REMEDIATION SUMMARY

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SITE CLOSURE REQUEST

COG Operating, LLC
SRO State Com #002H
Eddy County, New Mexico
Unit Letter "P", Section 32, Township 25 South, Range 28 East
Latitude 32.080101° North, Longitude 104.1018906° West
NMOCD Reference Nos. 2RP-4510, 2RP-4862

Prepared For:

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

Prepared By:

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February 2019

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INTRODUCTION & BACKGROUND INFORMATION

TRC Environmental Corporation (TRC), on behalf of COG Operating, LLC (COG), has prepared this *Remediation Summary and Site Closure Request* for two (2) releases at the Site known as the SRO State Com #002H (the Site). The legal description of the Site is Unit Letter "P", Section 32, Township 25 South, Range 28 East, in Eddy County, New Mexico. The subject property is owned by the State of New Mexico and administered by New Mexico State Land Office (NMSLO). The GPS coordinates for the Site are N 32.080101° W 104.1018906°. A topographical map is provided as **Figure 1**. Photographs are provided in the photolog as **Appendix B**.

On November 30, 2017, COG discovered a produced water release had occurred at the Site. The Release was attributed to the failure of a "two (2) to one (1) swedge", which resulted in the release of produced water inside the facility's secondary lined containment and onto the adjacent caliche production pad. On the discovery date, COG notified the New Mexico Oil and Conservation Division (NMOCD) and New Mexico State Land Office (NMSLO) of the Release and the Release was assigned an NMOCD Reference number of 2RP-4510. During initial response activities, a vacuum truck was dispatched to recover all freestanding fluids. On December 1, 2017, the initial Release Notification and Corrective Action (Form C-141) was submitted and indicated thirty (30) barrels (bbls) of produced water was released with approximately twenty-eight (28) bbls of produced water recovered. The release affected an area measuring approximately one thousand and fifty (1,050) sq. ft. The majority of the release was confined within the facility's secondary lined containment, with the exception of two (2) areas which affected the adjacent caliche production pad. The two (2) areas of exception include an area to the north of the lined containment measuring approximately one hundred and forty-seven (147) sq. ft. and an area to the south of the lined containment measuring approximately two hundred and twenty-one (221) sq. ft.

On July 15, 2018, COG discovered a produced water release had occurred at the Site. The Release was attributed to lightning striking the overflow water tank, which resulted in a fire which destroyed the facility and released produced water onto the caliche production pad and adjacent pasture area. On the discovery date, COG notified the NMOCD and NMSLO of the Release and was assigned an NMOCD Reference number of 2RP-4862. During initial response activities, a vacuum truck was dispatched to recover all freestanding fluids. On July 17, 2018 the initial Release Notification and Corrective Action (Form C-141) was submitted and indicated one hundred and ninety (190) barrels (bbls) of produced water was released with approximately one hundred and eighty (180) bbls of produced water recovered. The Release affected an area measuring approximately ten thousand and fifty-three (10,053) sq. ft. The majority of the release affected the caliche production pad, with the exception of one (1) area north of the pad in the pasture measuring approximately three hundred and seventy-four (374) sq. ft. Copies of the submitted Form C-141 for each Release are provided in **Appendix C**.

A groundwater database maintained by The New Mexico Office of the State Engineer (NMOSE) did not identify any registered water wells in Section 32, Township 25 South, Range 28 East. A reference map utilized by the NMOCD indicates groundwater should be encountered at approximately twenty-five (25) feet below ground surface (bgs). No water wells were observed within one-thousand (1,000) feet of the Site. No surface water was observed within one-thousand (1,000) feet of the release.

Based on the depth to groundwater, the NMOCD Closure Criteria for Soils Impacted by a Release for the SRO State Com #002H are as follows:

- Benzene – 10 mg/kg
- Benzene, toluene, ethylbenzene, and xylenes (BTEX) – 50 mg/kg
- Total Petroleum Hydrocarbons (TPH) – 100 mg/kg
- Chloride – 600 mg/kg

INITIAL INVESTIGATION AND PROPOSED REMEDIATION WORKPLAN

The July 15, 2018 Release and subsequent fire caused major site destruction. The tank battery was inoperable and the Releases associated with incident report numbers 2RP-4510 and 2RP-4862 were remediated simultaneously. For the remainder of this report the information will be representative of the investigation and remediation completed in association with 2RP-4862, as the footprint of release 2RP-4862 included the footprint of release 2RP-4510. Additional information regarding the initial investigation for the Release associated with 2RP-4510 will be provided as **Appendix D – Investigation Summary and Proposed Remediation Workplan (2RP-4510).**

On August 15, 2018, an initial investigation was conducted at the Release Site. During the initial investigation, eight (8) augerholes (SP1, SP2, SP3, SP4, SP5, SP6, SP7, and SP8) were advanced at the Release Site in an effort to characterize the vertical extent of soil impact. In addition, four (4) surface samples (North, South, East and West) were collected at the inferred margins of the Release area to characterize the lateral extent of soil impact. Please reference **Figure 2B – Site & Sample Location Map – Initial Investigation (2RP-4862)**.

Augerhole SP1 was advanced in the southwest corner of the facility. During the advancement of the augerhole, three (3) soil samples (SP1 @ Surface, SP1 @ 1', and SP1 @ 2') were collected and submitted to the laboratory for analysis of BTEX, TPH and/or chloride concentrations. Laboratory analytical results indicated BTEX constituents in all samples were below the laboratory method detection limit (MDL), TPH concentrations were below the NMOCD regulatory guidelines in SP1 @ 2' and chloride concentrations were below NMOCD regulatory guidelines in SP1 @ 1' and SP1 @ 2'. Based on laboratory analytical results, soil was not affected above the NMOCD regulatory guidelines for BTEX constituents, TPH, or chloride beyond two (2) ft. bgs in the area characterized by augerhole SP1.

Augerhole SP2 was advanced outside of the bermed facility to the west. During the advancement of the augerhole, four (4) soil samples (SP2 @ Surface, SP2 @ 1', SP2 @ 2', and SP2 @ 3') were collected and submitted to the laboratory for analysis of BTEX, TPH and/or chloride concentrations. Laboratory analytical results indicated BTEX constituents in all samples analyzed for BTEX were below the laboratory MDL, TPH concentrations were below the laboratory MDL in all samples analyzed for TPH, and chloride concentrations were below NMOCD regulatory guidelines in SP2 @ 3'. Based on laboratory analytical results, soil was not affected above the NMOCD regulatory guidelines for BTEX constituents, TPH or chloride beyond three (3) ft. bgs in the area characterized by augerhole SP2.

Augerhole SP3 was advanced outside of the bermed facility to the northwest. During the advancement of the augerhole, four (4) soil samples (SP3 @ Surface, SP3 @ 1' SP3 @ 2', and SP3 @ 3') were collected and submitted to the laboratory for analysis of BTEX, TPH and/or chloride concentrations. Laboratory analytical results indicated BTEX constituents in all samples analyzed for BTEX were below the laboratory MDL, TPH concentrations were below the NMOCD regulatory guidelines in SP3 @ 1', and chloride concentrations were below NMOCD regulatory guidelines in SP3 @ 2' and SP3 @ 3'. Based on laboratory analytical results, soil was not affected above the NMOCD regulatory guidelines for BTEX constituents, TPH or chloride beyond two (2) ft. bgs in the area characterized by augerhole SP3.

Augerhole SP4 was advanced outside of the bermed facility to the north. During the advancement of the augerhole, three (3) soil samples (SP4 @ Surface, SP4 @ 1', and SP4 @ 2') were collected and submitted to the laboratory for analysis of BTEX, TPH and/or chloride concentrations. Laboratory analytical results indicated BTEX constituents in all samples analyzed for BTEX were below the laboratory MDL, TPH concentrations were below the NMOCD regulatory guidelines in SP4 @ 1' and SP4 @ 2', and chloride concentrations were below NMOCD regulatory guidelines in SP4 @ 1' and SP4 @ 2'. Based on laboratory analytical results, soil was not affected above the NMOCD regulatory guidelines for BTEX constituents, TPH or chloride beyond one (1) ft. bgs in the area characterized by augerhole SP4.

Augerhole SP5 was advanced north of SP4 in the pastureland. During the advancement of the augerhole, three (3) soil samples (SP5 @ Surface, SP5 @ 1' and SP5 @ 2') were collected and submitted to the laboratory for analysis of BTEX, TPH and/or chloride concentrations. Laboratory analytical results indicated BTEX constituents and TPH in all samples were below the laboratory MDL, and chloride concentrations were below NMOCD regulatory guidelines in SP5 @ 1' and SP5 @ 2'. Based on laboratory analytical results, soil was not affected above the NMOCD regulatory guidelines for BTEX constituents, TPH or chloride beyond the surface in the area characterized by augerhole SP5.

Augerhole SP6 was advanced inside the bermed facility between the two (2) easternmost steel tanks. During the advancement of the augerhole, two (2) soil samples (SP6 @ Surface and SP6 @ 1') were collected and submitted to the laboratory for analysis of BTEX, TPH and/or chloride concentrations. Laboratory analytical results indicated BTEX constituents and TPH in all samples were below the laboratory MDL, and chloride concentrations were below NMOCD regulatory guidelines in all samples collected from augerhole SP6. Based on laboratory analytical results, soil was not affected above the NMOCD regulatory limits for BTEX constituents, TPH or chloride at any depth characterized by augerhole SP6.

Augerhole SP7 was advanced inside the bermed facility east of the steel tanks. During the advancement of the augerhole, five (5) soil samples (SP7 @ Surface, SP7 @ 1', SP7 @ 2', SP7 @ 3', and SP7 @ 4') were collected and submitted to the laboratory for analysis of BTEX, TPH and/or chloride concentrations. Laboratory analytical results indicated BTEX constituents and TPH in all samples were below the laboratory MDL, and chloride concentrations were below NMOCD regulatory guidelines in SP7 @ 3' and SP7 @ 4'. Based on laboratory analytical results, soil was not affected above the NMOCD regulatory guidelines for BTEX constituents, TPH or chloride beyond three (3) ft. bgs in the area characterized by augerhole SP7.

Augerhole SP8 was advanced outside the bermed facility to the south. During the advancement of the augerhole, three (3) soil samples (SP8 @ Surface, SP8 @ 1', and SP8 @ 2') were collected and submitted to the laboratory for analysis of BTEX, TPH and/or chloride concentrations. Laboratory analytical results indicated BTEX constituents and TPH in all samples were below the laboratory MDL, and chloride concentrations were below NMOCD regulatory guidelines in SP8 @ 2'. Based on laboratory analytical results, soil was not affected above the NMOCD regulatory guidelines for BTEX constituents, TPH or chloride beyond two (2) ft. bgs in the area characterized by augerhole SP8.

In addition, four (4) surface samples (North @ Surface, East @ Surface, South @ Surface, and West @ Surface) were collected at the inferred edges of the affected area in an effort to characterize the horizontal extent of soil impacts. The samples were collected and submitted to the laboratory for analysis of BTEX, TPH, and chloride concentrations. Laboratory analytical results indicated BTEX constituents, TPH and chloride concentrations were each below the applicable NMOCD regulatory guideline values in each submitted soil sample. Based on laboratory analytical results, no further horizontal or vertical delineation was warranted.

On September 28, 2018, COG submitted a *Soil Investigation Summary and Proposed Remediation Workplan (Workplan)* to the NMOCD and NMSLO, proposing the following remediation activities designed to advance the Site toward an approved closure:

- Utilizing mechanical equipment, excavate impacted soil within the release margins in the areas characterized by SP1, SP5 and SP6 to a depth of approximately six (6) inches bgs, the area characterized by SP4 to a depth of approximately twelve (12) inches bgs, the area characterized by SP8 to a depth of approximately eighteen (18) inches bgs, the areas characterized by SP2 and SP3 to a depth of approximately twenty-four (24) inches bgs and the area characterized by SP7 to a depth of approximately thirty (30) inches bgs. Excavated soil will be stockpiled on-site, atop an impermeable liner pending final disposition.
- After receiving laboratory analytical results from confirmation soil samples, backfill the excavated area with locally sourced, non-impacted "like" material.

The *Workplan* was subsequently approved.

SUMMARY OF SOIL REMEDIATION ACTIVITIES

Excavation activities were completed by a third-party contractor. As per the approved *Workplan*, the area characterized by SP5 was excavated to six (6) inches bgs. However, the areas characterized by SP1, SP2, SP3, SP4, SP6, SP7, and SP8 were field screened at the floor depth proposed by the workplan and field screen results indicated the floor required additional excavation. The floor of the excavation in the areas characterized by augerholes SP1, SP2, SP3, SP4, SP6, SP7 and SP8 was advanced until chloride field test results suggested concentrations of chloride were below the NMOCD regulatory guidelines. The resultant excavation floor was approximately eighteen (18) inches bgs in the areas characterized by SP1 and SP6, approximately thirty (30) inches bgs in the area characterized by SP8, approximately thirty-six (36) inches bgs in the areas characterized by SP2 and SP3, approximately forty-eight (48) inches bgs in the area characterized by SP7 and approximately twenty-four (24) to thirty-six (36) inches bgs in the area characterized by SP4. Excavated soil was stockpiled on-site pending final disposition.

On October 8, 2018, after the impacted soil had been excavated from within the margins of the Release Site, TRC collected twelve (12) excavation confirmation soil samples (SP-1 @ 1.5', SP-2 @ 3', SP-3 @ 3', SP-4 (1) @ 2', SP-4 (2) @ 3', SP-5 @ 6", SP-6 @ 1.5', SP-8 @ 2.5', Wall 1, Wall 2, Wall 3, and Wall 4) from the floor and sidewalls of the excavated area. The wall samples were collected from half-way down the excavation in the west, north, east and south cardinal directions, respectively, and the floor samples were labeled corresponding to the respective initial sampling areas. Collected soil samples were submitted to the laboratory for analysis of chloride concentrations. Laboratory analytical results indicated chloride concentrations were below the NMOCD regulatory guidelines in all of the submitted soil samples.

On October 11, 2018, following further excavation in the area characterized by SP7, TRC collected two (2) excavation soil samples (SP-7 FL Comp @ 4' and Wall 3) from the floor and sidewall of the excavated area. Wall 3 was resampled as the excavation depth was further advanced along the eastern margin of the excavation. Collected soil samples were submitted to the laboratory for analysis of chloride. Laboratory analytical results indicated chloride concentrations were below the NMOCD regulatory guidelines in each of the submitted soil samples. Please reference Figure 3 – Site & Confirmation Sample Location Map.

Prior to backfilling, the final dimensions of the excavated area were approximately two hundred (200) ft. in length, sixty (60) ft. to one hundred fifteen (115) ft. in width, and six (6) to forty-eight (48) inches in depth.

The site was returned to grade utilizing locally sourced clean backfill material. All excavated materials were disposed of at an NMOCD approved disposal facility.

SITE CLOSURE REQUEST

Remediation activities were conducted in accordance with an NMOCD-approved *Workplan*. Laboratory analytical results from excavation confirmation soil samples indicated chloride concentrations were below the NMOCD regulatory guidelines in all of the submitted soil samples. The impacted soil was transported to an NMOCD approved disposal facility, and the site was returned to grade with locally sourced clean backfill material.

Based on laboratory analytical results and field activities conducted to date, TRC recommends COG provide copies of this Remediation Summary and Risk-Based Site Closure Request to the NMOCD and NMSLO and request closure status to the SRO State Com #2H.

LIMITATIONS

TRC has prepared this Remediation Summary and Site Closure Request to the best of its ability. No other warranty, expressed or implied, is made or intended.

TRC has examined and relied upon documents referenced in the report and has relied on oral statements made by certain individuals. TRC has not conducted an independent examination of the facts contained in referenced materials and statements. We have presumed the genuineness of the documents and that the information provided in documents or statements is true and accurate. TRC has prepared this report, in a professional manner, using the degree of skill and care exercised by similar environmental consultants. TRC also notes that the facts and conditions referenced in this report may change over time and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

This report has been prepared for the benefit of COG Operating, LLC. The information contained in this report, including all exhibits and attachments, may not be used by any other party without the express consent of TRC and/or COG Operating, LLC.

DISTRIBUTION

Copy 1: Bradford Billings
New Mexico Energy, Minerals and Natural Resources Department
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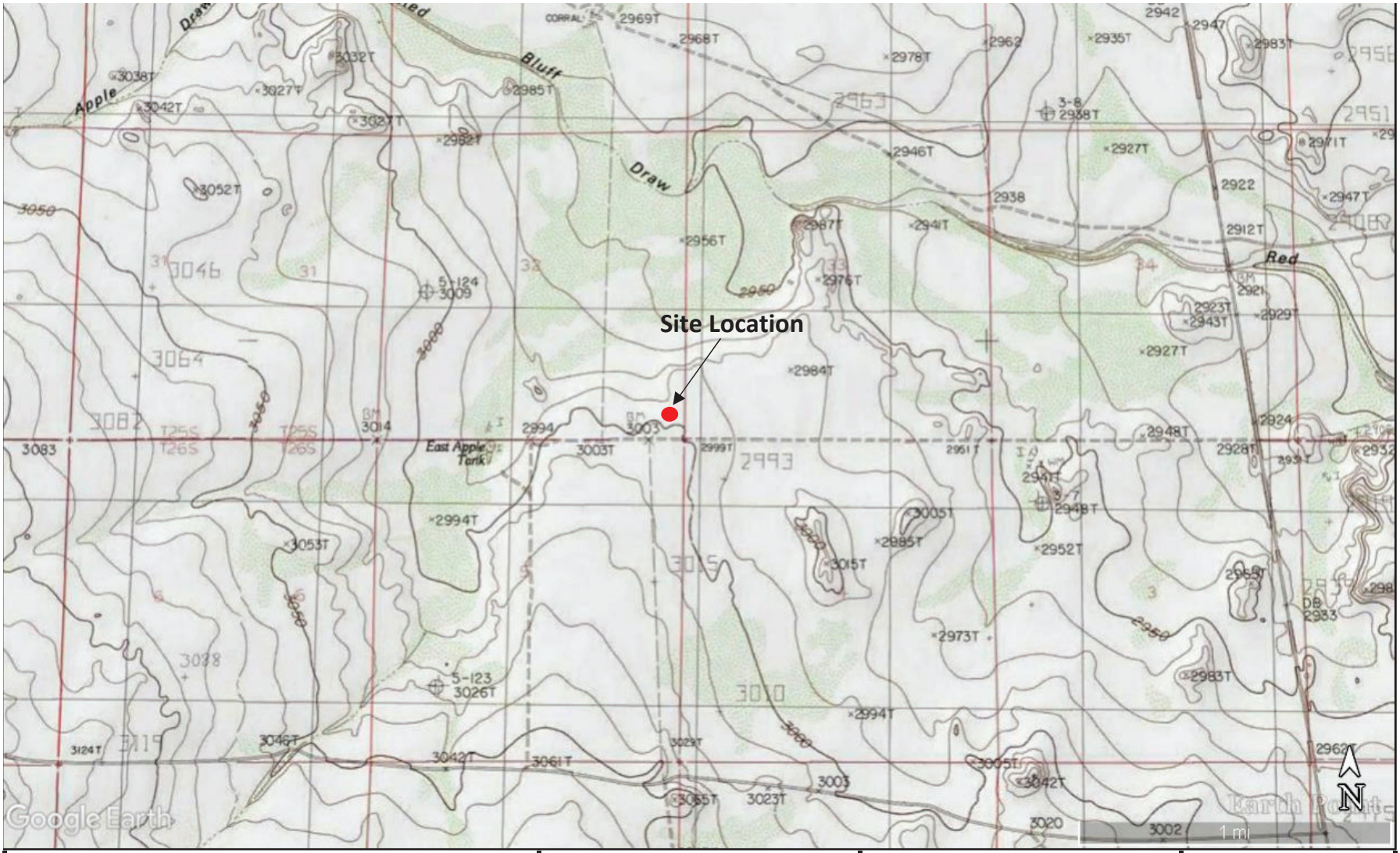
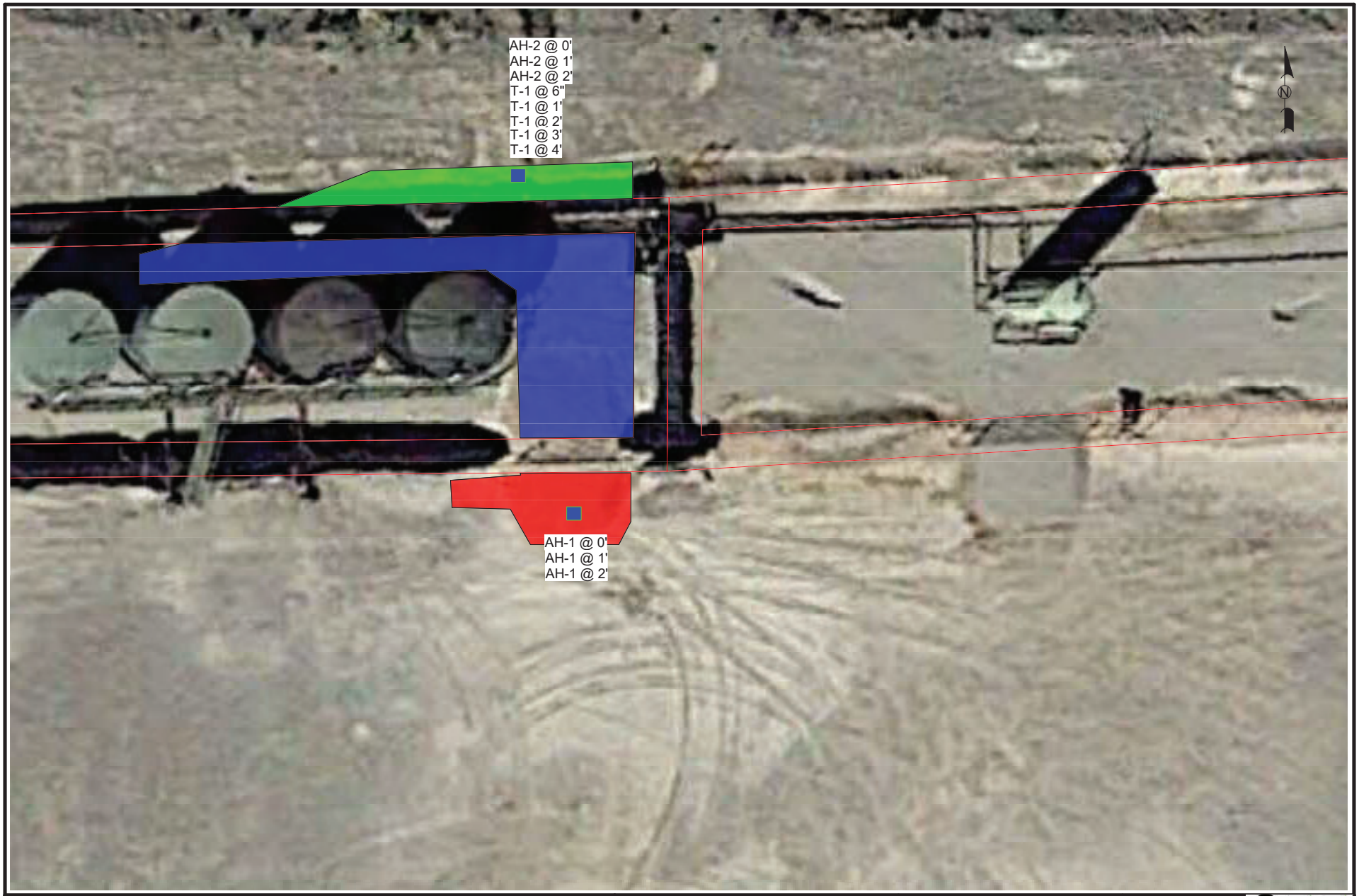


