# **REMEDIATION SUMMARY**

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## SITE CLOSURE REQUEST

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 Eddy County, New Mexico SRO State Com #002H COG Operating, LLC

Prepared For:

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

Prepared By:

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February 2019

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Senior Project Manager

in.

Curt Stanley

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# **INTRODUCTION & BACKGROUND INFORMATION**

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

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

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

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 within one-thousand (1,000) feet of the Site. No surface water was observed within one-thousand approximately twenty-five (25) feet below ground surface (bgs). No water wells were observed reference map utilized by the NMOCD indicates (1,000) feet of the release groundwater should be encountered at

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

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

Laboratory analytical results indicated BTEX constituents in all samples were below the laboratory method detection limit (MDL), TPH concentrations were below the NMOCD regulatory and submitted to the laboratory for analysis of BTEX, TPH and/or chloride concentrations. 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 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. guidelines in SP1 @ 2' and chloride concentrations were below NMOCD regulatory guidelines in

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 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 in the area characterized by augerhole SP2 for BTEX were below the laboratory MDL, TPH concentrations were below the laboratory MDL NMOCD regulatory guidelines for BTEX constituents, TPH or chloride beyond three (3) ft. bgs

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

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

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 submitted to the laboratory for analysis of BTEX, TPH and/or chloride concentrations. Laboratory characterized by augerhole SP5. regulatory guidelines for BTEX constituents, TPH or chloride beyond the surface in the area analytical results indicated BTEX constituents and TPH in all samples were below the laboratory augerhole, three (3) soil samples (SP5 @ Surface, SP5 @ 1' and SP5 @ 2') were collected and Augerhole SP5 was advanced north of SP4 in the pastureland. During the advancement of the

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

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 @ soil was not affected above the NMOCD regulatory guidelines for BTEX constituents, TPH or NMOCD regulatory guidelines in SP7 @ 3' and SP7 @ 4'. Based on laboratory analytical results, TPH in all samples were below the laboratory MDL, and chloride concentrations were below and/or chloride concentrations. Laboratory analytical results indicated BTEX constituents and 3', and SP7 (a) 4') were collected and submitted to the laboratory for analysis of BTEX, TPH 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 laboratory MDL, and chloride concentrations were below NMOCD regulatory guidelines in SP8 and submitted to the laboratory for analysis of BTEX, TPH and/or chloride concentrations. by augerhole SP8. guidelines for BTEX constituents, TPH or chloride beyond two (2) ft. bgs in the area characterized (a) 2'. Based on laboratory analytical results, soil was not affected above the NMOCD regulatory Laboratory analytical results indicated BTEX constituents and TPH in all samples were below the

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

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

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

The Workplan was subsequently approved.

# SUMMARY OF SOIL REMEDIATION ACTIVITIES

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

sampling areas. directions, respectively, and the floor samples were labeled corresponding to the respective initial NMOCD regulatory guidelines in all of the submitted soil samples. concentrations. Laboratory analytical results indicated chloride concentrations were below the were collected from half-way down the excavation in the west, north, east and south cardinal 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 On October 8, 2018, after the impacted soil had been excavated from within the margins of the Collected soil samples were submitted to the laboratory for analysis of chloride

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

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

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

### SITE CLOSURE REQUEST

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

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

### LIMITATIONS

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

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

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. This report has been prepared for the benefit of COG Operating, LLC. The information contained

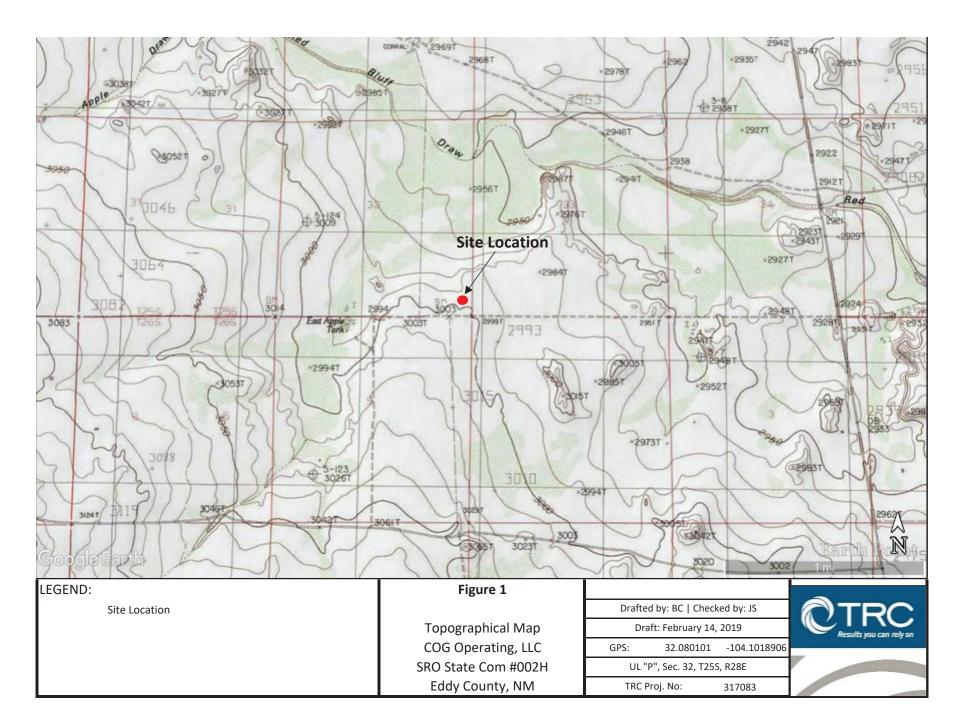
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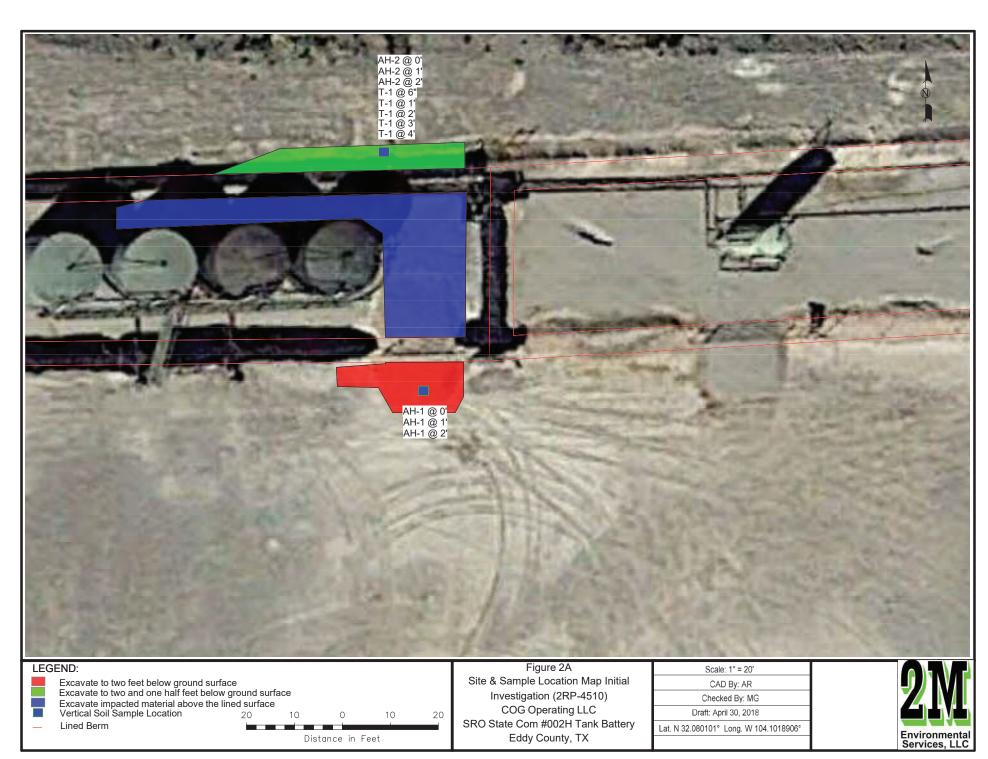
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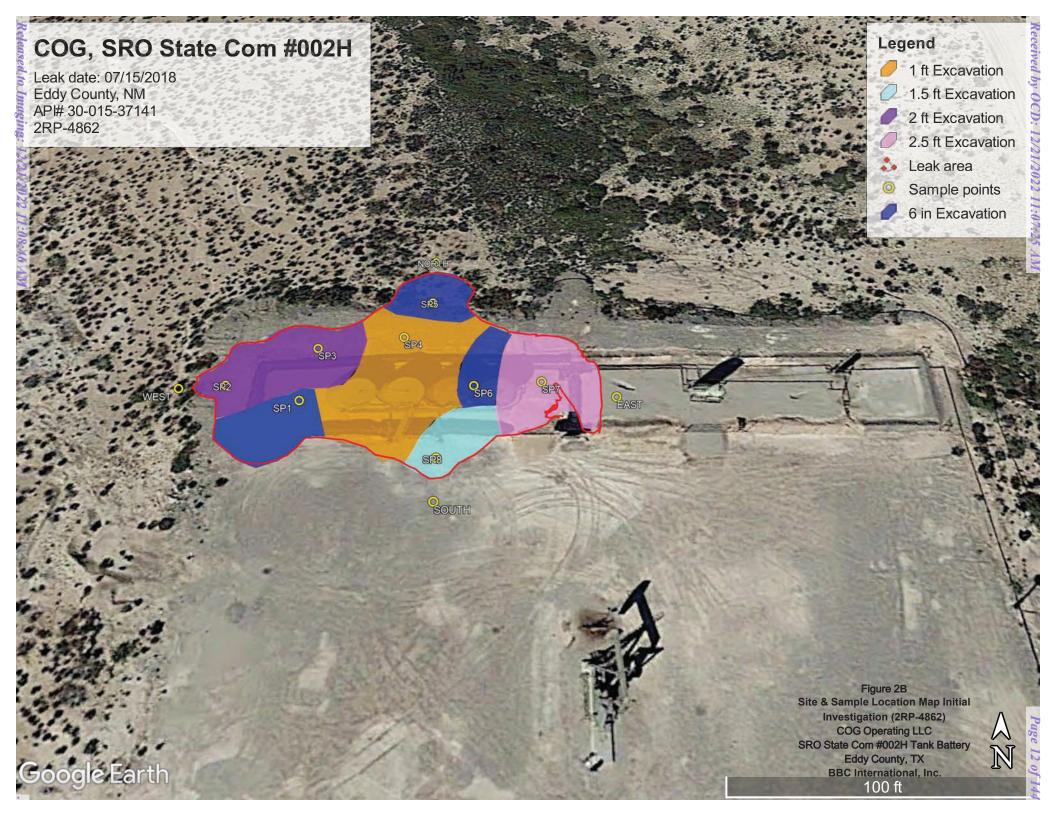
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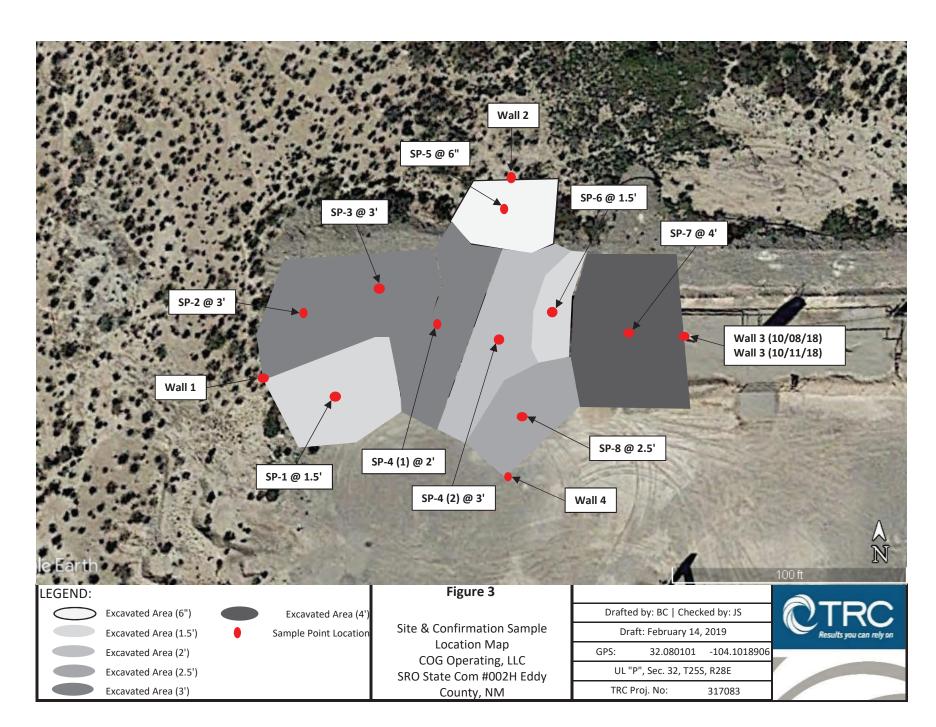
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### TABLE 1 CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN SOIL

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

All concentrations are reported in mg/kg

						HODS: SW 84	reported in mg/k	5		METHOD	SW 8015M		E 300.1
SAMPLE LOCATION	SAMPLE DEPTH	SAMPLE DATE	SOIL STATUS	BENZENE		ETHYL-	TOTAL XYLENES	TOTAL BTEX	TPH GRO C <sub>6</sub> -C <sub>10</sub>	TPH DRO C <sub>10</sub> -C <sub>28</sub>	<b>TPH ORO</b> C <sub>28</sub> -C <sub>35</sub>	ТОТАL ТРН С <sub>6</sub> -С <sub>35</sub>	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 Gu	idelines			10	-	-	-	50	-	-	-	100	600
					Sample	Locations d	epicted in Fig	ure 2A					

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

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### 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

						HODS: SW 84	reported in mg/k 6-8021b	-		METHOD	: SW 8015M		E 300.1
SAMPLE LOCATION	SAMPLE DEPTH	SAMPLE DATE	SOIL STATUS	BENZENE	TOLUENE	ETHYL- BENZENE	TOTAL XYLENES	TOTAL BTEX	<b>TPH GRO</b> C <sub>6</sub> -C <sub>10</sub>	TPH DRO C <sub>10</sub> -C <sub>28</sub>	<b>TPH ORO</b> C <sub>28</sub> -C <sub>35</sub>	TOTAL TPH C <sub>6</sub> -C <sub>35</sub>	CHLORIDE
						DERIGERICE		DILII	C6-C10	C10-C28	C <sub>28</sub> -C <sub>35</sub>	06-035	
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 G	uidelines			10	-	-	-	50	-	-	-	100	600
					Sample	Locations d	epicted in Fig	gure 2B					

### 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

				I			reported in mg/k	5		METHOD	: SW 8015M		E 300.1
	SAMPLE	SAMPLE	SOIL		MEI	HODS: SW 84		TOTAL	TRU CDO	-		TOTAL TRU	E 300.1
SAMPLE LOCATION	DEPTH	DATE	STATUS	BENZENE	TOLUENE	ETHYL-	TOTAL	TOTAL	TPH GRO	TPH DRO	TPH ORO	TOTAL TPH	CHLORIDE
						BENZENE	XYLENES	BTEX	C <sub>6</sub> -C <sub>10</sub>	C <sub>10</sub> -C <sub>28</sub>	C <sub>28</sub> -C <sub>35</sub>	C <sub>6</sub> -C <sub>35</sub>	
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 Gu	idelines			10	-	-	-	50	-	-	-	100	600
					Sampl	le Locations	lepicted in Fi	gure 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

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

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

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4) Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-17) Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18) Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-13) 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)



12-0CT-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:

subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report. Subcontracted analyses are identified in this report with either the NELAC certification number of the this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. 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

reported using all other available quality control measures. NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC standards. The uncertainty of measurement associated with the results of analysis reported is Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with

practices, controlled substances under regulated protocols, etc). consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged arranged with you. The samples received, and described as recorded in Report No. 602047 will be filed for least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at The validity and integrity of this report will remain intact as long as it is accompanied by this letter and

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

Respectfully,

Kelsey Brooks Project Manager

**Recipient of the Prestigious Small Business Administration Award of Excellence in 1994** 

A Small Business and Minority Status Company that delivers SERVICE and QUALITY Certified and approved by numerous States and Agencies.

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



# Sample Cross Reference 602047

### TRC Solutions, Inc, Midland, TX

SRO State Com

S	S	S	S	S	S	S	S	S	S	S	S	Matrix
10-08-18 09:00	10-08-18 09:00	10-08-18 09:00	10-08-18 09:00	10-08-18 09:00	10-08-18 09:00	10-08-18 09:00	10-08-18 09:00	10-08-18 09:00	10-08-18 09:00	10-08-18 09:00	10-08-18 09:00	Date Collected
				2.5	1.5 ft	6 ft	3 ft	2 ft	3 ft	3 ft	1.5 ft	Sample Depth
602047-012	602047-011	602047-010	602047-009	602047-008	602047-007	602047-006	602047-005	602047-004	602047-003	602047-002	602047-001	Lab Sample Id

SP-4 (2) @ 3' SP-5 @ 6" SP-6 @ 1.5' SP-8 @ 2.5'

Wall 2

Wall 1

Wall 3 Wall 4 SP-1 @ 1.5' SP-2 @ 3' SP-3 @ 3'

Sample Id

SP-4 (1) @ 2'

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



Project Id:#002HContact:Joel LowryProject Location:Eddy Co. NM

Released to Imaging: 12/21/2022 11:08:46 AM

### Certificate of Analysis Summary 602047

TRC Solutions, Inc, Midland, TX Project Name: SRO State Com

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

	Lab Id:	602047-0	01	602047-0	02	602047-0	03	602047-0	04	602047-0	005	602047-0	06
Analysis Requested	Field Id:	SP-1 @ 1	.5'	SP-2 @	3'	SP-3 @	3'	SP-4 (1) @	ı) 2'	SP-4 (2) (	<i>i</i> ) 3'	SP-5 @	6"
Anulysis Kequesteu	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 (	9:00	Oct-08-18 (	9:00	Oct-08-18 0	9:00	Oct-08-18 (	09:00	Oct-08-18 0	9:00
Chloride by EPA 300	Extracted:	Oct-11-18 08:30		Oct-11-18 (	08:30	Oct-11-18 0	8:30	Oct-11-18 0	8:30	Oct-11-18 (	08:30	Oct-11-18 0	8:30
	Analyzed:	Oct-11-18 1	0:13	Oct-11-18 1	0:49	Oct-11-18 1	1:02	Oct-11-18 1	1:14	Oct-11-18	1:27	Oct-11-18 1	1:39
	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

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Version: 1.%

Kurs Boah

Kelsey Brooks Project Manager

Page 21 of 144

Final 1.000



Project Id:#002HContact:Joel LowryProject Location:Eddy Co. NM

Released to Imaging: 12/21/2022 11:08:46 AM

### Certificate of Analysis Summary 602047

TRC Solutions, Inc, Midland, TX

Project Name: SRO State Com

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

	Lab Id:	602047-0	07	602047-0	08	602047-0	09	602047-0	10	602047-0	)11	602047-0	12
Analysis Requested	Field Id:	SP-6 @ 1	.5'	SP-8 @ 2	2.5'	Wall 1		Wall 2		Wall 3		Wall 4	
Anuiysis Kequesieu	Depth:	1.5- ft	1.5- ft SOIL										
	Matrix:	SOIL				SOIL		SOIL		SOIL		SOIL	
	Sampled:	Oct-08-18 0	9:00	Oct-08-18 0	9:00	Oct-08-18 0	9:00	Oct-08-18 0	9:00	Oct-08-18 (	09:00	Oct-08-18 0	9:00
Chloride by EPA 300	Extracted:	Oct-11-18 0	Oct-11-18 08:30		Oct-11-18 08:30		Oct-11-18 08:30		8:30	Oct-11-18 (	08:30	Oct-11-18 0	8:30
	Analyzed:	Oct-11-18 1	Oct-11-18 11:52		2:04	Oct-11-18 1	2:16	Oct-11-18 1	2:29	Oct-11-18	2:54	Oct-11-18 1	3:31
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		456	456 25.0		25.0	93.3	25.0	219	25.0	46.8	25.0	48.2	25.0

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Version: 1.%

Kurs Boah

Kelsey Brooks Project Manager



### Flagging Criteria

- $\succ$ 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.
- Β laboratory contamination. A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or
- 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.
- $\overline{}$ 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.
- Г 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.
- Η 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.
- Z numerical value may not be consistent with the amount actually present in the environmental sample. A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated
- \*\* Surrogate recovered outside laboratory control limit.
- BRL Below Reporting Limit.
- RL Reporting Limit

<ul><li>MDL Method Detection Limit</li><li>PQL Practical Quantitation Limit</li><li>DL Method Detection Limit</li><li>NC Non-Calculable</li></ul>	SDL Sample Detection Limit MQL Method Quantitation Limit	LOD Limit of Detection LOQ Limit of Quantitation
NC Non-Calculable		
SMP Client Sample	BLK	Method Blank
BKS/LCS Blank Spike/Laboratory Control Sample		BKSD/LCSD Blank Spike Duplicate/Laboratory Control

+ NELAC certification not offered for this compound.

