



Dakota Neel
HSE Coordinator

September 29, 2017

Mike Bratcher
Oil Conservation Division
District 2 – Artesia
811 S. First St.
Artesia, NM 88210

Shelly Tucker
Bureau of Land Management
620 E. Greene St.
Carlsbad, NM 88220

Re: Work Plan
Burch Keely Unit #936
API #: 30-015-40888
Unit Letter M, Section 13, Township 17S, Range 29E
Eddy County, NM

Mr. Mike Bratcher/Ms. Tucker,

COG Operating LLC is pleased to submit for your consideration the following work plan for the Burch Keely Unit #936 well. The work plan is in response to a crude oil and produced water release that occurred on June 24, 2017. Subsequent to the release a C-141 Initial Report was submitted to the New Mexico Oil Conservation Division (NMOCD) and the Bureau of Land Management (BLM) on June 24, 2017.

BACKGROUND

This release was the result of a cow kicking the Murphy switch and breaking the nipple off. The fluid from the release oversprayed a portion of the location as well as the adjacent pasture. A vacuum truck was dispatched to remove any standing fluids. A crew was dispatched to perform an initial scrape of the area on location and to spray microblaze on the impacted soil and vegetation in the pasture.

SITE RANKING

A groundwater database maintained by the New Mexico Office of the State Engineer (NMOSE) did not identify any registered water wells in Section 13, Township 17S, Range 29E. The Chevron Trend Map utilized by the NMOCD Artesia District II Office indicates depth to groundwater is approximately 150 feet below ground surface (bgs). No water

wells or surface water was observed within 1,000 feet of the release site. Based on the NMOCD ranking criteria, the release area would be classified at a site ranking of zero (0).

ANALYTICAL RESULTS

On July 27, 2017, COG personnel collected ten (10) soil samples from the subject area. Soil samples were collected at depths ranging from surface to eight (8) feet bgs. The soil samples were submitted to a laboratory for analysis of benzene, toluene, ethylbenzene and xylenes (BTEX, total petroleum hydrocarbons (TPH) and chloride.

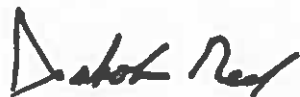
Analytical results indicate TPH and BTEX concentrations are within the recommended remedial action levels (RRAL)s for a site ranking of zero (0). Chloride concentrations in the T1 sampling area were elevated at the surface and declined at one (1) foot bgs (see attached site diagram). The T1 surface sample exhibited a chloride concentration of 759 mg/Kg.

BKU #936H				
Sample ID	Sample Depth (ft)	Chloride (mg/kg)	Total TPH (mg/kg)	Total BTEX (mg/kg)
T1	Surface	759	40.8	<0.00200
T1	1'	93.5	<14.9	<0.00200
T1	2'	85.4	<15.0	<0.00201
T1	3'	69.2	<15.0	<0.00199
T1	8'	146	<15.0	<0.00199
T2	Surface	429	170	<0.00198
T2	1'	13.5	<15.0	<0.00351
T2	2'	61.8	<15.0	0.0120
T2	3'	41.9	<15.0	<0.00199
T2	8'	20.1	<15.0	<0.00358

WORK PLAN

Based on the analytical results of soil samples collected on July 27, 2017, COG proposes the excavation of six (6) inches of material in the area of T1 and no excavation in the area of T2. The excavated soil will be transported to a NMOCD approved disposal facility and non-impacted soil will be utilized to backfill the excavated area. If there are no objections or further stipulations, COG Operating LLC would like to begin the proposed remediation at this time. Please feel free to contact my with any questions or concerns at (432) 215-2783.

Sincerely,

A handwritten signature in black ink that reads "Dakota Neel". The signature is written in a cursive, slightly slanted style.

Dakota Neel
HSE Coordinator

Enclosed

- (1) Site Diagram and Summary Table
- (2) Laboratory Analysis
- (3) C-141 Initial (Copy)

