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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company: COG Operating LLC OGRID # 229137	Contact: Robert McNeill
Address: 600 West Illinois Avenue, Midland TX 79701	Telephone No. 432-683-7443
Facility Name: Skelly Unit #743 **(2RP-4285)**	Facility Type: Flowline

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-37884

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
N	22	17S	31E	945	South	1650	West	Eddy

Latitude 32.8154373 **Longitude** -103.860733

NATURE OF RELEASE

Type of Release: Oil and Produced Water	Volume of Release: 9 bbl. Oil & 10 bbl. PW	Volume Recovered: 8 bbl. Oil & 9 bbl. PW
Source of Release: Flowline	Date and Hour of Occurrence: July 6, 2017 7:30 pm	Date and Hour of Discovery: July 6, 2017 7:30 pm
Was Immediate Notice Given? ☐ Yes ☒ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour:	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

The release occurred in the pasture and was due to a polyline splitting in an area that had previously been spliced. The line will be repaired.

Describe Area Affected and Cleanup Action Taken.*

The release was within the pasture. A vacuum truck was dispatched to remove all freestanding fluids.

Remediation activities were conducted in accordance with an NMOCD and BLM-approved *Workplan* and/or associated correspondence with respective regulatory representatives. Please reference the *Workplan* dated September 21, 2017, and *Remediation Summary and Risk-Based Closure Report* dated May 2018 for additional details regarding remediation activities.

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

Signature: Rebecca Haskell

Printed Name: Rebecca Haskell

Title: Senior HSE Coordinator

E-mail Address: rhaskell@concho.com

Date: July 7, 2017 Phone: 432-683-7443

OIL CONSERVATION DIVISION

Approved by Environmental Specialist: Brittany Hall

Approval Date: 5/2/2023 Expiration Date: n/a

Conditions of Approval:

Closure approved under the previous rules per approved workplan.

Attached ☐

* Attach Additional Sheets If Necessary

REMEDIATION SUMMARY AND

RISK-BASED SITE CLOSURE REQUEST

COG Operating, LLC
SKELLY UNIT #743
Eddy County, New Mexico
Unit Letter "I", Section 22, Township 17 South, Range 31 East
Latitude 32.81797° North, Longitude 103.85149 ° West
NMOCD Reference No. 2RP-4285

Prepared For:

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

Prepared By:

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

May 2018

Joel Lowry
Project Manager

Curt Stanley
Senior Project Manager

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APPENDICES

INTRODUCTION & BACKGROUND INFORMATION

TRC Environmental Corporation (TRC), on behalf of COG Operating, LLC (COG), has prepared this *Remediation Summary and Risk-Based Soil Closure Request* for the Site known as the Skelly Unit #743. The legal description of the Site is Unit Letter "I", Section 22, Township 17 South, Range 31 East, in Eddy County, New Mexico. The subject property is owned by the United States Department of the Interior and administered by the Bureau of Land Management (BLM). The GPS coordinates for the site are N 32.81797° W 103.85149°. Please reference Figure 1 for the Site Location Map and Figure 2 for the Site & Sample Location Map. Site photographs are provided in Appendix B.

On July 6, 2017, COG discovered a crude oil and produced water release on the Skelly Unit #743 flowline. The release was attributed to the failure of a splice on the flowline, resulting in the release of approximately nine (9) barrels (bbls) of crude oil and ten (10) bbls of produce water. During initial response activities the flowline was repaired and approximately eight (8) bbls of crude oil and nine (9) bbls of produced water were recovered utilizing vacuum trucks. The release affected an area within the pasture and portions of an adjacent caliche well pad measuring approximately six thousand (6,000 sq. ft.). On July 7, 2017, COG submitted a Release Notification and Corrective Action (Form C-141) to the NMOCD. A copy of the Form C-141 is provided in Appendix C.

A groundwater database maintained by The New Mexico Office of the State Engineer (NMOSE) did not identify any registered water wells in Section 22, Township 17 South, Range 31 East. A reference map utilized by the NMOCD Hobbs District Office indicated groundwater should be encountered at approximately three hundred fifty (350) feet (ft.) below ground surface (bgs). Based on the NMOCD site classification system, zero (0) points will be assigned to the subject area ranking as a result of this criterion.

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

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

The NMOCD guidelines indicate the Skelly Unit #743 Release Site has a ranking score of zero (0). Recommended Remediation Action Levels (RRAL) for a site with a ranking score of zero (0) points are as follows:

- Benzene – 10 mg/kg
- Benzene, toluene, ethylbenzene, and xylenes (BTEX) – 50 mg/kg
- Total Petroleum Hydrocarbons (TPH) – 5,000 mg/kg
- Chloride – 600 mg/kg

INITIAL INVESTIGATION AND PROPOSED REMEDIATION WORKPLAN

On August 9, 2017, an pervious environmental contractor conducted an initial investigation at the site. During the initial investigation, a series of test trenches (T1 through T3) were advanced within the affected area in an effort to delineate the vertical extent of soil impact. During the advancement of the test trenches, twenty-three (23) delineation soil samples (T1- Surf., T1- 1', T1- 2', T1- 3', T1- 4', T1- 9', T1- 14', T2- Surf., T2 - 1', T2- 2', T2- 3', T2- 4', T2- 6', T2- 8', T2- 10', T2- 12', T2- 17', T3- Surf., T3- 1', T3- 2', T3- 3', T3- 4' and T3- 7') were collected and submitted to Xenco Laboratories in Midland, Texas for analysis of chloride concentrations using Method 300/300.1. Laboratory analytical results indicated chloride concentrations were below the NMOCD RRAL in each of the submitted soil samples, with the exception of soil samples T1- 2' (1,500 mg/kg), T2- 4' (1,860 mg/kg), T2- 8' (2,610 mg/kg) and T2- 10' (1,430 mg/kg). Select soil samples (T1- Surf., T1- 1', T1- 2', T1- 3', T1- 4', T1- 14', T2- Surf., T2- 1', T2- 2', T2- 3', T2- 4', T2- 17', T3- Surf., T3- 1', T3- 2', T3- 3', T3- 4' and T3- 7') were also analyzed for BTEX and TPH concentrations in accordance with EPA Methods SW-846- 8021b and 8015 M Ext., respectively. Laboratory analytical results indicated BTEX and TPH concentrations were below the NMOCD RRAL in each of the submitted soil samples, with the exception of soil sample T1-Surf., which exhibited BTEX and TPH concentrations of 424 mg/kg and 14,700 mg/kg, respectively. Laboratory analytical results are summarized in Table 1 - Concentrations of Benzene, BTEX, TPH and Chloride in Soil. Laboratory analytical reports are provided in Appendix A.

In addition, eight (8) soil samples (North- Surf., North- 1', South- Surf., South- 1', East- Surf., East- 1', West- Surf. and West- 1') were collected from the inferred edges of the release in an effort to delineate the horizontal extent of soil impacts. The collected soil samples were submitted to the laboratory for analysis of BTEX, TPH and chloride concentrations. Laboratory analytical results indicated BTEX, TPH and chloride concentrations were below the NMOCD RRAL in each of the submitted soil samples.

On September 21, 2017, a *Workplan* was submitted to the NMOCD and BLM on behalf of COG proposing the following remediation activities designed to advance the site toward an approved closure:

- Excavate impacted soil within the affected area characterized by test trench T1 to a depth of one (1) ft. bgs and transport to an NMOCD-approved disposal facility.
- Upon excavating impacted soil from within the area characterized by test trench T1, resample the area characterized by soil sample T1- 2' for concentrations of chloride.
- Excavate the affected area characterized by test trench T2 to a depth of three (3) ft. bgs and install a 40-millimeter liner on the floor of the excavation to "cap" chloride impacted soil remaining in-situ.
- Excavated soil generated from the excavation of the area characterized by test trench T2 would be field screened for concentrations of chloride to determine if it was suitable for reuse on-site.

The *Workplan* was subsequently approved with the condition that the liner be installed at four (4) ft. bgs. The BLM also requested a two (2) day notification prior to the collection of soil sample(s).

SUMMARY OF SOIL REMEDIATION ACTIVITIES

On February 28, 2018, remediation activities commenced at the release site. Impacted soil within the affected area characterized by test trench T1 was excavated to a depth of one approximately (1) ft. bgs. Excavated soil was stockpiled on-site, atop an impermeable liner pending final disposition at an NMOCD-approved disposal facility. As per the NMOCD, the affected area characterized by test trench T2 was excavated to a depth of approximately four (4) ft. bgs. The top three (3) ft. of excavated soil generated from the affected area characterized by test trench T2 was placed into a separate soil stockpile. Excavated soil generated from between three (3) and four (4) ft. bgs within the area characterized by test trench T2 was placed into the soil stockpile pending disposition at an NMOCD-approved disposal facility. Excavation sidewalls were advanced until field test results suggested BTEX, TPH and chloride concentrations were below the NMOCD RRAL.

On March 6, 2018, representatives of the BLM and TRC met on-site. TRC collected seven (7) soil samples (T-2 NSW, T-2 ESW, T-2 WSW, T-2 SSW, T-2 NW @ 4', T-2 SW @ 4' and T-1 NSW) from the site and submitted the soil samples to the laboratory for analysis of chloride concentrations. Laboratory analytical results indicated chloride concentrations ranged from less than the applicable laboratory RL in soil samples T-2 ESW and T-2 SSW to 1,020 mg/kg in soil sample T-2 SE @ 4'. Chloride concentrations were below the NMOCD RRAL in each of the submitted soil samples, with the exception of T-2 SE @ 4'. Based on laboratory analytical results it was determine the approved liner would need to be extended over the affected area characterized by soil sample T-2 SE @ 4'. Soil sample T-1 NSW was also analyzed for TPH concentrations, which were determined to be less than the laboratory reporting limit.

In addition, one (1) soil sample (T-1b @ 2') was collected from the area characterized by soil sample T2-2' and submitted to the laboratory for analysis of chloride concentrations, which were determined to be less than the laboratory RL.

Finally, one (1) five-point composite stockpile characterization soil sample (SP-1) was collected from the stockpiled soil generated from excavation of the top three (3) ft. of affected area characterized by test trench T2 and submitted to the laboratory for analysis of chloride concentrations, which were determined to be 225 mg/kg. Based on laboratory analytical results, stockpiled soil represented by soil sample SP-1 was deemed suitable for use as backfill material.

On March 7 and 8, 2018, approximately three hundred eighty (380) cubic yards (cy) of impacted soil was transported to R360 Environmental Solutions, LLC for disposal.

On March 13, 2018, upon receiving laboratory analytical results from confirmation soil samples, a polyurethane liner was installed on the floor of the excavated area characterized by test trench T2 at four (4) ft. bgs in an effort to mitigate the vertical migration of chloride remaining in-situ. Upon installing the liner on the floor of the excavated area, an approximate six (6) inch (in.) layer of pad sand was placed on top of the liner and the excavation was backfilled with stockpiled soil represented by soil sample SP-1. The remaining excavated area was backfilled with locally-sourced, non-impacted "like" material. Excavation backfill was compacted and graded to match the surrounding topography.

Prior to backfilling, the final dimensions of the excavated area were approximately one hundred and fifteen (115) ft. in length, thirty (30) to fifty (50) ft. in width, and one (1) ft. to four (4) ft. in depth.

SITE CLOSURE REQUEST

Remediation activities were conducted in accordance with the NMOCD and BLM-approved Workplan and/or associated agreements. Impacted soil from within the affected area characterized by test trench T1 was excavated to a depth of approximately one (1) ft. bgs. The affected area characterized by test trench T2 was excavated to a depth of approximately four (4) ft. bgs. Upon excavating the affected area characterized by test trench T2, a polyurethane liner was installed on the floor of the excavated area in an effort to mitigate the vertical migration of chloride remaining in-situ in accordance with the NMOCD and BLM-approved workplan. Upon installing the NMOCD-approved polyurethane liner and receiving laboratory analytical results from confirmation soil samples, the excavated area was backfilled with a combination of stockpiled soil represented by soil sample SP-1 and locally-sourced, non-impacted "like" material. Based on laboratory analytical results and field activities conducted to date, TRC recommends COG provide copies of this Remediation Summary and Risk-Based Soil Closure Request to the NMOCD and BLM and request closure status to the Skelly Unit #743 Site.

LIMITATIONS

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

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

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

DISTRIBUTION

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

Copy 2: Henryetta Price
Carlsbad Field Office
United States Department of the Interior
Bureau of Land Management
620 E. Greene Street
Carlsbad, New Mexico 88220

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

Copy4: TRC Environmental Corporation
10 Desta Drive, Suite 150E
Midland, Texas 79705