MD/SD

Method Duplicate/Sample Duplicate

SW

Matrix Spike

MSD: Matrix Spike Duplicate

I Sample Duplicate

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



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### **BS / BSD Recoveries**

### Project Name: SRO State Com

1	Work Order	#: 602047								Proj	Project ID: #002H							
1	Analyst:	RNL		D	ate Prepa	red: 10/11/201	.8			Date A	nalyzed: 1	0/11/2018						
]	Lab Batch ID	: 3066118	Sample: 7663988-1-	BKS	Batc	<b>h #:</b> 1					Matrix: S	Solid						
1	Units:	mg/kg			BLAN	K /BLANK S	SPIKE / I	BLANK S	SPIKE DUPI	LICATE	RECOVI	ERY STUE	θY					
		Chloride by EPA		Blank Sample Result [A]		Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag				
	Analy	rtes			[B]	[C]	[D]	[E]	Result [F]	[G]								
Í	Chloride			0.800	250	254	102	250	252	101	1	90-110	20					



### Form 3 - MS / MSD Recoveries

### Project Name: SRO State Com

Work Order # :	602047						Project II	D: #002H				
Lab Batch ID:	3066118	QC- Sample ID:	602047-0	01 S	Ba	tch #:	1 Matri	x: Soil				
Date Analyzed:	10/11/2018	Date Prepared:	10/11/201	18	An	alyst: I	RNL					
<b>Reporting Units:</b>	mg/kg		MA	TRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
	Chloride by EPA 300	Parent Sample	Spike	piked Sample Result	Sample	Spike	Duplicate Spiked Sample		RPD	Control Limits	Control Limits	Flag
	Analytes	Result [A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Chloride		91.6	250	332	96	250	331	96	0	80-120	20	
Lab Batch ID:	3066118	QC- Sample ID:	602047-0	11 S	Ba	tch #:	1 Matri	x: Soil				
Date Analyzed:	10/11/2018	Date Prepared:	10/11/201	18	An	alyst: I	RNL					
<b>Reporting Units:</b>	mg/kg		MA	TRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
	Chloride by EPA 300	Parent Sample Result	Spike	piked Sample Result	Sample	Spike	Duplicate Spiked Sample		RPD	Control Limits	Control Limits	Flag
	Analytes	[A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
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.

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	5					Page	1	Of	1															
Setting the Standard since 1990																								
Stafford, Texas (281-240-4200)			San Antor	-										Phoeni	x, Ari	zona (	480-355-0	0900)						
Dallas Texas (214-902-0300)			Midland, T	exas (432-	704-525	1)							_											
602041					N	www.xer		om										ľ	Kenco Job	#	10A	045	F	
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Client / Reporting Information				Pro	oject Info	rmation	=						-								T			A GOUES
company Name / Branch: RC Environmental Corporation			Project Name SRO State		4																		W = Wa	
ompany Address:			Project Local	tion:									-											il/Sed/So Fround W
057 Commerce Drive lidland, TX 79703			Eddy Co, NM																					Drinking V
mail:	Phone No:		Invoice To:										-										P = Pro SW = S	oduct Surface w
ilowry@trcsolutions.com zconder@trcsolutions.com	432-466-4450		COG Operati	ng C/O Becky	Haskell													Í					SL = SI	ludge
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Joel Lowry amplers's Name: Joel Lowry			Invoice:											MExt	3								O = Oil	Ĺ
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No. Field ID / Point of Co	llection			1	1					piese		lico	-	Chlorido E		8					$\vdash$		A-All	
		Sample				#of		NaOH/Zn Acetate	HNO3	H2SO4	NaOH NaHSO4	MEOH	щ	TPH 801		Hold I								
1 SP-1@15'		Depth	Date	Time	Matrix		포	Na( Ace	Ť	μž	Nat Na	Ψ	NONE		1	미프							Field Comm	ents
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3 SP. 3 @ 3'		364		9:10	11	1								D	7								1	
4 SP-4(1)@Z'		2 f+		9:15		1							-											·
5 SP-4(2) @ 3'		3F+		9:20		1				+			+	D			+	+					$\leftarrow$	
6 SP-5 @ 6"		610	1	9:25	+	1	$\vdash$			-		$\left  \right $	-				++-	+					$\rightarrow$	
7 SP-60, 1.5'		14610			+			-		-	_		+	X							_			
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9 Wall 1		NA		9:40		1								1										
o Wall 2		NA		9:45	$\left\{ \right\}$	1																	/	
1 Wall 5		NA	{	9:50		1			T					A							+	/	f	
2 Wall 4		NA		9:55		1			-				+	a										
Turnaround Time ( Business days)	19.58-1-55		121-173		D	ata Deliv	erable	Informat	tion		199.22				ų		No	tes:	1000	8.0.24/103			1	10000
Same Day TAT	X 5 Day TAT			Lev	el II Std	QC		Γ		Level	IV (Full	Data P	kg /ra	w data)					utions.cor	m			zconder@trcs	solutions
Next Day EMERGENCY	7 Day TAT			Lev	el III Std	QC+ Fo	rms	Г	=	TRRP	Level IV	,						-	cho.com					
2 Day EMERGENCY	Contract TAT			Lev	el 3 (CLI	P Forms	)	 Г			RG -411								solutions.					
3 Day EMERGENCY					RP Chec			L								100								
TAT Starts Day received by Lab																	dneel2@	_	Tracking	#				
Relinquished by Sampler:	SAMPLE CUSTO	DY MUST BE	DOCUMENTED	BELOW EAC	H TIME S	AMPLES	CHAN	GE POS					RIER D	ELIVER								-11		
				1					2	reindr	ished B	y:			Date	e Time:		Re 2	ceived By	<i>/</i> :				
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Convolution Signature of this document and relinque losses or expenses incurred by the Client if such I s will be enforced unless previously negotiated ur		10/10/	18 MINO	10		IA L	Un	. 1							-				1		1	1 12	-	25

Final 1.000

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### Prelogin/Nonconformance Report- Sample Log-In **XENCO** Laboratories



Acceptable Temperature Range: 0 - 6 degC

Work Order #: 602047 Date/ Time Received: 10/10/2018 04:40:00 PM Client: TRC Solutions, Inc

Temperature Measuring device used : IR-3 Air and Metal samples Acceptable Range: Ambient

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

) jonda Williano Brenda Ward and

Date: 10/11/2018

Kund. Kelsey Brooks Moah

Checklist reviewed by:

Date: 10/11/2018

# **Analytical Report 602197**

for

**TRC** Solutions, Inc

**Project Manager: Joel Lowry** SRO State Com #2H

12-0CT-18

Collected By: Client



6701 Aberdeen, Suite 9 Lubbock, TX 79424

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

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

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

Xenco-Tampa: Florida (E87429)

Xenco-Lakeland: Florida (E84098)



12-0CT-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:

subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report. Subcontracted analyses are identified in this report with either the NELAC certification number of the this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. 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

reported using all other available quality control measures. NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC standards. The uncertainty of measurement associated with the results of analysis reported is Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with

practices, controlled substances under regulated protocols, etc). consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged arranged with you. The samples received, and described as recorded in Report No. 602197 will be filed for least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at The validity and integrity of this report will remain intact as long as it is accompanied by this letter and

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

Respectfully,

Kelsey Brooks Project Manager

**Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.** 

A Small Business and Minority Status Company that delivers SERVICE and QUALITY Certified and approved by numerous States and Agencies.

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



# Sample Cross Reference 602197

## TRC Solutions, Inc, Midland, TX

SRO State Com #2H

		Matrix Date Collected Sample Depth L	
602197-00	602197-00	Lab Sample	

Wall 3

SP-7 FL Comp @ 4'

Sample Id

)01 002 le Id



### 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



Joel Lowry Eddy Co. NM

**Project Id:** 

**Project Location:** 

**Contact:** 

Released to Imaging: 12/21/2022 11:08:46 AM

### Certificate of Analysis Summary 602197

TRC Solutions, Inc, Midland, TX Project Name: SRO State Com #2H

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

	Lab Id:	602197-00	)1	602197-0	002			
Analysis Requested	Field Id:	SP-7 FL Comp	a@ 4'	Wall 3	3			
Anuiysis Kequesieu	Depth:							
	Matrix:	SOIL		SOIL				
	Sampled:	Oct-11-18 10	0:00	Oct-11-18	10:05			
Chloride by EPA 300	Extracted:	Oct-12-18 1	1:00	Oct-12-18	11:00			
	Analyzed:	Oct-12-18 14	4:46	Oct-12-18	15:12			
	Units/RL:	mg/kg	RL	mg/kg	RL			
Chloride		302	250	25.4	25.0			

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Kurs Boah

Kelsey Brooks Project Manager

Final 1.000



### Flagging Criteria

- $\succ$ 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.
- Β laboratory contamination. A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or
- 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.
- Т RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- Analyte was not detected.
- Г 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.
- Η 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.
- $\mathbf{N}$ Sample analyzed outside of recommended hold time.
- Z numerical value may not be consistent with the amount actually present in the environmental sample. A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated
- \* Surrogate recovered outside laboratory control limit.
- **BRL** Below Reporting Limit.
- RL Reporting Limit

RKC/I CS Blank Snika/I aboratory Control Sample RKSN/I CSN B	SMP Client Sample BLK N	NC Non-Calculable	DL Method Detection Limit	PQL Practical Quantitation Limit MQL Method Quantitation Limit	MDL Method Detection Limit SDL Sample Detection Limit
BKSD/LCSD Blank Spike Duplicate/Laboratory Control	Method Blank			LOQ Limit of Quantitation	LOD Limit of Detection

NELAC certification not offered for this compound

+

MD/SD

Method Duplicate/Sample Duplicate

MS

Matrix Spike

MSD: Matrix Spike Duplicate

l Sample Duplicate

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



Released to Imaging: 12/21/2022 11:08:46 AM

### **BS / BSD Recoveries**

### Project Name: SRO State Com #2H

Wor	k Orde	r #: 602197								Proj	ject ID:			
Anal	yst:	RNL		D	ate Prepai	ed: 10/12/201	.8			Date A	nalyzed: 1	0/12/2018		
Lab	Batch ID	: 3066255	Sample: 7664077-1-	BKS	Batc	<b>h #:</b> 1					Matrix: S	Solid		
Units	:	mg/kg			BLAN	K /BLANK S	SPIKE / I	BLANK S	SPIKE DUPI	LICATE	RECOVI	ERY STUD	θY	
		Chloride by EPA	A 300	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Analy	ytes			[B]	[C]	[D]	[E]	Result [F]	[G]				
	Chloride			2.37	250	250	100	250	251	100	0	90-110	20	



### Form 3 - MS / MSD Recoveries

### Project Name: SRO State Com #2H

Reporting Units: mg/kg Chloride by EPA 300 Analytes							Project II	):				
Lab Batch ID:	3066255	QC- Sample ID:	602197	-002 S	Ba	tch #:	1 Matrix	: Soil				
Date Analyzed:	10/12/2018	Date Prepared:	10/12/2	018	An	alyst: F	RNL					
<b>Reporting Units:</b>	mg/kg		Μ	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERYS	STUDY		
	Chloride by EPA 300	Parent Sample	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
	Analytes	Result [A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Chloride		25.4	250	265	96	250	271	98	2	80-120	20	

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

Page 8 of 10

XENCO			CH	IAI	LIN Page		(ľ (( Of		51	Ú.	D	Y										
Setting the Standard since 1990 Stafford,Texas (281-240-4200)		0																				
Dallas Texas (214-902-0300)		San Antor				)						Pho	enix, /	Arizor	1a (480	-355-	0900)					
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	1919-121	1.000000000			Warn, Ke	nco.con											^	T		600	219	1
Client / Reporting Information												-	1	A	nalytica	l Info	rmation	<u>n</u>				Matrix Codes
npany Name / Branch:		Project Name		ject Info			-		10	1			-		- 12							W = Water
C Environmental Corporation		Project Loca	tion:	SKI	2 2.	tate	La	<u>m</u> 7	ŦΖ	<u>H</u>		_										S = Soil/Sed/Solid
Desta Dr. Suite 150E		FIOJECT LOCA	dda (	°o .	NN	1							- 0									GW =Ground Water DW = Drinking Water
and, TX 79705 ail: Phone N	0.	Invoice To:		- )	14.1-																	P = Product
ilowry@trcsolutions.com 432-466-		CŁ	ddy ( Con , Re	bea	) ~	tast	se ll						10				s		Î			SW = Surface water SL = Sludge
ect Contact: Joel Lowry				2	0.	a • 8											Aeta		Ext (NM)			OW =Ocean/Sea Wate WI = Wipe
iplers's Name: ZPC		Invoice:											300			le	8		Ĕ			O = Oil
		Collection	SPACE AND				lumbe	r of pre	served	bottle	S	100	L L L L			Benzene	AR		2 2			WW= Waste Water A = Air
. Field ID / Point of Collection	Comple		-							R R		1 TX1005	Chloride	M		P Be	TCLP RCRA 8 Metals	Chloride	1 8015			
	Sample Depth	Date	Time	Matrix	# of bottles	HC	Acetate	HNO3 H2SO4	NaOH	NaHSO4	NONE	TPH	- F	NORM	RCI	TCLP	<u>[</u> ]	ਤੋਂ	H			Field Comments
SP-7 FL Campey	1 41	10-11-18	10:000	S	T							1	×	-				-	·		***	riold Comments
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elinquished by Sampler:	CUSTODY MUST BE Date Time	5119	Received	CH TIME By:	SAMPLE	S CHANC	E POSS		i, INCLU			R DELIV		Date Ti	ime:		Re	ceive	d By:			
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### Prelogin/Nonconformance Report- Sample Log-In **XENCO** Laboratories



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

Temperature Measuring device used : IR-3

Work Order #: 602197

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

Client: TRC Solutions, Inc

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

) winddy WMMon Brenda Ward and

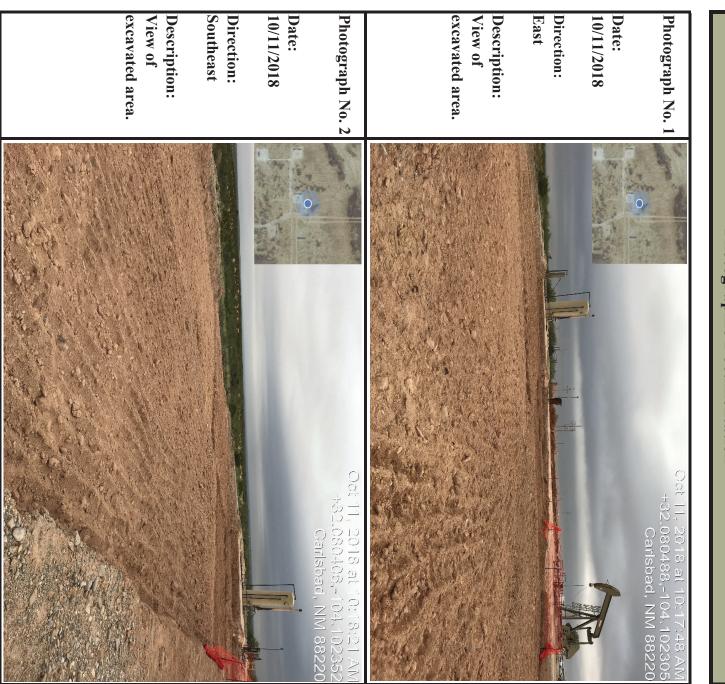
Date: 10/11/2018

Checklist reviewed by: Kelsey Brooks Moah

Date: 10/12/2018

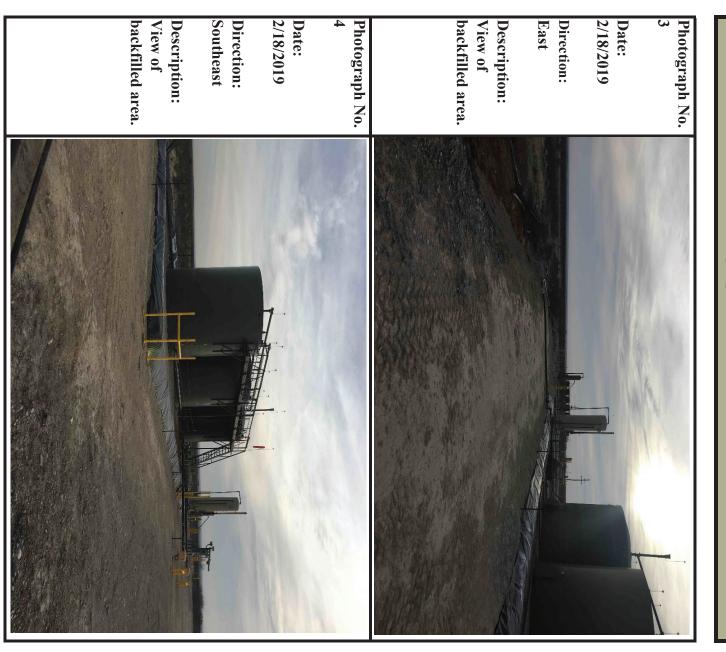
COG- SRO State Com #002H Date: 2/19/2019

### **Photographic Documentation**



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

### **Photographic Documentation**



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Received by OCD: 12/21/2022 11:07:25 AM

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

Energy Minerals and Natural Resources State of New Mexico

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**

1220 South St. Francis Dr. **Oil Conservation Division** 

Santa Fe, NM 87505

Surface Owner: State	Facility Name: SRO State Com #002H	Address: 600 West Illinois Avenue, Midland, TX 79701	Name of Company: COG Operating, LLC (OGRID #229137)	
Mineral Owner: State		TX 79701		
: State	Facility Type: Tank Battery	Telephone No.	Contact:	OPERATOR
	Battery	432-683-7443	Robert McNeil	
API No. 30-015-3714		3	eill	$\boxtimes$ Initial Report
7141				☐ Final Report

# LOCATION OF RELEASE

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

## Latitude 32.080101 Longitude -104.1018906 NAD83

### **NATURE OF RELEASE**

Type of Release	Volume of Release	Volume Recovered
Produced Water	190 bbl.	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?	If YES, To Whom?	
🛛 Yes 🔲 No 🗌 Not Required	Mike Bratcher – NMOCD Ryan Mann – SLO	
By Whom? DeAnn Grant	Date and Hour July 16, 2018 9:03am	n
Was a Watercourse Reached?	If YES, Volume Impacting the Watercourse.	ercourse.
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.	e 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 evalua 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.	led to remove all freestanding fluids. work plan to the NMOCD for approv	Concho will have the spill area evaluated val prior to any significant remediation
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 the environment. In addition NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other the environment. The addition NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other to the environment. The addition NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other to the environment.	best of my knowledge and understatifications and perform corrective act infications and perform corrective act NMOCD marked as "Final Report" of contamination that pose a threat to g contamination the operator of responses.	nd that pursuant to NMOCD rules and ions for releases which may endanger loes not relieve the operator of liability round water, surface water, human health ikility for compliance with any other
or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other	es not relieve the operator of respons-	ibility for compliance with any other

