[Dakota Neel]
[HSE Coordinator]

March 8, 2018

Crystal Weaver
Oil Conservation Division
District 2 – Artesia
811 S. First St.
Artesia, NM 88210

Henryetta Price
Bureau of Land Management
620 E. Green St.
Carlsbad, NM 88220

Re: Work Plan
RJ Unit #126
API #: 30-015-03784
RP#: 2RP-4520
Unit Letter G Section 35, Township 17S, Range 29E
Eddy County, NM

Ms. Weaver/Ms. Price,

COG Operating, LLC (COG) is pleased to submit for your consideration the following remediation work plan for the RJ Unit #126. This plan is in response to an oil and produced water release that occurred on December 14, 2017. A C-141 initial report was submitted to the New Mexico Oil Conservation Division (NMOCD) subsequent to the release.

BACKGROUND

On December 14, 2017, a poly flowline ruptured resulting in the release of approximately three (3) barrels (bbls) of oil and four (4) bbls of produced water in the pasture and along the lease road. Approximately one (1) bbl of oil and one (1) bbl of produced water were recovered. The RP number NMOCD assigned to this release was 2RP-4520.

On February 14, 2017, a site assessment and soil sampling were conducted in order to vertically and horizontally define the area impacted by this release. A site diagram is included in Appendix I. The analytical results from the soil sampling activities are summarized in the table below.

ANALYTICAL RESULTS

RJ Unit #126 December 14, 2017					
G-35-17S-29E					
Sample ID	Date	Chloride mg/Kg	Benzene mg/Kg	BTEX mg/Kg	TPH mg/Kg
T-1	2/14/2018	4,360	106	1,560	11,500
T-1 1'	2/14/2018	1,490	0.00805	0.0472	<15.0
T-1 2'	2/14/2018	1,400	<0.00200	0.00225	<15.0
T-1 3'	2/14/2018	1,610	<0.00202	0.00219	<14.9
T-1 4'	2/14/2018	118	<0.00199	<0.00199	<15.0
T-1 5'	2/14/2018	-	<0.00199	<0.00199	<15.0
T-2	2/14/2018	<4.96	<0.00200	0.0903	410
T-2 1'	2/14/2018	-	<0.00198	0.00254	<15.0
T-2 2'	2/14/2018	-	<0.00202	0.00288	<15.0
T-3	2/14/2018	<4.95	<0.00200	<0.00200	<15.0
T-3 1'	2/14/2018	-	<0.00200	<0.00200	<15.0
T-4	2/14/2018	<4.92	<0.00201	<0.00201	<15.0
T-4 1'	2/14/2018	-	<0.00199	0.00204	<15.0
T-4 2'	2/14/2018	-	<0.00199	<0.00199	<15.0

(-) Analysis not requested

GROUNDWATER AND SITE RANKING

According to the 2005 Chevron Texaco groundwater trend map, groundwater in the project vicinity is approximately one-hundred and eighty (180) feet below ground surface (BGS). No water well or surface water was observed within one-thousand (1,000) feet of the release site. Therefore the site ranking for this release is zero (0) based on the following:

Depth to groundwater	>100-feet
Distance to surface water body	>1000-feet
Wellhead Protection Area	>1000-feet

PROPOSED REMEDIAL ACTIONS

- The area of T1 will be excavated to the depth of three (3) feet BGS.
- All of the excavated material will be hauled to an NMOCD approved solid waste disposal facility.
- The excavation will be backfilled with caliche and contoured to match the surrounding location.
- The site will be reseeded in June of 2018.

Should you have any questions or concerns please do not hesitate to contact me.

Sincerely,

Dakota Neel
HSE Coordinator
Dneel2@concho.com

Enclosed:

Appendix I: Site Diagram
Appendix II: Initial C-141 (Copy)
Appendix III: Analytical Reports and Chain-of-Custody Forms

APPENDIX I

RJU #126 Pasture Release

CONCHO

APPENDIX II

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

State of New Mexico
Energy Minerals and Natural Resources

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

NM OIL CONSERVATION
ARTESIA DISTRICT
DEC 15 2017
RECEIVED

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

nAB1735221901

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: **RJ UNIT #126**	Facility Type: **Well**

Surface Owner: Federal	Mineral Owner: Federal	API No.: 30-015-03784

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	35	17S	29E	1295	North	2615	West	Eddy

Latitude: 32.7927394 **Longitude**: -104.0448796 NAD83

NATURE OF RELEASE

Type of Release: Oil & Produced Water	Volume of Release: 3 bbl. Oil & 4 bbl. PW	Volume Recovered: 1 bbl. Oil & 1 bbl. PW
Source of Release: Flowline	Date and Hour of Occurrence: 12-14-17 9:30am	Date and Hour of Discovery: 12-14-17 9:30am
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.*

This release was caused by a rupture in a poly flowline. The damaged portion of the flowline has been replaced.

Describe Area Affected and Cleanup Action Taken.*

The release occurred in the pasture along the lease road. A vacuum truck was dispatched to recover all freestanding fluids. Concho will have the spill area evaluated for any possible impact from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation activities.

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

Signature: Dakota Neel	OIL CONSERVATION DIVISION Approved by Environmental Specialist: Crystal Weaver
Printed Name: Dakota Neel	
Title: HSE Coordinator	Approval Date: 12/18/17 Expiration Date: N/A
E-mail Address: dneel2@concho.com	Conditions of Approval: See attached Attached ☒ 2RP-4520
Date: December 15, 2017 Phone: 575-746-2010	

* Attach Additional Sheets If Necessary

12/15/17AB

Operator/Responsible Party,

The OCD has received the form C-141 you provided on **12/15/17** regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number 2RP-4520 has been assigned. **Please refer to this case number in all future correspondence.**

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

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

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District II office in Artesia on or before 1/15/18. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

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

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

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

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

- Composite sampling is not generally allowed.