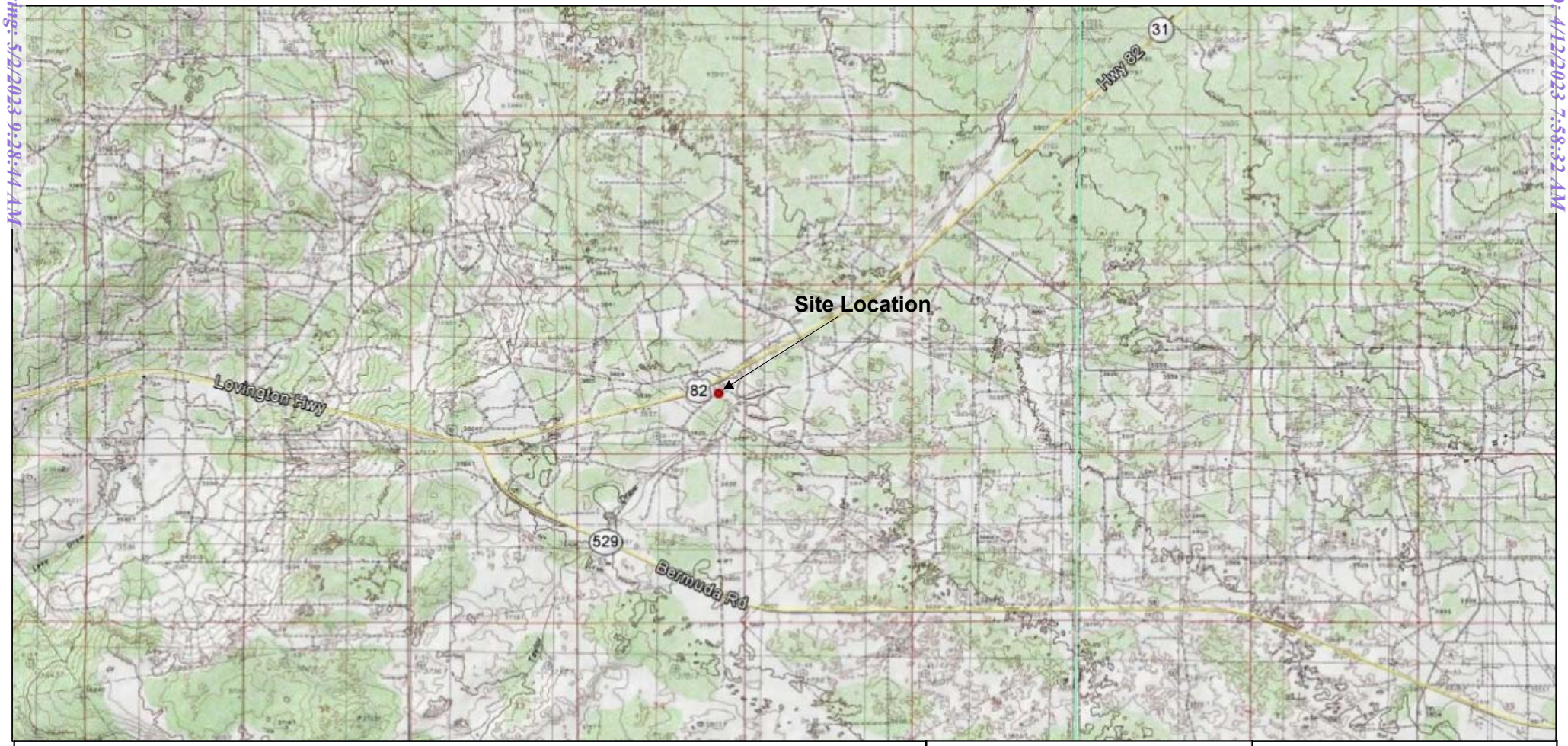


Figure 1

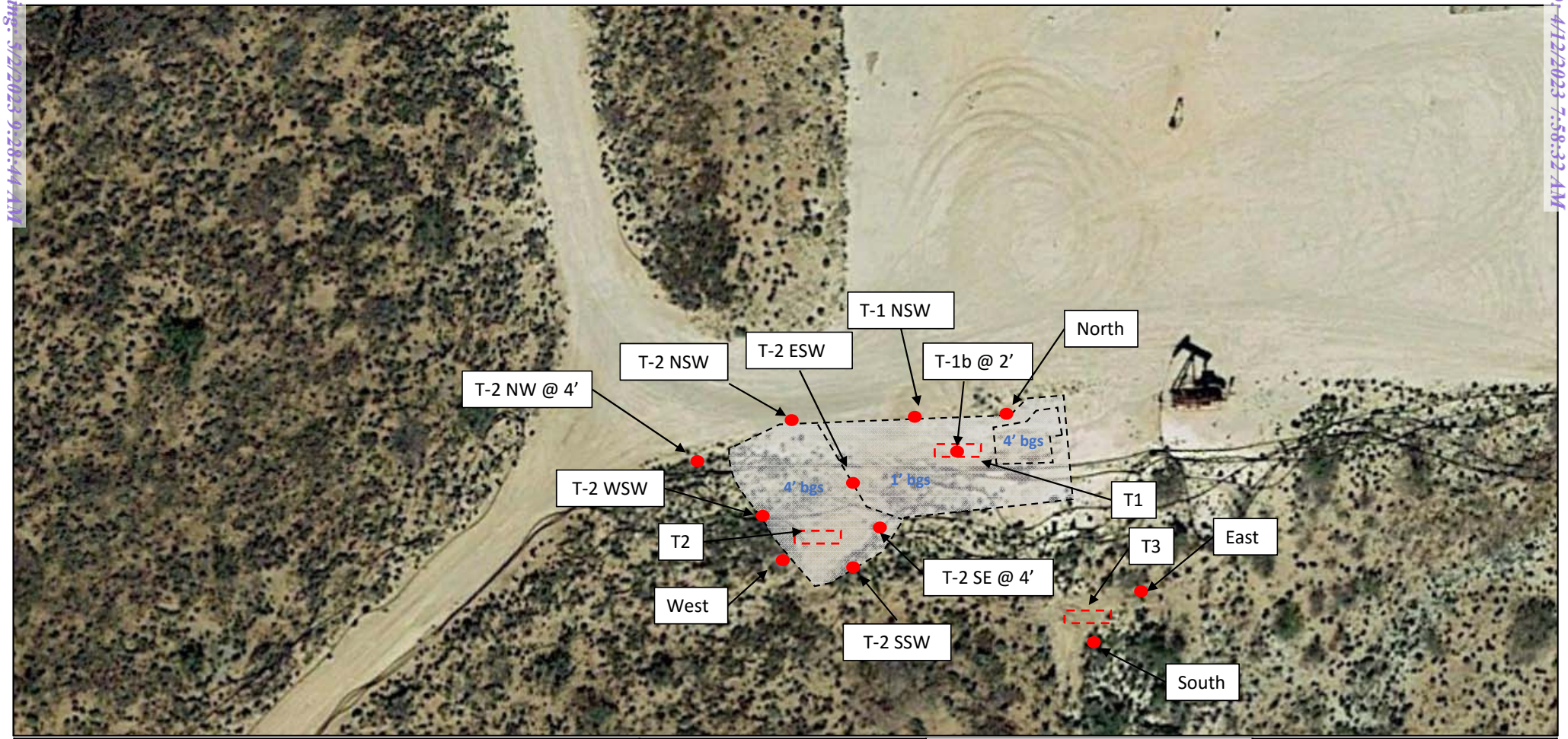
Site Location Map
COG Operating, LLC
Skelly Unit #743

Eddy County, New Mexico

Scale 1" = ~3,000'	
Drafted by: ZC	Checked by: JL
Draft: April 4, 2018	
Lat. N 32.81797 Long. W 103.85149	
UL "I", Sec. 22, T17S, R31E	
TRC Proj. No.: 296612	

TRC
Results you can rely on

2057 Commerce Drive
Midland, Texas 79703
432.520.7720



LEGEND:

- Soil Sample Location
- Test Trench
- Excavated Area

Figure 2

Site & Sample Location Map

COG Operating, LLC

Skelly Unit #743

Eddy County, New Mexico

Scale 1" = ~50'	
Drafted by: ZC	Checked by: JL
Draft: March 20, 2018	
Lat. N 32.81797 Long. W 103.85149	
UL "I", Sec. 22, T17S, R31E	
TRC Proj. No.: 296612	

TRC
Results you can rely on

2057 Commerce Drive
Midland, Texas 79703
432.520.7720

TABLE 1

CONCENTRATIONS OF BENZENE, BTEX, TPH and CHLORIDE IN SOIL

COG OPERATING, LLC
SKELLY UNIT #743
EDDY COUNTY, NEW MEXICO

All concentrations are reported in mg/kg

SAMPLE LOCATION	DEPTH	SAMPLE DATE	SOIL STATUS	METHODS: SW 846-8021b					METHOD: SW 8015M				E 300.1
				BENZENE	TOLUENE	ETHYL-BENZENE	TOTAL XYLENES	TOTAL BTEX	TPH GRO C_6-C_{10}	TPH DRO C_{10}-C_{28}	TPH ORO C_{28}-C_{35}	TOTAL TPH C_6-C_{35}	CHLORIDE
T1	Surf.	8/9/2017	Excavated	0.0330	40.0	189	195	**424**	1,390	11,600	1,690	**14,700**	442
T1	1'	8/9/2017	Excavated	<0.00356	<0.00356	<0.00356	0.00448	0.00448	<15.0	<15.0	<15.0	<15.0	62.7
T1	2'	8/9/2017	Resampled	<0.00341	<0.00341	<0.00341	<0.00341	<0.00341	<15.0	<15.0	<15.0	<15.0	**1,500**
T1	3'	8/9/2017	In-Situ	<0.00333	<0.00333	<0.00333	<0.00333	<0.00333	<15.0	37.5	<15.0	37.5	101
T1	4'	8/9/2017	In-Situ	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	22.2
T1	9'	8/9/2017	In-Situ	-	-	-	-	-	-	-	-	-	361
T1	14'	8/9/2017	In-Situ	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	93.9
T2	Surf.	8/9/2017	In-Situ	<0.00360	<0.00360	<0.00360	0.00453	0.00453	<15.0	<15.0	<15.0	<15.0	304
T2	1'	8/9/2017	In-Situ	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	41.6
T2	2'	8/9/2017	In-Situ	<0.00364	<0.00364	<0.00364	0.00578	0.00578	<15.0	<15.0	<15.0	<15.0	106
T2	3'	8/9/2017	In-Situ	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	379
T2	4'	8/9/2017	Risked	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	**1,860**
T2	6'	8/9/2017	Risked	-	-	-	-	-	-	-	-	-	653
T2	8'	8/9/2017	Risked	-	-	-	-	-	-	-	-	-	**2,610**
T2	10'	8/9/2017	Risked	-	-	-	-	-	-	-	-	-	**1,430**
T2	12'	8/9/2017	Risked	-	-	-	-	-	-	-	-	-	434
T2	17'	8/9/2017	Risked	<0.00357	<0.00357	<0.00357	<0.00357	<0.00357	<15.0	<15.0	<15.0	<15.0	273
T3	Surf.	8/9/2017	In-Situ	<0.00360	<0.00360	<0.00360	<0.00360	<0.00360	<15.0	133	56.4	190	13.9
T3	1'	8/9/2017	In-Situ	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<4.96
T3	2'	8/9/2017	In-Situ	<0.00201	<0.00201	<0.00201	0.00253	0.00253	<15.0	<15.0	<15.0	<15.0	<4.90
T3	3'	8/9/2017	In-Situ	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<4.96
T3	4'	8/9/2017	In-Situ	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<4.97
T3	7'	8/9/2017	In-Situ	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	456
North	Surf.	8/9/2017	In-Situ	<0.00351	<0.00351	<0.00351	<0.00351	<0.00351	<15.0	<15.0	<15.0	<15.0	<4.96
North	1'	8/9/2017	In-Situ	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<5.00
South	Surf.	8/9/2017	In-Situ	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<4.98
South	1'	8/9/2017	In-Situ	<0.00345	<0.00345	<0.00345	<0.00345	<0.00345	<15.0	<15.0	<15.0	<15.0	22.6
East	Surf.	8/9/2017	In-Situ	<0.00344	<0.00344	<0.00344	<0.00344	<0.00344	<15.0	<15.0	<15.0	<15.0	<4.98
East	1'	8/9/2017	In-Situ	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	28.1
West	Surf.	8/9/2017	In-Situ	<0.00330	<0.00330	<0.00330	<0.00330	<0.00330	<15.0	<15.0	<15.0	<15.0	<4.99
West	1'	8/9/2017	In-Situ	<0.00353	<0.00353	<0.00353	<0.00445	<0.00445	<15.0	<15.0	<15.0	<15.0	8.00
T-2 NSW	4'	3/6/2018	Trench	-	-	-	-	-	-	-	-	-	348
T-2 ESW	4'	3/6/2018	Trench	-	-	-	-	-	-	-	-	-	<0.858
T-2 WSW	4'	3/6/2018	Trench	-	-	-	-	-	-	-	-	-	335
T-2 SSW	4'	3/6/2018	Trench	-	-	-	-	-	-	-	-	-	<0.852
T-2 NW @ 4'	4'	3/6/2018	Trench	-	-	-	-	-	-	-	-	-	182
T-2 SE @ 4'	4'	3/6/2018	Risked	-	-	-	-	-	-	-	-	-	**1,020**
T-1 NSW	1'	3/6/2018	In-Situ	-	-	-	-	-	<7.99	<8.11	<8.11	<7.99	<0.850
T-1b @ 2'	2'	3/6/2018	Trench	-	-	-	-	-	-	-	-	-	<0.848
SP-1	N/A	3/6/2018	Backfill	-	-	-	-	-	-	-	-	-	225
NMOCD Recommended Remediation Action Level				**10**	-	-	-	**50**	-	-	-	**5,000**	**600**

Certificate of Analysis Summary 560036

COG Operating LLC, Artesia, NM

Project Name: Skelly Unit #743

Project Id:
Contact: Aaron Lieb
Project Location: Skelly Unit #743

Date Received in Lab: Fri Aug-11-17 11:45 am
Report Date: 23-AUG-17
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	560036-001		560036-002		560036-003		560036-004		560036-005		560036-006	
	Field Id:	T1-Surface		T1-1'		T1-2'		T1-3'		T1-4'		T1-9'	
	Depth:			1- ft		2- ft		3- ft		4- ft		9- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-09-17 10:30		Aug-09-17 10:30		Aug-09-17 10:30		Aug-09-17 10:30		Aug-09-17 10:30		Aug-09-17 10:30	
BTEX by EPA 8021B	***Extracted:***	Aug-21-17 08:00		Aug-16-17 09:20		Aug-16-17 09:20		Aug-16-17 09:20		Aug-15-17 10:00			
	Analyzed:	Aug-21-17 13:03		Aug-16-17 22:24		Aug-16-17 20:31		Aug-16-17 22:05		Aug-15-17 12:22			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		0.0330	0.0198	<0.00356	0.00356	<0.00341	0.00341	<0.00333	0.00333	<0.00200	0.00200		
Toluene		40.0 D	1.00	<0.00356	0.00356	<0.00341	0.00341	<0.00333	0.00333	<0.00200	0.00200		
Ethylbenzene		189 D	1.00	<0.00356	0.00356	<0.00341	0.00341	<0.00333	0.00333	<0.00200	0.00200		
m,p-Xylenes		194 D	2.00	<0.00712	0.00712	<0.00683	0.00683	<0.00667	0.00667	<0.00399	0.00399		
o-Xylene		1.37	0.0198	0.00448	0.00356	<0.00341	0.00341	<0.00333	0.00333	<0.00200	0.00200		
Total Xylenes		195	0.0198	0.00448	0.00356	<0.00341	0.00341	<0.00333	0.00333	<0.00200	0.00200		
Total BTEX		424	0.0198	0.00448	0.00356	<0.00341	0.00341	<0.00333	0.00333	<0.00200	0.00200		
Inorganic Anions by EPA 300/300.1	***Extracted:***	Aug-21-17 17:30		Aug-21-17 17:30		Aug-21-17 17:30		Aug-21-17 17:30		Aug-21-17 17:30		Aug-21-17 17:30	
	Analyzed:	Aug-22-17 03:29		Aug-22-17 03:52		Aug-22-17 04:00		Aug-22-17 04:07		Aug-22-17 04:15		Aug-22-17 04:38	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		442	4.96	62.7	5.00	1500	24.8	101	4.92	22.2	4.97	361	4.96
TPH By SW8015 Mod	***Extracted:***	Aug-14-17 17:00		Aug-14-17 17:00		Aug-14-17 17:00		Aug-14-17 17:00		Aug-14-17 17:00			
	Analyzed:	Aug-14-17 22:42		Aug-14-17 23:02		Aug-15-17 00:03		Aug-15-17 00:24		Aug-15-17 00:44			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		1390	74.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0		
Diesel Range Organics (DRO)		11600	74.9	<15.0	15.0	<15.0	15.0	37.5	15.0	<15.0	15.0		
Oil Range Hydrocarbons (ORO)		1690	74.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0		
Total TPH		14700	74.9	<15.0	15.0	<15.0	15.0	37.5	15.0	<15.0	15.0		

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Version: 1.%

Kelsey Brooks
Project Manager

Final 1.000

Certificate of Analysis Summary 560036

COG Operating LLC, Artesia, NM

Project Name: Skelly Unit #743

Project Id:
Contact: Aaron Lieb
Project Location: Skelly Unit #743

Date Received in Lab: Fri Aug-11-17 11:45 am
Report Date: 23-AUG-17
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	560036-007		560036-008		560036-009		560036-010		560036-011		560036-012	
	Field Id:	T1-14'		T2-Surface		T2-1'		T2-2'		T2-3'		T2-4'	
	Depth:	14- ft				1- ft		2- ft		3- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-09-17 10:30		Aug-09-17 11:00		Aug-09-17 11:00		Aug-09-17 11:00		Aug-09-17 11:00		Aug-09-17 11:00	
BTEX by EPA 8021B	***Extracted:***	Aug-15-17 10:00		Aug-16-17 09:20		Aug-15-17 10:00		Aug-16-17 09:20		Aug-15-17 10:00		Aug-15-17 10:00	
	Analyzed:	Aug-15-17 12:41		Aug-16-17 20:50		Aug-15-17 13:19		Aug-16-17 21:09		Aug-15-17 13:56		Aug-15-17 14:54	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00360	0.00360	<0.00202	0.00202	<0.00364	0.00364	<0.00200	0.00200	<0.00200	0.00200
Toluene		<0.00199	0.00199	<0.00360	0.00360	<0.00202	0.00202	<0.00364	0.00364	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		<0.00199	0.00199	<0.00360	0.00360	<0.00202	0.00202	<0.00364	0.00364	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		<0.00398	0.00398	<0.00719	0.00719	<0.00404	0.00404	<0.00727	0.00727	<0.00401	0.00401	<0.00399	0.00399
o-Xylene		<0.00199	0.00199	0.00453	0.00360	<0.00202	0.00202	0.00578	0.00364	<0.00200	0.00200	<0.00200	0.00200
Total Xylenes		<0.00199	0.00199	0.00453	0.00360	<0.00202	0.00202	0.00578	0.00364	<0.00200	0.00200	<0.00200	0.00200
Total BTEX		<0.00199	0.00199	0.00453	0.00360	<0.00202	0.00202	0.00578	0.00364	<0.00200	0.00200	<0.00200	0.00200
Inorganic Anions by EPA 300/300.1	***Extracted:***	Aug-21-17 17:30		Aug-21-17 17:30		Aug-21-17 17:30		Aug-21-17 17:30		Aug-21-17 17:30		Aug-21-17 17:30	
	Analyzed:	Aug-22-17 04:46		Aug-22-17 04:54		Aug-22-17 05:01		Aug-22-17 05:09		Aug-22-17 05:17		Aug-22-17 05:40	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		93.9	4.93	304	4.90	41.6	4.91	106	4.96	379	4.97	1860	24.6
TPH By SW8015 Mod	***Extracted:***	Aug-14-17 17:00		Aug-14-17 17:00		Aug-14-17 17:00		Aug-14-17 17:00		Aug-14-17 17:00		Aug-14-17 17:00	
	Analyzed:	Aug-15-17 01:05		Aug-15-17 01:26		Aug-15-17 01:48		Aug-15-17 02:08		Aug-15-17 02:29		Aug-15-17 03:32	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<14.9	14.9	<15.0	15.0	<15.0	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	<15.0	15.0
Total TPH		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