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federal. state, or local	federal, state, or local laws and/or regulations.	and the rest of a state of the		
	<i>t</i> > > -	OIL CONSERVATION DIVISION	VATION I	NOISIAIC
Signature:	Lewon Unewat			
Printed Name:	DeAnn Grant	Approved by Environmental Specialist:	list:	
Title:	HSE Administrative Assistant	Approval Date:	Expiration Date:	ate:
E-mail Address:	agrant@concho.com	Conditions of Approval:		Attached
Date: July 16, 2018	Phone: (432) 253-4513			
Attach Additional Sheets If Necessary	leets If Necessary			

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District.1 1625 N. French Dr., Hobbs, NM 88240 District.11 811 S. Frist St., Artesin, NM 88210

District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 District III 1000 Rio Brazos Road, Aztec, NM 87410

> NM OIL CONSERVATION Page 41 of 144

ARTESIA DISTRICT

DEC 01 2017

**Energy Minerals and Natural Resources** 

State of New Mexico

**Oil Conservation Division** 

Submit 1 Copy to appropriate District Office in RECEIVED rdance with 19.15.29 NMAC. Form C-141 Revised April 3, 2017

1220 South St. Francis Dr. Santa Fe, NM 87505

Release **Notification and Corrective** Action

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 nose a threat to ground water surface water human health

							-	
Date: 12/1/2017 Phone: 575-746-2010	E-mail Address: cgray@concho.com	Title: HSE Coordinator	Printed Name: Christopher Gray	Signature:	2	federal, state, or local laws and/or regulations.	or the environment. In addition, NMOCD acceptance of a C-141 report d	mound mean operations have failed to adequately investigate and remediate
119hitten	Conditions of Approval SP P. NATA WAAnthed Barn 1-	Approval Date: 12/4/17 Expiration Date: 1 N/14	Approved by Environmental Specialist:	n. In U. R.	OIL CONSERVATION DIVISION		or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other	should their operations have tailed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, numan nearth

Attach Additional Sheets If Necessary

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June 22, 2018

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

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

Dear Mr. Bratcher and Mr. Mann,

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

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

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 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 system, twenty (20) points will be assigned to the subject area ranking as a result of this criterion. one-thousand (1,000) feet of the Release Site. Based on the NMOCD site classification system, zero (0) assigned to the subject area ranking as a result of this criterion. No water wells were observed within below ground surface (bgs). Based on the NMOCD site classification system, twenty (20) points will be District Office indicates groundwater should be encountered at approximately twenty-five (25) feet East. A reference map utilized by the New Mexico Oil Conservation Division (NMOCD) Artesia

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

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

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 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). determination of concentrations of BTEX using Method SW 846-8021B, TPH using Method SW 846-

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

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

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

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

Thank you,

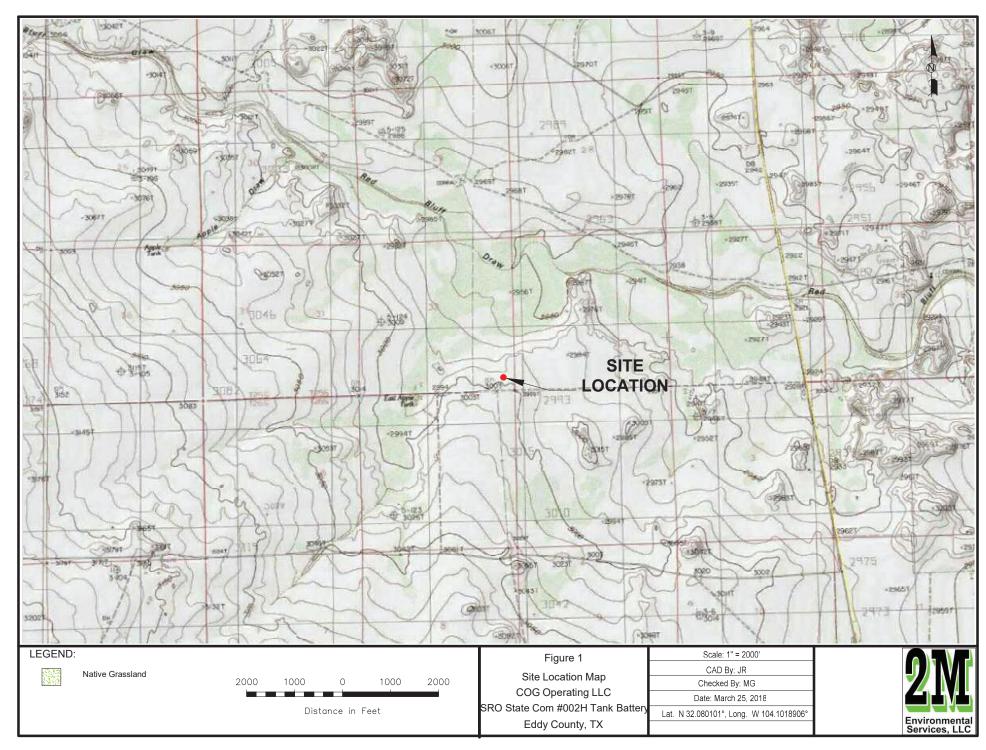
Matthew Dree

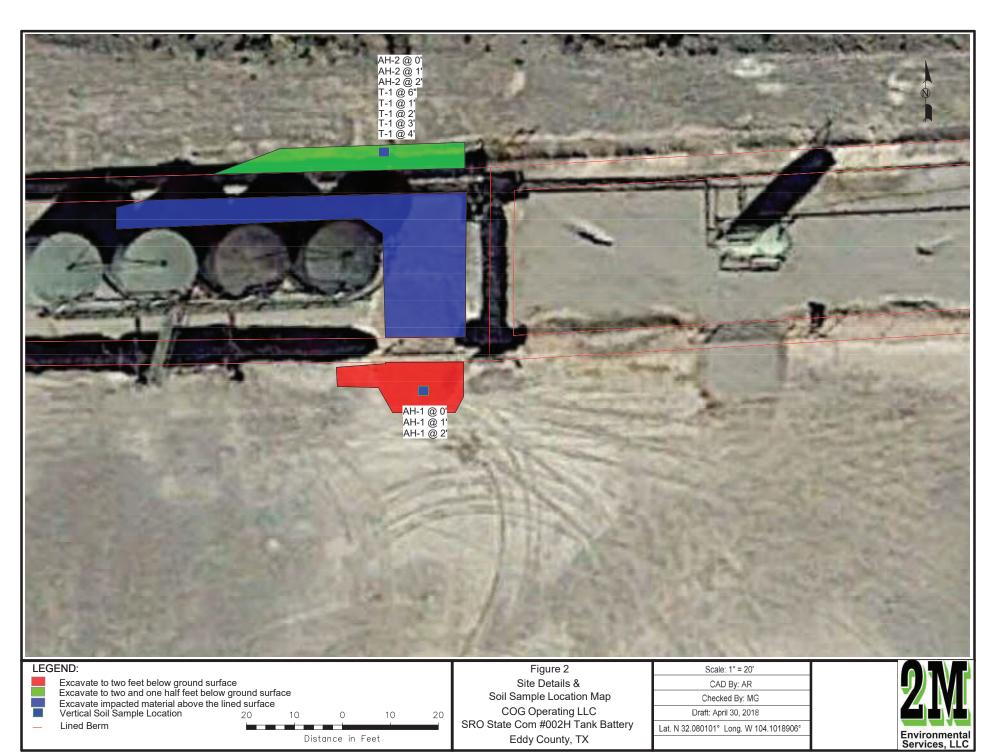
Matthew Green, P.G. President 2M Environmental Services, LLC

Attachments:

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

cc: File





#### 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

				METHODS:	SW 846-80211	3			М	ETHOD: SW 801	5M		E 300.1
SAMPLE LOCATION	SAMPLE DATE	BENZENE	TOLUENE	ETHYL- BENZENE	m, p - XYLENES	0 - XYLENE	TOTAL XYLENES	TOTAL BTEX	TPH GRO C <sub>6</sub> -C <sub>12</sub>	TPH DRO C <sub>12</sub> -C <sub>28</sub>	TPH ORO C <sub>28</sub> -C <sub>35</sub>	TOTAL TPH C <sub>6</sub> -C <sub>35</sub>	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.

Released to Imaging: 12/21/2022 11:08:46 AM



#### **Project Id:**

Released to Imaging: 12/21/2022 11:08:46 AM

**Contact:** 

Sheldon Hitchcock Eddy County NM **Project Location:** 

Certificate of Analysis Summary 573116

COG Operating LLC, Artesia, NM Project Name: SRO St. Com #2H



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

	Lab Id:	573116-0	001	573116-0	002	573116-	003	573116-	004	573116-	005	573116-	006
Analysis Requested	Field Id:	AH-1 (	)'	AH-1	וי	AH-12	2'	AH-2	0'	AH-2 1'		AH-2 2'	
<i>Απαιγsis Κ</i> εquesieu													
	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 2	22:38	Jan-12-182	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	I By SW8015 Mod Extracted: Jan-1		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		10:00
	Analyzed:	Jan-12-18 2	Jan-12-18 23:10		Jan-12-18 20:16		Jan-12-18 20:38		Jan-17-18 01:33		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

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing,

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

Version: 1.%

Hurs Roah

Kelsey Brooks Project Manager

### **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)

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

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

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)





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18-JAN-18

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

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

### Sheldon Hitchcock:

subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report. Subcontracted analyses are identified in this report with either the NELAC certification number of the this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. referenced above and identified with the XENCO Report Number(s) 573116. All results being reported under We are reporting to you the results of the analyses performed on the samples received under the project name

reported using all other available quality control measures. NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC standards. The uncertainty of measurement associated with the results of analysis reported is Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with

practices, controlled substances under regulated protocols, etc). consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged arranged with you. The samples received, and described as recorded in Report No. 573116 will be filed for least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at The validity and integrity of this report will remain intact as long as it is accompanied by this letter and

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

Respectfully,

Project Manager Kelsey Brooks

**Recipient of the Prestigious Small Business Administration Award of Excellence in 1994** 

Certified and approved by numerous States and Agencies.

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



### Sample Cross Reference 573116



# COG Operating LLC, Artesia, NM

Sample Id

S 12-29-17 14:05	S 12-29-17 14:00	S 12-29-17 13:40	S 12-29-17 13:35	S 12-29-17 13:30	Matrix Date Collected Sample Depth	SRO St. Com #2H
573116-005	573116-004	573116-003	573116-002	573116-001	Lab Sample Id	

AH-1 0' AH-1 1' AH-1 2' AH-2 0' AH-2 1'

AH-2 2'

 $\mathbf{v}$ 

12-29-17 14:10

573116-006

Version: 1.%

Released to Imaging: 12/21/2022 11:08:46 AM

Page 4 of 25

Final 1.000

.



### CASE NARRATIVE

Client Name: COG Operating LLC Project Name: SRO St. Com #2H

Project ID: Work Order Number(s): 573116

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

Sample receipt non conformances and comments: None

Sample receipt non conformances and comments per sample:

None

Soil samples were not received in Terracore kits and therefore were prepared by method 5030. Batch: LBA-3038355 BTEX by EPA 8021B Analytical non conformances and comments:





### COG Operating LLC, Artesia, NM SRO St. Com #2H

Matrix:SoilDate Received:01.09.18 12.30by EPA 300Frep Collected: 12.29.17 13.30Prep Method: E300P % Moisture: Date Prep:01.11.18 14.00Cas NumberResultRLUnitsAnalysis DateFlagDil16887-00-619500248mg/kg01.11.18 16.2450SW8015 ModSummerSummerSummerSummerSummerSummerSW8015 ModSummerSummerSummerSummerSummerSW8015 ModSummerSummerSummerSummerSummerSW8015 ModSummerSummerSummerSummerSUMMERSummerSummerSummerSummerSUMMERSummerSummerSummerSummerSUMMERSummerSummerSummerSummerSUMMERSummerSummerSummerSUMMERSummerSummerSummerSUMMERSummerSummerSummerSUMMERSummerSummerSummerSUMMERSummerSummerSUMMERSummerSummerSUMMERSummerSummerSUMMERSummerSummerSUMMERSummerSummerSUMMERSummerSummerSUMMERSummerSummerSUMMERSummerSummerSUMMERSummerSummerSUMMERSummerSummerSUMMERSummerSummerSUMMERSummerSUMMERSu	Tech: ALJ	Analytical Method: TPH By SW8015 Mod	Chloride	Parameter	Seq Number: 3038226	Analyst: OJS	Tech: OJS	Analytical Method: Chloride by EPA 300	Lab Sample Id: 573116-001	Sample Id: AH-1 0'	
rix: Soil Date Received:01.09.18 12.30 e Collected: 12.29.17 13.30 Prep Method: E300P % Moisture: e Prep: 01.11.18 14.00 RL Units Analysis Date Flag 500 248 mg/kg 01.11.18 16.24 Prep Method: TX1005P % Moisture:		SW8015 Mod	16887-00-6	<b>Cas Number</b>				by EPA 300			
Date Received:01.09.18 12.30 Prep Method: E300P % Moisture: Basis: Wet Weight Units Analysis Date Flag mg/kg 01.11.18 16.24 Prep Method: TX1005P % Moisture:	1		19500	Result		Date Prep:			Date Collec	Matrix:	
Date Received:01.09.18 12.30 Prep Method: E300P % Moisture: Basis: Wet Weight Analysis Date Flag 01.11.18 16.24 Prep Method: TX1005P % Moisture:			248	RL		01.11.18 14.00			ted: 12.29.17 13.30	Soil	
Date Received:01.09.18 12.30 Prep Method: E300P % Moisture: Basis: Wet Weight Analysis Date Flag 01.11.18 16.24 Prep Method: TX1005P % Moisture:			mg/kg	Units							
<b>Dil</b>				e			% Moisture:			Date Received:01.09.18 12.30	
			50	Dil							

		01.12.18 23.10 01.12.18 23.10	70-135 70-135	%	94 94	111-85-3 84-15-1		1-Chlorooctane o-Terphenyl
	Flag	Analysis Date	Limits	Units	% Recovery	Cas Number		Surrogate
1	U	01.12.18 23.10	mg/kg		15.0	<15.0	PHC635	Total TPH
1	U	01.12.18 23.10	mg/kg		15.0	<15.0	PHCG2835	Oil Range Hydrocarbons (ORO)
1	U	01.12.18 23.10	mg/kg		15.0	<15.0	C10C28DRO	Diesel Range Organics (DRO)
-	U	01.12.18 23.10	mg/kg		15.0	<15.0	PHC610	Gasoline Range Hydrocarbons (GRO)
Dil	Flag	Analysis Date	Units		RL	Result	Cas Number	Parameter
								Seq Number: 3038390
	Wet Weight	Basis: Wet	ш	01.12.18 10.00		Date Prep:		Analyst: ALJ

.





### COG Operating LLC, Artesia, NM SRO St. Com #2H

	Matrix: Soil Date Collected: 12.29.17 13.30	
Prep Method: SW5030B % Moisture:	Date Received:01.09.18 12.30	

Date Prep:
01.12.18 16.00

Basis:

Wet Weight

Seq Number: 3038355								
Parameter	<b>Cas Number</b>	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00201	0.00201		mg/kg	01.12.18 22.38	UK	-
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 1,4-Difluorobenzene 4-Bromofluorobenzene	N 4	<b>Cas Number</b> 540-36-3 460-00-4	% Recovery 92 95	Units %	Limits 80-120 80-120	<b>Analysis Date</b> 01.12.18 22.38 01.12.18 22.38	Flag	
4-Bromofluorobenzene	4	60-00-4	95	%	80-120	01.12.18 22.38		

Tech:

Analyst:

ALJ ALJ Analytical Method: BTEX by EPA 8021B

Sample Id:

AH-1 0'

Lab Sample Id: 573116-001





### COG Operating LLC, Artesia, NM SRO St. Com #2H

Image: Part I'       Matrix:       Soil       Date Collected: 12.29.17 13.35       Date Received: 01.09.18 12.30         S       Caloride by EPA 300       Date Prep:       01.11.18 14.00       Prep Method:       E300P         S       Date Prep:       01.11.18 14.00       Basis:       Wet Weight         18226       Cas Number       Result       RL       Units       Analysis Date       Flag         18226       16887-00-6       9390       50.0       mg/kg       01.11.18 16.31       Flag         1       16887-00-6       9390       50.0       mg/kg       01.11.18 16.31       Flag         :       TPH By SW8015 Mod       Eate Prep:       01.12.18 10.00       Prep Method:       TX1005P         J       Date Prep:       01.12.18 10.00       Basis:       Wet Weight	Analyst: ALJ	Tech: ALJ	Analytical Method	Chloride	Parameter	Seq Number: 3038226	Analyst: OJS	Tech: OJS	Analytical Method	Lab Sample Id: 573116-002	Sample Id: AI	
riix: Soil e Collected: 12.29.17 13.35 e Prep: 01.11.18 14.00 RL. Units 390 50.0 mg/kg e Prep: 01.12.18 10.00	J.	J	Analytical Method: TPH By SW8015 Mod	16887-00-6	Cas Number	38226	S	S	Analytical Method: Chloride by EPA 300	73116-002	AH-1 1'	
Units mg/kg	Date Prep:			9390			Date Prep:			Date Collect	Matrix:	
	01.12.18 10.00			50.0	RL		$01.11.18\ 14.00$			ed: 12.29.17 13.35	Soil	
				mg/kg	Units							
1.09.18 12.30 300P Vet Weight Flag X1005P X1005P Vet Weight		% Moisture:						% Moisture:			Date Received:0	
30	/et Weight		X1005P		Flag		/et Weight		300P		1.09.18 12.3	
10 10				10	Dil						30	

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	C	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	L	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		





### COG Operating LLC, Artesia, NM SRO St. Com #2H

Matrix:	Soil	Date Received:01.09.18 12.30
Date Collec	Date Collected: 12.29.17 13.35	
		Prep Method: SW5030B
		% Moisture:

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

Tech:

Analyst:

ALJ ALJ Analytical Method: BTEX by EPA 8021B

Sample Id:

AH-1 1'

Lab Sample Id: 573116-002





### COG Operating LLC, Artesia, NM SRO St. Com #2H

Sample Id: AH-1 2' Lab Sample Id: 573116-003 Analytical Method: Chloride by EPA 300	Matrix: Date Colle	Matrix: Soil Date Collected: 12.29.17 13.40			09.18 12.30 )0P	
Analytical Method: Chloride by EPA 300 Tech: OJS				Prep Method: E300P % Moisture:	)0P	
Analyst: OJS	Date Prep:	: 01.11.18 14.00		Basis: We	Wet Weight	
Seq Number: 3038226						
Parameter Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
<b>Chloride</b> 16887-00-6	131	49.4	mg/kg	01.11.18 16.38		10
Analytical Method: TPH By SW8015 Mod				Prep Method: TX	TX1005P	

	Flag	<b>Analysis Date</b> 01.12.18 20.38 01.12.18 20.38	Limits 70-135 70-135	Units %	% Recovery 85 86	<b>Cas Number</b> 111-85-3 84-15-1		<b>Surrogate</b> 1-Chlorooctane o-Terphenyl
-	U	01.12.18 20.38	mg/kg		15.0	<15.0	PHC635	Total TPH
<u> </u>		01.12.18 20.38	mg/kg		15.0	<15.0	PHCG2835	Oil Range Hydrocarbons (ORO)
		01.12.18 20.38	mg/kg mg/kg		15.0	<15.0	C10C28DRO	Gasoline Kange Hydrocarbons (GKO)
Dil	Flag	Analysis Date	Units		RL	Result	Cas Number	Parameter
								Seq Number: 3038390
	Wet Weight	Basis: Wet	В	01.12.18 10.00		Date Prep:		Analyst: ALJ
		% Moisture:	%					Tech: ALJ





### COG Operating LLC, Artesia, NM SRO St. Com #2H

Matrix: Soil	Date Received:01.09.18 12.30
Date Collected: 12.29.17 13.40	
	Prep Method: SW5030B
	% Moisture:

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

Tech:

Analyst:

ALJ ALJ Analytical Method: BTEX by EPA 8021B

Sample Id:

AH-1 2'

Lab Sample Id: 573116-003





### COG Operating LLC, Artesia, NM

Chloride 16887-00-6 14400 248 mg/	Parameter Cas Number Result RL Un	ber: 3038226	Analyst: OJS Date Prep: 01.11.18 14.00	Tech: 0JS	Analytical Method: Chloride by EPA 300	Lab Sample Id: 573116-004 Date Collected: 12.29.17 14.00	Sample Id: AH-2 0' Matrix: Soil	SRO St. Com #2H
mg/kg	Units		8 14.00			7 14.00		n #2H
kg 01.11.18 16.45	ts Analysis Date Flag		Basis: Wet Weight	% Moisture:	Prep Method: E300P		Date Received:01.09.18 12.30	
50	Dil							

		01.17.18 01.33	70-135	%	92	84-15-1	~	o-Terphenyl	o-Te
		01.17.18 01.33	70-135	%	91	111-85-3	1	1-Chlorooctane	1-C1
	Flag	Analysis Date	Limits	Units	% Recovery	Cas Number		Surrogate	Suri
1	UK	01.17.18 01.33	mg/kg		15.0	<15.0	PHC635	H	Total TPH
1	UK	01.17.18 01.33	mg/kg		15.0	<15.0	PHCG2835	Oil Range Hydrocarbons (ORO)	Oil Range
1	UK	01.17.18 01.33	mg/kg		15.0	<15.0	C10C28DRO	Diesel Range Organics (DRO)	Diesel Rai
1	UK	01.17.18 01.33	mg/kg		15.0	<15.0	PHC610	Gasoline Range Hydrocarbons (GRO)	Gasoline I
Dil	Flag	Analysis Date	Units		RL	Result	Cas Number	9 F	Parameter
								Seq Number: 3038511	Seq Nui
	Wet Weight	Basis: Wet	В	01.16.18 16.00		Date Prep:		: ARM	Analyst:
		% Moisture:	%					ARM	Tech:
	005P	Prep Method: TX10	Р				15 Mod	Analytical Method: TPH By SW8015 Mod	Analytic

.





