CONCHO

November 8, 2018

Maria Pruett
Oil Conservation Division, District 2
811 S First St.
Artesia, NM 88210

Shelly Tucker
Bureau of Land Management, CFO
620 E. Green Street
Carlsbad, NM 88220

Closure Report
Blue Thunder 5 Federal Com #004H
API#: 30-015-38477
RP#: 2RP-4886
DOR: July 26, 2018
GPS: 32.6835594 -103.8846512
Unit Letter P, Section 5, Township 19 South, Range 31 East
Eddy County, New Mexico

Ms. Pruett/Ms. Tucker,

COG Operating, LLC (COG) is pleased to submit the following closure report in response to a release that occurred at the Blue Thunder 5 Federal Com #004H. The release is located in Unit Letter P, Section 5, Township 19 South and Range 31 East in Eddy County, New Mexico. More specifically the latitude and longitude for the release are 32.6835594 North and -103.8846512 West.

BACKGROUND

The release was discovered on July 26, 2018. A C-141 initial report was submitted to the New Mexico Oil Conservation Division (NMOCD) and the Bureau of Land Management (BLM). The initial C-141 is presented in Appendix A. A lightning strike damaged three of the tanks inside of the battery resulting in the release of approximately sixty-five (65) barrels (bbls) of produced water and one (1) bbl of oil. Vacuum trucks were utilized to recover approximately sixty (60) bbls of produced water and one (1) bbl of oil.

GROUNDWATER AND REGULATORY FRAMEWORK

According to the United States Geological Survey (USGS) the nearest water well (324159103503801) indicates that groundwater in the project vicinity is approximately two-hundred and sixty (260) feet below ground surface (BGS). The water well information is shown in Appendix B.

A risk based evaluation and site determinations were performed in accordance to the New Mexico Oil Conservation Division (NMOCD) Rule (Title 19 Chapter 15 Part 29) for releases on oil and gas development and production in New Mexico (effective August 14, 2018). According to the site characterization evaluation, no other receptors (water wells, playas, karst, water course, lake beds or ordinance boundaries) were located within each specific boundaries or distance from the site. The groundwater data and the site characterization evaluation data is summarized in Appendix B. The delineation and closure criteria are listed below:

GENERAL SITE CHARACTERIZATION AND GROUNDWATER:

Site Characterization	Average Groundwater Depth (ft.)
None Located	>100 feet

DELINEATION AND CLOSURE CRITERIA:

Recommended Remedial Action Levels (RRALs)	
Chlorides	20,000 mg/kg
TPH (GRO and DRO and MRO)	2,500 mg/kg
TPH (GRO and DRO)	1,000 mg/kg
Benzene	10 mg/kg
Total BTEX	50 mg/kg

REMEDIATION PLAN

All samples were below the closure criteria detailed in Table 1 of 19.15.29.12 NMAC and thus no remediation will occur. Based on the information provided, COG is requesting closure of the release. The signed C-141 Final is included in Appendix A.

SITE RECLAMATION AND RESTORATION

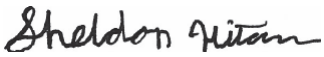
All of the fluid remained on the well pad thus no reclamation is required for the release.

CLOSURE REQUEST

COG Operating, LLC respectfully requests that the New Mexico Oil Conservation Division and the Bureau of Land Management grant closure approval for the Blue Thunder 5 Federal Com #004H incident that occurred on July 26, 2018.