Burch Keely Unit #936

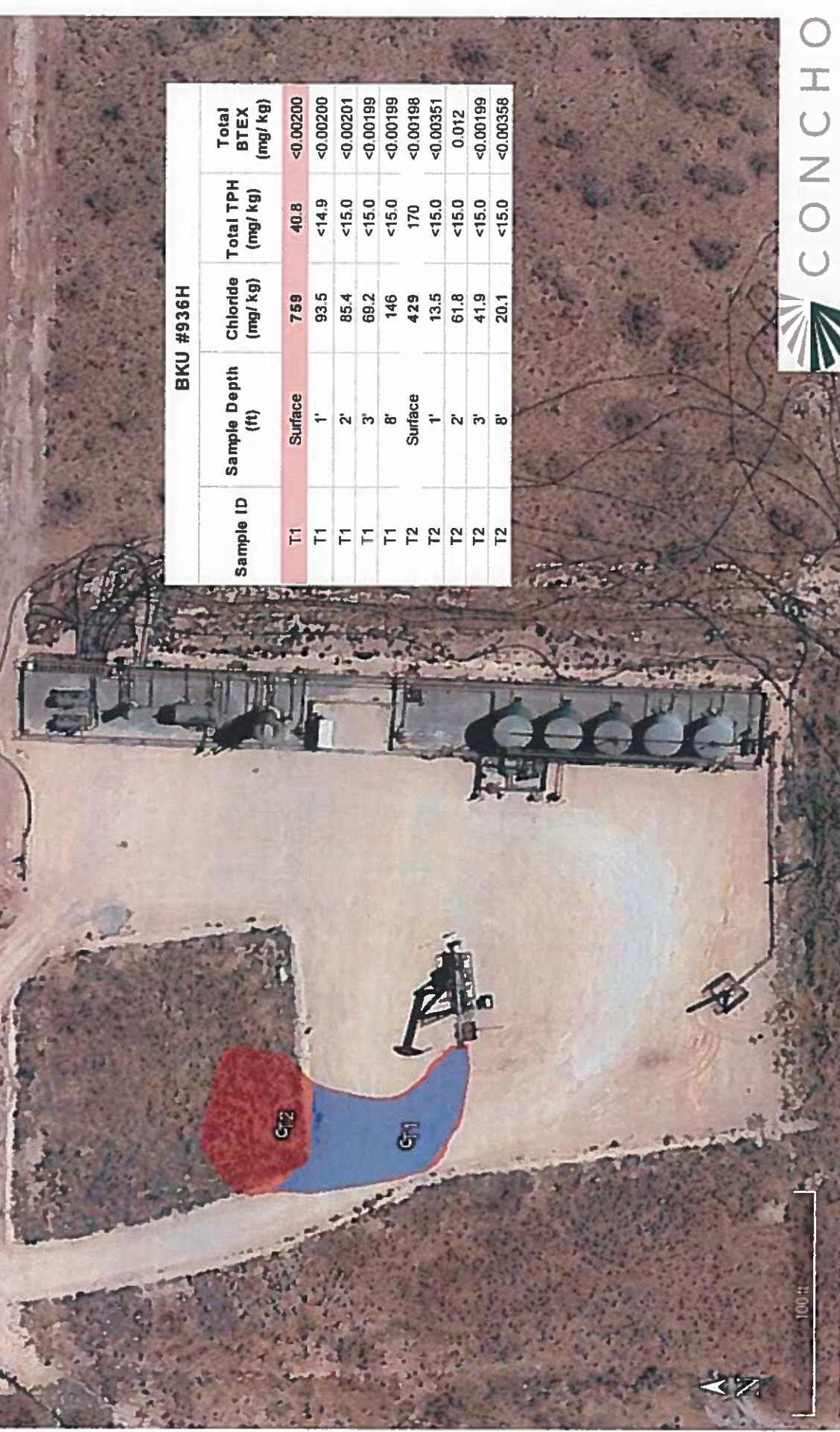
Site Diagram

Burch Keely Unit #936

32.830014° -104.035772°

Legend

- Excavate 8 inches
- Sample Points
- No Excavation



BKU #936H					
Sample ID	Sample Depth (ft)	Chloride (mg/ kg)	Total TPH (mg/ kg)	Total BTEX (mg/ kg)	
T1	Surface	759	40.8	<0.00200	
T1	1'	93.5	<14.9	<0.00200	
T1	2'	85.4	<15.0	<0.00201	
T1	3'	69.2	<15.0	<0.00199	
T1	8'	146	<15.0	<0.00199	
T2	Surface	429	170	<0.00198	
T2	1'	13.5	<15.0	<0.00351	
T2	2'	61.8	<15.0	0.012	
T2	3'	41.9	<15.0	<0.00199	
T2	8'	20.1	<15.0	<0.00358	

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

JUN 26 2017

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

RECEIVED

Form C-141
Revised August 8, 2011

Release Notification and Corrective Action

DAB1718054313 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: Burch Keely Unit #936H	Facility Type: Wellhead
Surface Owner: Federal	Mineral Owner: Federal
API No. 30-015-40888	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
M	13	17S	29E	990	South	330	West	Eddy

Latitude 32.8300629 Longitude -104.0357742

NATURE OF RELEASE

Type of Release: Oil and Produced Water	Volume of Release: 2 bbls Oil & 3 bbls PW	Volume Recovered: 2 bbls Oil & 2 bbls PW
Source of Release: Murphy Switch	Date and Hour of Occurrence: June 24, 2017 7:00 pm	Date and Hour of Discovery: June 24, 2017 7:00 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 was the result of a cow kicking the murphy switch. The broken nipple was replaced.		
Describe Area Affected and Cleanup Action Taken.*		
The release was on location and within the adjacent 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: <u>Rebecca Haskell</u>	OIL CONSERVATION DIVISION	
Printed Name: Rebecca Haskell	Approved by Environmental Specialist <u>Cynthia W...</u>	
Title: Senior HSE Coordinator	Approval Date: <u>6/29/17</u>	Expiration Date: <u>N/A</u>
E-mail Address: <u>rhaskell@concho.com</u>	Conditions of Approval: <u>see attached</u>	Attached ☒
Date: _____ Phone: 432-683-7443		

* Attach Additional Sheets If Necessary

Please refer to the New Mexico Oil
Conservation Division Website for
updated form(s) at:
[http://www.emnrd.state.nm.us/
OCD/forms.html](http://www.emnrd.state.nm.us/OCD/forms.html) Thank you

2RP4267



Certificate of Analysis Summary 559039
COG Operating LLC, Artesia, NM
Project Name: BKU #936H



Project Id:

Contact: Aaron Lieb

Project Location:

Date Received in Lab: Tue Aug-01-17 03:06 pm

Report Date: 09-AUG-17

Project Manager: Kelsey Brooks

Analysis Requested		Lab Id:	Field Id:	Depth:	Matrix:	Sampled:	559039-001	559039-002	559039-003	559039-004	559039-005	559039-006
		Extracted:	Field Id:	Depth:	Matrix:	Sampled:	559039-001	559039-002	559039-003	559039-004	559039-005	559039-006
BTEX by EPA 8021B		Analyzed:	Field Id:	Depth:	Matrix:	Sampled:	559039-001	559039-002	559039-003	559039-004	559039-005	559039-006
		Units/RL:	Field Id:	Depth:	Matrix:	Sampled:	559039-001	559039-002	559039-003	559039-004	559039-005	559039-006
Benzene			Aug-03-17 10:00	Aug-03-17 10:00	SOIL	Jul-27-17 11:30	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Toluene			Aug-04-17 04:21	Aug-04-17 04:40	SOIL	Jul-27-17 11:30	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Ethylbenzene			Aug-03-17 10:00	Aug-03-17 10:00	SOIL	Jul-27-17 11:30	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
m,p-Xylenes			Aug-03-17 10:00	Aug-03-17 10:00	SOIL	Jul-27-17 11:30	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
o-Xylene			Aug-03-17 10:00	Aug-03-17 10:00	SOIL	Jul-27-17 11:30	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Total Xylenes			Aug-03-17 10:00	Aug-03-17 10:00	SOIL	Jul-27-17 11:30	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Total BTEX			Aug-03-17 10:00	Aug-03-17 10:00	SOIL	Jul-27-17 11:30	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Inorganic Anions by EPA 300/300.1												
Chloride			Aug-03-17 10:55	Aug-03-17 10:55	SOIL	Jul-27-17 11:30	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
TPH By SW8015 Mod			Aug-03-17 16:37	Aug-03-17 17:00	SOIL	Jul-27-17 11:30	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Extracted:			Aug-03-17 10:00	Aug-03-17 10:00	SOIL	Jul-27-17 11:30	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Analyzed:			Aug-03-17 10:14	Aug-03-17 11:15	SOIL	Jul-27-17 11:30	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Units/RL:			Aug-03-17 10:00	Aug-03-17 10:00	SOIL	Jul-27-17 11:30	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)			Aug-03-17 10:00	Aug-03-17 10:00	SOIL	Jul-27-17 11:30	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Diesel Range Organics (DRO)			Aug-03-17 10:00	Aug-03-17 10:00	SOIL	Jul-27-17 11:30	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Oil Range Hydrocarbons (ORO)			Aug-03-17 10:00	Aug-03-17 10:00	SOIL	Jul-27-17 11:30	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Total TPH			Aug-03-17 10:00	Aug-03-17 10:00	SOIL	Jul-27-17 11:30	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL

