REMEDIATION SUMMARY AND

RISK-BASED SITE CLOSURE REQUEST

COG Operating, LLC
SRO State Com #064H
Eddy County, New Mexico
Unit Letter "E", Section 10, Township 26 South, Range 28 East
Latitude 32.0576019° North, Longitude 104.0815811°West
NMOCD Reference No. 2RP-3974

Prepared For:

COG Operating, LLC
600 W Illinois Avenue
Midland, Texas 79701

Prepared By:

TRC Environmental Corporation
10 Desta Drive, Suite 150E
Midland, Texas 79705

February 19, 2018

Joel Lowry
Project Manager

Curt Stanley
Senior Project Manager

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

INTRODUCTION & BACKGROUND INFORMATION

TRC Environmental Corporation (TRC), on behalf of COG Operating, LLC (COG), has prepared this *Remediation Summary and Risk-Based Soil Closure Request* for the Site known as SRO State Com #064H. The legal description of the Site is Unit Letter "E", Section 10, Township 26 South, Range 28 East, in Eddy County, New Mexico. The subject property is owned by the State of New Mexico and administered by New Mexico State Land Office (NMSLO). The GPS coordinates for the site are N 32.0576019° W 104.0815811°. Please reference Figure 1 for the Site Location Map and Figure 2 for the Site & Sample Location Map.

On October 28, 2016, COG discovered a produced water release from a quarter (1/4) inch nipple. The affected area measured approximately two thousand, six hundred and five (2,605) square feet (sq. ft.) in area. On October 29, 2016, COG notified (email) NMOCD and NMSLO of the release 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. The initial Form C-141 indicated approximately thirty (30) barrels of fluid was released, with twenty-five (25) barrels recovered. A copy of the Form C-141 is provided in Appendix C.

A groundwater database maintained by The New Mexico Office of the State Engineer (NMOSE) did not identify any registered water wells in Section 10, Township 26 South, Range 28 East. A reference map utilized by the NMOCD Hobbs District Office indicated groundwater should be encountered at approximately seventy-five (75) feet (ft.) to eighty (80) ft. 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.

The NMOCD guidelines indicate the SRO State Com #064H Release Site has a ranking score of twenty (10). Recommended Remediation Action Levels (RRAL) for a site with a ranking score of twenty (10) points are as follows:

- Benzene – 10 mg/kg
- Benzene, toluene, ethylbenzene, and xylenes (BTEX) – 50 mg/kg
- Total Petroleum Hydrocarbons (TPH) – 1,000 mg/kg
- Chloride – 600 mg/kg

INITIAL INVESTIGATION AND PROPOSED REMEDIATION WORKPLAN

On January 11, 2017, COG representatives conducted an initial investigation at the site. During the initial investigation, a series of test trenches (T1 through T3) were advanced within the affected

area. During the advancement of the test trenches, thirty-two (32) delineation soil samples were collected and submitted to Xenco Laboratories in Midland, Texas for analysis of chloride concentrations using Method 300/300.1. Chloride concentrations ranged from 14,000 mg/kg for soil sample T2-3' to 8.35 mg/kg for soil sample T3-2'. A review of laboratory analytical results indicated soil was not affected above the NMOCD Recommended Remediation Action Level beyond two (2) ft. bgs in the area characterized by test trench T1, four (4) ft. bgs in the area characterized by test trench T2, and two (2) ft. bgs in the area characterized by test trench T3. Soil sample locations are depicted in Figure 2 – Site and Sample Location Map. Laboratory analytical results are summarized in Table 1 - Concentrations of Benzene, BTEX, TPH and Chloride in Soil. Laboratory analytical reports are provided in Appendix A.

On September 7, 2017, COG submitted a *Soil Investigation Summary and Proposed Remediation Workplan (Workplan)* to the NMOCD and NMSLO, proposing the following remediation activities designed to advance the site toward an approved closure:

- 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.

The *Workplan* was subsequently approved.

SUMMARY OF SOIL REMEDIATION ACTIVITIES

On October 23, 2017, remediation activities commenced at the release site. As per the approved Work Plan, impacted soil within the release margins was excavated and stockpile on-site, atop an impermeable liner pending final disposition. The floor of the excavation was advanced to a depth of approximately three and one half (3.5) ft. bgs in the area characterized by test trench T2 and approximately one and a half (1.5) ft. bgs in the area characterized by test trenches T1 and T3. Upon excavating impacted soil within the release margins, eleven (11) excavation confirmation soil samples (NW-1 1', EW-1 1', BH-1 1.5', WW-1 1', EW-2 2', BH-2 3.5', WW-2 2', EW-3 1', BH-3 3.5', WW-3 1' and SW-1 1') were collected from the floors and sidewalls of the excavated area and submitted to the laboratory for analysis of BTEX, TPH, and/or chloride. Laboratory

analytical results indicated benzene, BTEX, and TPH concentrations were below the NMOCD RRAL in each of the submitted soil samples. Analytical results indicated chloride concentrations were below the NMOCD RRAL in each of the submitted soil samples, with the exception of soil sample EW-2 2', which exhibited a chloride concentration of 7,399 mg/kg. Further excavation in the area characterized by soil sample EW-2 2' was impracticable due to the presence of the active tank battery facility.

On December 18, 2017, TRC submitted a *Proposed Email to Request Backfill (Backfill Request)* to the NMOCD and NMSLO, summarizing field activities conducted to date and laboratory analytical results from confirmation soil samples. The *Backfill Request* was subsequently approved.

Beginning January 30, 2018, the excavated areas were backfilled with locally-sourced, non-impacted "like" material. Prior to backfilling, the final dimensions of the excavated area were approximately one hundred and sixty-five (165) ft. in length, ten (10) to thirty (30) ft. in width, and one and one half (1.5) to three and one half (3.5) ft. in depth.

On February 7 and 8, 2018, approximately three hundred sixty (360) cubic yards (cy) of impacted soil was transported to R360 Environmental Solutions, LLC for disposal.

