WORLD-WIDE ENVIRONMENTAL SPECIALISTS

BBC INTERNATIONAL INCORPORATED

PHONE (575) 397-6388 • FAX (575) 397- 0397 • 1324 W. MARLAND • P.O. BOX 805 • HOBBS, NM 88241-0805
E-MAIL: cbrunson@bbcinternational.com

DELINEATION WORKPLAN

COG – SRO STATE COM #48
(Leak Date: 4/21/17)

RP # 2RP-4182
API # 30-015-41779

This delineation workplan and remediation proposal addresses the release associated with RP # 2RP-4182.

The following information includes:

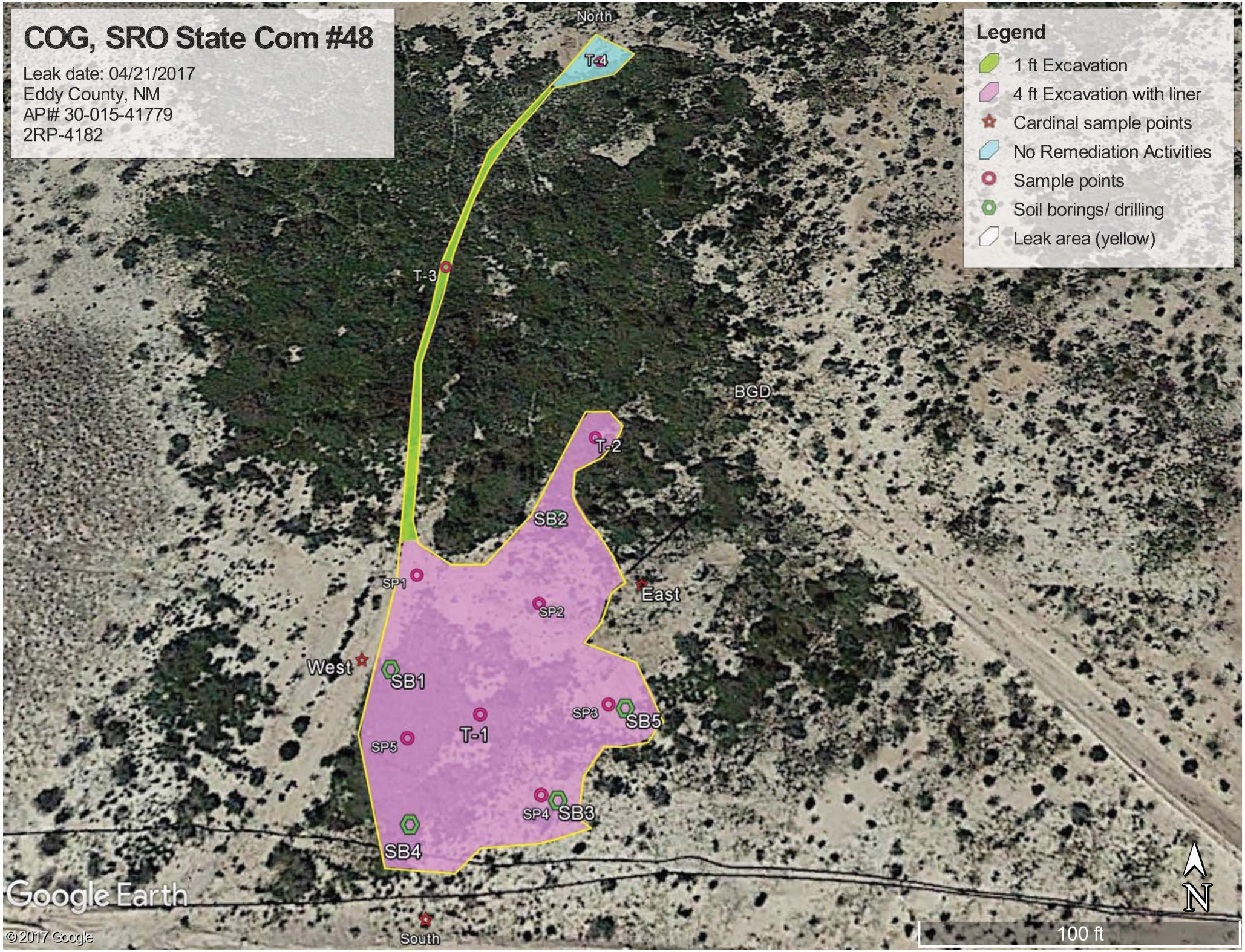
1. Scaled digital site map with spill area demarcated and leak point identified along with sample point locations and areas of remediation at appropriate depths.
2. GPS information for sample points and sample methodology
3. Depth to groundwater information (i.e., pdf of OSE search results and/or copy of Chevron groundwater trend map).
4. Laboratory analysis results summary table and original laboratory analysis reports
5. A copy of the initial C-141
6. Potentially other pertinent information as necessary for site specific purposes.

Based on the information included in this package and the NMOCD guidelines, the following remediation is proposed:

COG will excavate the spill area as depicted on the following site diagram. The leak area near SP1, SB1, SP2, SB2, SP3, SB3, SP4, SB4, SP5, SB5, T-1, and T-2 (purple shade on diagram) will be excavated to a depth of 4 feet and then an impermeable liner will be installed in the excavation and backfilled with caliche and then a cap of top soil. The leak area near T-3 (green shade on diagram) will be excavated to a depth of 1 foot. The leak area near T-4 (blue shade on diagram) will require no remediation activities.

The entire site will then be backfilled with clean soil and revegetated (if warranted) to the standards of the appropriate regulatory agency or private surface owner.

All excavated materials will be disposed of at an NMOCD-approved disposal facility.


COG, SRO State Com #48
Leak date: 04/21/2017
Eddy County, NM
API# 30-015-41779
2RP-4182
Legend
1 ft Excavation
4 ft Excavation with liner
Cardinal sample points
No Remediation Activities
Sample points
Soil borings/ drilling
Leak area (yellow)
North
T-4
T-3
BGD
T-2
SB2
SP1
East
SP2
West
SB1
SP3
SB5
T-1
SP5
SP4
SB3
SB4
South
Google Earth
© 2017 Google
N
100 ft

COG, SRO State Com #48H

Sample points taken by BBC, hand auger

SP1, N 32.06449 W -104.11170

SP2, N 32.06446 W-104.11156

SP3, N 32.06436 W-104.11148

SP4, N 32.06428 W-104.11155

SP5, N 32.06433 W-104.11169

SOUTH, N 32.06417 W-104.11116

Sample points taken by COG, hand auger

T-1, N 32.06435 W-104.11162

T-2, N 32.06464 W-104.11149

T-3, N 32.06486 W-104.11169

T-4, N 32.06516 W-104.11149

NORTH, N 32.06523 W-104.11150

EAST, N 32.06448 W-104.11144

WEST, N 32.06441 W-104.11175

BACKGROUND, N 32.06469 W-104.11130

Soil borings, drilling

SB1, N 32.06439 W-104.11172

SB2, N 32.06455 W-104.11154

SB3, N 32.06427 W-104.11153

SB4, N 32.06425 W-104.11168

SB5, N 32.06436 W-104.11146

BBC INTERNATIONAL INCORPORATED

PHONE (575) 397-6388 • FAX (575) 397- 0397 • 1324 W. MARLAND • P.O. BOX 805 • HOBBS, NM 88241-0805

New Mexico State Land Office
Revegetation and Noxious Weed Management Plan

COG – SRO STATE COM #48

Revegetation Plan

Disturbed areas associated with the remediation efforts will be reseeded. If after one growing season, the vegetation has not taken hold, seeding may need to be repeated until revegetation is successful, as determined by the State Land Office. The seed will be spread by either using a hand-held broadcaster or tractor-mounted broadcaster and the area will be raked or dragged to cover the seed. Since the seed will be broadcast, the pounds per acre will be double over the amount used by drill planting.

The seed mixture will be the appropriate mixture for the specific site and planted in the required amounts of pounds pure live seed (PLS) per acre. Commercially sold seed will be either certified or registered and will not contain primary or secondary noxious weeds.

Gramma grass – 40% - 1.5 lbs. PLS
Buffalo grass – 40% - 1.5 lbs. PLS
Side oats – 10% - 0.5% lbs. PLS
Four wing Salt bush – 10% - 1.5 lbs. PLS

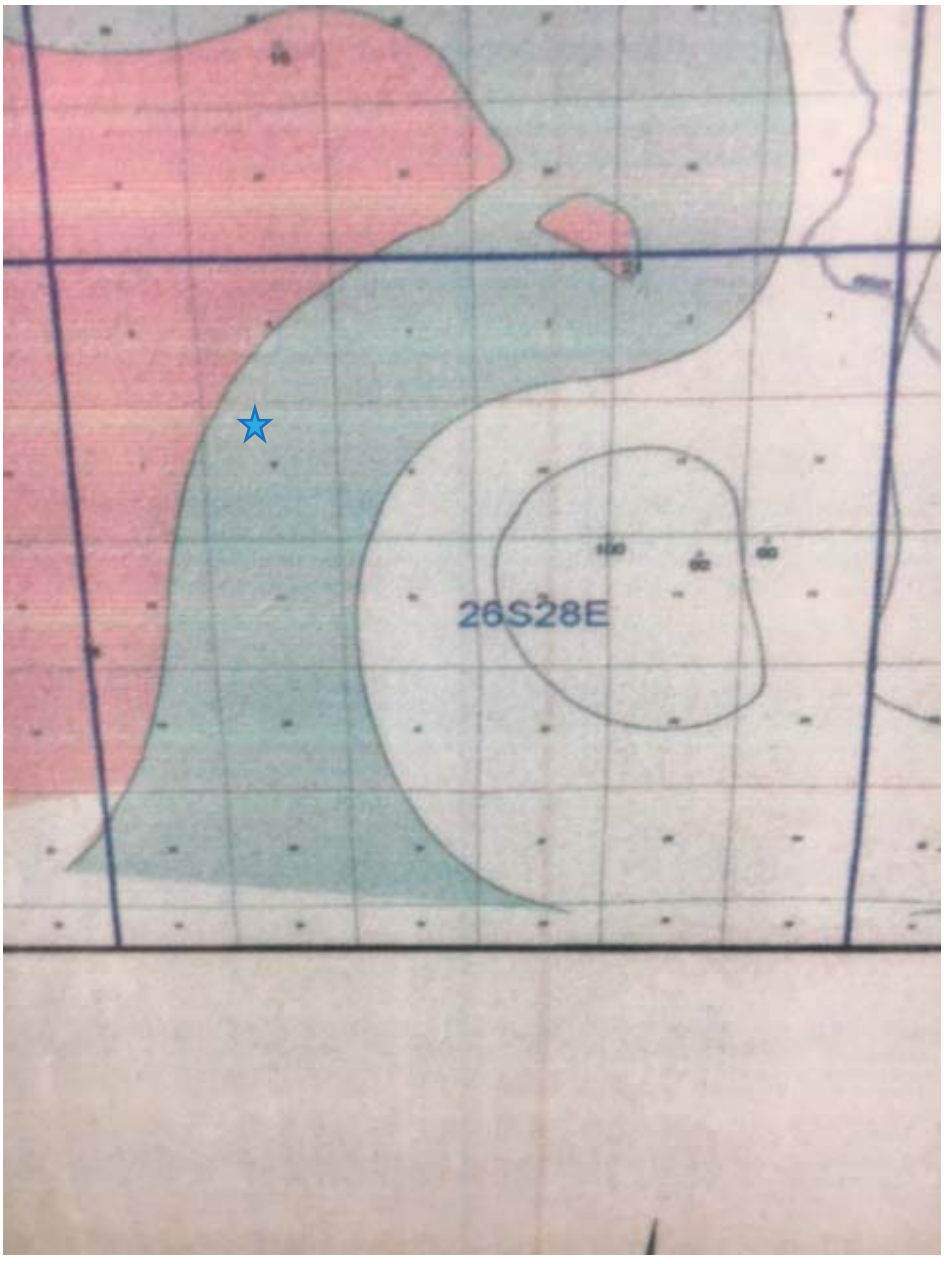
Noxious Weed Management Plan

The site will be visited to assess the establishment of vegetative growth. Personnel performing the site visit will also look for the presence of noxious weeds at the site as indicated on the New Mexico Noxious Weeds List specified on the United States Department of Agriculture website. If a noxious weed is observed at the site, the NMSLO will be contacted to determine the most effective manner to eradicate it.

COG, SRO State Com #48H

U/L C, Section 8, T26S, R28E

Groundwater: <50’



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

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

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

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 02478		CUB	ED	2	1		05	26S	28E	583848	3549325*	1619	100		

Average Depth to Water: --

Minimum Depth: --

Maximum Depth: --

Record Count: 1

UTMNAD83 Radius Search (in meters):

Easting (X): 583853 **Northing (Y):** 3547706 **Radius:** 1700

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

Public Land Survey System (PLSS)

Q64: Q16: NE Q4: NW Sec: 08 Tws: 26S Rng: 28E

State Plane Coordinate System - NAD27

X: 0 ft Y: 0 ft Zone:

State Plane Coordinate System - NAD83

X: 0 ft Y: 0 ft Zone:

Degrees/Minutes/Seconds

Longitude (X): Degrees: 0 ° Minutes: 0 ' Seconds: 0 "

Latitude (Y): Degrees: 0 ° Minutes: 0 ' Seconds: 0 "

UTM - NAD27

Easting (X): 0 mtrs Northing (Y): 0 mtrs Zone:

SUBMIT

All Conversion Results are displayed as NAD 1983 UTM Zone 13

Easting (X): 583853.0 mtrs Northing (Y): 3547706.0 mtrs

~~ Please keep screen open to copy UTM values for Reports. ~~

Laboratory Analytical Results Summary
SRO State Com #48H

		Sample	T1 @ SURFACE	T1 @ 1'	T1 @ 2'	T1 @ 3'	T1 @ 4'	T1 @ 6'	T1 @ 8'	T1 @ 10'	T1 @ 12'	T1 @ 14'	T1 @ 18'	T1 @ 24'
Analyte	Method	Date	5/3/17	5/3/17	5/3/17	5/3/17	5/3/17	5/3/17	5/3/17	5/3/17	5/3/17	5/3/17	5/3/17	5/3/17
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	EPA 8021B		<0.00935	<0.00337	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Toluene	EPA 8021B		<0.00935	**0.0158**	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Ethylbenzene	EPA 8021B		<0.00935	<0.00337	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
m,p-Xylenes	EPA 8021B		<0.0187	**0.0379**	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
o-Xylene	EPA 8021B		<0.00935	**0.0169**	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylenes	EPA 8021B		<0.150	**0.0548**	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total BTEX	EPA 8021B		<0.300	**0.0706**	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chloride	EPA300/300.1		**11000**	**12200**	**16800**	**14600**	**14800**	**15400**	**6140**	**1290**	**271**	**28.3**	**98**	**163**
GRO, C6-C10	SW8015 Mod		<15.0	<15.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DRO, C10-C28	SW8015 Mod		<15.0	<15.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total TPH	SW8015 Mod		<15.0	<15.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

		Sample	T2 @ SURFACE	T2 @ 1'	T2 @ 2'	T2 @ 3'	T2 @ 4'	T2 @ 6'	T2 @ 8'	T2 @ 10'	T2 @ 12'	T2 @ 14'	T2 @ 19'	T2 @ 24'
Analyte	Method	Date	5/3/17	5/3/17	5/3/17	5/3/17	5/3/17	5/3/17	5/3/17	5/3/17	5/3/17	5/3/17	5/3/17	5/3/17
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	EPA 8021B		<0.00388	<0.00380	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Toluene	EPA 8021B		<0.00388	**0.00567**	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Ethylbenzene	EPA 8021B		<0.00388	<0.00380	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
m,p-Xylenes	EPA 8021B		<0.00775	<0.00760	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
o-Xylene	EPA 8021B		<0.00388	<0.00380	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylenes	EPA 8021B		<0.00388	<0.00380	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total BTEX	EPA 8021B		<0.00388	**0.00567**	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chloride	EPA300/300.1		**9730**	**11900**	**9720**	**8500**	**13900**	**13300**	**9170**	**1180**	**1350**	**6.48**	<25.0	<49.7
GRO, C6-C10	SW8015 Mod		<14.9	<15.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DRO, C10-C28	SW8015 Mod		<14.9	<15.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total TPH	SW8015 Mod		<14.9	<15.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

		Sample	T3 @ SURFACE	T3 @ 1'	T3 @ 2'	T3 @ 3'	T3 @ 4'	T3 @ 6'	T3 @ 8'	T3 @ 10'	T3 @ 17'	T3 @ 22'
Analyte	Method	Date	5/3/17	5/3/17	5/3/17	5/3/17	5/3/17	5/3/17	5/3/17	5/3/17	5/3/17	5/3/17
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	EPA 8021B		<0.00319	<0.00201	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Toluene	EPA 8021B		<0.00319	<0.00201	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Ethylbenzene	EPA 8021B		<0.00319	<0.00201	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
m,p-Xylenes	EPA 8021B		<0.00639	<0.00402	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
o-Xylene	EPA 8021B		<0.00319	<0.00201	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylenes	EPA 8021B		<0.00319	<0.00201	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total BTEX	EPA 8021B		<0.00319	<0.00201	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chloride	EPA300/300.1		**29000**	**649**	**23**	**1130**	<24.9	<24.9	<24.9	<24.9	**209**	**209**
GRO, C6-C10	SW8015 Mod		<15.0	<15.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DRO, C10-C28	SW8015 Mod		**132**	<15.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total TPH	SW8015 Mod		**132**	<15.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