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 user of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Version: 1.1%

Kelsey Brooks

Kelsey Brooks
Project Manager



Certificate of Analysis Summary 559039
COG Operating LLC, Artesia, NM
Project Name: BKU #936H



Project Id:

Contact:

Aaron Lieb

Project Location:

Date Received in Lab: Tue Aug-01-17 03:06 pm

Report Date: 09-AUG-17

Project Manager: Kelsey Brooks

Analysis Requested	Lab Id: Field Id: Depth: Matrix: Sampled:	559039-007 T2 1- ft SOIL Aug-07-17 08:00 Aug-07-17 17:21 mg/kg RL <0.00351 0.00351 <0.00351 0.00351 <0.00351 0.00351 <0.00702 0.00702 <0.00351 0.00351 <0.00351 0.00351 <0.00351 0.00351 <0.00351 0.00351	559039-008 T2 2- ft SOIL Jul-27-17 11:30 Aug-07-17 08:00 Aug-07-17 17:39 mg/kg RL <0.00341 0.00341 0.0120 0.00341 <0.00341 0.00341 <0.00683 0.00683 <0.00341 0.00341 <0.00341 0.00341 0.0120 0.00341	559039-009 T2 3- ft SOIL Jul-27-17 11:30 Aug-04-17 08:15 Aug-04-17 11:27 mg/kg RL <0.00199 0.00199 <0.00199 0.00199 <0.00199 0.00199 <0.00398 0.00398 <0.00199 0.00199 <0.00199 0.00199 <0.00199 0.00199	559039-010 T2 8- ft SOIL Jul-27-17 11:30 Aug-07-17 08:00 Aug-07-17 17:58 mg/kg RL <0.00358 0.00358 <0.00358 0.00358 <0.00358 0.00358 <0.00717 0.00717 <0.00358 0.00358 <0.00358 0.00358 <0.00358 0.00358
BTEX by EPA 8021B	Extracted: Analyzed: Units/RL:				
Benzene					
Toluene					
Ethylbenzene					
m,p-Xylenes					
o-Xylenes					
Total Xylenes					
Total BTEX					
Inorganic Anions by EPA 300/300.1	Extracted: Analyzed: Units/RL:				
Chloride					
TPH By SW8015 Mod	Extracted: Analyzed: Units/RL:				
Gasoline Range Hydrocarbons (GRO)					
Diesel Range Organics (DRO)					
Oil Range Hydrocarbons (ORO)					
Total TPH					

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

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Version: 1.5

Kelsey Brooks

Kelsey Brooks
Project Manager

Analytical Report 559039

**for
COG Operating LLC**

Project Manager: Aaron Lieb

BKU #936H

09-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)



09-AUG-17

Project Manager: **Aaron Lieb**

COG Operating LLC

2407 Pecos Avenue

Artesia, NM 88210

Reference: XENCO Report No(s): **559039**

BKU #936H

Project Address:

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) 559039. 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. 559039 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kelsey Brooks

Project Manager

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

Certified and approved by numerous States and Agencies.

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Sample Cross Reference 559039



COG Operating LLC, Artesia, NM

BKU #936H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
T1	S	07-27-17 11:30		559039-001
T1	S	07-27-17 11:30	1 ft	559039-002
T1	S	07-27-17 11:30	2 ft	559039-003
T1	S	07-27-17 11:30	3 ft	559039-004
T1	S	07-27-17 11:30	8 ft	559039-005
T2	S	07-27-17 11:30	N/A	559039-006
T2	S	07-27-17 11:30	1 ft	559039-007
T2	S	07-27-17 11:30	2 ft	559039-008
T2	S	07-27-17 11:30	3 ft	559039-009
T2	S	07-27-17 11:30	8 ft	559039-010



CASE NARRATIVE

Client Name: COG Operating LLC

Project Name: BKU #936H

Project ID:

Work Order Number(s): 559039

Report Date: 09-AUG-17

Date Received: 08/01/2017

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3024007 BTEX by EPA 8021B

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

Batch: LBA-3024166 BTEX by EPA 8021B

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

Batch: LBA-3024257 BTEX by EPA 8021B

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



Certificate of Analytical Results 559039



COG Operating LLC, Artesia, NM BKU #936H

Sample Id: T1
Lab Sample Id: 559039-001

Matrix: Soil
Date Collected: 07.27.17 11.30

Date Received: 08.01.17 15.06

Analytical Method: Inorganic Anions by EPA 300/300.1

Tech: MGO

Analyst: MGO

Seq Number: 3024108

Date Prep: 08.03.17 10.55

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	759	4.91	mg/kg	08.03.17 16.37		1

Analytical Method: TPH By SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3024174