SITE CLOSURE REQUEST

Remediation activities were conducted in accordance with the NMOCD-approved Work Plan. Impacted soil within the release margins was excavated and transported to and approved disposal facility. Impacted soil remaining in-situ affected above the NMOCD RRAL for chloride represented by soil samples EW-2 2' will be further investigation and/or remediated upon time of abandonment (TOA). Based on laboratory analytical results and field activities conducted to date, TRC recommends COG provide copies of this Remediation Summary and Risk-Based Soil Closure Request to the NMOCD and BLM and request closure status to the SRO State Com #064H.

LIMITATIONS

TRC has prepared this Remediation Summary and Site 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.

DISTRIBUTION

Copy 1: Mike Bratcher
New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division, District 2
811 S. First Street
Artesia, NM 88210

Copy 2: Mark Naranjo
Roswell Field Office
New Mexico State Land Office
1001 S. Atkinson Ave.
Roswell, New Mexico 88203

Copy 3: Rebecca Haskell
COG Operating, LLC
600 W. Illinois Avenue
Midland, Texas 79701

Copy4: TRC Environmental Corporation
2057 Commerce Street
Midland, Texas 79703

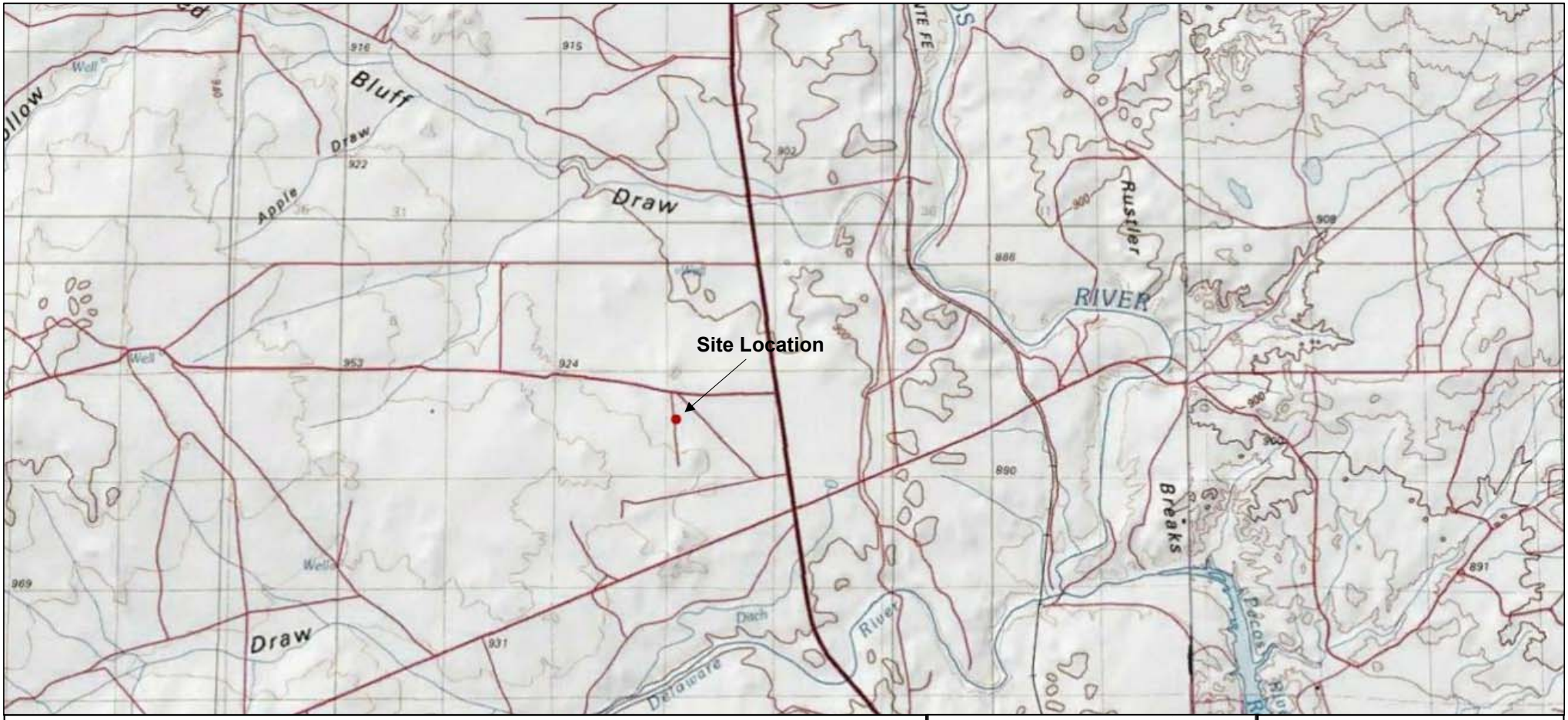

Figure 1

Site Location Map

COG Operating, LLC

SRO State Com #064H

Eddy County, New Mexico

Scale 1" = ~8,000'	
Drafted by:ZC	Checked by: JL
Draft: February 19, 2018	
Lat. N 32.0576019Long. W 104.0815811	
UL "E", Sec. 10, T26S, R28E	
TRC Proj. No.: 293104	

TRC
Results you can rely on

2057 Commerce Drive
Midland, Texas 79703
432.520.7720

LEGEND:

- Sidewall Sample
- Impacted Soil
- Floor Sample

66 33 0 33 66

Distance in Feet

Figure 2
Site & Sample Location Map
SRO STATE COM #064H
COG Operating,LLC.
Eddy County,NM

Scale: 1" = 66'	
CAD By: JH	Checked By:NG
November 30, 2017	
LAT. N 32.0576019 , Long. W 104.0815811	
SW 1/4 NW 1/4 SEC 10 T26S R28E	
TRC Proj. NO.: 279785	