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

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

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

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

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

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

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

Weaver, Crystal, EMNRD

From:	Dakota Neel <DNeel2@concho.com>
Sent:	Friday, December 15, 2017 7:06 AM
To:	Weaver, Crystal, EMNRD; Bratcher, Mike, EMNRD; stucker@blm.gov
Cc:	James_Amos@blm.gov; Robert McNeill; Sheldon Hitchcock; Rebecca Haskell; Christopher Gray
Subject:	(C-141 Initial) RJ Unit #126 (FL) 12-14-17 (30-15-03784)
Attachments:	(C-141 Initial) RJ Unit #126 (FL) 12-14-17 (30-15-03784).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,

Dakota Neel
HSE Coordinator
COG Operating LLC
Cell: 432-215-2783
dneel2@concho.com

2407 Pecos Ave.
Artesia , NM 88210

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APPENDIX III

Certificate of Analysis Summary 576848

COG Operating LLC, Artesia, NM

Project Name: RJ Unit #126

Project Id:

Contact: Sheldon Hitchcock

Project Location: Eddy CO, NM

Date Received in Lab: Mon Feb-19-18 09:00 am

Report Date: 01-MAR-18

Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	576848-001		576848-002		576848-003		576848-004		576848-005		576848-006	
	Field Id:	T-1		T-1		T-1		T-1		T-1		T-1	
	Depth:	0- ft		1- ft		2- ft		3- ft		4- ft		5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-14-18 00:00		Feb-14-18 00:00		Feb-14-18 00:00		Feb-14-18 00:00		Feb-14-18 00:00		Feb-14-18 00:00	
BTEX by EPA 8021B	***Extracted:***	Feb-23-18 08:00		Feb-20-18 15:00		Feb-20-18 15:00		Feb-22-18 16:50		Feb-22-18 16:50		Feb-22-18 16:50	
	Analyzed:	Feb-23-18 13:30		Feb-21-18 23:46		Feb-21-18 22:29		Feb-22-18 20:25		Feb-23-18 00:33		Feb-23-18 00:52	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		106	10.0	0.00805	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00199	0.00199
Toluene		524	10.0	0.0185	0.00199	0.00225	0.00200	0.00219	0.00202	<0.00199	0.00199	<0.00199	0.00199
Ethylbenzene		367	10.0	0.00813	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00199	0.00199
m,p-Xylenes		375	20.1	0.00872	0.00398	<0.00399	0.00399	<0.00403	0.00403	<0.00398	0.00398	<0.00398	0.00398
o-Xylene		183	10.0	0.00382	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00199	0.00199
Total Xylenes		558	10.0	0.0125	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00199	0.00199
Total BTEX		1560	10.0	0.0472	0.00199	0.00225	0.00200	0.00219	0.00202	<0.00199	0.00199	<0.00199	0.00199
Chloride by EPA 300	***Extracted:***	Feb-23-18 13:30		Feb-23-18 13:30		Feb-23-18 13:30		Feb-26-18 12:00		Feb-26-18 18:00			
	Analyzed:	Feb-23-18 18:27		Feb-23-18 18:32		Feb-23-18 18:37		Feb-26-18 16:15		Feb-27-18 03:52			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		4360	25.0	1490	24.9	1400	5.00	1610	25.0	118	4.95		
TPH By SW8015 Mod	***Extracted:***	Feb-21-18 10:00		Feb-21-18 10:00		Feb-21-18 10:00		Feb-21-18 10:00		Feb-21-18 10:00		Feb-21-18 10:00	
	Analyzed:	Feb-21-18 15:35		Feb-21-18 16:00		Feb-21-18 16:27		Feb-21-18 16:52		Feb-21-18 17:18		Feb-21-18 17:43	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		5870	74.9	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		5640	74.9	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Oil Range Hydrocarbons (ORO)		<74.9	74.9	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Total TPH		11500	74.9	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0

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

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 576848

COG Operating LLC, Artesia, NM

Project Name: RJ Unit #126

Project Id:

Contact: Sheldon Hitchcock

Project Location: Eddy CO, NM

Date Received in Lab: Mon Feb-19-18 09:00 am

Report Date: 01-MAR-18

Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	576848-007		576848-008		576848-009		576848-010		576848-011		576848-012	
	Field Id:	T-2		T-2		T-2		T-3		T-3		T-4	
	Depth:	0- ft		1- ft		2- ft		0- ft		1- ft		0- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-14-18 00:00		Feb-14-18 00:00		Feb-14-18 00:00		Feb-14-18 00:00		Feb-14-18 00:00		Feb-14-18 00:00	
BTEX by EPA 8021B	***Extracted:***	Feb-22-18 16:50		Feb-22-18 16:50		Feb-22-18 16:50		Feb-23-18 08:00		Feb-23-18 08:00		Feb-22-18 16:50	
	Analyzed:	Feb-23-18 01:11		Feb-23-18 01:30		Feb-23-18 01:48		Feb-23-18 10:19		Feb-23-18 10:38		Feb-23-18 02:07	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
Toluene		0.00282	0.00200	0.00254	0.00198	0.00288	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
Ethylbenzene		0.0147	0.00200	<0.00198	0.00198	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
m,p-Xylenes		0.0428	0.00401	<0.00396	0.00396	<0.00404	0.00404	<0.00399	0.00399	<0.00401	0.00401	<0.00402	0.00402
o-Xylene		0.0300	0.00200	<0.00198	0.00198	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
Total Xylenes		0.0728	0.00200	<0.00198	0.00198	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
Total BTEX		0.0903	0.00200	0.00254	0.00198	0.00288	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
Chloride by EPA 300	***Extracted:***	Feb-23-18 13:30						Feb-23-18 16:00				Feb-23-18 16:00	
	Analyzed:	Feb-23-18 18:42						Feb-23-18 19:14				Feb-23-18 19:30	
	Units/RL:	mg/kg	RL					mg/kg	RL			mg/kg	RL
Chloride		<4.96	4.96					<4.95	4.95			<4.92	4.92
TPH By SW8015 Mod	***Extracted:***	Feb-21-18 10:00		Feb-21-18 10:00		Feb-21-18 10:00		Feb-21-18 10:00		Feb-21-18 10:00		Feb-21-18 10:00	
	Analyzed:	Feb-21-18 19:02		Feb-21-18 19:30		Feb-21-18 19:56		Feb-21-18 20:21		Feb-21-18 20:49		Feb-21-18 21:15	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		57.7	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)		352	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		410	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