Date Prep: 08.04.17 07.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.04.17 10.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	40.8	15.0	mg/kg	08.04.17 10.14		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.04.17 10.14	U	1
Total TPH	PHC635	40.8	15.0	mg/kg	08.04.17 10.14		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	124	%	70-135	08.04.17 10.14		
m-Terphenyl	84-15-1	91	%	70-135	08.04.17 10.14		



Certificate of Analytical Results 559039



COG Operating LLC, Artesia, NM BKU #936H

Sample Id: T1
Lab Sample Id: 559039-001

Matrix: Soil
Date Collected: 07.27.17 11.30

Date Received: 08.01.17 15.06

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 08.03.17 10.00

Basis: Wet Weight

Seq Number: 3024007

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.04.17 04.21	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.04.17 04.21	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.04.17 04.21	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.04.17 04.21	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.04.17 04.21	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.04.17 04.21	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.04.17 04.21	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	111	%	80-120	08.04.17 04.21		
1,4-Difluorobenzene	540-36-3	101	%	80-120	08.04.17 04.21		



Certificate of Analytical Results 559039



COG Operating LLC, Artesia, NM BKU #936H

Sample Id: T1 Matrix: Soil Date Received: 08.01.17 15.06
Lab Sample Id: 559039-002 Date Collected: 07.27.17 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: 08.03.17 10.55 Basis: Wet Weight
Seq Number: 3024108

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	93.5	4.95	mg/kg	08.03.17 17.00		1

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 08.04.17 07.00 Basis: Wet Weight
Seq Number: 3024174

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	08.04.17 11.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	08.04.17 11.15	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	08.04.17 11.15	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	08.04.17 11.15	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	123	%	70-135	08.04.17 11.15		
o-Terphenyl	84-15-1	91	%	70-135	08.04.17 11.15		



Certificate of Analytical Results 559039



COG Operating LLC, Artesia, NM BKU #936H

Sample Id: T1
Lab Sample Id: 559039-002

Matrix: Soil
Date Collected: 07.27.17 11.30

Date Received: 08.01.17 15.06
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 08.03.17 10.00

Basis: Wet Weight

Seq Number: 3024007

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.04.17 04.40	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.04.17 04.40	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.04.17 04.40	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.04.17 04.40	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.04.17 04.40	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.04.17 04.40	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.04.17 04.40	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	80-120	08.04.17 04.40		
4-Bromofluorobenzene	460-00-4	108	%	80-120	08.04.17 04.40		



Certificate of Analytical Results 559039



COG Operating LLC, Artesia, NM BKU #936H

Sample Id: T1 Matrix: Soil Date Received: 08.01.17 15.06
Lab Sample Id: 559039-003 Date Collected: 07.27.17 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: 08.03.17 10.55 Basis: Wet Weight
Seq Number: 3024108

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	85.4	4.99	mg/kg	08.03.17 17.07		1

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 08.04.17 07.00 Basis: Wet Weight
Seq Number: 3024174

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.04.17 11.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.04.17 11.35	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.04.17 11.35	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.04.17 11.35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	122	%	70-135	08.04.17 11.35		
o-Terphenyl	84-15-1	90	%	70-135	08.04.17 11.35		



Certificate of Analytical Results 559039



COG Operating LLC, Artesia, NM BKU #936H

Sample Id: T1
Lab Sample Id: 559039-003

Matrix: Soil
Date Collected: 07.27.17 11.30

Date Received: 08.01.17 15.06
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 08.03.17 10.00

Basis: Wet Weight

Seq Number: 3024007

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.04.17 04.59	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.04.17 04.59	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.04.17 04.59	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.04.17 04.59	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.04.17 04.59	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.04.17 04.59	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.04.17 04.59	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	80-120	08.04.17 04.59		
4-Bromofluorobenzene	460-00-4	110	%	80-120	08.04.17 04.59		



Certificate of Analytical Results 559039



COG Operating LLC, Artesia, NM BKU #936H

Sample Id: T1 Matrix: Soil Date Received: 08.01.17 15.06
Lab Sample Id: 559039-004 Date Collected: 07.27.17 11.30 Sample Depth: 3 ft
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Tech: MGO % Moisture:
Analyst: MGO Date Prep: 08.03.17 10.55 Basis: Wet Weight
Seq Number: 3024108

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	69.2	4.99	mg/kg	08.03.17 17.15		1

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 08.04.17 07.00 Basis: Wet Weight
Seq Number: 3024174

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.04.17 11.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.04.17 11.55	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.04.17 11.55	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.04.17 11.55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	124	%	70-135	08.04.17 11.55		
o-Terphenyl	84-15-1	91	%	70-135	08.04.17 11.55		



Certificate of Analytical Results 559039



COG Operating LLC, Artesia, NM BKU #936H

Sample Id: T1
Lab Sample Id: 559039-004

Matrix: Soil
Date Collected: 07.27.17 11.30

Date Received: 08.01.17 15.06
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3024007

Date Prep: 08.03.17 10.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.04.17 05.17	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.04.17 05.17	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.04.17 05.17	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.04.17 05.17	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.04.17 05.17	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.04.17 05.17	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.04.17 05.17	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	80-120	08.04.17 05.17		
4-Bromofluorobenzene	460-00-4	107	%	80-120	08.04.17 05.17		



Certificate of Analytical Results 559039



COG Operating LLC, Artesia, NM

BKU #936H

Sample Id: T1

Matrix: Soil

Date Received: 08.01.17 15.06

Lab Sample Id: 559039-005

Date Collected: 07.27.17 11.30

Sample Depth: 8 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MGO

% Moisture:

Analyst: MGO

Date Prep: 08.03.17 10.55

Basis: Wet Weight

Seq Number: 3024108

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	146	4.92	mg/kg	08.03.17 17.23		1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 08.04.17 07.00

Basis: Wet Weight

Seq Number: 3024174

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.04.17 12.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.04.17 12.15	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.04.17 12.15	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.04.17 12.15	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	128	%	70-135	08.04.17 12.15		
o-Terphenyl	84-15-1	101	%	70-135	08.04.17 12.15		



Certificate of Analytical Results 559039



COG Operating LLC, Artesia, NM BKU #936H

Sample Id: T1
Lab Sample Id: 559039-005

Matrix: Soil
Date Collected: 07.27.17 11.30

Date Received: 08.01.17 15.06
Sample Depth: 8 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3024166