TRC
2057 Commerce Drive
Midland, Texas 79703
432.520.7720

TABLE 1

CONCENTRATION OF BENZENE, BTEX, TPH and 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	METHODS: SW 846-8021b						METHOD: SW 8015M				E 300.1
			BENZENE	TOLUENE	ETHYL-BENZENE	m, p - XYLENES	o - XYLENE	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
T1-1'	1/11/2017	Excavated	-	-	-	-	-	-	-	-	-	-	**6,720**
T1-2'	1/11/2017	In-Situ	-	-	-	-	-	-	-	-	-	-	46.9
T1-3'	1/11/2017	In-Situ	-	-	-	-	-	-	-	-	-	-	39.7
T1-4'	1/11/2017	In-Situ	-	-	-	-	-	-	-	-	-	-	56.4
T1-5'	1/11/2017	In-Situ	-	-	-	-	-	-	-	-	-	-	44.6
T1-6'	1/11/2017	In-Situ	-	-	-	-	-	-	-	-	-	-	123
T1-8'	1/11/2017	In-Situ	-	-	-	-	-	-	-	-	-	-	177
T1-10'	1/11/2017	In-Situ	-	-	-	-	-	-	-	-	-	-	160
T1-12'	1/11/2017	In-Situ	-	-	-	-	-	-	-	-	-	-	16.6
T1-14'	1/11/2017	In-Situ	-	-	-	-	-	-	-	-	-	-	55.2
T1-15.5'	1/11/2017	In-Situ	-	-	-	-	-	-	-	-	-	-	164
T2-1'	1/11/2017	Excavated	-	-	-	-	-	-	-	-	-	-	**4,210**
T2-2'	1/11/2017	Excavated	-	-	-	-	-	-	-	-	-	-	**3,050**
T2-3'	1/11/2017	Excavated	-	-	-	-	-	-	-	-	-	-	**14,000**
T2-4'	1/11/2017	In-Situ	-	-	-	-	-	-	-	-	-	-	44.7
T2-5'	1/11/2017	In-Situ	-	-	-	-	-	-	-	-	-	-	44.5
T2-6'	1/11/2017	In-Situ	-	-	-	-	-	-	-	-	-	-	62.1
T2-8'	1/11/2017	In-Situ	-	-	-	-	-	-	-	-	-	-	75.2
T2-10'	1/11/2017	In-Situ	-	-	-	-	-	-	-	-	-	-	59.7
T2-12'	1/11/2017	In-Situ	-	-	-	-	-	-	-	-	-	-	80.3
T2-14'	1/11/2017	In-Situ	-	-	-	-	-	-	-	-	-	-	176
T2-16'	1/11/2017	In-Situ	-	-	-	-	-	-	-	-	-	-	335
T3-1'	1/11/2017	Excavated	-	-	-	-	-	-	-	-	-	-	**4,890**
T3-2'	1/11/2017	In-Situ	-	-	-	-	-	-	-	-	-	-	8.35
T3-3'	1/11/2017	In-Situ	-	-	-	-	-	-	-	-	-	-	10.5
T3-4'	1/11/2017	In-Situ	-	-	-	-	-	-	-	-	-	-	55.9
T3-5'	1/11/2017	In-Situ	-	-	-	-	-	-	-	-	-	-	34.7
T3-6'	1/11/2017	In-Situ	-	-	-	-	-	-	-	-	-	-	43.9
T3-8'	1/11/2017	In-Situ	-	-	-	-	-	-	-	-	-	-	133
T3-12'	1/11/2017	In-Situ	-	-	-	-	-	-	-	-	-	-	62.6
T3-14'	1/11/2017	In-Situ	-	-	-	-	-	-	-	-	-	-	225
T3-16'	1/11/2017	In-Situ	-	-	-	-	-	-	-	-	-	-	309
NW-1 1'	#########	In-Situ	<0.00201	<0.00201	<0.00201	<0.00201		<0.00201	<15.0	<15.0	<15.0	<15.0	86.4
EW-1 1'	#########	In-Situ	<0.00200	<0.00200	<0.00200	<0.00200		<0.00200	<14.9	<14.9	<14.9	<14.9	8.85
BH-1 1.5'	#########	In-Situ	<0.00200	<0.00200	<0.00200	<0.00200		<0.00200	<15.0	<15.0	<15.0	<15.0	-
WW-1 1'	#########	In-Situ	<0.00351	<0.00351	<0.00351	<0.00351		<0.00351	<15.0	<15.0	<15.0	<15.0	54.5
EW-2 2'	#########	In-Situ	<0.00199	<0.00199	<0.00199	<0.00199		<0.00199	<15.0	<15.0	<15.0	<15.0	**8,160**
BH-2 3.5'	#########	In-Situ	<0.00199	<0.00199	<0.00199	<0.00199		<0.00199	<15.0	<15.0	<15.0	<15.0	-
WW-2 2'	#########	In-Situ	<0.00201	<0.00201	<0.00201	<0.00201		<0.00201	<15.0	<15.0	<15.0	<15.0	125
EW-3 1'	#########	In-Situ	<0.00358	<0.00358	<0.00358	<0.00358		<0.00358	<14.9	<14.9	<14.9	<14.9	113
BH-3 1.5'	#########	In-Situ	<0.00199	<0.00199	<0.00199	<0.00199		<0.00199	<15.0	<15.0	<15.0	<15.0	-
WW-3 1'	#########	In-Situ	<0.00198	<0.00198	<0.00198	<0.00198		<0.00198	<15.0	<15.0	<15.0	<15.0	89.7
SW-1 1'	#########	In-Situ	<0.00198	<0.00198	<0.00198	<0.00198		<0.00198	<15.0	<15.0	<15.0	<15.0	311
NMOCD Recommended Remediation Action Level			**10**	-	-	-	-	**50**	-	-	-	**1,000**	**600**

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

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

Page 1 Of 3

XENCO LABORATORIES

Setting the Standard since 1990

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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	Date	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: 1 DAKOTA NEEL	Date Time: 1-16-17 12W	Received By: 1	Relinquished By: 2	Date Time:	Received By: 2 CRAMER 1.17.17 950
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 ☒

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

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 cos 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 b terms will be enforced unless previously negotiated under a fully executed client contract.