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Version: 1.%

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 560036

COG Operating LLC, Artesia, NM

Project Name: Skelly Unit #743

Project Id:
Contact: Aaron Lieb
Project Location: Skelly Unit #743

Date Received in Lab: Fri Aug-11-17 11:45 am
Report Date: 23-AUG-17
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	560036-013		560036-014		560036-015		560036-016		560036-017		560036-018	
	Field Id:	T2-6'		T2-8'		T2-10'		T2-12'		T2-17'		T3-Surface	
	Depth:	6- ft		8- ft		10- ft		12- ft		17- ft			
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-09-17 11:00		Aug-09-17 11:15		Aug-09-17 11:15		Aug-09-17 11:15		Aug-09-17 11:15		Aug-09-17 11:30	
BTEX by EPA 8021B	***Extracted:***									Aug-16-17 09:20		Aug-16-17 09:20	
	Analyzed:									Aug-16-17 21:28		Aug-16-17 21:46	
	Units/RL:									mg/kg	RL	mg/kg	RL
Benzene										<0.00357	0.00357	<0.00360	0.00360
Toluene										<0.00357	0.00357	<0.00360	0.00360
Ethylbenzene										<0.00357	0.00357	<0.00360	0.00360
m,p-Xylenes										<0.00714	0.00714	<0.00719	0.00719
o-Xylene										<0.00357	0.00357	<0.00360	0.00360
Total Xylenes										<0.00357	0.00357	<0.00360	0.00360
Total BTEX										<0.00357	0.00357	<0.00360	0.00360
Inorganic Anions by EPA 300/300.1	***Extracted:***	Aug-21-17 17:30		Aug-21-17 17:30		Aug-21-17 17:30		Aug-21-17 17:30		Aug-21-17 17:30		Aug-21-17 17:30	
	Analyzed:	Aug-22-17 05:47		Aug-22-17 06:10		Aug-22-17 06:18		Aug-22-17 06:26		Aug-22-17 06:33		Aug-22-17 06:41	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		653	4.91	2610	24.9	1430	4.96	434	4.97	273	4.90	13.9	4.97
TPH By SW8015 Mod	***Extracted:***									Aug-14-17 17:00		Aug-14-17 17:00	
	Analyzed:									Aug-15-17 03:52		Aug-15-17 04:13	
	Units/RL:									mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)										<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)										<15.0	15.0	133	15.0
Oil Range Hydrocarbons (ORO)										<15.0	15.0	56.5	15.0
Total TPH										<15.0	15.0	190	15.0

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Kelsey Brooks
Project Manager

Certificate of Analysis Summary 560036

COG Operating LLC, Artesia, NM

Project Name: Skelly Unit #743

Project Id:

Contact: Aaron Lieb

Project Location: Skelly Unit #743

Date Received in Lab: Fri Aug-11-17 11:45 am

Report Date: 23-AUG-17

Project Manager: Kelsey Brooks

Analysis Requested											
	Lab Id:	560036-019		560036-020		560036-021		560036-022		560036-023	
	Field Id:	T3-1'		T3-2'		T3-3'		T3-4'		T3-7'	
	Depth:	1- ft		2- ft		3- ft		4- ft		7- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-09-17 11:30		Aug-09-17 11:30		Aug-09-17 11:30		Aug-09-17 11:30		Aug-09-17 11:30	
BTEX by EPA 8021B	***Extracted:***	Aug-15-17 10:00		Aug-15-17 10:00		Aug-15-17 10:00		Aug-15-17 10:00		Aug-21-17 09:40	
	Analyzed:	Aug-15-17 16:09		Aug-15-17 16:28		Aug-15-17 16:47		Aug-15-17 17:06		Aug-21-17 15:53	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199
Toluene		<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199
Ethylbenzene		<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199
m,p-Xylenes		<0.00396	0.00396	<0.00402	0.00402	<0.00401	0.00401	<0.00398	0.00398	<0.00398	0.00398
o-Xylene		<0.00198	0.00198	0.00253	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199
Total Xylenes		<0.00198	0.00198	0.00253	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199
Total BTEX		<0.00198	0.00198	0.00253	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199
Inorganic Anions by EPA 300/300.1	***Extracted:***	Aug-21-17 17:30		Aug-21-17 17:30		Aug-22-17 10:30		Aug-22-17 10:30		Aug-22-17 10:30	
	Analyzed:	Aug-22-17 06:49		Aug-22-17 06:56		Aug-22-17 11:53		Aug-22-17 12:16		Aug-22-17 12:23	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<4.96	4.96	<4.90	4.90	<4.96	4.96	<4.97	4.97	456	4.98
TPH By SW8015 Mod	***Extracted:***	Aug-14-17 17:00		Aug-14-17 17:00		Aug-14-17 17:00		Aug-14-17 17:00		Aug-14-17 17:00	
	Analyzed:	Aug-15-17 04:35		Aug-15-17 04:56		Aug-15-17 05:17		Aug-15-17 07:05		Aug-15-17 07:25	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0

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Version: 1.%

Kelsey Brooks
Project Manager

Final 1.000

Analytical Report 560036

for

COG Operating LLC

Project Manager: Aaron Lieb

Skelly Unit #743

23-AUG-17

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)
Xenco-San Antonio: Texas (T104704534)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

23-AUG-17

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

Reference: XENCO Report No(s): **560036**
Skelly Unit #743
Project Address: Skelly Unit #743

Aaron Lieb:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 560036. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 560036 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kelsey Brooks
Project Manager

Sample Cross Reference 560036

COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
T1-Surface	S	08-09-17 10:30		560036-001
T1-1'	S	08-09-17 10:30	1 ft	560036-002
T1-2'	S	08-09-17 10:30	2 ft	560036-003
T1-3'	S	08-09-17 10:30	3 ft	560036-004
T1-4'	S	08-09-17 10:30	4 ft	560036-005
T1-9'	S	08-09-17 10:30	9 ft	560036-006
T1-14'	S	08-09-17 10:30	14 ft	560036-007
T2-Surface	S	08-09-17 11:00		560036-008
T2-1'	S	08-09-17 11:00	1 ft	560036-009
T2-2'	S	08-09-17 11:00	2 ft	560036-010
T2-3'	S	08-09-17 11:00	3 ft	560036-011
T2-4'	S	08-09-17 11:00	4 ft	560036-012
T2-6'	S	08-09-17 11:00	6 ft	560036-013
T2-8'	S	08-09-17 11:15	8 ft	560036-014
T2-10'	S	08-09-17 11:15	10 ft	560036-015
T2-12'	S	08-09-17 11:15	12 ft	560036-016
T2-17'	S	08-09-17 11:15	17 ft	560036-017
T3-Surface	S	08-09-17 11:30		560036-018
T3-1'	S	08-09-17 11:30	1 ft	560036-019
T3-2'	S	08-09-17 11:30	2 ft	560036-020
T3-3'	S	08-09-17 11:30	3 ft	560036-021
T3-4'	S	08-09-17 11:30	4 ft	560036-022
T3-7'	S	08-09-17 11:30	7 ft	560036-023

CASE NARRATIVE

Client Name: COG Operating LLC

Project Name: Skelly Unit #743

Project ID:
Work Order Number(s): *560036*

Report Date: *23-AUG-17*
Date Received: *08/11/2017*

Sample receipt non conformances and comments:

Sample 24 T3-8' not taken, removed from WO per Aaron Lieb by phone-- 08/14/17 KB
Sample 23 T3-7' added BEX/TPH per Aaron Lieb by phone-- 08/14/17 KB

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3025339 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3025345 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3025537 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3025625 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analytical Results 560036

COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T1-Surface**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-001	Date Collected:	08.09.17 10.30		

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	08.21.17 17.30	Basis:	Wet Weight
Seq Number:	3025640				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**442**	4.96	mg/kg	08.22.17 03.29		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.14.17 17.00	Basis:	Wet Weight
Seq Number:	3025053				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**1390**	74.9	mg/kg	08.14.17 22.42		5
Diesel Range Organics (DRO)	C10C28DRO	**11600**	74.9	mg/kg	08.14.17 22.42		5
Oil Range Hydrocarbons (ORO)	PHCG2835	**1690**	74.9	mg/kg	08.14.17 22.42		5
Total TPH	PHC635	**14700**	74.9	mg/kg	08.14.17 22.42		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	08.14.17 22.42	
o-Terphenyl	84-15-1	116	%	70-135	08.14.17 22.42	

Certificate of Analytical Results 560036

COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T1-Surface**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-001	Date Collected:	08.09.17 10.30		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.21.17 08.00	Basis:	Wet Weight
Seq Number:	3025625				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.0330**	0.0198	mg/kg	08.21.17 13.03		10
Toluene	108-88-3	**40.0**	1.00	mg/kg	08.15.17 18.02	D	100
Ethylbenzene	100-41-4	**189**	1.00	mg/kg	08.15.17 18.02	D	100
m,p-Xylenes	179601-23-1	**194**	2.00	mg/kg	08.15.17 18.02	D	100
o-Xylene	95-47-6	**1.37**	0.0198	mg/kg	08.21.17 13.03		10
Total Xylenes	1330-20-7	**195**	0.0198	mg/kg	08.15.17 18.02		100
Total BTEX		**424**	0.0198	mg/kg	08.15.17 18.02		100

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	80-120	08.21.17 13.03	
1,4-Difluorobenzene	540-36-3	81	%	80-120	08.21.17 13.03	

Certificate of Analytical Results 560036

COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T1-1'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-002	Date Collected:	08.09.17 10.30	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	08.21.17 17.30	Basis:	Wet Weight
Seq Number:	3025640				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**62.7**	5.00	mg/kg	08.22.17 03.52		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.14.17 17.00	Basis:	Wet Weight
Seq Number:	3025053				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.14.17 23.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.14.17 23.02	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.14.17 23.02	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.14.17 23.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	08.14.17 23.02	
o-Terphenyl	84-15-1	97	%	70-135	08.14.17 23.02	

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COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T1-1'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-002	Date Collected:	08.09.17 10.30	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.16.17 09.20	Basis:	Wet Weight
Seq Number:	3025345				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00356	0.00356	mg/kg	08.16.17 22.24	U	1
Toluene	108-88-3	<0.00356	0.00356	mg/kg	08.16.17 22.24	U	1
Ethylbenzene	100-41-4	<0.00356	0.00356	mg/kg	08.16.17 22.24	U	1
m,p-Xylenes	179601-23-1	<0.00712	0.00712	mg/kg	08.16.17 22.24	U	1
o-Xylene	95-47-6	**0.00448**	0.00356	mg/kg	08.16.17 22.24		1
Total Xylenes	1330-20-7	**0.00448**	0.00356	mg/kg	08.16.17 22.24		1
Total BTEX		**0.00448**	0.00356	mg/kg	08.16.17 22.24		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	82	%	80-120	08.16.17 22.24	
1,4-Difluorobenzene	540-36-3	103	%	80-120	08.16.17 22.24	

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COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T1-2'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-003	Date Collected:	08.09.17 10.30	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	08.21.17 17.30	Basis:	Wet Weight
Seq Number:	3025640				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1500**	24.8	mg/kg	08.22.17 04.00		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.14.17 17.00	Basis:	Wet Weight
Seq Number:	3025053				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.15.17 00.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.15.17 00.03	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.15.17 00.03	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.15.17 00.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	08.15.17 00.03	
o-Terphenyl	84-15-1	113	%	70-135	08.15.17 00.03	

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COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T1-2'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-003	Date Collected:	08.09.17 10.30	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.16.17 09.20	Basis:	Wet Weight
Seq Number:	3025345				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00341	0.00341	mg/kg	08.16.17 20.31	U	1
Toluene	108-88-3	<0.00341	0.00341	mg/kg	08.16.17 20.31	U	1
Ethylbenzene	100-41-4	<0.00341	0.00341	mg/kg	08.16.17 20.31	U	1
m,p-Xylenes	179601-23-1	<0.00683	0.00683	mg/kg	08.16.17 20.31	U	1
o-Xylene	95-47-6	<0.00341	0.00341	mg/kg	08.16.17 20.31	U	1
Total Xylenes	1330-20-7	<0.00341	0.00341	mg/kg	08.16.17 20.31	U	1
Total BTEX		<0.00341	0.00341	mg/kg	08.16.17 20.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	82	%	80-120	08.16.17 20.31	
1,4-Difluorobenzene	540-36-3	96	%	80-120	08.16.17 20.31	

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COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T1-3'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-004	Date Collected:	08.09.17 10.30	Sample Depth:	3 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	08.21.17 17.30	Basis:	Wet Weight
Seq Number:	3025640				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**101**	4.92	mg/kg	08.22.17 04.07		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.14.17 17.00	Basis:	Wet Weight
Seq Number:	3025053				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.15.17 00.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	**37.5**	15.0	mg/kg	08.15.17 00.24		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.15.17 00.24	U	1
Total TPH	PHC635	**37.5**	15.0	mg/kg	08.15.17 00.24		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	08.15.17 00.24	
o-Terphenyl	84-15-1	97	%	70-135	08.15.17 00.24	

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COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T1-3'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-004	Date Collected:	08.09.17 10.30	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.16.17 09.20	Basis:	Wet Weight
Seq Number:	3025345				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00333	0.00333	mg/kg	08.16.17 22.05	U	1
Toluene	108-88-3	<0.00333	0.00333	mg/kg	08.16.17 22.05	U	1
Ethylbenzene	100-41-4	<0.00333	0.00333	mg/kg	08.16.17 22.05	U	1
m,p-Xylenes	179601-23-1	<0.00667	0.00667	mg/kg	08.16.17 22.05	U	1
o-Xylene	95-47-6	<0.00333	0.00333	mg/kg	08.16.17 22.05	U	1
Total Xylenes	1330-20-7	<0.00333	0.00333	mg/kg	08.16.17 22.05	U	1
Total BTEX		<0.00333	0.00333	mg/kg	08.16.17 22.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	85	%	80-120	08.16.17 22.05	
1,4-Difluorobenzene	540-36-3	93	%	80-120	08.16.17 22.05	

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COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T1-4'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-005	Date Collected:	08.09.17 10.30	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	08.21.17 17.30	Basis:	Wet Weight
Seq Number:	3025640				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**22.2**	4.97	mg/kg	08.22.17 04.15		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.14.17 17.00	Basis:	Wet Weight
Seq Number:	3025053				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.15.17 00.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.15.17 00.44	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.15.17 00.44	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.15.17 00.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	08.15.17 00.44	
o-Terphenyl	84-15-1	97	%	70-135	08.15.17 00.44	