Date Prep: 08.04.17 08.15

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.04.17 10.12	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.04.17 10.12	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.04.17 10.12	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.04.17 10.12	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.04.17 10.12	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.04.17 10.12	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.04.17 10.12	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	80-120	08.04.17 10.12		
4-Bromofluorobenzene	460-00-4	106	%	80-120	08.04.17 10.12		



Certificate of Analytical Results 559039



COG Operating LLC, Artesia, NM BKU #936H

Sample Id: T2
Lab Sample Id: 559039-006

Matrix: Soil
Date Collected: 07.27.17 11.30

Date Received: 08.01.17 15.06

Analytical Method: Inorganic Anions by EPA 300/300.1

Tech: MGO

Analyst: MGO

Seq Number: 3024108

Date Prep: 08.03.17 10.55

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	429	4.99	mg/kg	08.03.17 17.30		1

Analytical Method: TPH By SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3024174

Date Prep: 08.04.17 07.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.04.17 12.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	142	15.0	mg/kg	08.04.17 12.36		1
Oil Range Hydrocarbons (ORO)	PHCG2835	28.3	15.0	mg/kg	08.04.17 12.36		1
Total TPH	PHC635	170	15.0	mg/kg	08.04.17 12.36		1

Surrogate

1-Chlorooctane

o-Terphenyl

Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
111-85-3	125	%	70-135	08.04.17 12.36	
84-15-1	93	%	70-135	08.04.17 12.36	



Certificate of Analytical Results 559039



COG Operating LLC, Artesia, NM BKU #936H

Sample Id: T2
Lab Sample Id: 559039-006

Matrix: Soil
Date Collected: 07.27.17 11.30

Date Received: 08.01.17 15.06

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 08.04.17 08.15

Basis: Wet Weight

Seq Number: 3024166

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.04.17 10.31	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.04.17 10.31	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.04.17 10.31	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	08.04.17 10.31	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.04.17 10.31	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.04.17 10.31	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.04.17 10.31	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	111	%	80-120	08.04.17 10.31		
1,4-Difluorobenzene	540-36-3	102	%	80-120	08.04.17 10.31		



Certificate of Analytical Results 559039



COG Operating LLC, Artesia, NM BKU #936H

Sample Id: T2 Matrix: Soil Date Received: 08.01.17 15.06
Lab Sample Id: 559039-007 Date Collected: 07.27.17 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: 08.03.17 10.55 Basis: Wet Weight
Seq Number: 3024108

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	13.5	4.99	mg/kg	08.03.17 17.38		1

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 08.04.17 07.00 Basis: Wet Weight
Seq Number: 3024174

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.04.17 12.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.04.17 12.56	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.04.17 12.56	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.04.17 12.56	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	128	%	70-135	08.04.17 12.56		
o-Terphenyl	84-15-1	94	%	70-135	08.04.17 12.56		



Certificate of Analytical Results 559039



COG Operating LLC, Artesia, NM BKU #936H

Sample Id: T2
Lab Sample Id: 559039-007

Matrix: Soil
Date Collected: 07.27.17 11.30

Date Received: 08.01.17 15.06
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 08.07.17 08.00

Basis: Wet Weight

Seq Number: 3024257

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00351	0.00351	mg/kg	08.07.17 17.21	U	1
Toluene	108-88-3	<0.00351	0.00351	mg/kg	08.07.17 17.21	U	1
Ethylbenzene	100-41-4	<0.00351	0.00351	mg/kg	08.07.17 17.21	U	1
m,p-Xylenes	179601-23-1	<0.00702	0.00702	mg/kg	08.07.17 17.21	U	1
o-Xylene	95-47-6	<0.00351	0.00351	mg/kg	08.07.17 17.21	U	1
Total Xylenes	1330-20-7	<0.00351	0.00351	mg/kg	08.07.17 17.21	U	1
Total BTEX		<0.00351	0.00351	mg/kg	08.07.17 17.21	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	99	%	80-120	08.07.17 17.21		
1,4-Difluorobenzene	540-36-3	97	%	80-120	08.07.17 17.21		



Certificate of Analytical Results 559039



COG Operating LLC, Artesia, NM BKU #936H

Sample Id: T2 Matrix: Soil Date Received: 08.01.17 15.06
Lab Sample Id: 559039-008 Date Collected: 07.27.17 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: 08.03.17 10.55 Basis: Wet Weight
Seq Number: 3024108

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	61.8	4.97	mg/kg	08.03.17 18.01		1

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 08.04.17 07.00 Basis: Wet Weight
Seq Number: 3024174

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.04.17 13.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.04.17 13.16	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.04.17 13.16	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.04.17 13.16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	124	%	70-135	08.04.17 13.16		
o-Terphenyl	84-15-1	91	%	70-135	08.04.17 13.16		



Certificate of Analytical Results 559039



COG Operating LLC, Artesia, NM BKU #936H

Sample Id: T2
Lab Sample Id: 559039-008

Matrix: Soil
Date Collected: 07.27.17 11.30

Date Received: 08.01.17 15.06
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B
Tech: ALJ
Analyst: ALJ
Seq Number: 3024257

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00341	0.00341	mg/kg	08.07.17 17.39	U	1
Toluene	108-88-3	0.0120	0.00341	mg/kg	08.07.17 17.39		1
Ethylbenzene	100-41-4	<0.00341	0.00341	mg/kg	08.07.17 17.39	U	1
m,p-Xylenes	179601-23-1	<0.00683	0.00683	mg/kg	08.07.17 17.39	U	1
o-Xylene	95-47-6	<0.00341	0.00341	mg/kg	08.07.17 17.39	U	1
Total Xylenes	1330-20-7	<0.00341	0.00341	mg/kg	08.07.17 17.39	U	1
Total BTEX		0.0120	0.00341	mg/kg	08.07.17 17.39		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	83	%	80-120	08.07.17 17.39		
1,4-Difluorobenzene	540-36-3	92	%	80-120	08.07.17 17.39		