LEGEND: Site Location	**Figure 1** Topographical Map COG Operating, LLC SRO State Com #002H Eddy County, NM	Drafted by: BC | Checked by: JS Draft: February 14, 2019 GPS: 32.080101 -104.1018906 UL "P", Sec. 32, T25S, R28E TRC Proj. No: 317083



LEGEND:

- Excavate to two feet below ground surface
- Excavate to two and one half feet below ground surface
- Excavate impacted material above the lined surface
- Vertical Soil Sample Location
- Lined Berm

20 10 0 10 20

Distance in Feet

Figure 2A
Site & Sample Location Map Initial Investigation (2RP-4510)
COG Operating LLC
SRO State Com #002H Tank Battery
Eddy County, TX

Scale: 1" = 20'
CAD By: AR
Checked By: MG
Draft: April 30, 2018
Lat. N 32.080101° Long. W 104.1018906°

2M Environmental Services, LLC

COG, SRO State Com #002H

Leak date: 07/15/2018
Eddy County, NM
API# 30-015-37141
2RP-4862

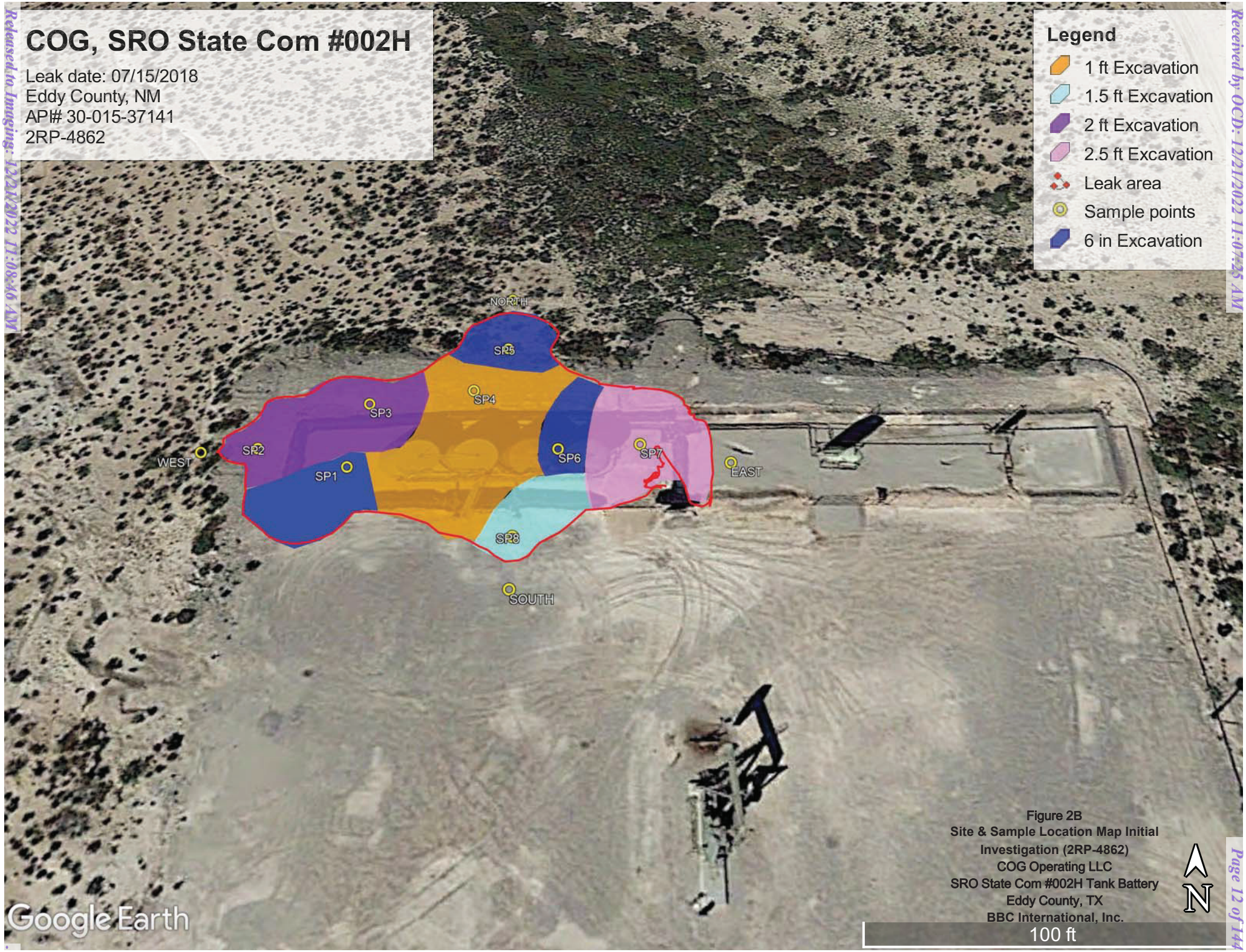
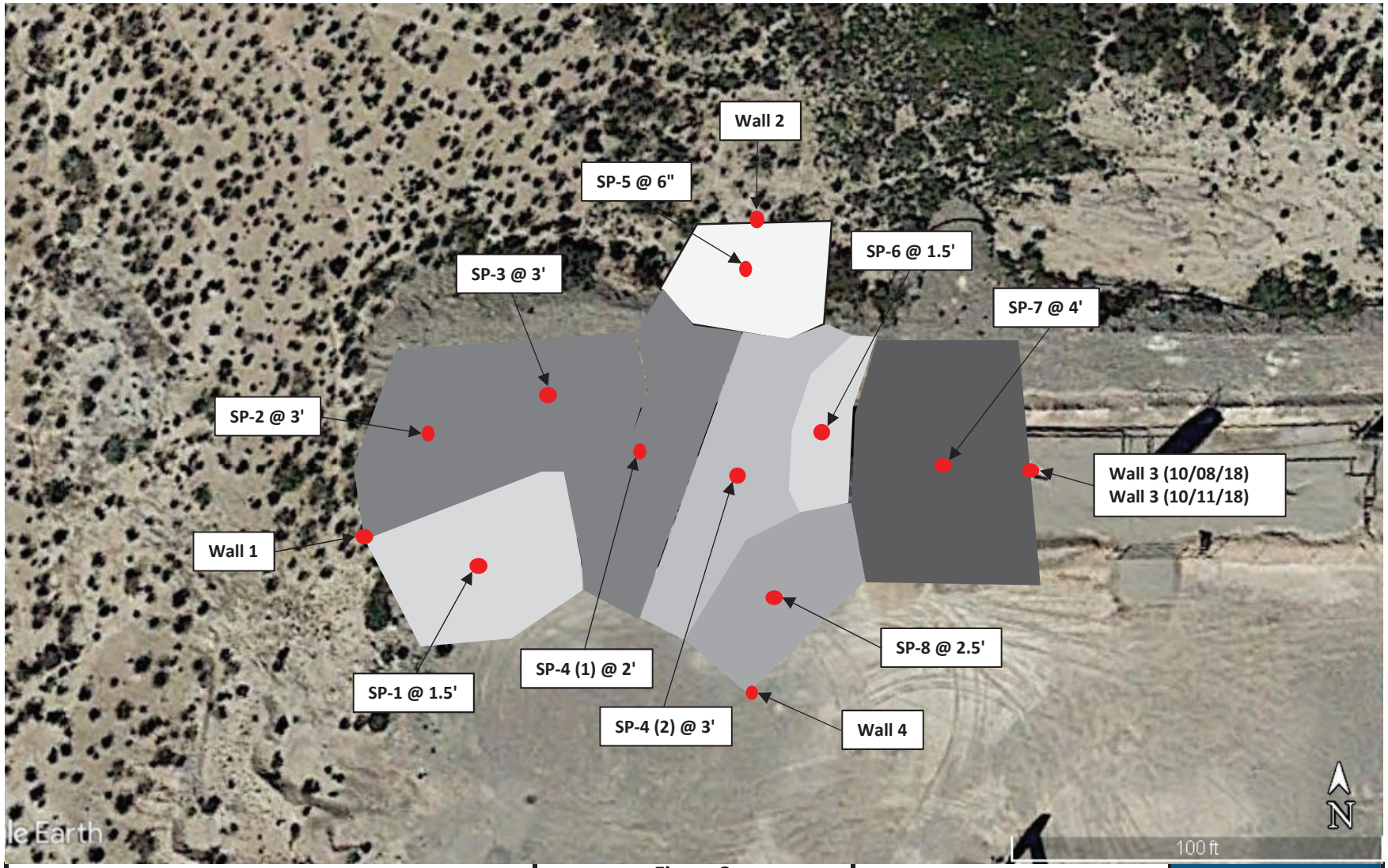


Figure 2B
Site & Sample Location Map Initial Investigation (2RP-4862)
COG Operating LLC
SRO State Com #002H Tank Battery
Eddy County, TX
BBC International, Inc.



LEGEND:

- Excavated Area (6")
- Excavated Area (1.5')
- Excavated Area (2')
- Excavated Area (2.5')
- Excavated Area (3')
- Excavated Area (4')
- Sample Point Location

Figure 3

Site & Confirmation Sample Location Map
COG Operating, LLC
SRO State Com #002H Eddy County, NM

Drafted by: BC | Checked by: JS	
Draft: February 14, 2019	
GPS:	32.080101 -104.1018906
UL "P", Sec. 32, T25S, R28E	
TRC Proj. No:	317083

TRC Results you can rely on

TABLE 1
CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN SOIL

COG OPERATING LLC
SRO STATE COM #002H
EDDY COUNTY, NEW MEXICO

All concentrations are reported in mg/kg

SAMPLE LOCATION	SAMPLE DEPTH	SAMPLE DATE	SOIL STATUS	METHODS: SW 846-8021b					METHOD: SW 8015M				E 300.1
				BENZENE	TOLUENE	ETHYL-BENZENE	TOTAL XYLENES	TOTAL BTEX	TPH GRO C_6-C_{10}	TPH DRO C_{10}-C_{28}	TPH ORO C_{28}-C_{35}	TOTAL TPH C_6-C_{35}	CHLORIDE
AH-1 @ 0'	Surface	12/29/17	In-situ	<0.00201	<0.00201	<0.00201	<0.00402	<0.00402	<15.0	<15.0	<15.0	<15.0	**19,500**
AH-1 @ 1'	12"	12/29/17	In-situ	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	<15.0	<15.0	<15.0	<15.0	**9,390**
AH-1 @ 2'	24"	12/29/17	In-situ	<0.00200	<0.00200	<0.00200	<0.00399	<0.00399	<15.0	<15.0	<15.0	<15.0	131
AH-2 @ 0'	Surface	12/29/17	In-situ	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	<15.0	<15.0	<15.0	<15.0	**14,400**
AH-2 @ 1'	12"	12/29/17	In-situ	<0.00202	<0.00202	<0.00202	<0.00404	<0.00404	<15.0	<15.0	<15.0	<15.0	**1,640**
AH-2 @ 2'	24"	12/29/17	In-situ	<0.00201	<0.00201	<0.00201	<0.00402	<0.00402	<15.0	<15.0	<15.0	<15.0	**1,180**
T-1 @ 6"	6"	03/13/18	In-situ	<0.00202	<0.00202	<0.00202	<0.00403	<0.00403	<15.0	<15.0	<15.0	<15.0	286
T-1 @ 1'	12"	03/13/18	In-situ	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	<15.0	<15.0	<15.0	<15.0	291
T-1 @ 2'	24"	03/13/18	In-situ	<0.00200	<0.00200	<0.00200	<0.00401	<0.00401	<15.0	<15.0	<15.0	<15.0	200
T-1 @ 3'	36"	03/13/18	In-situ	<0.00202	<0.00202	<0.00202	<0.00404	<0.00404	<15.0	<15.0	<15.0	<15.0	86.8
T-1 @ 4'	48"	03/13/18	In-situ	<0.00198	<0.00198	<0.00198	<0.00397	<0.00397	<15.0	<15.0	<15.0	<15.0	132
NMOCD Regulatory Guidelines				**10**	**-**	**-**	**-**	**50**	**-**	**-**	**-**	**100**	**600**
Sample Locations depicted in Figure 2A													

****Samples collected by 2M Environmental Services, LLC**

TABLE 1
CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN SOIL

COG OPERATING LLC
SRO STATE COM #002H
EDDY COUNTY, NEW MEXICO

All concentrations are reported in mg/kg

SAMPLE LOCATION	SAMPLE DEPTH	SAMPLE DATE	SOIL STATUS	METHODS: SW 846-8021b					METHOD: SW 8015M				E 300.1
				BENZENE	TOLUENE	ETHYL-BENZENE	TOTAL XYLENES	TOTAL BTEX	TPH GRO C_6-C_{10}	TPH DRO C_{10}-C_{28}	TPH ORO C_{28}-C_{35}	TOTAL TPH C_6-C_{35}	CHLORIDE
SP1 @ Surface	Surface	08/15/18	In-situ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**4,040**
SP1 @ 1'	12"	08/15/18	In-situ	<0.050	<0.050	<0.050	<0.150	<0.300	10.2	2,220	487	**2,717**	80
SP1 @ 2'	24"	08/15/18	In-situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	56.4	27.1	83.5	48
SP2 @ Surface	Surface	08/15/18	In-situ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**7,120**
SP2 @ 1'	12"	08/15/18	In-situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	**5,040**
SP2 @ 2'	24"	08/15/18	In-situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	**608**
SP2 @ 3'	36"	08/15/18	In-situ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	80
SP3 @ Surface	Surface	08/15/18	In-situ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**3,800**
SP3 @ 1'	12"	08/15/18	In-situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	90.5	16.2	**107**	**5,200**
SP3 @ 2'	24"	08/15/18	In-situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	432
SP3 @ 3'	36"	08/15/18	In-situ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	48
SP4 @ Surface	Surface	08/15/18	In-situ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**6,960**
SP4 @ 1'	12"	08/15/18	In-situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	12.3	<10.0	12.3	496
SP4 @ 2'	24"	08/15/18	In-situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	32
SP5 @ Surface	Surface	08/15/18	In-situ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**5,200**
SP5 @ 1'	12"	08/15/18	In-situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	176
SP5 @ 2'	24"	08/15/18	In-situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	48
SP6 @ Surface	Surface	08/15/18	In-situ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	208
SP6 @ 1'	12"	08/15/18	In-situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	176
SP7 @ Surface	Surface	08/16/18	In-situ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**2,960**
SP7 @ 1'	12"	08/16/18	In-situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	**4,000**
SP7 @ 2'	24"	08/16/18	In-situ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**3,040**
SP7 @ 3'	36"	08/16/18	In-situ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	336
SP7 @ 4'	48"	08/16/18	In-situ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	464
SP8 @ Surface	Surface	08/16/18	In-situ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**1,300**
SP8 @ 1'	12"	08/16/18	In-situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	**1,400**
SP8 @ 2'	24"	08/16/18	In-situ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	80
North @ Surface	Surface	08/16/18	In-situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	208
East @ Surface	Surface	08/16/18	In-situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	240
West @ Surface	Surface	08/16/18	In-situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	224
South @ Surface	Surface	08/16/18	In-situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	240
NMOCD Regulatory Guidelines				**10**	**-**	**-**	**-**	**50**	**-**	**-**	**-**	**100**	**600**
Sample Locations depicted in Figure 2B													

****Samples collected by BBC International, Inc.**

TABLE 1
CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN SOIL

COG OPERATING LLC
SRO STATE COM #002H
EDDY COUNTY, NEW MEXICO

All concentrations are reported in mg/kg

SAMPLE LOCATION	SAMPLE DEPTH	SAMPLE DATE	SOIL STATUS	METHODS: SW 846-8021b					METHOD: SW 8015M				E 300.1
				BENZENE	TOLUENE	ETHYL-BENZENE	TOTAL XYLENES	TOTAL BTEX	TPH GRO C_6-C_{10}	TPH DRO C_{10}-C_{28}	TPH ORO C_{28}-C_{35}	TOTAL TPH C_6-C_{35}	CHLORIDE
SP-1 @ 1.5'	18"	10/08/18	Excavated	-	-	-	-	-	-	-	-	-	91.6
SP-2 @ 3'	36"	10/08/18	Excavated	-	-	-	-	-	-	-	-	-	97.3
SP-3 @ 3'	36"	10/08/18	Excavated	-	-	-	-	-	-	-	-	-	65.5
SP-4 (1) @ 2'	24"	10/08/18	Excavated	-	-	-	-	-	-	-	-	-	208
SP-4 (2) @ 3'	36"	10/08/18	Excavated	-	-	-	-	-	-	-	-	-	298
SP-5 @ 6"	6"	10/08/18	Excavated	-	-	-	-	-	-	-	-	-	396
SP-6 @ 1.5'	18"	10/08/18	Excavated	-	-	-	-	-	-	-	-	-	456
SP-8 @ 2.5'	30"	10/08/18	Excavated	-	-	-	-	-	-	-	-	-	478
Wall 1	9"	10/08/18	Excavated	-	-	-	-	-	-	-	-	-	93.3
Wall 2	3"	10/08/18	Excavated	-	-	-	-	-	-	-	-	-	219
Wall 3	12"	10/08/18	Excavated	-	-	-	-	-	-	-	-	-	46.8
Wall 4	15"	10/08/18	Excavated	-	-	-	-	-	-	-	-	-	48.2
SP-7 FL Comp @ 4'	48"	10/11/18	Excavated	-	-	-	-	-	-	-	-	-	302
Wall 3	24"	10/11/18	Excavated	-	-	-	-	-	-	-	-	-	25.4
NMOCD Regulatory Guidelines				**10**	**-**	**-**	**-**	**50**	**-**	**-**	**-**	**100**	**600**
Sample Locations depicted in Figure 3													

****Samples collected by TRC Environmental Corporation**

Analytical Report 602047

for

TRC Solutions, Inc

Project Manager: Joel Lowry

SRO State Com

#002H

12-OCT-18

Collected By: Client

6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-27), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-13)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-17)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

12-OCT-18

Project Manager: **Joel Lowry**
TRC Solutions, Inc
2057 Commerce
Midland, TX 79703

Reference: XENCO Report No(s): **602047**
SRO State Com
Project Address: Eddy Co. NM

Joel Lowry:

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) 602047. 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. 602047 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kelsey Brooks
Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 602047