### COG Operating LLC, Artesia, NM SRO St. Com #2H

Prep Method	Matrix: Soil Date E Date Collected: 12.29.17 14.00	
Prep Method: SW5030B	Date Received:01.09.18 12.30	•

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	-
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 1,4-Difluorobenzene	(4)	Cas Number 540-36-3	% Recovery 101	Units	Limits 80-120	<b>Analysis Date</b> 01.12.18 20.42	Flag	
4-Bromofluorobenzene	4	460-00-4	101	%	80-120	01.12.18 20.42		

Tech:

Analyst:

ALJ ALJ Analytical Method: BTEX by EPA 8021B

Sample Id:

AH-2 0'

Lab Sample Id: 573116-004





### COG Operating LLC, Artesia, NM SRO St. Com #2H

Analytical Method: TPH By SW8015 Mod Tech: ALJ	Chloride	Parameter	Seq Number: 3038226	Analyst: OJS	Tech: OJS	Analytical Method: Chloride by EPA 300	Lab Sample Id: 573116-005	Sample Id: AH-2 1'
SW8015 Mod	16887-00-6	<b>Cas Number</b>				by EPA 300		
	1640	Result		Date Prep:			Date Collect	Matrix:
	49.6	RL		01.11.18 14.00			Date Collected: 12.29.17 14.05	Soil
d	mg/kg	Units						
Prep Method: % Moisture:	01.11.18 16.52	Analysis Date		Basis: We	% Moisture:	Prep Method: E300P		Date Received:01.09.18 12.30
TX1005P		Flag		Wet Weight		)0P		09.18 12.3
:	10	Dil						0

	Flag	Analysis Date 01.12.18 21.21 01.12.18 21.21	Limits 70-135 70-135	Units %	Recovery 70 70	<b>Cas Number</b> 111-85-3 84-15-1		Surrogate 1-Chlorooctane o-Terphenyl
1	U	01.12.18 21.21	mg/kg		15.0 %	<15.0	PHC635	Total TPH
1	L	01.12.18 21.21	mg/kg		15.0	<15.0	PHCG2835	Oil Range Hydrocarbons (ORO)
1	L	01.12.18 21.21	mg/kg		15.0	<15.0	C10C28DRO	Diesel Range Organics (DRO)
1	U	01.12.18 21.21	mg/kg		15.0	<15.0	PHC610	Gasoline Range Hydrocarbons (GRO)
Dil	Flag	Analysis Date	Units		RL	Result	<b>Cas Number</b>	Parameter
								Seq Number: 3038390
	Wet Weight	Basis: Wet	В	01.12.18 10.00		Date Prep:		Analyst: ALJ

.





### COG Operating LLC, Artesia, NM SRO St. Com #2H

%	Pr	Date Collected: 12.29.17 14.05	Matrix: Soil De	
% Moisture:	Prep Method: SW5030B		Date Received:01.09.18 12.30	

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	-
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 1,4-Difluorobenzene 4-Bromofluorobenzene	5 U	<b>Cas Number</b> 540-36-3 460-00-4	<b>%</b> <b>Recovery</b> 101 102	Units %	Limits 80-120 80-120	<b>Analysis Date</b> 01.12.18 21.01 01.12.18 21.01	Flag	
4-Bromofluorobenzene	4	-60-00-4	102	%	80-120	01.12.18 21.01		

Tech:

Analyst:

ALJ ALJ Lab Sample Id: 573116-005

Analytical Method: BTEX by EPA 8021B

Sample Id:

AH-2 1'





### 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	Ĩ
Chloride 16887-00-6	<b>1180</b> 49.9	mg/kg 01.11.18 16.59 10	0
Analytical Method: TPH By SW8015 Mod		Prep Method: TX1005P	

Analytical Method: TPH By SW8015 Mod	15 Mod				Р	Prep Method: TX	(1005P	
Tech: ALJ					,0	% Moisture:		
Analyst: ALJ		Date Prep:		01.12.18 10.00	H	Basis: W	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

.





### COG Operating LLC, Artesia, NM SRO St. Com #2H

Matrix: Soil	Date Received:01.09.18 12.30
Date Collected: 12.29.17 14.10	
	Prep Method: SW5030B
	% Moisture:

Date Prep:
01.12.18 16.00

Basis:

Wet Weight

Seq Number: 3038355								
Parameter	<b>Cas Number</b>	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		
/ D / D		100 00 1	100	/0	00 100	10 10 10 10 11		

4-Bromofluorobenzene

460-00-4

100

%

80-120

01.12.18 21.21

Tech:

ALJ ALJ

Analyst:

Analytical Method: BTEX by EPA 8021B

Sample Id:

AH-2 2'

Lab Sample Id: 573116-006



### Flagging Criteria



- × 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.
- Β 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.
- $\overline{}$ The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated
- Т 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.
- Г 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.
- Η 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
- Z 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
- **PQL** Practical Quantitation Limit **MDL** Method Detection Limit **SDL** Sample Detection Limit **MQL** Method Quantitation Limit LOQ Limit of Quantitation LOD Limit of Detection
- **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

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5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
1211 W Florida Ave, Midland, TX 79701	(432) 563-1800	(432) 563-1713
2525 W. Huntington Dr Suite 102, Tempe AZ 85282	(602) 437-0330	



#### QC Summary 573116

#### **COG Operating LLC** SRO St. Com #2H

Chloride	Parameter	MB Sample Id:	Seq Number:	Analytical Method:
<5.00	MB Result	7637332-1-BLK	3038226	Analytical Method: Chloride by EPA 300
250	Spike Amount			00
240	LCS Result	LCS Sam	7	
96	LCS %Rec	ple Id:	Matrix: Solid	
240	LCSD LCSD Result %Rec	LCS Sample Id: 7637332-1-BKS	Solid	
	LCSD %Rec	-BKS		
96 90-110	Limits			
0	%RPD	LCS		P
20	%RPD RPD Limit	LCSD Sample 1	Date Prep:	Prep Method:
mg/kg	it Units	e Id: 763		od: E300P
01.11.18 14:50	Analysis Date	Id: 7637332-1-BSD	01.11.18	QC
	Flag			

Chloride	Parameter	Parent Sample Id: 573117-001	Seq Number:	<b>Analytical Method:</b>
240	Parent Result	573117-001	3038226	Analytical Method: Chloride by EPA 300
250	Spike Amount			00
500 104	MS MS Result %Rec	MS San	1	
104	MS %Rec	ıple Id:	Matrix:	
508	MSD MSD Result %Rec	MS Sample Id: 573117-001 S	Soil	
107	MSD %Rec	2 I(		
107 90-110	Limits			
2	%RPD	MS		$\mathbf{P}_1$
20	%RPD RPD Limit 1	MSD Sample	Date Prep: 0	Prep Method:
mg/kg	it Units	: Id: 573	ep: 01.1	od: E300P
01.11.18 15:11	Analysis Date	Id: 573117-001 SD	01.11.18	0P

Flag

Chloride	Parameter	Parent Sample Id: 573122-002	Seq Number:	<b>Analytical Method:</b>
<4.97	Parent Result	573122-002	3038226	Analytical Method: Chloride by EPA 300
249	Spike Amount			00
237	MS Result	MS Sam	7	
95	MS %Rec	ıple Id:	Matrix: Soil	
247	MSD MSD Result %Rec	MS Sample Id: 573122-002 S	Soil	
66	MSD %Rec	12 S		
99 90-110	Limits			
4	%RPD	MS		P
20	RPD Limi	D Sample	Date Prep:	Prep Method:
mg/kg	t Units	Id: 573]	p: 01.1	od: E300P
01.11.18 17:20	Limits %RPD RPD Limit Units Analysis Date	MSD Sample Id: 573122-002 SD	01.11.18	)P
	Flag			

1-Chlorooctane o-Terphenyl	Surrogate	Gasoline Range Hydrocarbons (GRO Diesel Range Organics (DRO)	Parameter	Analytical Method: Seq Number: MB Sample Id:
		18 (GRO) DRO)		<b>TPH By SW8015 Mod</b> 3038511 7637574-1-BLK
93 100	MB %Rec	<15.0 <15.0	MB Result	V8015 M BLK
	MB Flag	1000 1000	Spike Amount	ſod
91 89	LCS %Rec	923 974	LCS Result	N LCS Sam
0 –		92 97	LCS %Rec	Matrix: nple Id:
	LCS Flag	866 925	LCSD Result	Matrix: Solid LCS Sample Id: 7637574-1-BKS
68 68	LCSD %Rec	87 93	LCSD %Rec	-BKS
	LCSD Flag	87 70-135 93 70-135	Limits	
70		5 6	%RPD	P LCS
70-135 70-135	Limits	35 35	%RPD RPD Limit	Prep Method: Date Prep: LCSD Sample Id:
% %	Units	mg/kg mg/kg	t Units	d: TX1005P p: 01.16.18 Id: 7637574-
01.16.18 22:31 01.16.18 22:31	Analysis Date	01.16.18 22:31 01.16.18 22:31	Analysis Date	d: TX1005P \$\$\$: 01.16.18 Id: 7637574-1-BSD
			Flag	

LCS/LCSD Recovery	<b>Relative Percent Difference</b>	MS/MSD Percent Recovery
	rence	overy

.



#### QC Summary 573116

#### **COG Operating LLC** SRO St. Com #2H

Analytical Method: TPH By SW8015 Mod Seq Number: 3038390 MB Sample Id: 7637443-1-BLK	: TPH By SW801 3038390 7637443-1-BLK	5 Mod		LCS San	Matrix: nple Id:	Matrix: Solid LCS Sample Id: 7637443-1-BKS		Prep Method: Date Prep:	re	nod: TX1005F rep: 01.12.18
Parameter	MB Result		Spike Amount	LCS LCS Result %Rec	LCS %Rec		Limits			Units
Gasoline Range Hydrocarbons (GRO)	0	5.0	1000	862	86		70-135			
Diesel Range Organics (DRO)	; (DRO) <15.0	5.0	1000	861	98		70-135			mg/kg 01.12.18 19:11
Surrogate	%	MB %Rec	MB Flag	% 	LCS %Rec	LCS Flag			Limits	Limits Units
1-Chlorooctane	ŷ	91		~	80				70-135	70-135 %
o-Terphenyl	2	96			95				70-135	70-135 %

	Analysis Date	Units	Limits		MSD Flag	MSD %Rec	MS Flag	MS %Rec I	N				Surrogate
	01.13.18 02:42	mg/kg	35	2	75 70-135		870	74	856	1000	120	(DRO)	Diesel Range Organics (DRO)
	01.13.18 02:42	mg/kg	35	4	81 70-135	81	831	77	796	1000	23.0	oons (GRO)	Gasoline Range Hydrocarbons (GRO
Flag	Analysis Date	Units	%RPD RPD Limit	%RPD	Limits	MSD %Rec	MSD Result	MS %Rec	MS MS Result %Rec	Spike Amount	Parent Result		Parameter
	261-001 SD	d: 5732	MSD Sample Id: 573261-001 SD	MS		)1 S	MS Sample Id: 573261-001 S	nple Id:	MS San		10	573261-001	Parent Sample Id:
	2.18	: 01.12.18	Date Prep: (				Soil	Matrix: Soil				3038390	Seq Number:
	005P	: TX1005P	Prep Method:	Р						lod	W8015 N	TPH By S	Analytical Method: TPH By SW8015 Mod

1-Chlorooctane o-Terphenyl

%Rec 85 101

Flag

%Rec

Flag

88 81

70-135 70-135

% %

01.13.18 02:42 01.13.18 02:42

Date

Diesel Range Organics (DRO)	Gasoline Range Hydrocarbons (GRO	Parameter	Parent Sample Id: 572902-00	Seq Number:	Analytical Method:
ORO)	ns (GRO)		572902-00	3038511	TPH By SW8015 Mod
<15.0	<15.0	Parent Result	1		W8015 M
866	866	Spike Amount			od
965	836	MS MS Result %Rec	MS San	1	
97	84	MS %Rec	ıple Id:	Matrix:	
964	837	MSD Result	MS Sample Id: 572902-001 S	Soil	
96	84	MSD MSD	)1 S		
96 70-135	70-135	Limits			
0	0	%RPD	MSI		Pr
35	35	%RPD RPD Limit	MSD Sample Id:	Date Prep:	Prep Method:
mg/kg	mg/kg	Units			
01.16.18 23:40	01.16.18 23:40	Analysis Date	572902-001 SD	01.16.18	TX1005P

#### Surrogate

MS %Rec 85 72

MSD %Rec 83 77

70-135 70-135

% %

01.16.18 23:40 01.16.18 23:40

MS Flag

MSD Flag

Limits

Units

Analysis

Flag

Date

Released to Imaging: 12/21/2022 11:08:46 AM

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Final 1.000

.

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

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



#### **COG Operating LLC** SRO St. Com #2H

1,4-Difluorobenzene 4-Bromofluorobenzene	Surrogate	o-Xylene	m,p-Xylenes	Ethylbenzene	Toluene	Benzene	Parameter	Analytical Method: Seq Number: MB Sample Id:
100 92	MB %Rec	< 0.00201	< 0.00402	< 0.00201	< 0.00201	< 0.00201	MB Result	BTEX by EPA 8021B 3038355 7637493-1-BLK
	MB Flag	0.100	0.201	0.100	0.100	0.100	Spike Amount	α
99 93	LCS %Rec	0.0902	0.182	0.0908	0.0928	0.0948	LCS Result	l LCS San
ÕŨ	Rec	90	91	91	93	95	LCS %Rec	Matrix: nple Id:
	LCS Flag	0.0854	0.170	0.0848	0.0864	0.0882	LCSD Result	Matrix: Solid LCS Sample Id: 7637493-1-BKS
98 95	LCSD %Rec	98	85	85	87	88	LCSD %Rec	1-BKS
	D LCSD c Flag	71-133	70-135	71-129	70-130	70-130	Limits	
~ ~		S	7	7	7	Τ	%RPI	LC
80-120 80-120	Limits	35	35	35	35	35	%RPD RPD Limit	Prep Method: Date Prep: LCSD Sample Id:
%	Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	it Units	od: SW5030) ep: 01.12.18 e Id: 7637493
01.12.18 17:29 01.12.18 17:29	Analysis Date	01.12.18 17:29	01.12.18 17:29	01.12.18 17:29	01.12.18 17:29	01.12.18 17:29	Analysis Date	d: SW5030B p: 01.12.18 Id: 7637493-1-BSD
							Flag	

### Analytical Method: BTEX by EPA 8021B

1,4-Difluorobenzene	Surrogate	o-Xylene	m,p-Xylenes	Ethylbenzene	Toluene	Benzene	Parameter	Analytical Method: Seq Number: Parent Sample Id:
		<0.00199	< 0.00398	< 0.00199	< 0.00199	< 0.00199	Parent Result	BTEX by EPA 8021E 3038355 573116-003
		0.0996	0.199	0.0996	0.0996	0.0996	Spike Amount	в
99	MS %Rec	0.0818	0.162	0.0806	0.0852	0.0868	MS Result	۱ MS Sam
9		82	81	81	98	87	MS %Rec	Matrix: Soil nple Id: 5731
	MS Flag	0.0824	0.165	0.0824	0.0865	0.0896	MSD Result	Matrix: Soil MS Sample Id: 573116-003 S
117	MSD %Rec	83	83	83	87	90	MSD %Rec	)3 S
	o MSD c Flag	71-133	70-135	83 71-129	70-130	70-130	Limits	
8	_	1	2	2	2	ω	%RPD	MS I
80-120	Limits	35	35	35	35	35	%RPD RPD Limit	Prep Method: Date Prep: SD Sample Id:
%	Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	t Units	od: SW sp: 01.1 Id: 573
01.12.18 18:09	Analysis Date	01.12.18 18:09	01.12.18 18:09	01.12.18 18:09	01.12.18 18:09	01.12.18 18:09	Analysis Date	Prep Method: SW5030B Date Prep: 01.12.18 MSD Sample Id: 573116-003 SD
							Flag	

4-Bromofluorobenzene

97

111

80-120

%

01.12.18 18:09

Released to Imaging: 12/21/2022 11:08:46 AM

Page 21 of 25

Final 1.000

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

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

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



Page 70 of 144

#### bage to t CHAIN OF CUSTODY

(Action Conternation (210-509-3334)

Phoenix, Arizona (480-355-0900)

Setting the Standard since 1990 Stafford,Texas (281-240-4200)

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CHAIN OF CUSTODY

Page 71 of 144



#### **Inter-Office Shipment**

#### IOS Number 1054383

Houston

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

-

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:

have Into

Relinquished By Shawnee Smith

Date Relinquished: 01/10/2018

Received By: -

Date Received:

Cooler Temperature: \_

Final 1.000



### Prelogin/Nonconformance Report- Sample Log-In **XENCO** Laboratories



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

Temperature Measuring device used : R8

Work Order #: 573116

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

Client: COG Operating LLC

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Hanne Into Shawnee Smith

Date: 01/10/2018

Checklist reviewed by: Kelsey Brooks Moah

Date: 01/11/2018



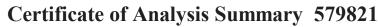
#### **Project Id:**

**Contact:** 

Released to Imaging: 12/21/2022 11:08:46 AM

**Project Location:** 

Matt Green Eddy County, NM



2M Environmental Services LLC, Odessa, TX

Project Name: COG SRO State COM #002



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

	Lab Id:	579821-	001	579821-	002	579821-	003	579821-	004	579821-0	005	
Analysis Requested	Field Id:	T-1 @	6"	T-1 @	1'	T-1 @	2'	T-1 @	3'	T-1 @	4'	
Analysis Kequesieu	Depth:											
	Matrix:	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									
	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									
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									
	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									
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									
	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									
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	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing,