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COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T1-4'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-005	Date Collected:	08.09.17 10.30	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.15.17 10.00	Basis:	Wet Weight
Seq Number:	3025339				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.15.17 12.22	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.15.17 12.22	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.15.17 12.22	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.15.17 12.22	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.15.17 12.22	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.15.17 12.22	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.15.17 12.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	84	%	80-120	08.15.17 12.22	
1,4-Difluorobenzene	540-36-3	99	%	80-120	08.15.17 12.22	

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COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T1-9'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-006	Date Collected:	08.09.17 10.30	Sample Depth:	9 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	08.21.17 17.30	Basis:	Wet Weight
Seq Number:	3025640				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**361**	4.96	mg/kg	08.22.17 04.38		1

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COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T1-14'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-007	Date Collected:	08.09.17 10.30	Sample Depth:	14 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	08.21.17 17.30	Basis:	Wet Weight
Seq Number:	3025640				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**93.9**	4.93	mg/kg	08.22.17 04.46		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.14.17 17.00	Basis:	Wet Weight
Seq Number:	3025053				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	08.15.17 01.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	08.15.17 01.05	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	08.15.17 01.05	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	08.15.17 01.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	08.15.17 01.05	
o-Terphenyl	84-15-1	94	%	70-135	08.15.17 01.05	

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COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T1-14'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-007	Date Collected:	08.09.17 10.30	Sample Depth:	14 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.15.17 10.00	Basis:	Wet Weight
Seq Number:	3025339				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.15.17 12.41	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.15.17 12.41	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.15.17 12.41	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.15.17 12.41	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.15.17 12.41	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.15.17 12.41	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.15.17 12.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	80-120	08.15.17 12.41	
4-Bromofluorobenzene	460-00-4	83	%	80-120	08.15.17 12.41	

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COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T2-Surface**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-008	Date Collected:	08.09.17 11.00		

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	08.21.17 17.30	Basis:	Wet Weight
Seq Number:	3025640				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**304**	4.90	mg/kg	08.22.17 04.54		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.14.17 17.00	Basis:	Wet Weight
Seq Number:	3025053				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.15.17 01.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.15.17 01.26	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.15.17 01.26	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.15.17 01.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	08.15.17 01.26	
o-Terphenyl	84-15-1	95	%	70-135	08.15.17 01.26	

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COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T2-Surface**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-008	Date Collected:	08.09.17 11.00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.16.17 09.20	Basis:	Wet Weight
Seq Number:	3025345				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00360	0.00360	mg/kg	08.16.17 20.50	U	1
Toluene	108-88-3	<0.00360	0.00360	mg/kg	08.16.17 20.50	U	1
Ethylbenzene	100-41-4	<0.00360	0.00360	mg/kg	08.16.17 20.50	U	1
m,p-Xylenes	179601-23-1	<0.00719	0.00719	mg/kg	08.16.17 20.50	U	1
o-Xylene	95-47-6	**0.00453**	0.00360	mg/kg	08.16.17 20.50		1
Total Xylenes	1330-20-7	**0.00453**	0.00360	mg/kg	08.16.17 20.50		1
Total BTEX		**0.00453**	0.00360	mg/kg	08.16.17 20.50		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	80-120	08.16.17 20.50	
4-Bromofluorobenzene	460-00-4	81	%	80-120	08.16.17 20.50	

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COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T2-1'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-009	Date Collected:	08.09.17 11.00	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	08.21.17 17.30	Basis:	Wet Weight
Seq Number:	3025640				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**41.6**	4.91	mg/kg	08.22.17 05.01		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.14.17 17.00	Basis:	Wet Weight
Seq Number:	3025053				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.15.17 01.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.15.17 01.48	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.15.17 01.48	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.15.17 01.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	08.15.17 01.48	
o-Terphenyl	84-15-1	95	%	70-135	08.15.17 01.48	

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COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T2-1'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-009	Date Collected:	08.09.17 11.00	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.15.17 10.00	Basis:	Wet Weight
Seq Number:	3025339				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.15.17 13.19	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.15.17 13.19	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.15.17 13.19	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	08.15.17 13.19	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.15.17 13.19	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.15.17 13.19	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.15.17 13.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	80-120	08.15.17 13.19	
4-Bromofluorobenzene	460-00-4	86	%	80-120	08.15.17 13.19	

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COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T2-2'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-010	Date Collected:	08.09.17 11.00	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	08.21.17 17.30	Basis:	Wet Weight
Seq Number:	3025640				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**106**	4.96	mg/kg	08.22.17 05.09		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.14.17 17.00	Basis:	Wet Weight
Seq Number:	3025053				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.15.17 02.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.15.17 02.08	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.15.17 02.08	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.15.17 02.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	08.15.17 02.08	
o-Terphenyl	84-15-1	99	%	70-135	08.15.17 02.08	

Certificate of Analytical Results 560036

COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T2-2'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-010	Date Collected:	08.09.17 11.00	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.16.17 09.20	Basis:	Wet Weight
Seq Number:	3025345				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00364	0.00364	mg/kg	08.16.17 21.09	U	1
Toluene	108-88-3	<0.00364	0.00364	mg/kg	08.16.17 21.09	U	1
Ethylbenzene	100-41-4	<0.00364	0.00364	mg/kg	08.16.17 21.09	U	1
m,p-Xylenes	179601-23-1	<0.00727	0.00727	mg/kg	08.16.17 21.09	U	1
o-Xylene	95-47-6	**0.00578**	0.00364	mg/kg	08.16.17 21.09		1
Total Xylenes	1330-20-7	**0.00578**	0.00364	mg/kg	08.16.17 21.09		1
Total BTEX		**0.00578**	0.00364	mg/kg	08.16.17 21.09		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	95	%	80-120	08.16.17 21.09	
4-Bromofluorobenzene	460-00-4	80	%	80-120	08.16.17 21.09	

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COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T2-3'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-011	Date Collected:	08.09.17 11.00	Sample Depth:	3 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	08.21.17 17.30	Basis:	Wet Weight
Seq Number:	3025640				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**379**	4.97	mg/kg	08.22.17 05.17		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.14.17 17.00	Basis:	Wet Weight
Seq Number:	3025053				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.15.17 02.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.15.17 02.29	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.15.17 02.29	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.15.17 02.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	08.15.17 02.29	
o-Terphenyl	84-15-1	95	%	70-135	08.15.17 02.29	

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COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T2-3'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-011	Date Collected:	08.09.17 11.00	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.15.17 10.00	Basis:	Wet Weight
Seq Number:	3025339				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.15.17 13.56	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.15.17 13.56	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.15.17 13.56	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.15.17 13.56	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.15.17 13.56	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.15.17 13.56	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.15.17 13.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	82	%	80-120	08.15.17 13.56	
1,4-Difluorobenzene	540-36-3	98	%	80-120	08.15.17 13.56	

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COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T2-4'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-012	Date Collected:	08.09.17 11.00	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	08.21.17 17.30	Basis:	Wet Weight
Seq Number:	3025640				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1860**	24.6	mg/kg	08.22.17 05.40		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.14.17 17.00	Basis:	Wet Weight
Seq Number:	3025053				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.15.17 03.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.15.17 03.32	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.15.17 03.32	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.15.17 03.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	08.15.17 03.32	
o-Terphenyl	84-15-1	97	%	70-135	08.15.17 03.32	

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COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T2-4'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-012	Date Collected:	08.09.17 11.00	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.15.17 10.00	Basis:	Wet Weight
Seq Number:	3025339				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.15.17 14.54	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.15.17 14.54	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.15.17 14.54	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.15.17 14.54	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.15.17 14.54	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.15.17 14.54	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.15.17 14.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	85	%	80-120	08.15.17 14.54	
1,4-Difluorobenzene	540-36-3	98	%	80-120	08.15.17 14.54	

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COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T2-6'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-013	Date Collected:	08.09.17 11.00	Sample Depth:	6 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	08.21.17 17.30	Basis:	Wet Weight
Seq Number:	3025640				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**653**	4.91	mg/kg	08.22.17 05.47		1

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COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T2-8'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-014	Date Collected:	08.09.17 11.15	Sample Depth:	8 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	08.21.17 17.30	Basis:	Wet Weight
Seq Number:	3025640				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2610**	24.9	mg/kg	08.22.17 06.10		5

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COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T2-10'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-015	Date Collected:	08.09.17 11.15	Sample Depth:	10 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	08.21.17 17.30	Basis:	Wet Weight
Seq Number:	3025640				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1430**	4.96	mg/kg	08.22.17 06.18		1

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COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T2-12'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-016	Date Collected:	08.09.17 11.15	Sample Depth:	12 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	08.21.17 17.30	Basis:	Wet Weight
Seq Number:	3025640				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**434**	4.97	mg/kg	08.22.17 06.26		1

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COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T2-17'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-017	Date Collected:	08.09.17 11.15	Sample Depth:	17 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	08.21.17 17.30	Basis:	Wet Weight
Seq Number:	3025640				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**273**	4.90	mg/kg	08.22.17 06.33		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.14.17 17.00	Basis:	Wet Weight
Seq Number:	3025053				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.15.17 03.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.15.17 03.52	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.15.17 03.52	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.15.17 03.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	08.15.17 03.52	
o-Terphenyl	84-15-1	95	%	70-135	08.15.17 03.52	

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COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T2-17'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-017	Date Collected:	08.09.17 11.15	Sample Depth:	17 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.16.17 09.20	Basis:	Wet Weight
Seq Number:	3025345				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00357	0.00357	mg/kg	08.16.17 21.28	U	1
Toluene	108-88-3	<0.00357	0.00357	mg/kg	08.16.17 21.28	U	1
Ethylbenzene	100-41-4	<0.00357	0.00357	mg/kg	08.16.17 21.28	U	1
m,p-Xylenes	179601-23-1	<0.00714	0.00714	mg/kg	08.16.17 21.28	U	1
o-Xylene	95-47-6	<0.00357	0.00357	mg/kg	08.16.17 21.28	U	1
Total Xylenes	1330-20-7	<0.00357	0.00357	mg/kg	08.16.17 21.28	U	1
Total BTEX		<0.00357	0.00357	mg/kg	08.16.17 21.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	80-120	08.16.17 21.28	
4-Bromofluorobenzene	460-00-4	82	%	80-120	08.16.17 21.28	

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COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T3-Surface**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-018	Date Collected:	08.09.17 11.30		

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	08.21.17 17.30	Basis:	Wet Weight
Seq Number:	3025640				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**13.9**	4.97	mg/kg	08.22.17 06.41		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.14.17 17.00	Basis:	Wet Weight
Seq Number:	3025053				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.15.17 04.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	**133**	15.0	mg/kg	08.15.17 04.13		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**56.5**	15.0	mg/kg	08.15.17 04.13		1
Total TPH	PHC635	**190**	15.0	mg/kg	08.15.17 04.13		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	08.15.17 04.13	
o-Terphenyl	84-15-1	96	%	70-135	08.15.17 04.13	

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COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T3-Surface**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-018	Date Collected:	08.09.17 11.30		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.16.17 09.20	Basis:	Wet Weight
Seq Number:	3025345				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00360	0.00360	mg/kg	08.16.17 21.46	U	1
Toluene	108-88-3	<0.00360	0.00360	mg/kg	08.16.17 21.46	U	1
Ethylbenzene	100-41-4	<0.00360	0.00360	mg/kg	08.16.17 21.46	U	1
m,p-Xylenes	179601-23-1	<0.00719	0.00719	mg/kg	08.16.17 21.46	U	1
o-Xylene	95-47-6	<0.00360	0.00360	mg/kg	08.16.17 21.46	U	1
Total Xylenes	1330-20-7	<0.00360	0.00360	mg/kg	08.16.17 21.46	U	1
Total BTEX		<0.00360	0.00360	mg/kg	08.16.17 21.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	80-120	08.16.17 21.46	
4-Bromofluorobenzene	460-00-4	82	%	80-120	08.16.17 21.46	

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COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T3-1'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-019	Date Collected:	08.09.17 11.30	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	08.21.17 17.30	Basis:	Wet Weight
Seq Number:	3025640				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	08.22.17 06.49	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.14.17 17.00	Basis:	Wet Weight
Seq Number:	3025053				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.15.17 04.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.15.17 04.35	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.15.17 04.35	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.15.17 04.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	08.15.17 04.35	
o-Terphenyl	84-15-1	97	%	70-135	08.15.17 04.35	

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COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T3-1'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-019	Date Collected:	08.09.17 11.30	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.15.17 10.00	Basis:	Wet Weight
Seq Number:	3025339				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.15.17 16.09	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.15.17 16.09	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.15.17 16.09	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	08.15.17 16.09	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.15.17 16.09	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.15.17 16.09	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.15.17 16.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	81	%	80-120	08.15.17 16.09	
1,4-Difluorobenzene	540-36-3	97	%	80-120	08.15.17 16.09	

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COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T3-2'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-020	Date Collected:	08.09.17 11.30	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	08.21.17 17.30	Basis:	Wet Weight
Seq Number:	3025640				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.90	4.90	mg/kg	08.22.17 06.56	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.14.17 17.00	Basis:	Wet Weight
Seq Number:	3025053				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.15.17 04.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.15.17 04.56	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.15.17 04.56	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.15.17 04.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	08.15.17 04.56	
o-Terphenyl	84-15-1	94	%	70-135	08.15.17 04.56	

Certificate of Analytical Results 560036

COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T3-2'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-020	Date Collected:	08.09.17 11.30	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.15.17 10.00	Basis:	Wet Weight
Seq Number:	3025339				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.15.17 16.28	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.15.17 16.28	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.15.17 16.28	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.15.17 16.28	U	1
o-Xylene	95-47-6	**0.00253**	0.00201	mg/kg	08.15.17 16.28		1
Total Xylenes	1330-20-7	**0.00253**	0.00201	mg/kg	08.15.17 16.28		1
Total BTEX		**0.00253**	0.00201	mg/kg	08.15.17 16.28		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	83	%	80-120	08.15.17 16.28	
1,4-Difluorobenzene	540-36-3	100	%	80-120	08.15.17 16.28	

Certificate of Analytical Results 560036

COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T3-3'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-021	Date Collected:	08.09.17 11.30	Sample Depth:	3 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNV			% Moisture:	
Analyst:	MGO	Date Prep:	08.22.17 10.30	Basis:	Wet Weight
Seq Number:	3025713				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	08.22.17 11.53	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.14.17 17.00	Basis:	Wet Weight
Seq Number:	3025053				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	08.15.17 05.17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	08.15.17 05.17	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	08.15.17 05.17	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	08.15.17 05.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	08.15.17 05.17	
o-Terphenyl	84-15-1	106	%	70-135	08.15.17 05.17	

Certificate of Analytical Results 560036

COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T3-3'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-021	Date Collected:	08.09.17 11.30	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.15.17 10.00	Basis:	Wet Weight
Seq Number:	3025339				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.15.17 16.47	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.15.17 16.47	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.15.17 16.47	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.15.17 16.47	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.15.17 16.47	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.15.17 16.47	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.15.17 16.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	82	%	80-120	08.15.17 16.47	
1,4-Difluorobenzene	540-36-3	96	%	80-120	08.15.17 16.47	

Certificate of Analytical Results 560036

COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T3-4'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-022	Date Collected:	08.09.17 11.30	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNV			% Moisture:	
Analyst:	MGO	Date Prep:	08.22.17 10.30	Basis:	Wet Weight
Seq Number:	3025713				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.97	4.97	mg/kg	08.22.17 12.16	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.14.17 17.00	Basis:	Wet Weight
Seq Number:	3025053				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.15.17 07.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.15.17 07.05	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.15.17 07.05	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.15.17 07.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	08.15.17 07.05	
o-Terphenyl	84-15-1	94	%	70-135	08.15.17 07.05	

Certificate of Analytical Results 560036

COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T3-4'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-022	Date Collected:	08.09.17 11.30	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.15.17 10.00	Basis:	Wet Weight
Seq Number:	3025339				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.15.17 17.06	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.15.17 17.06	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.15.17 17.06	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.15.17 17.06	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.15.17 17.06	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.15.17 17.06	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.15.17 17.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	80-120	08.15.17 17.06	
4-Bromofluorobenzene	460-00-4	85	%	80-120	08.15.17 17.06	