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

Sincerely,



Sheldon L. Hitchcock
HSE Coordinator
slhitchcock@concho.com

FIGURES

Blue Thunder 5 Federal Com #004H

CONCHO

TABLES

Table 1
COG Operating LLC.
Blue Thunder 5 Federal Com #004H (7-26-2018)
Eddy County, New Mexico

Sample ID	Sample Depth (ft)	Sample Date	Soil Status		TPH (mg/kg)							Benzene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	MRO	*Total*	GRO	DRO	*Total*			
NMOCD RRAL Limits (mg/kg)					**-**	**-**	**-**	**2,500**	**-**	**-**	**1,000**	**10**	**50**	**20,000**
BH-1	0	8/16/2018	X		<15.0	<15.0	<15.0	0.0	<15.0	<15.0	0.0	<0.00200	<0.00200	3770
BH-1	1	8/16/2018	X		<15.0	<15.0	<15.0	0.0	<15.0	<15.0	0.0	<0.00200	<0.00200	849
BH-1	2	8/16/2018	X		<14.9	<14.9	<14.9	0.0	<14.9	<14.9	0.0	<0.00202	<0.00202	17
BH-1	3	8/16/2018	X		<15.0	<15.0	<15.0	0.0	<15.0	<15.0	0.0	<0.00199	<0.00199	#
BH-1	4	8/16/2018	X		<15.0	16.6	<15.0	16.6	<15.0	16.6	16.6	<0.00199	<0.00199	#
BH-2	0	8/16/2018	X		<14.9	155	<14.9	155.0	<14.9	155	155.0	<0.00201	<0.00201	896
BH-2	1	8/16/2018	X		<15.0	41.2	<15.0	41.2	<15.0	41.2	41.2	<0.0100	<0.0100	57
BH-2	2	8/16/2018	X		<15.0	<15.0	<15.0	0.0	<15.0	<15.0	0.0	<0.0100	<0.0100	#
BH-2	3	8/16/2018	X		<15.0	<15.0	<15.0	0.0	<15.0	<15.0	0.0	<0.0100	<0.0100	#
NORTH	0	8/16/2018	X		<15.0	<15.0	<15.0	0.0	<15.0	<15.0	0.0	<0.0100	<0.0100	<4.97
SOUTH	0	8/16/2018	X		<15.0	427	25.8	452.8	<15.0	427	427.0	<0.0100	<0.0100	<59.4
EAST	0	8/16/2018	X		<15.0	<15.0	<15.0	0.0	<15.0	<15.0	0.0	<0.0100	<0.0100	<5.04

Proposed Excavation Depth

(#) Not Analyzed

APPENDIX A

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

nAB1821440875

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: **Blue Thunder 5 Federal Com #004H**	Facility Type: Tank Battery

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-38477

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
P	05	19S	31E	480	South	500	East	Eddy

Latitude 32.6835594 **Longitude** -103.8846512 NAD83

NATURE OF RELEASE

Type of Release Oil & Produced Water	Volume of Release 1 bbl. Oil 65 bbl. Produced Water	Volume Recovered 1 bbl. Oil 60 bbl. Produced Water
Source of Release Lightning Strike	Date and Hour of Occurrence July 26, 2018 9:00am	Date and Hour of Discovery July 26, 2018 9:00am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher – NMOCD Shelly Tucker – BLM Maria Pruett – NMOCD	
By Whom? Rebecca Haskell	Date and Hour July 26, 2018 2:16pm	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

The release was caused by lightning striking the tank battery. The burned tanks are being replaced.

Describe Area Affected and Cleanup Action Taken.*

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

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

Signature: DeAnn Grant	OIL CONSERVATION DIVISION
Printed Name: DeAnn Grant	Approved by Environmental Specialist: Maria Pruett
Title: HSE Administrative Assistant	Approval Date: 8/2/18 Expiration Date: N/A
E-mail Address: agrant@concho.com	Conditions of Approval: See Attached Attached ☐ RP-4886
Date: July 30, 2018 Phone: (432) 253-4513	

* Attach Additional Sheets If Necessary

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 Department

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	COG Operating, LLC	OGRID	229137
Contact Name	Robert McNeill	Contact Telephone	(432) 683-7443
Contact email	RMcNeill@concho.com	Incident # *(assigned by OCD)*	
Contact mailing address	600 West Illinois Avenue, Midland, Texas 79701		