TRC Solutions, Inc, Midland, TX

SRO State Com

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SP-1 @ 1.5'	S	10-08-18 09:00	1.5 ft	602047-001
SP-2 @ 3'	S	10-08-18 09:00	3 ft	602047-002
SP-3 @ 3'	S	10-08-18 09:00	3 ft	602047-003
SP-4 (1) @ 2'	S	10-08-18 09:00	2 ft	602047-004
SP-4 (2) @ 3'	S	10-08-18 09:00	3 ft	602047-005
SP-5 @ 6"	S	10-08-18 09:00	6 ft	602047-006
SP-6 @ 1.5'	S	10-08-18 09:00	1.5 ft	602047-007
SP-8 @ 2.5'	S	10-08-18 09:00	2.5	602047-008
Wall 1	S	10-08-18 09:00		602047-009
Wall 2	S	10-08-18 09:00		602047-010
Wall 3	S	10-08-18 09:00		602047-011
Wall 4	S	10-08-18 09:00		602047-012

Version: 1.%

CASE NARRATIVE

Client Name: TRC Solutions, Inc

Project Name: SRO State Com

Project ID: *#002H*
Work Order Number(s): *602047*

Report Date: *12-OCT-18*
Date Received: *10/10/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 602047

TRC Solutions, Inc, Midland, TX

Project Name: SRO State Com

Project Id: #002H
Contact: Joel Lowry
Project Location: Eddy Co. NM

Date Received in Lab: Wed Oct-10-18 04:40 pm
Report Date: 12-OCT-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	602047-001		602047-002		602047-003		602047-004		602047-005		602047-006	
	Field Id:	SP-1 @ 1.5'		SP-2 @ 3'		SP-3 @ 3'		SP-4 (1) @ 2'		SP-4 (2) @ 3'		SP-5 @ 6"	
	Depth:	1.5- ft		3- ft		3- ft		2- ft		3- ft		6- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Oct-08-18 09:00		Oct-08-18 09:00		Oct-08-18 09:00		Oct-08-18 09:00		Oct-08-18 09:00		Oct-08-18 09:00	
Chloride by EPA 300	***Extracted:***	Oct-11-18 08:30		Oct-11-18 08:30		Oct-11-18 08:30		Oct-11-18 08:30		Oct-11-18 08:30		Oct-11-18 08:30	
	Analyzed:	Oct-11-18 10:13		Oct-11-18 10:49		Oct-11-18 11:02		Oct-11-18 11:14		Oct-11-18 11:27		Oct-11-18 11:39	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		91.6	25.0	97.3	25.0	65.5	25.0	208	25.0	298	25.0	396	25.0

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Version: 1.%

Kelsey Brooks
Project Manager

Final 1.000

Certificate of Analysis Summary 602047

TRC Solutions, Inc, Midland, TX

Project Name: SRO State Com

Project Id: #002H
Contact: Joel Lowry
Project Location: Eddy Co. NM

Date Received in Lab: Wed Oct-10-18 04:40 pm
Report Date: 12-OCT-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	602047-007		602047-008		602047-009		602047-010		602047-011		602047-012	
	Field Id:	SP-6 @ 1.5'		SP-8 @ 2.5'		Wall 1		Wall 2		Wall 3		Wall 4	
	Depth:	1.5- ft		2.5-									
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Oct-08-18 09:00		Oct-08-18 09:00		Oct-08-18 09:00		Oct-08-18 09:00		Oct-08-18 09:00		Oct-08-18 09:00	
Chloride by EPA 300	***Extracted:***	Oct-11-18 08:30		Oct-11-18 08:30		Oct-11-18 08:30		Oct-11-18 08:30		Oct-11-18 08:30		Oct-11-18 08:30	
	Analyzed:	Oct-11-18 11:52		Oct-11-18 12:04		Oct-11-18 12:16		Oct-11-18 12:29		Oct-11-18 12:54		Oct-11-18 13:31	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		456	25.0	478	25.0	93.3	25.0	219	25.0	46.8	25.0	48.2	25.0

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Version: 1.%

Kelsey Brooks
Project Manager

Final 1.000

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

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

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

BS / BSD Recoveries

Project Name: SRO State Com

Work Order #: 602047 **Project ID:** #002H

Analyst: RNL **Date Prepared:** 10/11/2018 **Date Analyzed:** 10/11/2018

Lab Batch ID: 3066118 **Sample:** 7663988-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	0.800	250	254	102	250	252	101	1	90-110	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Version: 1.%

Form 3 - MS / MSD Recoveries

Project Name: SRO State Com

Work Order # : 602047 **Project ID:** #002H

Lab Batch ID: 3066118 **QC- Sample ID:** 602047-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10/11/2018 **Date Prepared:** 10/11/2018 **Analyst:** RNL

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	91.6	250	332	96	250	331	96	0	80-120	20	

Lab Batch ID: 3066118 **QC- Sample ID:** 602047-011 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10/11/2018 **Date Prepared:** 10/11/2018 **Analyst:** RNL

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	46.8	250	295	99	250	285	95	3	80-120	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

CHAIN OF CUSTODY

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

602047

Xenco Job # 602047

Client / Reporting Information	Project Information
Company Name / Branch: TRC Environmental Corporation	Project Name/Number: SRO State Com #002H
Company Address: 2057 Commerce Drive, Midland, TX 79703	Project Location: Eddy Co, NM
Email: jlowry@trcsolutions.com, zconder@trcsolutions.com	Phone No: 432-466-4450
	Invoice To: COG Operating C/O Becky Haskell
Project Contact: Joel Lowry	Invoice:
Samplers's Name: Joel Lowry	

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 8015 M Ext	Chloride E 300	BTEX 8021B	Hold	Field Comments
1	SP-1 @ 1.5'	1ft-6in	10-2-18	9:00	S	1										X			Composite
2	SP-2 @ 3'	3ft		9:05		1										X			
3	SP-3 @ 3'	3ft		9:10		1										X			
4	SP-4 (1) @ 2'	2 ft		9:15		1										X			
5	SP-4 (2) @ 3'	3 ft		9:20		1										X			
6	SP-5 @ 6"	6 in		9:25		1										X			
7	SP-6 @ 1.5'	1ft-6in		9:30		1										X			
8	SP-8 @ 2.5'	2ft-6in		9:35		1										X			
9	Wall 1	NA		9:40		1										X			
10	Wall 2	NA		9:45		1										X			
11	Wall 5	NA		9:50		1										X			
12	Wall 4	NA		9:55		1										X			

Turnaround Time (Business days)	Data Deliverable Information	Notes:
☐ Same Day TAT ☒ 5 Day TAT	☐ Level II Std QC ☐ Level IV (Full Data Pkg /raw data)	jlowry@trcsolutions.com zconder@trcsolutions.com
☐ Next Day EMERGENCY ☐ 7 Day TAT	☐ Level III Std QC+ Forms ☐ TRRP Level IV	rhaskell@concho.com
☐ 2 Day EMERGENCY ☐ Contract TAT	☐ Level 3 (CLP Forms) ☐ UST / RG -411	bcooper@trcsolutions.com
☐ 3 Day EMERGENCY	☐ TRRP Checklist	dneel2@concho.com
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			1	2		2
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
			3	4		4
5	Relinquished by:	Date Time: 10/10/18 9:40	Received By: Brenda Ward	Custody Seal #	Preserved where applicable	On Ice ✓ Cooler Temp. 4.8 Thermo. Corr. Factor IR-3

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

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: TRC Solutions, Inc

Date/ Time Received: 10/10/2018 04:40:00 PM

Work Order #: 602047

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

Temperature Measuring device used : IR-3

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4.8
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**N/A**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Brenda Ward Date: 10/11/2018
Brenda Ward

Checklist reviewed by: Kelsey Brooks Date: 10/11/2018
Kelsey Brooks

Analytical Report 602197

for

TRC Solutions, Inc

Project Manager: Joel Lowry

SRO State Com #2H

12-OCT-18

Collected By: Client

6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-27), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-13)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-17)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

12-OCT-18

Project Manager: **Joel Lowry**
TRC Solutions, Inc
2057 Commerce
Midland, TX 79703

Reference: XENCO Report No(s): **602197**
SRO State Com #2H
Project Address: Eddy Co. NM

Joel Lowry:

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) 602197. 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. 602197 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kelsey Brooks
Project Manager

Sample Cross Reference 602197

TRC Solutions, Inc, Midland, TX

SRO State Com #2H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SP-7 FL Comp @ 4'	S	10-11-18 10:00		602197-001
Wall 3	S	10-11-18 10:05		602197-002

CASE NARRATIVE

Client Name: TRC Solutions, Inc

Project Name: SRO State Com #2H

Project ID:
Work Order Number(s): *602197*

Report Date: *12-OCT-18*
Date Received: *10/11/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 602197

TRC Solutions, Inc, Midland, TX

Project Name: SRO State Com #2H

Project Id:
Contact: Joel Lowry
Project Location: Eddy Co. NM

Date Received in Lab: Thu Oct-11-18 05:33 pm
Report Date: 12-OCT-18
Project Manager: Kelsey Brooks

Analysis Requested									
	Lab Id:	602197-001		602197-002					
	Field Id:	SP-7 FL Comp @ 4'		Wall 3					
	Depth:								
	Matrix:	SOIL		SOIL					
	Sampled:	Oct-11-18 10:00		Oct-11-18 10:05					
Chloride by EPA 300	***Extracted:***	Oct-12-18 11:00		Oct-12-18 11:00					
	Analyzed:	Oct-12-18 14:46		Oct-12-18 15:12					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		302	250	25.4	25.0				

Kelsey Brooks
Project Manager

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

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

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

BS / BSD Recoveries

Project Name: SRO State Com #2H

Work Order #: 602197 **Project ID:**

Analyst: RNL **Date Prepared:** 10/12/2018 **Date Analyzed:** 10/12/2018

Lab Batch ID: 3066255 **Sample:** 7664077-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	2.37	250	250	100	250	251	100	0	90-110	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS / MSD Recoveries

Project Name: SRO State Com #2H

Work Order # : 602197 **Project ID:**

Lab Batch ID: 3066255 **QC- Sample ID:** 602197-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10/12/2018 **Date Prepared:** 10/12/2018 **Analyst:** RNL

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	25.4	250	265	96	250	271	98	2	80-120	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

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

602197

Xenco Quote #
Xenco Job # 602197

Client / Reporting Information

Company Name / Branch: TRC Environmental Corporation
Company Address: 10 Desta Dr. Suite 150E, Midland, TX 79705
Email: jlowry@trcsolutions.com
Phone No: 432-466-4450
Project Contact: Joel Lowry
Samplers's Name: ZPC

Project Information

Project Name/Number: SRO State Com #2H
Project Location: Eddy Co, NM
Invoice To: Concho cp Rebecca Haskell
Invoice:

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 TX1005	Chloride E 300	NORM	RCI	TCLP Benzene	TCLP RCRA 8 Metals	Chloride	TPH 8015 M Ext (NM)			Field Comments
1	SP-7 FL Comp @ 4'	4'	10-11-18	10:00am	S	1										X									1
2	Wall 3	2'	10-11-18	10:05am	S	1										X									2
3																									
4																									
5																									
6																									
7																									
8																									
9																									
10																									

Turnaround Time (Business days)

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

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

Data Deliverable Information

- [ ] 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:

jlowry@trcsolutions.com [redacted]
zconder@trcsolutions.com ifavarez@concho.com
bcooper@trcsolutions.com rhaskell@concho.com
slhitchcock@concho.com
dreel2@concho.com

FED-EX / UPS: Tracking #

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

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	[signature]	10-11-18 5:12 pm	Brenda Ward	2		2
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
			3	4		4
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. / Thermo. Corr. Factor
			5		✓	✓ 4.1 -0.3

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

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: TRC Solutions, Inc

Date/ Time Received: 10/11/2018 05:33:17 PM

Work Order #: 602197

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

Temperature Measuring device used : IR-3

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4.1
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**N/A**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Brenda Ward Date: 10/11/2018
Brenda Ward

Checklist reviewed by: Kelsey Brooks Date: 10/12/2018
Kelsey Brooks

COG- SRO State Com #002H
Date: 2/19/2019

Photographic Documentation

Photograph No. 1 **Date:** **10/11/2018** **Direction:** **East** **Description:** **View of excavated area.**	
Photograph No. 2 **Date:** **10/11/2018** **Direction:** **Southeast** **Description:** **View of excavated area.**	

COG- SRO State Com #002H
Date: 2/19/2019

Photographic Documentation

Photograph No. 3 **Date: 2/18/2019** **Direction: East** **Description: View of backfilled area.**	
Photograph No. 4 **Date: 2/18/2019** **Direction: Southeast** **Description: View of backfilled area.**	

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised April 3, 2017

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: COG Operating, LLC (OGRID #229137)	Contact: Robert McNeill
Address: 600 West Illinois Avenue, Midland, TX 79701	Telephone No. 432-683-7443
Facility Name: **SRO State Com #002H**	Facility Type: Tank Battery

Surface Owner: State	Mineral Owner: State	API No. 30-015-37141

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
P	32	25S	28E	430	South	330	East	Eddy

Latitude 32.080101 **Longitude** -104.1018906 NAD83

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: 190 bbl.	Volume Recovered: 180 bbl.
Source of Release: Lightning Strike	Date and Hour of Occurrence: July 15, 2018 6:30pm	Date and Hour of Discovery: July 15, 2018 6:30pm
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher – NMOCD Ryan Mann – SLO	
By Whom? DeAnn Grant	Date and Hour July 16, 2018 9:03am	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

The release was caused by a lightning strike to the overflow water tank. The damaged tanks will be replaced.

Describe Area Affected and Cleanup Action Taken.*

The release occurred within the lined facility. A vacuum truck was dispatched to remove all freestanding fluids. Concho will have the spill area evaluated for any possible impact from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation activities.

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: DeAnn Grant		OIL CONSERVATION DIVISION	
Printed Name: DeAnn Grant		Approved by Environmental Specialist:	
Title: HSE Administrative Assistant		Approval Date:	Expiration Date:
E-mail Address: agrant@concho.com		Conditions of Approval:	Attached ☐
Date: July 16, 2018	Phone: (432) 253-4513		

* Attach Additional Sheets If Necessary

NM OIL CONSERVATION
ARTESIA DISTRICT
DEC 01 2017
RECEIVED

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised April 3, 2017

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

nAB1734038101

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 #002H	Facility Type: Tank Battery

Surface Owner: State	Mineral Owner: State	API No.: 30-015-37141

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
P	32	25	28	430	South	330	East	Eddy

Latitude: 32.080101 Longitude: -104.1018906 NAD83

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: 30 BBLS	Volume Recovered: 28 BBLS
Source of Release: Water Transfer Pump	Date and Hour of Occurrence: 11/30/2017 8:00 am	Date and Hour of Discovery: 11/30/2017 8:00 am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Crystal Weaver-NMOCD Amber Groves-NMSLO	
By Whom? Rebecca Haskell	Date and Hour: 11/30/2017 2:34	
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.*

Two to one swedge failed and resulted in a 30 BBL release. The swedge was replaced.

Describe Area Affected and Cleanup Action Taken.*

The fluid impacted the lined containment and the adjacent well pad. A vacuum truck was dispatched to recover all freestanding fluids. Concho will have the spill area evaluated for any possible impact from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation activities.

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: C. Gray	OIL CONSERVATION DIVISION
Printed Name: Christopher Gray	Approved by Environmental Specialist: Crystal Weaver
Title: HSE Coordinator	Approval Date: 12/4/17 Expiration Date: N/A
E-mail Address: cgray@concho.com	Conditions of Approval: See attached Attached ☒
Date: 12/1/2017 Phone: 575-746-2010	

* Attach Additional Sheets If Necessary

State of New Mexico
Oil Conservation Division

Incident ID	nAB1734038101
District RP	2RP-4510
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☑ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☑ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☑ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☑ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Charles R. Beauvais II Title: Senior Environmental Engineer

Signature: Charles R. Beauvais II Date: 12/20/2022

email: charles.r.beauvais@conocophillips.com Telephone: 575-988-2043

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Brittany Hall Date: 12/21/2022

Printed Name: Brittany Hall Title: Environmental Specialist

2M Environmental Services, LLC
1219 W. University Blvd.
Odessa, TX 79764

June 22, 2018

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

Ryan Mann
District Resource Specialist
Field Operations Division
New Mexico State Land Office
2827 N. Dal Paso Suite 117
Hobbs, NM 88240
rmann@slo.state.nm.us

Re: Soil Investigation Summary and Proposed Remediation Workplan
SRO State COM #002H 11/30/2017 (2RP-4510)
GPS: N 32.080101° W 104.1018906°
Unit Letter "P", Section 32, Township 25 South, Range 28 East, NMPM
Eddy County, New Mexico

Dear Mr. Bratcher and Mr. Mann,

2M Environmental Services, LLC. (2M), on behalf of COG Operating, LLC. (Concho), has prepared this Soil Investigation Summary and Proposed Remediation Workplan (Workplan) for the SRO State COM #002H 11/30/2017 Release Site (Release Site). The purpose of this Workplan is to propose remediation activities designed to advance the SRO State COM #002H 11/30/2017 Release Site toward a New Mexico Oil and Conservation District (NMOCD) approved Site Closure Status. The legal description of the Release Site is Unit Letter "P", Section 32, Township 25 South, Range 28 East, in Eddy County, New Mexico. The subject property is administered by the New Mexico State Land Office (NMSLO). The GPS coordinates for the site are N 32.080101° W 104.1018906°. A Site Location Map and Site Details and Soil Sample Location Map are provided as Figure 1 and Figure 2, respectively.

On November 30, 2017, a produced water release occurred at the SRO State COM #002H 11/30/2017. The release was the result of the failure of a two to one swedge, which resulted in the release of produced water in the lined containment and on the adjacent caliche production pad. On November 30, 2017, Concho reported the release to the NMOCD District 2 Office, located in Artesia, New Mexico, and NMSLO. The release was assigned an incident number 2RP-4510. A Release Notification and Corrective Action Form (Form C-141) was subsequently submitted to the NMOCD on December 1, 2017. The release was reported as approximately thirty (30) barrels of produced water released with approximately twenty-eight (28) barrels of produced water recovered, resulting in a net loss of approximately two (2) barrels of produced water. A copy of the NMOCD Release Notification and Corrective Action Form C-141 is attached to this Workplan.

A groundwater database maintained by The New Mexico Office of the State Engineer (NMOSE) did not identify the average depth to groundwater information in Section 32, Township 25 South, Range 28 East. A reference map utilized by the New Mexico Oil Conservation Division (NMOCD) Artesia District Office indicates groundwater should be encountered at approximately twenty-five (25) feet below ground surface (bgs). Based on the NMOCD site classification system, twenty (20) points will be assigned to the subject area ranking as a result of this criterion. No water wells were observed within one-thousand (1,000) feet of the Release Site. Based on the NMOCD site classification system, zero (0) points will be assigned to the subject area ranking as a result of this criterion. No surface water was observed within one thousand (1,000) feet of the release. Based on the NMOCD site classification system, twenty (20) points will be assigned to the subject area ranking as a result of this criterion.

Based on the NMOCD Site Classification criteria, the Release Site remediation levels are 10 mg/Kg for benzene, 50 mg/Kg for benzene, toluene, ethylbenzene and xylenes (BTEX) and 100 mg/Kg for total petroleum hydrocarbons (TPH). Chloride remediation levels for the Release Site will be 600 mg/Kg, per NMOCD request.

On December 29, 2017, Concho collected six (6) delineation soil samples (AH-1 @ 0', AH-1 @ 1', AH-1 @ 2', AH-2 @ 0', AH-2 @ 1', and AH-2 @ 2') utilizing a hand auger on the caliche pad. The soil samples were submitted to Xenco Laboratories in Midland, Texas for determination of concentrations of BTEX using Method SW 846-8021B, TPH using Method SW 846-8015M, and chloride using Method E-300.1. Laboratory analytical results indicated additional delineation was needed in the area represented by sample point AH-2. Sample results are provided as an attachment to this report (Table 1 - Concentrations of Benzene, BTEX, TPH and Chloride in Soil).

On March 13, 2018, 2M, on behalf of Concho, utilized a backhoe to collect five (5) delineation soil samples (T-1 @ 6", T-1 @ 1', T-1 @ 2', T-1 @ 3', and T-1 @ 4') from the area represented by sample point AH-2. The soil samples were submitted to Xenco Laboratories in Midland, Texas for determination of concentrations of BTEX using Method SW 846-8021B, TPH using Method SW 846-8015M, and chloride using Method E-300.1. Sample results are provided as an attachment to this report (Table 1 - Concentrations of Benzene, BTEX, TPH and Chloride in Soil).

Based on the analytical results of the soil samples collected on December 29, 2017 and March 13, 2018, respectively, Concho proposes the following field activities designed to remediate the SRO State COM #002H 11/30/2017:

- Utilizing a backhoe, excavate the area represented by sample point AH-1 to approximately two (2) feet bgs and the area represented by sample points AH-2 and T-1 to approximately two and a half (2.5) feet bgs.
- Impacted gravel inside the lined containment will be removed down to the lined surface.
- In addition, confirmation sidewall samples will be collected from the excavation to confirm clean margins.
- Excavated soil and impacted gravel will be stockpiled on a plastic liner adjacent to the excavation pending disposal.
- The excavation will be backfilled with locally purchased non-impacted "like" soil or caliche and the lined containment will be backfilled with non-impacted gravel. In addition, the excavated soil and gravel will be transported under manifest to a NMOCD approved disposal facility.
- Prepare and submit a "Remediation Summary and Site Closure Request" to the NMOCD and NMSLO.