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Jessica Kramer
Project Assistant

Certificate of Analysis Summary 576848

COG Operating LLC, Artesia, NM

Project Name: RJ Unit #126

Project Id:

Contact: Sheldon Hitchcock

Project Location: Eddy CO, NM

Date Received in Lab: Mon Feb-19-18 09:00 am

Report Date: 01-MAR-18

Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	576848-013		576848-014					
	Field Id:	T-4		T-4					
	Depth:	1- ft		2- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Feb-14-18 00:00		Feb-14-18 00:00					
BTEX by EPA 8021B	***Extracted:***	Feb-22-18 16:50		Feb-22-18 16:50					
	Analyzed:	Feb-23-18 02:26		Feb-23-18 00:14					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00199	0.00199	<0.00199	0.00199				
Toluene		0.00204	0.00199	<0.00199	0.00199				
Ethylbenzene		<0.00199	0.00199	<0.00199	0.00199				
m,p-Xylenes		<0.00398	0.00398	<0.00398	0.00398				
o-Xylene		<0.00199	0.00199	<0.00199	0.00199				
Total Xylenes		<0.00199	0.00199	<0.00199	0.00199				
Total BTEX		0.00204	0.00199	<0.00199	0.00199				
TPH By SW8015 Mod	***Extracted:***	Feb-21-18 10:00		Feb-21-18 10:00					
	Analyzed:	Feb-21-18 21:44		Feb-21-18 22:09					
	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				

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
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Jessica Kramer
Project Assistant

Analytical Report 576848

for

COG Operating LLC

Project Manager: Sheldon Hitchcock

RJ Unit #126

01-MAR-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

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

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

Xenco-El Paso (EPA Lab code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-17-13)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco-Atlanta: Louisiana (04176)
Xenco-Tampa: Florida (E87429), North Carolina (483), DoD (LI0-135), Kentucky (123066)
Xenco-Lakeland: Florida (E84098)

01-MAR-18

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

Reference: XENCO Report No(s): **576848**
RJ Unit #126
Project Address: Eddy CO, NM

Sheldon Hitchcock:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 576848. 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. 576848 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,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 576848

COG Operating LLC, Artesia, NM

RJ Unit #126

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
T-1	S	02-14-18 00:00	0 ft	576848-001
T-1	S	02-14-18 00:00	1 ft	576848-002
T-1	S	02-14-18 00:00	2 ft	576848-003
T-1	S	02-14-18 00:00	3 ft	576848-004
T-1	S	02-14-18 00:00	4 ft	576848-005
T-1	S	02-14-18 00:00	5 ft	576848-006
T-2	S	02-14-18 00:00	0 ft	576848-007
T-2	S	02-14-18 00:00	1 ft	576848-008
T-2	S	02-14-18 00:00	2 ft	576848-009
T-3	S	02-14-18 00:00	0 ft	576848-010
T-3	S	02-14-18 00:00	1 ft	576848-011
T-4	S	02-14-18 00:00	0 ft	576848-012
T-4	S	02-14-18 00:00	1 ft	576848-013
T-4	S	02-14-18 00:00	2 ft	576848-014

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3041950 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Lab Sample ID 576848-004 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 576848-004, -005, -006, -007, -008, -009, -012, -013, -014.
The Laboratory Control Sample for Benzene is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3041964 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3041987 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analytical Results 576848

COG Operating LLC, Artesia, NM

RJ Unit #126

Sample Id:	**T-1**	Matrix:	Soil	Date Received:	02.19.18 09.00
Lab Sample Id:	576848-001	Date Collected:	02.14.18 00.00	Sample Depth:	0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	LRI			% Moisture:	
Analyst:	OJS	Date Prep:	02.23.18 13.30	Basis:	Wet Weight
Seq Number:	3042082				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4360**	25.0	mg/kg	02.23.18 18.27		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.21.18 10.00	Basis:	Wet Weight
Seq Number:	3041818				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**5870**	74.9	mg/kg	02.21.18 15.35		5
Diesel Range Organics (DRO)	C10C28DRO	**5640**	74.9	mg/kg	02.21.18 15.35		5
Oil Range Hydrocarbons (ORO)	PHCG2835	<74.9	74.9	mg/kg	02.21.18 15.35	U	5
Total TPH	PHC635	**11500**	74.9	mg/kg	02.21.18 15.35		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	02.21.18 15.35	
o-Terphenyl	84-15-1	88	%	70-135	02.21.18 15.35	

Certificate of Analytical Results 576848

COG Operating LLC, Artesia, NM

RJ Unit #126

Sample Id:	**T-1**	Matrix:	Soil	Date Received:	02.19.18 09.00
Lab Sample Id:	576848-001	Date Collected:	02.14.18 00.00	Sample Depth:	0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.23.18 08.00	Basis:	Wet Weight
Seq Number:	3041987				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**106**	10.0	mg/kg	02.23.18 13.30		5000
Toluene	108-88-3	**524**	10.0	mg/kg	02.23.18 13.30		5000
Ethylbenzene	100-41-4	**367**	10.0	mg/kg	02.23.18 13.30		5000
m,p-Xylenes	179601-23-1	**375**	20.1	mg/kg	02.23.18 13.30		5000
o-Xylene	95-47-6	**183**	10.0	mg/kg	02.23.18 13.30		5000
Total Xylenes	1330-20-7	**558**	10.0	mg/kg	02.23.18 13.30		5000
Total BTEX		**1560**	10.0	mg/kg	02.23.18 13.30		5000

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	120	%	80-120	02.23.18 13.30	
1,4-Difluorobenzene	540-36-3	85	%	80-120	02.23.18 13.30	

Certificate of Analytical Results 576848

COG Operating LLC, Artesia, NM

RJ Unit #126

Sample Id:	**T-1**	Matrix:	Soil	Date Received:	02.19.18 09.00
Lab Sample Id:	576848-002	Date Collected:	02.14.18 00.00	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	LRI			% Moisture:	
Analyst:	OJS	Date Prep:	02.23.18 13.30	Basis:	Wet Weight
Seq Number:	3042082				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1490**	24.9	mg/kg	02.23.18 18.32		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.21.18 10.00	Basis:	Wet Weight
Seq Number:	3041818				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.21.18 16.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.21.18 16.00	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	02.21.18 16.00	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.21.18 16.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	02.21.18 16.00	
o-Terphenyl	84-15-1	107	%	70-135	02.21.18 16.00	