Location of Release Source

Latitude 32.6835594 Longitude -103.8846512

(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Blue Thunder 5 Federal Com #004H	Site Type	Tank Battery
Date Release Discovered	July 26, 2018	API# *(if applicable)*	30-015-38477

Unit Letter	Section	Township	Range	County
P	5	19S	31E	Eddy

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (*Name:* _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☒ Crude Oil	Volume Released (bbls) 1	Volume Recovered (bbls) 1
☒ Produced Water	Volume Released (bbls) 65	Volume Recovered (bbls) 60
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

The release was caused by lightning striking the tank battery. The damage tanks were replaced.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? The release volume was greater than 25bbls and involved a fire.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Yes-Rebecca Haskell-Mike Bratcher, Maria Pruett, Shelly Tucker (BLM)-Email 7/26/2018 2:16pm

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

- ☒ The source of the release has been stopped.
- ☒ The impacted area has been secured to protect human health and the environment.
- ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
- ☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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

Printed Name: Sheldon L. Hitchcock
Title: HSE Coordinator
Signature: Sheldon Hitchcock
Date: 11/8/2018
email: slhitchcock@conco.com
Telephone: 575-746-2010

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	260 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☐ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☐ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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

Printed Name: Sheldon L. Hitchcock Title: HSE Coordinator

Signature: Sheldon Hitchcock Date: 11/8/2018

email: slhitchcock@concho.com Telephone: 575-746-2018

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: ***Each of the following items must be included in the plan.***

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☐ Extents of contamination must be fully delineated.

☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: Sheldon L. Hitchcock Title: HSE Coordinator

Signature: Sheldon Hitchcock Date: 11/18/2018

email: slhitchcock@concho.com Telephone: 575-746-2010

OCD Only

Received by: _____ Date: _____

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

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

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

- [x] A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- [x] Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- [x] Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- [ ] Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Sheldon L. Hitchcock Title: HSE Coordinator

Signature: Sheldon Hitchcock Date: 11/8/2018

email: slhitchcock@concho.com Telephone: 575-746-2010

OCD Only

Received by: _____ Date: _____

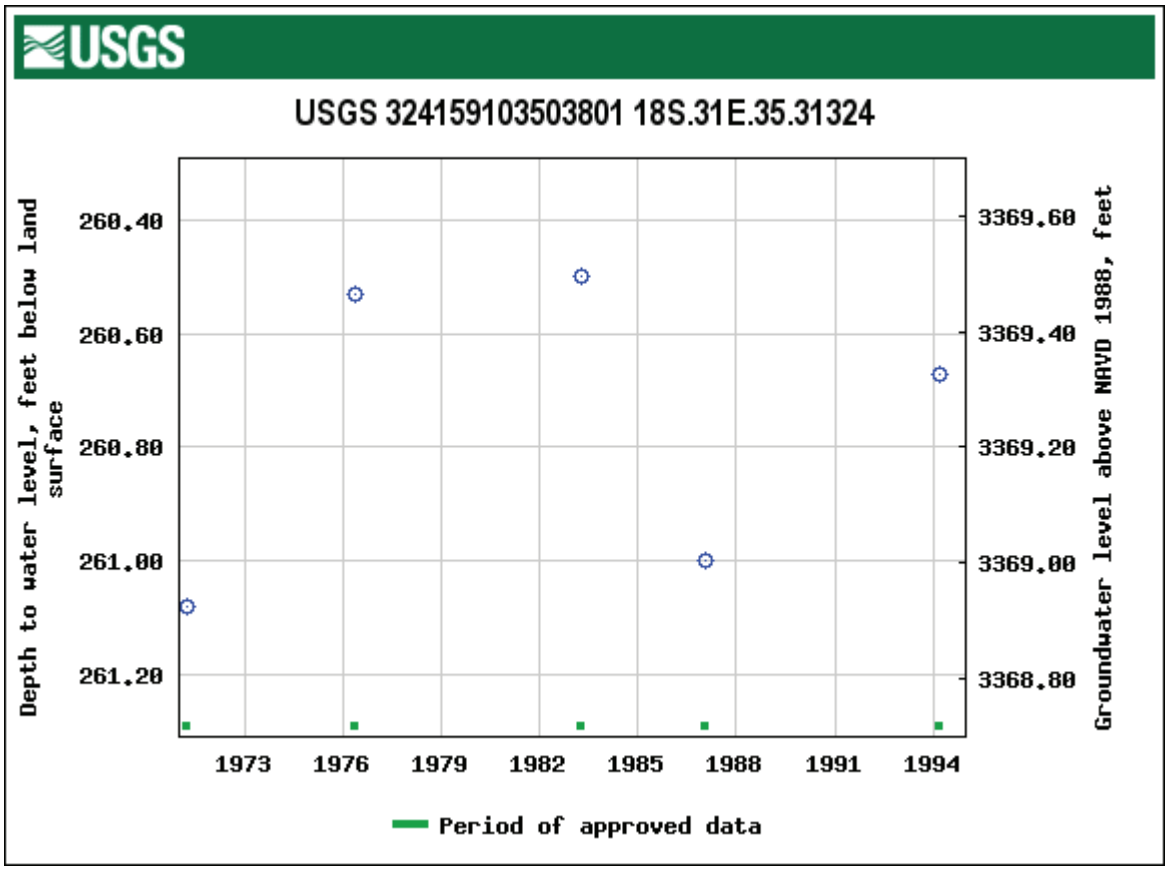
Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance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