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

Hely Taylor

Holly Taylor Project Manager

### **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)

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

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

Xenco-Atlanta (LELAP Lab ID #04176)





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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:

subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report. Subcontracted analyses are identified in this report with either the NELAC certification number of the this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. referenced above and identified with the XENCO Report Number(s) 579821. All results being reported under We are reporting to you the results of the analyses performed on the samples received under the project name

reported using all other available quality control measures. NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC standards. The uncertainty of measurement associated with the results of analysis reported is Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with

practices, controlled substances under regulated protocols, etc). consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged arranged with you. The samples received, and described as recorded in Report No. 579821 will be filed for least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at The validity and integrity of this report will remain intact as long as it is accompanied by this letter and

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

Respectfully,

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

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### Sample Cross Reference 579821



#### Sample Id

T-1	T-1	T-1	T-1	T-1
۲	۲	۲	۲	۲
4	ίω	2	1-	6"

### 2M Enviromental Services LLC, Odessa, TX

COG SRO State COM #002

S	S	S	S	S	Matrix
03-13-18 10:40	03-13-18 10:32	03-13-18 10:26	03-13-18 10:20	03-13-18 10:16	Date Collected
					Sample Depth
579821-005	579821-004	579821-003	579821-002	579821-001	Lab Sample Id



### 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-18Date Received:03/20/2018

Sample receipt non conformances and comments: None

Sample receipt non conformances and comments per sample:

None

Soil samples were not received in Terracore kits and therefore were prepared by method 5030. Batch: LBA-3044699 BTEX by EPA 8021B Analytical non conformances and comments:





#### 2M Enviromental Services LLC, Odessa, TX COG SRO State COM #002

Sample Id:       T-1 @ 6"       Matrix:         Lab Sample Id:       579821-001       Date Collecte         Analytical Method:       Chloride by EPA 300       Tech:         Tech:       SCM       Date Prep:         Analyst:       SCM       Date Prep:         Seq Number:       3044697       Date Prep:         Parameter       Cas Number       Result       R         Chloride       16887-00-6       286	Matrix:       Soil         Date Collected: 03.13.18 10.16         Date Prep:       03.22.18 13.30         sult       RL         286       5.00	Units mg/kg	Date Received:03.20.18 15.00 Prep Method: E300P % Moisture: Basis: Wet Weight Analysis Date Flag 03.27.18 15.16	.18 15.00 P Veight Flag Dil
16887-00-6 <b>286</b> cal Method: TPH Bv SW8015 Mod	5.00	mg/kg	03.27.18 15.16 Prep Method: TX1005P	1 SP

	Flag	<b>Analysis Date</b> 03.23.18 03.14 03.23.18 03.14	Limits 70-135 70-135	Units %	% Recovery 100 101	<b>Cas Number</b> 111-85-3 84-15-1	~ -	<b>Surrogate</b> 1-Chlorooctane o-Terphenyl
1	U	03.23.18 03.14	mg/kg		14.9	<14.9	PHC635	Total TPH
1	U	03.23.18 03.14	mg/kg		14.9	<14.9	PHCG2835	Oil Range Hydrocarbons (ORO)
1	U	03.23.18 03.14	mg/kg		14.9	<14.9	C10C28DRO	Diesel Range Organics (DRO)
1	U	03.23.18 03.14	mg/kg		14.9	<14.9	PHC610	Gasoline Range Hydrocarbons (GRO)
Dil	Flag	Analysis Date	Units		RL	Result	Cas Number	Parameter
								Seq Number: 3044591
	Wet Weight	Basis: Wet	В	03.22.18 15.00		Date Prep:		Analyst: ARM
		% Moisture:	%					Tech: ARM

.





#### 2M Enviromental Services LLC, Odessa, TX COG SRO State COM #002

Date Prep: 03.22.18 17.15		Date Collected: 03.13.18 10.16	Matrix: Soil	
Basis: Wet Weight	Prep Method: SW5030B % Moisture:		Date Received:03.20.18 15.00	

Tech:

Analyst:

ALJ ALJ Lab Sample Id: 579821-001

Analytical Method: BTEX by EPA 8021B

Sample Id:

T-1 @ 6"

Seq Number: 3044699

4-Bromofluorobenzene	Surrogate	Total BTEX	Total Xylenes	o-Xylene	m,p-Xylenes	Ethylbenzene	Toluene	Benzene	Parameter
4			1330-20-7	95-47-6	179601-23-1	100-41-4	108-88-3	71-43-2	Cas Number
460-00-4	Cas Number	< 0.00202	<0.00202	<0.00202	< 0.00403	<0.00202	<0.00202	<0.00202	Result
93	% Recovery	0.00202	0.00202	0.00202	0.00403	0.00202	0.00202	0.00202	RL
%	Units								
70-130	Limits	mg/kg	Units						
03.23.18 08.37	Analysis Date	03.23.18 08.37	03.23.18 08.37	03.23.18 08.37	03.23.18 08.37	03.23.18 08.37	03.23.18 08.37	03.23.18 08.37	Analysis Date
	Flag	U	U	U	U	U	U	U	Flag
		1	1	1	1	1	1	1	Dil

1,4-Difluorobenzene

540-36-3

86

%

70-130

03.23.18 08.37





#### 2M Enviromental Services LLC, Odessa, TX COG SRO State COM #002

Analytical Method: TPH By SW8015 Mod	Chloride	Parameter	Seq Number: 3044697	Analyst: SCM	Tech: SCM	Analytical Method: Chloride by EPA 300	Lab Sample Id: 579821-002	Sample Id: T-1 @ 1'
3015 Mod	16887-00-6	<b>Cas Number</b>				EPA 300		
	291	Result		Date Prep:			Date Colle	Matrix:
	49.7	RL		03.22.18 13.30			Date Collected: 03.13.18 10.20	Soil
	mg/kg	Units						
Prep Method: TX1005P	03.22.18 18.19	Analysis Date		Basis: Wet	% Moisture:	Prep Method: E300P		Date Received:03.20.18 15.00
)05P	10	Flag Dil		Wet Weight		ιP		).18 15.00
	0	T						

Tech:	ARM					%	% Moisture:			
Analyst:	ARM		Date Prep:		03.22.18 15.00	В	Basis:	Wet Weigh	ight	
Seq Number:	3044591									
Parameter		Cas Number	Result	RL		Units	Analysis Date	ate F	lag	Dil
Gasoline Range	Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	03.23.18 03.41	.41 1	G	1
<b>Diesel Range Organics (DRO)</b>	rganics (DRO)	C10C28DRO	61.2	15.0		mg/kg	03.23.18 03.41	.41		1
Oil Range Hydrocarbons (ORO)	ocarbons (ORO)	PHCG2835	<15.0	15.0		mg/kg	03.23.18 03.41	.41 1	G	1
<b>Total TPH</b>		PHC635	133	15.0		mg/kg	03.23.18 03.41	.41		1
Surrogate			Cas Number	% Recovery	Units	Limits	Analysis Date		Flag	
1-Chlorooctane	stane		111-85-3	91	%	70-135	03.23.18 03.4	3.41		
o-Terphenyl	yl	~	84-15-1	92	%	70-135	03.23.18 03.4	3.41		

.





#### 2M Enviromental Services LLC, Odessa, TX COG SRO State COM #002

Date Prep:			Date Collecte	Matrix:	
03.22.18 17.15			Date Collected: 03.13.18 10.20	Soil	
Basis:	% Moisture:	Prep Method: SW5030B		Date Received	
Wet Weight		SW5030B		Date Received:03.20.18 15.00	

Tech:

Analyst:

ALJ ALJ Lab Sample Id: 579821-002

Analytical Method: BTEX by EPA 8021B

Sample Id:

T-1 @ 1'

Seq Number: 3044699

1,4-Difluorobenzene	Surrogate	Total BTEX	Total Xylenes	o-Xylene	m,p-Xylenes	Ethylbenzene	Toluene	Benzene	Parameter
5			1330-20-7	95-47-6	179601-23-1	100-41-4	108-88-3	71-43-2	Cas Number
540-36-3	Cas Number	< 0.00199	< 0.00199	< 0.00199	<0.00398	< 0.00199	< 0.00199	< 0.00199	Result
86	% Recovery	0.00199	0.00199	0.00199	0.00398	0.00199	0.00199	0.00199	RL
%	Units								
70-130	Limits	mg/kg	Units						
03.23.18 12.29	Analysis Date	03.23.18 12.29	03.23.18 12.29	03.23.18 12.29	03.23.18 12.29	03.23.18 12.29	03.23.18 12.29	03.23.18 12.29	Analysis Date
	Flag	U	U	U	U	U	U	U	Flag
		1	1	1	1	1	1	-	Dil

4-Bromofluorobenzene

460-00-4

97

%

70-130

03.23.18 12.29





#### 2M Enviromental Services LLC, Odessa, TX COG SRO State COM #002

Sample Id: <b>T-1</b> @ <b>2'</b> Lab Sample Id: 579821-003	<b>T-1 @ 2'</b> 579821-003	Matrix: Date Collec	Matrix: Soil Date Collected: 03.13.18 10.26	I	Date Received	Date Received:03.20.18 15.00	C
Analytical Meth Tech: S	Analytical Method: Chloride by EPA 300 Tech: SCM				Prep Method: % Moisture:	E300P	
Analyst: SCM Seq Number: 3044697	SCM 3044697	Date Prep:	03.22.18 13.30		Basis:	Wet Weight	
Parameter	Cas Number	Result	RL	Units	Analysis Dat	ate Flag	Dil
Chloride	16887-00-6	200	49.8	mg/kg	03.22.18 18.35	35	10
Analytical Meth Tech:	Analytical Method: TPH By SW8015 Mod Tech: ARM				Prep Method: % Moisture:	TX1005P	

	03.23.18 04.09 03.23.18 04.09 Analysis Date	mg/kg mg/kg Limits 70-135	Units	15.0 15.0 % Recovery 103	<15.0 <15.0 Cas Number 1111-85-3	РНСG2835 РНС635	Oil Range Hydrocarbons (ORO) Total TPH Surrogate 1-Chlorooctane
	03.23.18 04.09 03.23.18 04.09	mg/kg mg/kg		15.0 15.0	<15.0 <15.0	PHC610 C10C28DRO	Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO)
Flag Dil	Analysis Date	Units		RL	Result	Cas Number	Parameter
÷	% Moisture: Basis: Wet Weig	B; %	03.22.18 15.00		Date Prep:		Tech: ARM Analyst: ARM Seq Number: 3044591

.





#### 2M Enviromental Services LLC, Odessa, TX COG SRO State COM #002

Date Prep:			Date Collecte	Matrix:	
03.22.18 17.15			Date Collected: 03.13.18 10.26	Soil	
Basis:	% Moisture:	Prep Method: SW5030B		Date Received	
Wet Weight		SW5030B		Date Received:03.20.18 15.00	

Tech:

Analyst:

ALJ ALJ Lab Sample Id: 579821-003

Analytical Method: BTEX by EPA 8021B

Sample Id:

T-1 @ 2'

Seq Number: 3044699

Surrogate 4-Bromofluorobenzene	Total BTEX	Total Xylenes	o-Xylene	m,p-Xylenes	Ethylbenzene	Toluene	Benzene	Parameter
		1330-20-7	95-47-6	179601-23-1	100-41-4	108-88-3	71-43-2	Cas Number
<b>Cas Number</b> 460-00-4	< 0.00200	< 0.00200	< 0.00200	< 0.00401	< 0.00200	< 0.00200	< 0.00200	Result
% Recovery 89	0.00200	0.00200	0.00200	0.00401	0.00200	0.00200	0.00200	RL
Units								
<b>Limits</b> 70-130	mg/kg	Units						
<b>Analysis Date</b> 03.23.18 12.49	03.23.18 12.49	03.23.18 12.49	03.23.18 12.49	03.23.18 12.49	03.23.18 12.49	03.23.18 12.49	03.23.18 12.49	Analysis Date
Flag	U	U	U	U	U	U	U	Flag
	1	1	1	1	1	1	-	Dil

1,4-Difluorobenzene

540-36-3

94

%

70-130

03.23.18 12.49





#### 2M Enviromental Services LLC, Odessa, TX COG SRO State COM #002

				52			
Sample Id: T-1 @ 3' Lab Sample Id: 579821-004	<b>2</b> ) <b>3'</b> 21-004	Matrix: Date Collec	Matrix: Soil Date Collected: 03.13.18 10.32		Date Received:03.20.18 15.00	.20.18 15.00	
Analytical Method: Chloride by EPA 300	Chloride by EPA 300				Prep Method: E3	E300P	
Tech: SCM					% Moisture:		
Analyst: SCM		Date Prep:	03.22.18 13.30		Basis: We	Wet Weight	
Seq Number: 3044697	97						
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:	Analytical Method: TPH By SW8015 Mod				Prep Method: TX	TX1005P	

		03.23.18 04.36	70-135	%	100	84-15-1	~	o-Terphenyl	
		03.23.18 04.36	70-135	%	100	111-85-3	1	1-Chlorooctane	
	Flag	Analysis Date	Limits	Units	% Recovery	Cas Number		Surrogate	
1	U	03.23.18 04.36	mg/kg		15.0	<15.0	PHC635	Total TPH	Tota
1	U	03.23.18 04.36	mg/kg		15.0	<15.0	PHCG2835	Oil Range Hydrocarbons (ORO)	Oil
1	U	03.23.18 04.36	mg/kg		15.0	<15.0	C10C28DRO	Diesel Range Organics (DRO)	Dies
1	U	03.23.18 04.36	mg/kg		15.0	<15.0	PHC610	Gasoline Range Hydrocarbons (GRO)	Gas
Dil	Flag	Analysis Date	Units		RL.	Result	Cas Number	Parameter	Par
								Seq Number: 3044591	Se
	Wet Weight	Basis: Wet	В	03.22.18 15.00		Date Prep:		Analyst: ARM	Ar
		% Moisture:	%					Tech: ARM	Te
	TX1005P	Prep Method: TX1	Р				5 Mod	Analytical Method: TPH By SW8015 Mod	Ar





#### 2M Enviromental Services LLC, Odessa, TX COG SRO State COM #002

Date Prep:			Date Collecte	Matrix:	
03.22.18 17.15			Date Collected: 03.13.18 10.32	Soil	
Basis:	% Moisture:	Prep Method: SW5030B		Date Received	
Wet Weight		SW5030B		Date Received:03.20.18 15.00	

Tech:

Analyst:

ALJ ALJ Lab Sample Id: 579821-004

Analytical Method: BTEX by EPA 8021B

Sample Id:

T-1 @ 3'

Seq Number: 3044699

Surrogate%4-Bromofluorobenzene460-00-41,4-Difluorobenzene540-36-3	Total BTEX <0.00202 0.00202	Total Xylenes 1330-20-7 <0.00202 0.00202	o-Xylene 95-47-6 <0.00202 0.00202	m,p-Xylenes 179601-23-1 <0.00404 0.00404	Ethylbenzene 100-41-4 <0.00202 0.00202	Toluene 108-88-3 <0.00202 0.00202	Benzene 71-43-2 <0.00202 0.00202	Parameter Cas Number Result RL
<b>Units Limits</b> % 70-130 % 70-130	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	Units
<ul> <li>Analysis Date</li> <li>0 03.23.18 13.08</li> <li>0 03.23.18 13.08</li> </ul>	03.23.18 13.08	03.23.18 13.08	03.23.18 13.08	03.23.18 13.08	03.23.18 13.08	03.23.18 13.08	03.23.18 13.08	Analysis Date
Flag	L	L	С	L	L	С	U	Flag
	1	1	1	1	1	1	1	Dil





#### 2M Enviromental Services LLC, Odessa, TX COG SRO State COM #002

Tech: ARM	Analytical Method:	Chloride	Parameter	Seq Number: 3044697	Analyst: SCM	Tech: SCM	Analytical Method: Chloride by EPA 300	Lab Sample Id: 579821-005	Sample Id: T-1 @ 4'	
	Analytical Method: TPH By SW8015 Mod	16887-00-6	<b>Cas Number</b>	97			Chloride by EPA 300	21-005	@ 4'	
		132	Result		Date Prep:			Date Colle	Matrix:	
		4.95	RL		03.22.18 13.30			Date Collected: 03.13.18 10.40	Soil	
		mg/kg	Units							101
% Moisture:	Prep Method: T	03.22.18 18.46	Analysis Date		Basis: V	% Moisture:	Prep Method: E		Date Received:03.20.18 15.00	
	TX1005P		Flag		Wet Weight		E300P		3.20.18 15.0	
		1	Dil						00	

	Flag	<b>Analysis Date</b> 03.23.18 05.04 03.23.18 05.04	Limits 70-135 70-135	Units %	% Recovery 92 92	<b>Cas Number</b> 111-85-3 84-15-1		<b>Surrogate</b> 1-Chlorooctane o-Terphenyl
1	U	03.23.18 05.04	mg/kg		15.0	<15.0	PHC635	Total TPH
1	U	03.23.18 05.04	mg/kg		15.0	<15.0	PHCG2835	Oil Range Hydrocarbons (ORO)
1	U	03.23.18 05.04	mg/kg		15.0	<15.0	C10C28DRO	Diesel Range Organics (DRO)
1	U	03.23.18 05.04	mg/kg		15.0	<15.0	PHC610	Gasoline Range Hydrocarbons (GRO)
Dil	Flag	Analysis Date	Units		RL	Result	Cas Number	Parameter
	Wet Weight	Basis: Wet	В	03.22.18 15.00		Date Prep:		Analyst: ARM Seq Number: 3044591



2M Enviromental Services LLC, Odessa, TX



Sample Id: T-1 @ 4'

Date Collected: 03.13.18 10.40 Matrix: COG SRO State COM #002 Soil

Date Received:03.20.18 15.00

Date Prep: 03.22.18 17.15

Tech:

Analytical Method: BTEX by EPA 8021B

Lab Sample Id: 579821-005

Analyst:

ALJ ALJ

**Basis**: % Moisture: Prep Method: SW5030B

Wet Weight

	Flag Di Flag I I I I I I I	Surrogate         %         Units         Limits         Analysis Date           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	Total BTEX <0.00198 0.00198 mg/kg 03.23.18 13.27	Total Xylenes 1330-20-7 <0.00198 0.00198 mg/kg 03.23.18 13.27	o-Xylene 95-47-6 <0.00198 0.00198 mg/kg 03.23.18 13.27	m,p-Xylenes 179601-23-1 <0.00397 0.00397 mg/kg 03.23.18 13.27	Ethylbenzene 100-41-4 <0.00198 0.00198 mg/kg 03.23.18 13.27	Toluene 108-88-3 <0.00198 0.00198 mg/kg 03.23.18 13.27	Benzene 71-43-2 <0.00198 0.00198 mg/kg 03.23.18 13.27	Parameter Cas Number Result RL Units Analysis Date
7 7 12	Flag UUUUUU	imits         Analysis Date           -130         03.23.18 13.27           -130         03.23.18 13.27				ykg 03.23.18 13.27				nits Analysis Date



### Flagging Criteria



- $\succ$ 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.
- Β laboratory contamination. A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or
- 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.
- $\overline{}$ The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- Т RPD exceeded lab control limits
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- Analyte was not detected.
- Г 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.
- Η 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.
- $\mathbf{N}$ Sample analyzed outside of recommended hold time.
- Z numerical value may not be consistent with the amount actually present in the environmental sample. A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated
- \* Surrogate recovered outside laboratory control limit.
- **BRL** Below Reporting Limit.
- MDL Method Detection Limit Reporting Limit SDL