Certificate of Analytical Results 576848

COG Operating LLC, Artesia, NM

RJ Unit #126

Sample Id:	**T-1**	Matrix:	Soil	Date Received:	02.19.18 09.00
Lab Sample Id:	576848-002	Date Collected:	02.14.18 00.00	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.20.18 15.00	Basis:	Wet Weight
Seq Number:	3041964				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.00805**	0.00199	mg/kg	02.21.18 23.46		1
Toluene	108-88-3	**0.0185**	0.00199	mg/kg	02.21.18 23.46		1
Ethylbenzene	100-41-4	**0.00813**	0.00199	mg/kg	02.21.18 23.46		1
m,p-Xylenes	179601-23-1	**0.00872**	0.00398	mg/kg	02.21.18 23.46		1
o-Xylene	95-47-6	**0.00382**	0.00199	mg/kg	02.21.18 23.46		1
Total Xylenes	1330-20-7	**0.0125**	0.00199	mg/kg	02.21.18 23.46		1
Total BTEX		**0.0472**	0.00199	mg/kg	02.21.18 23.46		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	80-120	02.21.18 23.46	
1,4-Difluorobenzene	540-36-3	81	%	80-120	02.21.18 23.46	

Certificate of Analytical Results 576848

COG Operating LLC, Artesia, NM

RJ Unit #126

Sample Id:	**T-1**	Matrix:	Soil	Date Received:	02.19.18 09.00
Lab Sample Id:	576848-003	Date Collected:	02.14.18 00.00	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	LRI			% Moisture:	
Analyst:	OJS	Date Prep:	02.23.18 13.30	Basis:	Wet Weight
Seq Number:	3042082				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1400**	5.00	mg/kg	02.23.18 18.37		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.21.18 10.00	Basis:	Wet Weight
Seq Number:	3041818				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.21.18 16.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.21.18 16.27	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	02.21.18 16.27	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.21.18 16.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	02.21.18 16.27	
o-Terphenyl	84-15-1	104	%	70-135	02.21.18 16.27	

Certificate of Analytical Results 576848

COG Operating LLC, Artesia, NM

RJ Unit #126

Sample Id:	**T-1**	Matrix:	Soil	Date Received:	02.19.18 09.00
Lab Sample Id:	576848-003	Date Collected:	02.14.18 00.00	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.20.18 15.00	Basis:	Wet Weight
Seq Number:	3041964				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.21.18 22.29	U	1
Toluene	108-88-3	**0.00225**	0.00200	mg/kg	02.21.18 22.29		1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.21.18 22.29	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.21.18 22.29	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.21.18 22.29	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.21.18 22.29	U	1
Total BTEX		**0.00225**	0.00200	mg/kg	02.21.18 22.29		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	86	%	80-120	02.21.18 22.29	
4-Bromofluorobenzene	460-00-4	107	%	80-120	02.21.18 22.29	

Certificate of Analytical Results 576848

COG Operating LLC, Artesia, NM

RJ Unit #126

Sample Id:	**T-1**	Matrix:	Soil	Date Received:	02.19.18 09.00
Lab Sample Id:	576848-004	Date Collected:	02.14.18 00.00	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 12.00	Basis:	Wet Weight
Seq Number:	3042140				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1610**	25.0	mg/kg	02.26.18 16.15		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.21.18 10.00	Basis:	Wet Weight
Seq Number:	3041818				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	02.21.18 16.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	02.21.18 16.52	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	02.21.18 16.52	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	02.21.18 16.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	02.21.18 16.52	
o-Terphenyl	84-15-1	101	%	70-135	02.21.18 16.52	

Certificate of Analytical Results 576848

COG Operating LLC, Artesia, NM

RJ Unit #126

Sample Id:	**T-1**	Matrix:	Soil	Date Received:	02.19.18 09.00
Lab Sample Id:	576848-004	Date Collected:	02.14.18 00.00	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.22.18 16.50	Basis:	Wet Weight
Seq Number:	3041950				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	02.22.18 20.25	U	1
Toluene	108-88-3	**0.00219**	0.00202	mg/kg	02.22.18 20.25		1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.22.18 20.25	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	02.22.18 20.25	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.22.18 20.25	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	02.22.18 20.25	U	1
Total BTEX		**0.00219**	0.00202	mg/kg	02.22.18 20.25		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	80	%	80-120	02.22.18 20.25	
4-Bromofluorobenzene	460-00-4	107	%	80-120	02.22.18 20.25	

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COG Operating LLC, Artesia, NM

RJ Unit #126

Sample Id:	**T-1**	Matrix:	Soil	Date Received:	02.19.18 09.00
Lab Sample Id:	576848-005	Date Collected:	02.14.18 00.00	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.26.18 18.00	Basis:	Wet Weight
Seq Number:	3042191				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**118**	4.95	mg/kg	02.27.18 03.52		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.21.18 10.00	Basis:	Wet Weight
Seq Number:	3041818				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.21.18 17.18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.21.18 17.18	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	02.21.18 17.18	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.21.18 17.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	02.21.18 17.18	
o-Terphenyl	84-15-1	114	%	70-135	02.21.18 17.18	

Certificate of Analytical Results 576848

COG Operating LLC, Artesia, NM

RJ Unit #126

Sample Id:	**T-1**	Matrix:	Soil	Date Received:	02.19.18 09.00
Lab Sample Id:	576848-005	Date Collected:	02.14.18 00.00	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.22.18 16.50	Basis:	Wet Weight
Seq Number:	3041950				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.23.18 00.33	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.23.18 00.33	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.23.18 00.33	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.23.18 00.33	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.23.18 00.33	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.23.18 00.33	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.23.18 00.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	81	%	80-120	02.23.18 00.33	
4-Bromofluorobenzene	460-00-4	111	%	80-120	02.23.18 00.33	

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COG Operating LLC, Artesia, NM