CHAIN OF CUSTODY

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Dallas Texas (214-902-0300)
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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:

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W = Water
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SL = Sludge
OW =Ocean/Sea Water
WI = Wipe
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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	

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- ☐ Level 3 (CLP Forms)
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- ☐ TRRP Checklist

Notes:

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	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

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Xenco Quote #
Xenco Job # 544227

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Email: dneel2@concho.com Phone No: 432-215-2783
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Samplers's Name Dakota Neel

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Project Location: 32.0576019,-104.0815811
Invoice To: COG Operating LLC, Robert McNeill, 600 W Illinois, Midland TX 79701, (432) 221-0388
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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																

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- ☐ TRRP Level IV
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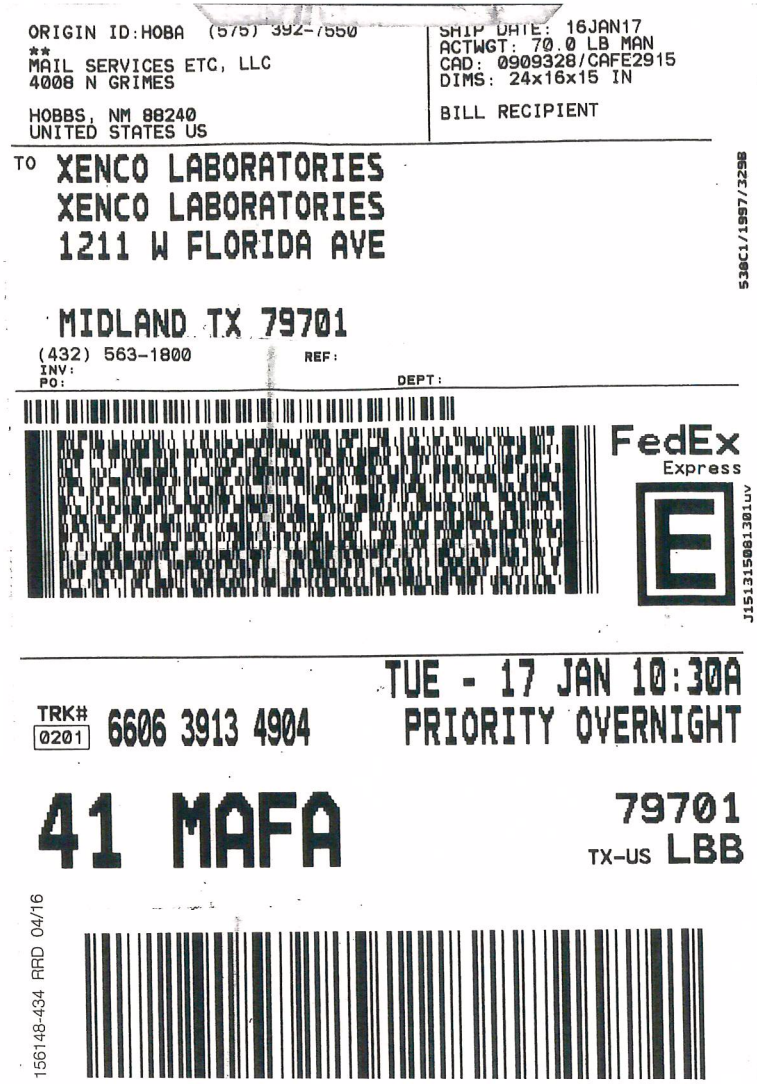
	Date Time:			Date Time:	
Relinquished by Sampler: 1		Received By: 1	Relinquished By: 2		Received By: 2 Kramer 1.17.17 950
Relinquished by: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable ☐	On Ice ☒ Cooler Temp. Thermo. Corr. Factor

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

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 co or 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 se terms will be enforced unless previously negotiated under a fully executed client contract.


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

REF:
INV:
PO:
DEPT:

FedEx
Express

TRK# 0201 6606 3913 4904

TUE - 17 JAN 10:30A
PRIORITY OVERNIGHT

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

Certificate of Analysis Summary 567041

TRC Solutions, Inc, Midland, TX

Project Name: SRO State Com #64H (10/28/16)

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

Date Received in Lab: Tue Oct-31-17 03:54 pm
Report Date: 15-FEB-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	567041-001		567041-002		567041-003		567041-004		567041-005		567041-006	
	Field Id:	NW-1 1'		EW-1 1'		BH-1 1.5'		WW-1 1'		EW-2 2'		BH-2 3.5'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Oct-25-17 14:00		Oct-25-17 14:05		Oct-25-17 14:10		Oct-25-17 14:15		Oct-25-17 14:20		Oct-25-17 14:25	
BTEX by EPA 8021B	***Extracted:***	Nov-01-17 08:00		Nov-01-17 08:00		Nov-01-17 08:00		Nov-01-17 15:00		Nov-01-17 08:00		Nov-01-17 08:00	
	Analyzed:	Nov-01-17 12:19		Nov-01-17 12:38		Nov-01-17 12:57		Nov-02-17 07:22		Nov-01-17 13:34		Nov-01-17 13:53	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00351	0.00351	<0.00199	0.00199	<0.00199	0.00199
Toluene		<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00351	0.00351	<0.00199	0.00199	<0.00199	0.00199
Ethylbenzene		<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00351	0.00351	<0.00199	0.00199	<0.00199	0.00199
Xylenes, Total		<0.00201	0.00201	<0.002	0.002	<0.002	0.002	<0.00351	0.00351	<0.00199	0.00199	<0.00199	0.00199
Total BTEX		<0.00201	0.00201	<0.002	0.002	<0.002	0.002	<0.00351	0.00351	<0.00199	0.00199	<0.00199	0.00199
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 13:22		Nov-07-17 13:41				Nov-07-17 14:00		Nov-07-17 14:20			
	Units/RL:	mg/kg	RL	mg/kg	RL			mg/kg	RL	mg/kg	RL		
Chloride		86.4	5.00	8.85	4.92			54.5	4.98	8160	49.9		
TPH by SW8015 Mod	***Extracted:***	Nov-02-17 07:00		Nov-02-17 07:00		Nov-02-17 07:00		Nov-02-17 07:00		Nov-02-17 07:00		Nov-02-17 07:00	
	Analyzed:	Nov-02-17 12:16		Nov-02-17 13:16		Nov-02-17 13:38		Nov-02-17 16:07		Nov-02-17 16:27		Nov-02-17 16:48	
	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	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<15	15	<14.9	14.9	<15	15	<15	15	<15	15	<15	15