RL

- PQL Practical Quantitation Limit MQL Method Quantitation Limit Sample Detection Limit LOQ Limit of Quantitation LOD Limit of Detection
- DL Method Detection Limit
- NC Non-Calculable
- SMP Client Sample BLK Method Blank
- MD/SD BKS/LCS Blank Spike/Laboratory Control Sample Method Duplicate/Sample Duplicate SW BKSD/LCSD Blank Spike Duplicate/Laboratory Control Sample Duplicate 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

Chloride	Parameter	MB Sample Id:	Seq Number:	Analytical Method:
<5.00	MB Result	7641290-1-BLK	3044697	Analytical Method: Chloride by EPA 300
250	Spike Amount			00
261	LCS Result	LCS Sam	7	
104	LCS %Rec	ıple Id:	Matrix:	
260	LCSD LCSD Result %Rec	LCS Sample Id: 7641290-1-BKS	Solid	
104	LCSD %Rec	-BKS		
90-110	Limits			
0	%RPD	LCS		P
20	%RPD RPD Limit	D Sample	Date Prep:	Prep Method:
mg/kg	Units	Id: 764	p: 03.2	1: E300P
03.22.18 17:37	Analysis Date	LCSD Sample Id: 7641290-1-BSD	03.22.18	0P
	Flag			

Chloride	Parameter	Parent Sample Id: 579820-001	Seq Number:	Analytical Method:
62.9	Parent Result	579820-001	3044697	Chloride by EPA 300
249	Spike Amount			0
309	MS MS Result %Rec	MS Sam	N	
66	MS %Rec	ple Id:	Matrix:	
317	MSD MSD Result %Rec	MS Sample Id: 579820-001 S	Soil	
102	MSD %Rec	51 S		
102 90-110	Limits			
ω	%RPD	MS		Р
3 20	%RPD RPD Limit	4SD Sample Id: 579820-001 SD	Date Prep:	Prep Method:
mg/kg	Units	l: 579		E300P
03.22.18 17:53	Analysis Date	820-001 SD	03.22.18	)0P

Flag

Chloride	Parameter	Analytical Method:Chloride by EPA 300Seq Number:3044697Parent Sample Id:579822-002
164	Parent Result	<b>Chloride by EPA 3</b> 3044697 579822-002
250	Spike Amount	00
390	MS Result	N MS Sam
06	S MS t %Rec	Matrix: Soil nple Id: 5798
391	MSD MSD Result %Rec	Matrix: Soil MS Sample Id: 579822-002 S
91	MSD %Rec	)2 S
91 90-110	Limits	
0	%RPD	P. MS
20	%RPD RPD Limit	Prep Method: Date Prep: MSD Sample Id:
mg/kg	Units	d: E300P p: 03.22.18 Id: 579822-0
03.22.18 19:07	Analysis Date	E300P 03.22.18 579822-002 SD
	Flag	

1-Chlorooctane	Surrogate	Diesel Range Organics (DRO)	Gasoline Range Hydrocarbons (GRO	Parameter	MB Sample Id:	Seq Number:	Analytical Method: TPH By SW8015 Mod
9	MB %Rec		ns (GRO) <15.0	MB Result	7641316-1-BLK	3044591	TPH By SW801:
86	IB MB Rec Flag	5.0 1000		IB Spike ult Amount			5 Mod
11	LCS %Rec	1110	1050	LCS Result	LCS Sam	1	
115		111	105	LCS %Rec	ıple Id:	Matrix: Solid	
	LCS Flag	1150	1090	LCSD Result	LCS Sample Id: 7641316-1-BKS	Solid	
116	LCSD %Rec	115	109 70-135	LCSD %Rec	-BKS		
	LCSD Flag	70-135	70-135	Limits			
70-135	Limits	4	4	%RPD RPD Limit	LCSD S	D	Prep
55		35 1	35 1	<b>—</b>	Sample Id	Date Prep: (	Prep Method:
%	Units	mg/kg		Units	l: 76413	03.22.18	TX1005P
03.22.18 23:38	Analysis Date	03.22.18 23:38	03.22.18 23:38	Analysis Date	LCSD Sample Id: 7641316-1-BSD	.18	105P
				Flag			

o-Terphenyl

100

109

114

70-135

%

03.22.18 23:38

.

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

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

OCD: 12/21/2022 11:07:25 AM	Received by
	OCD: 12/21/2022 11:07:25 AM

#### **2M Enviromental Services LLC** COG SRO State COM #002

Analytical Method:BTEX by EPA 8021BSeq Number:3044699MB Sample Id:7641383-1-BLK	1-Chlorooctane o-Terphenyl	Surrogate	Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO)	Parameter	Analytical Method:TPH By SW8015 ModSeq Number:3044591Parent Sample Id:579708-001
BTEX by EPA: 3044699 7641383-1-BLK			ons (GRO) DRO)		<b>TPH By SW</b> 3044591 579708-001
<b>PA 8021</b> 3LK			<15.0 <15.0	Parent Result	/8015 M
Β			866 866	Spike Amount	od
N LCS Sam	109 105	MS %Rec	1030 1080	MS MS Result %Rec	۸ MS Sam
Matrix: mple Id:	Q Q		103 108	MS %Rec	Matrix: mple Id:
Matrix: Solid LCS Sample Id: 7641383-1-BKS		MS Flag	1090 1140	MSD Result	Matrix: Soil MS Sample Id: 579708-001 S
-BKS	113 111	MSD %Rec	109 114	MSD %Rec	11 S
		o MSD c Flag	109 70-135 114 70-135	Limits	
P	7 7		5 6	%RPD	P MS
Prep Method: Date Prep: SD Sample Id:	70-135 70-135	Limits	35 35	%RPD RPD Limit	Prep Method: Date Prep: ISD Sample Id:
od: SW5030) 2p: 03.22.18 1d: 7641383	% %	Units	mg/kg mg/kg	t Units	ep Method: TX1005P Date Prep: 03.22.18 D Sample Id: 579708-0
Prep Method: SW5030B Date Prep: 03.22.18 LCSD Sample Id: 7641383-1-BSD	03.23.18 00:57 03.23.18 00:57	Analysis Date	03.23.18 00:57 03.23.18 00:57	Analysis Date	Prep Method: TX1005P Date Prep: 03.22.18 MSD Sample Id: 579708-001 SD
				Flag	

### Analy

	03.23.18 06:23 03.23.18 06:23	% %	70-130 70-130			107 92		107 97	9		101 85	1,4-Difluorobenzene 4-Bromofluorobenzene
	Analysis Date	Units	Limits		) LCSD : Flag	LCSD %Rec	LCS Flag		LCS %Rec	MB Flag	MB %Rec	Surrogate
	03.23.18 06:23	mg/kg	35	2	70-130	114	0.115	113	0.113	0.0996	<0.00199	o-Xylene
	03.23.18 06:23	mg/kg	35	0	70-130	113	0.228	114	0.227	0.199	< 0.00398	m,p-Xylenes
	03.23.18 06:23	mg/kg	35	1	70-130	111	0.112	111	0.111	0.0996	< 0.00199	Ethylbenzene
	03.23.18 06:23	mg/kg	35	2	70-130	112	0.113	111	0.111	0.0996	< 0.00199	Toluene
	03.23.18 06:23	mg/kg	35	2	70-130	114	0.115	113	0.113	0.0996	< 0.00199	Benzene
Flag	Analysis Date	it Units	%RPD RPD Limit Units	%RPI	Limits	LCSD %Rec	LCSD Result	LCS %Rec	LCS Result	Spike Amount	MB Result	Parameter
	383-1-BSD	; Id: 7641.	LCSD Sample Id: 7641383-1-BSE	LC		1-BKS	7641383-1-BKS	ıple Id:	LCS Sample Id:		7641383-1-BLK	MB Sample Id:
	2.18	Date Prep: 03.22.18	Date Pre				Solid	Matrix: Solid			3044699	Seq Number:

#### Surrogate o-Xylene Toluene Seq Number: m,p-Xylenes Ethylbenzene Benzene Parameter Parent Sample Id: **Analytical Method:** BTEX by EPA 8021B 579821-001 3044699 < 0.00201 < 0.00402 < 0.00201< 0.00201< 0.00201 Parent Result Amount Spike 0.1000.201 0.1000.1000.1000.0845 0.0829 0.0950 Result 0.0882 MS Sample Id: 0.169MS %Rec MS Matrix: %Rec MS 83 88 88 95 85 84 Flag Soil MS 579821-001 S 0.0895 0.08680.0950Result 0.0909MSD 0.177 %Rec MSD %Rec MSD 95 06 68 87 91 70-130 Limits 70-130 70-130 70-130 70-130 MSD Flag %RPD RPD Limit Units 6 5 νωο MSD Sample Id: 579821-001 SD Limits Prep Method: Date Prep: 35 35 35 35 Units mg/kg mg/kg mg/kg mg/kg mg/kg SW5030B 03.22.18 03.23.18 07:02 03.23.18 07:02 03.23.18 07:02 03.23.18 07:02 03.23.18 07:02 Analysis Date Analysis Date

Flag

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

4-Bromofluorobenzene 1,4-Difluorobenzene

107 86

103 95

70-130

% %

03.23.18 07:02

03.23.18 07:02

70-130

$$\begin{split} & [D] = 100^*(\text{C-A}) \, / \, \text{B} \\ & \text{RPD} = 200^* \, | \, (\text{C-E}) \, / \, (\text{C+E}) \, | \\ & [D] = 100^* \, (\text{C}) \, / \, [\text{B}] \end{split}$$

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

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

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f 90	RUSH TAT (Pre-Schedule) 24, 48, Standard TAT	Chlorides E 300	1		BTEX 8021B/5030 or BTEX 8260	Semivolatiles	Metals: As Ag Ba Cd Cr Pb Hg Se Volatiles	SAR / ESP / CEC	Anions (CI, SO4, Alkalinity)	Cations (Ca, Mg, Na, K)	TX 1005 Ext T	on-Potable Specify Other 418.1 8015M 801	Groundwater	Other ( Specify) DW=Drinking Water SL=Sludge	ainers	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>		H <sub>2</sub> SO <sub>4</sub>		HNO3		Total #. of Containers	Field Filtered	Time Sampled	Date Sampled	Ending Depth	Beginning Depth				LAB # (lab use only)
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**Client:** 2M Enviromental Services LLC

### **XENCO** Laboratories



Prelogin/Nonconformance Report- Sample Log-In

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

used : R8

Work Order #: 579821 Temperature M	Temperature Measuring device used :
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

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

#18 Water VOC samples have zero headspace?

N/A

Analyst:

PH Device/Lot#:

Checklist completed by: Com

the Connie Hernandez

Date: 03/21/2018

Checklist reviewed by: thely

P 5 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  $\frac{202}{202}$  has been assigned. Please refer to this case number in all future correspondence.

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

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

with this release be submitted to the OCD District II office in Artesia on or before 1/01/18. If and when the release upon the efforts it oversees. As such, the Division is requiring a workplan for the characterization of impacts associated characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification. characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all

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

within the impacted area and beyond. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both (GRO+DRO+MRO; C<sub>6</sub> thru C<sub>36</sub>), and for chloride by Method 300. This is not an exclusive list of potential contaminants. and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must

these values must be demonstrated as existing above the water table. encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of Method 300. 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C<sub>6</sub> thru C<sub>36</sub>), and for chloride by using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents As above, this is not an exclusive list of potential contaminants and can be modified. Vertical

Nominal detection limits for field and laboratory analyses must be provided

• Composite sampling is not generally allowed.

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

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

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

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

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

of remedial efforts must still be provided to the OCD before any release incident will be closed. 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

#### 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

Attachments: (C-141 Initial)SRO State Com #002H (30-015-37141) 11-30-2017.pdf	Subject: (C-141 Initial) SRO State Com #002H (30-015-37141) 11-30-201	Cc: Rebecca Haskell; Robert McNeill; Sheldon Hitchcock; Dakota Nee	To: Weaver, Crystal, EMNRD; Bratcher, Mike, EMNRD; agroves@slo.state.nm.us	Sent: Friday, December 1, 2017 2:38 PM	From: Christopher Gray <cgray@concho.com></cgray@concho.com>	
002H (30-015-37141) 11-30-2017.pdf	:002H (30-015-37141) 11-30-2017	ll; Sheldon Hitchcock; Dakota Neel	ner, Mike, EMNRD; agroves@slo.state.nm.us	PM	cho.com>	

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) <u>cgray@concho.com</u>



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### Weaver, Crystal, EMNRD

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

Ms. Weaver / Ms. Groves,

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

Estimated Recovered: Approximately: Currently ongoing

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

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

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### DELINEATION WORKPLAN

#### COG - SRO STATE COM #002H (Leak Date: 7/15/18)

### RP # 2RP-4862

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

The following information includes:

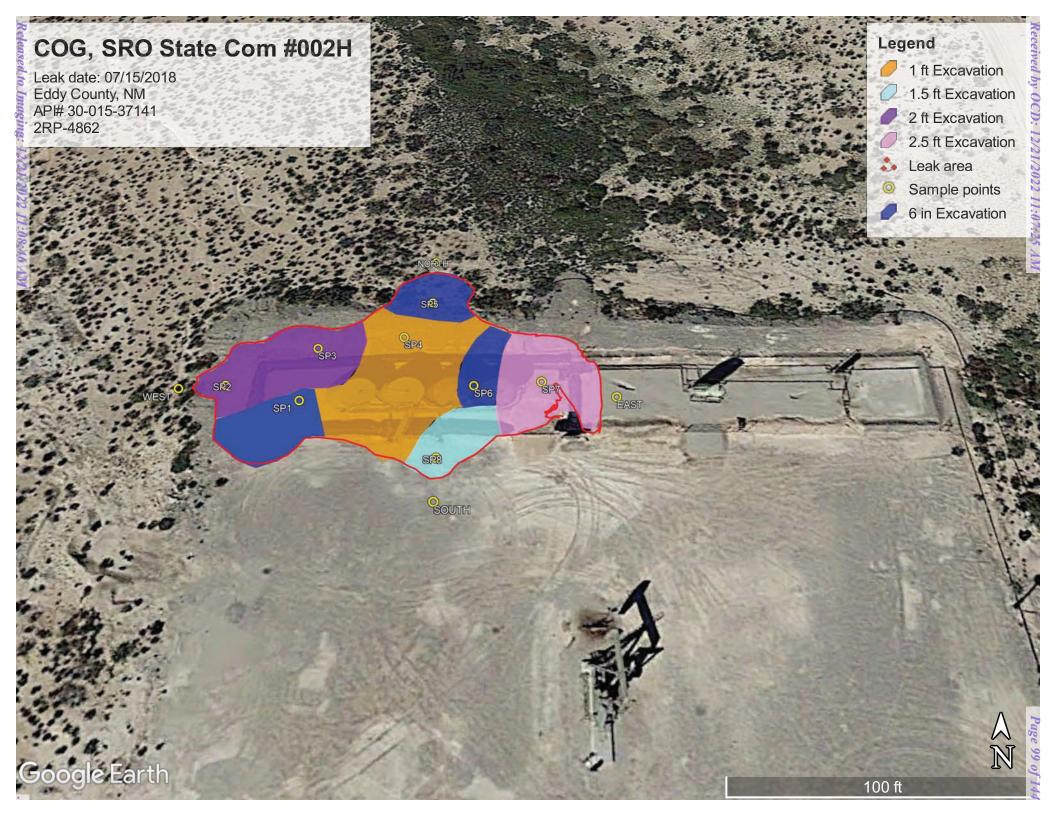
- <del>. `</del> Scaled digital site map with spill area demarcated and leak point identified along with sample point locations and areas of remediation at appropriate depths
- GPS information for sample points and sample methodology
- ωŅ Depth to groundwater information (i.e., pdf of OSE search results and/or copy of Chevron groundwater trend map).
- 4 S A copy of the initial C-141 Laboratory analysis results summary table and original laboratory analysis reports
- o, 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:

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

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

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



WORLD-WIDE ENVIRONMENTAL SPECIALISTS



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

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

### **Revegetation Plan**

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

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

Common winterfat	<u>Shrubs:</u> Fourwing saltbush	<u>Forbs:</u> Firewheel ( <i>Gaillardia</i> )	Plains bristlegrass	Green sprangletop	Little bluestem	Blue grama	Sideoats grama	<u>Grasses:</u>
VNS, Southern	Marana, Santa Rita	VNS, Southern	VNS, Southern	VNS, Southern	Pastura, Cimmaron	Lovington, Hachita	Vaughn, El Reno	
0.5	1.0	1.0	1.0	1.0	1.5	3.0	4.0	
т	D	D	D	D	т	D	Ŧ	

Total PLS/acre

13.0

### Noxious Weed Management Plan

ENVIRONMENTAL CONSULTING AND REMEDIATION SERVICES HOBBS, NEW MEXICO • WEBSITE: <u>www.bbcinternational.com</u> • HOUSTON, TEXAS

site, the NMSLO will be contacted to determine the most effective manner to eradicate it.

will also look for the presence of noxious weeds at the site as indicated on the New Mexico Noxious Weeds The site will be visited to assess the establishment of vegetative growth. Personnel performing the site visit

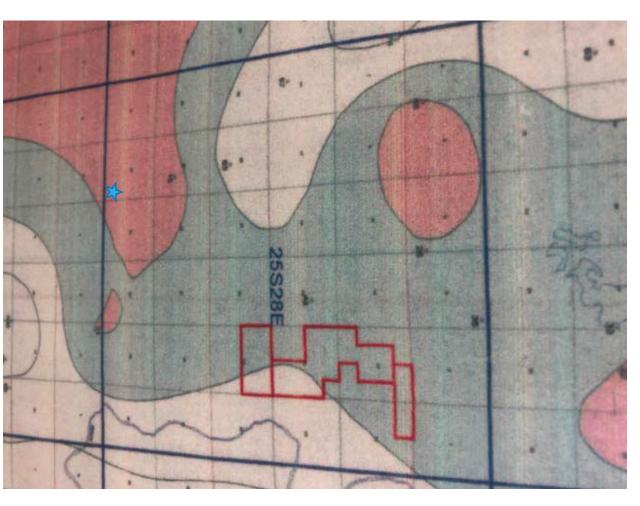
List specified on the United States Department of Agriculture website. If a noxious weed is observed at the

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-104.10203 SP8, N 32.08031 W-104.10207 NORTH, N 32.08061 W-104.10209 SOUTH, N 32.08025 W-104.10207

WEST, N 32.08041 W-104.10242

EAST, N 32.08039 W-104.10184

#### COG, SRO State Com #002H U/L P, Section 32, T25S, R28E Groundwater: <50'





### Water Column/Average Depth to Water New Mexico Office of the State Engineer

UTMNAD83 Radius Search (in meters):	Record Count: 1				<u>C 02478</u>	POD Number	(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)
arch (in meters)					CUB ED	POD Sub- Code basin Cou	(R=POD has been replaced, O=orphaned, C=the file is closed)
<u>):</u>		Maximum Depth	Minimum Depth	Average Depth to Water:	ED 2 1 05 26S 28E 583848 3549325* 🌍 906 100	POD Sub- QQQ Code basin County 64 16 4 Sec Tws Rng X Y Distance V	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) (NAD83 UTM in meters)
		epth:	epth: -	/ater:	100	Depth Depth Water Well Water Column	(In feet)