		Sample	T4 @ SURFACE	T4 @ 1'	T4 @ 2'	T4 @ 3'	T4 @ 4'	T4 @ 6'	T4 @ 11'	T4 @ 16'
Analyte	Method	Date	5/3/17	5/3/17	5/3/17	5/3/17	5/3/17	5/3/17	5/3/17	5/3/17
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	EPA 8021B		<0.00199	<0.00198	n/a	n/a	n/a	n/a	n/a	n/a
Toluene	EPA 8021B		<0.00199	<0.00198	n/a	n/a	n/a	n/a	n/a	n/a
Ethylbenzene	EPA 8021B		<0.00199	<0.00198	n/a	n/a	n/a	n/a	n/a	n/a
m,p-Xylenes	EPA 8021B		<0.00397	<0.00397	n/a	n/a	n/a	n/a	n/a	n/a
o-Xylene	EPA 8021B		<0.00199	<0.00198	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylenes	EPA 8021B		<0.00199	<0.00198	n/a	n/a	n/a	n/a	n/a	n/a
Total BTEX	EPA 8021B		<0.00199	<0.00198	n/a	n/a	n/a	n/a	n/a	n/a
Chloride	EPA300/300.1		**37.2**	<48.9	**51.1**	<49.5	<24.6	**7.83**	**14.8**	**271**
GRO, C6-C10	SW8015 Mod		<15.0	<15.0	n/a	n/a	n/a	n/a	n/a	n/a
DRO, C10-C28	SW8015 Mod		<15.0	<15.0	n/a	n/a	n/a	n/a	n/a	n/a
Total TPH	SW8015 Mod		<15.0	<15.0	n/a	n/a	n/a	n/a	n/a	n/a

Laboratory Analytical Results Summary
SRO State Com #48H

		Sample	Background @ 5'	Background @ 10'	Background @ 15'	Background @ 20'
Analyte	Method	Date	5/3/17	5/3/17	5/3/17	5/3/17
			mg/Kg	mg/Kg	mg/Kg	mg/Kg
Chloride	EPA300/300.1		<49.0	<24.4	<24.6	**47.6**

		Sample	North @ Surface	North @ 1'
Analyte	Method	Date	5/3/17	5/3/17
			mg/Kg	mg/Kg
Benzene	EPA 8021B		<0.00339	<0.00201
Toluene	EPA 8021B		<0.00339	<0.00201
Ethylbenzene	EPA 8021B		<0.00339	<0.00201
m,p-Xylenes	EPA 8021B		<0.00678	<0.00402
o-Xylene	EPA 8021B		<0.00339	<0.00201
Total Xylenes	EPA 8021B		<0.00339	<0.00201
Total BTEX	EPA 8021B		<0.00339	<0.00201
Chloride	EPA300/300.1		**13.7**	<4.93
GRO, C6-C10	SW8015 Mod		<15.0	<15.0
DRO, C10-C28	SW8015 Mod		<15.0	<15.0
Total TPH	SW8015 Mod		<15.0	<15.0

		Sample	East @ Surface	East @ 1'
Analyte	Method	Date	5/3/17	5/3/17
			mg/Kg	mg/Kg
Benzene	EPA 8021B		<0.00200	<0.00202
Toluene	EPA 8021B		<0.00200	<0.00202
Ethylbenzene	EPA 8021B		<0.00200	<0.00202
m,p-Xylenes	EPA 8021B		<0.00399	<0.00404
o-Xylene	EPA 8021B		<0.00200	<0.00202
Total Xylenes	EPA 8021B		<0.00200	<0.00202
Total BTEX	EPA 8021B		<0.00200	<0.00202
Chloride	EPA300/300.1		**20**	**6.9**
GRO, C6-C10	SW8015 Mod		<15.0	<15.0
DRO, C10-C28	SW8015 Mod		<15.0	<15.0
Total TPH	SW8015 Mod		<15.0	<15.0

		Sample	West @ Surface	West @ 1'
Analyte	Method	Date	5/3/17	5/3/17
			mg/Kg	mg/Kg
Benzene	EPA 8021B		<0.00199	<0.00200
Toluene	EPA 8021B		<0.00199	<0.00200
Ethylbenzene	EPA 8021B		<0.00199	**0.00238**
m,p-Xylenes	EPA 8021B		<0.00398	<0.00399
o-Xylene	EPA 8021B		<0.00199	<0.00200
Total Xylenes	EPA 8021B		<0.00199	<0.00200
Total BTEX	EPA 8021B		<0.00199	**0.00238**
Chloride	EPA300/300.1		**26.8**	<4.99
GRO, C6-C10	SW8015 Mod		<15.0	<15.0
DRO, C10-C28	SW8015 Mod		<15.0	<15.0
Total TPH	SW8015 Mod		<15.0	<15.0

Laboratory Analytical Results Summary
SRO State Com #48H

		Sample	SP1 @ 1'	SP1 @ 3'	SP1 @ 6'	SP1 @ 9'	SP1 @ 12'	SP1 @ 16'	SP1 @ 18'
Analyte	Method	Date	8/25/17	8/25/17	8/25/17	8/25/17	8/25/17	8/25/17	8/25/17
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	n/a	n/a	n/a	n/a	n/a	n/a
Toluene	BTEX 8021B		<0.050	n/a	n/a	n/a	n/a	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.050	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	n/a	n/a	n/a	n/a	n/a	n/a
Total BTEX	BTEX 8021B		<0.300	n/a	n/a	n/a	n/a	n/a	n/a
Chloride	SM4500Cl-B		**9800**	**8800**	**6100**	**8900**	**9800**	**4400**	**5920**
GRO	TPH 8015M		<10.0	n/a	n/a	n/a	n/a	n/a	n/a
DRO	TPH 8015M		<10.0	n/a	n/a	n/a	n/a	n/a	n/a
EXT DRO	TPH 8015M		<10.0	n/a	n/a	n/a	n/a	n/a	n/a

		Sample	SOUTH @ SURFACE
Analyte	Method	Date	8/28/17
			mg/Kg
Benzene	BTEX 8021B		<0.050
Toluene	BTEX 8021B		<0.050
Ethylbenzene	BTEX 8021B		<0.050
Total Xylenes	BTEX 8021B		<0.150
Total BTEX	BTEX 8021B		<0.300
Chloride	SM4500Cl-B		**32**
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0
EXT DRO	TPH 8015M		<10.0

		Sample	SP2 @ 1'	SP2 @ 3'	SP2 @ 6'	SP2 @ 9'	SP2 @ 12'	SP2 @ 16'	SP2 @ 18'
Analyte	Method	Date	8/25/17	8/25/17	8/25/17	8/28/17	8/28/17	8/28/17	8/28/17
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Chloride	SM4500Cl-B		**10700**	**8700**	**6800**	**7600**	**11400**	**2200**	**1280**

		Sample	SP3 @ 1'	SP3 @ 3'	SP3 @ 6'	SP3 @ 9'	SP3 @ 12'	SP3 @ 16'	SP3 @ 18'
Analyte	Method	Date	8/28/17	8/28/17	8/28/17	8/28/17	8/28/17	8/28/17	8/28/17
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	n/a	n/a	n/a	n/a	n/a	n/a
Toluene	BTEX 8021B		<0.050	n/a	n/a	n/a	n/a	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.050	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	n/a	n/a	n/a	n/a	n/a	n/a
Total BTEX	BTEX 8021B		<0.300	n/a	n/a	n/a	n/a	n/a	n/a
Chloride	SM4500Cl-B		**11200**	**10800**	**9000**	**3200**	**565**	**400**	**368**
GRO	TPH 8015M		<10.0	n/a	n/a	n/a	n/a	n/a	n/a
DRO	TPH 8015M		<10.0	n/a	n/a	n/a	n/a	n/a	n/a
EXT DRO	TPH 8015M		<10.0	n/a	n/a	n/a	n/a	n/a	n/a

		Sample	SP4 @ 1'	SP4 @ 3'	SP4 @ 6'	SP4 @ 9'	SP4 @ 12'	SP4 @ 16'	SP4 @ 18'
Analyte	Method	Date	8/28/17	8/28/17	8/28/17	8/28/17	8/28/17	8/28/17	8/28/17
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Chloride	SM4500Cl-B		**38400**	**1570**	**7300**	**8300**	**6200**	**5300**	**4100**

		Sample	SP5 @ 1'	SP5 @ 3'	SP5 @ 6'	SP5 @ 9'	SP5 @ 12'	SP5 @ 16'	SP5 @ 18'
Analyte	Method	Date	8/28/17	8/28/17	8/28/17	8/28/17	8/28/17	8/28/17	8/28/17
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	n/a	n/a	n/a	n/a	n/a	n/a
Toluene	BTEX 8021B		<0.050	n/a	n/a	n/a	n/a	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.050	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	n/a	n/a	n/a	n/a	n/a	n/a
Total BTEX	BTEX 8021B		<0.300	n/a	n/a	n/a	n/a	n/a	n/a
Chloride	SM4500Cl-B		**34800**	**1840**	**7000**	**8000**	**6400**	**5900**	**5500**
GRO	TPH 8015M		<10.0	n/a	n/a	n/a	n/a	n/a	n/a
DRO	TPH 8015M		**11.8**	n/a	n/a	n/a	n/a	n/a	n/a
EXT DRO	TPH 8015M		<10.0	n/a	n/a	n/a	n/a	n/a	n/a

Laboratory Analytical Results Summary
SRO State Com #48H

		Sample ID	SB1 @ 20'	SB1 @ 25'	SB1 @ 30'	SB1 @ 35'
Analyte	**Method**	**Date**	10/10/17	10/10/17	10/10/17	10/10/17
			mg/kg	mg/kg	mg/kg	mg/kg
Chloride	SM4500Cl-B		**304**	**48**	**48**	**48**

		Sample ID	SB2 @ 20'	SB2 @ 25'	SB2 @ 30'	SB2 @ 35'
Analyte	**Method**	**Date**	10/10/17	10/10/17	10/10/17	10/10/17
			mg/kg	mg/kg	mg/kg	mg/kg
Chloride	SM4500Cl-B		**4320**	**48**	**48**	**16**

		Sample ID	SB3 @ 20'	SB3 @ 25'	SB3 @ 30'	SB3 @ 35'
Analyte	**Method**	**Date**	10/10/17	10/10/17	10/10/17	10/10/17
			mg/kg	mg/kg	mg/kg	mg/kg
Chloride	SM4500Cl-B		**8260**	**320**	**208**	**240**

		Sample ID	SB4 @ 20'	SB4 @ 25'	SB4 @ 30'
Analyte	**Method**	**Date**	10/10/17	10/10/17	10/10/17
			mg/kg	mg/kg	mg/kg
Chloride	SM4500Cl-B		**240**	**112**	**160**

		Sample ID	SB5 @ 20'	SB5 @ 25'	SB5 @ 30'	SB5 @ 35'
Analyte	**Method**	**Date**	10/10/17	10/10/17	10/10/17	10/10/17
			mg/kg	mg/kg	mg/kg	mg/kg
Chloride	SM4500Cl-B		**352**	**192**	**160**	**208**

Certificate of Analysis Summary 552580

COG Operating LLC, Artesia, NM

Project Name: SRO STATE COM #48H

Project Id:
Contact: Aaron Lieb
Project Location: SRO STATE COM #48H

Date Received in Lab: Fri May-05-17 11:00 am
Report Date: 15-MAY-17
Project Manager: Liz Givens

Analysis Requested													
	Lab Id:	552580-001		552580-002		552580-003		552580-004		552580-005		552580-006	
	Field Id:	T1-SURF		T1-1'		T1-2'		T1-3'		T1-4'		T1-6'	
	Depth:			1 ft		2 ft		3 ft		4 ft		6 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-03-17 09:30		May-03-17 09:35		May-03-17 09:37		May-03-17 09:40		May-03-17 09:42		May-03-17 09:45	
BTEX by EPA 8021B	***Extracted:***	May-08-17 16:00		May-08-17 09:00									
	Analyzed:	May-09-17 12:07		May-09-17 00:43									
	Units/RL:	mg/kg	RL	mg/kg	RL								
Benzene		<0.00935	0.00935	<0.00337	0.00337								
Toluene		<0.00935	0.00935	0.0158	0.00337								
Ethylbenzene		<0.00935	0.00935	<0.00337	0.00337								
m,p-Xylenes		<0.0187	0.0187	0.0379	0.00673								
o-Xylene		<0.00935	0.00935	0.0169	0.00337								
Total Xylenes		<0.00935	0.00935	0.0548	0.00337								
Total BTEX		<0.00935	0.00935	0.0706	0.00337								
Inorganic Anions by EPA 300/300.1	***Extracted:***	May-15-17 08:00		May-13-17 15:00		May-13-17 15:00		May-13-17 15:00		May-13-17 15:00		May-13-17 15:00	
	Analyzed:	May-15-17 09:26		May-13-17 18:27		May-13-17 18:35		May-13-17 18:43		May-13-17 18:50		May-13-17 19:13	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		11000	97.5	12200	97.7	16800	250	14600	247	14800	249	15400	249
TPH By SW8015 Mod	***Extracted:***	May-08-17 15:00		May-08-17 15:00									
	Analyzed:	May-08-17 20:06		May-08-17 20:25									
	Units/RL:	mg/kg	RL	mg/kg	RL								
C6-C10 Gasoline Range Hydrocarbons		<15.0	15.0	<15.0	15.0								
C10-C28 Diesel Range Hydrocarbons		<15.0	15.0	<15.0	15.0								
Total TPH		<15.0	15.0	<15.0	15.0								

Brandi Ritcherson
Project Manager

Certificate of Analysis Summary 552580

COG Operating LLC, Artesia, NM

Project Name: SRO STATE COM #48H

Project Id:
Contact: Aaron Lieb
Project Location: SRO STATE COM #48H

Date Received in Lab: Fri May-05-17 11:00 am
Report Date: 15-MAY-17
Project Manager: Liz Givens

Analysis Requested													
	Lab Id:	552580-007		552580-008		552580-009		552580-010		552580-011		552580-012	
	Field Id:	T1-8'		T1-10'		T1-12'		T1-14'		T1-18'		T1-24'	
	Depth:	8 ft		10 ft		12 ft		14 ft		18 ft		24 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-03-17 09:47		May-03-17 09:50		May-03-17 09:52		May-03-17 09:54		May-03-17 09:57		May-03-17 09:58	
Inorganic Anions by EPA 300/300.1	***Extracted:***	May-13-17 15:00		May-13-17 15:00		May-13-17 15:00		May-13-17 15:00		May-13-17 15:00		May-13-17 15:00	
	Analyzed:	May-13-17 19:21		May-13-17 19:28		May-13-17 19:36		May-13-17 19:43		May-13-17 19:51		May-13-17 20:14	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		6140	99.4	1290	48.7	271	24.9	28.3	4.89	98.0	4.93	163	4.88

Brandi Ritcherson
Project Manager

Certificate of Analysis Summary 552580

COG Operating LLC, Artesia, NM

Project Name: SRO STATE COM #48H

Project Id:
Contact: Aaron Lieb
Project Location: SRO STATE COM #48H

Date Received in Lab: Fri May-05-17 11:00 am
Report Date: 15-MAY-17
Project Manager: Liz Givens

Analysis Requested													
	Lab Id:	552580-013		552580-014		552580-015		552580-016		552580-017		552580-018	
	Field Id:	T2- SURF		T2- 1'		T2- 2'		T2- 3'		T2- 4'		T2- 6'	
	Depth:			1 ft		2 ft		3 ft		4 ft		6 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-03-17 10:05		May-03-17 10:10		May-03-17 10:13		May-03-17 10:15		May-03-17 10:17		May-03-17 10:20	
BTEX by EPA 8021B	***Extracted:***	May-08-17 16:00		May-08-17 16:00									
	Analyzed:	May-09-17 10:13		May-09-17 10:29									
	Units/RL:	mg/kg	RL	mg/kg	RL								
Benzene		<0.00388	0.00388	<0.00380	0.00380								
Toluene		<0.00388	0.00388	0.00567	0.00380								
Ethylbenzene		<0.00388	0.00388	<0.00380	0.00380								
m,p-Xylenes		<0.00775	0.00775	<0.00760	0.00760								
o-Xylene		<0.00388	0.00388	<0.00380	0.00380								
Total Xylenes		<0.00388	0.00388	<0.00380	0.00380								
Total BTEX		<0.00388	0.00388	0.00567	0.00380								
Inorganic Anions by EPA 300/300.1	***Extracted:***	May-13-17 15:00		May-13-17 15:00		May-13-17 15:00		May-13-17 15:00		May-13-17 15:00		May-13-17 15:00	
	Analyzed:	May-13-17 20:21		May-13-17 20:44		May-13-17 20:52		May-13-17 20:59		May-13-17 21:07		May-13-17 21:14	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		9730	99.4	11900	99.6	9720	98.8	8500	97.8	13900	249	13300	100
TPH By SW8015 Mod	***Extracted:***	May-08-17 15:00		May-08-17 15:00									
	Analyzed:	May-08-17 21:23		May-08-17 21:43									
	Units/RL:	mg/kg	RL	mg/kg	RL								
C6-C10 Gasoline Range Hydrocarbons		<14.9	14.9	<15.0	15.0								
C10-C28 Diesel Range Hydrocarbons		<14.9	14.9	<15.0	15.0								
Total TPH		<14.9	14.9	<15.0	15.0								