Certificate of Analytical Results 560036

COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T3-7'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-023	Date Collected:	08.09.17 11.30	Sample Depth:	7 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNV			% Moisture:	
Analyst:	MGO	Date Prep:	08.22.17 10.30	Basis:	Wet Weight
Seq Number:	3025713				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**456**	4.98	mg/kg	08.22.17 12.23		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.14.17 17.00	Basis:	Wet Weight
Seq Number:	3025053				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.15.17 07.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.15.17 07.25	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.15.17 07.25	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.15.17 07.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	08.15.17 07.25	
o-Terphenyl	84-15-1	94	%	70-135	08.15.17 07.25	

Certificate of Analytical Results 560036

COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**T3-7'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560036-023	Date Collected:	08.09.17 11.30	Sample Depth:	7 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.21.17 09.40	Basis:	Wet Weight
Seq Number:	3025537				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.21.17 15.53	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.21.17 15.53	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.21.17 15.53	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.21.17 15.53	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.21.17 15.53	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.21.17 15.53	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.21.17 15.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	92	%	80-120	08.21.17 15.53	
4-Bromofluorobenzene	460-00-4	113	%	80-120	08.21.17 15.53	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

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

QC Summary 560036

COG Operating LLC

Skelly Unit #743

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3025640 — Matrix: Solid — Date Prep: 08.21.17
MB Sample Id: 729719-1-BLK — LCS Sample Id: 729719-1-BKS — LCSD Sample Id: 729719-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.90	245	257	105	252	101	90-110	2	20	mg/kg	08.22.17 03:14	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3025713 — Matrix: Solid — Date Prep: 08.22.17
MB Sample Id: 729725-1-BLK — LCS Sample Id: 729725-1-BKS — LCSD Sample Id: 729725-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	259	104	252	101	90-110	3	20	mg/kg	08.22.17 11:37	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3025640 — Matrix: Soil — Date Prep: 08.21.17
Parent Sample Id: 560036-001 — MS Sample Id: 560036-001 S — MSD Sample Id: 560036-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	442	248	679	96	669	92	90-110	1	20	mg/kg	08.22.17 03:37	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3025640 — Matrix: Soil — Date Prep: 08.21.17
Parent Sample Id: 560036-011 — MS Sample Id: 560036-011 S — MSD Sample Id: 560036-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	379	249	618	96	624	98	90-110	1	20	mg/kg	08.22.17 05:24	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3025713 — Matrix: Soil — Date Prep: 08.22.17
Parent Sample Id: 560036-021 — MS Sample Id: 560036-021 S — MSD Sample Id: 560036-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.96	248	269	108	274	110	90-110	2	20	mg/kg	08.22.17 12:00	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3025713 — Matrix: Soil — Date Prep: 08.22.17
Parent Sample Id: 560039-008 — MS Sample Id: 560039-008 S — MSD Sample Id: 560039-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	122	245	381	106	385	107	90-110	1	20	mg/kg	08.22.17 13:48	

QC Summary 560036

COG Operating LLC

Skelly Unit #743

Analytical Method: TPH By SW8015 Mod — Prep Method: TX1005P
Seq Number: 3025053 — Matrix: Solid — Date Prep: 08.14.17
MB Sample Id: 729380-1-BLK — LCS Sample Id: 729380-1-BKS — LCSD Sample Id: 729380-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	854	85	887	89	70-135	4	35	mg/kg	08.14.17 22:02	
Diesel Range Organics (DRO)	<15.0	1000	1070	107	1030	103	70-135	4	35	mg/kg	08.14.17 22:02	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	112		106		109		70-135	%	08.14.17 22:02
o-Terphenyl	112		98		123		70-135	%	08.14.17 22:02

Analytical Method: TPH By SW8015 Mod — Prep Method: TX1005P
Seq Number: 3025053 — Matrix: Soil — Date Prep: 08.14.17
Parent Sample Id: 560036-002 — MS Sample Id: 560036-002 S — MSD Sample Id: 560036-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	999	839	84	855	86	70-135	2	35	mg/kg	08.14.17 23:23	
Diesel Range Organics (DRO)	<15.0	999	1050	105	1080	108	70-135	3	35	mg/kg	08.14.17 23:23	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	107		105		70-135	%	08.14.17 23:23
o-Terphenyl	119		98		70-135	%	08.14.17 23:23

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3025339 — Matrix: Solid — Date Prep: 08.15.17
MB Sample Id: 729487-1-BLK — LCS Sample Id: 729487-1-BKS — LCSD Sample Id: 729487-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.117	116	0.115	115	70-130	2	35	mg/kg	08.15.17 08:53	
Toluene	<0.00202	0.101	0.113	112	0.112	112	70-130	1	35	mg/kg	08.15.17 08:53	
Ethylbenzene	<0.00202	0.101	0.110	109	0.110	110	71-129	0	35	mg/kg	08.15.17 08:53	
m,p-Xylenes	<0.00403	0.202	0.215	106	0.214	106	70-135	0	35	mg/kg	08.15.17 08:53	
o-Xylene	<0.00202	0.101	0.103	102	0.103	103	71-133	0	35	mg/kg	08.15.17 08:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		100		100		80-120	%	08.15.17 08:53
4-Bromofluorobenzene	84		86		88		80-120	%	08.15.17 08:53

QC Summary 560036

COG Operating LLC

Skelly Unit #743

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3025345 — Matrix: Solid — Date Prep: 08.16.17
MB Sample Id: 729520-1-BLK — LCS Sample Id: 729520-1-BKS — LCSD Sample Id: 729520-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.124	124	0.124	124	70-130	0	35	mg/kg	08.17.17 11:56	
Toluene	<0.00199	0.0996	0.122	122	0.123	123	70-130	1	35	mg/kg	08.17.17 11:56	
Ethylbenzene	<0.00199	0.0996	0.121	121	0.121	121	71-129	0	35	mg/kg	08.17.17 11:56	
m,p-Xylenes	<0.00398	0.199	0.237	119	0.237	119	70-135	0	35	mg/kg	08.17.17 11:56	
o-Xylene	<0.00199	0.0996	0.115	115	0.116	116	71-133	1	35	mg/kg	08.17.17 11:56	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		98		95		80-120	%	08.17.17 11:56
4-Bromofluorobenzene	82		86		85		80-120	%	08.17.17 11:56

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3025625 — Matrix: Solid — Date Prep: 08.21.17
MB Sample Id: 729668-1-BLK — LCS Sample Id: 729668-1-BKS — LCSD Sample Id: 729668-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.102	102	0.101	101	70-130	1	35	mg/kg	08.21.17 08:04	
Toluene	<0.00200	0.0998	0.101	101	0.0998	100	70-130	1	35	mg/kg	08.21.17 08:04	
Ethylbenzene	<0.00200	0.0998	0.101	101	0.101	101	71-129	0	35	mg/kg	08.21.17 08:04	
m,p-Xylenes	<0.00399	0.200	0.198	99	0.197	99	70-135	1	35	mg/kg	08.21.17 08:04	
o-Xylene	<0.00200	0.0998	0.0965	97	0.0967	97	71-133	0	35	mg/kg	08.21.17 08:04	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		97		97		80-120	%	08.21.17 08:04
4-Bromofluorobenzene	84		90		90		80-120	%	08.21.17 08:04

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3025537 — Matrix: Solid — Date Prep: 08.21.17
MB Sample Id: 729681-1-BLK — LCS Sample Id: 729681-1-BKS — LCSD Sample Id: 729681-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.110	111	0.108	109	70-130	2	35	mg/kg	08.21.17 15:53	
Toluene	<0.00199	0.0994	0.122	123	0.118	119	70-130	3	35	mg/kg	08.21.17 15:53	
Ethylbenzene	<0.00199	0.0994	0.113	114	0.111	112	71-129	2	35	mg/kg	08.21.17 15:53	
m,p-Xylenes	<0.00398	0.199	0.228	115	0.226	114	70-135	1	35	mg/kg	08.21.17 15:53	
o-Xylene	<0.00199	0.0994	0.116	117	0.114	115	71-133	2	35	mg/kg	08.21.17 15:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	96		99		104		80-120	%	08.21.17 15:53
4-Bromofluorobenzene	113		108		114		80-120	%	08.21.17 15:53

QC Summary 560036

COG Operating LLC

Skelly Unit #743

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3025339 — Matrix: Soil — Date Prep: 08.15.17
Parent Sample Id: 560035-003 — MS Sample Id: 560035-003 S — MSD Sample Id: 560035-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0990	0.102	103	0.110	110	70-130	8	35	mg/kg	08.15.17 09:31	
Toluene	<0.00198	0.0990	0.0983	99	0.104	104	70-130	6	35	mg/kg	08.15.17 09:31	
Ethylbenzene	<0.00198	0.0990	0.0926	94	0.103	103	71-129	11	35	mg/kg	08.15.17 09:31	
m,p-Xylenes	<0.00396	0.198	0.179	90	0.195	98	70-135	9	35	mg/kg	08.15.17 09:31	
o-Xylene	<0.00198	0.0990	0.0871	88	0.0993	99	71-133	13	35	mg/kg	08.15.17 09:31	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		96		80-120	%	08.15.17 09:31
4-Bromofluorobenzene	88		90		80-120	%	08.15.17 09:31

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3025345 — Matrix: Soil — Date Prep: 08.16.17
Parent Sample Id: 560035-001 — MS Sample Id: 560035-001 S — MSD Sample Id: 560035-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00348	0.174	0.186	107	0.176	101	70-130	6	35	mg/kg	08.17.17 12:32	
Toluene	<0.00348	0.174	0.176	101	0.165	94	70-130	6	35	mg/kg	08.17.17 12:32	
Ethylbenzene	<0.00348	0.174	0.162	93	0.151	86	71-129	7	35	mg/kg	08.17.17 12:32	
m,p-Xylenes	<0.00697	0.348	0.313	90	0.291	83	70-135	7	35	mg/kg	08.17.17 12:32	
o-Xylene	<0.00348	0.174	0.154	89	0.145	83	71-133	6	35	mg/kg	08.17.17 12:32	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		98		80-120	%	08.17.17 12:32
4-Bromofluorobenzene	83		87		80-120	%	08.17.17 12:32

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3025625 — Matrix: Soil — Date Prep: 08.21.17
Parent Sample Id: 560162-001 — MS Sample Id: 560162-001 S — MSD Sample Id: 560162-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.00712	0.101	0.0869	79	0.0733	66	70-130	17	35	mg/kg	08.21.17 08:53	X
Toluene	0.00535	0.101	0.0837	78	0.0769	72	70-130	8	35	mg/kg	08.21.17 08:53	
Ethylbenzene	0.00617	0.101	0.0816	75	0.0886	82	71-129	8	35	mg/kg	08.21.17 08:53	
m,p-Xylenes	0.0309	0.202	0.163	65	0.179	74	70-135	9	35	mg/kg	08.21.17 08:53	X
o-Xylene	0.0235	0.101	0.0812	57	0.0742	51	71-133	9	35	mg/kg	08.21.17 08:53	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		85		80-120	%	08.21.17 08:53
4-Bromofluorobenzene	92		83		80-120	%	08.21.17 08:53

QC Summary 560036

COG Operating LLC

Skelly Unit #743

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

Seq Number: 3025537 Matrix: Soil Date Prep: 08.21.17

Parent Sample Id: 560611-008 MS Sample Id: 560611-008 S MSD Sample Id: 560611-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.105	104	0.108	107	70-130	3	35	mg/kg	08.21.17 15:53	
Toluene	<0.00201	0.101	0.111	110	0.114	113	70-130	3	35	mg/kg	08.21.17 15:53	
Ethylbenzene	<0.00201	0.101	0.100	99	0.110	109	71-129	10	35	mg/kg	08.21.17 15:53	
m,p-Xylenes	<0.00402	0.201	0.180	90	0.222	110	70-135	21	35	mg/kg	08.21.17 15:53	
o-Xylene	<0.00201	0.101	0.108	107	0.112	111	71-133	4	35	mg/kg	08.21.17 15:53	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	86		91		80-120	%	08.21.17 15:53
4-Bromofluorobenzene	106		103		80-120	%	08.21.17 15:53

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Stafford,Texas (281-240-4200)

Dallas Texas (214-902-0300)

San Antonio, Texas (210-509-3334)

Midland, Texas (432-704-5251)

Phoenix, Arizona (480-355-0900)

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CHAIN OF CUSTODY

Page 1 Of 3

Xenco Quote #

Xenco Job # 560036

Client / Reporting Information

Company Name / Branch: COG Operating LLC

Company Address: 2407 PECOS Avenue Artesia NM 88210

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

Phone No: 575-748-1553

Project Contact: Aaron Lieb

Samplers's Name- Aaron Lieb

Project Information

Project Name/Number: Skelly Unit #743

Project Location: Skelly Unit #743

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

PO Number:

Matrix Codes

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

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Analytical Information: TPH/ EXTENDED	BTEX	Chloride	Field Comments
1	T1- SURF	-	8-9-17	10:30AM	S	1									X	X	X	
2	T1- 1'	1				1									X	X	X	
3	T1- 2'	2				1									X	X	X	
4	T1- 3'	3				1									X	X	X	
5	T1- 4'	4				1									X	X	X	
6	T1- 9'	9				1											X	
7	T1- 14'	14				1									X	X	X	
8																		
9																		
10																		

Turnaround Time (Business days)

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

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

Data Deliverable Information

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

Notes:

Run TPH + BTEX to Non Detect (SURF - 4')

FED-EX / UPS: Tracking #

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

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Rece
1		8-11-17 1030 AM	1 Sid Butler 8-11-17 10A	2 Sid Butler	8-11-17 1145 A	2
3	Relinquished by: TARCISIO MONTOYA	Date Time: 8-12-17 14:20	Received By: 3	Relinquished By: 4	Date Time:	Rece 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	

Temp: 3.8 IR ID:R-8

CF:(0-6: -0.2°C)
(6-23: +0.2°C)

Corrected Temp: 3.6

XENCO LABORATORIES

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

CHAIN OF CUSTODY

Page 2 Of 3

Xenco Quote # | Xenco Job # 560036

Client / Reporting Information

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

Project Information

Project Name/Number: Skelly Unit #743
Project Location: Skelly Unit #743
Invoice To: COG Operating LLC, Attn: Robert Mcneill, 600 W. Illinois, Midland TX 79701
PO Number:

Matrix Codes

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

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Analytical Information: TPH/ EXTENDED	BTEX	Chloride	Field Comments
1	T2- Surface	—	8-9-17	11:00 AM	S	1									X	X	X	
2	T2- 1'	1				1									X	X	X	
3	T2- 2'	2				1									X	X	X	
4	T2- 3'	3				1									X	X	X	
5	T2- 4'	4				1									X	X	X	
6	T2- 6'	6				1											X	
7	T2- 8'	8		11:15 AM		1											X	
8	T2- 10'	10				1											X	
9	T2- 12'	12				1											X	
10	T2- 17'	17				1									X	X	X	

Turnaround Time (Business days)

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

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

Data Deliverable Information

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

Notes:

RUN TPH + BTEX to Non Detect (SURF - 4')

FED-EX / UPS: Tracking #

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

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		8-11-17 10:00 AM	1 Sid Butler 8-11-17 10A	2 Sid Butler	8-11-17 1145 A	2
3	Relinquished by: ARCESIO MONTOYA	Date Time: 8-12-17 14:20	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable ☐	

Temp: 3.9 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 3.6

Notice: Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be lia any losses or expenses incurred by the Client if such loses are due to circumstances beyond the control of Xenco. A minimum charge of $75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples re terms will be enforced unless previously negotiated under a fully executed client contract.