Easting (X): 584657

Northing (Y): 3549735

Radius: 1700

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data. 7/25/18 9:38 AM

\*UTM location was derived from PLSS - see Help

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WATER COLUMN/ AVERAGE

DEPTH TO WATER

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104	<u> </u>
of 144	

All Conversion Easting (X): 584657.0 ~~ Please k		Easting (X):	Latitude (Y):	Congitude (X):	X: 0	X: 0	<ul> <li>● Q64: </li> <li>✓ Q16: SE</li> </ul>
All Conversion Results are displayed as NAD 1983 UTM Zone 13         asting (X):       584657.0       mtrs       Northing (Y):       3549735.0       mtrs         ~~ Please keep screen open to copy UTM values for Reports. ~~	SUBMIT	UTM - NAD27	Degrees: 0 °	Degrees: 0 ° Minutes: 0	State Plane Coordinate System - NAD83 Y: 0 ft Zone:	State Plane Coordinate System - NAD27 Y: 0 ft Zone:	Public Land Surv       V     Q4: SE
yed as <u>NAD 1983 UTM</u> Northing (Y): 3549735.0 ppy UTM values for Report	MIT	VAD27 Northing (Y): 0	Minutes: 0	tes/Seconds Minutes: 0	te System - NAD83 <sup>Zone:</sup>	i <b>te System - NAD27</b> <sup>Zone:</sup>	<b>ey System (PLSS)</b> sec: 32 ∨ Tws: 25S ∨
<u>√ Zone 13</u> bmtrs •ts. ~~		mtrs Zone:	Seconds: 0 "	Seconds: 0	<	<	Rng: 28E 🗸

Released to Imaging: 12/21/2022 11:08:46 AM http://nmwrrs.ose.state.nm.us/nmwrrs/ConvertUTMDispatcher

#### Laboratory Analytical Results Summary SRO State Com #002H

		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	SM4500CI-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

SP2 @ 3'			Sample ID	SP6 @ SURFACE	SP6 @ 1'
8/15/18	Analyte	Method	Date	8/15/18	8/16/18
mg/kg				mg/kg	mg/kg
n/a	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
80	Chloride	SM4500CI-B		208	176
n/a	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

Chloride	SM4500CI-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
			SP3 @			
		Sample ID	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	SM4500CI-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

SP1 @ Sample ID SURFACE

8/15/18

mg/kg

n/a

n/a

n/a

n/a

n/a

4040

n/a

n/a

n/a SP2 @ Sample ID SURFACE

8/15/18

mg/kg

n/a

n/a

n/a

n/a

n/a

SP1 @ 2'

8/15/18

mg/kg

<0.050

<0.050

< 0.050

<0.150

< 0.300

48

<10.0

56.4

27.1

SP2 @ 2'

8/15/18

mg/kg

<0.050

<0.050

<0.050

<0.150

< 0.300

SP1 @ 1'

8/15/18

mg/kg

<0.050

<0.050

<0.050

<0.150

<0.300

80

10.2

2220

487

SP2 @ 1'

8/15/18

mg/kg

<0.050

<0.050

<0.050

<0.150

<0.300

			SP4 @		
		Sample ID	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	SM4500CI-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	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	SM4500CI-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

			SP8 @		
		Sample ID	•	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	SM4500CI-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

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Analyte

Benzene

Toluene

Chloride

EXT DRO

Benzene

Toluene

Analyte

GRO

DRO

Method

BTEX 8021B

BTEX 8021B

SM4500CI-B

TPH 8015M

TPH 8015M

TPH 8015M

Method

BTEX 8021B

BTEX 8021B

Ethylbenzene BTEX 8021B

Total Xylenes BTEX 8021B

Total BTEX BTEX 8021B

Ethylbenzene BTEX 8021B

Total Xylenes BTEX 8021B

Total BTEX BTEX 8021B

Date

Date

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			NORTH @	EAST @	WEST @	SOUTH @
		Sample ID	SURFACE	SURFACE	SURFACE	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	SM4500CI-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



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.

www.tceq.texas.gov/field/qa/lab\_accred\_certif.html. an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

٨

Celey D. Keene

Lab Director/Quality Manager



#### Analytical Results For:

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

Project Location:	Project Number:	Project Name:	Reported:	Received:	
cog - Malaga	07/15/18	SRO STATE COM #2H	08/24/2018	08/17/2018	

Sampling Type: Sampling Condition: Sample Received By:

Soil

08/15/2018

Tamara Oldaker Cool & Intact Sampling Date:

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

Chloride 4040 16.0 08/21/2018 ND 416 104 400	Analyte Result Reporting Limit Analyzed Method Blank BS % Recovery True Valu	Chloride, SM4500Cl-B mg/kg Analyzed By: AC
	BS	
	QC RPD Qualifier	

Sample ID: SP 1 @ 1 (H802315-02)	5-02)								
BTEX 8021B	mg/kg	'kg	Analyzed By: ms	l 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	2						
Chloride, SM4500Cl-B	mg/kg	'kg	Analyzed By: AC	I 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	'kg	Analyzed By: MS	l By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GR0 C6-C10*	10.2	10.0	08/20/2018	ND	196	98.0	200	0.403	

Surrogate: 1-Chlorooctane 71.7% 41-142

EXT DRO >C28-C36 DRO >C10-C28\*

2220 487

08/20/2018 08/20/2018

200

100

200

1.84

QM-07

10.0 10.0

ND ND

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Celey D. Keene, Lab Director/Quality Manager

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

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

BBC International, Inc.

Project Name: Project Location: Project Number: 08/24/2018 SRO STATE COM #2H 07/15/18 COG - MALAGA 08/17/2018 Fax To: Hobbs NM, 88241 P.O. Box 805 Cliff Brunson (575) 397-0397 Sampling Type: Sample Received By: Sampling Condition: Sampling Date: Tamara Oldaker Soil 08/15/2018 Cool & Intact

Reported: Received:

Sample ID: SP 1 @ 1 (H802315-02)	15-02)							
TPH 8015M	mg/kg	Analyze	Analyzed By: MS					
Analyte	Result Reporting Limit Analyzed Method Blank BS % Recovery	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Surrogate: 1-Chlorooctadecane	131 % 37.6-147	17						



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

### Analytical Results For:

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

Project Location:	Project Number:	Project Name:	Reported:	Received:
Cog - Malaga	07/15/18	SRO STATE COM #2H	08/24/2018	08/17/2018

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Tamara Oldaker Cool & Intact Soil 08/15/2018

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

	6 (e								
Analyte	Result	Reporting Limit	Analyzed	Method Blank	ß	% 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	2						
Chloride, SM4500CI-B	mg	mg/kg	Analyze	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	mg/kg	Analyze	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	
DR0 >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					

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Surrogate: 1-Chlorooctadecane

96.8 %

37.6-147

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Celey D. Keene, Lab Director/Quality Manager

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### Analytical Results For:

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**CARDINAL** Laboratories

Fax To: BBC International, Inc. Hobbs NM, 88241 P.O. Box 805 Cliff Brunson (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)	CE (H802315-04)		

Chloride	Analyte	Chloride, SM4500Cl-B
7120	Result	mg,
16.0	Reporting Limit	mg/kg
08/21/2018	Analyzed	Analyze
ND	Method Blank	Analyzed By: AC
400	BS	
100	% Recovery	
400	True Value QC	
7.69	RPD	
	Qualifier	



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

Sampling Date: Sampling Type: Sampling Condition: Sample Received By:

08/24/2018 SRO STATE COM #2H

08/17/2018

07/15/18 COG - MALAGA

> Soil Cool & Intact Tamara Oldaker

08/15/2018

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

Received: Reported: Project Name: Project Number: Project Location:

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					
	95.4 %	% 69.8-142	2						
Chloride, SM4500Cl-B	mg/kg	/kg	Analyze	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	/kg	Analyze	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	
	<10.0	10.0	08/20/2018	ND					

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Surrogate: 1-Chlorooctadecane

89.4 %

37.6-147

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Celey D. Keene, Lab Director/Quality Manager

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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

Project Location:	Project Number:	Project Name:	Reported:	Received:
Cog - Malaga	07/15/18	SRO STATE COM #2H	08/24/2018	08/17/2018

Sampling Date: Sampling Type: Sampling Condition: Sample Received By:

Soil Cool & Intact Tamara Oldaker 08/15/2018

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

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	2						
Chloride, SM4500CI-B	mg/kg	/kg	Analyze	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	mg/kg	Analyze	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			08/20/2018	ND					

### Cardinal Laboratories

Surrogate: 1-Chlorooctadecane

83.2 %

37.6-147

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

Project Location:	Project Number:	Project Name:	Reported:	Received:	
cog - Malaga	07/15/18	SRO STATE COM #2H	08/24/2018	08/17/2018	

Sampling Type:

Soil 08/15/2018

Sampling Date:

Sample Received By: Sampling Condition:

Tamara Oldaker Cool & Intact

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

Analyte Result Reporting Limit Analyzed	Chloride, SM4500Cl-B	,6w	mg/kg	Analyze	Analyzed By: AC					
	Analyte	Result	Reporting Limit	Analyzed	Method Blank BS	BS	% Recovery	True Value QC	RPD	Qualifier
e 80.0 10.0	Chloride	80.0	16.0	08/21/2018	ND	400	100	400	7.69	

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

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Project Location:	Project Number:	Project Name:	Reported:	Received:
Cog - Malaga	07/15/18	SRO STATE COM #2H	08/24/2018	08/17/2018

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Tamara Oldaker Cool & Intact Soil 08/15/2018

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

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	D 94.5 %	69.8-142	2						
Chloride, SM4500Cl-B	pm	mg/kg	Analyze	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	mg/kg	Analyze	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	
DR0 >C10-C28*	90.5	10.0	08/20/2018	ND	200	100	200	1.84	
		10.0	08/20/2018	ND					

### Cardinal Laboratories

Surrogate: 1-Chlorooctadecane

98.6 %

37.6-147

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

Project Location:	Project Number:	Project Name:	Reported:	Received:
Cog - Malaga	07/15/18	SRO STATE COM #2H	08/24/2018	08/17/2018

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Tamara Oldaker Cool & Intact Soil 08/15/2018

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

BTEX 8021B	, mg/kg	'kg	Analyze	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	2						
Chloride, SM4500CI-B	mg/kg	'kg	Analyze	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	'kg	Analyze	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							

### Cardinal Laboratories

Surrogate: 1-Chlorooctadecane

90.3 %

37.6-147

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

Project Location:	Project Number:	Project Name:	Reported:	Received:
Cog - Malaga	07/15/18	SRO STATE COM #2H	08/24/2018	08/17/2018

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Tamara Oldaker Cool & Intact Soil 08/15/2018

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

Chloride, SM4500Cl-B	mg,	mg/kg	Analyze	Analyzed By: AC					
Analyte	Result	Result Reporting Limit Analyzed	Analyzed	Method Blank BS	BS	% Recovery	% 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 6060 16.0	Analyte Result Reporting Limit	Chloride, SM4500Cl-B mg/kg
08/21/2018	Analyzed	Analyze
ND	Method Blank	Analyzed By: AC
400	BS	
100	% Recovery	
400	True Value QC	
7.69	RPD	
	Qualifier	

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

Project Location:	Project Number:	Project Name:	Reported:	Received:	
cog - Malaga	07/15/18	SRO STATE COM	08/24/2018	08/17/2018	

#2H

Sampling Date: Sampling Type: Sampling Condition: Sample Received By:

Soil Cool & Intact Tamara Oldaker 08/15/2018

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

BIEV GATE	Ext / Erri								
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					
	95.2 %	% 69.8-142	2						
Chloride, SM4500CI-B	mg/kg	/kg	Analyze	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	mg/kg	Analyze	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	
DR0 >C10-C28*	12.3	10.0	08/20/2018	ND	200	100	200	1.84	
EXT DRO >028-036		10 0	08/20/2018	ND					

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Surrogate: 1-Chlorooctadecane

94.1%

37.6-147

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

### Analytical Results For:

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

Project Location:	Project Number:	Project Name:	Reported:	Received:	
Cog - Malaga	07/15/18	SRO STATE COM #2H	08/24/2018	08/17/2018	

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Tamara Oldaker Cool & Intact Soil 08/15/2018

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

Result Reporting	Limit Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<0.050 0.050	08/21/2018	ND	1.93	96.6	2.00	1.14	
<0.050 0.050	08/21/2018	ND	1.84	91.9	2.00	1.79	
<0.050 0.050	08/21/2018	ND	1.87	93.3	2.00	1.13	
<0.150 0.150	08/21/2018	ND	5.60	93.3	6.00	1.11	
<0.300 0.300	08/21/2018	ND					
95.9 % 6	59.8-142						
mg/kg	Analyzı	ed By: AC					
Result Reporting	Limit Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>32.0</b> 16.0	08/21/2018	ND	400	100	400	7.69	
mg/kg	Analyz	ed By: MS					
Result Reporting	Limit Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<10.0 10.0	08/20/2018	ND	196	98.0	200	0.403	
<10.0 10.0	08/20/2018	ND	200	100	200	1.84	
<10.0 10.0	08/20/2018	ND					
	Reporting 0.05 0.05 0.05 0.15 0.30 0.30 0/ <b>kg</b> 16.1 Reporting Reporting 10.1	Reporting Limit         Anal           0.050         08/21           0.050         08/21           0.050         08/21           0.150         08/21           0.300         08/21           0.300         08/21           1/kg         69.8-1/42           16.0         08/21           10.0         08/21           10.0         08/22           10.0         08/22           10.0         08/22	Reporting Limit         Analyzed           0.050         08/21/2018           0.050         08/21/2018           0.050         08/21/2018           0.150         08/21/2018           0.300         08/21/2018           0.300         08/21/2018           0.300         08/21/2018 $\gamma_{\%}$ $69.8$ - $142$ $1/kg$ Analyzed $16.0$ 08/21/2018 $1/kg$ Analyzed $10.0$ 08/20/2018 $10.0$ 08/20/2018 $10.0$ 08/20/2018	Reporting LimitAnalyzedMethod Blank $0.050$ $08/21/2018$ ND $0.050$ $08/21/2018$ ND $0.050$ $08/21/2018$ ND $0.150$ $08/21/2018$ ND $0.300$ $08/21/2018$ ND $0.300$ $08/21/2018$ ND $0.300$ $08/21/2018$ ND $1/kg$ $Analyzed$ $NE$ $N/kg$ $Analyzed$ Method Blank16.0 $08/21/2018$ ND $10.0$ $08/20/2018$ ND $10.0$ $08/20/2018$ ND $10.0$ $08/20/2018$ ND $10.0$ $08/20/2018$ ND	Reporting LimitAnalyzedMethod BlankBS $0.050$ $08/21/2018$ ND $1.93$ $0.050$ $08/21/2018$ ND $1.84$ $0.050$ $08/21/2018$ ND $1.87$ $0.150$ $08/21/2018$ ND $1.87$ $0.300$ $08/21/2018$ ND $5.60$ $0.300$ $08/21/2018$ ND $5.60$ $0.300$ $08/21/2018$ ND $5.60$ $1/kg$ $Analyzed$ $Hethod$ BlankBSReporting LimitAnalyzedMethod BlankBS $10.0$ $08/20/2018$ ND $196$ $10.0$ $08/20/2018$ ND $200$ $10.0$ $08/20/2018$ ND $200$ $10.0$ $08/20/2018$ ND $200$	Reporting Limit         Analyzed         Method Blank         BS         % Recovery $0.050$ $08/21/2018$ ND $1.93$ $96.6$ $0.050$ $08/21/2018$ ND $1.83$ $91.9$ $0.050$ $08/21/2018$ ND $1.84$ $91.9$ $0.050$ $08/21/2018$ ND $1.87$ $93.3$ $0.300$ $08/21/2018$ ND $5.60$ $93.3$ $0.300$ $08/21/2018$ ND $5.60$ $93.3$ $0.300$ $08/21/2018$ ND $5.60$ $93.3$ $1/kg$ $69.8-142$ $V$ $V$ $V$ $ND$ $10.0$ $08/21/2018$ ND $V$ $V$ Reporting Limit         Analyzed         Method Blank         BS $\%$ Recovery $10.0$ $08/20/2018$ ND $196$ $98.0$ $10.0$ $08/20/2018$ ND $100$ $100$	Reporting Limit         Analyzed         Method Blank         BS         % Recovery         True Value QC           0.050         08/21/2018         ND         1.93         96.6         2.00           0.050         08/21/2018         ND         1.84         91.9         2.00           0.050         08/21/2018         ND         1.84         91.9         2.00           0.150         08/21/2018         ND         1.87         93.3         6.00           0.300         08/21/2018         ND         5.60         93.3         6.00           1.9% $69.8.1/2$ ND         5.60         93.3         6.00           1% $69.8.1/2$ ND         5.60         93.3         6.00           16.0         08/21/2018         ND         ND         10.0         400         100         400           16.0         08/21/2018         ND         400         100         400         400         400         400         400         400         400         400         400         400         400         400         400         400         400         400         400         400         400         400         400

### Cardinal Laboratories

Surrogate: 1-Chlorooctadecane

85.9 %

37.6-147

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### Analytical Results For:

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

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

Cool & Intact Tamara Oldaker 08/15/2018 Soil

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

סמווועוכ דהי סר ס (ה סטעראטב (הומעבסדס-דס)		<i>с</i> т-с							
Chloride, SM4500Cl-B	mg	mg/kg	Analyze	Analyzed By: AC					
Analyte	Result	Reporting Limit	nit Analyzed Me	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5200	16.0	08/21/2018	ND	400	100	400	7.69	



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

Sampling Date: Sampling Type: Sampling Condition: Sample Received By:

08/24/2018 SRO STATE COM #2H

08/17/2018

07/15/18 COG - MALAGA

> Soil Cool & Intact Tamara Oldaker

08/15/2018

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

Received: Reported: Project Name: Project Number: Project Location:

		1				
Reporting Limit Analyzed	Method Blank	ß	% Recovery	True Value QC	RPD	Qualifier
08/21/2018	ND	1.93	96.6	2.00	1.14	
08/21/2018	ND	1.84	91.9	2.00	1.79	
08/21/2018	ND	1.87	93.3	2.00	1.13	
08/21/2018	ND	5.60	93.3	6.00	1.11	
08/21/2018	ND					
8-142						
Analyze	ad By: AC					
nit Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
08/21/2018	ND	400	100	400	7.69	
Analyze	ed By: MS					
nit Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
08/20/2018	ND	196	98.0	200	0.403	
08/20/2018	ND	200	100	200	1.84	
08/20/2018	ND					
	08/21 08/21 08/21 08/21 08/21 08/21 Anal 08/21 08/22 08/22	08/21/2018 08/21/2018 08/21/2018 08/21/2018 08/21/2018 (142 Analyzed I Analyzed I Analyzed I Analyzed I Analyzed I Analyzed I Analyzed I 08/21/2018 08/20/2018 08/20/2018	08/21/2018 ND 08/21/2018 ND 08/21/2018 ND 08/21/2018 ND 08/21/2018 ND 08/21/2018 ND 4nalyzed By: AC Analyzed By: AC Analyzed By: MS Analyzed By: MS Analyzed By: MS 08/20/2018 ND 08/20/2018 ND	08/21/2018         ND         1.93           08/21/2018         ND         1.84           08/21/2018         ND         1.87           08/21/2018         ND         5.60           08/21/2018         Method Blank         BS           08/21/2018         ND         400           Analyzed         By: MS         400           Analyzed         ND         400           08/20/2018         ND         196           08/20/2018         ND         200           08/20/2018         ND         200	08/21/2018         ND         1.93         96.6           08/21/2018         ND         1.84         91.9           08/21/2018         ND         1.87         93.3           08/21/2018         ND         5.60         93.3           Analyzed         By: AC         V         V           Analyzed         Method Blank         BS         % Recovery           08/20/2018         ND         400         100           Analyzed         ND         196         98.0           08/20/2018         ND         100         100           08/20/2018         ND         200         100	08/21/2018         ND         1.93         96.6         2.00           08/21/2018         ND         1.84         91.9         2.00           08/21/2018         ND         1.87         93.3         2.00           08/21/2018         ND         1.87         93.3         2.00           08/21/2018         ND         5.60         93.3         6.00           08/21/2018         ND         5.60         93.3         6.00           08/21/2018         ND         5.60         93.3         6.00           08/21/2018         ND         VE         VE         VE           Analyzed Wethod Blank         BS         % Recovery         True Value QC           08/21/2018         ND         400         100         400           Analyzed Wethod Blank         BS         % Recovery         True Value QC           08/20/2018         ND         196         98.0         200           08/20/2018         ND         200         200         200           08/20/2018         ND         200         100         200

### Cardinal Laboratories

Surrogate: 1-Chlorooctadecane

94.9 %

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

Project Location:	Project Number:	Project Name:	Reported:	Received:
Cog - Malaga	07/15/18	SRO STATE COM #2H	08/24/2018	08/17/2018

Sampling Date: Sampling Type: Sampling Condition: Sample Received By:

Soil Cool & Intact Tamara Oldaker 08/15/2018

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

Analyte								
	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 %	4 % 69.8-142	2						
Chloride, SM4500Cl-B mg	mg/kg	Analyzed By: AC	d 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	mg/kg	Analyzed By: MS	d 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					

### Cardinal Laboratories

Surrogate: 1-Chlorooctadecane

90.4 %

37.6-147

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Analytical Results For:

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

BBC International, Inc.