RJ Unit #126

Sample Id:	**T-1**	Matrix:	Soil	Date Received:	02.19.18 09.00
Lab Sample Id:	576848-006	Date Collected:	02.14.18 00.00	Sample Depth:	5 ft

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.21.18 10.00	Basis:	Wet Weight
Seq Number:	3041818				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.21.18 17.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.21.18 17.43	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	02.21.18 17.43	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.21.18 17.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	02.21.18 17.43	
o-Terphenyl	84-15-1	107	%	70-135	02.21.18 17.43	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.22.18 16.50	Basis:	Wet Weight
Seq Number:	3041950				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.23.18 00.52	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.23.18 00.52	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.23.18 00.52	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.23.18 00.52	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.23.18 00.52	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.23.18 00.52	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.23.18 00.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	80	%	80-120	02.23.18 00.52	
4-Bromofluorobenzene	460-00-4	117	%	80-120	02.23.18 00.52	

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COG Operating LLC, Artesia, NM

RJ Unit #126

Sample Id:	**T-2**	Matrix:	Soil	Date Received:	02.19.18 09.00
Lab Sample Id:	576848-007	Date Collected:	02.14.18 00.00	Sample Depth:	0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	LRI			% Moisture:	
Analyst:	OJS	Date Prep:	02.23.18 13.30	Basis:	Wet Weight
Seq Number:	3042082				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	02.23.18 18.42	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.21.18 10.00	Basis:	Wet Weight
Seq Number:	3041818				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**57.7**	15.0	mg/kg	02.21.18 19.02		1
Diesel Range Organics (DRO)	C10C28DRO	**352**	15.0	mg/kg	02.21.18 19.02		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	02.21.18 19.02	U	1
Total TPH	PHC635	**410**	15.0	mg/kg	02.21.18 19.02		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	02.21.18 19.02	
o-Terphenyl	84-15-1	106	%	70-135	02.21.18 19.02	

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COG Operating LLC, Artesia, NM

RJ Unit #126

Sample Id:	**T-2**	Matrix:	Soil	Date Received:	02.19.18 09.00
Lab Sample Id:	576848-007	Date Collected:	02.14.18 00.00	Sample Depth:	0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.22.18 16.50	Basis:	Wet Weight
Seq Number:	3041950				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.23.18 01.11	U	1
Toluene	108-88-3	**0.00282**	0.00200	mg/kg	02.23.18 01.11		1
Ethylbenzene	100-41-4	**0.0147**	0.00200	mg/kg	02.23.18 01.11		1
m,p-Xylenes	179601-23-1	**0.0428**	0.00401	mg/kg	02.23.18 01.11		1
o-Xylene	95-47-6	**0.0300**	0.00200	mg/kg	02.23.18 01.11		1
Total Xylenes	1330-20-7	**0.0728**	0.00200	mg/kg	02.23.18 01.11		1
Total BTEX		**0.0903**	0.00200	mg/kg	02.23.18 01.11		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	82	%	80-120	02.23.18 01.11	
4-Bromofluorobenzene	460-00-4	114	%	80-120	02.23.18 01.11	

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RJ Unit #126

Sample Id:	**T-2**	Matrix:	Soil	Date Received:	02.19.18 09.00
Lab Sample Id:	576848-008	Date Collected:	02.14.18 00.00	Sample Depth:	1 ft

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.21.18 10.00	Basis:	Wet Weight
Seq Number:	3041818				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.21.18 19.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.21.18 19.30	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	02.21.18 19.30	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.21.18 19.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	02.21.18 19.30	
o-Terphenyl	84-15-1	87	%	70-135	02.21.18 19.30	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.22.18 16.50	Basis:	Wet Weight
Seq Number:	3041950				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	02.23.18 01.30	U	1
Toluene	108-88-3	**0.00254**	0.00198	mg/kg	02.23.18 01.30		1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	02.23.18 01.30	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	02.23.18 01.30	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	02.23.18 01.30	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	02.23.18 01.30	U	1
Total BTEX		**0.00254**	0.00198	mg/kg	02.23.18 01.30		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	81	%	80-120	02.23.18 01.30	
4-Bromofluorobenzene	460-00-4	102	%	80-120	02.23.18 01.30	

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RJ Unit #126

Sample Id:	**T-2**	Matrix:	Soil	Date Received:	02.19.18 09.00
Lab Sample Id:	576848-009	Date Collected:	02.14.18 00.00	Sample Depth:	2 ft

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.21.18 10.00	Basis:	Wet Weight
Seq Number:	3041818				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.21.18 19.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.21.18 19.56	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	02.21.18 19.56	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.21.18 19.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	02.21.18 19.56	
o-Terphenyl	84-15-1	102	%	70-135	02.21.18 19.56	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.22.18 16.50	Basis:	Wet Weight
Seq Number:	3041950				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	02.23.18 01.48	U	1
Toluene	108-88-3	**0.00288**	0.00202	mg/kg	02.23.18 01.48		1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.23.18 01.48	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	02.23.18 01.48	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.23.18 01.48	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	02.23.18 01.48	U	1
Total BTEX		**0.00288**	0.00202	mg/kg	02.23.18 01.48		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	82	%	80-120	02.23.18 01.48	
4-Bromofluorobenzene	460-00-4	118	%	80-120	02.23.18 01.48	

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RJ Unit #126

Sample Id:	**T-3**	Matrix:	Soil	Date Received:	02.19.18 09.00
Lab Sample Id:	576848-010	Date Collected:	02.14.18 00.00	Sample Depth:	0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.23.18 16.00	Basis:	Wet Weight
Seq Number:	3042120				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	02.23.18 19.14	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.21.18 10.00	Basis:	Wet Weight
Seq Number:	3041818				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.21.18 20.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.21.18 20.21	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	02.21.18 20.21	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.21.18 20.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	02.21.18 20.21	
o-Terphenyl	84-15-1	97	%	70-135	02.21.18 20.21	

