - 8'**	Matrix:	Soil	Date Received:	01.16.17 12.00
Lab Sample Id:	544227-018	Date Collected:	01.11.17 10.45	Sample Depth:	8 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	01.19.17 11.00	Basis:	Wet Weight
Seq Number:	3008055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**75.2**	25.0	mg/kg	01.19.17 20.51		5

Certificate of Analytical Results 544227

COG Operating LLC, Artesia, NM

SRO State Com #064H

Sample Id:	**T2 - 10'**	Matrix:	Soil	Date Received:	01.16.17 12.00
Lab Sample Id:	544227-019	Date Collected:	01.11.17 10.45	Sample Depth:	10 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	01.20.17 09.00	Basis:	Wet Weight
Seq Number:	3008054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**59.7**	25.0	mg/kg	01.20.17 12.07		5

Certificate of Analytical Results 544227

COG Operating LLC, Artesia, NM

SRO State Com #064H

Sample Id:	**T2 - 12'**	Matrix:	Soil	Date Received:	01.16.17 12.00
Lab Sample Id:	544227-020	Date Collected:	01.11.17 10.45	Sample Depth:	12 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	01.20.17 09.00	Basis:	Wet Weight
Seq Number:	3008054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**80.3**	5.00	mg/kg	01.20.17 12.14		1

Certificate of Analytical Results 544227

COG Operating LLC, Artesia, NM

SRO State Com #064H

Sample Id:	**T2 - 14'**	Matrix:	Soil	Date Received:	01.16.17 12.00
Lab Sample Id:	544227-021	Date Collected:	01.11.17 10.45	Sample Depth:	14 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	01.20.17 09.00	Basis:	Wet Weight
Seq Number:	3008054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**176**	25.0	mg/kg	01.20.17 12.21		5

Certificate of Analytical Results 544227

COG Operating LLC, Artesia, NM

SRO State Com #064H

Sample Id:	**T2 - 16'**	Matrix:	Soil	Date Received:	01.16.17 12.00
Lab Sample Id:	544227-022	Date Collected:	01.11.17 10.45	Sample Depth:	16 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	01.20.17 09.00	Basis:	Wet Weight
Seq Number:	3008054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**335**	25.0	mg/kg	01.20.17 12.28		5

Certificate of Analytical Results 544227

COG Operating LLC, Artesia, NM

SRO State Com #064H

Sample Id:	**T3 - 1'**	Matrix:	Soil	Date Received:	01.16.17 12.00
Lab Sample Id:	544227-023	Date Collected:	01.11.17 11.30	Sample Depth:	1 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	01.20.17 09.00	Basis:	Wet Weight
Seq Number:	3008054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4890**	50.0	mg/kg	01.20.17 12.35		10

Certificate of Analytical Results 544227

COG Operating LLC, Artesia, NM

SRO State Com #064H

Sample Id:	**T3 - 2'**	Matrix:	Soil	Date Received:	01.16.17 12.00
Lab Sample Id:	544227-024	Date Collected:	01.11.17 11.30	Sample Depth:	2 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	01.20.17 09.00	Basis:	Wet Weight
Seq Number:	3008054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.35**	5.00	mg/kg	01.20.17 12.42		1

Certificate of Analytical Results 544227

COG Operating LLC, Artesia, NM

SRO State Com #064H

Sample Id:	**T3 - 3'**	Matrix:	Soil	Date Received:	01.16.17 12.00
Lab Sample Id:	544227-025	Date Collected:	01.11.17 11.30	Sample Depth:	3 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	01.20.17 09.00	Basis:	Wet Weight
Seq Number:	3008054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10.5**	5.00	mg/kg	01.20.17 12.49		1

Certificate of Analytical Results 544227

COG Operating LLC, Artesia, NM

SRO State Com #064H

Sample Id:	**T3 - 4'**	Matrix:	Soil	Date Received:	01.16.17 12.00
Lab Sample Id:	544227-026	Date Collected:	01.11.17 11.30	Sample Depth:	4 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	01.20.17 09.00	Basis:	Wet Weight
Seq Number:	3008054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**55.9**	25.0	mg/kg	01.20.17 13.25		5