Brandi Ritcherson
Project Manager

Certificate of Analysis Summary 552580

COG Operating LLC, Artesia, NM

Project Name: SRO STATE COM #48H

Project Id:
Contact: Aaron Lieb
Project Location: SRO STATE COM #48H

Date Received in Lab: Fri May-05-17 11:00 am
Report Date: 15-MAY-17
Project Manager: Liz Givens

Analysis Requested													
	Lab Id:	552580-019		552580-020		552580-021		552580-022		552580-023		552580-024	
	Field Id:	T2- 8'		T2- 10'		T2- 12'		T2- 14'		T2- 19'		T2- 24'	
	Depth:	8 ft		10 ft		12 ft		14 ft		19 ft		24 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-03-17 10:22		May-03-17 10:25		May-03-17 10:30		May-03-17 10:35		May-03-17 10:37		May-03-17 10:40	
Inorganic Anions by EPA 300/300.1	***Extracted:***	May-13-17 15:00		May-13-17 15:00		May-14-17 13:00		May-14-17 13:00		May-14-17 13:00		May-14-17 13:00	
	Analyzed:	May-13-17 21:22		May-13-17 21:30		May-14-17 15:16		May-14-17 14:53		May-14-17 15:24		May-14-17 15:31	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		9170	97.1	1180	24.9	1350	24.8	6.48	4.94	<25.0	25.0	<49.7	49.7

Brandi Ritcherson
Project Manager

Certificate of Analysis Summary 552580

COG Operating LLC, Artesia, NM

Project Name: SRO STATE COM #48H

Project Id:
Contact: Aaron Lieb
Project Location: SRO STATE COM #48H

Date Received in Lab: Fri May-05-17 11:00 am
Report Date: 15-MAY-17
Project Manager: Liz Givens

Analysis Requested													
	Lab Id:	552580-025		552580-026		552580-027		552580-028		552580-029		552580-030	
	Field Id:	T3-SURF		T3-1'		T3-2'		T3-3'		T3-4'		T3-6'	
	Depth:			1 ft		2 ft		3 ft		4 ft		6 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-03-17 10:55		May-03-17 11:00		May-03-17 11:03		May-03-17 11:05		May-03-17 11:08		May-03-17 11:10	
BTEX by EPA 8021B	***Extracted:***	May-08-17 09:00		May-08-17 09:00									
	Analyzed:	May-09-17 01:31		May-09-17 01:47									
	Units/RL:	mg/kg	RL	mg/kg	RL								
Benzene		<0.00319	0.00319	<0.00201	0.00201								
Toluene		<0.00319	0.00319	<0.00201	0.00201								
Ethylbenzene		<0.00319	0.00319	<0.00201	0.00201								
m,p-Xylenes		<0.00639	0.00639	<0.00402	0.00402								
o-Xylene		<0.00319	0.00319	<0.00201	0.00201								
Total Xylenes		<0.00319	0.00319	<0.00201	0.00201								
Total BTEX		<0.00319	0.00319	<0.00201	0.00201								
Inorganic Anions by EPA 300/300.1	***Extracted:***	May-14-17 13:00		May-14-17 13:00		May-14-17 13:00		May-14-17 13:00		May-14-17 13:00		May-14-17 13:00	
	Analyzed:	May-14-17 15:39		May-14-17 16:02		May-14-17 16:09		May-14-17 16:17		May-14-17 16:24		May-14-17 16:32	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		29000	250	649	4.94	23.0	4.97	1130	50.0	<24.9	24.9	<24.9	24.9
TPH By SW8015 Mod	***Extracted:***	May-08-17 15:00		May-08-17 15:00									
	Analyzed:	May-08-17 22:02		May-08-17 22:22									
	Units/RL:	mg/kg	RL	mg/kg	RL								
C6-C10 Gasoline Range Hydrocarbons		<15.0	15.0	<15.0	15.0								
C10-C28 Diesel Range Hydrocarbons		132	15.0	<15.0	15.0								
Total TPH		132	15.0	<15.0	15.0								

Brandi Ritcherson
Project Manager

Certificate of Analysis Summary 552580

COG Operating LLC, Artesia, NM

Project Name: SRO STATE COM #48H

Project Id:

Contact: Aaron Lieb

Project Location: SRO STATE COM #48H

Date Received in Lab: Fri May-05-17 11:00 am

Report Date: 15-MAY-17

Project Manager: Liz Givens

Analysis Requested		Lab Id:	552580-031		552580-032		552580-033		552580-034		552580-035		552580-036	
		Field Id:	T3-8'		T3-10'		T3-17'		T3-22'		T4-SURF		T4-1'	
		Depth:	8 ft		10 ft		17 ft		22 ft				1 ft	
		Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sampled:	May-03-17 11:45		May-03-17 11:50		May-03-17 11:55		May-03-17 12:35		May-03-17 12:40		May-03-17 12:42	
BTEX by EPA 8021B		Extracted:									May-08-17 09:00		May-08-17 09:00	
		Analyzed:									May-09-17 02:03		May-09-17 02:19	
		Units/RL:									mg/kg	RL	mg/kg	RL
Benzene											<0.00199	0.00199	<0.00198	0.00198
Toluene											0.00334	0.00199	<0.00198	0.00198
Ethylbenzene											<0.00199	0.00199	<0.00198	0.00198
m,p-Xylenes											<0.00398	0.00398	<0.00397	0.00397
o-Xylene											<0.00199	0.00199	<0.00198	0.00198
Total Xylenes											<0.00199	0.00199	<0.00198	0.00198
Total BTEX											0.00334	0.00199	<0.00198	0.00198
Inorganic Anions by EPA 300/300.1		Extracted:	May-14-17 13:00		May-14-17 13:00		May-14-17 13:00		May-14-17 13:00		May-14-17 13:00		May-14-17 13:00	
		Analyzed:	May-14-17 17:02		May-14-17 17:10		May-14-17 16:40		May-14-17 17:33		May-14-17 17:40		May-14-17 17:48	
		Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride			<24.9	24.9	<24.9	24.9	209	4.92	209	4.94	37.2	4.92	<48.9	48.9
TPH By SW8015 Mod		Extracted:									May-08-17 15:00		May-08-17 15:00	
		Analyzed:									May-08-17 22:41		May-08-17 23:00	
		Units/RL:									mg/kg	RL	mg/kg	RL
C6-C10 Gasoline Range Hydrocarbons											<15.0	15.0	<15.0	15.0
C10-C28 Diesel Range Hydrocarbons											<15.0	15.0	<15.0	15.0
Total TPH											<15.0	15.0	<15.0	15.0

Brandi Ritcherson
Project Manager

Certificate of Analysis Summary 552580

COG Operating LLC, Artesia, NM

Project Name: SRO STATE COM #48H

Project Id:
Contact: Aaron Lieb
Project Location: SRO STATE COM #48H

Date Received in Lab: Fri May-05-17 11:00 am
Report Date: 15-MAY-17
Project Manager: Liz Givens

Analysis Requested													
	Lab Id:	552580-037		552580-038		552580-039		552580-040		552580-041		552580-042	
	Field Id:	T4-2'		T4-3'		T4-4'		T4-6'		T4-11'		T4-16'	
	Depth:	2 ft		3 ft		4 ft		6 ft		11 ft		16 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-03-17 12:45		May-03-17 12:50		May-03-17 12:55		May-03-17 12:58		May-03-17 01:05		May-03-17 01:10	
Inorganic Anions by EPA 300/300.1	***Extracted:***	May-14-17 13:00		May-14-17 13:00		May-14-17 13:00		May-14-17 13:00		May-14-17 13:30		May-14-17 13:30	
	Analyzed:	May-14-17 17:56		May-14-17 18:03		May-14-17 18:11		May-14-17 18:18		May-14-17 19:04		May-14-17 19:27	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		51.1	49.9	<49.5	49.5	<24.6	24.6	7.83	4.92	14.8	4.99	271	4.92

Brandi Ritcherson
Project Manager

Analytical Report 552580

for

COG Operating LLC

Project Manager: Aaron Lieb

SRO STATE COM #48H

15-MAY-17

Collected By: Client

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)

15-MAY-17

Project Manager: **Aaron Lieb**
COG Operating LLC
2407 Pecos Avenue
Artesia, NM 88210

Reference: XENCO Report No(s): **552580**
SRO STATE COM #48H
Project Address: SRO STATE COM #48H

Aaron Lieb:

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) 552580. 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. 552580 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,

Brandi Ritcherson
Project Manager

Sample Cross Reference 552580

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
T1-SURF	S	05-03-17 09:30	N/A	552580-001
T1-1'	S	05-03-17 09:35	- 1 ft	552580-002
T1-2'	S	05-03-17 09:37	- 2 ft	552580-003
T1-3'	S	05-03-17 09:40	- 3 ft	552580-004
T1-4'	S	05-03-17 09:42	- 4 ft	552580-005
T1-6'	S	05-03-17 09:45	- 6 ft	552580-006
T1-8'	S	05-03-17 09:47	- 8 ft	552580-007
T1-10'	S	05-03-17 09:50	- 10 ft	552580-008
T1-12'	S	05-03-17 09:52	- 12 ft	552580-009
T1-14'	S	05-03-17 09:54	- 14 ft	552580-010
T1-18'	S	05-03-17 09:57	- 18 ft	552580-011
T1-24'	S	05-03-17 09:58	- 24 ft	552580-012
T2- SURF	S	05-03-17 10:05	N/A	552580-013
T2- 1'	S	05-03-17 10:10	- 1 ft	552580-014
T2- 2'	S	05-03-17 10:13	- 2 ft	552580-015
T2- 3'	S	05-03-17 10:15	- 3 ft	552580-016
T2- 4'	S	05-03-17 10:17	- 4 ft	552580-017
T2- 6'	S	05-03-17 10:20	- 6 ft	552580-018
T2- 8'	S	05-03-17 10:22	- 8 ft	552580-019
T2- 10'	S	05-03-17 10:25	- 10 ft	552580-020
T2- 12'	S	05-03-17 10:30	- 12 ft	552580-021
T2- 14'	S	05-03-17 10:35	- 14 ft	552580-022
T2- 19'	S	05-03-17 10:37	- 19 ft	552580-023
T2- 24'	S	05-03-17 10:40	- 24 ft	552580-024
T3-SURF	S	05-03-17 10:55	N/A	552580-025
T3-1'	S	05-03-17 11:00	- 1 ft	552580-026
T3-2'	S	05-03-17 11:03	- 2 ft	552580-027
T3-3'	S	05-03-17 11:05	- 3 ft	552580-028
T3-4'	S	05-03-17 11:08	- 4 ft	552580-029
T3-6'	S	05-03-17 11:10	- 6 ft	552580-030
T3-8'	S	05-03-17 11:45	- 8 ft	552580-031
T3-10'	S	05-03-17 11:50	- 10 ft	552580-032
T3-17'	S	05-03-17 11:55	- 17 ft	552580-033
T3-22'	S	05-03-17 12:35	- 22 ft	552580-034
T4-SURF	S	05-03-17 12:40	N/A	552580-035
T4-1'	S	05-03-17 12:42	- 1 ft	552580-036
T4-2'	S	05-03-17 12:45	- 2 ft	552580-037
T4-3'	S	05-03-17 12:50	- 3 ft	552580-038
T4-4'	S	05-03-17 12:55	- 4 ft	552580-039
T4-6'	S	05-03-17 12:58	- 6 ft	552580-040
T4-11'	S	05-03-17 01:05	- 11 ft	552580-041
T4-16'	S	05-03-17 01:10	- 16 ft	552580-042

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3016772 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3017044 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3017191 Inorganic Anions by EPA 300/300.1
Lab Sample ID 552580-011 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 552580-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -017, -018, -019, -020.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3017230 Inorganic Anions by EPA 300/300.1
Lab Sample ID 552582-005 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 552580-041, -042.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T1-SURF**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-001	Date Collected:	05.03.17 09.30		

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.15.17 08.00	Basis:	Wet Weight
Seq Number:	3017191				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**11000**	97.5	mg/kg	05.15.17 09.26		20

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.08.17 15.00	Basis:	Wet Weight
Seq Number:	3016765				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C10 Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.08.17 20.06	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	<15.0	15.0	mg/kg	05.08.17 20.06	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.08.17 20.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	05.08.17 20.06	
o-Terphenyl	84-15-1	108	%	70-135	05.08.17 20.06	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	05.08.17 16.00	Basis:	Wet Weight
Seq Number:	3017044				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00935	0.00935	mg/kg	05.09.17 12.07	U	1
Toluene	108-88-3	<0.00935	0.00935	mg/kg	05.09.17 12.07	U	1
Ethylbenzene	100-41-4	<0.00935	0.00935	mg/kg	05.09.17 12.07	U	1
m,p-Xylenes	179601-23-1	<0.0187	0.0187	mg/kg	05.09.17 12.07	U	1
o-Xylene	95-47-6	<0.00935	0.00935	mg/kg	05.09.17 12.07	U	1
Total Xylenes	1330-20-7	<0.00935	0.00935	mg/kg	05.09.17 12.07	U	1
Total BTEX		<0.00935	0.00935	mg/kg	05.09.17 12.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	80-120	05.09.17 12.07	
1,4-Difluorobenzene	540-36-3	91	%	80-120	05.09.17 12.07	

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T1-1'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-002	Date Collected:	05.03.17 09.35	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.13.17 15.00	Basis:	Wet Weight
Seq Number:	3017191				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**12200**	97.7	mg/kg	05.13.17 18.27		20

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.08.17 15.00	Basis:	Wet Weight
Seq Number:	3016765				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C10 Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.08.17 20.25	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	<15.0	15.0	mg/kg	05.08.17 20.25	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.08.17 20.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	05.08.17 20.25	
o-Terphenyl	84-15-1	104	%	70-135	05.08.17 20.25	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	05.08.17 09.00	Basis:	Wet Weight
Seq Number:	3016772				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00337	0.00337	mg/kg	05.09.17 00.43	U	1
Toluene	108-88-3	**0.0158**	0.00337	mg/kg	05.09.17 00.43		1
Ethylbenzene	100-41-4	<0.00337	0.00337	mg/kg	05.09.17 00.43	U	1
m,p-Xylenes	179601-23-1	**0.0379**	0.00673	mg/kg	05.09.17 00.43		1
o-Xylene	95-47-6	**0.0169**	0.00337	mg/kg	05.09.17 00.43		1
Total Xylenes	1330-20-7	**0.0548**	0.00337	mg/kg	05.09.17 00.43		1
Total BTEX		**0.0706**	0.00337	mg/kg	05.09.17 00.43		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	89	%	80-120	05.09.17 00.43	
1,4-Difluorobenzene	540-36-3	98	%	80-120	05.09.17 00.43	

Certificate of Analytical Results 552580

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T1-2'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-003	Date Collected:	05.03.17 09.37	Sample Depth:	2 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.13.17 15.00	Basis:	Wet Weight
Seq Number:	3017191				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**16800**	250	mg/kg	05.13.17 18.35		50

Certificate of Analytical Results 552580

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T1-3'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-004	Date Collected:	05.03.17 09.40	Sample Depth:	3 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.13.17 15.00	Basis:	Wet Weight
Seq Number:	3017191				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**14600**	247	mg/kg	05.13.17 18.43		50

Certificate of Analytical Results 552580

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T1-4'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-005	Date Collected:	05.03.17 09.42	Sample Depth:	4 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.13.17 15.00	Basis:	Wet Weight
Seq Number:	3017191				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**14800**	249	mg/kg	05.13.17 18.50		50

Certificate of Analytical Results 552580

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T1-6'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-006	Date Collected:	05.03.17 09.45	Sample Depth:	6 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.13.17 15.00	Basis:	Wet Weight
Seq Number:	3017191				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**15400**	249	mg/kg	05.13.17 19.13		50

Certificate of Analytical Results 552580

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T1-8'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-007	Date Collected:	05.03.17 09.47	Sample Depth:	8 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.13.17 15.00	Basis:	Wet Weight
Seq Number:	3017191				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6140**	99.4	mg/kg	05.13.17 19.21		20