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RJ Unit #126

Sample Id:	**T-3**	Matrix:	Soil	Date Received:	02.19.18 09.00
Lab Sample Id:	576848-010	Date Collected:	02.14.18 00.00	Sample Depth:	0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.23.18 08.00	Basis:	Wet Weight
Seq Number:	3041987				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.23.18 10.19	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.23.18 10.19	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.23.18 10.19	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.23.18 10.19	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.23.18 10.19	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.23.18 10.19	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.23.18 10.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	86	%	80-120	02.23.18 10.19	
4-Bromofluorobenzene	460-00-4	120	%	80-120	02.23.18 10.19	

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RJ Unit #126

Sample Id:	**T-3**	Matrix:	Soil	Date Received:	02.19.18 09.00
Lab Sample Id:	576848-011	Date Collected:	02.14.18 00.00	Sample Depth:	1 ft

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.21.18 10.00	Basis:	Wet Weight
Seq Number:	3041818				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.21.18 20.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.21.18 20.49	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	02.21.18 20.49	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.21.18 20.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	02.21.18 20.49	
o-Terphenyl	84-15-1	94	%	70-135	02.21.18 20.49	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.23.18 08.00	Basis:	Wet Weight
Seq Number:	3041987				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.23.18 10.38	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.23.18 10.38	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.23.18 10.38	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.23.18 10.38	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.23.18 10.38	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.23.18 10.38	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.23.18 10.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	80-120	02.23.18 10.38	
1,4-Difluorobenzene	540-36-3	84	%	80-120	02.23.18 10.38	

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RJ Unit #126

Sample Id:	**T-4**	Matrix:	Soil	Date Received:	02.19.18 09.00
Lab Sample Id:	576848-012	Date Collected:	02.14.18 00.00	Sample Depth:	0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.23.18 16.00	Basis:	Wet Weight
Seq Number:	3042120				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.92	4.92	mg/kg	02.23.18 19.30	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.21.18 10.00	Basis:	Wet Weight
Seq Number:	3041818				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.21.18 21.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.21.18 21.15	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	02.21.18 21.15	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.21.18 21.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	02.21.18 21.15	
o-Terphenyl	84-15-1	93	%	70-135	02.21.18 21.15	

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RJ Unit #126

Sample Id:	**T-4**	Matrix:	Soil	Date Received:	02.19.18 09.00
Lab Sample Id:	576848-012	Date Collected:	02.14.18 00.00	Sample Depth:	0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.22.18 16.50	Basis:	Wet Weight
Seq Number:	3041950				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.23.18 02.07	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.23.18 02.07	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.23.18 02.07	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.23.18 02.07	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.23.18 02.07	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.23.18 02.07	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.23.18 02.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	81	%	80-120	02.23.18 02.07	
4-Bromofluorobenzene	460-00-4	104	%	80-120	02.23.18 02.07	

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Sample Id:	**T-4**	Matrix:	Soil	Date Received:	02.19.18 09.00
Lab Sample Id:	576848-013	Date Collected:	02.14.18 00.00	Sample Depth:	1 ft

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.21.18 10.00	Basis:	Wet Weight
Seq Number:	3041818				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.21.18 21.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.21.18 21.44	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	02.21.18 21.44	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.21.18 21.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	02.21.18 21.44	
o-Terphenyl	84-15-1	100	%	70-135	02.21.18 21.44	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.22.18 16.50	Basis:	Wet Weight
Seq Number:	3041950				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.23.18 02.26	U	1
Toluene	108-88-3	**0.00204**	0.00199	mg/kg	02.23.18 02.26		1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.23.18 02.26	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.23.18 02.26	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.23.18 02.26	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.23.18 02.26	U	1
Total BTEX		**0.00204**	0.00199	mg/kg	02.23.18 02.26		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	82	%	80-120	02.23.18 02.26	
4-Bromofluorobenzene	460-00-4	106	%	80-120	02.23.18 02.26	

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RJ Unit #126

Sample Id:	**T-4**	Matrix:	Soil	Date Received:	02.19.18 09.00
Lab Sample Id:	576848-014	Date Collected:	02.14.18 00.00	Sample Depth:	2 ft

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.21.18 10.00	Basis:	Wet Weight
Seq Number:	3041818				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.21.18 22.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.21.18 22.09	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	02.21.18 22.09	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.21.18 22.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	02.21.18 22.09	
o-Terphenyl	84-15-1	96	%	70-135	02.21.18 22.09	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.22.18 16.50	Basis:	Wet Weight
Seq Number:	3041950				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.23.18 00.14	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.23.18 00.14	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.23.18 00.14	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.23.18 00.14	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.23.18 00.14	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.23.18 00.14	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.23.18 00.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	80-120	02.23.18 00.14	
1,4-Difluorobenzene	540-36-3	83	%	80-120	02.23.18 00.14	

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 576848

COG Operating LLC

RJ Unit #126

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3042082 Matrix: Solid Date Prep: 02.23.18
MB Sample Id: 7639674-1-BLK LCS Sample Id: 7639674-1-BKS LCSD Sample Id: 7639674-1-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	258	103	258	103	90-110	0	20	mg/kg	02.23.18 15:45	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3042120 Matrix: Solid Date Prep: 02.23.18
MB Sample Id: 7639727-1-BLK LCS Sample Id: 7639727-1-BKS LCSD Sample Id: 7639727-1-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	272	109	273	109	90-110	0	20	mg/kg	02.23.18 19:04	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3042140 Matrix: Solid Date Prep: 02.26.18
MB Sample Id: 7639780-1-BLK LCS Sample Id: 7639780-1-BKS LCSD Sample Id: 7639780-1-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	264	106	269	108	90-110	2	20	mg/kg	02.26.18 12:15	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3042191 Matrix: Solid Date Prep: 02.26.18
MB Sample Id: 7639815-1-BLK LCS Sample Id: 7639815-1-BKS LCSD Sample Id: 7639815-1-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	270	108	270	108	90-110	0	20	mg/kg	02.27.18 01:24	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3042082 Matrix: Soil Date Prep: 02.23.18
Parent Sample Id: 576852-003 MS Sample Id: 576852-003 S MSD Sample Id: 576852-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	295	247	525	93	533	96	90-110	2	20	mg/kg	02.23.18 16:12	