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

If you have any questions, or if additional information is required, please feel free to call me at 432-614-6793 (office) or 432-230-3763 (cell).

Thank you,

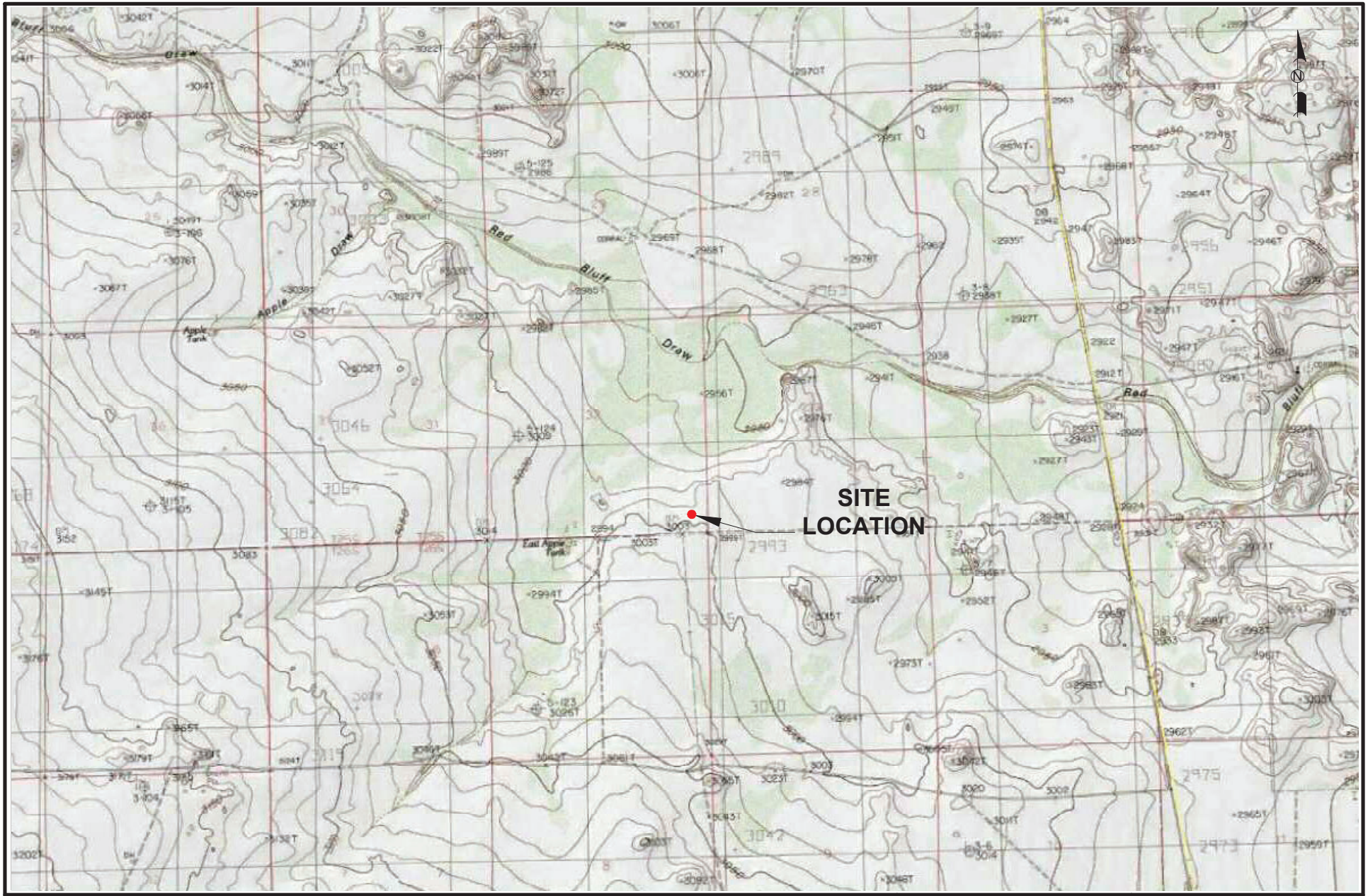
Matthew Green

Matthew Green, P.G.
President
2M Environmental Services, LLC.

Attachments:

Figure 1 - Site Location Map
Figure 2 - Site Details and Soil Sample Location Map
Table 1 - Concentrations of Benzene, BTEX, TPH and Chloride in Soil
Laboratory Analytical Results
Release Notification and Corrective Action (Form C-141)

cc: File



LEGEND:

Native Grassland

2000 1000 0 1000 2000

Distance in Feet

Figure 1

Site Location Map

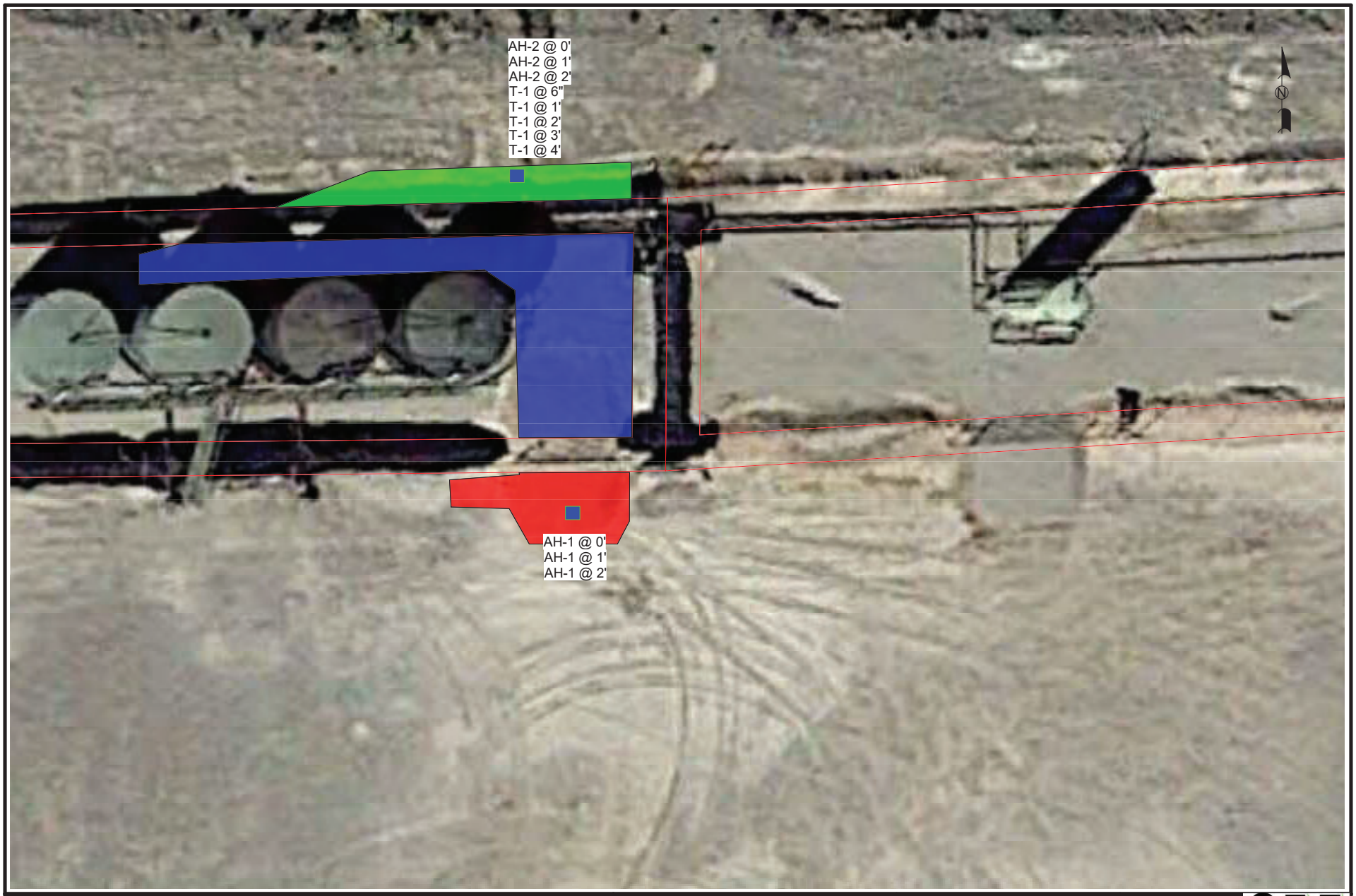
COG Operating LLC

SRO State Com #002H Tank Battery

Eddy County, TX

Scale: 1" = 2000'
CAD By: JR
Checked By: MG
Date: March 25, 2018
Lat. N 32.080101°, Long. W 104.1018906°

2M Environmental Services, LLC



LEGEND:

- Excavate to two feet below ground surface
- Excavate to two and one half feet below ground surface
- Excavate impacted material above the lined surface
- Vertical Soil Sample Location
- Lined Berm

20 10 0 10 20

Distance in Feet

Figure 2
Site Details &
Soil Sample Location Map
COG Operating LLC
SRO State Com #002H Tank Battery
Eddy County, TX

Scale: 1" = 20'
CAD By: AR
Checked By: MG
Draft: April 30, 2018
Lat. N 32.080101° Long. W 104.1018906°

2M Environmental Services, LLC

TABLE 1

CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN SOIL

CONCHO OPERATING, LLC

SRO State Com #002H (11/30/2017) RELEASE SITE

EDDY COUNTY, NEW MEXICO

All concentrations are reported in mg/Kg

SAMPLE LOCATION	SAMPLE DATE	METHODS: SW 846-8021B						METHOD: SW 8015M					E 300.1
		BENZENE	TOLUENE	ETHYL-BENZENE	m, p - XYLENES	o - XYLENE	TOTAL XYLENES	TOTAL BTEX	TPH GRO C_6-C_{12}	TPH DRO C_{12}-C_{28}	TPH ORO C_{28}-C_{35}	TOTAL TPH C_6-C_{35}	CHLORIDE
Limits		**10 mg/Kg**						**50 mg/Kg**				**100 mg/Kg**	**600 mg/Kg**
AH-1 @ 0'	12/29/2017	<0.00201	<0.00201	<0.00201	<0.00402	<0.00201	<0.00402	<0.00402	<15.0	<15.0	<15.0	<15.0	**19,500**
AH-1 @ 1'	12/29/2017	<0.00199	<0.00199	<0.00199	<0.00398	<0.00199	<0.00398	<0.00398	<15.0	<15.0	<15.0	<15.0	**9,390**
AH-1 @ 2'	12/29/2017	<0.00200	<0.00200	<0.00200	<0.00399	<0.00200	<0.00399	<0.00399	<15.0	<15.0	<15.0	<15.0	131
AH-2 @ 0'	12/29/2017	<0.00199	<0.00199	<0.00199	<0.00398	<0.00199	<0.00398	<0.00398	<15.0	<15.0	<15.0	<15.0	**14,400**
AH-1 @ 1'	12/29/2017	<0.00202	<0.00202	<0.00202	<0.00404	<0.00202	<0.00404	<0.00404	<15.0	<15.0	<15.0	<15.0	**1,640**
AH-2 @ 2'	12/29/2017	<0.00201	<0.00201	<0.00201	<0.00402	<0.00201	<0.00402	<0.00402	<15.0	<15.0	<15.0	<15.0	**1,180**
T-1 @ 6"	3/13/2018	<0.00202	<0.00202	<0.00202	<0.00403	<0.00202	<0.00403	<0.00403	<14.9	<14.9	<14.9	<14.9	286
T-1 @ 1'	3/13/2018	<0.00199	<0.00199	<0.00199	<0.00398	<0.00199	<0.00398	<0.00398	<15.0	61.2	<15.0	61.2	291
T-1 @ 2'	3/13/2018	<0.00200	<0.00200	<0.00200	<0.00401	<0.00200	<0.00401	<0.00401	<15.0	<15.0	<15.0	<15.0	200
T-1 @ 3'	3/13/2018	<0.00202	<0.00202	<0.00202	<0.00404	<0.00202	<0.00404	<0.00404	<15.0	<15.0	<15.0	<15.0	86.8
T-1 @ 4'	3/13/2018	<0.00198	<0.00198	<0.00198	<0.00397	<0.00198	<0.00397	<0.00397	<15.0	<15.0	<15.0	<15.0	132

*** T-1 was collected from the area represented by AH-2.**

Certificate of Analysis Summary 573116

COG Operating LLC, Artesia, NM

Project Name: SRO St. Com #2H

Project Id:
Contact: Sheldon Hitchcock
Project Location: Eddy County NM

Date Received in Lab: Tue Jan-09-18 12:30 pm
Report Date: 18-JAN-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	573116-001		573116-002		573116-003		573116-004		573116-005		573116-006	
	Field Id:	AH-1 0'		AH-1 1'		AH-1 2'		AH-2 0'		AH-2 1'		AH-2 2'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-29-17 13:30		Dec-29-17 13:35		Dec-29-17 13:40		Dec-29-17 14:00		Dec-29-17 14:05		Dec-29-17 14:10	
BTEX by EPA 8021B	*Extracted:*	Jan-12-18 16:00		Jan-12-18 16:00		Jan-12-18 16:00		Jan-12-18 16:00		Jan-12-18 16:00		Jan-12-18 16:00	
	Analyzed:	Jan-12-18 22:38		Jan-12-18 20:04		Jan-12-18 19:45		Jan-12-18 20:42		Jan-12-18 21:01		Jan-12-18 21:21	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00202	0.00202	<0.00201	0.00201
Toluene		<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00202	0.00202	<0.00201	0.00201
Ethylbenzene		<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00202	0.00202	<0.00201	0.00201
m,p-Xylenes		<0.00402	0.00402	<0.00398	0.00398	<0.00399	0.00399	<0.00398	0.00398	<0.00404	0.00404	<0.00402	0.00402
o-Xylene		<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00202	0.00202	<0.00201	0.00201
Total Xylenes		<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00202	0.00202	<0.00201	0.00201
Total BTEX		<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00202	0.00202	<0.00201	0.00201
Chloride by EPA 300	*Extracted:*	Jan-11-18 14:00		Jan-11-18 14:00		Jan-11-18 14:00		Jan-11-18 14:00		Jan-11-18 14:00		Jan-11-18 14:00	
	Analyzed:	Jan-11-18 16:24		Jan-11-18 16:31		Jan-11-18 16:38		Jan-11-18 16:45		Jan-11-18 16:52		Jan-11-18 16:59	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		19500	248	9390	50.0	131	49.4	14400	248	1640	49.6	1180	49.9
TPH By SW8015 Mod	*Extracted:*	Jan-12-18 10:00		Jan-12-18 10:00		Jan-12-18 10:00		Jan-16-18 16:00		Jan-12-18 10:00		Jan-12-18 10:00	
	Analyzed:	Jan-12-18 23:10		Jan-12-18 20:16		Jan-12-18 20:38		Jan-17-18 01:33		Jan-12-18 21:21		Jan-12-18 21:43	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Version: 1.%

Kelsey Brooks
Project Manager

Final 1.000

Analytical Report 573116

for

COG Operating LLC

Project Manager: Sheldon Hitchcock

SRO St. Com #2H

18-JAN-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

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

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

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

18-JAN-18

Project Manager: **Sheldon Hitchcock**
COG Operating LLC
2407 Pecos Avenue
Artesia, NM 88210

Reference: XENCO Report No(s): **573116**
SRO St. Com #2H
Project Address: Eddy County NM

Sheldon Hitchcock:

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) 573116. 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. 573116 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kelsey Brooks
Project Manager

Sample Cross Reference 573116

COG Operating LLC, Artesia, NM

SRO St. Com #2H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
AH-1 0'	S	12-29-17 13:30		573116-001
AH-1 1'	S	12-29-17 13:35		573116-002
AH-1 2'	S	12-29-17 13:40		573116-003
AH-2 0'	S	12-29-17 14:00		573116-004
AH-2 1'	S	12-29-17 14:05		573116-005
AH-2 2'	S	12-29-17 14:10		573116-006

Version: 1.%

CASE NARRATIVE

Client Name: COG Operating LLC

Project Name: SRO St. Com #2H

Project ID:
Work Order Number(s): *573116*

Report Date: *18-JAN-18*
Date Received: *01/09/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3038355 BTEX by EPA 8021B

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

Certificate of Analytical Results 573116

COG Operating LLC, Artesia, NM

SRO St. Com #2H

Sample Id:	**AH-1 0'**	Matrix:	Soil	Date Received:	01.09.18 12.30
Lab Sample Id:	573116-001	Date Collected:	12.29.17 13.30		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.11.18 14.00	Basis:	Wet Weight
Seq Number:	3038226				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**19500**	248	mg/kg	01.11.18 16.24		50

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.12.18 10.00	Basis:	Wet Weight
Seq Number:	3038390				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.12.18 23.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.12.18 23.10	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.12.18 23.10	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.12.18 23.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	01.12.18 23.10	
o-Terphenyl	84-15-1	94	%	70-135	01.12.18 23.10	

Certificate of Analytical Results 573116

COG Operating LLC, Artesia, NM

SRO St. Com #2H

Sample Id:	**AH-1 0'**	Matrix:	Soil	Date Received:	01.09.18 12.30
Lab Sample Id:	573116-001	Date Collected:	12.29.17 13.30		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.12.18 16.00	Basis:	Wet Weight
Seq Number:	3038355				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.12.18 22.38	UK	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.12.18 22.38	UK	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.12.18 22.38	UK	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.12.18 22.38	UK	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.12.18 22.38	UK	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.12.18 22.38	UK	1
Total BTEX		<0.00201	0.00201	mg/kg	01.12.18 22.38	UK	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	92	%	80-120	01.12.18 22.38	
4-Bromofluorobenzene	460-00-4	95	%	80-120	01.12.18 22.38	

Certificate of Analytical Results 573116

COG Operating LLC, Artesia, NM

SRO St. Com #2H

Sample Id:	**AH-1 1'**	Matrix:	Soil	Date Received:	01.09.18 12.30
Lab Sample Id:	573116-002	Date Collected:	12.29.17 13.35		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.11.18 14.00	Basis:	Wet Weight
Seq Number:	3038226				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9390**	50.0	mg/kg	01.11.18 16.31		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.12.18 10.00	Basis:	Wet Weight
Seq Number:	3038390				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.12.18 20.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.12.18 20.16	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.12.18 20.16	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.12.18 20.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	76	%	70-135	01.12.18 20.16	
o-Terphenyl	84-15-1	77	%	70-135	01.12.18 20.16	

Certificate of Analytical Results 573116

COG Operating LLC, Artesia, NM

SRO St. Com #2H

Sample Id:	**AH-1 1'**	Matrix:	Soil	Date Received:	01.09.18 12.30
Lab Sample Id:	573116-002	Date Collected:	12.29.17 13.35		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.12.18 16.00	Basis:	Wet Weight
Seq Number:	3038355				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.12.18 20.04	UK	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.12.18 20.04	UK	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.12.18 20.04	UK	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.12.18 20.04	UK	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.12.18 20.04	UK	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.12.18 20.04	UK	1
Total BTEX		<0.00199	0.00199	mg/kg	01.12.18 20.04	UK	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	95	%	80-120	01.12.18 20.04	
4-Bromofluorobenzene	460-00-4	94	%	80-120	01.12.18 20.04	

Certificate of Analytical Results 573116

COG Operating LLC, Artesia, NM

SRO St. Com #2H

Sample Id:	**AH-1 2'**	Matrix:	Soil	Date Received:	01.09.18 12.30
Lab Sample Id:	573116-003	Date Collected:	12.29.17 13.40		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.11.18 14.00	Basis:	Wet Weight
Seq Number:	3038226				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**131**	49.4	mg/kg	01.11.18 16.38		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.12.18 10.00	Basis:	Wet Weight
Seq Number:	3038390				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.12.18 20.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.12.18 20.38	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.12.18 20.38	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.12.18 20.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	01.12.18 20.38	
o-Terphenyl	84-15-1	86	%	70-135	01.12.18 20.38	

Certificate of Analytical Results 573116

COG Operating LLC, Artesia, NM

SRO St. Com #2H

Sample Id:	**AH-1 2'**	Matrix:	Soil	Date Received:	01.09.18 12.30
Lab Sample Id:	573116-003	Date Collected:	12.29.17 13.40		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.12.18 16.00	Basis:	Wet Weight
Seq Number:	3038355				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.12.18 19.45	UK	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.12.18 19.45	UK	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.12.18 19.45	UK	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.12.18 19.45	UK	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.12.18 19.45	UK	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.12.18 19.45	UK	1
Total BTEX		<0.00200	0.00200	mg/kg	01.12.18 19.45	UK	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	90	%	80-120	01.12.18 19.45	
1,4-Difluorobenzene	540-36-3	97	%	80-120	01.12.18 19.45	

Certificate of Analytical Results 573116

COG Operating LLC, Artesia, NM

SRO St. Com #2H

Sample Id: **AH-2 0'** Matrix: Soil Date Received:01.09.18 12.30

Lab Sample Id: 573116-004 Date Collected: 12.29.17 14.00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: OJS % Moisture:

Analyst: OJS Date Prep: 01.11.18 14.00 Basis: Wet Weight

Seq Number: 3038226

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**14400**	248	mg/kg	01.11.18 16.45		50

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 01.16.18 16.00 Basis: Wet Weight