Certificate of Analytical Results 552580

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T1-10'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-008	Date Collected:	05.03.17 09.50	Sample Depth:	10 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.13.17 15.00	Basis:	Wet Weight
Seq Number:	3017191				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1290**	48.7	mg/kg	05.13.17 19.28		10

Certificate of Analytical Results 552580

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T1-12'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-009	Date Collected:	05.03.17 09.52	Sample Depth:	12 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.13.17 15.00	Basis:	Wet Weight
Seq Number:	3017191				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**271**	24.9	mg/kg	05.13.17 19.36		5

Certificate of Analytical Results 552580

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T1-14'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-010	Date Collected:	05.03.17 09.54	Sample Depth:	14 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.13.17 15.00	Basis:	Wet Weight
Seq Number:	3017191				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**28.3**	4.89	mg/kg	05.13.17 19.43		1

Certificate of Analytical Results 552580

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T1-18'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-011	Date Collected:	05.03.17 09.57	Sample Depth:	18 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.13.17 15.00	Basis:	Wet Weight
Seq Number:	3017191				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**98.0**	4.93	mg/kg	05.13.17 19.51		1

Certificate of Analytical Results 552580

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T1-24'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-012	Date Collected:	05.03.17 09.58	Sample Depth:	24 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.13.17 15.00	Basis:	Wet Weight
Seq Number:	3017191				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**163**	4.88	mg/kg	05.13.17 20.14		1

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T2- SURF**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-013	Date Collected:	05.03.17 10.05		

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.13.17 15.00	Basis:	Wet Weight
Seq Number:	3017191				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9730**	99.4	mg/kg	05.13.17 20.21		20

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.08.17 15.00	Basis:	Wet Weight
Seq Number:	3016765				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C10 Gasoline Range Hydrocarbons	PHC610	<14.9	14.9	mg/kg	05.08.17 21.23	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	<14.9	14.9	mg/kg	05.08.17 21.23	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	05.08.17 21.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	05.08.17 21.23	
o-Terphenyl	84-15-1	104	%	70-135	05.08.17 21.23	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	05.08.17 16.00	Basis:	Wet Weight
Seq Number:	3017044				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00388	0.00388	mg/kg	05.09.17 10.13	U	1
Toluene	108-88-3	<0.00388	0.00388	mg/kg	05.09.17 10.13	U	1
Ethylbenzene	100-41-4	<0.00388	0.00388	mg/kg	05.09.17 10.13	U	1
m,p-Xylenes	179601-23-1	<0.00775	0.00775	mg/kg	05.09.17 10.13	U	1
o-Xylene	95-47-6	<0.00388	0.00388	mg/kg	05.09.17 10.13	U	1
Total Xylenes	1330-20-7	<0.00388	0.00388	mg/kg	05.09.17 10.13	U	1
Total BTEX		<0.00388	0.00388	mg/kg	05.09.17 10.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	86	%	80-120	05.09.17 10.13	
1,4-Difluorobenzene	540-36-3	88	%	80-120	05.09.17 10.13	

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T2- 1'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-014	Date Collected:	05.03.17 10.10	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.13.17 15.00	Basis:	Wet Weight
Seq Number:	3017191				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**11900**	99.6	mg/kg	05.13.17 20.44		20

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.08.17 15.00	Basis:	Wet Weight
Seq Number:	3016765				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C10 Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.08.17 21.43	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	<15.0	15.0	mg/kg	05.08.17 21.43	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.08.17 21.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	05.08.17 21.43	
o-Terphenyl	84-15-1	103	%	70-135	05.08.17 21.43	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	05.08.17 16.00	Basis:	Wet Weight
Seq Number:	3017044				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00380	0.00380	mg/kg	05.09.17 10.29	U	1
Toluene	108-88-3	**0.00567**	0.00380	mg/kg	05.09.17 10.29		1
Ethylbenzene	100-41-4	<0.00380	0.00380	mg/kg	05.09.17 10.29	U	1
m,p-Xylenes	179601-23-1	<0.00760	0.00760	mg/kg	05.09.17 10.29	U	1
o-Xylene	95-47-6	<0.00380	0.00380	mg/kg	05.09.17 10.29	U	1
Total Xylenes	1330-20-7	<0.00380	0.00380	mg/kg	05.09.17 10.29	U	1
Total BTEX		**0.00567**	0.00380	mg/kg	05.09.17 10.29		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	115	%	80-120	05.09.17 10.29	
1,4-Difluorobenzene	540-36-3	118	%	80-120	05.09.17 10.29	

Certificate of Analytical Results 552580

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T2- 2'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-015	Date Collected:	05.03.17 10.13	Sample Depth:	2 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.13.17 15.00	Basis:	Wet Weight
Seq Number:	3017191				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9720**	98.8	mg/kg	05.13.17 20.52		20

Certificate of Analytical Results 552580

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T2- 3'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-016	Date Collected:	05.03.17 10.15	Sample Depth:	3 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.13.17 15.00	Basis:	Wet Weight
Seq Number:	3017191				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8500**	97.8	mg/kg	05.13.17 20.59		20

Certificate of Analytical Results 552580

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T2- 4'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-017	Date Collected:	05.03.17 10.17	Sample Depth:	4 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.13.17 15.00	Basis:	Wet Weight
Seq Number:	3017191				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**13900**	249	mg/kg	05.13.17 21.07		50

Certificate of Analytical Results 552580

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T2- 6'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-018	Date Collected:	05.03.17 10.20	Sample Depth:	6 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.13.17 15.00	Basis:	Wet Weight
Seq Number:	3017191				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**13300**	100	mg/kg	05.13.17 21.14		20

Certificate of Analytical Results 552580

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T2- 8'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-019	Date Collected:	05.03.17 10.22	Sample Depth:	8 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.13.17 15.00	Basis:	Wet Weight
Seq Number:	3017191				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9170**	97.1	mg/kg	05.13.17 21.22		20

Certificate of Analytical Results 552580

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T2- 10'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-020	Date Collected:	05.03.17 10.25	Sample Depth:	10 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.13.17 15.00	Basis:	Wet Weight
Seq Number:	3017191				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1180**	24.9	mg/kg	05.13.17 21.30		5

Certificate of Analytical Results 552580

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T2- 12'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-021	Date Collected:	05.03.17 10.30	Sample Depth:	12 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.14.17 13.00	Basis:	Wet Weight
Seq Number:	3017234				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1350**	24.8	mg/kg	05.14.17 15.16		5

Certificate of Analytical Results 552580

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T2- 14'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-022	Date Collected:	05.03.17 10.35	Sample Depth:	14 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.14.17 13.00	Basis:	Wet Weight
Seq Number:	3017234				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6.48**	4.94	mg/kg	05.14.17 14.53		1

Certificate of Analytical Results 552580

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T2- 19'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-023	Date Collected:	05.03.17 10.37	Sample Depth:	19 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.14.17 13.00	Basis:	Wet Weight
Seq Number:	3017234				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<25.0	25.0	mg/kg	05.14.17 15.24	U	5

Certificate of Analytical Results 552580

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T2- 24'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-024	Date Collected:	05.03.17 10.40	Sample Depth:	24 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.14.17 13.00	Basis:	Wet Weight
Seq Number:	3017234				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<49.7	49.7	mg/kg	05.14.17 15.31	U	10

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T3-SURF**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-025	Date Collected:	05.03.17 10.55		

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.14.17 13.00	Basis:	Wet Weight
Seq Number:	3017234				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**29000**	250	mg/kg	05.14.17 15.39		50

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.08.17 15.00	Basis:	Wet Weight
Seq Number:	3016765				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C10 Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.08.17 22.02	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	**132**	15.0	mg/kg	05.08.17 22.02		1
Total TPH	PHC635	**132**	15.0	mg/kg	05.08.17 22.02		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	05.08.17 22.02	
o-Terphenyl	84-15-1	103	%	70-135	05.08.17 22.02	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	05.08.17 09.00	Basis:	Wet Weight
Seq Number:	3016772				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00319	0.00319	mg/kg	05.09.17 01.31	U	1
Toluene	108-88-3	<0.00319	0.00319	mg/kg	05.09.17 01.31	U	1
Ethylbenzene	100-41-4	<0.00319	0.00319	mg/kg	05.09.17 01.31	U	1
m,p-Xylenes	179601-23-1	<0.00639	0.00639	mg/kg	05.09.17 01.31	U	1
o-Xylene	95-47-6	<0.00319	0.00319	mg/kg	05.09.17 01.31	U	1
Total Xylenes	1330-20-7	<0.00319	0.00319	mg/kg	05.09.17 01.31	U	1
Total BTEX		<0.00319	0.00319	mg/kg	05.09.17 01.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	80-120	05.09.17 01.31	
1,4-Difluorobenzene	540-36-3	116	%	80-120	05.09.17 01.31	

Certificate of Analytical Results 552580

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T3-1'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-026	Date Collected:	05.03.17 11.00	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.14.17 13.00	Basis:	Wet Weight
Seq Number:	3017234				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**649**	4.94	mg/kg	05.14.17 16.02		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.08.17 15.00	Basis:	Wet Weight
Seq Number:	3016765				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C10 Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.08.17 22.22	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	<15.0	15.0	mg/kg	05.08.17 22.22	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.08.17 22.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	05.08.17 22.22	
o-Terphenyl	84-15-1	96	%	70-135	05.08.17 22.22	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	05.08.17 09.00	Basis:	Wet Weight
Seq Number:	3016772				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	05.09.17 01.47	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	05.09.17 01.47	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	05.09.17 01.47	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	05.09.17 01.47	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	05.09.17 01.47	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	05.09.17 01.47	U	1
Total BTEX		<0.00201	0.00201	mg/kg	05.09.17 01.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	89	%	80-120	05.09.17 01.47	
1,4-Difluorobenzene	540-36-3	102	%	80-120	05.09.17 01.47	

Certificate of Analytical Results 552580

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T3-2'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-027	Date Collected:	05.03.17 11.03	Sample Depth:	2 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.14.17 13.00	Basis:	Wet Weight
Seq Number:	3017234				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**23.0**	4.97	mg/kg	05.14.17 16.09		1

Certificate of Analytical Results 552580

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T3-3'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-028	Date Collected:	05.03.17 11.05	Sample Depth:	3 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.14.17 13.00	Basis:	Wet Weight
Seq Number:	3017234				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1130**	50.0	mg/kg	05.14.17 16.17		10

Certificate of Analytical Results 552580

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T3-4'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-029	Date Collected:	05.03.17 11.08	Sample Depth:	4 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.14.17 13.00	Basis:	Wet Weight
Seq Number:	3017234				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<24.9	24.9	mg/kg	05.14.17 16.24	U	5

Certificate of Analytical Results 552580

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T3-6'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-030	Date Collected:	05.03.17 11.10	Sample Depth:	6 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.14.17 13.00	Basis:	Wet Weight
Seq Number:	3017234				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<24.9	24.9	mg/kg	05.14.17 16.32	U	5

Certificate of Analytical Results 552580

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T3-8'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-031	Date Collected:	05.03.17 11.45	Sample Depth:	8 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.14.17 13.00	Basis:	Wet Weight
Seq Number:	3017234				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<24.9	24.9	mg/kg	05.14.17 17.02	U	5

Certificate of Analytical Results 552580

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T3-10'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-032	Date Collected:	05.03.17 11.50	Sample Depth:	10 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.14.17 13.00	Basis:	Wet Weight
Seq Number:	3017234				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<24.9	24.9	mg/kg	05.14.17 17.10	U	5

Certificate of Analytical Results 552580

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T3-17'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-033	Date Collected:	05.03.17 11.55	Sample Depth:	17 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.14.17 13.00	Basis:	Wet Weight
Seq Number:	3017234				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**209**	4.92	mg/kg	05.14.17 16.40		1

Certificate of Analytical Results 552580

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T3-22'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-034	Date Collected:	05.03.17 12.35	Sample Depth:	22 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.14.17 13.00	Basis:	Wet Weight
Seq Number:	3017234				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**209**	4.94	mg/kg	05.14.17 17.33		1

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T4-SURF**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-035	Date Collected:	05.03.17 12.40		

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.14.17 13.00	Basis:	Wet Weight
Seq Number:	3017234				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**37.2**	4.92	mg/kg	05.14.17 17.40		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.08.17 15.00	Basis:	Wet Weight
Seq Number:	3016765				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C10 Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.08.17 22.41	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	<15.0	15.0	mg/kg	05.08.17 22.41	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.08.17 22.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	05.08.17 22.41	
o-Terphenyl	84-15-1	95	%	70-135	05.08.17 22.41	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	05.08.17 09.00	Basis:	Wet Weight
Seq Number:	3016772				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.09.17 02.03	U	1
Toluene	108-88-3	**0.00334**	0.00199	mg/kg	05.09.17 02.03		1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.09.17 02.03	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.09.17 02.03	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.09.17 02.03	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.09.17 02.03	U	1
Total BTEX		**0.00334**	0.00199	mg/kg	05.09.17 02.03		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	85	%	80-120	05.09.17 02.03	
1,4-Difluorobenzene	540-36-3	102	%	80-120	05.09.17 02.03	

Certificate of Analytical Results 552580

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T4-1'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-036	Date Collected:	05.03.17 12.42	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.14.17 13.00	Basis:	Wet Weight
Seq Number:	3017234				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<48.9	48.9	mg/kg	05.14.17 17.48	U	10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.08.17 15.00	Basis:	Wet Weight
Seq Number:	3016765				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C10 Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.08.17 23.00	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	<15.0	15.0	mg/kg	05.08.17 23.00	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.08.17 23.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	05.08.17 23.00	
o-Terphenyl	84-15-1	96	%	70-135	05.08.17 23.00	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	05.08.17 09.00	Basis:	Wet Weight
Seq Number:	3016772				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	05.09.17 02.19	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	05.09.17 02.19	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	05.09.17 02.19	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	05.09.17 02.19	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	05.09.17 02.19	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	05.09.17 02.19	U	1
Total BTEX		<0.00198	0.00198	mg/kg	05.09.17 02.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	80-120	05.09.17 02.19	
4-Bromofluorobenzene	460-00-4	87	%	80-120	05.09.17 02.19	

Certificate of Analytical Results 552580

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T4-2'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-037	Date Collected:	05.03.17 12.45	Sample Depth:	2 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.14.17 13.00	Basis:	Wet Weight
Seq Number:	3017234				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**51.1**	49.9	mg/kg	05.14.17 17.56		10

Certificate of Analytical Results 552580

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T4-3'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-038	Date Collected:	05.03.17 12.50	Sample Depth:	3 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.14.17 13.00	Basis:	Wet Weight
Seq Number:	3017234				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<49.5	49.5	mg/kg	05.14.17 18.03	U	10

Certificate of Analytical Results 552580

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T4-4'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-039	Date Collected:	05.03.17 12.55	Sample Depth:	4 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.14.17 13.00	Basis:	Wet Weight
Seq Number:	3017234				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<24.6	24.6	mg/kg	05.14.17 18.11	U	5

Certificate of Analytical Results 552580

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T4-6'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-040	Date Collected:	05.03.17 12.58	Sample Depth:	6 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.14.17 13.00	Basis:	Wet Weight
Seq Number:	3017234				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7.83**	4.92	mg/kg	05.14.17 18.18		1

Certificate of Analytical Results 552580

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T4-11'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-041	Date Collected:	05.03.17 01.05	Sample Depth:	11 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.14.17 13.30	Basis:	Wet Weight
Seq Number:	3017230				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**14.8**	4.99	mg/kg	05.14.17 19.04		1

Certificate of Analytical Results 552580

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**T4-16'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552580-042	Date Collected:	05.03.17 01.10	Sample Depth:	16 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.14.17 13.30	Basis:	Wet Weight
Seq Number:	3017230				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**271**	4.92	mg/kg	05.14.17 19.27		1

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

\+ NELAC certification not offered for this compound.