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

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

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

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

QC Summary 576848

COG Operating LLC

RJ Unit #126

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3042082 Matrix: Soil Date Prep: 02.23.18
Parent Sample Id: 576852-013 MS Sample Id: 576852-013 S MSD Sample Id: 576852-013 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	36.1	249	309	110	299	106	90-110	3	20	mg/kg	02.23.18 17:39	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3042120 Matrix: Soil Date Prep: 02.23.18
Parent Sample Id: 576848-010 MS Sample Id: 576848-010 S MSD Sample Id: 576848-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.95	248	255	103	253	102	90-110	1	20	mg/kg	02.23.18 19:20	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3042120 Matrix: Soil Date Prep: 02.23.18
Parent Sample Id: 576910-002 MS Sample Id: 576910-002 S MSD Sample Id: 576910-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1090	245	1300	86	1320	94	90-110	2	20	mg/kg	02.23.18 20:34	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3042140 Matrix: Soil Date Prep: 02.26.18
Parent Sample Id: 576907-017 MS Sample Id: 576907-017 S MSD Sample Id: 576907-017 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	259	104	272	110	90-110	5	20	mg/kg	02.26.18 12:31	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3042140 Matrix: Soil Date Prep: 02.26.18
Parent Sample Id: 577014-001 MS Sample Id: 577014-001 S MSD Sample Id: 577014-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	228	249	474	99	467	96	90-110	1	20	mg/kg	02.26.18 13:45	

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

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

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

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

QC Summary 576848

COG Operating LLC

RJ Unit #126

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3042191 Matrix: Soil Date Prep: 02.26.18
Parent Sample Id: 577084-007 MS Sample Id: 577084-007 S MSD Sample Id: 577084-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	102	262	387	109	384	108	90-110	1	20	mg/kg	02.27.18 01:40	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3042191 Matrix: Soil Date Prep: 02.26.18
Parent Sample Id: 577310-001 MS Sample Id: 577310-001 S MSD Sample Id: 577310-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.93	247	275	111	281	114	90-110	2	20	mg/kg	02.27.18 02:54	X

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3041818 Matrix: Solid Date Prep: 02.21.18
MB Sample Id: 7639556-1-BLK LCS Sample Id: 7639556-1-BKS LCSD Sample Id: 7639556-1-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	937	94	877	88	70-135	7	35	mg/kg	02.21.18 11:41	
Diesel Range Organics (DRO)	<15.0	1000	1010	101	949	95	70-135	6	35	mg/kg	02.21.18 11:41	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		119		109		70-135	%	02.21.18 11:41
o-Terphenyl	97		113		106		70-135	%	02.21.18 11:41

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3041818 Matrix: Soil Date Prep: 02.21.18
Parent Sample Id: 576847-007 MS Sample Id: 576847-007 S MSD Sample Id: 576847-007 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	886	89	1010	101	70-135	13	35	mg/kg	02.21.18 13:53	
Diesel Range Organics (DRO)	47.1	997	1070	103	1100	106	70-135	3	35	mg/kg	02.21.18 13:53	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		119		70-135	%	02.21.18 13:53
o-Terphenyl	106		114		70-135	%	02.21.18 13:53

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

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

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

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

QC Summary 576848

COG Operating LLC

RJ Unit #126

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3041964 Matrix: Solid Date Prep: 02.20.18
MB Sample Id: 7639673-1-BLK LCS Sample Id: 7639673-1-BKS LCSD Sample Id: 7639673-1-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	0.0823	83	0.0935	94	70-130	13	35	mg/kg	02.21.18 20:15	
Toluene	<0.00199	0.0994	0.0887	89	0.101	101	70-130	13	35	mg/kg	02.21.18 20:15	
Ethylbenzene	<0.00199	0.0994	0.102	103	0.117	117	71-129	14	35	mg/kg	02.21.18 20:15	
m,p-Xylenes	<0.00398	0.199	0.201	101	0.229	114	70-135	13	35	mg/kg	02.21.18 20:15	
o-Xylene	<0.00199	0.0994	0.0994	100	0.114	114	71-133	14	35	mg/kg	02.21.18 20:15	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	83		87		86		80-120	%	02.21.18 20:15
4-Bromofluorobenzene	99		108		112		80-120	%	02.21.18 20:15

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3041950 Matrix: Solid Date Prep: 02.22.18
MB Sample Id: 7639669-1-BLK LCS Sample Id: 7639669-1-BKS LCSD Sample Id: 7639669-1-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	0.100	0.0907	91	0.0880	89	70-130	3	35	mg/kg	02.22.18 18:11	
Toluene	<0.00200	0.100	0.0965	97	0.0937	94	70-130	3	35	mg/kg	02.22.18 18:11	
Ethylbenzene	<0.00200	0.100	0.105	105	0.103	104	71-129	2	35	mg/kg	02.22.18 18:11	
m,p-Xylenes	<0.00401	0.200	0.207	104	0.204	103	70-135	1	35	mg/kg	02.22.18 18:11	
o-Xylene	<0.00200	0.100	0.100	100	0.101	102	71-133	1	35	mg/kg	02.22.18 18:11	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	84		89		85		80-120	%	02.22.18 18:11
4-Bromofluorobenzene	101		107		112		80-120	%	02.22.18 18:11

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3041987 Matrix: Solid Date Prep: 02.23.18
MB Sample Id: 7639672-1-BLK LCS Sample Id: 7639672-1-BKS LCSD Sample Id: 7639672-1-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	0.0930	92	0.0843	84	70-130	10	35	mg/kg	02.23.18 07:54	
Toluene	<0.00202	0.101	0.0996	99	0.0910	91	70-130	9	35	mg/kg	02.23.18 07:54	
Ethylbenzene	<0.00202	0.101	0.114	113	0.104	104	71-129	9	35	mg/kg	02.23.18 07:54	
m,p-Xylenes	<0.00403	0.202	0.224	111	0.205	102	70-135	9	35	mg/kg	02.23.18 07:54	
o-Xylene	<0.00202	0.101	0.110	109	0.101	101	71-133	9	35	mg/kg	02.23.18 07:54	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	83		81		82		80-120	%	02.23.18 07:54
4-Bromofluorobenzene	107		111		117		80-120	%	02.23.18 07:54