Certificate of Analytical Results 544227

COG Operating LLC, Artesia, NM

SRO State Com #064H

Sample Id:	**T3 - 5'**	Matrix:	Soil	Date Received:	01.16.17 12.00
Lab Sample Id:	544227-027	Date Collected:	01.11.17 11.30	Sample Depth:	5 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	01.20.17 09.00	Basis:	Wet Weight
Seq Number:	3008054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**34.7**	25.0	mg/kg	01.20.17 13.32		5

Certificate of Analytical Results 544227

COG Operating LLC, Artesia, NM

SRO State Com #064H

Sample Id:	**T3 - 6'**	Matrix:	Soil	Date Received:	01.16.17 12.00
Lab Sample Id:	544227-028	Date Collected:	01.11.17 11.30	Sample Depth:	6 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	01.20.17 09.00	Basis:	Wet Weight
Seq Number:	3008054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**43.9**	25.0	mg/kg	01.20.17 13.39		5

Certificate of Analytical Results 544227

COG Operating LLC, Artesia, NM

SRO State Com #064H

Sample Id:	**T3 - 8'**	Matrix:	Soil	Date Received:	01.16.17 12.00
Lab Sample Id:	544227-029	Date Collected:	01.11.17 11.30	Sample Depth:	8 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	01.20.17 09.00	Basis:	Wet Weight
Seq Number:	3008054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**133**	25.0	mg/kg	01.20.17 13.46		5

Certificate of Analytical Results 544227

COG Operating LLC, Artesia, NM

SRO State Com #064H

Sample Id:	**T3 - 12'**	Matrix:	Soil	Date Received:	01.16.17 12.00
Lab Sample Id:	544227-030	Date Collected:	01.11.17 11.30	Sample Depth:	12 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	01.20.17 09.00	Basis:	Wet Weight
Seq Number:	3008054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**62.6**	25.0	mg/kg	01.20.17 13.53		5

Certificate of Analytical Results 544227

COG Operating LLC, Artesia, NM

SRO State Com #064H

Sample Id:	**T3 - 14'**	Matrix:	Soil	Date Received:	01.16.17 12.00
Lab Sample Id:	544227-031	Date Collected:	01.11.17 11.30	Sample Depth:	14 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	01.20.17 09.00	Basis:	Wet Weight
Seq Number:	3008054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**225**	25.0	mg/kg	01.20.17 14.00		5

Certificate of Analytical Results 544227

COG Operating LLC, Artesia, NM

SRO State Com #064H

Sample Id:	**T3 - 16'**	Matrix:	Soil	Date Received:	01.16.17 12.00
Lab Sample Id:	544227-032	Date Collected:	01.11.17 11.30	Sample Depth:	16 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	
Analyst:	MNR	Date Prep:	01.20.17 09.00	Basis:	Wet Weight
Seq Number:	3008054				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**309**	25.0	mg/kg	01.20.17 14.07		5

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

COG Operating LLC

SRO State Com #064H

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3008055 — Matrix: Solid — Date Prep: 01.19.17
MB Sample Id: 718772-1-BLK — LCS Sample Id: 718772-1-BKS — LCSD Sample Id: 718772-1-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	251	100	255	102	90-110	2	20	mg/kg	01.19.17 14:50	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3008054 — Matrix: Solid — Date Prep: 01.20.17
MB Sample Id: 718770-1-BLK — LCS Sample Id: 718770-1-BKS — LCSD Sample Id: 718770-1-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	241	96	246	98	90-110	2	20	mg/kg	01.20.17 10:28	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3008055 — Matrix: Soil — Date Prep: 01.19.17
Parent Sample Id: 544226-032 — MS Sample Id: 544226-032 S — MSD Sample Id: 544226-032 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	526	250	768	97	774	99	90-110	1	20	mg/kg	01.19.17 16:04	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3008055 — Matrix: Soil — Date Prep: 01.19.17
Parent Sample Id: 544227-009 — MS Sample Id: 544227-009 S — MSD Sample Id: 544227-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	16.6	250	279	105	263	99	90-110	6	20	mg/kg	01.20.17 14:49	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3008054 — Matrix: Soil — Date Prep: 01.20.17
Parent Sample Id: 544227-025 — MS Sample Id: 544227-025 S — MSD Sample Id: 544227-025 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	10.5	250	247	95	248	95	90-110	0	20	mg/kg	01.20.17 12:56	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3008054 — Matrix: Soil — Date Prep: 01.20.17
Parent Sample Id: 544522-001 — MS Sample Id: 544522-001 S — MSD Sample Id: 544522-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	7280	250	7320	16	7320	16	90-110	0	20	mg/kg	01.20.17 10:50	X