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 567041

TRC Solutions, Inc, Midland, TX

Project Name: SRO State Com #64H (10/28/16)

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

Date Received in Lab: Tue Oct-31-17 03:54 pm
Report Date: 15-FEB-18
Project Manager: Kelsey Brooks

Analysis Requested											
	Lab Id:	567041-007		567041-008		567041-009		567041-010		567041-011	
	Field Id:	WW-2 2'		EW-3 1'		BH-3 1.5'		WW-3 1'		SW-1 1'	
	Depth:										
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Oct-25-17 14:30		Oct-25-17 14:35		Oct-25-17 14:40		Oct-25-17 14:45		Oct-25-17 14:50	
BTEX by EPA 8021B	***Extracted:***	Nov-01-17 08:00		Nov-01-17 15:00		Nov-01-17 08:00		Nov-01-17 08:00		Nov-01-17 08:00	
	Analyzed:	Nov-01-17 14:12		Nov-02-17 07:40		Nov-01-17 14:51		Nov-01-17 15:10		Nov-01-17 18:00	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00201	0.00201	<0.00358	0.00358	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198
Toluene		<0.00201	0.00201	<0.00358	0.00358	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198
Ethylbenzene		<0.00201	0.00201	<0.00358	0.00358	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198
Xylenes, Total		<0.00201	0.00201	<0.00358	0.00358	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198
Total BTEX		<0.00201	0.00201	<0.00358	0.00358	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198
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 14:26		Nov-07-17 14:32				Nov-07-17 14:39		Nov-07-17 14:45	
	Units/RL:	mg/kg	RL	mg/kg	RL			mg/kg	RL	mg/kg	RL
Chloride		125	4.98	113	4.91			89.7	4.93	311	4.98
TPH by SW8015 Mod	***Extracted:***	Nov-02-17 07:00		Nov-02-17 07:00		Nov-02-17 07:00		Nov-02-17 07:00		Nov-02-17 07:00	
	Analyzed:	Nov-02-17 17:08		Nov-02-17 17:28		Nov-02-17 17:48		Nov-02-17 18:08		Nov-02-17 18:27	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<15	15	<14.9	14.9	<15	15	<15	15	<15	15

Kelsey Brooks
Project Manager

Analytical Report 567041

for

TRC Solutions, Inc

Project Manager: Nikki Green

SRO State Com #64H (10/28/16)

15-FEB-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-17-23), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab code: TX01468):
Texas (T104704295-17-15), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-17-13)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

15-FEB-18

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

Reference: XENCO Report No(s): **567041**
SRO State Com #64H (10/28/16)
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) 567041. 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. 567041 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kelsey Brooks
Project Manager

Sample Cross Reference 567041

TRC Solutions, Inc, Midland, TX

SRO State Com #64H (10/28/16)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
NW-1 1'	S	10-25-17 14:00		567041-001
EW-1 1'	S	10-25-17 14:05		567041-002
BH-1 1.5'	S	10-25-17 14:10		567041-003
WW-1 1'	S	10-25-17 14:15		567041-004
EW-2 2'	S	10-25-17 14:20		567041-005
BH-2 3.5'	S	10-25-17 14:25		567041-006
WW-2 2'	S	10-25-17 14:30		567041-007
EW-3 1'	S	10-25-17 14:35		567041-008
BH-3 1.5'	S	10-25-17 14:40		567041-009
WW-3 1'	S	10-25-17 14:45		567041-010
SW-1 1'	S	10-25-17 14:50		567041-011

Sample receipt non conformances and comments:

Revision to correct 567041-009 sampe name per Zach Conder e-mail 02/15/18-- KB

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3032143 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3032144 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Lab Sample ID 567041-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene, Ethylbenzene, Toluene recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 567041-001, -002, -003, -005, -006, -007, -009, -010, -011.
The Laboratory Control Sample for Toluene, Benzene, Ethylbenzene is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analytical Results 567041

TRC Solutions, Inc, Midland, TX

SRO State Com #64H (10/28/16)

Sample Id:	**NW-1 1'**	Matrix:	Soil	Date Received:	10.31.17 15.54
Lab Sample Id:	567041-001	Date Collected:	10.25.17 14.00		

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	**86.4**	5.00	mg/kg	11.07.17 13.22		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.02.17 07.00	Basis:	Wet Weight
Seq Number:	3032266				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	11.02.17 12.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	11.02.17 12.16	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	11.02.17 12.16	U	1
Total TPH	PHC635	<15	15	mg/kg	11.02.17 12.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	11.02.17 12.16	
o-Terphenyl	84-15-1	102	%	70-135	11.02.17 12.16	

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 12.19	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	11.01.17 12.19	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	11.01.17 12.19	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	11.01.17 12.19	U	1
Total BTEX		<0.00201	0.00201	mg/kg	11.01.17 12.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	80-120	11.01.17 12.19	
1,4-Difluorobenzene	540-36-3	96	%	80-120	11.01.17 12.19	

TRC Solutions, Inc, Midland, TX

SRO State Com #64H (10/28/16)

Sample Id:	**EW-1 1'**	Matrix:	Soil	Date Received:	10.31.17 15.54
Lab Sample Id:	567041-002	Date Collected:	10.25.17 14.05		