07/15/18 08/24/2018 SRO STATE COM #2H 08/17/2018 COG - MALAGA Fax To: Hobbs NM, 88241 P.O. Box 805 Cliff Brunson (575) 397-0397 Sampling Type: Sample Received By: Sampling Condition: Sampling Date: Tamara Oldaker Soil 08/15/2018 Cool & Intact

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

Project Name:

Received: Reported:

Project Number: Project Location:

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



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

Project Location:	Project Number:	Project Name:	Reported:	Received:
Cog - Malaga	07/15/18	SRO STATE COM #2H	08/24/2018	08/17/2018

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Tamara Oldaker Cool & Intact Soil 08/16/2018

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

BTEX 8021B	mg/kg	lkg	Analyzed By: ms	d 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	2						
Chloride, SM4500CI-B	mg/kg	lkg	Analyzed By: AC	d 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	/ kg	Analyzed By: MS	d 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							

### Cardinal Laboratories

Surrogate: 1-Chlorooctadecane

86.0%

37.6-147

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## Analytical Results For:

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

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

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

Tamara Oldaker Cool & Intact Soil 08/16/2018

Sample ID: SP 7 @ SURFACE (H802315-20)	CE (H802315	5-20)							
Chloride, SM4500Cl-B	mg	mg/kg	Analyze	Analyzed By: AC					
Analyte	Result	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	



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

Project Location:	Project Number:	Project Name:	Reported:	Received:
Cog - Malaga	07/15/18	SRO STATE COM #2H	08/24/2018	08/17/2018

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Tamara Oldaker Cool & Intact Soil

08/16/2018

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

BTEX 8021B	6 U	шу/ку		muiyee ey: me					
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					
	5 95.0%	% 69.8-142	2						
Chloride, SM4500Cl-B	mg/kg	/kg	Analyze	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	mg/kg	Analyze	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	
			08/20/2018	ND					

### Cardinal Laboratories

Surrogate: 1-Chlorooctadecane

85.4 %

37.6-147

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### Analytical Results For:

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

Project Location:	Project Number:	Project Name:	Reported:	Received:	
Cog - Malaga	07/15/18	SRO STATE COM #2H	08/24/2018	08/17/2018	

Sampling Type:

08/16/2018 Soil

Sampling Date:

Sampling Condition: Sample Received By:

Tamara Oldaker

Cool & Intact

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

Chloride, SM4500Cl-B	/6w	mg/kg	Analyze	Analyzed By: AC					
Analyte	Result	Result Reporting Limit	Analyzed	Analyzed Method Blank BS	BS	% Recovery True	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,	mg/kg	Analyze	Analyzed By: AC					
Analyte	Result	Result Reporting Limit	nit Analyzed Me	thod 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/	mg/kg	Analyze	Analyzed By: AC					
Analyte	Result	Result Reporting Limit Analyzed Method Blank BS	Analyzed	Method Blank	BS	% Recovery True	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,	mg/kg	Analyze	Analyzed By: AC					
Analyte	Result	Result Reporting Limit	Analyzed	Method Blank BS	BS	% Recovery	True Value QC	RPD	Qualifie
Chloride	1300	16.0	08/21/2018	ND	432	108	400	0.00	

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### Analytical Results For:

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

Project Location:	Project Number:	Project Name:	Reported:	Received:
Cog - Malaga	07/15/18	SRO STATE COM #2H	08/24/2018	08/17/2018

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Tamara Oldaker Cool & Intact Soil 08/16/2018

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

BTEV 8031B			Analyzed By: me						
<b>b</b>	F	-			3		1	2	
							,		,
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					
	92.6 %	% 69.8-142	2						
Chloride, SM4500CI-B	mg/kg	/kg	Analyzed By: AC	d 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	/kg	Analyzed By: MS	d 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							

### Cardinal Laboratories

Surrogate: 1-Chlorooctadecane

85.1%

37.6-147

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## Analytical Results For:

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

Project Location:	Project Number:	Project Name:	Reported:	Received:	
COG - MALAGA	07/15/18	SRO STATE COM #2H	08/24/2018	08/17/2018	

Sampling Type:

Soil 08/16/2018

Sampling Date:

Sample Received By: Sampling Condition:

Tamara Oldaker Cool & Intact

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

Chloride, SM4500Cl-B	mg	mg/kg	Analyze	Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	ß	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	08/21/2018	ND	432	108	400	0.00	



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

Project Location:	Project Number:	Project Name:	Reported:	Received:
Cog - Malaga	07/15/18	SRO STATE COM #2H	08/24/2018	08/17/2018

Sampling Type: Sample Received By: Sampling Condition: Sampling Date:

Tamara Oldaker Cool & Intact Soil

08/16/2018

# Sample ID: N @ SURFACE (H802315-28)

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	91D 96.1 %	69.8-142	2						
Chloride, SM4500Cl-B	pm	mg/kg	Analyze	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	pm	mg/kg	Analyze	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					

### Cardinal Laboratories

Surrogate: 1-Chlorooctadecane

90.1%

37.6-147

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

08/24/2018 SRO STATE COM #2H

08/17/2018

Sample Received By: Sampling Condition: Sampling Type: Sampling Date:

Tamara Oldaker Soil Cool & Intact

08/16/2018

# Sample ID: E @ SURFACE (H802315-29)

Project Location: Project Number: Project Name: Reported: Received:

07/15/18 COG - MALAGA

Analyte Res	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene* <0.	<0.050	0.050	08/22/2018	ND	1.93	96.6	2.00	1.14	
Toluene* <0.	<0.050	0.050	08/22/2018	ND	1.84	91.9	2.00	1.79	
Ethylbenzene* <0.	<0.050	0.050	08/22/2018	ND	1.87	93.3	2.00	1.13	
Total Xylenes* <0.	<0.150	0.150	08/22/2018	ND	5.60	93.3	6.00	1.11	
Total BTEX <0.	<0.300	0.300	08/22/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	96.2 %	69.8-142	.5						
Chloride, SM4500CI-B	mg/kg		Analyzed By: AC	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride 24	240	16.0	08/21/2018	ND	432	108	400	0.00	
TPH 8015M	mg/kg		Analyzed By: MS	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10* <1	<10.0	10.0	08/21/2018	ND	205	103	200	0.866	
DRO >C10-C28* <1	<10.0	10.0	08/21/2018	ND	208	104	200	3.67	
EXT DRO >C28-C36 <1	<10.0	10.0	08/21/2018	ND					

### Cardinal Laboratories

Surrogate: 1-Chlorooctadecane

88.5 %

37.6-147

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\*=Accredited Analyte

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

Sampling Date: Sampling Type: Sampling Condition: Sample Received By:

08/24/2018 SRO STATE COM #2H

08/17/2018

07/15/18 COG - MALAGA

> Soil Cool & Intact Tamara Oldaker

08/16/2018

# Sample ID: W @ SURFACE (H802315-30)

Received: Reported: Project Name: Project Number: Project Location:

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	2						
Chloride, SM4500Cl-B mg/kg	9	Analyzed By: AC	d 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	9	Analyzed By: MS	d 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					

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Surrogate: 1-Chlorooctadecane

80.5 %

37.6-147

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Page 26 of 32

Celey D. Keene, Lab Director/Quality Manager

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

Project Location:	Project Number:	Project Name:	Reported:	Received:	
Cog - Malaga	07/15/18	SRO STATE COM #2H	08/24/2018	08/17/2018	

Sampling Date: Sampling Type: Sampling Condition: Sample Received By:

Soil Cool & Intact Tamara Oldaker 08/16/2018

# Sample ID: S @ SURFACE (H802315-31)

	64 / 6411								
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					
	94.0 %	% 69.8-142	N						
Chloride, SM4500CI-B	mg/kg	/kg	Analyze	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	/kg	Analyze	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	
	<10.0		08/21/2018	ND					

### Cardinal Laboratories

Surrogate: 1-Chlorooctadecane

81.7%

37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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Page 134 of 144



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

*	RPD	ND		QM-07
Compared to provide at account to monoration of GOD of bolow	Relative Percent Difference	Analyte NOT DETECTED at or above the reporting limit	recovery.	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS

\* Samples not received at proper temperature of 6°C or below.

Insufficient time to reach temperature.

1 \*\*

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

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240

	505) 393-2326 FAX (505) 393-247		BILL TO	ANALYSIS REQUEST
	BBC International, Inc.		P.O. #:	
Project Manager:			P.O. #:	
Address: P.O.	Box 805		Company:	
city: Hobbs	State: NM	zip: 88241	Attn:	
Phone #: 575-3	97-6388 Fax #: 575	-397-0397	Address:	
Project #:	Project Owner	COG	City:	J. X. I.
Project Name:	SPO State Con	~ - 2 H (7/15/18	State: Zip:	
Project Location:			Phone #:	
Sampler Name:	10		Fax #:	
FOR LAB USE ONLY	9	MATRIX	PRESERV. SAMPLING	
Lab I.D. H802315	Sample I.D.	(G)RAB OR (C)OM # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL OIL	OTHER : ACID/BASE: ICE / COOL OTHER : MIL BAU	
1	Sp/OSUR	G X	× 015 /00/	
2	1.0	GI K	X /0/6	
3	Z	GUX	1029	
4	Sple Sul	G/ X	1045	
5	1	GI A	1047	
4	2	51 2	2 11	
1	3	21 2	2 1120	
G	Sp30>UL		2	X Z Z I I I I I I I I I I I I I I I I I
id	5930 SUK	El A	7 / 150	227

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affiliates or successors arising out of or related to the performance of the performance	Date: 17.	Cardinal, regardless of whether such claim is base Received By:	d upon any of the above stated re	Phone Result: Fax Result:	Yes Yes	No	Add'l Phone #: Add'l Fax #:	
Relinquished By:	Time: 3:55 Date:	Received By:	little	REMARKS:				
	Time:	-	1 e					
Delivered By: (Circle One)	-9.7°	Sample Condition Cool Intact	CHECKED BY: (Initials)					
Sampler - UPS - Bus - Other:	Corrected	- 9.65 Yes Yes	10.43					

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

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### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240

	BBC International, Inc.		BILL TO	ANALYSIS REQUEST
	: Cliff Brunson		P.O. #:	
Address: P.O.			Company:	
City: Hobbs		Zip: 88241	Attn:	
Phone #: 575-3		5-397-0397	Address:	
Project #:	Project Own	er: (m/-	City:	
Project Name:	SR0 -2H	(7/15/18	State: Zip:	
Project Location			Phone #:	
Sampler Name:	VU		Fax #:	
FOR LAB USE ONLY		MATRIX	PRESERV. SAMPLING	
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP # CONTAINERS GROUNDWATER WASTEWATER SOIL	SLUDGE OTHER: ACID/BASE: JCE / COOL OTHER:	
11	5030 3	EI X	X 3.15 /2/2	
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14	2	615		
15	SpSC Syk	C 1 ×	1 120	
16	1 /	61 5	1 190	220
17	1121	51 1	1 1/25	
18	Spiezek	5 9	1 011 029	
19	1170 5.10	51 7	A 211 111E	
	5/140 201		1 0/6 /()/7	

Relinquished By:	De:17.16	Received By:	111.1	Phone Result: Fax Result:	Yes Yes	No	Add'l Phone #: Add'l Fax #:
1 D -	fime:	hunra C	Labor	REMARKS:			
Relinquished By:	Date:	Received By:					
UU	Time:	-					
Delivered By: (Circle One) _ 9	7:	Sample Condition Cool Intact	CHECKED BY: (Initials)				
Sampler - UPS - Bus - Other:	rected	9.65 Tes Fres	70,475				

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### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

ARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240

Company Name:	BBC International, Inc.		BILL TO	1	AN	ALYSIS REQUE	ST
Project Manager:			P.O. #:	)			
Address: P.O. I	Box 805		Company:	0			
city: Hobbs		zip: 88241	Attn:	2			
Phone #: 575-3		-397-0397	Address:	1			
Project #:	Project Owner	COG	City:	K	X		
Project Name:	5RO -2H (-	115/18)	State: Zip:	18			
Project Location:	110		Phone #:	1	12		
Sampler Name:			Fax #:	7	mai		
FOR LAB USE ONLY		MATRIX	PRESERV. SAM				
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL	SLUDGE OTHER : ACID/BASE: ICE / COOL OTHER :				
21	Spite/		1 07	IA A	12		
21 22 23	3		A I	1101	Â		
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25	Specsur	CI I	x	1130	X		
210	que	617	×	1140 ×	7 X		
25 26 27 26 27 28 29	Nesurfa	GIX	X	12/2	XX		
24	E Courter	CI X	FV	10 7	27		

Mates or successors arising out of or related to the performance of th	Date: Date:	Received By: Received By: Received By: Received By:	added upon in of the above tables	Phone Result: Fax Result: REMARKS:	Yes Yes	□ No □ No	Add'l Phone #: Add'l Fax #:	
 Delivered By: (Circle One) Sampler - UPS - Bus - Other:	-9.7e Corrected	Sample Conditi Cool Intact -965, Pes Yes	(Initials)					

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

Page 137 of 144

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### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	BBC International, Inc.		BILL TO	ANALYSIS REQUEST
	Cliff Brunson		P.O. #:	
Address: P.O.	Box 805		Company:	
city: Hobbs		<b>Zip:</b> 88241	Attn:	
Phone #: 575-3	97-6388 Fax #: 575-	397-0397	Address:	
Project #:	Project Owner	COF	City:	
Project Name:	SR0-2# (-	115/18)	State: Zip:	
Project Location	1 1		Phone #:	
Sampler Name:			Fax #:	
FOR LAB USE ONLY		MATRIX	PRESERV. SAMPLING	
Lab I.D. H&02315 31	Sample I.D. South & Surke	Containers # containers groundwater wastewater soil		
analyses All claims includin	d Damages. Cardinal's liability and client's exclusive remedy for a g those for negligence and any other cause whatsoever shall be written be faible for incidental or consequential damages, including	deemed waived unless made in writing	and received by Cardinal within 30 days after completion of	the applicable

service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries,

Relinquished By:	P:17.1	Received By:	NALI	Phone Result: Fax Result:	Yes     Yes	□ No	Add'I Phone #: Add'I Fax #:
(10)	Tim: 3:55	1 aunta	Mater	REMARKS:			
Retinquished By:	Date:	Received By:					
	Time:	-					
Delivered By: (Circle One)	22:1	Sample Conditio	n CHECKED BY: (Initials)				
Sampler - UPS - Bus - Other:	1-9.4	ese Pres Pres					

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**Energy Minerals and Natural Resources** State of New Mexico

JUL 17 2018 Form C-141 Revised April 3, 2017

DISTRECT-IL-ARTESIA Apply Prate District Office in accordance with 19.15.29 NMAC.

1220 South St. Francis Dr. Santa Fe, NM 87505

Oil Conservation Division

# **Release Notification and Corrective Action**

11AB 1819 482 3109	1	OPERATOR		Initial Report	Final Report
Name of Company: COG Operating, LLC (OGRID #229137)		Contact:	Robert McNeill		
Address: 600 West Illinois Avenue, Midland, TX 79701	79701	Telephone No.	432-683-7443		
Facility Name: SRO State Com #002H		Facility Type: Tank Battery	Battery		
Surface Owner: State M	Mineral Owner: State	State	A [	API No. 30-015-3714	1141

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

Latitude 32.080101 Longitude -104.1018906 NAD83

### NATURE OF RELEASE

	V-1 C N-1	W-I D
I ype of Kelease	Volume of Kelease	Volume Recovered
Produced Water	190 bbl.	180 bbl.
Source of Release	Date and Hour of Occurrence	Date and Hour of Discovery
Lightning Strike	July 15, 2018 6:30pm	July 15, 2018 6:30pm
Was Immediate Notice Given?	If YES, To Whom?	
X Yes 🗌 No 🔲 Not Required	Mike Bratcher – NMOCD	
	Ryan Mann – SLO	
By Whom? DeAnn Grant	Date and Hour July 16, 2018 9:03am	1
Was a Watercourse Reached?	If YES, Volume Impacting the Watercourse.	rcourse.
TYes X No		
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.	e damaged tanks will be replaced.	
Describe Area Affected and Cleanun 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

Caller-All	Sal attached	Phone: (432) 253-4513	Date: July 16, 2018
Allached	Conditions of Approval:	agrant@concho.com	E-mail Address:
Date: NIA	Approval Date: 1/19/18 Expiration Date:	HSE Administrative Assistant	Title:
Car /	Approved by Environmental Specialist:	DeAnn Grant U	Printed Name:
DIVISION	OIL CONSERVATION DIVISION	Delinn Onemet	Signature:
ompliance with any other	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.	addition, NMOCD acceptance of a C-141 report ws and/or regulations.	or the environment. In addition, NMOCD acc federal, state, or local laws and/or regulations.

Attach Additional Sheets If Necessary

Operator/Responsible Party

The OCD has received the form C-141 you provided on  $\sqrt{\mu/\nu}/7$ ,  $20/\beta$  regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number  $\beta/\gamma/48/\beta$  has been assigned. Please refer to this case number in all future correspondence.

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

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

investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable release characterization workplan is approved, there will be an associated deadline for submittal of the resultant with this release be submitted to the OCD District 2 office in <u>Press</u> on or before  $\frac{51515}{15}$ . If and when the upon the efforts it oversees. As such, the Division is requiring a workplan for the characterization of impacts associated impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all justification. characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions

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

and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both (GRO+DRO+MRO; C<sub>6</sub> thru C<sub>36</sub>), and for chloride by Method 300. This is not an exclusive list of potential contaminants. within the impacted area and beyond. Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must

Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C6 thru C36), and for chloride by these values must be demonstrated as existing above the water table. encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents

Nominal detection limits for field and laboratory analyses must be provided

Composite sampling is not generally allowed.

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

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

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

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

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

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

### Jim Griswold

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

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From: Sent:

To: Subject:

Attachments:

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

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>

<SLHitchcock@concho.com>; Dakota Neel <DNeel2@concho.com>; Rebecca Haskell <RHaskell@concho.com>; DeAnn Cc: Weaver, Crystal, EMNRD <Crystal.Weaver@state.nm.us>; Ike Tavarez <itavarez@concho.com>; Sheldon Hitchcock 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,

DeA ww 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

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ONCHO

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## Bratcher, Mike, EMNRD

Subject:	ĉ	To:	Sent:	From:
Grant (Notification) 5 R 包 5 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Weaver, Crystal, EMNRD; Sheldon Hitchcock; Dakota Neel; Rebecca Haskell; DeAnn	Bratcher, Mike, EMNRD; Mann, Ryan	Monday, July 16, 2018 8:03 AM	DeAnn Grant <agrant@concho.com></agrant@concho.com>

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

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** 

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

Thank you,

**DeAnn Grant** HSE Administrative Assistant <u>agrant@concho.com</u> COG Operating LLC 600 W Illínois Avenue | Midland, TX 79701

Direct: 432-253-4513 | Main: 432.683.7443

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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

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

### CONDITIONS

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

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