Certificate of Analytical Results 559039



COG Operating LLC, Artesia, NM BKU #936H

Sample Id: T2 Matrix: Soil Date Received: 08.01.17 15.06
Lab Sample Id: 559039-009 Date Collected: 07.27.17 11.30 Sample Depth: 3 ft
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Tech: MGO % Moisture:
Analyst: MGO Date Prep: 08.03.17 10.55 Basis: Wet Weight
Seq Number: 3024108

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	41.9	4.97	mg/kg	08.03.17 18.09		1

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 08.04.17 07.00 Basis: Wet Weight
Seq Number: 3024174

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.04.17 13.37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.04.17 13.37	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.04.17 13.37	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.04.17 13.37	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	126	%	70-135	08.04.17 13.37		
o-Terphenyl	84-15-1	91	%	70-135	08.04.17 13.37		



Certificate of Analytical Results 559039



COG Operating LLC, Artesia, NM BKU #936H

Sample Id: T2
Lab Sample Id: 559039-009

Matrix: Soil
Date Collected: 07.27.17 11.30

Date Received: 08.01.17 15.06
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3024166

Date Prep: 08.04.17 08.15

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.04.17 11.27	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.04.17 11.27	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.04.17 11.27	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.04.17 11.27	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.04.17 11.27	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.04.17 11.27	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.04.17 11.27	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	101	%	80-120	08.04.17 11.27		
1,4-Difluorobenzene	540-36-3	99	%	80-120	08.04.17 11.27		



Certificate of Analytical Results 559039



COG Operating LLC, Artesia, NM BKU #936H

Sample Id: T2
Lab Sample Id: 559039-010

Matrix: Soil
Date Collected: 07.27.17 11.30

Date Received: 08.01.17 15.06
Sample Depth: 8 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Tech: MGO

Analyst: MGO

Seq Number: 3024108

Date Prep: 08.03.17 10.55

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	20.1	4.98	mg/kg	08.03.17 18.32		1

Analytical Method: TPH By SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3024174

Date Prep: 08.04.17 07.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.04.17 13.57	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.04.17 13.57	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.04.17 13.57	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.04.17 13.57	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	125	%	70-135	08.04.17 13.57		
o-Terphenyl	84-15-1	92	%	70-135	08.04.17 13.57		



Certificate of Analytical Results 559039



COG Operating LLC, Artesia, NM BKU #936H

Sample Id: T2
Lab Sample Id: 559039-010

Matrix: Soil
Date Collected: 07.27.17 11.30

Date Received: 08.01.17 15.06
Sample Depth: 8 ft

Analytical Method: BTEX by EPA 8021B
Tech: ALJ
Analyst: ALJ
Seq Number: 3024257

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00358	0.00358	mg/kg	08.07.17 17.58	U	1
Toluene	108-88-3	<0.00358	0.00358	mg/kg	08.07.17 17.58	U	1
Ethylbenzene	100-41-4	<0.00358	0.00358	mg/kg	08.07.17 17.58	U	1
m,p-Xylenes	179601-23-1	<0.00717	0.00717	mg/kg	08.07.17 17.58	U	1
o-Xylene	95-47-6	<0.00358	0.00358	mg/kg	08.07.17 17.58	U	1
Total Xylenes	1330-20-7	<0.00358	0.00358	mg/kg	08.07.17 17.58	U	1
Total BTEX		<0.00358	0.00358	mg/kg	08.07.17 17.58	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	97	%	80-120	08.07.17 17.58		
4-Bromofluorobenzene	460-00-4	106	%	80-120	08.07.17 17.58		



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 **SQL** 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

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QC Summary 559039

COG Operating LLC BKU #936H

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3024108

Matrix: Solid

Prep Method: E300P

Date Prep: 08.03.17

MB Sample Id: 728718-1-BLK

LCS Sample Id: 728718-1-BKS

LCSD Sample Id: 728718-1-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	249	100	253	101	90-110	2	20	mg/kg	08.03.17 10:58	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3024108

Matrix: Soil

Prep Method: E300P

Date Prep: 08.03.17

Parent Sample Id: 559005-001

MS Sample Id: 559005-001 S

MSD Sample Id: 559005-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	5.72	250	251	98	251	98	90-110	0	20	mg/kg	08.03.17 15:58	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3024108

Matrix: Soil

Prep Method: E300P

Date Prep: 08.03.17

Parent Sample Id: 559039-007

MS Sample Id: 559039-007 S

MSD Sample Id: 559039-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	13.5	250	264	100	261	99	90-110	1	20	mg/kg	08.03.17 17:46	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3024174

Matrix: Solid

Prep Method: TX1005P

Date Prep: 08.04.17

MB Sample Id: 728838-1-BLK

LCS Sample Id: 728838-1-BKS

LCSD Sample Id: 728838-1-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	956	96	929	93	70-135	3	35	mg/kg	08.04.17 09:34	
Diesel Range Organics (DRO)	<15.0	1000	1060	106	1060	106	70-135	0	35	mg/kg	08.04.17 09:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	129		126		126		70-135	%	08.04.17 09:34
o-Terphenyl	97		97		100		70-135	%	08.04.17 09:34



QC Summary 559039

COG Operating LLC BKU #936H

Analytical Method: TPH By SW8015 Mod

Seq Number: 3024174

Parent Sample Id: 559039-001

Matrix: Soil

MS Sample Id: 559039-001 S

Prep Method: TX1005P

Date Prep: 08.04.17

MSD Sample Id: 559039-001 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	1000	926	93	948	95	70-135	2	35	mg/kg	08.04.17 10:34	
Diesel Range Organics (DRO)	40.8	1000	1010	97	1020	98	70-135	1	35	mg/kg	08.04.17 10:34	
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits			Units	Analysis Date	
1-Chlorooctane			125		124		70-135			%	08.04.17 10:34	
o-Terphenyl			87		86		70-135			%	08.04.17 10:34	