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	**8.85**	4.92	mg/kg	11.07.17 13.41		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.02.17 07.00	Basis:	Wet Weight
Seq Number:	3032266				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	11.02.17 13.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	11.02.17 13.16	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	11.02.17 13.16	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	11.02.17 13.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	11.02.17 13.16	
o-Terphenyl	84-15-1	107	%	70-135	11.02.17 13.16	

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 12.38	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.01.17 12.38	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.01.17 12.38	U	1
Xylenes, Total	1330-20-7	<0.002	0.002	mg/kg	11.01.17 12.38	U	1
Total BTEX		<0.002	0.002	mg/kg	11.01.17 12.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	80-120	11.01.17 12.38	
1,4-Difluorobenzene	540-36-3	101	%	80-120	11.01.17 12.38	

Certificate of Analytical Results 567041

TRC Solutions, Inc, Midland, TX

SRO State Com #64H (10/28/16)

Sample Id:	**BH-1 1.5'**	Matrix:	Soil	Date Received:	10.31.17 15.54
Lab Sample Id:	567041-003	Date Collected:	10.25.17 14.10		

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.02.17 07.00	Basis:	Wet Weight
Seq Number:	3032266				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	11.02.17 13.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	11.02.17 13.38	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	11.02.17 13.38	U	1
Total TPH	PHC635	<15	15	mg/kg	11.02.17 13.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	11.02.17 13.38	
o-Terphenyl	84-15-1	109	%	70-135	11.02.17 13.38	

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 12.57	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.01.17 12.57	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.01.17 12.57	U	1
Xylenes, Total	1330-20-7	<0.002	0.002	mg/kg	11.01.17 12.57	U	1
Total BTEX		<0.002	0.002	mg/kg	11.01.17 12.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	80-120	11.01.17 12.57	
4-Bromofluorobenzene	460-00-4	96	%	80-120	11.01.17 12.57	

TRC Solutions, Inc, Midland, TX

SRO State Com #64H (10/28/16)

Sample Id:	**WW-1 1'**	Matrix:	Soil	Date Received:	10.31.17 15.54
Lab Sample Id:	567041-004	Date Collected:	10.25.17 14.15		

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	**54.5**	4.98	mg/kg	11.07.17 14.00		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.02.17 07.00	Basis:	Wet Weight
Seq Number:	3032266				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	11.02.17 16.07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	11.02.17 16.07	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	11.02.17 16.07	U	1
Total TPH	PHC635	<15	15	mg/kg	11.02.17 16.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	11.02.17 16.07	
o-Terphenyl	84-15-1	105	%	70-135	11.02.17 16.07	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	11.01.17 15.00	Basis:	Wet Weight
Seq Number:	3032143				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00351	0.00351	mg/kg	11.02.17 07.22	U	1
Toluene	108-88-3	<0.00351	0.00351	mg/kg	11.02.17 07.22	U	1
Ethylbenzene	100-41-4	<0.00351	0.00351	mg/kg	11.02.17 07.22	U	1
Xylenes, Total	1330-20-7	<0.00351	0.00351	mg/kg	11.02.17 07.22	U	1
Total BTEX		<0.00351	0.00351	mg/kg	11.02.17 07.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	80-120	11.02.17 07.22	
1,4-Difluorobenzene	540-36-3	93	%	80-120	11.02.17 07.22	

TRC Solutions, Inc, Midland, TX

SRO State Com #64H (10/28/16)

Sample Id:	**EW-2 2'**	Matrix:	Soil	Date Received:	10.31.17 15.54
Lab Sample Id:	567041-005	Date Collected:	10.25.17 14.20		

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	**8160**	49.9	mg/kg	11.07.17 14.20		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.02.17 07.00	Basis:	Wet Weight
Seq Number:	3032266				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	11.02.17 16.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	11.02.17 16.27	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	11.02.17 16.27	U	1
Total TPH	PHC635	<15	15	mg/kg	11.02.17 16.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	11.02.17 16.27	
o-Terphenyl	84-15-1	108	%	70-135	11.02.17 16.27	

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 13.34	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	11.01.17 13.34	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	11.01.17 13.34	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	11.01.17 13.34	U	1
Total BTEX		<0.00199	0.00199	mg/kg	11.01.17 13.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	80-120	11.01.17 13.34	
4-Bromofluorobenzene	460-00-4	94	%	80-120	11.01.17 13.34	

TRC Solutions, Inc, Midland, TX

SRO State Com #64H (10/28/16)

Sample Id: **BH-2 3.5'** Matrix: Soil Date Received:10.31.17 15.54

Lab Sample Id: 567041-006 Date Collected: 10.25.17 14.25

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 11.02.17 07.00 Basis: Wet Weight

Seq Number: 3032266

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	11.02.17 16.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	11.02.17 16.48	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	11.02.17 16.48	U	1
Total TPH	PHC635	<15	15	mg/kg	11.02.17 16.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	11.02.17 16.48	
o-Terphenyl	84-15-1	100	%	70-135	11.02.17 16.48	

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 13.53	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	11.01.17 13.53	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	11.01.17 13.53	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	11.01.17 13.53	U	1
Total BTEX		<0.00199	0.00199	mg/kg	11.01.17 13.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	80-120	11.01.17 13.53	
4-Bromofluorobenzene	460-00-4	99	%	80-120	11.01.17 13.53	

TRC Solutions, Inc, Midland, TX

SRO State Com #64H (10/28/16)

Sample Id:	**WW-2 2'**	Matrix:	Soil	Date Received:	10.31.17 15.54
Lab Sample Id:	567041-007	Date Collected:	10.25.17 14.30		

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	**125**	4.98	mg/kg	11.07.17 14.26		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.02.17 07.00	Basis:	Wet Weight
Seq Number:	3032266				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	11.02.17 17.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	11.02.17 17.08	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	11.02.17 17.08	U	1
Total TPH	PHC635	<15	15	mg/kg	11.02.17 17.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	11.02.17 17.08	
o-Terphenyl	84-15-1	102	%	70-135	11.02.17 17.08	