Seq Number: 3038511

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.17.18 01.33	UK	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.17.18 01.33	UK	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.17.18 01.33	UK	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.17.18 01.33	UK	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	01.17.18 01.33	
o-Terphenyl	84-15-1	92	%	70-135	01.17.18 01.33	

Certificate of Analytical Results 573116

COG Operating LLC, Artesia, NM

SRO St. Com #2H

Sample Id:	**AH-2 0'**	Matrix:	Soil	Date Received:	01.09.18 12.30
Lab Sample Id:	573116-004	Date Collected:	12.29.17 14.00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.12.18 16.00	Basis:	Wet Weight
Seq Number:	3038355				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.12.18 20.42	UK	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.12.18 20.42	UK	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.12.18 20.42	UK	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.12.18 20.42	UK	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.12.18 20.42	UK	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.12.18 20.42	UK	1
Total BTEX		<0.00199	0.00199	mg/kg	01.12.18 20.42	UK	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	80-120	01.12.18 20.42	
4-Bromofluorobenzene	460-00-4	101	%	80-120	01.12.18 20.42	

Certificate of Analytical Results 573116

COG Operating LLC, Artesia, NM

SRO St. Com #2H

Sample Id:	**AH-2 1'**	Matrix:	Soil	Date Received:	01.09.18 12.30
Lab Sample Id:	573116-005	Date Collected:	12.29.17 14.05		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.11.18 14.00	Basis:	Wet Weight
Seq Number:	3038226				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1640**	49.6	mg/kg	01.11.18 16.52		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.12.18 10.00	Basis:	Wet Weight
Seq Number:	3038390				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.12.18 21.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.12.18 21.21	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.12.18 21.21	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.12.18 21.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	70	%	70-135	01.12.18 21.21	
o-Terphenyl	84-15-1	70	%	70-135	01.12.18 21.21	

Certificate of Analytical Results 573116

COG Operating LLC, Artesia, NM

SRO St. Com #2H

Sample Id:	**AH-2 1'**	Matrix:	Soil	Date Received:	01.09.18 12.30
Lab Sample Id:	573116-005	Date Collected:	12.29.17 14.05		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.12.18 16.00	Basis:	Wet Weight
Seq Number:	3038355				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.12.18 21.01	UK	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.12.18 21.01	UK	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.12.18 21.01	UK	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	01.12.18 21.01	UK	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.12.18 21.01	UK	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.12.18 21.01	UK	1
Total BTEX		<0.00202	0.00202	mg/kg	01.12.18 21.01	UK	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	80-120	01.12.18 21.01	
4-Bromofluorobenzene	460-00-4	102	%	80-120	01.12.18 21.01	

Certificate of Analytical Results 573116

COG Operating LLC, Artesia, NM

SRO St. Com #2H

Sample Id:	**AH-2 2'**	Matrix:	Soil	Date Received:	01.09.18 12.30
Lab Sample Id:	573116-006	Date Collected:	12.29.17 14.10		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.11.18 14.00	Basis:	Wet Weight
Seq Number:	3038226				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1180**	49.9	mg/kg	01.11.18 16.59		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.12.18 10.00	Basis:	Wet Weight
Seq Number:	3038390				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.12.18 21.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.12.18 21.43	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.12.18 21.43	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	01.12.18 21.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	80	%	70-135	01.12.18 21.43	
o-Terphenyl	84-15-1	84	%	70-135	01.12.18 21.43	

Certificate of Analytical Results 573116

COG Operating LLC, Artesia, NM

SRO St. Com #2H

Sample Id:	**AH-2 2'**	Matrix:	Soil	Date Received:	01.09.18 12.30
Lab Sample Id:	573116-006	Date Collected:	12.29.17 14.10		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.12.18 16.00	Basis:	Wet Weight
Seq Number:	3038355				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.12.18 21.21	UK	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.12.18 21.21	UK	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.12.18 21.21	UK	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.12.18 21.21	UK	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.12.18 21.21	UK	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.12.18 21.21	UK	1
Total BTEX		<0.00201	0.00201	mg/kg	01.12.18 21.21	UK	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	80-120	01.12.18 21.21	
4-Bromofluorobenzene	460-00-4	100	%	80-120	01.12.18 21.21	

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 573116

COG Operating LLC

SRO St. Com #2H

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3038226 — Matrix: Solid — Date Prep: 01.11.18
MB Sample Id: 7637332-1-BLK — LCS Sample Id: 7637332-1-BKS — LCSD Sample Id: 7637332-1-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	240	96	240	96	90-110	0	20	mg/kg	01.11.18 14:50	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3038226 — Matrix: Soil — Date Prep: 01.11.18
Parent Sample Id: 573117-001 — MS Sample Id: 573117-001 S — MSD Sample Id: 573117-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	240	250	500	104	508	107	90-110	2	20	mg/kg	01.11.18 15:11	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3038226 — Matrix: Soil — Date Prep: 01.11.18
Parent Sample Id: 573122-002 — MS Sample Id: 573122-002 S — MSD Sample Id: 573122-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.97	249	237	95	247	99	90-110	4	20	mg/kg	01.11.18 17:20	

Analytical Method: TPH By SW8015 Mod — Prep Method: TX1005P
Seq Number: 3038511 — Matrix: Solid — Date Prep: 01.16.18
MB Sample Id: 7637574-1-BLK — LCS Sample Id: 7637574-1-BKS — LCSD Sample Id: 7637574-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	923	92	866	87	70-135	6	35	mg/kg	01.16.18 22:31	
Diesel Range Organics (DRO)	<15.0	1000	974	97	925	93	70-135	5	35	mg/kg	01.16.18 22:31	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		91		89		70-135	%	01.16.18 22:31
o-Terphenyl	100		89		89		70-135	%	01.16.18 22:31

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

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

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

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

QC Summary 573116

COG Operating LLC

SRO St. Com #2H

Analytical Method: TPH By SW8015 Mod — Prep Method: TX1005P
Seq Number: 3038390 — Matrix: Solid — Date Prep: 01.12.18
MB Sample Id: 7637443-1-BLK — LCS Sample Id: 7637443-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	862	86	70-135	mg/kg	01.12.18 19:11	
Diesel Range Organics (DRO)	<15.0	1000	861	86	70-135	mg/kg	01.12.18 19:11	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	Limits	Units	Analysis Date
1-Chlorooctane	91		80		70-135	%	01.12.18 19:11
o-Terphenyl	96		95		70-135	%	01.12.18 19:11

Analytical Method: TPH By SW8015 Mod — Prep Method: TX1005P
Seq Number: 3038390 — Matrix: Soil — Date Prep: 01.12.18
Parent Sample Id: 573261-001 — MS Sample Id: 573261-001 S — MSD Sample Id: 573261-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	23.0	1000	796	77	831	81	70-135	4	35	mg/kg	01.13.18 02:42	
Diesel Range Organics (DRO)	120	1000	856	74	870	75	70-135	2	35	mg/kg	01.13.18 02:42	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	85		88		70-135	%	01.13.18 02:42
o-Terphenyl	101		81		70-135	%	01.13.18 02:42

Analytical Method: TPH By SW8015 Mod — Prep Method: TX1005P
Seq Number: 3038511 — Matrix: Soil — Date Prep: 01.16.18
Parent Sample Id: 572902-001 — MS Sample Id: 572902-001 S — MSD Sample Id: 572902-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	998	836	84	837	84	70-135	0	35	mg/kg	01.16.18 23:40	
Diesel Range Organics (DRO)	<15.0	998	965	97	964	96	70-135	0	35	mg/kg	01.16.18 23:40	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	85		83		70-135	%	01.16.18 23:40
o-Terphenyl	72		77		70-135	%	01.16.18 23:40

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

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

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

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

Final 1.000

QC Summary 573116

COG Operating LLC

SRO St. Com #2H

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3038355 | Matrix: Solid | Date Prep: 01.12.18
MB Sample Id: 7637493-1-BLK | LCS Sample Id: 7637493-1-BKS | LCSD Sample Id: 7637493-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0948	95	0.0882	88	70-130	7	35	mg/kg	01.12.18 17:29	
Toluene	<0.00201	0.100	0.0928	93	0.0864	87	70-130	7	35	mg/kg	01.12.18 17:29	
Ethylbenzene	<0.00201	0.100	0.0908	91	0.0848	85	71-129	7	35	mg/kg	01.12.18 17:29	
m,p-Xylenes	<0.00402	0.201	0.182	91	0.170	85	70-135	7	35	mg/kg	01.12.18 17:29	
o-Xylene	<0.00201	0.100	0.0902	90	0.0854	86	71-133	5	35	mg/kg	01.12.18 17:29	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		99		98		80-120	%	01.12.18 17:29
4-Bromofluorobenzene	92		93		95		80-120	%	01.12.18 17:29

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3038355 | Matrix: Soil | Date Prep: 01.12.18
Parent Sample Id: 573116-003 | MS Sample Id: 573116-003 S | MSD Sample Id: 573116-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0868	87	0.0896	90	70-130	3	35	mg/kg	01.12.18 18:09	
Toluene	<0.00199	0.0996	0.0852	86	0.0865	87	70-130	2	35	mg/kg	01.12.18 18:09	
Ethylbenzene	<0.00199	0.0996	0.0806	81	0.0824	83	71-129	2	35	mg/kg	01.12.18 18:09	
m,p-Xylenes	<0.00398	0.199	0.162	81	0.165	83	70-135	2	35	mg/kg	01.12.18 18:09	
o-Xylene	<0.00199	0.0996	0.0818	82	0.0824	83	71-133	1	35	mg/kg	01.12.18 18:09	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		117		80-120	%	01.12.18 18:09
4-Bromofluorobenzene	97		111		80-120	%	01.12.18 18:09

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

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

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

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

CHAIN OF CUSTODY

Page 1 Of 1

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Xenco Quote #
Xenco Job # 573116

Client / Reporting Information

Company Name / Branch: COG Operating, LLC
Company Address: 2407 Pecos Ave. Artesia NM 88210
Email: slhitchcock@concho.com Phone No: 575-703-6475
dneel2@concho.com; cgray@concho.com; rhaskell@concho.com
Project Contact: Sheldon Hitchcock
Samplers's Name: Sheldon Hitchcock

Project Information

Project Name/Number: SRO St. Com #2H
Project Location: Eddy CO, NM
Invoice To: COG Operating, LLC
Attn: Robert McNeill
600 W. Illnois Ave.
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 EXTENDED	BTEX	CHLORIDES							Field Comments
1	AH-1 0'	0	12/5/17	11:30	S	1								✓	✓	✓	✓							
2	AH-1 1'	1		1:35	S	1								✓	✓	✓	✓							
3	AH-1 2'	2		1:40	S	1								✓	✓	✓	✓							
4	AH-2 0'	0		2:00	S	1								✓	✓	✓	✓							
5	AH-2 1'	1		2:05	S	1								✓	✓	✓	✓							
6	AH-2 2'	2		2:10	S	1								✓	✓	✓	✓							
7					S	1																		
8					S	1																		
9					S	1																		
10					S	1																		

Turnaround Time (Business days)

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

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

Data Deliverable Information

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

Temp: 3.2 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 3.0

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	Sheldon Hitchcock	1-9-18 11 AM		2	1-9-18 12:30	
2	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
	3		3	4		4 1.10.18 12:00
3	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. / Thermo. Corr. Factor
	5		5			10-2

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 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 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 # 573116

Client / Reporting Information

Company Name / Branch: COG Operating, LLC
Company Address: 2407 Pecos Ave. Artesia NM 88210
Email: shitchcock@concho.com Phone No: 575-703-6475
dneel2@concho.com; cgray@concho.com; rhaskell@concho.com
Project Contact: Sheldon Hitchcock
Sampler's Name: Sheldon Hitchcock

Project Information

Project Name/Number: SRO St. Com #2H
Project Location: Eddy CO. NM
Invoice To: COG Operating, LLC
Attn: Robert McNeill
600 W. Illinois Ave.
Midland Tx. 79701
PO Number:

Matrix Codes

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

No.	Field ID / Point of Collection	Collection: Sample Depth	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	None	Analytical Information: TPH EXTENDED	BTEX	CHLORIDES	Field Comments
1	AH-1 0'	0	12/29/17	11:30	S	1								X	X	X	X	
2	AH-1 1'	1		1:35	S	1								X	X	X	X	
3	AH-1 2'	2		1:40	S	1								X	X	X	X	
4	AH-2 0'	0		2:00	S	1								X	X	X	X	
5	AH-2 1'	1		2:05	S	1								X	X	X	X	
6	AH-2 2'	2		2:10	S	1								X	X	X	X	
7					S	1												
8					S	1												
9					S	1												
10					S	1												

Turnaround Time (Business days)

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

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

Data Deliverable Information

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

Temp: 3.2 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 3.0

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	Sheldon Hitchcock	1-9-18 11 AM	Derrick Shaw	2 Derrick Shaw	1-9-18 12:30	2 Rhonnee Smith
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By: 1.10.18 12:00
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. 10-2 / Thermo. Corr. Factor

Notice: Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the Client if such losses 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.

Inter-Office Shipment

IOS Number **1054383**

Date/Time: 01/10/18 12:32
Lab# From: **Midland**
Lab# To: **Houston**

Created by: Shawnee Smith
Delivery Priority:
Air Bill No.:

Please send report to: Kelsey Brooks
Address: 1211 W. Florida Ave, Midland TX 79701
Phone:
E-Mail: kelsey.brooks@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
573116-001	S	AH-1 0'	12/05/17 13:30	TX1005	TPH by Texas1005	01/15/18	12/19/17	KEB	PHCC12C28 PHCC28C35]	
573116-002	S	AH-1 1'	12/05/17 13:35	TX1005	TPH by Texas1005	01/15/18	12/19/17	KEB	PHCC12C28 PHCC28C35]	
573116-003	S	AH-1 2'	12/05/17 13:40	TX1005	TPH by Texas1005	01/15/18	12/19/17	KEB	PHCC12C28 PHCC28C35]	
573116-004	S	AH-2 0'	12/05/17 14:00	TX1005	TPH by Texas1005	01/15/18	12/19/17	KEB	PHCC12C28 PHCC28C35]	
573116-005	S	AH-2 1'	12/05/17 14:05	TX1005	TPH by Texas1005	01/15/18	12/19/17	KEB	PHCC12C28 PHCC28C35]	
573116-006	S	AH-2 2'	12/05/17 14:10	TX1005	TPH by Texas1005	01/15/18	12/19/17	KEB	PHCC12C28 PHCC28C35]	

Inter Office Shipment or Sample Comments:

Relinquished By 
Shawnee Smith

Date Relinquished: 01/10/2018

Received By: _____

Date Received: _____

Cooler Temperature: _____

Final 1.000

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC

Date/ Time Received: 01/09/2018 12:30:00 PM

Work Order #: 573116

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	10.2
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**No**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Shawnee Smith Date: 01/10/2018
Shawnee Smith

Checklist reviewed by: Kelsey Brooks Date: 01/11/2018
Kelsey Brooks

Certificate of Analysis Summary 579821

2M Enviromental Services LLC, Odessa, TX

Project Name: COG SRO State COM #002

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

Date Received in Lab: Tue Mar-20-18 03:00 pm
Report Date: 27-MAR-18
Project Manager: Holly Taylor

Analysis Requested											
	Lab Id:	579821-001		579821-002		579821-003		579821-004		579821-005	
	Field Id:	T-1 @ 6"		T-1 @ 1'		T-1 @ 2'		T-1 @ 3'		T-1 @ 4'	
	Depth:										
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-13-18 10:16		Mar-13-18 10:20		Mar-13-18 10:26		Mar-13-18 10:32		Mar-13-18 10:40	
BTEX by EPA 8021B	***Extracted:***	Mar-22-18 17:15		Mar-22-18 17:15		Mar-22-18 17:15		Mar-22-18 17:15		Mar-22-18 17:15	
	Analyzed:	Mar-23-18 08:37		Mar-23-18 12:29		Mar-23-18 12:49		Mar-23-18 13:08		Mar-23-18 13:27	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00198	0.00198
Toluene		<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00198	0.00198
Ethylbenzene		<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00198	0.00198
m,p-Xylenes		<0.00403	0.00403	<0.00398	0.00398	<0.00401	0.00401	<0.00404	0.00404	<0.00397	0.00397
o-Xylene		<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00198	0.00198
Total Xylenes		<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00198	0.00198
Total BTEX		<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00198	0.00198
Chloride by EPA 300	***Extracted:***	Mar-22-18 13:30		Mar-22-18 13:30		Mar-22-18 13:30		Mar-22-18 13:30		Mar-22-18 13:30	
	Analyzed:	Mar-22-18 18:14		Mar-22-18 18:19		Mar-22-18 18:35		Mar-22-18 18:41		Mar-22-18 18:46	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		286	5.00	291	49.7	200	49.8	86.8	49.9	132	4.95
TPH By SW8015 Mod	***Extracted:***	Mar-22-18 15:00		Mar-22-18 15:00		Mar-22-18 15:00		Mar-22-18 15:00		Mar-22-18 15:00	
	Analyzed:	Mar-23-18 03:14		Mar-23-18 03:41		Mar-23-18 04:09		Mar-23-18 04:36		Mar-23-18 05:04	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<14.9	14.9	61.2	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Oil Range Hydrocarbons (ORO)		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<14.9	14.9	133	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Holly Taylor
Project Manager

Final 1.000

Analytical Report 579821

for

2M Enviromental Services LLC

Project Manager: Matt Green

COG SRO State COM #002

27-MAR-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-18-24), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab code: TX01468):
Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-18-14)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)

27-MAR-18

Project Manager: **Matt Green**
2M Enviromental Services LLC
1219 W University Blvd
Odessa, TX 79764

Reference: XENCO Report No(s): **579821**
COG SRO State COM #002
Project Address: Eddy County, NM

Matt Green:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 579821. 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. 579821 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Holly Taylor

Holly Taylor
Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 579821

2M Enviromental Services LLC, Odessa, TX

COG SRO State COM #002

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
T-1 @ 6"	S	03-13-18 10:16		579821-001
T-1 @ 1'	S	03-13-18 10:20		579821-002
T-1 @ 2'	S	03-13-18 10:26		579821-003
T-1 @ 3'	S	03-13-18 10:32		579821-004
T-1 @ 4'	S	03-13-18 10:40		579821-005

CASE NARRATIVE

Client Name: 2M Enviromental Services LLC

Project Name: COG SRO State COM #002

Project ID:
Work Order Number(s): *579821*

Report Date: *27-MAR-18*
Date Received: *03/20/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3044699 BTEX by EPA 8021B

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

Certificate of Analytical Results 579821

2M Enviromental Services LLC, Odessa, TX

COG SRO State COM #002

Sample Id: **T-1 @ 6"** Matrix: Soil Date Received:03.20.18 15.00

Lab Sample Id: 579821-001 Date Collected: 03.13.18 10.16

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: SCM % Moisture:

Analyst: SCM Date Prep: 03.22.18 13.30 Basis: Wet Weight

Seq Number: 3044697

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**286**	5.00	mg/kg	03.27.18 15.16		1

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 03.22.18 15.00 Basis: Wet Weight

Seq Number: 3044591

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	03.23.18 03.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	03.23.18 03.14	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	03.23.18 03.14	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	03.23.18 03.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	03.23.18 03.14	
o-Terphenyl	84-15-1	101	%	70-135	03.23.18 03.14	

Certificate of Analytical Results 579821

2M Enviromental Services LLC, Odessa, TX

COG SRO State COM #002

Sample Id:	**T-1 @ 6"**	Matrix:	Soil	Date Received:	03.20.18 15.00
Lab Sample Id:	579821-001	Date Collected:	03.13.18 10.16		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.22.18 17.15	Basis:	Wet Weight
Seq Number:	3044699				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.23.18 08.37	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	03.23.18 08.37	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	03.23.18 08.37	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	03.23.18 08.37	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.23.18 08.37	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	03.23.18 08.37	U	1
Total BTEX		<0.00202	0.00202	mg/kg	03.23.18 08.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	93	%	70-130	03.23.18 08.37	
1,4-Difluorobenzene	540-36-3	98	%	70-130	03.23.18 08.37	

Certificate of Analytical Results 579821

2M Enviromental Services LLC, Odessa, TX

COG SRO State COM #002

Sample Id:	**T-1 @ 1'**	Matrix:	Soil	Date Received:	03.20.18 15.00
Lab Sample Id:	579821-002	Date Collected:	03.13.18 10.20		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.22.18 13.30	Basis:	Wet Weight
Seq Number:	3044697				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**291**	49.7	mg/kg	03.22.18 18.19		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.22.18 15.00	Basis:	Wet Weight
Seq Number:	3044591				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.23.18 03.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	**61.2**	15.0	mg/kg	03.23.18 03.41		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	03.23.18 03.41	U	1
Total TPH	PHC635	**133**	15.0	mg/kg	03.23.18 03.41		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	03.23.18 03.41	
o-Terphenyl	84-15-1	92	%	70-135	03.23.18 03.41	

Certificate of Analytical Results 579821

2M Enviromental Services LLC, Odessa, TX

COG SRO State COM #002

Sample Id:	**T-1 @ 1'**	Matrix:	Soil	Date Received:	03.20.18 15.00
Lab Sample Id:	579821-002	Date Collected:	03.13.18 10.20		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.22.18 17.15	Basis:	Wet Weight
Seq Number:	3044699				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.23.18 12.29	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.23.18 12.29	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.23.18 12.29	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.23.18 12.29	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.23.18 12.29	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.23.18 12.29	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.23.18 12.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	03.23.18 12.29	
4-Bromofluorobenzene	460-00-4	97	%	70-130	03.23.18 12.29	