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

COG Operating LLC

SRO STATE COM #48H

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 3017191 Matrix: Solid Date Prep: 05.13.17
MB Sample Id: 724544-1-BLK LCS Sample Id: 724544-1-BKS LCSD Sample Id: 724544-1-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	245	98	90-110	2	20	mg/kg	05.13.17 17:06	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 3017234 Matrix: Solid Date Prep: 05.14.17
MB Sample Id: 724549-1-BLK LCS Sample Id: 724549-1-BKS LCSD Sample Id: 724549-1-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	255	102	90-110	1	20	mg/kg	05.14.17 14:38	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 3017230 Matrix: Solid Date Prep: 05.14.17
MB Sample Id: 724559-1-BLK LCS Sample Id: 724559-1-BKS LCSD Sample Id: 724559-1-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	255	102	253	101	90-110	1	20	mg/kg	05.14.17 18:49	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 3017191 Matrix: Soil Date Prep: 05.13.17
Parent Sample Id: 552580-011 MS Sample Id: 552580-011 S MSD Sample Id: 552580-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	98.0	247	347	101	348	101	90-110	0	20	mg/kg	05.13.17 19:59	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 3017234 Matrix: Soil Date Prep: 05.14.17
Parent Sample Id: 552580-022 MS Sample Id: 552580-022 S MSD Sample Id: 552580-022 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	6.48	247	258	102	255	101	90-110	1	20	mg/kg	05.14.17 15:01	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 3017234 Matrix: Soil Date Prep: 05.14.17
Parent Sample Id: 552580-033 MS Sample Id: 552580-033 S MSD Sample Id: 552580-033 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	209	246	457	101	456	100	90-110	0	20	mg/kg	05.14.17 16:47	

QC Summary 552580

COG Operating LLC
SRO STATE COM #48H

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 3017230 Matrix: Soil Date Prep: 05.14.17
Parent Sample Id: 552580-041 MS Sample Id: 552580-041 S MSD Sample Id: 552580-041 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	14.8	250	299	114	289	110	90-110	3	20	mg/kg	05.14.17 19:12	X

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 3017230 Matrix: Soil Date Prep: 05.14.17
Parent Sample Id: 552582-005 MS Sample Id: 552582-005 S MSD Sample Id: 552582-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	26.8	244	311	116	296	110	90-110	5	20	mg/kg	05.14.17 20:58	X

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 3017191 Matrix: Soil Date Prep: 05.15.17
Parent Sample Id: 552580-001 MS Sample Id: 552580-001 S MSD Sample Id: 552580-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	11000	244	10700	0	10600	0	90-110	1	20	mg/kg	05.15.17 09:34	X

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3016765 Matrix: Solid Date Prep: 05.08.17
MB Sample Id: 724267-1-BLK LCS Sample Id: 724267-1-BKS LCSD Sample Id: 724267-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	1170	117	1170	117	70-135	0	35	mg/kg	05.08.17 16:14	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	1100	110	1120	112	70-135	2	35	mg/kg	05.08.17 16:14	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	109		115		120		70-135	%	05.08.17 16:14
o-Terphenyl	118		116		115		70-135	%	05.08.17 16:14

QC Summary 552580

COG Operating LLC
SRO STATE COM #48H

Analytical Method: TPH By SW8015 Mod | Prep Method: TX1005P
Seq Number: 3016765 | Matrix: Soil | Date Prep: 05.08.17
Parent Sample Id: 552561-001 | MS Sample Id: 552561-001 S | MSD Sample Id: 552561-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
C6-C10 Gasoline Range Hydrocarbons	18.9	999	1030	101	986	97	70-135	4	35	mg/kg	05.08.17 18:13	
C10-C28 Diesel Range Hydrocarbons	110	999	1140	103	1140	103	70-135	0	35	mg/kg	05.08.17 18:13	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	107		97		70-135	%	05.08.17 18:13
o-Terphenyl	103		85		70-135	%	05.08.17 18:13

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3016772 | Matrix: Solid | Date Prep: 05.08.17
MB Sample Id: 724253-1-BLK | LCS Sample Id: 724253-1-BKS | LCSD Sample Id: 724253-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.0954	96	0.0967	97	70-130	1	35	mg/kg	05.08.17 19:22	
Toluene	<0.00199	0.0994	0.0995	100	0.111	111	70-130	11	35	mg/kg	05.08.17 19:22	
Ethylbenzene	<0.00199	0.0994	0.0915	92	0.0937	94	71-129	2	35	mg/kg	05.08.17 19:22	
m,p-Xylenes	<0.00398	0.199	0.180	90	0.182	91	70-135	1	35	mg/kg	05.08.17 19:22	
o-Xylene	<0.00199	0.0994	0.0944	95	0.0975	98	71-133	3	35	mg/kg	05.08.17 19:22	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	119		101		104		80-120	%	05.08.17 19:22
4-Bromofluorobenzene	110		101		103		80-120	%	05.08.17 19:22

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3017044 | Matrix: Solid | Date Prep: 05.08.17
MB Sample Id: 724323-1-BLK | LCS Sample Id: 724323-1-BKS | LCSD Sample Id: 724323-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0942	94	0.0942	94	70-130	0	35	mg/kg	05.09.17 07:15	
Toluene	<0.00200	0.0998	0.0964	97	0.101	101	70-130	5	35	mg/kg	05.09.17 07:15	
Ethylbenzene	<0.00200	0.0998	0.0938	94	0.0898	90	71-129	4	35	mg/kg	05.09.17 07:15	
m,p-Xylenes	<0.00399	0.200	0.186	93	0.186	93	70-135	0	35	mg/kg	05.09.17 07:15	
o-Xylene	<0.00200	0.0998	0.0996	100	0.103	103	71-133	3	35	mg/kg	05.09.17 07:15	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		97		101		80-120	%	05.09.17 07:15
4-Bromofluorobenzene	92		85		106		80-120	%	05.09.17 07:15

QC Summary 552580

COG Operating LLC

SRO STATE COM #48H

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

Seq Number: 3016772 | Matrix: Soil | Date Prep: 05.08.17

Parent Sample Id: 552561-001 | MS Sample Id: 552561-001 S | MSD Sample Id: 552561-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0743	74	0.0770	76	70-130	4	35	mg/kg	05.08.17 19:54	
Toluene	<0.00202	0.101	0.0704	70	0.0884	88	70-130	23	35	mg/kg	05.08.17 19:54	
Ethylbenzene	0.00751	0.101	0.0627	55	0.0780	70	71-129	22	35	mg/kg	05.08.17 19:54	X
m,p-Xylenes	0.0417	0.202	0.151	54	0.162	60	70-135	7	35	mg/kg	05.08.17 19:54	X
o-Xylene	0.0179	0.101	0.0868	68	0.0875	69	71-133	1	35	mg/kg	05.08.17 19:54	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	120		118		80-120	%	05.08.17 19:54
4-Bromofluorobenzene	116		112		80-120	%	05.08.17 19:54

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

Seq Number: 3017044 | Matrix: Soil | Date Prep: 05.08.17

Parent Sample Id: 552582-003 | MS Sample Id: 552582-003 S | MSD Sample Id: 552582-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0725	73	0.0485	48	70-130	40	35	mg/kg	05.09.17 07:47	XF
Toluene	<0.00200	0.0998	0.0639	64	0.0348	34	70-130	59	35	mg/kg	05.09.17 07:47	XF
Ethylbenzene	<0.00200	0.0998	0.0539	54	0.0289	29	71-129	60	35	mg/kg	05.09.17 07:47	XF
m,p-Xylenes	<0.00399	0.200	0.105	53	0.0505	25	70-135	70	35	mg/kg	05.09.17 07:47	XF
o-Xylene	<0.00200	0.0998	0.0597	60	0.0353	35	71-133	51	35	mg/kg	05.09.17 07:47	XF

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	112		91		80-120	%	05.09.17 07:47
4-Bromofluorobenzene	105		95		80-120	%	05.09.17 07:47

CHAIN OF CUSTODY

Page 1 Of 5

XENCO LABORATORIES

Setting the Standard since 1990

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

Xenco Quote # | Xenco Job # 552580

Client / Reporting Information

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

Project Information

Project Name/Number: SRO STATE COM #48H
Project Location: SRO STATE COM #
Invoice To: COG Operating LLC, Attn: Robert Mcneill, 600 W. Illinois, Midland TX 79701
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	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH	BTEX	Chloride	Field Comments
1	T1 - Surf	—	5/3/17	9:30 Am	S	1									X	X	X	
2	T1 - 1'	1		9:35 Am		1									X	X	X	
3	T1 - 2'	2		9:37 Am		1											X	
4	T1 - 3'	3		9:40 Am		1											X	
5	T1 - 4'	4		9:42 Am		1											X	
6	T1 - 6'	6		9:45 Am		1											X	
7	T1 - 8'	8		9:47 Am		1											X	
8	T1 - 10'	10		9:50 Am		1											X	
9	T1 - 12'	12		9:52 Am		1											X	
10	T1 - 14'	14		9:54 Am		1											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:

FED-EX / UPS: Tracking #

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

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		5/5/17 11:30 Am	Sid Butler 11:00 AM 5-5-17	2		
3	Relinquished by:	Date Time:	Received By:	Relinquished By: 4	Date Time:	Received By:
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice: X

Temp: 3.1 IR ID:R-9
CF:(0-6: 0.0°C) (6-23: +0.1°C)
Corrected Temp: 3.1

CHAIN OF CUSTODY

Page 2 Of 5

XENCO LABORATORIES

Setting the Standard since 1990

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

Xenco Quote #
Xenco Job # 552580

Client / Reporting Information

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

Project Information

Project Name/Number: SRO STATE COM #48H
Project Location: SRO STATE COM #
Invoice To: COG Operating LLC, Attn: Robert Mcneill, 600 W. Illinois, Midland TX 79701
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	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH	BTEX	Chloride	Field Comments
1	T1 - 18'	18'	5/3/17	9:57 Am	S	1											X	
2	T1 - 24'	24'	5/3/17	9:58 Am		1											X	
3	T2 - SURF	—		10:05		1									X	X	X	
4	T2 - 1'	1		10:10		1									X	X	X	
5	T2 - 2'	2		10:13		1											X	
6	T2 - 3'	3		10:15		1											X	
7	T2 - 4'	4		10:17		1											X	
8	T2 - 6'	6		10:20		1											X	
9	T2 - 8'	8		10:22		1											X	
10	T2 - 10'	10		10:25		1											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:

FED-EX / UPS: Tracking #

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

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		11:00 Am 5/5/17	Sid Butler 11:00 AM 5-5-17			
2						
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
4						
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice
						X

Temp: 3.1 IR ID:R-9
CF:(0-6: 0.0°C) (6-23: +0.1°C)
Corrected Temp: 3.1

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 3 Of 5

XENCO LABORATORIES

Setting the Standard since 1990

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

Xenco Quote # | Xenco Job # 5525900

Client / Reporting Information

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

Project Information

Project Name/Number: SRO STATE COM #48H
Project Location: SRO STATE COM #
Invoice To: COG Operating LLC, Attn: Robert Mcneill, 600 W. Illinois, Midland TX 79701
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	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH	BTEX	Chloride	Field Comments
1	T2 - 12'	12	5/3/17	10:30	S	1											X	
2	T2 - 14'	14	"	10:35	"	1											X	
3	T2 - 19'	19	"	10:37	"	1											X	
4	T2 - 24'	24	"	10:40	"	1											X	
5	T3 - SURF	—	"	10:55	"	1									X	X	X	
6	T3 - 1'	1	"	11:00	"	1									X	X	X	
7	T3 - 2'	2	"	11:03	"	1											X	
8	T3 - 3'	3	"	11:05	"	1											X	
9	T3 - 4'	4	"	11:08	"	1											X	
10	T3 - 6'	6	"	11:10	"	1											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:

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		5/5/17 11:0 Am	Sid Butler 11:00 AM 5-5-17	2		2
3			3	4		4
5			5	Custody Seal #	Preserved where applicable	On Ice: X

Temp: 3.1 IR ID:R-9
CF:(0-6: 0.0°C) (6-23: +0.1°C)
Corrected Temp: 3.1

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

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

Xenco Quote # | Xenco Job # 557580

Client / Reporting Information

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

Project Information

Project Name/Number: SRO STATE COM #48H
Project Location: SRO STATE COM #
Invoice To: COG Operating LLC, Attn: Robert Mcneill, 600 W. Illinois, Midland TX 79701
PO Number:

Analytical Information

TPH | BTEX | Chloride

Matrix Codes

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

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH	BTEX	Chloride	Field Comments
1	T3-8'	8	5/3/17	11:45	S	1											X	
2	T3-10'	10	5/3/17	11:50		1											X	
3	T3-17'	17	5/3/17	11:55		1											X	
4	T3-22'	22	5/3/17	12:35		1											X	
5	T4-SURF	-	5/3/17	12:40		1									X	X	X	
6	T4-1'	1	5/3/17	12:42		1									X	X	X	
7	T4-2	2	5/3/17	12:45		1											X	
8	T4-3	3	5/3/17	12:50		1											X	
9	T4-4	4	5/3/17	12:55		1											X	
10	T4-6	6	5/3/17	12:58		1											X	

Turnaround Time (Business days) | Data Deliverable Information | Notes:

- [ ] Same Day TAT
- [ ] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY
- [ ] 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

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

FED-EX / UPS: Tracking #

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

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		5/5/17 11:00 am	Jeff Butler 11:00AM 5-5-17	2		2
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice

Temp: 3.1 IR ID.R-9
CF:(0.6: 0.0°C) (6-23: +0.1°C)
Corrected Temp: 3.1

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 5 Of 5

XENCO LABORATORIES

Setting the Standard since 1990

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

Xenco Quote # | Xenco Job # 552580

Client / Reporting Information

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

Project Information

Project Name/Number: SRO STATE COM #48H
Project Location: SRO STATE COM #
Invoice To: COG Operating LLC, Attn: Robert Mcneill, 600 W. Illinois, Midland TX 79701
PO Number:

Analytical Information

TPH | BTEX | Chloride

Matrix Codes

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

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH	BTEX	Chloride	Field Comments
1	T4 - 1'	1'	5/3/17	1:05	S	1											X	
2	T4 - 16'	16'	5/3/17	1:10	S	1											X	
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
- [ ] 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 III Std QC+ Forms
- [ ] Level 3 (CLP Forms)
- [ ] TRRP Checklist
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] TRRP Level IV
- [ ] UST / RG -411

Notes:

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	Sampler	5/5/17 11:00 am	Sid Butler 11:00AM 5-5-17	2		2
3			3	4		4
5			5	Custody Seal #	Preserved where applicable	On Ice: X

Temp: 3.1 IR ID:R-9
CF:(0-6: 0.0°C) (6-23: +0.1°C)
Corrected Temp: 3.1

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC

Date/ Time Received: 05/05/2017 11:00:00 AM

Work Order #: 552580

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R9

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

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

Analyst:

PH Device/Lot#:

Checklist completed by: Jessica Kramer
Jessica Kramer
Date: 05/08/2017

Checklist reviewed by: Liz Givens
Liz Givens
Date: 05/08/2017

Certificate of Analysis Summary 552581

COG Operating LLC, Artesia, NM

Project Name: SRO STATE COM #48H

Project Id:
Contact: Aaron Lieb
Project Location: SRO STATE COM #48H

Date Received in Lab: Fri May-05-17 11:00 am
Report Date: 15-MAY-17
Project Manager: Liz Givens

Analysis Requested													
	Lab Id:	552581-001		552581-002		552581-003		552581-004					
	Field Id:	BG-5'		BG-10'		BG-15'		BG-20'					
	Depth:	5 ft		10 ft		15 ft		20 ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	May-03-17 13:30		May-03-17 13:35		May-03-17 13:40		May-03-17 13:45					
Inorganic Anions by EPA 300/300.1	***Extracted:***	May-14-17 13:30		May-14-17 13:30		May-14-17 13:30		May-14-17 13:30					
	Analyzed:	May-14-17 19:34		May-14-17 19:42		May-14-17 19:50		May-14-17 20:12					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		<49.0	49.0	<24.4	24.4	<24.6	24.6	47.6	4.99				

Brandi Ritcherson
Project Manager

Analytical Report 552581

for

COG Operating LLC

Project Manager: Aaron Lieb

SRO STATE COM #48H

15-MAY-17

Collected By: Client

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)

15-MAY-17

Project Manager: **Aaron Lieb**
COG Operating LLC
2407 Pecos Avenue
Artesia, NM 88210

Reference: XENCO Report No(s): **552581**
SRO STATE COM #48H
Project Address: SRO STATE COM #48H

Aaron Lieb:

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) 552581. 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. 552581 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,

Brandi Ritcherson
Project Manager

Sample Cross Reference 552581

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BG-5'	S	05-03-17 13:30	- 5 ft	552581-001
BG-10'	S	05-03-17 13:35	- 10 ft	552581-002
BG-15'	S	05-03-17 13:40	- 15 ft	552581-003
BG-20'	S	05-03-17 13:45	- 20 ft	552581-004

Client Name: COG Operating LLC
Project Name: SRO STATE COM #48H

Project ID:
Work Order Number(s): *552581*

Report Date: *15-MAY-17*
Date Received: *05/05/2017*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 552581

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**BG-5'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552581-001	Date Collected:	05.03.17 13.30	Sample Depth:	5 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.14.17 13.30	Basis:	Wet Weight
Seq Number:	3017230				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<49.0	49.0	mg/kg	05.14.17 19.34	U	10

Certificate of Analytical Results 552581

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**BG-10'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552581-002	Date Collected:	05.03.17 13.35	Sample Depth:	10 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.14.17 13.30	Basis:	Wet Weight
Seq Number:	3017230				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<24.4	24.4	mg/kg	05.14.17 19.42	U	5

Certificate of Analytical Results 552581

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**BG-15'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552581-003	Date Collected:	05.03.17 13.40	Sample Depth:	15 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.14.17 13.30	Basis:	Wet Weight
Seq Number:	3017230				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<24.6	24.6	mg/kg	05.14.17 19.50	U	5

Certificate of Analytical Results 552581

COG Operating LLC, Artesia, NM

SRO STATE COM #48H

Sample Id:	**BG-20'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552581-004	Date Collected:	05.03.17 13.45	Sample Depth:	20 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.14.17 13.30	Basis:	Wet Weight
Seq Number:	3017230				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**47.6**	4.99	mg/kg	05.14.17 20.12		1

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

\+ NELAC certification not offered for this compound.