CHAIN OF CUSTODY

XENCO LABORATORIES
Setting the Standard since 1990
Stafford,Texas (281-240-4200)
Dallas Texas (214-902-0300)
San Antonio, Texas (210-509-3334)
Midland, Texas (432-704-5251)
www.xenco.com
Phoenix, Arizona (480-355-0900)

Xenco Quote # | Xenco Job # 544227

Client / Reporting Information

Company Name / Branch: COG Operating LLC
Company Address: 2407 Pecos Avenue, Artesia NM, 88210
Email: dneel2@concho.com Phone No: 432-215-2783
Project Contact: Dakota Neel
Samplers's Name Dakota Neel

Project Information

Project Name/Number: SRO State Com #064H
Project Location: 32.0576019,-104.0815811
Invoice To: COG Operating LLC, Robert McNeill, 600 W Illinois, Midland TX 79701, (432) 221-0388
PO Number:

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	Analytical Information: Chloride	Field Comments
1	T1	1'	1/11/2017	10:00 AM	S										X	
2	T1	2'	1/11/2017	10:00 AM	S										X	
3	T1	3'	1/11/2017	10:00 AM	S										X	
4	T1	4'	1/11/2017	10:00 AM	S										X	
5	T1	5'	1/11/2017	10:00 AM	S										X	
6	T1	6'	1/11/2017	10:00 AM	S										X	
7	T1	8'	1/11/2017	10:00 AM	S										X	
8	T1	10'	1/11/2017	10:00 AM	S										X	
9	T1	12'	1/11/2017	10:00 AM	S										X	
10	T1	14'	1/11/2017	10:00 AM	S										X	
11	T1	15.5'	1/11/2017	10:00 AM	S										X	

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:

Please Email Results to:

rgrubbs@concho.com; rhaskell@concho.com; alieb@concho.com; dneel2@concho.com

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	1-16-17 12W		2		1.17.17 950
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: X

Cooler Temp Thermo Corr Factor
Temp: IR ID:R-8
CF:+ 0.1 4.3
Corrected Temp: 4.4

CHAIN OF CUSTODY

XENCO LABORATORIES
Setting the Standard since 1990
Stafford,Texas (281-240-4200)
Dallas Texas (214-902-0300)
San Antonio, Texas (210-509-3334)
Midland, Texas (432-704-5251)
www.xenco.com
Phoenix, Arizona (480-355-0900)

Xenco Quote # | Xenco Job # 644727

Client / Reporting Information

Company Name / Branch: COG Operating LLC
Company Address: 2407 Pecos Avenue, Artesia NM, 88210
Email: dneel2@concho.com Phone No: 432-215-2783
Project Contact: Dakota Neel
Samplers's Name Dakota Neel

Project Information

Project Name/Number: SRO State Com #064H
Project Location: 32.0576019,-104.0815811
Invoice To: COG Operating LLC, Robert McNeill, 600 W Illinois, Midland TX 79701, (432) 221-0388
PO Number:

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	Analytical Information: Chrloride	Field Comments
1	T2	1'	1/11/2017	10:45 AM	S										x	
2	T2	2'	1/11/2017	10:45 AM	S										x	
3	T2	3'	1/11/2017	10:45 AM	S										x	
4	T2	4'	1/11/2017	10:45 AM	S										x	
5	T2	5'	1/11/2017	10:45 AM	S										x	
6	T2	6'	1/11/2017	10:45 AM	S										x	
7	T2	8'	1/11/2017	10:45 AM	S										x	
8	T2	10'	1/11/2017	10:45 AM	S										x	
9	T2	12'	1/11/2017	10:45 AM	S										x	
10	T2	14'	1/11/2017	10:45 AM	S										x	
11	T2	16'	1/11/2017	10:45 AM	S										x	