Certificate of Analytical Results 579821

2M Enviromental Services LLC, Odessa, TX

COG SRO State COM #002

Sample Id:	**T-1 @ 2'**	Matrix:	Soil	Date Received:	03.20.18 15.00
Lab Sample Id:	579821-003	Date Collected:	03.13.18 10.26		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.22.18 13.30	Basis:	Wet Weight
Seq Number:	3044697				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**200**	49.8	mg/kg	03.22.18 18.35		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.22.18 15.00	Basis:	Wet Weight
Seq Number:	3044591				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.23.18 04.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.23.18 04.09	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	03.23.18 04.09	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.23.18 04.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	03.23.18 04.09	
o-Terphenyl	84-15-1	103	%	70-135	03.23.18 04.09	

Certificate of Analytical Results 579821

2M Enviromental Services LLC, Odessa, TX

COG SRO State COM #002

Sample Id:	**T-1 @ 2'**	Matrix:	Soil	Date Received:	03.20.18 15.00
Lab Sample Id:	579821-003	Date Collected:	03.13.18 10.26		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.22.18 17.15	Basis:	Wet Weight
Seq Number:	3044699				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.23.18 12.49	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.23.18 12.49	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.23.18 12.49	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.23.18 12.49	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.23.18 12.49	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.23.18 12.49	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.23.18 12.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	89	%	70-130	03.23.18 12.49	
1,4-Difluorobenzene	540-36-3	94	%	70-130	03.23.18 12.49	

Certificate of Analytical Results 579821

2M Enviromental Services LLC, Odessa, TX

COG SRO State COM #002

Sample Id: **T-1 @ 3'** Matrix: Soil Date Received:03.20.18 15.00

Lab Sample Id: 579821-004 Date Collected: 03.13.18 10.32

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: SCM % Moisture:

Analyst: SCM Date Prep: 03.22.18 13.30 Basis: Wet Weight

Seq Number: 3044697

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**86.8**	49.9	mg/kg	03.22.18 18.41		10

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 03.22.18 15.00 Basis: Wet Weight

Seq Number: 3044591

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.23.18 04.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.23.18 04.36	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	03.23.18 04.36	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.23.18 04.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	03.23.18 04.36	
o-Terphenyl	84-15-1	100	%	70-135	03.23.18 04.36	

Certificate of Analytical Results 579821

2M Enviromental Services LLC, Odessa, TX

COG SRO State COM #002

Sample Id:	**T-1 @ 3'**	Matrix:	Soil	Date Received:	03.20.18 15.00
Lab Sample Id:	579821-004	Date Collected:	03.13.18 10.32		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.22.18 17.15	Basis:	Wet Weight
Seq Number:	3044699				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.23.18 13.08	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	03.23.18 13.08	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	03.23.18 13.08	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	03.23.18 13.08	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.23.18 13.08	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	03.23.18 13.08	U	1
Total BTEX		<0.00202	0.00202	mg/kg	03.23.18 13.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	93	%	70-130	03.23.18 13.08	
1,4-Difluorobenzene	540-36-3	102	%	70-130	03.23.18 13.08	

Certificate of Analytical Results 579821

2M Enviromental Services LLC, Odessa, TX

COG SRO State COM #002

Sample Id: **T-1 @ 4'** Matrix: Soil Date Received:03.20.18 15.00

Lab Sample Id: 579821-005 Date Collected: 03.13.18 10.40

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: SCM % Moisture:

Analyst: SCM Date Prep: 03.22.18 13.30 Basis: Wet Weight

Seq Number: 3044697

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**132**	4.95	mg/kg	03.22.18 18.46		1

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 03.22.18 15.00 Basis: Wet Weight

Seq Number: 3044591

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.23.18 05.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.23.18 05.04	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	03.23.18 05.04	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.23.18 05.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	03.23.18 05.04	
o-Terphenyl	84-15-1	92	%	70-135	03.23.18 05.04	

Certificate of Analytical Results 579821

2M Enviromental Services LLC, Odessa, TX

COG SRO State COM #002

Sample Id:	**T-1 @ 4'**	Matrix:	Soil	Date Received:	03.20.18 15.00
Lab Sample Id:	579821-005	Date Collected:	03.13.18 10.40		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.22.18 17.15	Basis:	Wet Weight
Seq Number:	3044699				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	03.23.18 13.27	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	03.23.18 13.27	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	03.23.18 13.27	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	03.23.18 13.27	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	03.23.18 13.27	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	03.23.18 13.27	U	1
Total BTEX		<0.00198	0.00198	mg/kg	03.23.18 13.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	03.23.18 13.27	
1,4-Difluorobenzene	540-36-3	103	%	70-130	03.23.18 13.27	

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

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

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

QC Summary 579821

2M Enviromental Services LLC

COG SRO State COM #002

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3044697 — Matrix: Solid — Date Prep: 03.22.18
MB Sample Id: 7641290-1-BLK — LCS Sample Id: 7641290-1-BKS — LCSD Sample Id: 7641290-1-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	261	104	260	104	90-110	0	20	mg/kg	03.22.18 17:37	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3044697 — Matrix: Soil — Date Prep: 03.22.18
Parent Sample Id: 579820-001 — MS Sample Id: 579820-001 S — MSD Sample Id: 579820-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	62.9	249	309	99	317	102	90-110	3	20	mg/kg	03.22.18 17:53	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3044697 — Matrix: Soil — Date Prep: 03.22.18
Parent Sample Id: 579822-002 — MS Sample Id: 579822-002 S — MSD Sample Id: 579822-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	164	250	390	90	391	91	90-110	0	20	mg/kg	03.22.18 19:07	

Analytical Method: TPH By SW8015 Mod — Prep Method: TX1005P
Seq Number: 3044591 — Matrix: Solid — Date Prep: 03.22.18
MB Sample Id: 7641316-1-BLK — LCS Sample Id: 7641316-1-BKS — LCSD Sample Id: 7641316-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	1050	105	1090	109	70-135	4	35	mg/kg	03.22.18 23:38	
Diesel Range Organics (DRO)	<15.0	1000	1110	111	1150	115	70-135	4	35	mg/kg	03.22.18 23:38	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	98		115		116		70-135	%	03.22.18 23:38
o-Terphenyl	100		109		114		70-135	%	03.22.18 23:38

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

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

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

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

QC Summary 579821

2M Enviromental Services LLC

COG SRO State COM #002

Analytical Method: TPH By SW8015 Mod — Prep Method: TX1005P
Seq Number: 3044591 — Matrix: Soil — Date Prep: 03.22.18
Parent Sample Id: 579708-001 — MS Sample Id: 579708-001 S — MSD Sample Id: 579708-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	998	1030	103	1090	109	70-135	6	35	mg/kg	03.23.18 00:57	
Diesel Range Organics (DRO)	<15.0	998	1080	108	1140	114	70-135	5	35	mg/kg	03.23.18 00:57	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	109		113		70-135	%	03.23.18 00:57
o-Terphenyl	105		111		70-135	%	03.23.18 00:57

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3044699 — Matrix: Solid — Date Prep: 03.22.18
MB Sample Id: 7641383-1-BLK — LCS Sample Id: 7641383-1-BKS — LCSD Sample Id: 7641383-1-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	0.0996	0.113	113	0.115	114	70-130	2	35	mg/kg	03.23.18 06:23	
Toluene	<0.00199	0.0996	0.111	111	0.113	112	70-130	2	35	mg/kg	03.23.18 06:23	
Ethylbenzene	<0.00199	0.0996	0.111	111	0.112	111	70-130	1	35	mg/kg	03.23.18 06:23	
m,p-Xylenes	<0.00398	0.199	0.227	114	0.228	113	70-130	0	35	mg/kg	03.23.18 06:23	
o-Xylene	<0.00199	0.0996	0.113	113	0.115	114	70-130	2	35	mg/kg	03.23.18 06:23	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		107		107		70-130	%	03.23.18 06:23
4-Bromofluorobenzene	85		97		92		70-130	%	03.23.18 06:23

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3044699 — Matrix: Soil — Date Prep: 03.22.18
Parent Sample Id: 579821-001 — MS Sample Id: 579821-001 S — MSD Sample Id: 579821-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0950	95	0.0950	95	70-130	0	35	mg/kg	03.23.18 07:02	
Toluene	<0.00201	0.100	0.0882	88	0.0909	91	70-130	3	35	mg/kg	03.23.18 07:02	
Ethylbenzene	<0.00201	0.100	0.0829	83	0.0868	87	70-130	5	35	mg/kg	03.23.18 07:02	
m,p-Xylenes	<0.00402	0.201	0.169	84	0.177	89	70-130	5	35	mg/kg	03.23.18 07:02	
o-Xylene	<0.00201	0.100	0.0845	85	0.0895	90	70-130	6	35	mg/kg	03.23.18 07:02	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		103		70-130	%	03.23.18 07:02
4-Bromofluorobenzene	98		95		70-130	%	03.23.18 07:02

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

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

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

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

PBELAB

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Permian Basin Environmental Lab, LP
10014 S. County Road 1213
Midland, Texas 79706

Phone: 432-661-4184

Project Manager: Matt Green

Company Name: 2M Environmental Services, LLC.

Company Address: 1219 W. University Blvd.

City/State/Zip: Odessa, Texas 79764

Telephone No: (432)230-3763 Fax No:

Sampler Signature: Matthew Green e-mail: mgreen@2m-environmental.com

Project Name: COG SRO STATE COM #002

Project #:

Project Loc: Eddy County, NM

PO #:

Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)

ORDER #: 579821

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge	GW = Groundwater S=Soil/Solid	NP=Non-Potable Specify Other	Analyze For: TPH: 418.1 8015M 8015B	TPH: TX 1005 Ext TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B 5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides E 300			RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
	T-1 @ 6"			3/13/2018	1016		1	x									S		X								X			X				X
	T-1 @ 1'			3/13/2018	1020		1	x									S		X								X			X				X
	T-1 @ 2'			3/13/2018	1026		1	x									S		X								X			X				X
	T-1 @ 3'			3/13/2018	1032		1	x									S		X								X			X				X
	T-1 @ 4'			3/13/2018	1040		1	x									S		X								X			X				X

Special Instructions:

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N

	Date	Time		Date	Time
Relinquished by: Matthew Green	3-20-18	14:11	Received by:	3/20/18	14:11
Relinquished by:	3/20/18	1500	Received by:	3/20/18	1500
Relinquished by:	Date	Time	Received by PBEL:	Date	Time

Temp: 4.6 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 4.4

Final 1.000

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: 2M Enviromental Services LLC

Date/ Time Received: 03/20/2018 03:00:00 PM

Work Order #: 579821

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4.4
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Connie Hernandez Date: 03/21/2018

Checklist reviewed by: Holly Taylor Date: 03/21/2018

Operator/Responsible Party,

The OCD has received the form C-141 you provided on **12/01/17** regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number 2RP-4510 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 1/01/18. 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: Christopher Gray <CGray@concho.com>
Sent: Friday, December 1, 2017 2:38 PM
To: Weaver, Crystal, EMNRD; Bratcher, Mike, EMNRD; agroves@slo.state.nm.us
Cc: Rebecca Haskell; Robert McNeill; Sheldon Hitchcock; Dakota Neel
Subject: (C-141 Initial) SRO State Com #002H (30-015-37141) 11-30-2017
Attachments: (C-141 Initial)SRO State Com #002H (30-015-37141) 11-30-2017.pdf

Ms. Weaver / Ms. Groves,

Attached is a C-141 for your consideration. If you have any additional questions please feel free to contact me.

Thank You,

Christopher Gray
HSE Coordinator
COG Operating, LLC
Artesia, NM 88210
575-748-6940 (main)
575-748-0235 (direct)
432-557-8032 (cell)
cgray@concho.com

Weaver, Crystal, EMNRD

From: Rebecca Haskell <RHaskell@concho.com>
Sent: Thursday, November 30, 2017 2:34 PM
To: Weaver, Crystal, EMNRD; Amber Groves (agroves@SLO.state.nm.us)
Cc: Bratcher, Mike, EMNRD; Sheldon Hitchcock; Dakota Neel; Christopher Gray
Subject: (Notification) SRO State Com #002H 11/30/17 (30-015-37141)

Ms. Weaver / Ms. Groves,

COG Operating LLC is reporting a release at the SRO State Com #002H (30-015-37141)
Unit P Section 32 Township 25S Range 28E GPS 32.080101, -104.1018906.
OGRID# [229137]
The release occurred on November 30, 2017 at 8:00 am.
Estimated Released: Approximately: >25 bbl. of Produced Water.
Estimated Recovered: Approximately: Currently ongoing.

The release was due to a swedge failure on the water transfer pump. The release is within a lined facility and on the adjacent pad. The site is being evaluated and an Initial C-141 will be submitted. If you have any additional questions please don't hesitate to contact me.

Thank You,

Becky Haskell
Senior HSE Coordinator
COG Operating LLC
600 W Illinois Avenue | Midland, TX 79701
Direct: 432-818-2372 | Main: 432.683.7443
Cell: 432-556-5130
rhaskell@concho.com

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 #002H
(Leak Date: 7/15/18)

RP # 2RP-4862

This delineation workplan and remediation proposal addresses the release associated with RP # 2RP-4862.

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:

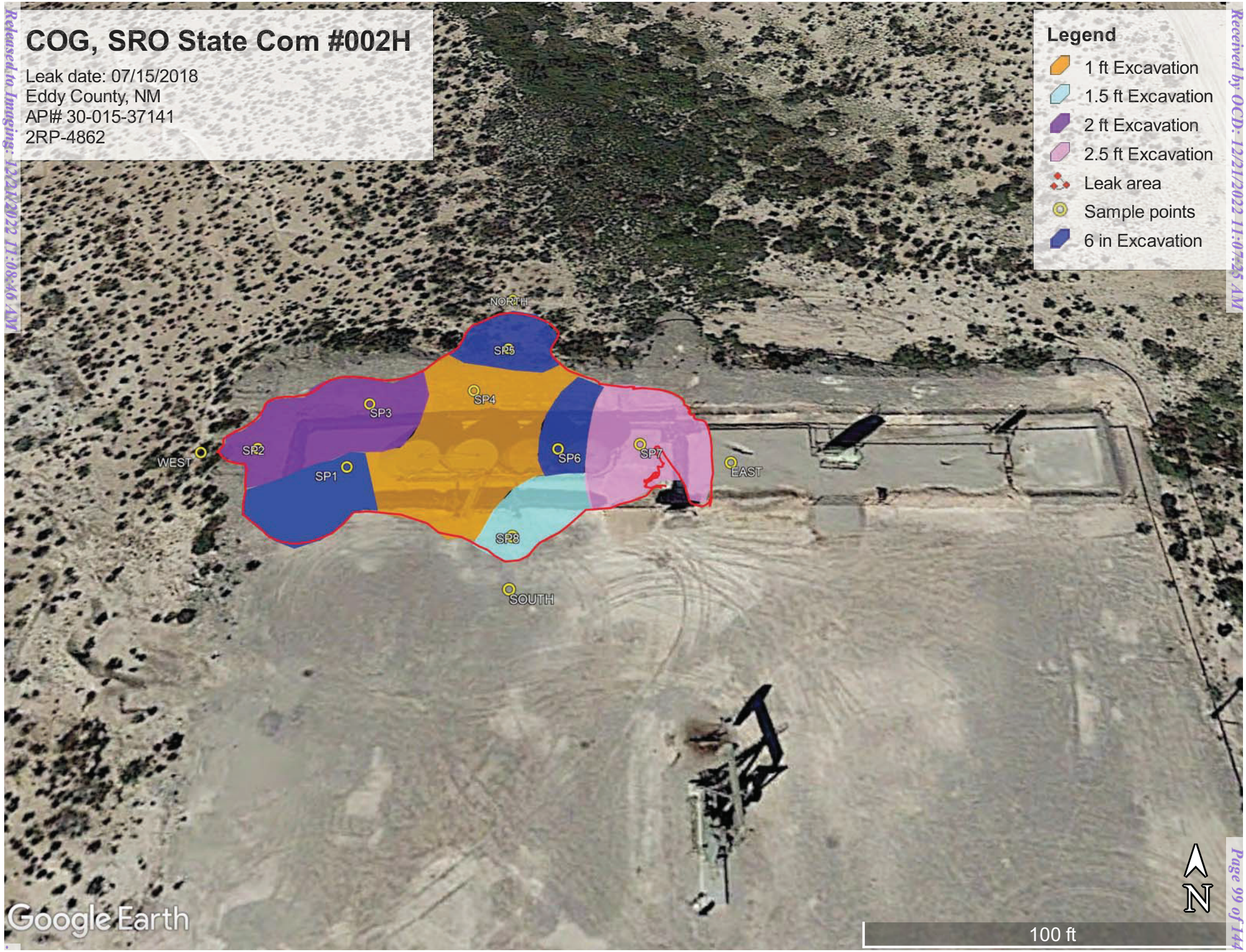
COG will excavate the spill area as depicted on the following site diagram. The battery was destroyed in the fire and was dismantled so the delineation activities could be conducted. The leak area near SP1, SP5, and SP6 (BLUE shade on diagram) will be excavated to a depth of 6 inches. The leak area near SP2 and SP3 (PURPLE shade on diagram) will be excavated to a depth of 2 feet. The leak area near SP4 (ORANGE shade on diagram) will be excavated to a depth of 1 foot. The leak area near SP7 (PINK shade on diagram) will be excavated to a depth of 2.5 feet.

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 #002H

Leak date: 07/15/2018
Eddy County, NM
API# 30-015-37141
2RP-4862



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

New Mexico State Land Office
Revegetation and Noxious Weed Management Plan
COG – SRO State Com #002H

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. If 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.

Grasses:			
Sideoats grama	Vaughn, El Reno	4.0	F
Blue grama	Lovington, Hachita	3.0	D
Little bluestem	Pastura, Cimmaron	1.5	F
Green sprangletop	VNS, Southern	1.0	D
Plains bristlegrass	VNS, Southern	1.0	D
Forbs:			
Firewheel (*Gaillardia*)	VNS, Southern	1.0	D
Shrubs:			
Fourwing saltbush	Marana, Santa Rita	1.0	D
Common winterfat	VNS, Southern	0.5	F
	Total PLS/acre	13.0	

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 #002H

Sample points

SP1, N 32.08039 W-104.10226

SP2, N 32.08041 W-104.10236

SP3, N 32.08046 W-104.10224

SP4, N 32.08048 W-104.10212

SP5, N 32.08054 W-104.10209

SP6, N 32.08040 W-104.10203

SP7, N 32.08041 W-104.10194

SP8, N 32.08031 W-104.10207

NORTH, N 32.08061 W-104.10209

SOUTH, N 32.08025 W-104.10207

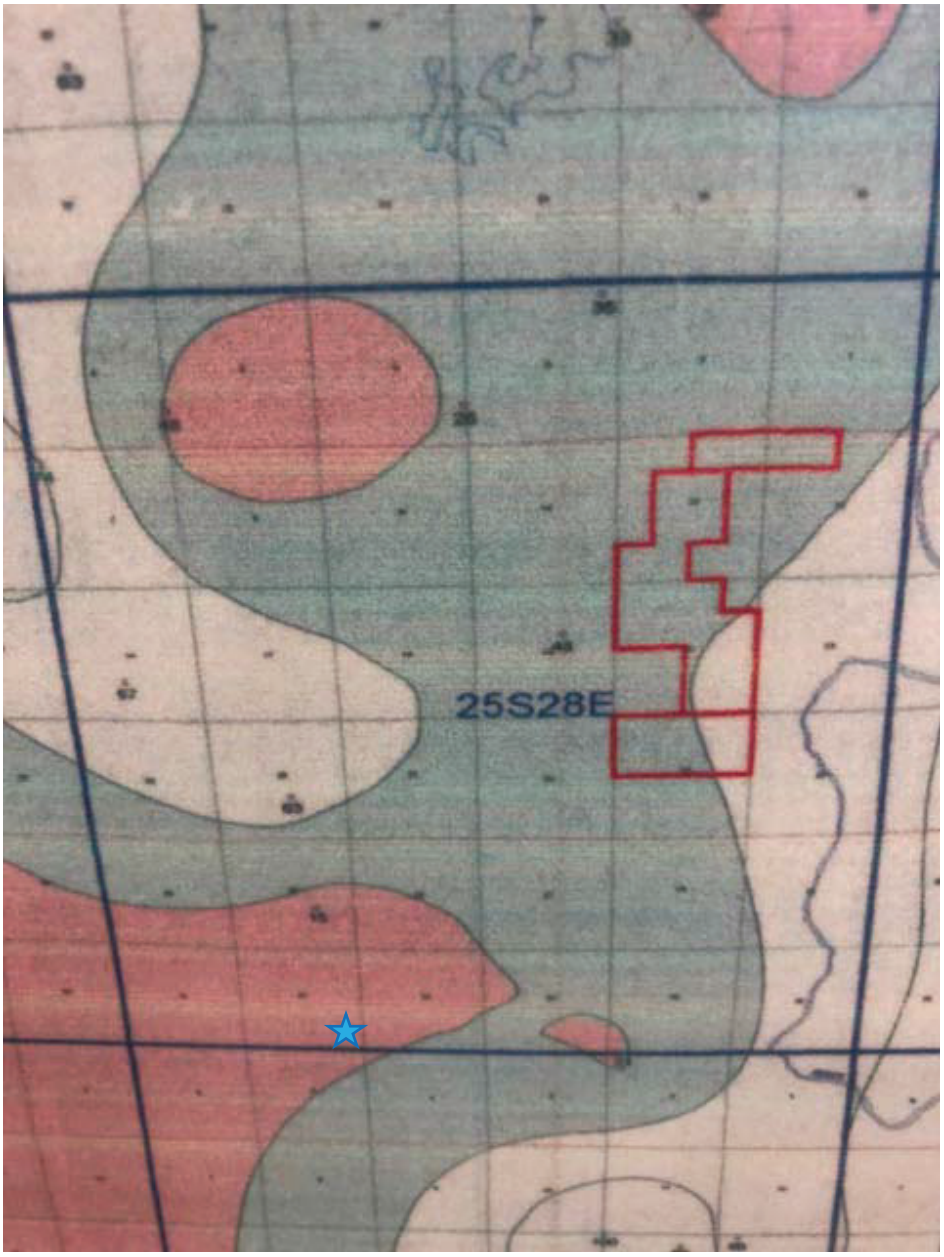
EAST, N 32.08039 W-104.10184

WEST, N 32.08041 W-104.10242

COG, SRO State Com #002H

U/L P, Section 32, T25S, 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	POD Sub-basin Code	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*	906	100		