XENCO LABORATORIES

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

CHAIN OF CUSTODY

Page 3 Of 3

Xenco Quote #

Xenco Job # 560036

Client / Reporting Information

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

Project Information

Project Name/Number: Skelly Unit #743
Project Location: Skelly Unit #743
Invoice To: COG Operating LLC, Attn: Robert Mcneill, 600 W. Illinois, Midland TX 79701
PO Number:

Analytical Information

Matrix Codes

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

No.	Field ID / Point of Collection	Collection: Sample Depth	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH/ EXTENDED	BTEX	Chloride	Field Comments
1	T3- SURFACE	—	8-9-17	11:30am	S	1									X	X	X	
2	T3- 1'	1				1									X	X	X	
3	T3- 2'	2				1									X	X	X	
4	T3- 3'	3				1									X	X	X	
5	T3- 4'	4				1									X	X	X	
6	T3- 7'	7				1											X	
7	T3- 8'	8				1									X	X	X	
8																		
9																		
10																		

Turnaround Time (Business days)

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

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

Data Deliverable Information

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

Notes:

Run TPH + BTEX to Non-Detect (surf - 4')

FED-EX / UPS: Tracking #

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

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		8-11-17 10:00 Am	1 Sid Butler 8-11-17 10A	2 Sid Butler	8-11-17 1145 A	2
3	Relinquished by: ARCESIO MONTOYA.	Date Time: 8-12-17 14:20	Received By: 3	Relinquished By: 4	Date Time:	Receive 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable ☐	

Temp: 3.8 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 3.6

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC

Date/ Time Received: 08/11/2017 11:45:00 AM

Work Order #: 560036

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

Temperature Measuring device used : R8

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	3.6	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seal present on shipping container/ cooler?	**N/A**	
#5 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#6 Custody Seals intact on sample bottles?	**N/A**	
#7 *Custody Seals Signed and dated?	**N/A**	
#8 *Chain of Custody present?	**Yes**	
#9 Sample instructions complete on Chain of Custody?	**Yes**	
#10 Any missing/extra samples?	**Yes**	MISSING SAMPLE 024 - T3-8'
#11 Chain of Custody signed when relinquished/ received?	**Yes**	
#12 Chain of Custody agrees with sample label(s)?	**Yes**	
#13 Container label(s) legible and intact?	**Yes**	
#14 Sample matrix/ properties agree with Chain of Custody?	**Yes**	
#15 Samples in proper container/ bottle?	**Yes**	
#16 Samples properly preserved?	**Yes**	
#17 Sample container(s) intact?	**Yes**	
#18 Sufficient sample amount for indicated test(s)?	**Yes**	
#19 All samples received within hold time?	**Yes**	
#20 Subcontract of sample(s)?	**N/A**	
#21 VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

NonConformance:
MISSING SAMPLE 024 - T3-8'
Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **DateTime :** _____

Checklist completed by: Jessica Kramer Date: 08/14/2017
Jessica Kramer

Checklist reviewed by: Kelsey Brooks Date: 08/14/2017
Kelsey Brooks

Certificate of Analysis Summary 560035

COG Operating LLC, Artesia, NM

Project Name: Skelly Unit #743

Project Id:
Contact: Aaron Lieb
Project Location: Skelly Unit #743

Date Received in Lab: Fri Aug-11-17 11:45 am
Report Date: 22-AUG-17
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	560035-001		560035-002		560035-003		560035-004		560035-005		560035-006	
	Field Id:	North- Surf		North- 1'		South- Surf		South- 1'		East-Surf		East- 1'	
	Depth:			1- ft				1- ft				1- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-09-17 10:15		Aug-09-17 10:15		Aug-09-17 10:15		Aug-09-17 10:15		Aug-09-17 10:15		Aug-09-17 10:15	
BTEX by EPA 8021B	*Extracted:*	Aug-16-17 09:20		Aug-15-17 10:00		Aug-15-17 10:00		Aug-16-17 09:20		Aug-16-17 09:20		Aug-15-17 08:00	
	Analyzed:	Aug-17-17 16:02		Aug-15-17 11:44		Aug-15-17 10:47		Aug-16-17 22:43		Aug-17-17 00:15		Aug-16-17 15:01	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00351	0.00351	<0.00201	0.00201	<0.00200	0.00200	<0.00345	0.00345	<0.00344	0.00344	<0.00200	0.00200
Toluene		<0.00351	0.00351	<0.00201	0.00201	<0.00200	0.00200	<0.00345	0.00345	<0.00344	0.00344	<0.00200	0.00200
Ethylbenzene		<0.00351	0.00351	<0.00201	0.00201	<0.00200	0.00200	<0.00345	0.00345	<0.00344	0.00344	<0.00200	0.00200
m,p-Xylenes		<0.00702	0.00702	<0.00402	0.00402	<0.00399	0.00399	<0.00690	0.00690	<0.00687	0.00687	<0.00399	0.00399
o-Xylene		<0.00351	0.00351	<0.00201	0.00201	<0.00200	0.00200	<0.00345	0.00345	<0.00344	0.00344	<0.00200	0.00200
Total Xylenes		<0.00351	0.00351	<0.00201	0.00201	<0.00200	0.00200	<0.00345	0.00345	<0.00344	0.00344	<0.00200	0.00200
Total BTEX		<0.00351	0.00351	<0.00201	0.00201	<0.00200	0.00200	<0.00345	0.00345	<0.00344	0.00344	<0.00200	0.00200
Inorganic Anions by EPA 300/300.1	*Extracted:*	Aug-21-17 17:00		Aug-21-17 17:00		Aug-21-17 17:00		Aug-21-17 17:00		Aug-21-17 17:00		Aug-21-17 17:00	
	Analyzed:	Aug-22-17 01:19		Aug-22-17 01:26		Aug-22-17 01:34		Aug-22-17 01:57		Aug-22-17 02:05		Aug-22-17 02:28	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<4.96	4.96	<5.00	5.00	<4.98	4.98	22.6	4.93	<4.98	4.98	28.1	5.00
TPH By SW8015 Mod	*Extracted:*	Aug-15-17 08:00		Aug-15-17 08:00		Aug-15-17 08:00		Aug-15-17 08:00		Aug-15-17 08:00		Aug-15-17 08:00	
	Analyzed:	Aug-15-17 10:11		Aug-15-17 11:12		Aug-15-17 14:37		Aug-15-17 11:53		Aug-15-17 12:13		Aug-15-17 12:34	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

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

Kelsey Brooks
Project Manager

Final 1.000

Certificate of Analysis Summary 560035

COG Operating LLC, Artesia, NM

Project Name: Skelly Unit #743

Project Id:
Contact: Aaron Lieb
Project Location: Skelly Unit #743

Date Received in Lab: Fri Aug-11-17 11:45 am
Report Date: 22-AUG-17
Project Manager: Kelsey Brooks

Analysis Requested									
	Lab Id:	560035-007		560035-008					
	Field Id:	West- Surf		West- 1'					
	Depth:			1- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Aug-09-17 10:15		Aug-09-17 10:15					
BTEX by EPA 8021B	***Extracted:***	Aug-16-17 09:20		Aug-16-17 09:20					
	Analyzed:	Aug-17-17 00:34		Aug-17-17 00:53					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00330	0.00330	<0.00353	0.00353				
Toluene		<0.00330	0.00330	<0.00353	0.00353				
Ethylbenzene		<0.00330	0.00330	<0.00353	0.00353				
m,p-Xylenes		<0.00660	0.00660	<0.00707	0.00707				
o-Xylene		<0.00330	0.00330	0.00445	0.00353				
Total Xylenes		<0.00330	0.00330	0.00445	0.00353				
Total BTEX		<0.00330	0.00330	0.00445	0.00353				
Inorganic Anions by EPA 300/300.1	***Extracted:***	Aug-21-17 17:00		Aug-21-17 17:00					
	Analyzed:	Aug-22-17 02:35		Aug-22-17 02:43					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		<4.99	4.99	8.00	4.99				
TPH By SW8015 Mod	***Extracted:***	Aug-15-17 08:00		Aug-15-17 08:00					
	Analyzed:	Aug-15-17 12:54		Aug-15-17 13:15					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0				
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0				
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0				
Total TPH		<15.0	15.0	<15.0	15.0				

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

Kelsey Brooks
Project Manager

Final 1.000

Analytical Report 560035

for

COG Operating LLC

Project Manager: Aaron Lieb

Skelly Unit #743

22-AUG-17

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)
Xenco-San Antonio: Texas (T104704534)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

22-AUG-17

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

Reference: XENCO Report No(s): **560035**
Skelly Unit #743
Project Address: Skelly Unit #743

Aaron Lieb:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 560035. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 560035 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kelsey Brooks
Project Manager

Sample Cross Reference 560035

COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
North- Surf	S	08-09-17 10:15		560035-001
North- 1'	S	08-09-17 10:15	1 ft	560035-002
South- Surf	S	08-09-17 10:15		560035-003
South- 1'	S	08-09-17 10:15	1 ft	560035-004
East-Surf	S	08-09-17 10:15		560035-005
East- 1'	S	08-09-17 10:15	1 ft	560035-006
West- Surf	S	08-09-17 10:15		560035-007
West- 1'	S	08-09-17 10:15	1 ft	560035-008

CASE NARRATIVE

Client Name: COG Operating LLC

Project Name: Skelly Unit #743

Project ID:
Work Order Number(s): *560035*

Report Date: *22-AUG-17*
Date Received: *08/11/2017*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3025079 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3025339 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3025345 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analytical Results 560035

COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**North- Surf**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560035-001	Date Collected:	08.09.17 10.15		

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	08.21.17 17.00	Basis:	Wet Weight
Seq Number:	3025638				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	08.22.17 01.19	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.15.17 08.00	Basis:	Wet Weight
Seq Number:	3025055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.15.17 10.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.15.17 10.11	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.15.17 10.11	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.15.17 10.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	08.15.17 10.11	
o-Terphenyl	84-15-1	99	%	70-135	08.15.17 10.11	

Certificate of Analytical Results 560035

COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**North- Surf**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560035-001	Date Collected:	08.09.17 10.15		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.16.17 09.20	Basis:	Wet Weight
Seq Number:	3025345				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00351	0.00351	mg/kg	08.17.17 16.02	U	1
Toluene	108-88-3	<0.00351	0.00351	mg/kg	08.17.17 16.02	U	1
Ethylbenzene	100-41-4	<0.00351	0.00351	mg/kg	08.17.17 16.02	U	1
m,p-Xylenes	179601-23-1	<0.00702	0.00702	mg/kg	08.17.17 16.02	U	1
o-Xylene	95-47-6	<0.00351	0.00351	mg/kg	08.17.17 16.02	U	1
Total Xylenes	1330-20-7	<0.00351	0.00351	mg/kg	08.17.17 16.02	U	1
Total BTEX		<0.00351	0.00351	mg/kg	08.17.17 16.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	84	%	80-120	08.17.17 16.02	
1,4-Difluorobenzene	540-36-3	94	%	80-120	08.17.17 16.02	

Certificate of Analytical Results 560035

COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**North- 1'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560035-002	Date Collected:	08.09.17 10.15	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	08.21.17 17.00	Basis:	Wet Weight
Seq Number:	3025638				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	08.22.17 01.26	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.15.17 08.00	Basis:	Wet Weight
Seq Number:	3025055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.15.17 11.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.15.17 11.12	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.15.17 11.12	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.15.17 11.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	08.15.17 11.12	
o-Terphenyl	84-15-1	99	%	70-135	08.15.17 11.12	

Certificate of Analytical Results 560035

COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**North- 1'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560035-002	Date Collected:	08.09.17 10.15	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.15.17 10.00	Basis:	Wet Weight
Seq Number:	3025339				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.15.17 11.44	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.15.17 11.44	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.15.17 11.44	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.15.17 11.44	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.15.17 11.44	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.15.17 11.44	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.15.17 11.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	80-120	08.15.17 11.44	
4-Bromofluorobenzene	460-00-4	83	%	80-120	08.15.17 11.44	

Certificate of Analytical Results 560035

COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**South- Surf**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560035-003	Date Collected:	08.09.17 10.15		

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	08.21.17 17.00	Basis:	Wet Weight
Seq Number:	3025638				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	08.22.17 01.34	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.15.17 08.00	Basis:	Wet Weight
Seq Number:	3025055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.15.17 14.37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.15.17 14.37	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.15.17 14.37	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.15.17 14.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	08.15.17 14.37	
o-Terphenyl	84-15-1	96	%	70-135	08.15.17 14.37	

Certificate of Analytical Results 560035

COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**South- Surf**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560035-003	Date Collected:	08.09.17 10.15		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.15.17 10.00	Basis:	Wet Weight
Seq Number:	3025339				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.15.17 10.47	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.15.17 10.47	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.15.17 10.47	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.15.17 10.47	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.15.17 10.47	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.15.17 10.47	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.15.17 10.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	86	%	80-120	08.15.17 10.47	
1,4-Difluorobenzene	540-36-3	99	%	80-120	08.15.17 10.47	

Certificate of Analytical Results 560035

COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**South- 1'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560035-004	Date Collected:	08.09.17 10.15	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	08.21.17 17.00	Basis:	Wet Weight
Seq Number:	3025638				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**22.6**	4.93	mg/kg	08.22.17 01.57		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.15.17 08.00	Basis:	Wet Weight
Seq Number:	3025055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.15.17 11.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.15.17 11.53	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.15.17 11.53	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.15.17 11.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	08.15.17 11.53	
o-Terphenyl	84-15-1	94	%	70-135	08.15.17 11.53	

Certificate of Analytical Results 560035

COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**South- 1'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560035-004	Date Collected:	08.09.17 10.15	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.16.17 09.20	Basis:	Wet Weight
Seq Number:	3025345				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00345	0.00345	mg/kg	08.16.17 22.43	U	1
Toluene	108-88-3	<0.00345	0.00345	mg/kg	08.16.17 22.43	U	1
Ethylbenzene	100-41-4	<0.00345	0.00345	mg/kg	08.16.17 22.43	U	1
m,p-Xylenes	179601-23-1	<0.00690	0.00690	mg/kg	08.16.17 22.43	U	1
o-Xylene	95-47-6	<0.00345	0.00345	mg/kg	08.16.17 22.43	U	1
Total Xylenes	1330-20-7	<0.00345	0.00345	mg/kg	08.16.17 22.43	U	1
Total BTEX		<0.00345	0.00345	mg/kg	08.16.17 22.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	82	%	80-120	08.16.17 22.43	
1,4-Difluorobenzene	540-36-3	94	%	80-120	08.16.17 22.43	

Certificate of Analytical Results 560035

COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**East-Surf**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560035-005	Date Collected:	08.09.17 10.15		

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	08.21.17 17.00	Basis:	Wet Weight
Seq Number:	3025638				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	08.22.17 02.05	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.15.17 08.00	Basis:	Wet Weight
Seq Number:	3025055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.15.17 12.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.15.17 12.13	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.15.17 12.13	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.15.17 12.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	08.15.17 12.13	
o-Terphenyl	84-15-1	96	%	70-135	08.15.17 12.13	

Certificate of Analytical Results 560035

COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**East-Surf**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560035-005	Date Collected:	08.09.17 10.15		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.16.17 09.20	Basis:	Wet Weight
Seq Number:	3025345				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00344	0.00344	mg/kg	08.17.17 00.15	U	1
Toluene	108-88-3	<0.00344	0.00344	mg/kg	08.17.17 00.15	U	1
Ethylbenzene	100-41-4	<0.00344	0.00344	mg/kg	08.17.17 00.15	U	1
m,p-Xylenes	179601-23-1	<0.00687	0.00687	mg/kg	08.17.17 00.15	U	1
o-Xylene	95-47-6	<0.00344	0.00344	mg/kg	08.17.17 00.15	U	1
Total Xylenes	1330-20-7	<0.00344	0.00344	mg/kg	08.17.17 00.15	U	1
Total BTEX		<0.00344	0.00344	mg/kg	08.17.17 00.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	85	%	80-120	08.17.17 00.15	
1,4-Difluorobenzene	540-36-3	94	%	80-120	08.17.17 00.15	