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:

Please Email Results to:

rgrubbs@concho.com; rhaskell@concho.com; alieb@concho.com; dneel2@concho.com

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			1	2		2 Received By: 1-17-17 950
3	Relinquished by:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice: X

Cooler Temp: Temp: 4.3 IR ID:R-8 CF:+ 0.1 Corrected Temp: 4.4

CHAIN OF CUSTODY

Page 3 Of 3

XENCO LABORATORIES

Setting the Standard since 1990

Stafford,Texas (281-240-4200)

Dallas Texas (214-902-0300)

San Antonio, Texas (210-509-3334)

Midland, Texas (432-704-5251)

www.xenco.com

Phoenix, Arizona (480-355-0900)

Xenco Quote # | Xenco Job # 544227

Client / Reporting Information

Company Name / Branch: COG Operating LLC

Company Address: 2407 Pecos Avenue, Artesia NM, 88210

Email: dneel2@concho.com Phone No: 432-215-2783

Project Contact: Dakota Neel

Samplers's Name Dakota Neel

Project Information

Project Name/Number: SRO State Com #064H

Project Location: 32.0576019,-104.0815811

Invoice To: COG Operating LLC
Robert McNeill
600 W Illinois, Midland TX 79701
(432) 221-0388

PO Number:

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	Analytical Information: Chloride	Field Comments
1	T3	1'	1/11/2017	11:30 AM	S										x	
2	T3	2'	1/11/2017	11:30 AM	S										x	
3	T3	3'	1/11/2017	11:30 AM	S										x	
4	T3	4'	1/11/2017	11:30 AM	S										x	
5	T3	5'	1/11/2017	11:30 AM	S										x	
6	T3	6'	1/11/2017	11:30 AM	S										x	
7	T3	8'	1/11/2017	11:30 AM	S										x	
8	T3	12'	1/11/2017	11:30 AM	S										x	
9	T3	14'	1/11/2017	11:30 AM	S										x	
10	T3	16'	1/11/2017	11:30 AM	S										x	
11																

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:

Please Email Results to:

rgrubbs@concho.com; rhaskell@concho.com; alieb@concho.com; dneel2@concho.com

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			1	2		2 Kramer 1.17.17 950
3	Relinquished by:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice: X

Cooler Temp. Thermo. Corr. Factor

Temp: IR ID:R-8
CF:+ 0.1 4.3
Corrected Temp: 4.4

ORIGIN ID:HOBA (575) 392-7550
MAIL SERVICES ETC, LLC
4008 N GRIMES
HOBBS, NM 88240
UNITED STATES US

SHIP DATE: 16JAN17
ACTWGT: 70.0 LB MAN
CAD: 0909328/CAFE2915
DIMS: 24x16x15 IN

BILL RECIPIENT

TO XENCO LABORATORIES
XENCO LABORATORIES
1211 W FLORIDA AVE

MIDLAND TX 79701

(432) 563-1800
INV:
PO:
REF:
DEPT:

J151315081301uv

FedEx Express

530C1/1997/3298

TUE - 17 JAN 10:30A
PRIORITY OVERNIGHT

TRK# 0201 6606 3913 4904

41 MAFA

79701
TX-US LBB

156148-434 RRD 04/16

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC

Date/ Time Received: 01/16/2017 12:00:00 PM

Work Order #: 544227

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)?	4.4
#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)?	**No**
#21 VOC samples have zero headspace (less than 1/4 inch bubble)?	**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 Date: 01/17/2017
Jessica Kramer

Checklist reviewed by: Kelsey Brooks Date: 01/18/2017
Kelsey Brooks

NM OIL CONSERVATION
ARTESIA DISTRICT

NOV 0 1 2016

RECEIVED

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

nAB1630657394

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:	SRO STATE COM #064H	Facility Type:	Tank Battery