Average Depth to Water: --

Minimum Depth: --

Maximum Depth: --

Record Count: 1

UTMNAD83 Radius Search (in meters):

Easting (X): 584657 **Northing (Y):** 3549735 **Radius:** 1700

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

Public Land Survey System (PLSS)

Q64: Q16: SE Q4: SE Sec: 32 Tws: 25S 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): 584657.0 mtrs Northing (Y): 3549735.0 mtrs

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

Laboratory Analytical Results Summary

SRO State Com #002H

		Sample ID	SP1 @ SURFACE	SP1 @ 1'	SP1 @ 2'
Analyte	**Method**	**Date**	8/15/18	8/15/18	8/15/18
			mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		n/a	<0.050	<0.050
Toluene	BTEX 8021B		n/a	<0.050	<0.050
Ethylbenzene	BTEX 8021B		n/a	<0.050	<0.050
Total Xylenes	BTEX 8021B		n/a	<0.150	<0.150
Total BTEX	BTEX 8021B		n/a	<0.300	<0.300
Chloride	SM4500Cl-B		**4040**	**80**	**48**
GRO	TPH 8015M		n/a	**10.2**	<10.0
DRO	TPH 8015M		n/a	**2220**	**56.4**
EXT DRO	TPH 8015M		n/a	**487**	**27.1**

		Sample ID	SP5 @ SURFACE	SP5 @ 1'	SP5 @ 2'
Analyte	**Method**	**Date**	8/15/18	8/15/18	8/15/18
			mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		n/a	<0.050	<0.050
Toluene	BTEX 8021B		n/a	<0.050	<0.050
Ethylbenzene	BTEX 8021B		n/a	<0.050	<0.050
Total Xylenes	BTEX 8021B		n/a	<0.150	<0.150
Total BTEX	BTEX 8021B		n/a	<0.300	<0.300
Chloride	SM4500Cl-B		**5200**	**176**	**48**
GRO	TPH 8015M		n/a	<10.0	<10.0
DRO	TPH 8015M		n/a	<10.0	<10.0
EXT DRO	TPH 8015M		n/a	<10.0	<10.0

		Sample ID	SP2 @ SURFACE	SP2 @ 1'	SP2 @ 2'	SP2 @ 3'
Analyte	**Method**	**Date**	8/15/18	8/15/18	8/15/18	8/15/18
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		n/a	<0.050	<0.050	n/a
Toluene	BTEX 8021B		n/a	<0.050	<0.050	n/a
Ethylbenzene	BTEX 8021B		n/a	<0.050	<0.050	n/a
Total Xylenes	BTEX 8021B		n/a	<0.150	<0.150	n/a
Total BTEX	BTEX 8021B		n/a	<0.300	<0.300	n/a
Chloride	SM4500Cl-B		**7120**	**5040**	**608**	**80**
GRO	TPH 8015M		n/a	<10.0	<10.0	n/a
DRO	TPH 8015M		n/a	<10.0	<10.0	n/a
EXT DRO	TPH 8015M		n/a	<10.0	<10.0	n/a

		Sample ID	SP6 @ SURFACE	SP6 @ 1'
Analyte	**Method**	**Date**	8/15/18	8/16/18
			mg/kg	mg/kg
Benzene	BTEX 8021B		n/a	<0.050
Toluene	BTEX 8021B		n/a	<0.050
Ethylbenzene	BTEX 8021B		n/a	<0.050
Total Xylenes	BTEX 8021B		n/a	<0.150
Total BTEX	BTEX 8021B		n/a	<0.300
Chloride	SM4500Cl-B		**208**	**176**
GRO	TPH 8015M		n/a	<10.0
DRO	TPH 8015M		n/a	<10.0
EXT DRO	TPH 8015M		n/a	<10.0

		Sample ID	SP3 @ SURFACE	SP3 @ 1'	SP3 @ 2'	SP3 @ 3'
Analyte	**Method**	**Date**	8/15/18	8/15/18	8/15/18	8/15/18
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		n/a	<0.050	<0.050	n/a
Toluene	BTEX 8021B		n/a	<0.050	<0.050	n/a
Ethylbenzene	BTEX 8021B		n/a	<0.050	<0.050	n/a
Total Xylenes	BTEX 8021B		n/a	<0.150	<0.150	n/a
Total BTEX	BTEX 8021B		n/a	<0.300	<0.300	n/a
Chloride	SM4500Cl-B		**3800**	**5200**	**432**	**48**
GRO	TPH 8015M		n/a	<10.0	<10.0	n/a
DRO	TPH 8015M		n/a	**90.5**	<10.0	n/a
EXT DRO	TPH 8015M		n/a	**16.2**	<10.0	n/a

		Sample ID	SP7 @ SURFACE	SP7 @ 1'	SP7 @ 2'	SP7 @ 3'	SP7 @ 4'
Analyte	**Method**	**Date**	8/16/18	8/16/18	8/16/18	8/16/18	8/16/18
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		n/a	<0.050	n/a	n/a	n/a
Toluene	BTEX 8021B		n/a	<0.050	n/a	n/a	n/a
Ethylbenzene	BTEX 8021B		n/a	<0.050	n/a	n/a	n/a
Total Xylenes	BTEX 8021B		n/a	<0.150	n/a	n/a	n/a
Total BTEX	BTEX 8021B		n/a	<0.300	n/a	n/a	n/a
Chloride	SM4500Cl-B		**2960**	**4000**	**3040**	**336**	**464**
GRO	TPH 8015M		n/a	<10.0	n/a	n/a	n/a
DRO	TPH 8015M		n/a	<10.0	n/a	n/a	n/a
EXT DRO	TPH 8015M		n/a	<10.0	n/a	n/a	n/a

		Sample ID	SP4 @ SURFACE	SP4 @ 1'	SP4 @ 2'
Analyte	**Method**	**Date**	8/15/18	8/15/18	8/15/18
			mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		n/a	<0.050	<0.050
Toluene	BTEX 8021B		n/a	<0.050	<0.050
Ethylbenzene	BTEX 8021B		n/a	<0.050	<0.050
Total Xylenes	BTEX 8021B		n/a	<0.150	<0.150
Total BTEX	BTEX 8021B		n/a	<0.300	<0.300
Chloride	SM4500Cl-B		**6960**	**496**	**32**
GRO	TPH 8015M		n/a	<10.0	<10.0
DRO	TPH 8015M		n/a	**12.3**	<10.0
EXT DRO	TPH 8015M		n/a	<10.0	<10.0

		Sample ID	SP8 @ SURFACE	SP8 @ 1'	SP8 @ 2'
Analyte	**Method**	**Date**	8/16/18	8/16/18	8/16/18
			mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		n/a	<0.050	n/a
Toluene	BTEX 8021B		n/a	<0.050	n/a
Ethylbenzene	BTEX 8021B		n/a	<0.050	n/a
Total Xylenes	BTEX 8021B		n/a	<0.150	n/a
Total BTEX	BTEX 8021B		n/a	<0.300	n/a
Chloride	SM4500Cl-B		**1300**	**1400**	**80**
GRO	TPH 8015M		n/a	<10.0	n/a
DRO	TPH 8015M		n/a	<10.0	n/a
EXT DRO	TPH 8015M		n/a	<10.0	n/a

Laboratory Analytical Results Summary
SRO State Com #002H

		Sample ID	NORTH @ SURFACE	EAST @ SURFACE	WEST @ SURFACE	SOUTH @ SURFACE
Analyte	**Method**	**Date**	8/16/18	8/16/18	8/16/18	8/16/18
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Toluene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Ethylbenzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150	<0.150	<0.150
Total BTEX	BTEX 8021B		<0.300	<0.300	<0.300	<0.300
Chloride	SM4500Cl-B		**208**	**240**	**224**	**240**
GRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0
DRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0
EXT DRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0

CARDINAL Laboratories

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

August 24, 2018

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: SRO STATE COM #2H

Enclosed are the results of analyses for samples received by the laboratory on 08/17/18 15:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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:	08/17/2018	Sampling Date:	08/15/2018
Reported:	08/24/2018	Sampling Type:	Soil
Project Name:	SRO STATE COM #2H	Sampling Condition:	Cool & Intact
Project Number:	07/15/18	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: SP 1 @ SURFACE (H802315-01)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**4040**	16.0	08/21/2018	ND	416	104	400	3.77	

Sample ID: SP 1 @ 1 (H802315-02)

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	08/21/2018	ND	1.93	96.6	2.00	1.14	
Toluene*	<0.050	0.050	08/21/2018	ND	1.84	91.9	2.00	1.79	
Ethylbenzene*	<0.050	0.050	08/21/2018	ND	1.87	93.3	2.00	1.13	
Total Xylenes*	<0.150	0.150	08/21/2018	ND	5.60	93.3	6.00	1.11	
Total BTEX	<0.300	0.300	08/21/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID *92.2 %* *69.8-142*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	08/21/2018	ND	400	100	400	7.69	

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**10.2**	10.0	08/20/2018	ND	196	98.0	200	0.403	
DRO >C10-C28*	**2220**	10.0	08/20/2018	ND	200	100	200	1.84	QM-07
EXT DRO >C28-C36	**487**	10.0	08/20/2018	ND					

Surrogate: 1-Chlorooctane *71.7 %* *41-142*

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:	08/17/2018	Sampling Date:	08/15/2018
Reported:	08/24/2018	Sampling Type:	Soil
Project Name:	SRO STATE COM #2H	Sampling Condition:	Cool & Intact
Project Number:	07/15/18	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: SP 1 @ 1 (H802315-02)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Surrogate: 1-Chlorooctadecane	*131 %*	*37.6-147*							

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:	08/17/2018	Sampling Date:	08/15/2018
Reported:	08/24/2018	Sampling Type:	Soil
Project Name:	SRO STATE COM #2H	Sampling Condition:	Cool & Intact
Project Number:	07/15/18	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: SP 1 @ 2 (H802315-03)

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	08/21/2018	ND	1.93	96.6	2.00	1.14	
Toluene*	<0.050	0.050	08/21/2018	ND	1.84	91.9	2.00	1.79	
Ethylbenzene*	<0.050	0.050	08/21/2018	ND	1.87	93.3	2.00	1.13	
Total Xylenes*	<0.150	0.150	08/21/2018	ND	5.60	93.3	6.00	1.11	
Total BTEX	<0.300	0.300	08/21/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID *92.4 %* *69.8-142*

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	08/21/2018	ND	400	100	400	7.69	

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	08/20/2018	ND	196	98.0	200	0.403	
DRO >C10-C28*	**56.4**	10.0	08/20/2018	ND	200	100	200	1.84	
EXT DRO >C28-C36	**27.1**	10.0	08/20/2018	ND					

Surrogate: 1-Chlorooctane *101 %* *41-142*

Surrogate: 1-Chlorooctadecane *96.8 %* *37.6-147*

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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:	08/17/2018	Sampling Date:	08/15/2018
Reported:	08/24/2018	Sampling Type:	Soil
Project Name:	SRO STATE COM #2H	Sampling Condition:	Cool & Intact
Project Number:	07/15/18	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: SP 2 @ SURFACE (H802315-04)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**7120**	16.0	08/21/2018	ND	400	100	400	7.69	

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Analytical Results For:

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

Received:	08/17/2018	Sampling Date:	08/15/2018
Reported:	08/24/2018	Sampling Type:	Soil
Project Name:	SRO STATE COM #2H	Sampling Condition:	Cool & Intact
Project Number:	07/15/18	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: SP 2 @ 1 (H802315-05)

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	08/21/2018	ND	1.93	96.6	2.00	1.14	
Toluene*	<0.050	0.050	08/21/2018	ND	1.84	91.9	2.00	1.79	
Ethylbenzene*	<0.050	0.050	08/21/2018	ND	1.87	93.3	2.00	1.13	
Total Xylenes*	<0.150	0.150	08/21/2018	ND	5.60	93.3	6.00	1.11	
Total BTEX	<0.300	0.300	08/21/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.4 %* *69.8-142*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**5040**	16.0	08/21/2018	ND	400	100	400	7.69	

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	08/20/2018	ND	196	98.0	200	0.403	
DRO >C10-C28*	<10.0	10.0	08/20/2018	ND	200	100	200	1.84	
EXT DRO >C28-C36	<10.0	10.0	08/20/2018	ND					

Surrogate: 1-Chlorooctane *92.1 %* *41-142*

Surrogate: 1-Chlorooctadecane *89.4 %* *37.6-147*

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Fax To: (575) 397-0397

Received:	08/17/2018	Sampling Date:	08/15/2018
Reported:	08/24/2018	Sampling Type:	Soil
Project Name:	SRO STATE COM #2H	Sampling Condition:	Cool & Intact
Project Number:	07/15/18	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: SP 2 @ 2 (H802315-06)

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	08/21/2018	ND	1.93	96.6	2.00	1.14	
Toluene*	<0.050	0.050	08/21/2018	ND	1.84	91.9	2.00	1.79	
Ethylbenzene*	<0.050	0.050	08/21/2018	ND	1.87	93.3	2.00	1.13	
Total Xylenes*	<0.150	0.150	08/21/2018	ND	5.60	93.3	6.00	1.11	
Total BTEX	<0.300	0.300	08/21/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.9 %* *69.8-142*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**608**	16.0	08/21/2018	ND	400	100	400	7.69	

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	08/20/2018	ND	196	98.0	200	0.403	
DRO >C10-C28*	<10.0	10.0	08/20/2018	ND	200	100	200	1.84	
EXT DRO >C28-C36	<10.0	10.0	08/20/2018	ND					

Surrogate: 1-Chlorooctane *91.4 %* *41-142*

Surrogate: 1-Chlorooctadecane *83.2 %* *37.6-147*

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Received:	08/17/2018	Sampling Date:	08/15/2018
Reported:	08/24/2018	Sampling Type:	Soil
Project Name:	SRO STATE COM #2H	Sampling Condition:	Cool & Intact
Project Number:	07/15/18	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: SP 2 @ 3 (H802315-07)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	08/21/2018	ND	400	100	400	7.69	

Sample ID: SP 3 @ SURFACE (H802315-08)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**3800**	16.0	08/21/2018	ND	400	100	400	7.69	

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Received:	08/17/2018	Sampling Date:	08/15/2018
Reported:	08/24/2018	Sampling Type:	Soil
Project Name:	SRO STATE COM #2H	Sampling Condition:	Cool & Intact
Project Number:	07/15/18	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: SP 3 @ 1 (H802315-09)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/21/2018	ND	1.93	96.6	2.00	1.14	
Toluene*	<0.050	0.050	08/21/2018	ND	1.84	91.9	2.00	1.79	
Ethylbenzene*	<0.050	0.050	08/21/2018	ND	1.87	93.3	2.00	1.13	
Total Xylenes*	<0.150	0.150	08/21/2018	ND	5.60	93.3	6.00	1.11	
Total BTEX	<0.300	0.300	08/21/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.5 %* *69.8-142*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**5200**	16.0	08/21/2018	ND	400	100	400	7.69	

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	08/20/2018	ND	196	98.0	200	0.403	
DRO >C10-C28*	**90.5**	10.0	08/20/2018	ND	200	100	200	1.84	
EXT DRO >C28-C36	**16.2**	10.0	08/20/2018	ND					

Surrogate: 1-Chlorooctane *99.2 %* *41-142*

Surrogate: 1-Chlorooctadecane *98.6 %* *37.6-147*

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Received:	08/17/2018	Sampling Date:	08/15/2018
Reported:	08/24/2018	Sampling Type:	Soil
Project Name:	SRO STATE COM #2H	Sampling Condition:	Cool & Intact
Project Number:	07/15/18	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: SP 3 @ 2 (H802315-10)

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	08/21/2018	ND	1.93	96.6	2.00	1.14	
Toluene*	<0.050	0.050	08/21/2018	ND	1.84	91.9	2.00	1.79	
Ethylbenzene*	<0.050	0.050	08/21/2018	ND	1.87	93.3	2.00	1.13	
Total Xylenes*	<0.150	0.150	08/21/2018	ND	5.60	93.3	6.00	1.11	
Total BTEX	<0.300	0.300	08/21/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.6 %* *69.8-142*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**432**	16.0	08/21/2018	ND	400	100	400	7.69	

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	08/20/2018	ND	196	98.0	200	0.403	
DRO >C10-C28*	<10.0	10.0	08/20/2018	ND	200	100	200	1.84	
EXT DRO >C28-C36	<10.0	10.0	08/20/2018	ND					

Surrogate: 1-Chlorooctane *96.6 %* *41-142*

Surrogate: 1-Chlorooctadecane *90.3 %* *37.6-147*

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Received:	08/17/2018	Sampling Date:	08/15/2018
Reported:	08/24/2018	Sampling Type:	Soil
Project Name:	SRO STATE COM #2H	Sampling Condition:	Cool & Intact
Project Number:	07/15/18	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: SP 3 @ 3 (H802315-11)

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	08/21/2018	ND	400	100	400	7.69	

Sample ID: SP 4 @ SURFACE (H802315-12)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**6960**	16.0	08/21/2018	ND	400	100	400	7.69	

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Fax To: (575) 397-0397

Received:	08/17/2018	Sampling Date:	08/15/2018
Reported:	08/24/2018	Sampling Type:	Soil
Project Name:	SRO STATE COM #2H	Sampling Condition:	Cool & Intact
Project Number:	07/15/18	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: SP 4 @ 1 (H802315-13)

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	08/21/2018	ND	1.93	96.6	2.00	1.14	
Toluene*	<0.050	0.050	08/21/2018	ND	1.84	91.9	2.00	1.79	
Ethylbenzene*	<0.050	0.050	08/21/2018	ND	1.87	93.3	2.00	1.13	
Total Xylenes*	<0.150	0.150	08/21/2018	ND	5.60	93.3	6.00	1.11	
Total BTEX	<0.300	0.300	08/21/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.2 %* *69.8-142*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**496**	16.0	08/21/2018	ND	400	100	400	7.69	

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	08/20/2018	ND	196	98.0	200	0.403	
DRO >C10-C28*	**12.3**	10.0	08/20/2018	ND	200	100	200	1.84	
EXT DRO >C28-C36	<10.0	10.0	08/20/2018	ND					

Surrogate: 1-Chlorooctane *99.6 %* *41-142*

Surrogate: 1-Chlorooctadecane *94.1 %* *37.6-147*

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Fax To: (575) 397-0397

Received:	08/17/2018	Sampling Date:	08/15/2018
Reported:	08/24/2018	Sampling Type:	Soil
Project Name:	SRO STATE COM #2H	Sampling Condition:	Cool & Intact
Project Number:	07/15/18	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: SP 4 @ 2 (H802315-14)

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	08/21/2018	ND	1.93	96.6	2.00	1.14	
Toluene*	<0.050	0.050	08/21/2018	ND	1.84	91.9	2.00	1.79	
Ethylbenzene*	<0.050	0.050	08/21/2018	ND	1.87	93.3	2.00	1.13	
Total Xylenes*	<0.150	0.150	08/21/2018	ND	5.60	93.3	6.00	1.11	
Total BTEX	<0.300	0.300	08/21/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.9 %* *69.8-142*

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	08/21/2018	ND	400	100	400	7.69	

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	08/20/2018	ND	196	98.0	200	0.403	
DRO >C10-C28*	<10.0	10.0	08/20/2018	ND	200	100	200	1.84	
EXT DRO >C28-C36	<10.0	10.0	08/20/2018	ND					

Surrogate: 1-Chlorooctane *93.9 %* *41-142*

Surrogate: 1-Chlorooctadecane *85.9 %* *37.6-147*

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Hobbs NM, 88241
Fax To: (575) 397-0397