Certificate of Analytical Results 560035

COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**East- 1'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560035-006	Date Collected:	08.09.17 10.15	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	08.21.17 17.00	Basis:	Wet Weight
Seq Number:	3025638				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**28.1**	5.00	mg/kg	08.22.17 02.28		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.15.17 08.00	Basis:	Wet Weight
Seq Number:	3025055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.15.17 12.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.15.17 12.34	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.15.17 12.34	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.15.17 12.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	08.15.17 12.34	
o-Terphenyl	84-15-1	95	%	70-135	08.15.17 12.34	

Certificate of Analytical Results 560035

COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**East- 1'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560035-006	Date Collected:	08.09.17 10.15	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.15.17 08.00	Basis:	Wet Weight
Seq Number:	3025079				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.16.17 15.01	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.16.17 15.01	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.16.17 15.01	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.16.17 15.01	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.16.17 15.01	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.16.17 15.01	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.16.17 15.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	80-120	08.16.17 15.01	
1,4-Difluorobenzene	540-36-3	93	%	80-120	08.16.17 15.01	

Certificate of Analytical Results 560035

COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**West- Surf**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560035-007	Date Collected:	08.09.17 10.15		

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	08.21.17 17.00	Basis:	Wet Weight
Seq Number:	3025638				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	08.22.17 02.35	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.15.17 08.00	Basis:	Wet Weight
Seq Number:	3025055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.15.17 12.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.15.17 12.54	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.15.17 12.54	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.15.17 12.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	08.15.17 12.54	
o-Terphenyl	84-15-1	94	%	70-135	08.15.17 12.54	

Certificate of Analytical Results 560035

COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**West- Surf**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560035-007	Date Collected:	08.09.17 10.15		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.16.17 09.20	Basis:	Wet Weight
Seq Number:	3025345				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00330	0.00330	mg/kg	08.17.17 00.34	U	1
Toluene	108-88-3	<0.00330	0.00330	mg/kg	08.17.17 00.34	U	1
Ethylbenzene	100-41-4	<0.00330	0.00330	mg/kg	08.17.17 00.34	U	1
m,p-Xylenes	179601-23-1	<0.00660	0.00660	mg/kg	08.17.17 00.34	U	1
o-Xylene	95-47-6	<0.00330	0.00330	mg/kg	08.17.17 00.34	U	1
Total Xylenes	1330-20-7	<0.00330	0.00330	mg/kg	08.17.17 00.34	U	1
Total BTEX		<0.00330	0.00330	mg/kg	08.17.17 00.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	83	%	80-120	08.17.17 00.34	
1,4-Difluorobenzene	540-36-3	96	%	80-120	08.17.17 00.34	

Certificate of Analytical Results 560035

COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**West- 1'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560035-008	Date Collected:	08.09.17 10.15	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	08.21.17 17.00	Basis:	Wet Weight
Seq Number:	3025638				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.00**	4.99	mg/kg	08.22.17 02.43		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.15.17 08.00	Basis:	Wet Weight
Seq Number:	3025055				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.15.17 13.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.15.17 13.15	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.15.17 13.15	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.15.17 13.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	08.15.17 13.15	
o-Terphenyl	84-15-1	96	%	70-135	08.15.17 13.15	

Certificate of Analytical Results 560035

COG Operating LLC, Artesia, NM

Skelly Unit #743

Sample Id:	**West- 1'**	Matrix:	Soil	Date Received:	08.11.17 11.45
Lab Sample Id:	560035-008	Date Collected:	08.09.17 10.15	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.16.17 09.20	Basis:	Wet Weight
Seq Number:	3025345				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00353	0.00353	mg/kg	08.17.17 00.53	U	1
Toluene	108-88-3	<0.00353	0.00353	mg/kg	08.17.17 00.53	U	1
Ethylbenzene	100-41-4	<0.00353	0.00353	mg/kg	08.17.17 00.53	U	1
m,p-Xylenes	179601-23-1	<0.00707	0.00707	mg/kg	08.17.17 00.53	U	1
o-Xylene	95-47-6	**0.00445**	0.00353	mg/kg	08.17.17 00.53		1
Total Xylenes	1330-20-7	**0.00445**	0.00353	mg/kg	08.17.17 00.53		1
Total BTEX		**0.00445**	0.00353	mg/kg	08.17.17 00.53		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	80-120	08.17.17 00.53	
4-Bromofluorobenzene	460-00-4	86	%	80-120	08.17.17 00.53	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

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

QC Summary 560035

COG Operating LLC

Skelly Unit #743

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 3025638 Matrix: Solid Date Prep: 08.21.17
MB Sample Id: 729712-1-BLK LCS Sample Id: 729712-1-BKS LCSD Sample Id: 729712-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.99	250	258	103	255	102	90-110	1	20	mg/kg	08.21.17 23:31	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 3025638 Matrix: Soil Date Prep: 08.21.17
Parent Sample Id: 560034-001 MS Sample Id: 560034-001 S MSD Sample Id: 560034-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	9.36	249	268	104	267	103	90-110	0	20	mg/kg	08.21.17 23:54	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 3025638 Matrix: Soil Date Prep: 08.21.17
Parent Sample Id: 560035-003 MS Sample Id: 560035-003 S MSD Sample Id: 560035-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.98	249	268	108	263	106	90-110	2	20	mg/kg	08.22.17 01:42	

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3025055 Matrix: Solid Date Prep: 08.15.17
MB Sample Id: 729383-1-BLK LCS Sample Id: 729383-1-BKS LCSD Sample Id: 729383-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	874	87	849	85	70-135	3	35	mg/kg	08.15.17 09:30	
Diesel Range Organics (DRO)	<15.0	1000	1050	105	1050	105	70-135	0	35	mg/kg	08.15.17 09:30	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	98		108		105		70-135	%	08.15.17 09:30
o-Terphenyl	95		122		117		70-135	%	08.15.17 09:30

QC Summary 560035

COG Operating LLC

Skelly Unit #743

Analytical Method: TPH By SW8015 Mod | Prep Method: TX1005P
Seq Number: 3025055 | Matrix: Soil | Date Prep: 08.15.17
Parent Sample Id: 560035-001 | MS Sample Id: 560035-001 S | MSD Sample Id: 560035-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	997	850	85	905	91	70-135	6	35	mg/kg	08.15.17 10:31	
Diesel Range Organics (DRO)	<15.0	997	1090	109	1050	105	70-135	4	35	mg/kg	08.15.17 10:31	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	118		103		70-135	%	08.15.17 10:31
o-Terphenyl	118		114		70-135	%	08.15.17 10:31

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3025079 | Matrix: Solid | Date Prep: 08.15.17
MB Sample Id: 729398-1-BLK | LCS Sample Id: 729398-1-BKS | LCSD Sample Id: 729398-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.122	122	0.121	120	70-130	1	35	mg/kg	08.16.17 15:01	
Toluene	<0.00200	0.0998	0.123	123	0.120	119	70-130	2	35	mg/kg	08.16.17 15:01	
Ethylbenzene	<0.00200	0.0998	0.116	116	0.113	112	71-129	3	35	mg/kg	08.16.17 15:01	
m,p-Xylenes	<0.00399	0.200	0.237	119	0.233	116	70-135	2	35	mg/kg	08.16.17 15:01	
o-Xylene	<0.00200	0.0998	0.118	118	0.116	115	71-133	2	35	mg/kg	08.16.17 15:01	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	96		116		106		80-120	%	08.16.17 15:01
4-Bromofluorobenzene	109		104		102		80-120	%	08.16.17 15:01

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3025339 | Matrix: Solid | Date Prep: 08.15.17
MB Sample Id: 729487-1-BLK | LCS Sample Id: 729487-1-BKS | LCSD Sample Id: 729487-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.117	116	0.115	115	70-130	2	35	mg/kg	08.15.17 08:53	
Toluene	<0.00202	0.101	0.113	112	0.112	112	70-130	1	35	mg/kg	08.15.17 08:53	
Ethylbenzene	<0.00202	0.101	0.110	109	0.110	110	71-129	0	35	mg/kg	08.15.17 08:53	
m,p-Xylenes	<0.00403	0.202	0.215	106	0.214	106	70-135	0	35	mg/kg	08.15.17 08:53	
o-Xylene	<0.00202	0.101	0.103	102	0.103	103	71-133	0	35	mg/kg	08.15.17 08:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		100		100		80-120	%	08.15.17 08:53
4-Bromofluorobenzene	84		86		88		80-120	%	08.15.17 08:53

QC Summary 560035

COG Operating LLC

Skelly Unit #743

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3025345 — Matrix: Solid — Date Prep: 08.16.17
MB Sample Id: 729520-1-BLK — LCS Sample Id: 729520-1-BKS — LCSD Sample Id: 729520-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.124	124	0.124	124	70-130	0	35	mg/kg	08.17.17 11:56	
Toluene	<0.00199	0.0996	0.122	122	0.123	123	70-130	1	35	mg/kg	08.17.17 11:56	
Ethylbenzene	<0.00199	0.0996	0.121	121	0.121	121	71-129	0	35	mg/kg	08.17.17 11:56	
m,p-Xylenes	<0.00398	0.199	0.237	119	0.237	119	70-135	0	35	mg/kg	08.17.17 11:56	
o-Xylene	<0.00199	0.0996	0.115	115	0.116	116	71-133	1	35	mg/kg	08.17.17 11:56	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		98		95		80-120	%	08.17.17 11:56
4-Bromofluorobenzene	82		86		85		80-120	%	08.17.17 11:56

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3025079 — Matrix: Soil — Date Prep: 08.15.17
Parent Sample Id: 559928-001 — MS Sample Id: 559928-001 S — MSD Sample Id: 559928-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0750	75	0.0588	59	70-130	24	35	mg/kg	08.16.17 15:01	X
Toluene	<0.00200	0.0998	0.0516	52	0.0386	39	70-130	29	35	mg/kg	08.16.17 15:01	X
Ethylbenzene	<0.00200	0.0998	0.0345	35	0.0242	24	71-129	35	35	mg/kg	08.16.17 15:01	X
m,p-Xylenes	<0.00399	0.200	0.0673	34	0.0472	24	70-135	35	35	mg/kg	08.16.17 15:01	X
o-Xylene	<0.00200	0.0998	0.0304	30	0.0241	24	71-133	23	35	mg/kg	08.16.17 15:01	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		110		80-120	%	08.16.17 15:01
4-Bromofluorobenzene	102		98		80-120	%	08.16.17 15:01

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3025339 — Matrix: Soil — Date Prep: 08.15.17
Parent Sample Id: 560035-003 — MS Sample Id: 560035-003 S — MSD Sample Id: 560035-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0990	0.102	103	0.110	110	70-130	8	35	mg/kg	08.15.17 09:31	
Toluene	<0.00198	0.0990	0.0983	99	0.104	104	70-130	6	35	mg/kg	08.15.17 09:31	
Ethylbenzene	<0.00198	0.0990	0.0926	94	0.103	103	71-129	11	35	mg/kg	08.15.17 09:31	
m,p-Xylenes	<0.00396	0.198	0.179	90	0.195	98	70-135	9	35	mg/kg	08.15.17 09:31	
o-Xylene	<0.00198	0.0990	0.0871	88	0.0993	99	71-133	13	35	mg/kg	08.15.17 09:31	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		96		80-120	%	08.15.17 09:31
4-Bromofluorobenzene	88		90		80-120	%	08.15.17 09:31

QC Summary 560035

COG Operating LLC

Skelly Unit #743

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

Seq Number: 3025345 Matrix: Soil Date Prep: 08.16.17

Parent Sample Id: 560035-001 MS Sample Id: 560035-001 S MSD Sample Id: 560035-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00348	0.174	0.186	107	0.176	101	70-130	6	35	mg/kg	08.17.17 12:32	
Toluene	<0.00348	0.174	0.176	101	0.165	94	70-130	6	35	mg/kg	08.17.17 12:32	
Ethylbenzene	<0.00348	0.174	0.162	93	0.151	86	71-129	7	35	mg/kg	08.17.17 12:32	
m,p-Xylenes	<0.00697	0.348	0.313	90	0.291	83	70-135	7	35	mg/kg	08.17.17 12:32	
o-Xylene	<0.00348	0.174	0.154	89	0.145	83	71-133	6	35	mg/kg	08.17.17 12:32	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		98		80-120	%	08.17.17 12:32
4-Bromofluorobenzene	83		87		80-120	%	08.17.17 12:32

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Page 1 Of 1

Xenco Quote #

Xenco Job # 560035

Client / Reporting Information

Company Name / Branch: COG Operating LLC

Company Address: 2407 PECOS Avenue Artesia NM 88210

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

Phone No: 575-748-1553

Project Contact: Aaron Lieb

Samplers's Name- Aaron Lieb

Project Information

Project Name/Number: Skelly Unit #743

Project Location: Skelly Unit #743

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

PO Number:

Analytical Information

Matrix Codes

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

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH/ EXTENDED	BTEX	Chloride						Field Comments
1	North- Surface	–	8-9-17	10:15AM	S	1									X	X	X						
2	North- 1'	1				1									X	X	X						
3	South- Surface	–				1									X	X	X						
4	South- 1'	1				1									X	X	X						
5	East - Surface	–				1									X	X	X						
6	East - 1'	1				1									X	X	X						
7	West - Surface	–				1									X	X	X						
8	West - 1'	1				1									X	X	X						
9																							
10																							

Turnaround Time (Business days)

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

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

Data Deliverable Information

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

Notes:

FED-EX / UPS: Tracking #

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

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		8-11-17 10:00 AM	1 Jed Butler	8-11-17 1014 2 Jed Butler	8-11-17 1145	2
3	Relinquished by: ARTESIO MONTOYA	8-17-17 14:20	3	4		4
5	Relinquished by:	Date Time:	5	Custody Seal #	Preserved where applicable	

Temp: 3.8 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 3.6

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC

Date/ Time Received: 08/11/2017 11:45:00 AM

Work Order #: 560035

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3.6
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seal present on shipping container/ cooler?	**N/A**
#5 *Custody Seals intact on shipping container/ cooler?	**N/A**
#6 Custody Seals intact on sample bottles?	**N/A**
#7 *Custody Seals Signed and dated?	**N/A**
#8 *Chain of Custody present?	**Yes**
#9 Sample instructions complete on Chain of Custody?	**Yes**
#10 Any missing/extra samples?	**No**
#11 Chain of Custody signed when relinquished/ received?	**Yes**
#12 Chain of Custody agrees with sample label(s)?	**Yes**
#13 Container label(s) legible and intact?	**Yes**
#14 Sample matrix/ properties agree with Chain of Custody?	**Yes**
#15 Samples in proper container/ bottle?	**Yes**
#16 Samples properly preserved?	**Yes**
#17 Sample container(s) intact?	**Yes**
#18 Sufficient sample amount for indicated test(s)?	**Yes**
#19 All samples received within hold time?	**Yes**
#20 Subcontract of sample(s)?	**N/A**
#21 VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Jessica Kramer Date: 08/14/2017
Jessica Kramer

Checklist reviewed by: Kelsey Brooks Date: 08/14/2017
Kelsey Brooks

Analytical Report 578650

for

TRC Solutions, Inc

Project Manager: Joel Lowry

Skelly #743

15-MAR-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

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

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

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

Table of Contents

15-MAR-18

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

Reference: XENCO Report No(s): **578650**
Skelly #743
Project Address: Lea Co, NM

Joel Lowry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 578650. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 578650 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kelsey Brooks
Project Manager

Sample Cross Reference 578650

TRC Solutions, Inc, Midland, TX

Skelly #743

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
T-2 NSW	S	03-06-18 11:05	4 ft	578650-001
T-2 ESW	S	03-06-18 11:10	4 ft	578650-002
T-2 WSW	S	03-06-18 11:15	4 ft	578650-003
T-2 SSW	S	03-06-18 11:20	4 ft	578650-004
T-2 NW @ 4'	S	03-06-18 11:25	4 ft	578650-005
T-2 SE @ 4'	S	03-06-18 11:30	4 ft	578650-006
T-2 1b @ 2'	S	03-06-18 11:35	2 ft	578650-007
T-1 NSW	S	03-06-18 11:45	6 In	578650-008
SP-1	S	03-06-18 11:50	ft	Not Analyzed