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

QC Summary 552581

COG Operating LLC

SRO STATE COM #48H

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P

Seq Number: 3017230 Matrix: Solid Date Prep: 05.14.17

MB Sample Id: 724559-1-BLK LCS Sample Id: 724559-1-BKS LCSD Sample Id: 724559-1-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	255	102	253	101	90-110	1	20	mg/kg	05.14.17 18:49	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P

Seq Number: 3017230 Matrix: Soil Date Prep: 05.14.17

Parent Sample Id: 552580-041 MS Sample Id: 552580-041 S MSD Sample Id: 552580-041 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	14.8	250	299	114	289	110	90-110	3	20	mg/kg	05.14.17 19:12	X

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P

Seq Number: 3017230 Matrix: Soil Date Prep: 05.14.17

Parent Sample Id: 552582-005 MS Sample Id: 552582-005 S MSD Sample Id: 552582-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	26.8	244	311	116	296	110	90-110	5	20	mg/kg	05.14.17 20:58	X

CHAIN OF CUSTODY

Page 1 of 1

XENCO LABORATORIES

Setting the Standard since 1990

Stafford,Texas (281-240-4200)

Dallas Texas (214-902-0300)

San Antonio, Texas (210-509-3334)

Midland, Texas (432-704-5251)

Phoenix, Arizona (480-355-0900)

www.xenco.com

Xenco Quote #

Xenco Job # 552581

Client / Reporting Information

Company Name / Branch: COG Operating LLC

Company Address: 2407 PECOS Avenue Artesia NM 88210

Email: alieb@concho.com dneel2@concho.com rhaskell@concho.com

Phone No: 575-748-1553

Project Contact: Aaron Lieb

Samplers's Name- Aaron Lieb

Project Information

Project Name/Number: SRO STATE COM #48H

Project Location: SRO STATE COM #

Invoice To: COG Operating LLC
Attn: Robert Mcneill
600 W. Illinois
Midland TX 79701

PO Number:

Analytical Information

Chloride

Matrix Codes

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

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Chloride	Field Comments
1	B.G. - 5'	5	5/3/17	1:30	S	1									X	
2	B.G. - 10'	10	"	1:35	"	1									X	
3	B.G. - 15'	15	"	1:40	"	1									X	
4	B.G. - 20'	20	"	1:45	"	1									X	
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
- ☐ Contract TAT
- ☐ 3 Day EMERGENCY

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

Data Deliverable Information

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

Notes:

FED-EX / UPS: Tracking #

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

	Relinquished by	Date Time	Received By	Relinquished By	Date Time	Received By
1	Sampler	5/5/17 11:00 mm	Sid Butler 5-5-17 11:00AM			
2						
3						
4						
5						

Custody Seal # | Preserved where applicable ☐ | On Ice ☒

Temp: 3.1 IR ID:R-9
CF:(0-6: 0.0°C) (6-23: +0.1°C)
Corrected Temp: 3.1

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC

Date/ Time Received: 05/05/2017 11:00:00 AM

Work Order #: 552581

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R9

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

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

Analyst:

PH Device/Lot#:

Checklist completed by: Jessica Kramer
Jessica Kramer
Date: 05/08/2017

Checklist reviewed by: Liz Givens
Liz Givens
Date: 05/08/2017

Certificate of Analysis Summary 552582

COG Operating LLC, Artesia, NM

Project Name: SRO State Com #48H

Project Id:
Contact: Aaron Lieb
Project Location: SRO State Com #48H

Date Received in Lab: Fri May-05-17 11:00 am
Report Date: 15-MAY-17
Project Manager: Liz Givens

Analysis Requested		Lab Id:	552582-001		552582-002		552582-003		552582-004		552582-005		552582-006	
		Field Id:	North-Surf		North-1'		East-Surf		East-1'		West-Surf		West-1'	
		Depth:			1 ft				1 ft				1 ft	
		Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sampled:	May-03-17 13:55		May-03-17 13:55		May-03-17 14:05		May-03-17 14:10		May-03-17 14:20		May-03-17 14:25	
BTEX by EPA 8021B		Extracted:	May-08-17 09:00		May-08-17 16:00		May-08-17 16:00		May-08-17 16:00		May-08-17 16:00		May-08-17 16:00	
		Analyzed:	May-09-17 02:35		May-09-17 12:23		May-09-17 08:51		May-09-17 12:40		May-09-17 12:56		May-09-17 13:12	
		Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene			<0.00339	0.00339	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200
Toluene			<0.00339	0.00339	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200
Ethylbenzene			<0.00339	0.00339	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	0.00238	0.00200
m,p-Xylenes			<0.00678	0.00678	<0.00402	0.00402	<0.00399	0.00399	<0.00404	0.00404	<0.00398	0.00398	<0.00399	0.00399
o-Xylene			<0.00339	0.00339	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200
Total Xylenes			<0.00339	0.00339	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200
Total BTEX			<0.00339	0.00339	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	0.00238	0.00200
Inorganic Anions by EPA 300/300.1		Extracted:	May-14-17 13:30		May-14-17 13:30		May-14-17 13:30		May-14-17 13:30		May-14-17 13:30		May-14-17 13:30	
		Analyzed:	May-14-17 20:20		May-14-17 20:28		May-14-17 20:35		May-14-17 20:43		May-14-17 20:50		May-14-17 21:13	
		Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride			13.7	4.95	<4.93	4.93	20.0	4.87	6.90	4.87	26.8	4.88	<4.99	4.99
TPH By SW8015 Mod		Extracted:	May-09-17 07:00		May-09-17 07:00		May-09-17 07:00		May-09-17 07:00		May-09-17 07:00		May-09-17 07:00	
		Analyzed:	May-09-17 08:50		May-09-17 09:52		May-09-17 10:12		May-09-17 10:32		May-09-17 10:52		May-09-17 11:11	
		Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C10 Gasoline Range Hydrocarbons			<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
C10-C28 Diesel Range Hydrocarbons			<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH			<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

Brandi Ritcherson
Project Manager

Analytical Report 552582

for

COG Operating LLC

Project Manager: Aaron Lieb

SRO State Com #48H

15-MAY-17

Collected By: Client

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)

15-MAY-17

Project Manager: **Aaron Lieb**
COG Operating LLC
2407 Pecos Avenue
Artesia, NM 88210

Reference: XENCO Report No(s): **552582**
SRO State Com #48H
Project Address: SRO State Com #48H

Aaron Lieb:

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) 552582. 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. 552582 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,

Brandi Ritcherson
Project Manager

Sample Cross Reference 552582

COG Operating LLC, Artesia, NM

SRO State Com #48H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
North-Surf	S	05-03-17 13:55	N/A	552582-001
North-1'	S	05-03-17 13:55	- 1 ft	552582-002
East-Surf	S	05-03-17 14:05	N/A	552582-003
East-1'	S	05-03-17 14:10	- 1 ft	552582-004
West-Surf	S	05-03-17 14:20	N/A	552582-005
West-1'	S	05-03-17 14:25	- 1 ft	552582-006

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3016772 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3017044 BTEX by EPA 8021B
Lab Sample ID 552582-003 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Benzene recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 552582-002, -003, -004, -005, -006.
The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene Relative Percent Difference (RPD) between matrix spike and duplicate were above quality control limits.
Samples in the analytical batch are: 552582-002, -003, -004, -005, -006

Batch: LBA-3017230 Inorganic Anions by EPA 300/300.1
Lab Sample ID 552582-005 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference.
Samples in the analytical batch are: 552582-001, -002, -003, -004, -005, -006.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analytical Results 552582

COG Operating LLC, Artesia, NM

SRO State Com #48H

Sample Id:	**North-Surf**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552582-001	Date Collected:	05.03.17 13.55		

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.14.17 13.30	Basis:	Wet Weight
Seq Number:	3017230				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**13.7**	4.95	mg/kg	05.14.17 20.20		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.09.17 07.00	Basis:	Wet Weight
Seq Number:	3016886				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C10 Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.09.17 08.50	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	<15.0	15.0	mg/kg	05.09.17 08.50	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.09.17 08.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	05.09.17 08.50	
o-Terphenyl	84-15-1	97	%	70-135	05.09.17 08.50	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	05.08.17 09.00	Basis:	Wet Weight
Seq Number:	3016772				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00339	0.00339	mg/kg	05.09.17 02.35	U	1
Toluene	108-88-3	<0.00339	0.00339	mg/kg	05.09.17 02.35	U	1
Ethylbenzene	100-41-4	<0.00339	0.00339	mg/kg	05.09.17 02.35	U	1
m,p-Xylenes	179601-23-1	<0.00678	0.00678	mg/kg	05.09.17 02.35	U	1
o-Xylene	95-47-6	<0.00339	0.00339	mg/kg	05.09.17 02.35	U	1
Total Xylenes	1330-20-7	<0.00339	0.00339	mg/kg	05.09.17 02.35	U	1
Total BTEX		<0.00339	0.00339	mg/kg	05.09.17 02.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	80-120	05.09.17 02.35	
1,4-Difluorobenzene	540-36-3	108	%	80-120	05.09.17 02.35	

Certificate of Analytical Results 552582

COG Operating LLC, Artesia, NM

SRO State Com #48H

Sample Id:	**North-1'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552582-002	Date Collected:	05.03.17 13.55	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.14.17 13.30	Basis:	Wet Weight
Seq Number:	3017230				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.93	4.93	mg/kg	05.14.17 20.28	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.09.17 07.00	Basis:	Wet Weight
Seq Number:	3016886				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C10 Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.09.17 09.52	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	<15.0	15.0	mg/kg	05.09.17 09.52	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.09.17 09.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	05.09.17 09.52	
o-Terphenyl	84-15-1	101	%	70-135	05.09.17 09.52	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	05.08.17 16.00	Basis:	Wet Weight
Seq Number:	3017044				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	05.09.17 12.23	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	05.09.17 12.23	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	05.09.17 12.23	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	05.09.17 12.23	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	05.09.17 12.23	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	05.09.17 12.23	U	1
Total BTEX		<0.00201	0.00201	mg/kg	05.09.17 12.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	118	%	80-120	05.09.17 12.23	
1,4-Difluorobenzene	540-36-3	112	%	80-120	05.09.17 12.23	

COG Operating LLC, Artesia, NM

SRO State Com #48H

Sample Id:	**East-Surf**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552582-003	Date Collected:	05.03.17 14.05		

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.14.17 13.30	Basis:	Wet Weight
Seq Number:	3017230				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**20.0**	4.87	mg/kg	05.14.17 20.35		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.09.17 07.00	Basis:	Wet Weight
Seq Number:	3016886				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C10 Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.09.17 10.12	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	<15.0	15.0	mg/kg	05.09.17 10.12	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.09.17 10.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	05.09.17 10.12	
o-Terphenyl	84-15-1	98	%	70-135	05.09.17 10.12	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	05.08.17 16.00	Basis:	Wet Weight
Seq Number:	3017044				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.09.17 08.51	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.09.17 08.51	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.09.17 08.51	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.09.17 08.51	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.09.17 08.51	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.09.17 08.51	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.09.17 08.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	80-120	05.09.17 08.51	
4-Bromofluorobenzene	460-00-4	86	%	80-120	05.09.17 08.51	

COG Operating LLC, Artesia, NM

SRO State Com #48H

Sample Id:	**East-1'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552582-004	Date Collected:	05.03.17 14.10	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.14.17 13.30	Basis:	Wet Weight
Seq Number:	3017230				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6.90**	4.87	mg/kg	05.14.17 20.43		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.09.17 07.00	Basis:	Wet Weight
Seq Number:	3016886				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C10 Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.09.17 10.32	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	<15.0	15.0	mg/kg	05.09.17 10.32	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.09.17 10.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	05.09.17 10.32	
o-Terphenyl	84-15-1	100	%	70-135	05.09.17 10.32	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	05.08.17 16.00	Basis:	Wet Weight
Seq Number:	3017044				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	05.09.17 12.40	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	05.09.17 12.40	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	05.09.17 12.40	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	05.09.17 12.40	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	05.09.17 12.40	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	05.09.17 12.40	U	1
Total BTEX		<0.00202	0.00202	mg/kg	05.09.17 12.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	80-120	05.09.17 12.40	
1,4-Difluorobenzene	540-36-3	107	%	80-120	05.09.17 12.40	

COG Operating LLC, Artesia, NM

SRO State Com #48H

Sample Id:	**West-Surf**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552582-005	Date Collected:	05.03.17 14.20		

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.14.17 13.30	Basis:	Wet Weight
Seq Number:	3017230				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**26.8**	4.88	mg/kg	05.14.17 20.50		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.09.17 07.00	Basis:	Wet Weight
Seq Number:	3016886				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C10 Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.09.17 10.52	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	<15.0	15.0	mg/kg	05.09.17 10.52	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.09.17 10.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	05.09.17 10.52	
o-Terphenyl	84-15-1	99	%	70-135	05.09.17 10.52	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	05.08.17 16.00	Basis:	Wet Weight
Seq Number:	3017044				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.09.17 12.56	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.09.17 12.56	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.09.17 12.56	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.09.17 12.56	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.09.17 12.56	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.09.17 12.56	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.09.17 12.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	80-120	05.09.17 12.56	
1,4-Difluorobenzene	540-36-3	111	%	80-120	05.09.17 12.56	

COG Operating LLC, Artesia, NM

SRO State Com #48H

Sample Id:	**West-1'**	Matrix:	Soil	Date Received:	05.05.17 11.00
Lab Sample Id:	552582-006	Date Collected:	05.03.17 14.25	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.14.17 13.30	Basis:	Wet Weight
Seq Number:	3017230				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	05.14.17 21.13	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.09.17 07.00	Basis:	Wet Weight
Seq Number:	3016886				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C10 Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.09.17 11.11	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	<15.0	15.0	mg/kg	05.09.17 11.11	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.09.17 11.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	05.09.17 11.11	
o-Terphenyl	84-15-1	98	%	70-135	05.09.17 11.11	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	05.08.17 16.00	Basis:	Wet Weight
Seq Number:	3017044				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.09.17 13.12	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.09.17 13.12	U	1
Ethylbenzene	100-41-4	**0.00238**	0.00200	mg/kg	05.09.17 13.12		1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.09.17 13.12	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.09.17 13.12	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.09.17 13.12	U	1
Total BTEX		**0.00238**	0.00200	mg/kg	05.09.17 13.12		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	80-120	05.09.17 13.12	
1,4-Difluorobenzene	540-36-3	118	%	80-120	05.09.17 13.12	

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 552582

COG Operating LLC

SRO State Com #48H

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 3017230 Matrix: Solid Date Prep: 05.14.17
MB Sample Id: 724559-1-BLK LCS Sample Id: 724559-1-BKS LCSD Sample Id: 724559-1-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	255	102	253	101	90-110	1	20	mg/kg	05.14.17 18:49	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 3017230 Matrix: Soil Date Prep: 05.14.17
Parent Sample Id: 552580-041 MS Sample Id: 552580-041 S MSD Sample Id: 552580-041 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	14.8	250	299	114	289	110	90-110	3	20	mg/kg	05.14.17 19:12	X

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 3017230 Matrix: Soil Date Prep: 05.14.17
Parent Sample Id: 552582-005 MS Sample Id: 552582-005 S MSD Sample Id: 552582-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	26.8	244	311	116	296	110	90-110	5	20	mg/kg	05.14.17 20:58	X

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3016886 Matrix: Solid Date Prep: 05.09.17
MB Sample Id: 724310-1-BLK LCS Sample Id: 724310-1-BKS LCSD Sample Id: 724310-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	958	96	973	97	70-135	2	35	mg/kg	05.09.17 08:07	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	983	98	946	95	70-135	4	35	mg/kg	05.09.17 08:07	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		98		102		70-135	%	05.09.17 08:07
o-Terphenyl	106		94		100		70-135	%	05.09.17 08:07

QC Summary 552582

COG Operating LLC

SRO State Com #48H

Analytical Method: TPH By SW8015 Mod | Prep Method: TX1005P
Seq Number: 3016886 | Matrix: Soil | Date Prep: 05.09.17
Parent Sample Id: 552582-001 | MS Sample Id: 552582-001 S | MSD Sample Id: 552582-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	970	97	959	96	70-135	1	35	mg/kg	05.09.17 09:11	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	960	96	954	96	70-135	1	35	mg/kg	05.09.17 09:11	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		95		70-135	%	05.09.17 09:11
o-Terphenyl	96		89		70-135	%	05.09.17 09:11