Received:	08/17/2018	Sampling Date:	08/15/2018
Reported:	08/24/2018	Sampling Type:	Soil
Project Name:	SRO STATE COM #2H	Sampling Condition:	Cool & Intact
Project Number:	07/15/18	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: SP 5 @ SURFACE (H802315-15)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**5200**	16.0	08/21/2018	ND	400	100	400	7.69	

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Analytical Results For:

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Fax To: (575) 397-0397

Received:	08/17/2018	Sampling Date:	08/15/2018
Reported:	08/24/2018	Sampling Type:	Soil
Project Name:	SRO STATE COM #2H	Sampling Condition:	Cool & Intact
Project Number:	07/15/18	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: SP 5 @ 1 (H802315-16)

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	08/21/2018	ND	1.93	96.6	2.00	1.14	
Toluene*	<0.050	0.050	08/21/2018	ND	1.84	91.9	2.00	1.79	
Ethylbenzene*	<0.050	0.050	08/21/2018	ND	1.87	93.3	2.00	1.13	
Total Xylenes*	<0.150	0.150	08/21/2018	ND	5.60	93.3	6.00	1.11	
Total BTEX	<0.300	0.300	08/21/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.2 %* *69.8-142*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**176**	16.0	08/21/2018	ND	400	100	400	7.69	

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	08/20/2018	ND	196	98.0	200	0.403	
DRO >C10-C28*	<10.0	10.0	08/20/2018	ND	200	100	200	1.84	
EXT DRO >C28-C36	<10.0	10.0	08/20/2018	ND					

Surrogate: 1-Chlorooctane *102 %* *41-142*

Surrogate: 1-Chlorooctadecane *94.9 %* *37.6-147*

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Received:	08/17/2018	Sampling Date:	08/15/2018
Reported:	08/24/2018	Sampling Type:	Soil
Project Name:	SRO STATE COM #2H	Sampling Condition:	Cool & Intact
Project Number:	07/15/18	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: SP 5 @ 2 (H802315-17)

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	08/21/2018	ND	1.93	96.6	2.00	1.14	
Toluene*	<0.050	0.050	08/21/2018	ND	1.84	91.9	2.00	1.79	
Ethylbenzene*	<0.050	0.050	08/21/2018	ND	1.87	93.3	2.00	1.13	
Total Xylenes*	<0.150	0.150	08/21/2018	ND	5.60	93.3	6.00	1.11	
Total BTEX	<0.300	0.300	08/21/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.4 %* *69.8-142*

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	08/21/2018	ND	400	100	400	7.69	

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	08/20/2018	ND	196	98.0	200	0.403	
DRO >C10-C28*	<10.0	10.0	08/20/2018	ND	200	100	200	1.84	
EXT DRO >C28-C36	<10.0	10.0	08/20/2018	ND					

Surrogate: 1-Chlorooctane *96.3 %* *41-142*

Surrogate: 1-Chlorooctadecane *90.4 %* *37.6-147*

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Received:	08/17/2018	Sampling Date:	08/15/2018
Reported:	08/24/2018	Sampling Type:	Soil
Project Name:	SRO STATE COM #2H	Sampling Condition:	Cool & Intact
Project Number:	07/15/18	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: SP 6 @ SURFACE (H802315-18)

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	08/21/2018	ND	400	100	400	7.69	

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:	08/17/2018	Sampling Date:	08/16/2018
Reported:	08/24/2018	Sampling Type:	Soil
Project Name:	SRO STATE COM #2H	Sampling Condition:	Cool & Intact
Project Number:	07/15/18	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: SP 6 @ 1 (H802315-19)

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	08/21/2018	ND	1.93	96.6	2.00	1.14	
Toluene*	<0.050	0.050	08/21/2018	ND	1.84	91.9	2.00	1.79	
Ethylbenzene*	<0.050	0.050	08/21/2018	ND	1.87	93.3	2.00	1.13	
Total Xylenes*	<0.150	0.150	08/21/2018	ND	5.60	93.3	6.00	1.11	
Total BTEX	<0.300	0.300	08/21/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.3 %* *69.8-142*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**176**	16.0	08/21/2018	ND	400	100	400	7.69	

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	08/20/2018	ND	196	98.0	200	0.403	
DRO >C10-C28*	<10.0	10.0	08/20/2018	ND	200	100	200	1.84	
EXT DRO >C28-C36	<10.0	10.0	08/20/2018	ND					

Surrogate: 1-Chlorooctane *91.9 %* *41-142*

Surrogate: 1-Chlorooctadecane *86.0 %* *37.6-147*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

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

Received:	08/17/2018	Sampling Date:	08/16/2018
Reported:	08/24/2018	Sampling Type:	Soil
Project Name:	SRO STATE COM #2H	Sampling Condition:	Cool & Intact
Project Number:	07/15/18	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: SP 7 @ SURFACE (H802315-20)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2960**	16.0	08/21/2018	ND	400	100	400	7.69	

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Analytical Results For:

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

Received:	08/17/2018	Sampling Date:	08/16/2018
Reported:	08/24/2018	Sampling Type:	Soil
Project Name:	SRO STATE COM #2H	Sampling Condition:	Cool & Intact
Project Number:	07/15/18	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: SP 7 @ 1 (H802315-21)

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	08/21/2018	ND	1.93	96.6	2.00	1.14	
Toluene*	<0.050	0.050	08/21/2018	ND	1.84	91.9	2.00	1.79	
Ethylbenzene*	<0.050	0.050	08/21/2018	ND	1.87	93.3	2.00	1.13	
Total Xylenes*	<0.150	0.150	08/21/2018	ND	5.60	93.3	6.00	1.11	
Total BTEX	<0.300	0.300	08/21/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.0 %* *69.8-142*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**4000**	16.0	08/21/2018	ND	400	100	400	7.69	

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	08/20/2018	ND	196	98.0	200	0.403	
DRO >C10-C28*	<10.0	10.0	08/20/2018	ND	200	100	200	1.84	
EXT DRO >C28-C36	<10.0	10.0	08/20/2018	ND					

Surrogate: 1-Chlorooctane *91.3 %* *41-142*

Surrogate: 1-Chlorooctadecane *85.4 %* *37.6-147*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

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

Received:	08/17/2018	Sampling Date:	08/16/2018
Reported:	08/24/2018	Sampling Type:	Soil
Project Name:	SRO STATE COM #2H	Sampling Condition:	Cool & Intact
Project Number:	07/15/18	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: SP 7 @ 2 (H802315-22)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**3040**	16.0	08/21/2018	ND	432	108	400	0.00	QM-07

Sample ID: SP 7 @ 3 (H802315-23)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**336**	16.0	08/21/2018	ND	432	108	400	0.00	

Sample ID: SP 7 @ 4 (H802315-24)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**464**	16.0	08/21/2018	ND	432	108	400	0.00	

Sample ID: SP 8 @ SURFACE (H802315-25)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1300**	16.0	08/21/2018	ND	432	108	400	0.00	

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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:	08/17/2018	Sampling Date:	08/16/2018
Reported:	08/24/2018	Sampling Type:	Soil
Project Name:	SRO STATE COM #2H	Sampling Condition:	Cool & Intact
Project Number:	07/15/18	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: SP 8 @ 1 (H802315-26)

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	08/21/2018	ND	1.93	96.6	2.00	1.14	
Toluene*	<0.050	0.050	08/21/2018	ND	1.84	91.9	2.00	1.79	
Ethylbenzene*	<0.050	0.050	08/21/2018	ND	1.87	93.3	2.00	1.13	
Total Xylenes*	<0.150	0.150	08/21/2018	ND	5.60	93.3	6.00	1.11	
Total BTEX	<0.300	0.300	08/21/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID *92.6 %* *69.8-142*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1400**	16.0	08/21/2018	ND	432	108	400	0.00	

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	08/20/2018	ND	196	98.0	200	0.403	
DRO >C10-C28*	<10.0	10.0	08/20/2018	ND	200	100	200	1.84	
EXT DRO >C28-C36	<10.0	10.0	08/20/2018	ND					

Surrogate: 1-Chlorooctane *89.9 %* *41-142*

Surrogate: 1-Chlorooctadecane *85.1 %* *37.6-147*

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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:	08/17/2018	Sampling Date:	08/16/2018
Reported:	08/24/2018	Sampling Type:	Soil
Project Name:	SRO STATE COM #2H	Sampling Condition:	Cool & Intact
Project Number:	07/15/18	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: SP 8 @ 2 (H802315-27)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	08/21/2018	ND	432	108	400	0.00	

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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:	08/17/2018	Sampling Date:	08/16/2018
Reported:	08/24/2018	Sampling Type:	Soil
Project Name:	SRO STATE COM #2H	Sampling Condition:	Cool & Intact
Project Number:	07/15/18	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: N @ SURFACE (H802315-28)

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	08/21/2018	ND	1.93	96.6	2.00	1.14	
Toluene*	<0.050	0.050	08/21/2018	ND	1.84	91.9	2.00	1.79	
Ethylbenzene*	<0.050	0.050	08/21/2018	ND	1.87	93.3	2.00	1.13	
Total Xylenes*	<0.150	0.150	08/21/2018	ND	5.60	93.3	6.00	1.11	
Total BTEX	<0.300	0.300	08/21/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.1 %* *69.8-142*

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	08/21/2018	ND	432	108	400	0.00	

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	08/20/2018	ND	196	98.0	200	0.403	
DRO >C10-C28*	<10.0	10.0	08/20/2018	ND	200	100	200	1.84	
EXT DRO >C28-C36	<10.0	10.0	08/20/2018	ND					

Surrogate: 1-Chlorooctane *96.5 %* *41-142*

Surrogate: 1-Chlorooctadecane *90.1 %* *37.6-147*

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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:	08/17/2018	Sampling Date:	08/16/2018
Reported:	08/24/2018	Sampling Type:	Soil
Project Name:	SRO STATE COM #2H	Sampling Condition:	Cool & Intact
Project Number:	07/15/18	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: E @ SURFACE (H802315-29)

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	08/22/2018	ND	1.93	96.6	2.00	1.14	
Toluene*	<0.050	0.050	08/22/2018	ND	1.84	91.9	2.00	1.79	
Ethylbenzene*	<0.050	0.050	08/22/2018	ND	1.87	93.3	2.00	1.13	
Total Xylenes*	<0.150	0.150	08/22/2018	ND	5.60	93.3	6.00	1.11	
Total BTEX	<0.300	0.300	08/22/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.2 %* *69.8-142*

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	08/21/2018	ND	432	108	400	0.00	

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	08/21/2018	ND	205	103	200	0.866	
DRO >C10-C28*	<10.0	10.0	08/21/2018	ND	208	104	200	3.67	
EXT DRO >C28-C36	<10.0	10.0	08/21/2018	ND					

Surrogate: 1-Chlorooctane *94.6 %* *41-142*

Surrogate: 1-Chlorooctadecane *88.5 %* *37.6-147*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

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

Received:	08/17/2018	Sampling Date:	08/16/2018
Reported:	08/24/2018	Sampling Type:	Soil
Project Name:	SRO STATE COM #2H	Sampling Condition:	Cool & Intact
Project Number:	07/15/18	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: W @ SURFACE (H802315-30)

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	08/22/2018	ND	1.93	96.6	2.00	1.14	
Toluene*	<0.050	0.050	08/22/2018	ND	1.84	91.9	2.00	1.79	
Ethylbenzene*	<0.050	0.050	08/22/2018	ND	1.87	93.3	2.00	1.13	
Total Xylenes*	<0.150	0.150	08/22/2018	ND	5.60	93.3	6.00	1.11	
Total BTEX	<0.300	0.300	08/22/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.7 %* *69.8-142*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**224**	16.0	08/21/2018	ND	432	108	400	0.00	

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	08/21/2018	ND	205	103	200	0.866	
DRO >C10-C28*	<10.0	10.0	08/21/2018	ND	208	104	200	3.67	
EXT DRO >C28-C36	<10.0	10.0	08/21/2018	ND					

Surrogate: 1-Chlorooctane *87.2 %* *41-142*

Surrogate: 1-Chlorooctadecane *80.5 %* *37.6-147*

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:	08/17/2018	Sampling Date:	08/16/2018
Reported:	08/24/2018	Sampling Type:	Soil
Project Name:	SRO STATE COM #2H	Sampling Condition:	Cool & Intact
Project Number:	07/15/18	Sample Received By:	Tamara Oldaker
Project Location:	COG - MALAGA		

Sample ID: S @ SURFACE (H802315-31)

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	08/21/2018	ND	1.85	92.6	2.00	3.01	
Toluene*	<0.050	0.050	08/21/2018	ND	1.74	87.0	2.00	2.88	
Ethylbenzene*	<0.050	0.050	08/21/2018	ND	1.72	86.1	2.00	3.27	
Total Xylenes*	<0.150	0.150	08/21/2018	ND	5.21	86.8	6.00	3.16	
Total BTEX	<0.300	0.300	08/21/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.0 %* *69.8-142*

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	08/21/2018	ND	432	108	400	0.00	

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	08/21/2018	ND	205	103	200	0.866	
DRO >C10-C28*	<10.0	10.0	08/21/2018	ND	208	104	200	3.67	
EXT DRO >C28-C36	<10.0	10.0	08/21/2018	ND					

Surrogate: 1-Chlorooctane *88.4 %* *41-142*

Surrogate: 1-Chlorooctadecane *81.7 %* *37.6-147*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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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

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL LABORATORIES

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

		BILL TO	
Company Name:	BBC International, Inc.	P.O. #:	
Project Manager:	Cliff Brunson	Company:	
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 - 2H (7/15/18)		Phone #:
Project Location:	Eddy Co NM		Fax #:
Sampler Name:			

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
H802315-1	Sp 1 @ Surf	C	1			X					X		8.15	1001
-2	2	C	1			X					X			1016
-3		C	1			X					X			1029
-4	Sp 2 @ Surf	C	1			X					X			1045
-5	2	C	1			X					X			1049
-6		C	1			X					X			1111
-7	3	C	1			X					X			1128
-8	Sp 3 @ Surf	C	1			X					X			1129
-9	2	C	1			X					X			1140
-10		C	1			X					X			1150

Relinquished By:	Date: 8.17.18	Received By: Samara Platt	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 3:55		Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		

Delivered By: (Circle One) Sampler - UPS - Bus - Other: -9.7° Corrected -9.6°

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

CHECKED BY: (Initials) TO #5

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

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:	CC
Project Name:	SRO -2H (7/15/18
Project Location:	
Sampler Name:	VU

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-
H802315																	
11	SP3e 3	G	1			X					X		6.15	1215			X
12	SP4e 5yR	G	1			X					X			1239			X
13	2	G	1			X					X			1258	X	X	X
14		G	1			X					X			111	X	X	X
15	SP5e 5yR	G	1			X					X			130			X
16		G	1			X					X			140	X	X	X
17	2	G	1			X					X			159	X	X	X
18	SP6e 5yR	G	1			X					X			215			X
19		G	1			X					X		6.16	939	X	X	X
20	SP7e 5yR	G	1			X					X		6.16	1015			X

Relinquished By:	Date: 6.17.16	Received By:	Tamara Oldaker
	Time: 3:55		
Relinquished By:	Date:	Received By:	
	Time:		

Delivered By: (Circle One) -9.7°
Sampler - UPS - Bus - Other: Corrected -9.6°C

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

CHECKED BY: (Initials) TO #15

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

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.	BILL TO	
Project Manager:	Cliff Brunson	P.O. #:	
Address:	P.O. Box 805	Company:	
City:	Hobbs	State: NM Zip: 88241	Attn:
Phone #:	575-397-6388	Fax #: 575-397-0397	Address:
Project #:		Project Owner: CBG	City:
Project Name:	SPO - 24 (7/15/18)		State: Zip:
Project Location:			Phone #:
Sampler Name:	JS		Fax #:

FOR LAB USE ONLY				MATRIX							PRESERV.			SAMPLING		ANALYSIS REQUEST												
Lab I.D.	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-												
H8D2315																												
21	Sp 7e /	G	1			X					X		8-16	1027	X	X	X											
22	2	G	1			X					X			1041			X											
23	3	C	1			X					X			1101			X											
24	4	G	1			X					X			1111			X											
25	Sp @ SCR	G	1			X					X			1130			X											
26	/	G	1			X					X			1140	X	X	X											
27	2	G	1			X					X			1212			X											
28	NC Surface	G	1			X					X			101	X	X	X											
29	E C Surface	G	1			X					X			110	X	X	X											
30	W C Surface	C	1			X					X		V	115	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: 8.17.18	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 3:55		Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		
Delivered By: (Circle One)		Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No	CHECKED BY: (Initials) TO-HS
Sampler - UPS - Bus - Other:	-9.7c corrected -9.6c		

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

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-2# (7/15/18)
Project Location:	
Sampler Name:	

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
H802315-31	South Side	G	1			X					X		8.16	12:5

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: 8.17.18	Received By: Tamara Oldaker	
Relinquished By:	Time: 3:55	Received By:	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	-9.7° / -9.6°C	Sample Condition Cool: Yes / No; Intact: Yes / No	CHECKED BY: (Initials) TO #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

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

JUL 17 2018
DISTRICT II ARTESIA O.C.D.

Form C-141
Revised April 3, 2017

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

nAB1819823169

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 #002H**	Facility Type: Tank Battery

Surface Owner: State	Mineral Owner: State	API No. 30-015-37141

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
P	32	25S	28E	430	South	330	East	Eddy

Latitude 32.080101 **Longitude** -104.1018906 NAD83

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: 190 bbl.	Volume Recovered: 180 bbl.
Source of Release: Lightning Strike	Date and Hour of Occurrence: July 15, 2018 6:30pm	Date and Hour of Discovery: July 15, 2018 6:30pm
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher – NMOCD; Ryan Mann – SLO	
By Whom? DeAnn Grant	Date and Hour July 16, 2018 9:03am	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

The release was caused by a lightning strike to the overflow water tank. The damaged tanks will be replaced.

Describe Area Affected and Cleanup Action Taken.*

The release occurred within the lined facility. A vacuum truck was dispatched to remove all freestanding fluids. Concho will have the spill area evaluated for any possible impact from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation activities.

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: DeAnn Grant	OIL CONSERVATION DIVISION
Printed Name: DeAnn Grant	Approved by Environmental Specialist:
Title: HSE Administrative Assistant	Approval Date: 7/17/18 Expiration Date: N/A
E-mail Address: agrant@concho.com	Conditions of Approval: See attached Attached ☐ 2RP-4863
Date: July 16, 2018 Phone: (432) 253-4513	

* Attach Additional Sheets If Necessary

Operator/Responsible Party,

The OCD has received the form C-141 you provided on July 17, 2018 regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number 2RP-4862 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 2 office in Artesia on or before 8/15/18. 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

Pruett, Maria, EMNRD

From: Bratcher, Mike, EMNRD
Sent: Tuesday, July 17, 2018 11:10 AM
To: Pruett, Maria, EMNRD
Subject: FW: (Initial C-141) SRO State Com #002H Battery (30-015-37141) 07-15-2018
Attachments: (Initial C-141) SRO State Com #002H Battery (30-015-37141) 07-15-2018.pdf

---

From: DeAnn Grant <agrant@concho.com>
Sent: Monday, July 16, 2018 3:03 PM
To: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Mann, Ryan <rmann@slo.state.nm.us>
Cc: Weaver, Crystal, EMNRD <Crystal.Weaver@state.nm.us>; Ike Tavarez <itavarez@concho.com>; Sheldon Hitchcock <SLHitchcock@concho.com>; Dakota Neel <DNeel2@concho.com>; Rebecca Haskell <RHaskell@concho.com>; DeAnn Grant <agrant@concho.com>
Subject: (Initial C-141) SRO State Com #002H Battery (30-015-37141) 07-15-2018

Mr. Bratcher/Mr. Mann,

Please find the attached Initial C-141 for your consideration. If you have any questions or concerns please contact me.

Thank you,

DeAnn Grant
HSE Administrative Assistant
agrant@concho.com
COG Operating LLC
600 W Illinois Avenue | Midland, TX 79701
Direct: 432-253-4513 | Main: 432.683.7443
CONCHO

Bratcher, Mike, EMNRD

From: DeAnn Grant <agrant@concho.com>
Sent: Monday, July 16, 2018 8:03 AM
To: Bratcher, Mike, EMNRD; Mann, Ryan
Cc: Weaver, Crystal, EMNRD; Sheldon Hitchcock; Dakota Neel; Rebecca Haskell; DeAnn Grant
Subject: (Notification) SRO State Com #002H (30-015-37141) 07-15-2018

COG Operating, LLC (OGRID# 229137) is reporting a produced water release at the SRO State Com #002H (30-015-37141).

Release Location:
ULSTR: P-32-25S-28E
Lat/Long: 32.080101, -104.1018906

Date of Release: July 15, 2018

Release Volume: >25bbls

Recovery Volume: On going

COG will have the release evaluated and will submit an initial C-141. If you have any questions or concerns please do not hesitate to contact me.

Thank you,

DeAnn Grant
HSE Administrative Assistant
agrant@concho.com
COG Operating LLC
600 W Illinois Avenue | Midland, TX 79701
Direct: 432-253-4513 | Main: 432.683.7443
CONCHO

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 169329

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 169329
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
bhall	None	12/21/2022