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 14.12	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	11.01.17 14.12	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	11.01.17 14.12	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	11.01.17 14.12	U	1
Total BTEX		<0.00201	0.00201	mg/kg	11.01.17 14.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	86	%	80-120	11.01.17 14.12	
4-Bromofluorobenzene	460-00-4	91	%	80-120	11.01.17 14.12	

TRC Solutions, Inc, Midland, TX

SRO State Com #64H (10/28/16)

Sample Id: **EW-3 1'** Matrix: Soil Date Received:10.31.17 15.54

Lab Sample Id: 567041-008 Date Collected: 10.25.17 14.35

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	**113**	4.91	mg/kg	11.07.17 14.32		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 11.02.17 07.00 Basis: Wet Weight

Seq Number: 3032266

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	11.02.17 17.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	11.02.17 17.28	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	11.02.17 17.28	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	11.02.17 17.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	11.02.17 17.28	
o-Terphenyl	84-15-1	103	%	70-135	11.02.17 17.28	

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: ALJ % Moisture:

Analyst: ALJ Date Prep: 11.01.17 15.00 Basis: Wet Weight

Seq Number: 3032143

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00358	0.00358	mg/kg	11.02.17 07.40	U	1
Toluene	108-88-3	<0.00358	0.00358	mg/kg	11.02.17 07.40	U	1
Ethylbenzene	100-41-4	<0.00358	0.00358	mg/kg	11.02.17 07.40	U	1
Xylenes, Total	1330-20-7	<0.00358	0.00358	mg/kg	11.02.17 07.40	U	1
Total BTEX		<0.00358	0.00358	mg/kg	11.02.17 07.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	83	%	80-120	11.02.17 07.40	
4-Bromofluorobenzene	460-00-4	82	%	80-120	11.02.17 07.40	

Certificate of Analytical Results 567041

TRC Solutions, Inc, Midland, TX

SRO State Com #64H (10/28/16)

Sample Id:	**BH-3 1.5'**	Matrix:	Soil	Date Received:	10.31.17 15.54
Lab Sample Id:	567041-009	Date Collected:	10.25.17 14.40		

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.02.17 07.00	Basis:	Wet Weight
Seq Number:	3032266				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	11.02.17 17.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	11.02.17 17.48	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	11.02.17 17.48	U	1
Total TPH	PHC635	<15	15	mg/kg	11.02.17 17.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	11.02.17 17.48	
o-Terphenyl	84-15-1	100	%	70-135	11.02.17 17.48	

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 14.51	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	11.01.17 14.51	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	11.01.17 14.51	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	11.01.17 14.51	U	1
Total BTEX		<0.00199	0.00199	mg/kg	11.01.17 14.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	80-120	11.01.17 14.51	
4-Bromofluorobenzene	460-00-4	97	%	80-120	11.01.17 14.51	

TRC Solutions, Inc, Midland, TX

SRO State Com #64H (10/28/16)

Sample Id: **WW-3 1'** Matrix: Soil Date Received:10.31.17 15.54
Lab Sample Id: 567041-010 Date Collected: 10.25.17 14.45

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	**89.7**	4.93	mg/kg	11.07.17 14.39		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 11.02.17 07.00 Basis: Wet Weight
Seq Number: 3032266

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	11.02.17 18.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	11.02.17 18.08	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	11.02.17 18.08	U	1
Total TPH	PHC635	<15	15	mg/kg	11.02.17 18.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	11.02.17 18.08	
o-Terphenyl	84-15-1	97	%	70-135	11.02.17 18.08	

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	<0.00198	0.00198	mg/kg	11.01.17 15.10	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	11.01.17 15.10	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	11.01.17 15.10	U	1
Xylenes, Total	1330-20-7	<0.00198	0.00198	mg/kg	11.01.17 15.10	U	1
Total BTEX		<0.00198	0.00198	mg/kg	11.01.17 15.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	80-120	11.01.17 15.10	
4-Bromofluorobenzene	460-00-4	96	%	80-120	11.01.17 15.10	

TRC Solutions, Inc, Midland, TX

SRO State Com #64H (10/28/16)

Sample Id:	**SW-1 1'**	Matrix:	Soil	Date Received:	10.31.17 15.54
Lab Sample Id:	567041-011	Date Collected:	10.25.17 14.50		

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	**311**	4.98	mg/kg	11.07.17 14.45		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.02.17 07.00	Basis:	Wet Weight
Seq Number:	3032266				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	11.02.17 18.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	11.02.17 18.27	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	11.02.17 18.27	U	1
Total TPH	PHC635	<15	15	mg/kg	11.02.17 18.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	11.02.17 18.27	
o-Terphenyl	84-15-1	99	%	70-135	11.02.17 18.27	

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	<0.00198	0.00198	mg/kg	11.01.17 18.00	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	11.01.17 18.00	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	11.01.17 18.00	U	1
Xylenes, Total	1330-20-7	<0.00198	0.00198	mg/kg	11.01.17 18.00	U	1
Total BTEX		<0.00198	0.00198	mg/kg	11.01.17 18.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	88	%	80-120	11.01.17 18.00	
1,4-Difluorobenzene	540-36-3	91	%	80-120	11.01.17 18.00	

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 567041

TRC Solutions, Inc

SRO State Com #64H (10/28/16)

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: 3032266 Matrix: Solid Date Prep: 11.02.17
MB Sample Id: 7633717-1-BLK LCS Sample Id: 7633717-1-BKS LCSD Sample Id: 7633717-1-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	1080	108	1100	110	70-135	2	35	mg/kg	11.02.17 07:53	
Diesel Range Organics (DRO)	<15.0	1000	1100	110	1110	111	70-135	1	35	mg/kg	11.02.17 07:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	109		100		101		70-135	%	11.02.17 07:53
o-Terphenyl	108		95		95		70-135	%	11.02.17 07:53

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]

LCS = Laboratory Control Sample MS = Matrix Spike
A = Parent Result B = Spike Added
C = MS/LCS Result D = MSD/LCSD % Rec
E = MSD/LCSD Result