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3016772 | Matrix: Solid | Date Prep: 05.08.17
MB Sample Id: 724253-1-BLK | LCS Sample Id: 724253-1-BKS | LCSD Sample Id: 724253-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.0954	96	0.0967	97	70-130	1	35	mg/kg	05.08.17 19:22	
Toluene	<0.00199	0.0994	0.0995	100	0.111	111	70-130	11	35	mg/kg	05.08.17 19:22	
Ethylbenzene	<0.00199	0.0994	0.0915	92	0.0937	94	71-129	2	35	mg/kg	05.08.17 19:22	
m,p-Xylenes	<0.00398	0.199	0.180	90	0.182	91	70-135	1	35	mg/kg	05.08.17 19:22	
o-Xylene	<0.00199	0.0994	0.0944	95	0.0975	98	71-133	3	35	mg/kg	05.08.17 19:22	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	119		101		104		80-120	%	05.08.17 19:22
4-Bromofluorobenzene	110		101		103		80-120	%	05.08.17 19:22

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3017044 | Matrix: Solid | Date Prep: 05.08.17
MB Sample Id: 724323-1-BLK | LCS Sample Id: 724323-1-BKS | LCSD Sample Id: 724323-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0942	94	0.0942	94	70-130	0	35	mg/kg	05.09.17 07:15	
Toluene	<0.00200	0.0998	0.0964	97	0.101	101	70-130	5	35	mg/kg	05.09.17 07:15	
Ethylbenzene	<0.00200	0.0998	0.0938	94	0.0898	90	71-129	4	35	mg/kg	05.09.17 07:15	
m,p-Xylenes	<0.00399	0.200	0.186	93	0.186	93	70-135	0	35	mg/kg	05.09.17 07:15	
o-Xylene	<0.00200	0.0998	0.0996	100	0.103	103	71-133	3	35	mg/kg	05.09.17 07:15	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		97		101		80-120	%	05.09.17 07:15
4-Bromofluorobenzene	92		85		106		80-120	%	05.09.17 07:15

QC Summary 552582

COG Operating LLC

SRO State Com #48H

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

Seq Number: 3016772 | Matrix: Soil | Date Prep: 05.08.17

Parent Sample Id: 552561-001 | MS Sample Id: 552561-001 S | MSD Sample Id: 552561-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0743	74	0.0770	76	70-130	4	35	mg/kg	05.08.17 19:54	
Toluene	<0.00202	0.101	0.0704	70	0.0884	88	70-130	23	35	mg/kg	05.08.17 19:54	
Ethylbenzene	0.00751	0.101	0.0627	55	0.0780	70	71-129	22	35	mg/kg	05.08.17 19:54	X
m,p-Xylenes	0.0417	0.202	0.151	54	0.162	60	70-135	7	35	mg/kg	05.08.17 19:54	X
o-Xylene	0.0179	0.101	0.0868	68	0.0875	69	71-133	1	35	mg/kg	05.08.17 19:54	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	120		118		80-120	%	05.08.17 19:54
4-Bromofluorobenzene	116		112		80-120	%	05.08.17 19:54

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

Seq Number: 3017044 | Matrix: Soil | Date Prep: 05.08.17

Parent Sample Id: 552582-003 | MS Sample Id: 552582-003 S | MSD Sample Id: 552582-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0725	73	0.0485	48	70-130	40	35	mg/kg	05.09.17 07:47	XF
Toluene	<0.00200	0.0998	0.0639	64	0.0348	34	70-130	59	35	mg/kg	05.09.17 07:47	XF
Ethylbenzene	<0.00200	0.0998	0.0539	54	0.0289	29	71-129	60	35	mg/kg	05.09.17 07:47	XF
m,p-Xylenes	<0.00399	0.200	0.105	53	0.0505	25	70-135	70	35	mg/kg	05.09.17 07:47	XF
o-Xylene	<0.00200	0.0998	0.0597	60	0.0353	35	71-133	51	35	mg/kg	05.09.17 07:47	XF

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	112		91		80-120	%	05.09.17 07:47
4-Bromofluorobenzene	105		95		80-120	%	05.09.17 07:47

CHAIN OF CUSTODY

Page 1 Of 1

XENCO LABORATORIES
Setting the Standard since 1990

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

Xenco Quote #
Xenco Job # 562507

Client / Reporting Information

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

Project Information

Project Name/Number: SRO STATE COM #48H
Project Location: SRO STATE COM #
Invoice To: COG Operating LLC, Attn: Robert Mcneill, 600 W. Illinois, Midland TX 79701
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	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH	BTEX	Chloride	Field Comments
1	North - Surf	Surf	5/3/17	1:55pm	S	1									X	X	X	
2	North - 1'	1'	"	"	"	1									X	X	X	
3																		
4	East - Surf	Surf		2:05		1									X	X	X	
5	East - 1'	1		2:10pm		1									X	X	X	
6																		
7	West - Surf	Surf		2:20		1									X	X	X	
8	West - 1'	1		2:25pm		1									X	X	X	
9																		
10																		

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

Notes:

FED-EX / UPS: Tracking #

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

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		5/5/17 11:00 Am	Sid Butler 11:10 AM 5-5-17	2		2
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice

Temp: 3.1 IR ID:R-9
CF:(0-6: 0.0°C) (6-23: +0.1°C)
Corrected Temp: 3.1

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

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC

Date/ Time Received: 05/05/2017 11:00:00 AM

Work Order #: 552582

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R9

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

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

Analyst:

PH Device/Lot#:

Checklist completed by: Jessica Kramer
Jessica Kramer
Date: 05/08/2017

Checklist reviewed by: Liz Givens
Liz Givens
Date: 05/08/2017

CARDINAL Laboratories

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

September 07, 2017

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: SRO STATE COM #48H

Enclosed are the results of analyses for samples received by the laboratory on 08/31/17 16:34.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

BBC International, Inc.
Cliff Brunson
P.O. Box 805
Hobbs NM, 88241
Fax To: (575) 397-0397

Received:	08/31/2017	Sampling Date:	08/25/2017
Reported:	09/07/2017	Sampling Type:	Soil
Project Name:	SRO STATE COM #48H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: SP1 @ 1 (H702335-01)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/05/2017	ND	1.93	96.6	2.00	0.458	
Toluene*	<0.050	0.050	09/05/2017	ND	1.93	96.6	2.00	0.872	
Ethylbenzene*	<0.050	0.050	09/05/2017	ND	2.06	103	2.00	0.713	
Total Xylenes*	<0.150	0.150	09/05/2017	ND	6.13	102	6.00	0.591	
Total BTEX	<0.300	0.300	09/05/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *72-148*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**9800**	16.0	09/06/2017	ND	448	112	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/05/2017	ND	185	92.4	200	3.24	
DRO >C10-C28	<10.0	10.0	09/05/2017	ND	186	92.8	200	2.95	
EXT DRO >C28-C36	<10.0	10.0	09/05/2017	ND					

Surrogate: 1-Chlorooctane *95.3 %* *28.3-164*

Surrogate: 1-Chlorooctadecane *94.8 %* *34.7-157*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

BBC International, Inc.
Cliff Brunson
P.O. Box 805
Hobbs NM, 88241
Fax To: (575) 397-0397

Received:	08/31/2017	Sampling Date:	08/25/2017
Reported:	09/07/2017	Sampling Type:	Soil
Project Name:	SRO STATE COM #48H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: SP1 @ 3 (H702335-02)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**8800**	16.0	09/06/2017	ND	448	112	400	3.64	

Sample ID: SP1 @ 6 (H702335-03)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**6100**	16.0	09/06/2017	ND	448	112	400	3.64	

Sample ID: SP1 @ 9 (H702335-04)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**8900**	16.0	09/06/2017	ND	448	112	400	3.64	

Sample ID: SP1 @ 12 (H702335-05)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**9800**	16.0	09/06/2017	ND	448	112	400	3.64	

Sample ID: SP1 @ 16 (H702335-06)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**4400**	16.0	09/06/2017	ND	448	112	400	3.64	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

BBC International, Inc.
Cliff Brunson
P.O. Box 805
Hobbs NM, 88241
Fax To: (575) 397-0397

Received:	08/31/2017	Sampling Date:	08/25/2017
Reported:	09/07/2017	Sampling Type:	Soil
Project Name:	SRO STATE COM #48H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: SP1 @ 18 (H702335-07)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**5920**	16.0	09/06/2017	ND	448	112	400	3.64	

Sample ID: SP2 @ 1 (H702335-08)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**10700**	16.0	09/06/2017	ND	448	112	400	3.64	

Sample ID: SP2 @ 3 (H702335-09)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**8700**	16.0	09/06/2017	ND	448	112	400	3.64	

Sample ID: SP2 @ 6 (H702335-10)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**6800**	16.0	09/06/2017	ND	416	104	400	3.77	QM-07

Sample ID: SP2 @ 9 (H702335-11)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**7600**	16.0	09/06/2017	ND	416	104	400	3.77	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

BBC International, Inc.
Cliff Brunson
P.O. Box 805
Hobbs NM, 88241
Fax To: (575) 397-0397

Received:	08/31/2017	Sampling Date:	08/28/2017
Reported:	09/07/2017	Sampling Type:	Soil
Project Name:	SRO STATE COM #48H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: SP2 @ 12 (H702335-12)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**11400**	16.0	09/06/2017	ND	416	104	400	3.77	

Sample ID: SP2 @ 16 (H702335-13)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2200**	16.0	09/06/2017	ND	416	104	400	3.77	

Sample ID: SP2 @ 18 (H702335-14)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1280**	16.0	09/06/2017	ND	416	104	400	3.77	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

BBC International, Inc.
Cliff Brunson
P.O. Box 805
Hobbs NM, 88241
Fax To: (575) 397-0397

Received:	08/31/2017	Sampling Date:	08/28/2017
Reported:	09/07/2017	Sampling Type:	Soil
Project Name:	SRO STATE COM #48H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: SP3 @ 1 (H702335-15)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/06/2017	ND	1.82	90.8	2.00	0.313	
Toluene*	<0.050	0.050	09/06/2017	ND	1.83	91.3	2.00	0.0863	
Ethylbenzene*	<0.050	0.050	09/06/2017	ND	1.94	97.0	2.00	0.633	
Total Xylenes*	<0.150	0.150	09/06/2017	ND	5.78	96.3	6.00	0.918	
Total BTEX	<0.300	0.300	09/06/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.4 %* *72-148*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**11200**	16.0	09/07/2017	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/05/2017	ND	185	92.4	200	3.24	
DRO >C10-C28	<10.0	10.0	09/05/2017	ND	186	92.8	200	2.95	
EXT DRO >C28-C36	<10.0	10.0	09/05/2017	ND					

Surrogate: 1-Chlorooctane *84.2 %* *28.3-164*

Surrogate: 1-Chlorooctadecane *92.4 %* *34.7-157*

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

BBC International, Inc.
Cliff Brunson
P.O. Box 805
Hobbs NM, 88241
Fax To: (575) 397-0397

Received:	08/31/2017	Sampling Date:	08/28/2017
Reported:	09/07/2017	Sampling Type:	Soil
Project Name:	SRO STATE COM #48H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: SP3 @ 3 (H702335-16)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**10800**	16.0	09/07/2017	ND	416	104	400	3.77	

Sample ID: SP3 @ 6 (H702335-17)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**9000**	16.0	09/07/2017	ND	416	104	400	3.77	

Sample ID: SP3 @ 9 (H702335-18)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**3200**	16.0	09/07/2017	ND	416	104	400	3.77	

Sample ID: SP3 @ 12 (H702335-19)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**656**	16.0	09/07/2017	ND	416	104	400	3.77	

Sample ID: SP3 @ 16 (H702335-20)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**400**	16.0	09/07/2017	ND	416	104	400	3.77	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

BBC International, Inc.
Cliff Brunson
P.O. Box 805
Hobbs NM, 88241
Fax To: (575) 397-0397

Received:	08/31/2017	Sampling Date:	08/28/2017
Reported:	09/07/2017	Sampling Type:	Soil
Project Name:	SRO STATE COM #48H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: SP3 @ 18 (H702335-21)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**368**	16.0	09/07/2017	ND	416	104	400	3.77	

Sample ID: SP4 @ 1 (H702335-22)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**38400**	16.0	09/07/2017	ND	416	104	400	3.77	

Sample ID: SP4 @ 3 (H702335-23)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1570**	16.0	09/07/2017	ND	416	104	400	3.77	

Sample ID: SP4 @ 6 (H702335-24)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**7300**	16.0	09/07/2017	ND	416	104	400	3.77	

Sample ID: SP4 @ 9 (H702335-25)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**8300**	16.0	09/07/2017	ND	416	104	400	3.77	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

BBC International, Inc.
Cliff Brunson
P.O. Box 805
Hobbs NM, 88241
Fax To: (575) 397-0397

Received:	08/31/2017	Sampling Date:	08/28/2017
Reported:	09/07/2017	Sampling Type:	Soil
Project Name:	SRO STATE COM #48H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: SP4 @ 12 (H702335-26)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**6200**	16.0	09/07/2017	ND	416	104	400	3.77	

Sample ID: SP4 @ 16 (H702335-27)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**5300**	16.0	09/07/2017	ND	416	104	400	3.77	

Sample ID: SP4 @ 18 (H702335-28)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**4100**	16.0	09/07/2017	ND	416	104	400	3.77	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

BBC International, Inc.
Cliff Brunson
P.O. Box 805
Hobbs NM, 88241
Fax To: (575) 397-0397

Received:	08/31/2017	Sampling Date:	08/28/2017
Reported:	09/07/2017	Sampling Type:	Soil
Project Name:	SRO STATE COM #48H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: SP5 @ 1 (H702335-29)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/06/2017	ND	1.82	90.8	2.00	0.313	
Toluene*	<0.050	0.050	09/06/2017	ND	1.83	91.3	2.00	0.0863	
Ethylbenzene*	<0.050	0.050	09/06/2017	ND	1.94	97.0	2.00	0.633	
Total Xylenes*	<0.150	0.150	09/06/2017	ND	5.78	96.3	6.00	0.918	
Total BTEX	<0.300	0.300	09/06/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.5 %* *72-148*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**34800**	16.0	09/07/2017	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/05/2017	ND	185	92.4	200	3.24	
DRO >C10-C28	**11.8**	10.0	09/05/2017	ND	186	92.8	200	2.95	
EXT DRO >C28-C36	<10.0	10.0	09/05/2017	ND					

Surrogate: 1-Chlorooctane *92.6 %* *28.3-164*

Surrogate: 1-Chlorooctadecane *98.5 %* *34.7-157*

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

BBC International, Inc.
Cliff Brunson
P.O. Box 805
Hobbs NM, 88241
Fax To: (575) 397-0397

Received:	08/31/2017	Sampling Date:	08/28/2017
Reported:	09/07/2017	Sampling Type:	Soil
Project Name:	SRO STATE COM #48H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: SP5 @ 3 (H702335-30)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1840**	16.0	09/07/2017	ND	416	104	400	3.77	

Sample ID: SP5 @ 6 (H702335-31)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**7000**	16.0	09/07/2017	ND	416	104	400	3.77	

Sample ID: SP5 @ 9 (H702335-32)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**8000**	16.0	09/07/2017	ND	416	104	400	3.77	

Sample ID: SP5 @ 12 (H702335-33)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**6400**	16.0	09/07/2017	ND	416	104	400	3.77	

Sample ID: SP5 @ 16 (H702335-34)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**5900**	16.0	09/07/2017	ND	416	104	400	3.77	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

BBC International, Inc.
Cliff Brunson
P.O. Box 805
Hobbs NM, 88241
Fax To: (575) 397-0397

Received:	08/31/2017	Sampling Date:	08/28/2017
Reported:	09/07/2017	Sampling Type:	Soil
Project Name:	SRO STATE COM #48H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: SP5 @ 18 (H702335-35)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**5500**	16.0	09/07/2017	ND	416	104	400	3.77	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

BBC International, Inc.
Cliff Brunson
P.O. Box 805
Hobbs NM, 88241
Fax To: (575) 397-0397

Received:	08/31/2017	Sampling Date:	08/28/2017
Reported:	09/07/2017	Sampling Type:	Soil
Project Name:	SRO STATE COM #48H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: SOUTH @ SURFACE (H702335-36)

BTEX 8021B mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/06/2017	ND	1.82	90.8	2.00	0.313	
Toluene*	<0.050	0.050	09/06/2017	ND	1.83	91.3	2.00	0.0863	
Ethylbenzene*	<0.050	0.050	09/06/2017	ND	1.94	97.0	2.00	0.633	
Total Xylenes*	<0.150	0.150	09/06/2017	ND	5.78	96.3	6.00	0.918	
Total BTEX	<0.300	0.300	09/06/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.2 %* *72-148*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	09/07/2017	ND	416	104	400	3.77	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/05/2017	ND	185	92.4	200	3.24	
DRO >C10-C28	<10.0	10.0	09/05/2017	ND	186	92.8	200	2.95	
EXT DRO >C28-C36	<10.0	10.0	09/05/2017	ND					

Surrogate: 1-Chlorooctane *91.5 %* *28.3-164*

Surrogate: 1-Chlorooctadecane *92.8 %* *34.7-157*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Celey D. Keene, Lab Director/Quality Manager