Surface Owner: State	Mineral Owner:	API No. 30-015-42130

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
E	10	26S	28E	2450'	North	710'	West	Eddy

Latitude 32.0576019 Longitude 104.0815811

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: 30bbls	Volume Recovered: 25bbls
Source of Release: ¼ Nipple	Date and Hour of Occurrence: 10-28-2016 12:15 pm	Date and Hour of Discovery: 10-28-2016 12:15 pm
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher - NMOCD / Amber Groves - SLO	
By Whom? Robert Grubbs Jr.	Date and Hour: Sat 10/29/2016 11:51 AM	
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.*

The release was caused by a 1/4" nipple that broke off causing the spill. Replaced the ¼ nipple with a new one.

Describe Area Affected and Cleanup Action Taken.*

This release occurred in the pasture an area of 8X50 against the tank batteries berm. 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
	Signed By Mike Bratcher
Printed Name: Robert Grubbs Jr.	Approved by Environmental Specialist:
Title: Senior Environmental Coordinator	Approval Date: 11/1/16 Expiration Date: N/A
E-mail Address: rgrubbs@concho.com	Conditions of Approval: → Attached ☒
Date: November 1, 2016 Phone: 432-683-7443	

* Attach Additional Sheets If Necessary

2RP-3974

Bratcher, Mike, EMNRD

From: Robert Grubbs <RGrubbs@concho.com>
Sent: Tuesday, November 01, 2016 10:21 AM
To: Bratcher, Mike, EMNRD; Patterson, Heather, EMNRD; 'agroves@slo.state.nm.us'
Subject: (C-141 Initial) SRO STATE COM #064H (TB) 30-015-42130
Attachments: SRO State Com #064H (TB) Initial.pdf

MR. BRATCHER / MS. GROVES,

ATTACHED IS A C-141 FOR YOUR CONSIDERATION. IF YOU HAVE ANY ADDITIONAL QUESTIONS PLEASE FEEL FREE TO CONTACT ME.

THANK YOU,

ROBERT GRUBBS JR.
SR. HSE COORDINATOR
432.683.7443 (MAIN)
432.818.2369 (DIRECT)
432.661.6601 (CELL)
432.221.0892 (FAX)
RGRUBBS@CONCHO.COM
MAILING ADDRESS:
ONE CONCHO CENTER
600 W. ILLINOIS AVENUE
MIDLAND, TEXAS 79701

Patterson, Heather, EMNRD

From: Robert Grubbs <RGrubbs@concho.com>
Sent: Saturday, October 29, 2016 10:51 AM
To: Bratcher, Mike, EMNRD; Patterson, Heather, EMNRD; 'agroves@slo.state.nm.us'
Subject: (Notification) SRO STATE COM #064H (TB)

MR. BRATCHER / MS. GROVES,

COG OPERATING LLC IS REPORTING A RELEASE ON THE SRO STATE COM #064H (30-015-42130) UNIT E SECTION 10 TOWNSHIP 26S RANGE 28E
THE RELEASE OCCURRED AT APPROXIMATELY 12:15 PM ON 10-28-2016
ESTIMATED RELEASED: APPROX. 30BBLS PRODUCED WATER
ESTIMATED RECOVERED: APPROX. 25BBLS PRODUCED WATER

THE RELEASE WAS CAUSED BY A 1/4" NIPPLE THAT BROKE OFF CAUSING THE SPILL. THIS ARE IS BEING EVALUATED AND A C-141 WILL BE SUBMITTED. IF YOU HAVE ANY ADDITIONAL QUESTIONS PLEASE FEEL FREE TO CONTACT ME.

THANK YOU,

ROBERT GRUBBS JR.
SR. HSE COORDINATOR
432.683.7443 (MAIN)
432.818.2369 (DIRECT)
432.661.6601 (CELL)
432.221.0892 (FAX)
RGRUBBS@CONCHO.COM
MAILING ADDRESS:
ONE CONCHO CENTER
600 W. ILLINOIS AVENUE
MIDLAND, TEXAS 79701