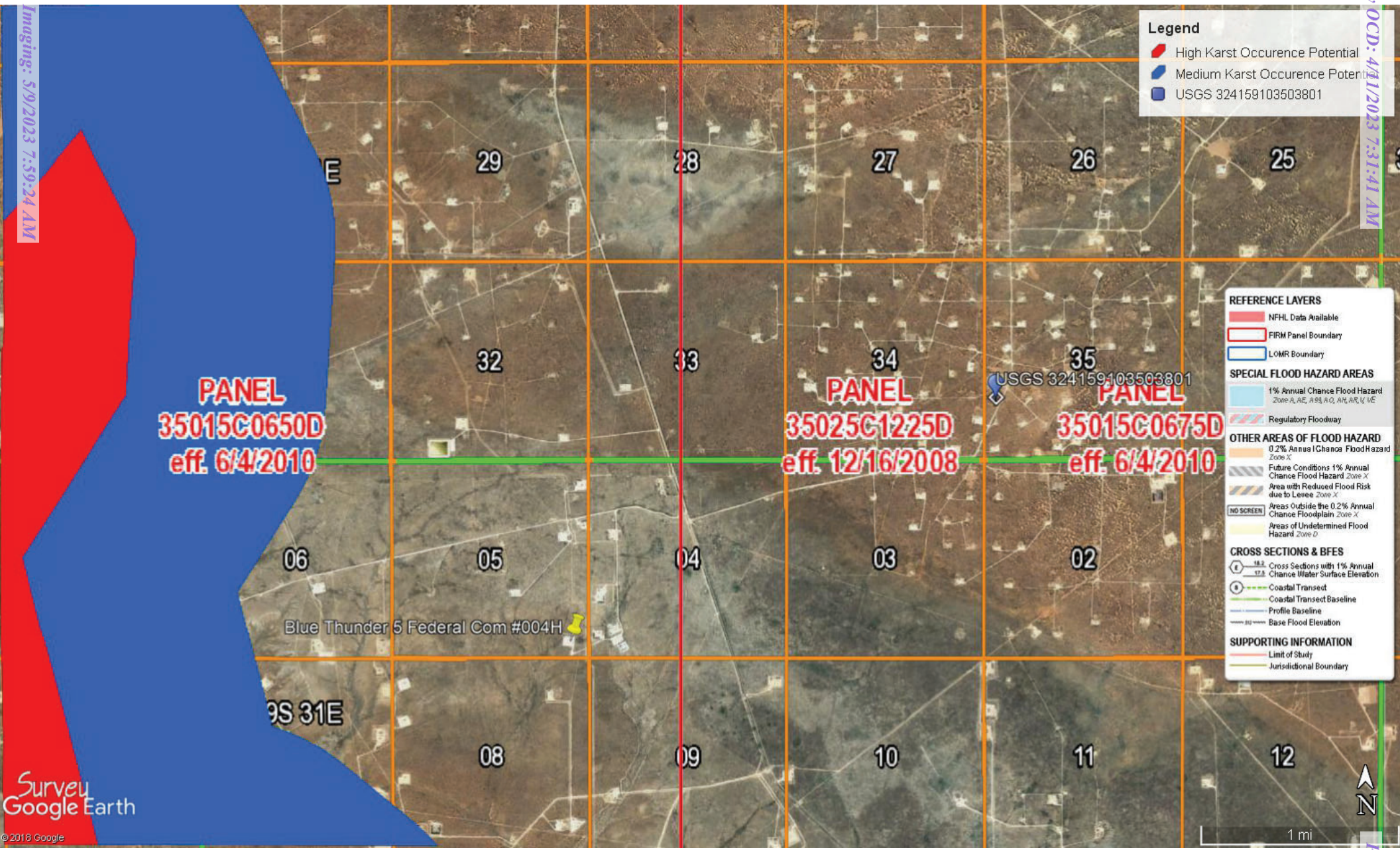
Closure previously approved on 11/14/2018 by C. Eads