Analytical Method: BTEX by EPA 8021B

Seq Number: 3024007

MB Sample Id: 728729-1-BLK

Matrix: Solid

LCS Sample Id: 728729-1-BKS

Prep Method: SW5030B

Date Prep: 08.03.17

LCSD Sample Id: 728729-1-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	0.0858	86	0.0842	84	70-130	2	35	mg/kg	08.03.17 20:54	
Toluene	<0.00200	0.0998	0.0899	90	0.0880	88	70-130	2	35	mg/kg	08.03.17 20:54	
Ethylbenzene	<0.00200	0.0998	0.0984	99	0.0972	97	71-129	1	35	mg/kg	08.03.17 20:54	
m,p-Xylenes	<0.00399	0.200	0.189	95	0.188	94	70-135	1	35	mg/kg	08.03.17 20:54	
o-Xylene	<0.00200	0.0998	0.0981	98	0.0990	99	71-133	1	35	mg/kg	08.03.17 20:54	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits			Units	Analysis Date	
1,4-Difluorobenzene	98		100		99		80-120			%	08.03.17 20:54	
4-Bromofluorobenzene	105		105		105		80-120			%	08.03.17 20:54	

Analytical Method: BTEX by EPA 8021B

Seq Number: 3024166

MB Sample Id: 728837-1-BLK

Matrix: Solid

LCS Sample Id: 728837-1-BKS

Prep Method: SW5030B

Date Prep: 08.04.17

LCSD Sample Id: 728837-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.108	107	0.116	115	70-130	7	35	mg/kg	08.04.17 08:18	
Toluene	<0.00201	0.101	0.107	106	0.115	114	70-130	7	35	mg/kg	08.04.17 08:18	
Ethylbenzene	<0.00201	0.101	0.110	109	0.117	116	71-129	6	35	mg/kg	08.04.17 08:18	
m,p-Xylenes	<0.00402	0.201	0.213	106	0.228	113	70-135	7	35	mg/kg	08.04.17 08:18	
o-Xylene	<0.00201	0.101	0.106	105	0.113	112	71-133	6	35	mg/kg	08.04.17 08:18	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits			Units	Analysis Date	
1,4-Difluorobenzene	100		106		105		80-120			%	08.04.17 08:18	
4-Bromofluorobenzene	103		104		103		80-120			%	08.04.17 08:18	



QC Summary 559039

COG Operating LLC
BKU #936H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3024257

MB Sample Id: 728907-1-BLK

Matrix: Solid

LCS Sample Id: 728907-1-BKS

Prep Method: SW5030B

Date Prep: 08.07.17

LCSD Sample Id: 728907-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.0969	96	0.0977	98	70-130	1	35	mg/kg	08.07.17 08:13	
Toluene	<0.00201	0.101	0.104	103	0.104	104	70-130	0	35	mg/kg	08.07.17 08:13	
Ethylbenzene	<0.00201	0.101	0.0984	97	0.0993	99	71-129	1	35	mg/kg	08.07.17 08:13	
m,p-Xylenes	<0.00402	0.201	0.192	96	0.194	97	70-135	1	35	mg/kg	08.07.17 08:13	
o-Xylene	<0.00201	0.101	0.0945	94	0.0962	96	71-133	2	35	mg/kg	08.07.17 08:13	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		104		105		80-120	%	08.07.17 08:13
4-Bromofluorobenzene	105		104		105		80-120	%	08.07.17 08:13

Analytical Method: BTEX by EPA 8021B

Seq Number: 3024007

Parent Sample Id: 559042-029

Matrix: Soil

MS Sample Id: 559042-029 S

Prep Method: SW5030B

Date Prep: 08.03.17

MSD Sample Id: 559042-029 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	0.0834	83	0.0753	75	70-130	10	35	mg/kg	08.04.17 07:14	
Toluene	<0.00202	0.101	0.0813	80	0.0754	75	70-130	8	35	mg/kg	08.04.17 07:14	
Ethylbenzene	<0.00202	0.101	0.0825	82	0.0902	90	71-129	9	35	mg/kg	08.04.17 07:14	
m,p-Xylenes	<0.00403	0.202	0.158	78	0.178	89	70-135	12	35	mg/kg	08.04.17 07:14	
o-Xylene	<0.00202	0.101	0.0799	79	0.0996	100	71-133	22	35	mg/kg	08.04.17 07:14	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		109		80-120	%	08.04.17 07:14
4-Bromofluorobenzene	102		106		80-120	%	08.04.17 07:14

Analytical Method: BTEX by EPA 8021B

Seq Number: 3024166

Parent Sample Id: 559039-005

Matrix: Soil

MS Sample Id: 559039-005 S

Prep Method: SW5030B

Date Prep: 08.04.17

MSD Sample Id: 559039-005 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	0.0988	98	0.101	100	70-130	2	35	mg/kg	08.04.17 08:56	
Toluene	<0.00201	0.101	0.0983	97	0.100	99	70-130	2	35	mg/kg	08.04.17 08:56	
Ethylbenzene	<0.00201	0.101	0.101	100	0.102	101	71-129	1	35	mg/kg	08.04.17 08:56	
m,p-Xylenes	<0.00402	0.201	0.196	98	0.199	99	70-135	2	35	mg/kg	08.04.17 08:56	
o-Xylene	<0.00201	0.101	0.0977	97	0.0990	98	71-133	1	35	mg/kg	08.04.17 08:56	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		105		80-120	%	08.04.17 08:56
4-Bromofluorobenzene	107		108		80-120	%	08.04.17 08:56



QC Summary 559039

COG Operating LLC BKU #936H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3024257

Parent Sample Id: 559041-001

Matrix: Soil

MS Sample Id: 559041-001 S

Prep Method: SW5030B

Date Prep: 08.07.17

MSD Sample Id: 559041-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0757	75	0.0640	64	70-130	17	35	mg/kg	08.07.17 15:10	X
Toluene	<0.00202	0.101	0.0718	71	0.0683	68	70-130	5	35	mg/kg	08.07.17 15:10	X
Ethylbenzene	<0.00202	0.101	0.0620	61	0.0561	56	71-129	10	35	mg/kg	08.07.17 15:10	X
m,p-Xylenes	0.00745	0.202	0.119	55	0.109	51	70-135	9	35	mg/kg	08.07.17 15:10	X
o-Xylene	0.00285	0.101	0.0606	57	0.0553	52	71-133	9	35	mg/kg	08.07.17 15:10	X