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

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

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

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

QC Summary 576848

COG Operating LLC

RJ Unit #126

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

Seq Number: 3041964 Matrix: Soil Date Prep: 02.20.18

Parent Sample Id: 576848-003 MS Sample Id: 576848-003 S MSD Sample Id: 576848-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0730	72	0.0738	74	70-130	1	35	mg/kg	02.21.18 20:53	
Toluene	0.00225	0.101	0.0781	75	0.0777	76	70-130	1	35	mg/kg	02.21.18 20:53	
Ethylbenzene	<0.00202	0.101	0.0875	87	0.0848	85	71-129	3	35	mg/kg	02.21.18 20:53	
m,p-Xylenes	<0.00403	0.202	0.171	85	0.166	83	70-135	3	35	mg/kg	02.21.18 20:53	
o-Xylene	<0.00202	0.101	0.0859	85	0.0823	83	71-133	4	35	mg/kg	02.21.18 20:53	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	83		87		80-120	%	02.21.18 20:53
4-Bromofluorobenzene	106		105		80-120	%	02.21.18 20:53

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

Seq Number: 3041950 Matrix: Soil Date Prep: 02.22.18

Parent Sample Id: 576848-004 MS Sample Id: 576848-004 S MSD Sample Id: 576848-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0543	54	0.0637	64	70-130	16	35	mg/kg	02.22.18 18:49	X
Toluene	0.00219	0.100	0.0777	76	0.0831	81	70-130	7	35	mg/kg	02.22.18 18:49	
Ethylbenzene	<0.00200	0.100	0.0836	84	0.0935	94	71-129	11	35	mg/kg	02.22.18 18:49	
m,p-Xylenes	<0.00401	0.200	0.165	83	0.186	93	70-135	12	35	mg/kg	02.22.18 18:49	
o-Xylene	<0.00200	0.100	0.0812	81	0.0931	93	71-133	14	35	mg/kg	02.22.18 18:49	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	84		83		80-120	%	02.22.18 18:49
4-Bromofluorobenzene	115		116		80-120	%	02.22.18 18:49

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

Seq Number: 3041987 Matrix: Soil Date Prep: 02.23.18

Parent Sample Id: 576848-010 MS Sample Id: 576848-010 S MSD Sample Id: 576848-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0771	77	0.0724	73	70-130	6	35	mg/kg	02.23.18 08:43	
Toluene	<0.00201	0.100	0.0818	82	0.0761	76	70-130	7	35	mg/kg	02.23.18 08:43	
Ethylbenzene	<0.00201	0.100	0.0923	92	0.0856	86	71-129	8	35	mg/kg	02.23.18 08:43	
m,p-Xylenes	<0.00402	0.201	0.182	91	0.170	85	70-135	7	35	mg/kg	02.23.18 08:43	
o-Xylene	<0.00201	0.100	0.0899	90	0.0849	85	71-133	6	35	mg/kg	02.23.18 08:43	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	87		82		80-120	%	02.23.18 08:43
4-Bromofluorobenzene	119		117		80-120	%	02.23.18 08:43

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

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

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

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

CHAIN OF CUSTODY

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XENCO LABORATORIES

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Phoenix, Arizona (480-355-0900)
www.xenco.com

Xenco Quote #
Xenco Job # 576848

Client / Reporting Information

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

Project Information

Project Name/Number: RS Unit # 126
Project Location: Eddy County
Invoice To: COG Operating, LLC
Attn: Robert McNeill
600 W. Illnois Ave.
Midland Tx, 79701
PO Number:

Analytical Information

Matrix Codes

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

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	None	TPH EXTENDED (EPA8015M)	BTEX (EPA 8021B)	CHLORIDES (EPA 300)	Field Comments
1	T-1	0	2/14/18		S	1								X	X	X	X	
2	T-1	1			S	1								X	X	X	X	
3	T-1	2			S	1								X	X	X	X	
4	T-1	3			S	1								X	X	X	X	
5	T-1	4			S	1								X	X	X	X	
6	T-1	5			S	1								X	X	X	X	
7	T-2	0			S	1								X	X	X	X	
8	T-2	1			S	1								X	X	X	X	
9	T-2	2			S	1								X	X	X	X	
10	T-3	0			S	1								X	X	X	X	

Temp: 3.2 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 3

Turnaround Time (Business days)

- [ ] Same Day TAT
- [x] 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:

Stop running if Chlorides are below 600

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	Christopher Gray	2/14/18 1:38	Sheldon Hitchcock	Sheldon Hitchcock		Sid Butler 2-16-18 10 A
2	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
3	Sid Butler	2/16/18 12			2/19 9:00	
4	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. / Thermo. Corr. Factor
5						

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

Final 1.000

CHAIN OF CUSTODY

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Phoenix, Arizona (480-355-0900)
www.xenco.com

Xenco Quote # | Xenco Job # 576848

Client / Reporting Information

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

Project Information

Project Name/Number: RJ Unit # 126
Project Location: Eddy County
Invoice To: COG Operating, LLC
Attn: Robert McNeill
600 W. Illnois Ave.
Midland Tx, 79701
PO Number:

Matrix Codes

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

No.	Field ID / Point of Collection	Collection: Sample Depth	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 (EPA8015M)	BTEX (EPA 8021B)	CHLORIDES (EPA 300)	Field Comments
1	T-3	1	2/14/18		S	1								X	X	X	X	
2	T-4	0			S	1								X	X	X	X	
3	T-4	1			S	1								X	X	X	X	
4	T-4	2			S	1								X	X	X	X	
5					S	1												
6					S	1												
7					S	1												
8					S	1												
9					S	1												
10					S	1												

Temp: 3.2 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 3

Turnaround Time (Business days)

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

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

Data Deliverable Information

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

Notes:

Stop running if Chlorides are bdow 600

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	Christopher Gray	2/14/18 1:38P				
2						Sid Butler 2-16-18 10A
3	Sid Butler	2-16-18 12N			2/19 9:00	
4						
5				Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. / Thermo. Corr. Factor

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

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC

Date/ Time Received: 02/19/2018 09:00:00 AM

Work Order #: 576848

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Katie Lowe Date: 02/19/2018

Checklist reviewed by: Jessica Kramer Date: 02/19/2018