CASE NARRATIVE

Client Name: TRC Solutions, Inc

Project Name: Skelly #743

Project ID:
Work Order Number(s): *578650*

Report Date: *15-MAR-18*
Date Received: *03/08/2018*

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results
578650
TRC Solutions, Inc, Midland, TX
Skelly #743

Sample Id: **T-2 NSW** Matrix: Soil Sample Depth: 4 ft

Lab Sample Id: 578650-001 Date Collected: 03.06.18 11.05 Date Received: 03.08.18 10.30

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

Analyst: OJS % Moist: Tech: OJS

Seq Number: 3043636 Date Prep: 03.13.18 16.30

Prep seq: 7640733

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**348**	4.99	0.857	mg/kg	03.14.18 02:16		1

Sample Id: **T-2 ESW** Matrix: Soil Sample Depth: 4 ft

Lab Sample Id: 578650-002 Date Collected: 03.06.18 11.10 Date Received: 03.08.18 10.30

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

Analyst: OJS % Moist: Tech: OJS

Seq Number: 3043699 Date Prep: 03.14.18 10.00

Prep seq: 7640751

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<0.858	5.00	0.858	mg/kg	03.14.18 12:54	U	1

Sample Id: **T-2 WSW** Matrix: Soil Sample Depth: 4 ft

Lab Sample Id: 578650-003 Date Collected: 03.06.18 11.15 Date Received: 03.08.18 10.30

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

Analyst: OJS % Moist: Tech: OJS

Seq Number: 3043699 Date Prep: 03.14.18 10.00

Prep seq: 7640751

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**335**	4.98	0.855	mg/kg	03.14.18 13:10		1

Sample Id: **T-2 SSW** Matrix: Soil Sample Depth: 4 ft

Lab Sample Id: 578650-004 Date Collected: 03.06.18 11.20 Date Received: 03.08.18 10.30

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

Analyst: OJS % Moist: Tech: OJS

Seq Number: 3043699 Date Prep: 03.14.18 10.00

Prep seq: 7640751

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<0.852	4.96	0.852	mg/kg	03.14.18 13:27	U	1

Certificate of Analytical Results
578650
TRC Solutions, Inc, Midland, TX
Skelly #743

Sample Id: **T-2 NW @ 4'** Matrix: Soil Sample Depth: 4 ft

Lab Sample Id: 578650-005 Date Collected: 03.06.18 11.25 Date Received: 03.08.18 10.30

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

Analyst: OJS % Moist: Tech: OJS

Seq Number: 3043699 Date Prep: 03.14.18 10.00

Prep seq: 7640751

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**182**	4.99	0.857	mg/kg	03.14.18 13:32		1

Sample Id: **T-2 SE @ 4'** Matrix: Soil Sample Depth: 4 ft

Lab Sample Id: 578650-006 Date Collected: 03.06.18 11.30 Date Received: 03.08.18 10.30

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

Analyst: OJS % Moist: Tech: OJS

Seq Number: 3043699 Date Prep: 03.14.18 10.00

Prep seq: 7640751

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**1020**	4.98	0.855	mg/kg	03.14.18 13:38		1

Sample Id: **T-2 1b @ 2'** Matrix: Soil Sample Depth: 2 ft

Lab Sample Id: 578650-007 Date Collected: 03.06.18 11.35 Date Received: 03.08.18 10.30

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

Analyst: OJS % Moist: Tech: OJS

Seq Number: 3043699 Date Prep: 03.14.18 10.00

Prep seq: 7640751

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<0.848	4.94	0.848	mg/kg	03.14.18 13:43	U	1

Certificate of Analytical Results
578650

TRC Solutions, Inc, Midland, TX
Skelly #743

Sample Id: **T-1 NSW** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 578650-008 Date Collected: 03.06.18 11.45 Date Received: 03.08.18 10.30

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

Analyst: OJS % Moist: Tech: OJS

Seq Number: 3043699 Date Prep: 03.14.18 10.00

Prep seq: 7640751

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<0.850	4.95	0.850	mg/kg	03.14.18 13:48	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3043412 Date Prep: 03.10.18 10.00

Prep seq: 7640552

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.99	15.0	7.99	mg/kg	03.11.18 01:31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.11	15.0	8.11	mg/kg	03.11.18 01:31	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<8.11	15.0	8.11	mg/kg	03.11.18 01:31	U	1
Total TPH	PHC635	<7.99		7.99	mg/kg	03.11.18 01:31	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	86	70 - 135	%		
o-Terphenyl	84	70 - 135	%		

Certificate of Analytical Results
578650
TRC Solutions, Inc, Midland, TX
Skelly #743

Sample Id: **7640552-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7640552-1-BLK Date Collected: Date Received:

Analytical Method: TPH by SW8015 Mod Prep Method: 1005

Analyst: ARM % Moist: Tech: ARM

Seq Number: 3043412 Date Prep: 03.10.18 10.00

Prep seq: 7640552

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<8.00	15.0	8.00	mg/kg	03.10.18 23:15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.13	15.0	8.13	mg/kg	03.10.18 23:15	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<8.13	15.0	8.13	mg/kg	03.10.18 23:15	U	1
Total TPH	PHC635	<8		8	mg/kg	03.10.18 23:15	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	82	70 - 135	%		
o-Terphenyl	88	70 - 135	%		

Sample Id: **7640733-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7640733-1-BLK Date Collected: Date Received:

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

Analyst: OJS % Moist: Tech: OJS

Seq Number: 3043636 Date Prep: 03.13.18 16.30

Prep seq: 7640733

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<0.858	5.00	0.858	mg/kg	03.13.18 23:37	U	1
Nitrate as N	14797-55-8	<0.157	1.00	0.157	mg/kg	03.13.18 23:37	U	1
Nitrite as N	14797-65-0	<0.159	1.00	0.159	mg/kg	03.13.18 23:37	U	1

Sample Id: **7640751-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7640751-1-BLK Date Collected: Date Received:

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

Analyst: OJS % Moist: Tech: OJS

Seq Number: 3043699 Date Prep: 03.14.18 10.00

Prep seq: 7640751

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<0.858	5.00	0.858	mg/kg	03.14.18 10:52	U	1

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

Form 2 - Surrogate Recoveries

Project Name: Skelly #743

Work Orders : 578650,

Project ID:

Lab Batch #: 3043412 **Sample:** 7640552-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 03/10/18 23:15

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.2	100	82	70-135	
o-Terphenyl	43.8	50.0	88	70-135	

Lab Batch #: 3043412 **Sample:** 7640552-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 03/10/18 23:34

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	121	100	121	70-135	
o-Terphenyl	55.5	50.0	111	70-135	

Lab Batch #: 3043412 **Sample:** 7640552-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 03/10/18 23:54

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.5	100	94	70-135	
o-Terphenyl	43.4	50.0	87	70-135	

Lab Batch #: 3043412 **Sample:** 578596-005 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/11/18 00:33

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.6	99.8	100	70-135	
o-Terphenyl	46.0	49.9	92	70-135	

Lab Batch #: 3043412 **Sample:** 578596-005 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/11/18 00:52

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	100	112	70-135	
o-Terphenyl	49.1	50.0	98	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: Skelly #743

Work Order #: 578650 **Project ID:**

Analyst: OJS **Date Prepared:** 03/13/2018 **Date Analyzed:** 03/13/2018

Lab Batch ID: 3043636 **Sample:** 7640733-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<0.858	250	255	102	250	275	110	8	90-110	20	

Analyst: OJS **Date Prepared:** 03/14/2018 **Date Analyzed:** 03/14/2018

Lab Batch ID: 3043699 **Sample:** 7640751-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<0.858	250	237	95	250	253	101	7	90-110	20	

Analyst: ARM **Date Prepared:** 03/10/2018 **Date Analyzed:** 03/10/2018

Lab Batch ID: 3043412 **Sample:** 7640552-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	1090	109	1000	943	94	14	70-135	35	
Diesel Range Organics (DRO)	<8.13	1000	984	98	1000	832	83	17	70-135	35	

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

Form 3 - MS / MSD Recoveries

Project Name: Skelly #743

Work Order # : 578650 **Project ID:**

Lab Batch ID: 3043636 **QC- Sample ID:** 578597-004 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 03/13/2018 **Date Prepared:** 03/13/2018 **Analyst:** OJS

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	682	248	937	103	248	946	106	1	90-110	20	

Lab Batch ID: 3043636 **QC- Sample ID:** 578599-004 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 03/14/2018 **Date Prepared:** 03/13/2018 **Analyst:** OJS

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<0.850	248	250	101	248	285	115	13	90-110	20	X

Lab Batch ID: 3043699 **QC- Sample ID:** 578650-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 03/14/2018 **Date Prepared:** 03/14/2018 **Analyst:** OJS

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<0.858	250	276	110	250	265	106	4	90-110	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.

Form 3 - MS / MSD Recoveries

Project Name: Skelly #743

Work Order # : 578650 **Project ID:**

Lab Batch ID: 3043699 **QC- Sample ID:** 579022-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 03/14/2018 **Date Prepared:** 03/14/2018 **Analyst:** OJS

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	128	250	401	109	250	411	113	2	90-110	20	X

Lab Batch ID: 3043412 **QC- Sample ID:** 578596-005 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 03/11/2018 **Date Prepared:** 03/10/2018 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	998	915	92	1000	967	97	6	70-135	35	
Diesel Range Organics (DRO)	<8.11	998	800	80	1000	839	84	5	70-135	35	

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

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

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

CHAIN OF CUSTODY

Page 1 Of 1

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

Xenco Job # 578650

Client / Reporting Information

Company Name / Branch: TRC Environmental Corporation
Company Address: 2057 Commerce Drive, Midland, TX 79703
Email: jlowry@trcsolutions.com, zconder@trcsolutions.com
Phone No: 432-466-4450
Project Contact: Joel Lowry
Samplers's Name: Zach Conder

Project Information

Project Name/Number: Skelly #743
Project Location: Lea Co, NM
Invoice To: COG Operating C/O Becky Haskell
Invoice:

Matrix Codes

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

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Analytical Information: TPH 8015 M Ext	Chloride E 300	BTEX 8021B	Hold	Field Comments
1	T-2 NSW	4'	3/6/2018	11:05	S	1										X			
2	T-2 ESW	4'	3/6/2018	11:10	S	1										X			
3	T-2 WSW	4'	3/6/2018	11:15	S	1										X			
4	T-2 SSW	4'	3/6/2018	11:20	S	1										X			
5	T-2 NW @ 4'	4'	3/6/2018	11:25	S	1										X			
6	T-2 SE @ 4'	4'	3/6/2018	11:30	S	1										X			
7	T-1b @ 2'	2'	3/6/2018	11:35	S	1										X			
8	T-1 NSW	6"	3/6/2018	11:45	S	1									X	X			
9	SP-1	comp.	3/6/2018	11:50	S	1									X	X	X		
10																			
11																			
12																			

Temp: 4.2 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 4

Turnaround Time (Business days)

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

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

Data Deliverable Information

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

Notes:

jlowry@trcsolutions.com zconder@trcsolutions.com
rhaskell@concho.com
kblackburn@trcsolutions.com
dneel2@concho.com
FED-EX / UPS: Tracking #

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

	Relinquished by	Date Time	Received By
1	Sampler:	3/7/18 4:05	Brittany Cox
2	Brittany Cox	3/7/18 4:08	
3			
4			3/8 10:30
5			

Custody Seal # | Preserved where applicable | On Ice | Cooler Temp. 1.1 | Thermo. Corr. Factor

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

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: TRC Solutions, Inc

Date/ Time Received: 03/08/2018 10:30:00 AM

Work Order #: 578650

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

Temperature Measuring device used : R8

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	4	
#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?	**No**	TPH received in bulk jars
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**No**	
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Connie Hernandez Date: 03/08/2018

Checklist reviewed by: Kelsey Brooks Date: 03/09/2018

Photographic Log

Client: COG Operating, LLC
Project Name: Skelly Unit #743

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

Photograph No. 1 **Description:** **View of surface staining from initial release.** **Direction:** **Southwest**	
Photograph No. 2 **Description:** **View of surface staining from initial release.** **Direction:** **Southwest**	

Photographic Log

Client: COG Operating, LLC
Project Name: Skelly Unit #743

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

Photograph No. 3 **Description:** **View of portion of the excavated area.** **Direction:** **Southwest**	
Photograph No. 4 **Description:** **View of the excavated area.** **Direction:** **East**	

Photographic Log

Client: COG Operating, LLC
Project Name: Skelly Unit #743

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

Photograph No. 5 **Description:** **View of affected area after remediation activities.** **Direction:** **South**	
Photograph No. 6 **Description:** **View of affected area after remediation activities.** **Direction:** **South**	

Photographic Log

Client: COG Operating, LLC
Project Name: Skelly Unit #743

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

Photograph No. 7 **Description:** **View of liner within the affected area.** **Direction:** **East**	
Photograph No. 8 **Description:** **View of liner within the affected area.** **Direction:** **Southeast**	

NM OIL CONSERVATION
ARTESIA DISTRICT
JUL 07 2017
RECEIVED

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

nAB1719127651

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: COG Operating LLC OGRID # 229137	Contact: Robert McNeill
Address: 600 West Illinois Avenue, Midland TX 79701	Telephone No. 432-683-7443
Facility Name: Skelly Unit #743	Facility Type: Flowline

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-37884

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
N	22	17S	31E	945	South	1650	West	Eddy

Latitude 32.8154373 **Longitude** -103.860733

NATURE OF RELEASE

Type of Release: Oil and Produced Water	Volume of Release: 9 bbl. Oil & 10 bbl. PW	Volume Recovered: 8 bbl. Oil & 9 bbl. PW
Source of Release: Flowline	Date and Hour of Occurrence: July 6, 2017 7:30 pm	Date and Hour of Discovery: July 6, 2017 7:30 pm
Was Immediate Notice Given? ☐ Yes ☒ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour:	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

The release occurred in the pasture and was due to a polyline splitting in an area that had previously been spliced. The line will be repaired.

Describe Area Affected and Cleanup Action Taken.*

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

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

Signature: Rebecca Haskell		OIL CONSERVATION DIVISION	
Printed Name:	Rebecca Haskell	Approved by Environmental Specialist: Crystal Weaver	
Title:	Senior HSE Coordinator	Approval Date: 7/10/17	Expiration Date: N/A
E-mail Address:	rhaskell@concho.com	Conditions of Approval: see attached	Attached ☒
Date: July 7, 2017	Phone: 432-683-7443		

* Attach Additional Sheets If Necessary

2RP-4285

Operator/Responsible Party,

The OCD has received the form C-141 you provided on **7/7/17** regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number 2RP-4385 has been assigned. **Please refer to this case number in all future correspondence.**

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

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

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District II office in Artesia on or before 8/7/17. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

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

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

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

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

- Composite sampling is not generally allowed.

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

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

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

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

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

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

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

Weaver, Crystal, EMNRD

From: Rebecca Haskell <RHaskell@concho.com>
Sent: Friday, July 7, 2017 11:51 AM
To: Weaver, Crystal, EMNRD; stucker@blm.gov
Cc: Bratcher, Mike, EMNRD; Jim Amos (jamos@blm.gov)
Subject: (C-141 Initial) Skelly Unit #743 7-6-17 (30-015-37884)
Attachments: Skelly Unit #743 Initial C-141 7-6-17 (30-015-37884).pdf

Ms. Weaver / Ms. Tucker,

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

Thank You,

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

CONCHO

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

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

CONDITIONS

Action 206630

CONDITIONS

Operator: Spur Energy Partners LLC 9655 Katy Freeway Houston, TX 77024	OGRID: 328947
	Action Number: 206630
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
bhall	None	5/2/2023