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		106		80-120	%	08.07.17 15:10
4-Bromofluorobenzene	105		114		80-120	%	08.07.17 15:10

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San Antonio, Texas (210-508-3334)
Midland, Texas (432-704-5251)

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Client / Reporting Information				Project Information				Analytical Information				Matrix Codes			
Company Name / Branch: COG Operating LLC Company Address: 2467 PECOS Avenue Arleta NM 88210 Email: info@concho.com Phone No: 575-745-1053 Project Contact: Aaron Lieb				Project Name/Number: Woolley Federal TN Invoice To: COG Operating LLC Attn: Robert McNeill 600 W. Illinois Midland TX 79701				Analytical Information: TPH/ EXTENDED BTEX Chloride				Matrix Codes: W = Water S = Soil/Sediment 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			
Turnaround Time (Business days)				Data Deferrable Information				Temp: 3.1 CF: (0-6: -0.2°C) (6-23: +0.2°C) Corrected Temp: 2.9 IPR ID: R-8							
☐ Same Day TAT ☐ Next Day EMERGENCY ☐ 2 Day EMERGENCY ☐ 3 Day EMERGENCY				☐ 6 Day TAT ☐ 7 Day TAT ☐ Contract TAT ☐ TRRP Checklist				☐ Level II Std QC ☐ Level III Std QC + Forms ☐ Level 3 (CLIP Forms) ☐ TRRP Level IV ☐ UST / RO -411				☐ Level IV (Full Data Pkg /raw data)			
TAT Starts Day received by Lab, if received by 5:00 pm				SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING CARRIER DELIVERY				Date Time: 8-1-17 10:00 AM Received By: Did Butler Date Time: 8-1-17 3:06 PM Received By: Did Butler				Date Time: 8-1-17 1:17 PM Received By: Did Butler Date Time: 8-1-17 3:06 PM Received By: Did Butler			
Relinquished by: SA Date Time: 8-1-17 10:00 AM				Relinquished by: SA Date Time: 8-1-17 1:17 PM				Relinquished by: SA Date Time: 8-1-17 3:06 PM				Relinquished by: SA Date Time: 8-1-17 3:06 PM			
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Relinquished by: SA Date Time: 8-1-17 10:00 AM				Relinquished by: SA Date Time: 8-1-17 1:17 PM				Relinquished by: SA Date Time: 8-1-17 3:06 PM				Relinquished by: SA Date Time: 8-1-17 3:06 PM			
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Relinquished by: SA Date Time: 8-1-17 10:00 AM				Relinquished by: SA Date Time: 8-1-17 1:17 PM				Relinquished by: SA Date Time: 8-1-17 3:06 PM				Relinquished by: SA Date Time: 8-1-17 3:06 PM			
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Relinquished by: SA Date Time: 8-1-17 10:00 AM				Relinquished by: SA Date Time: 8-1-17 1:17 PM				Relinquished by: SA Date Time: 8-1-17 3:06 PM				Relinquished by: SA Date Time: 8-1-17 3:0			

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Client / Reporting Information Company Name / Branch: COG Operating LLC Company Address: 2407 PECOS AVENUE ARLINGHAM 82510 Phone No: 878-746-1653 Email: aribb@cocogrp.com inshell@cocogrp.com mkstet@cocogrp.com Project Contact: Aaron Lab Sampler's Name: Aaron Lab		Project Information Project Name/Number: BKN # 936H Property Location: Woodley Federal TR Invoice To: COG Operating LLC Attn: Robert McNeill 800 W. Illinois Midland TX 79701 PO Number:	
No. Field ID / Point of Collection		Collection Sample Depth Date Time Matrix # of bottles	
1 T1 2 T1 3 T1 4 T1 5 T1 6 T2 7 T2 8 T2 9 T2 10 T2		5' 7:27 11:30 AM 1 1' 1' 2' 1' 3' 1' 4' 1' 5' 1' 6' 1' 7' 1' 8' 1' 9' 1' 10' 1'	
Turnaround Time (Business days)		Data Deliverable Information	
☐ Same Day TAT ☐ Next Day EMERGENCY ☐ 2 Day EMERGENCY ☐ 3 Day EMERGENCY		☐ Level II Std QC ☐ Level III Std QC + Forms ☐ Level 3 (CLP Forms) ☐ TRRP Checklists	
TAT Starts Day received by Lab, if received by 5:00 pm		Temp: 3.1 IR ID: R-8 CF: (0-6: -0.2°C) (6-23: +0.2°C) Corrected Temp: 2.9	
Relinquished by: AS Date Time: 8-1-17 10:00 AM		Relinquished By: AS Date Time: 8-1-17 3:06 PM	
Relinquished by: AS Date Time: 8-1-17 1:17 PM		Relinquished By: AS Date Time: 8-1-17 3:06 PM	
Relinquished by: AS Date Time: 8-1-17 1:17 PM		Relinquished By: AS Date Time: 8-1-17 3:06 PM	
Relinquished by: AS Date Time: 8-1-17 1:17 PM		Relinquished By: AS Date Time: 8-1-17 3:06 PM	
Relinquished by: AS Date Time: 8-1-17 1:17 PM		Relinquished By: AS Date Time: 8-1-17 3:06 PM	
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Relinquished by: AS Date Time: 8-1-17 1:17 PM		Relinquished By: AS Date Time: 8-1-17 3:06 PM	
Relinquished by: AS Date Time: 8-1-17 1:17 PM		Relinquished By: AS Date Time: 8-1-17 3:06 PM	
Relinquished by: AS Date Time: 8-1-17 1:17 PM		Relinquished By: AS	



XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In



Client: COG Operating LLC

Date/ Time Received: 08/01/2017 03:06:00 PM

Work Order #: 559039

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)?	2.9
#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
Jessica Kramer

Date: 08/02/2017

Checklist reviewed by: Kelsey Brooks
Kelsey Brooks

Date: 08/02/2017