1/4

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

CARDINAL LABORATORIES
101 East Marland, Hobbs, NM 88240
(505) 393-2326 FAX (505) 393-2476

Company Name:	BBC International, Inc.
Project Manager:	Cliff Brunson
Address:	P.O. Box 805
City:	Hobbs **State:** NM **Zip:** 88241
Phone #:	575-397-6388 **Fax #:** 575-397-0397
Project #:	**Project Owner:** COG
Project Name:	SRO State Com #48H
Project Location:	11/29/2
Sampler Name:	VO

BILL TO

P.O. #:	
Company:	COG
Attn:	
Address:	
City:	
State:	**Zip:**
Phone #:	
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	TPH Extended	BTEX	Cl-
H702335-1	Spl 1	G	1			X					X		8-25	935	X	X	X
2	3	G	1			X					X			951			X
3	6	G	1			X					X			1015			X
4	9	G	1			X					X			1033			X
5	12	G	1			X					X			1161			X
6	16	G	1			X					X			1130			X
7	10	G	1			X					X			1150			X
8	Sp 2C 1	G	1			X					X			1201			X
9	3	G	1			X					X			111			X
10	6	G	1			X					X			59			X

Relinquished By:	**Date:** 8-31-17	**Received By:**	Haley Curbow
	Time: 4:34		
Relinquished By:	**Date:**	**Received By:**	
	Time:		

Phone Result: ☐ Yes ☐ No **Add'l Phone #:**
Fax Result: ☐ Yes ☐ No **Add'l Fax #:**
REMARKS:

Delivered By: (Circle One) Sampler - UPS - Bus - Other: -2.6°C / -2.35°C

Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No

CHECKED BY: (Initials) HC

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

Corrected +.25°C

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

CARDINAL LABORATORIES
101 East Marland, Hobbs, NM 88240
(505) 393-2326 FAX (505) 393-2476

Company Name:	BBC International, Inc.
Project Manager:	Cliff Brunson
Address:	P.O. Box 805
City:	Hobbs
State:	NM
Zip:	88241
Phone #:	575-397-6388
Fax #:	575-397-0397
Project #:	
Project Owner:	COG
Project Name:	SRO State Com #40H
Project Location:	M2292
Sampler Name:	V.O

BILL TO

P.O. #:	
Company:	COG
Attn:	
Address:	
City:	
State:	Zip:
Phone #:	
Fax #:	

ANALYSIS REQUEST

TPH Extended / BTEX / Cl-

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	TPH Extended	BTEX	Cl-
H702335																	
11	SP2 9	C	1			X					X		8.28	855			X
12	2	C	1			X					X			925			X
13	6	C	1			X					X			957			X
14	8	C	1			X					X			1015			X
15	SP3 0 1	C	1			X					X			1017	X	X	X
16	3	C	1			X					X			1020			X
17	6	C	1			X					X			1040			X
18	9	C	1			X					X			1100			X
19	12	C	1			X					X			1115			X
20	16	C	1			X					X		↓	1139			X

Relinquished By:	Date: 8-31-17	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Jeff Dyke	Time: 4:34	Halley Curbow	Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		

Delivered By: (Circle One) Sampler - UPS - Bus - Other: -2.6°C / -2.35°C

Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No

CHECKED BY: (Initials) HC

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

Corrected +.25°C

CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240
(505) 393-2326 FAX (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	BBC International, Inc.
Project Manager:	Cliff Brunson
Address:	P.O. Box 805
City:	Hobbs State: NM Zip: 88241
Phone #:	575-397-6388 Fax #: 575-397-0397
Project #:	Project Owner: COG
Project Name:	SRO State Com #404H
Project Location:	M2bgz
Sampler Name:	V.O.

BILL TO

P.O. #:
Company:
Attn:
Address:
City:
State: Zip:
Phone #:
Fax #:

ANALYSIS REQUEST: TPH Extended; BTEX; Cl-

Lab I.D. (FOR LAB USE ONLY)	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	TPH Extended	BTEX	Cl-
H702335 21	SP3@10	G	1			X					X		8-20	1155			X
22	SP4@1	G	1			X					X		↓	1255			X
23	3	G	1			X					X			105			X
24	6	G	1			X					X			120			X
25	9	G	1			X					X			135			X
26	12	G	1			X					X			155			X
27	16	G	1			X					X			215			X
28	18	G	1			X					X			233			X
29	SP5@1	G	1			X					X			241	X	X	X
30	3	G	1			X					X			250			X

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

Relinquished By: [signature] Date: 8-21-17 Time: 4:34 Received By: Holly Curbow

Relinquished By: Date: Time: Received By:

Delivered By: (Circle One) -2.6°C / -2.35°C
Sampler - UPS - Bus - Other:

Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No
CHECKED BY: (Initials) HC

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS:

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

Corrected +.25°C

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

CARDINAL LABORATORIES
101 East Marland, Hobbs, NM 88240
(505) 393-2326 FAX (505) 393-2476

Company Name:	BBC International, Inc.
Project Manager:	Cliff Brunson
Address:	P.O. Box 805
City:	Hobbs
State:	NM
Zip:	88241
Phone #:	575-397-6388
Fax #:	575-397-0397
Project #:	
Project Owner:	COG
Project Name:	SRO State Com 40H
Project Location:	Mylar
Sampler Name:	V.O

BILL TO

P.O. #:	
Company:	
Attn:	
Address:	
City:	
State:	Zip:
Phone #:	
Fax #:	

ANALYSIS REQUEST

TPH Extended
BTEX
Cl-

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	TPH Extended	BTEX	Cl-
H702335-31	Sp Sc 6	G	1			X					X		8-20	259			X
32	9	G	1			X					X			311			X
33	12	G	1			X					X			325			X
34	16	G	1			X					X			340			X
35	18	G	1			X					X			351			X
36	South 0.5'	G	1			X					X		V	352	X	X	X

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

Relinquished By:	Date: 8-31-17	Received By:	Holly Corbow
Relinquished By:	Time: 4:34	Received By:	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	-2.6°C / -2.35°C	Sample Condition Cool: Yes / No; Intact: Yes / No	CHECKED BY: (Initials) HC

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS:

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

Corrected +.25°C

CARDINAL Laboratories

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

October 19, 2017

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: SRO STATE COM #48H

Enclosed are the results of analyses for samples received by the laboratory on 10/13/17 13:33.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

BBC International, Inc.
Cliff Brunson
P.O. Box 805
Hobbs NM, 88241
Fax To: (575) 397-0397

Received:	10/13/2017	Sampling Date:	10/10/2017
Reported:	10/19/2017	Sampling Type:	Soil
Project Name:	SRO STATE COM #48H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA, EDDY CO NM		

Sample ID: SB1 @ 20 (H702780-01)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**304**	16.0	10/17/2017	ND	416	104	400	3.77	

Sample ID: SB1 @ 25 (H702780-02)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	10/17/2017	ND	416	104	400	3.77	

Sample ID: SB1 @ 30 (H702780-03)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	10/17/2017	ND	416	104	400	3.77	

Sample ID: SB1 @ 35 (H702780-04)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	10/17/2017	ND	416	104	400	3.77	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

BBC International, Inc.
Cliff Brunson
P.O. Box 805
Hobbs NM, 88241
Fax To: (575) 397-0397

Received:	10/13/2017	Sampling Date:	10/10/2017
Reported:	10/19/2017	Sampling Type:	Soil
Project Name:	SRO STATE COM #48H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA, EDDY CO NM		

Sample ID: SB2 @ 20 (H702780-05)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**4320**	16.0	10/17/2017	ND	416	104	400	3.77	

Sample ID: SB2 @ 25 (H702780-06)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	10/17/2017	ND	416	104	400	3.77	

Sample ID: SB2 @ 30 (H702780-07)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	10/17/2017	ND	416	104	400	3.77	

Sample ID: SB2 @ 35 (H702780-08)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	10/17/2017	ND	416	104	400	3.77	

Sample ID: SB3 @ 20 (H702780-09)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**8260**	16.0	10/17/2017	ND	416	104	400	3.77	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

BBC International, Inc.
Cliff Brunson
P.O. Box 805
Hobbs NM, 88241
Fax To: (575) 397-0397

Received:	10/13/2017	Sampling Date:	10/10/2017
Reported:	10/19/2017	Sampling Type:	Soil
Project Name:	SRO STATE COM #48H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA, EDDY CO NM		

Sample ID: SB3 @ 25 (H702780-10)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**320**	16.0	10/17/2017	ND	416	104	400	3.77	

Sample ID: SB3 @ 30 (H702780-11)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**208**	16.0	10/18/2017	ND	416	104	400	3.77	

Sample ID: SB3 @ 35 (H702780-12)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**240**	16.0	10/18/2017	ND	416	104	400	3.77	

Sample ID: SB4 @ 20 (H702780-13)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**240**	16.0	10/18/2017	ND	416	104	400	3.77	

Sample ID: SB4 @ 25 (H702780-14)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	10/18/2017	ND	416	104	400	3.77	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

BBC International, Inc.
Cliff Brunson
P.O. Box 805
Hobbs NM, 88241
Fax To: (575) 397-0397

Received:	10/13/2017	Sampling Date:	10/10/2017
Reported:	10/19/2017	Sampling Type:	Soil
Project Name:	SRO STATE COM #48H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA, EDDY CO NM		

Sample ID: SB4 @ 30 (H702780-15)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**160**	16.0	10/18/2017	ND	416	104	400	3.77	

Sample ID: SB5 @ 20 (H702780-16)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**352**	16.0	10/18/2017	ND	432	108	400	3.64	

Sample ID: SB5 @ 25 (H702780-17)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**192**	16.0	10/18/2017	ND	432	108	400	3.64	

Sample ID: SB5 @ 30 (H702780-18)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**160**	16.0	10/18/2017	ND	432	108	400	3.64	

Sample ID: SB5 @ 35 (H702780-19)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**208**	16.0	10/18/2017	ND	432	108	400	3.64	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

CARDINAL LABORATORIES
101 East Marland, Hobbs, NM 88240
(505) 393-2326 FAX (505) 393-2476

Company Name:	BBC International, Inc.
Project Manager:	Cliff Brunson
Address:	P.O. Box 805
City:	Hobbs
State:	NM
Zip:	88241
Phone #:	575-397-6388
Fax #:	575-397-0397
Project #:	
Project Owner:	COG
Project Name:	SRO State Com #48H
Project Location:	Eddy County
Sampler Name:	Jeff Ornelas

BILL TO

P.O. #:	
Company:	Same
Attn:	
Address:	
City:	
State:	Zip:
Phone #:	
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	CL
H702780															
1	SB1@20	G	1			✓					✓		10/12/17	9:30	✓
2	SB1@25	G	1			✓					✓			9:41	✓
3	SB1@30	G	1			✓					✓			9:49	✓
4	SB1@35	G	1			✓					✓			10:10	✓
5	SB2@20	G	1			✓					✓			10:20	✓
6	SB2@25	G	1			✓					✓			10:30	✓
7	SB2@30	G	1			✓					✓			10:38	✓
8	SB2@35	G	1			✓					✓			10:50	✓
9	SB3@20	G	1			✓					✓			11:01	✓
10	SB3@25	G	1			✓					✓		↓	11:11	✓

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

Relinquished By:	Date:	Received By:	
	Time:		
Relinquished By:	Date: 10-13-17	Received By:	
	Time: 1133		
Delivered By: (Circle One)	Sample Condition: Cool Yes / No	Intact Yes / No	CHECKED BY: (Initials)
Sampler - UPS - Bus - Other: .1°C / .35°C			TP #75

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS:

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

#75 Corrected to .25°C

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

CARDINAL LABORATORIES
101 East Marland, Hobbs, NM 88240
(505) 393-2326 FAX (505) 393-2476

		BILL TO	
Company Name: BBC International, Inc.		P.O. #:	
Project Manager: Cliff Brunson		Company: Same	
Address: P.O. Box 805		Attn:	
City: Hobbs	State: NM Zip: 88241	Address:	
Phone #: 575-397-6388	Fax #: 575-397-0397	City:	
Project #:	Project Owner: COG	State:	Zip:
Project Name: SRO State com #48H		Phone #:	
Project Location: Eddy county		Fax #:	
Sampler Name: Jeff Ornelas			

ANALYSIS REQUEST

Lab I.D. (FOR LAB USE ONLY)	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	MATRIX: WASTEWATER	MATRIX: SOIL	MATRIX: OIL	MATRIX: SLUDGE	MATRIX: OTHER:	PRESERV.: ACID/BASE:	PRESERV.: ICE / COOL	PRESERV.: OTHER:	SAMPLING: DATE	SAMPLING: TIME	Cl
#702780															
11	SB3@30	G				✓					✓		10.10.17	11:20	✓
12	SB3@35	G				✓					✓		↓	11:31	✓
13	SB4@20	G				✓					✓		↓	12:22	✓
14	SB4@25	G				✓					✓		↓	12:33	✓
15	SB4@30	G				✓					✓		↓	12:51	✓
16	SB5@20	G				✓					✓		↓	1:11	✓
17	SB5@25	G				✓					✓		↓	1:22	✓
18	SB5@30	G				✓					✓		↓	1:37	✓
19	SB5@35	G				✓					✓		↓	2:15	✓

[initials] 10.13.17

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

Relinquished By: Jeff Ornelas [signature]	Date: Time:	Received By: Ilario Gomez Jr. [signature]	Phone Result: ☐ Yes ☐ No Add'l Phone #: Fax Result: ☐ Yes ☐ No Add'l Fax #: REMARKS:
Relinquished By: Ilario Gomez Jr. [signature]	Date: 10.13.17 Time: 1:33	Received By: Tamara Oldaker [signature]	
Delivered By: (Circle One) -.1°C / .35°C Sampler - UPS - Bus - Other:		Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No CHECKED BY: (Initials) TO #75	

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

#75 Corrected +.25°C

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

State of New Mexico
Energy Minerals and Natural Resources

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

NM OIL CONSERVATION
ARTESIA DISTRICT
APR 24 2017
RECEIVED

Form C-141
Revised August 8, 2011
Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

nAB1711542359

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: COG Operating LLC OGRID# [229137		Contact:	Robert McNeill
Address: 600 West Illinois Avenue, Midland TX 79701		Telephone No.	432-683-7443
Facility Name: SRO STATE COM #48H		Facility Type:	Tank Battery

Surface Owner: State	Mineral Owner:	API No. 30-015-41779

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	07	26S	28E	190'	North	2080'	East	Eddy

Latitude 32.063797 **Longitude** 104.1248322

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: 40bbls	Volume Recovered: 0bbls
Source of Release: 4" Plotline	Date and Hour of Occurrence: 04/21/2017 6:00 pm	Date and Hour of Discovery: 04/21/2017 6:00 pm
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mr. Bratcher – MNOCD / Ms. Groves - SLO	
By Whom? Robert Grubbs Jr	Date and Hour: 04/22/2017 Time of this email *8:54am	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

A 4" polyline had a split due to unknown reason. Cut out the bad section and refused the 4" poly line.

Describe Area Affected and Cleanup Action Taken.*

This release occurred in the pasture and affected a area of 50' x 100'. Concho will have the spill site sampled to delineate any possible contamination from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation work.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	OIL CONSERVATION DIVISION	
Printed Name: Robert Grubbs Jr.	Approved by Environmental Specialist:	
Title: Senior HSE Coordinator	Approval Date: 4/25/17	Expiration Date: N/A
E-mail Address: rgrubbs@concho.com	Conditions of Approval: see attached	Attached ☒
Date: April 22, 2017 Phone: 432-683-7443		

* Attach Additional Sheets If Necessary

2RP-4182

Operator/Responsible Party,

The OCD has received the form C-141 you provided on **4/24/17** regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number 2RP-4182 has been assigned. **Please refer to this case number in all future correspondence.**

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

> *The responsible person shall complete division-approved corrective action for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC.* [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District II office in Artesia on or before 5/24/17. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.

- Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.

- Nominal detection limits for field and laboratory analyses must be provided.

- Composite sampling is not generally allowed.

- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

•Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

• If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

• Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold
OCD Environmental Bureau Chief
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505-476-3465
jim.griswold@state.nm.us

Weaver, Crystal, EMNRD

From: Robert Grubbs <RGrubbs@concho.com>
Sent: Saturday, April 22, 2017 8:54 AM
To: Bratcher, Mike, EMNRD; Weaver, Crystal, EMNRD; 'agroves@slo.state.nm.us'
Subject: (immediate Notification & Initial C-141) SRO State Com #048 4/21/17 (30-015-41779)
Attachments: SRO State Com #48 (FL) Initial.pdf

MR. BRATCHER / MS. GROVES,

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

THANK YOU,

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

CONFIDENTIALITY NOTICE: The information in this email may be confidential and/or privileged. If you are not the intended recipient or an authorized representative of the intended recipient, you are hereby notified that any review, dissemination or copying of this email and its attachments, if any, or the information contained herein, is prohibited. If you have received this email in error, please immediately notify the sender by return email and delete this email from your system. Thank you.