QC Summary 567041

TRC Solutions, Inc

SRO State Com #64H (10/28/16)

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3032266 Matrix: Soil Date Prep: 11.02.17
Parent Sample Id: 566983-021 MS Sample Id: 566983-021 S MSD Sample Id: 566983-021 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)	<15.5	1040	1140	110	1170	113	70-135	3	35	mg/kg	11.02.17 08:53	
Diesel Range Organics (DRO)	<15.5	1040	1170	113	1190	114	70-135	2	35	mg/kg	11.02.17 08:53	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	116		95		70-135	%	11.02.17 08:53
o-Terphenyl	110		90		70-135	%	11.02.17 08:53

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: 3032143 Matrix: Solid Date Prep: 11.01.17
MB Sample Id: 7633649-1-BLK LCS Sample Id: 7633649-1-BKS LCSD Sample Id: 7633649-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.0921	91	0.0952	94	70-130	3	35	mg/kg	11.01.17 19:33	
Toluene	<0.00201	0.101	0.0944	93	0.0980	97	70-130	4	35	mg/kg	11.01.17 19:33	
Ethylbenzene	<0.00201	0.101	0.108	107	0.112	111	71-129	4	35	mg/kg	11.01.17 19:33	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	96		98		98		80-120	%	11.01.17 19:33
4-Bromofluorobenzene	92		106		102		80-120	%	11.01.17 19:33

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike
Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added
LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec
E = MSD/LCSD Result

QC Summary 567041

TRC Solutions, Inc

SRO State Com #64H (10/28/16)

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

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3032143 Matrix: Soil Date Prep: 11.01.17

Parent Sample Id: 567120-004 MS Sample Id: 567120-004 S MSD Sample Id: 567120-004 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	0.0426	43	0.0413	41	70-130	3	35	mg/kg	11.01.17 20:11	X
Toluene	0.00615	0.0996	0.0293	23	0.0294	23	70-130	0	35	mg/kg	11.01.17 20:11	X
Ethylbenzene	0.0136	0.0996	0.0280	14	0.0270	13	71-129	4	35	mg/kg	11.01.17 20:11	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		100		80-120	%	11.01.17 20:11
4-Bromofluorobenzene	115		88		80-120	%	11.01.17 20:11

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

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

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

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Dallas Texas (214-902-0300)
San Antonio, Texas (210-509-3334)
Midland, Texas (432-704-5251)
Phoenix, Arizona (480-355-0900)
www.xenco.com

CHAIN OF CUSTODY

Xenco Quote #
Xenco Job # 567041

Client / Reporting Information		Project Information	
Company Name / Branch: TRC		Project Name/Number: SRO State Com #64H (10/28/16)	
Company Address: 2057 Commerce Drive Midland, Texas 79703		Project Location: Eddy County, NM	
Email: ngreen@trcsolutions.com	Phone No: 432-664-6699	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	
Project Contact: Nikki Green		PO Number:	
Samplers's Name: Nikki Green			

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	NW-1 1'		25-Oct	1400	S	1								x	X	X	x	
2	EW-1 1'		25-Oct	1405	S	1								x	X	X	x	
3	BH-1 1.5'		25-Oct	1410	S	1								x	x	x		
4	WW-1 1'		25-Oct	1415	S	1								x	x	x	x	
5	EW-2 2'		25-Oct	1420	S	1								x	x	x	x	
6	BH-2 3.5'		25-Oct	1425	S	1								x	x	x		
7	WW-2 2'		25-Oct	1430	S	1								x	x	x	x	
8	EW-3 1'		25-Oct	1435	S	1								x	x	x	x	
9	BH-3 3.5'		25-Oct	1440	S	1								x	x	x		
10	WW-3 1'		25-Oct	1445	S	1								x	x	x	x	

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

Note
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	Date Time	Received By	Relinquished By	Date Time	Received By
1 Relinquished by Sampler: Nikki Green	10/31/17	1 J. Keel	2 J. Keel	10/31/17 1550	2 [signature] 10.31.17 15:54
3 Relinquished by:	Date Time:	3 Received By:	4 Relinquished By:	Date Time:	4 Received By:
5 Relinquished by:	Date Time:	5 Received By:	Custody Seal #	Preserved where applicable	On Ice ✓ 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.

CHAIN OF CUSTODY

Page 2 Of 2

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Dallas Texas (214-902-0300) | Midland, Texas (432-704-5251)

www.xenco.com

Xenco Quote # 567041 | 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:

Analytical Information

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 ~~10/25~~ 10/27 Oct	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH 8015M EXT 36	BTEX 8021B	Chloride E300.0	Field Comments
1	SW-1 1'		~~27~~ Oct	1450	S	1								x	X	X	x	
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

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

Notes:

Temp: 3.3 IR ID:R-8

CF:(0-6: -0.2°C)

(6-23: +0.2°C)

Corrected Temp: 3.1

FED-EX / ...racking #

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	Nikki Green	10/31/17	J. Keel	2 10/31/17 1550	10/31/17 1550	
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 / 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.

Final 1.001

Page 23 of 24

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: TRC Solutions, Inc

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

Work Order #: 567041

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: SRO State Com #64H

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

Figure 1 – View of the affected area before remediation activities, facing South.

Photographic Documentation

Client: COG Operating, LLC
Project Name: SRO State Com #64H

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

Figure 2 – View of the affected area before remediation activities, facing North.

Photographic Documentation

Client: COG Operating, LLC
Project Name: SRO State Com #64H

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

Figure 3 – View of portion of the excavated area, facing South.

Photographic Documentation

Client: COG Operating, LLC
Project Name: SRO State Com #64H

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

Figure 4 – View of portion of the excavated area, facing North.

Photographic Documentation

Client: COG Operating, LLC
Project Name: SRO State Com #64H

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

Figure 5 – View of the affected area after remediation activities, facing North.

Photographic Documentation

Client: COG Operating, LLC
Project Name: SRO State Com #64H

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

Figure 6 – View of the affected area after remediation activities, facing East.

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
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