Closure Approved by: Brittany Hall Date: 5/9/2023

Printed Name: Brittany Hall Title: Environmental Specialist

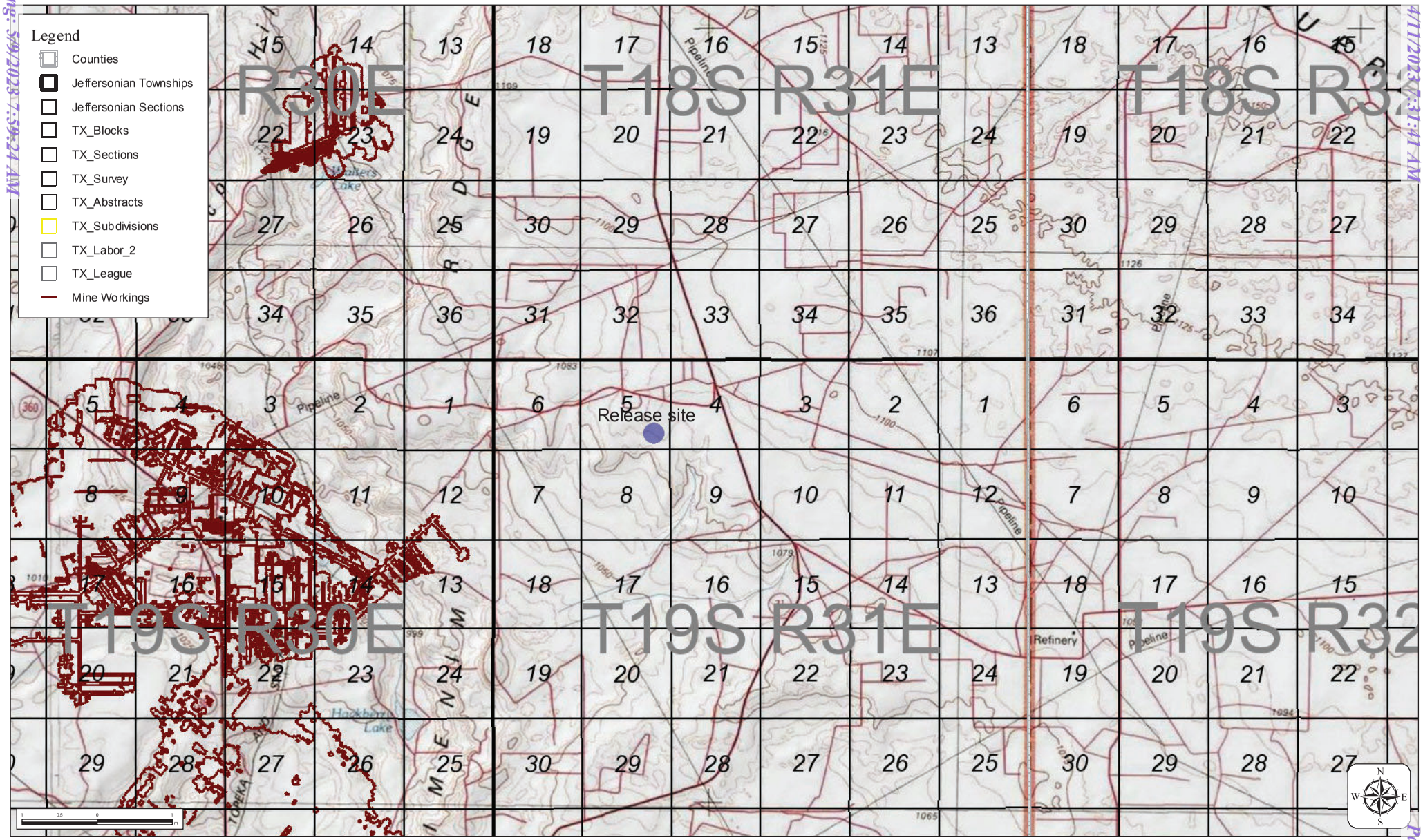
APPENDIX B


USGS
USGS 324159103503801 18S.31E.35.31324
Depth to water level, feet below land surface
260.40
260.60
260.80
261.00
261.20
Groundwater level above NAVD 1988, feet
3369.60
3369.40
3369.20
3369.00
3368.80
1973
1976
1979
1982
1985
1988
1991
1994
Period of approved data



CONCHO

Mine Workigns Map



APPENDIX C


CONCHO
COG Operating LLC
BLUE THUNDER 5 FEDERAL #4H
UL P SEC.5-T19S-R31E
480'FSL & 500'FEL
EDDY COUNTY, NM
API #30-015-38477
SH NMNM-100858 BH NMLC 69033
NMNM 127173


W
NW
240
270
300
330
288°W (T)
32.683769°, -103.884300° ±16.4ft
3571ft
26 Jul 2018, 09:36


N
NE
E
30
0
30
60
90
42°NE (T)
32.671600°, -104.019989° ±32445.8ft
3565ft
4x4
TX 54499AI
OK DPC 0619
NM 1575
KS 774
16 Aug 2018 09:48


210
240
300
330
NW
272°W (T)
32.671600°, -104.019989° ±32445.8ft
3565ft
16 Aug 2018, 09:48

APPENDIX D

Certificate of Analysis Summary 596317

COG Operating LLC, Artesia, NM

Project Name: Blue Thunder 5 Fed com #4

Project Id:

Contact: Sheldon Hitchcock

Project Location: Eddy Co, NM

Date Received in Lab: Sat Aug-18-18 09:00 am

Report Date: 27-AUG-18

Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	596317-001		596317-002		596317-003		596317-004		596317-005		596317-006	
	Field Id:	BH-1 0'		BH-1 1'		BH-1 2'		BH-1 3'		BH-1 4'		BH-2 0'	
	Depth:	0- ft		1- ft		2- ft		3- ft		4- ft		0- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-16-18 08:30		Aug-16-18 08:35		Aug-16-18 08:40		Aug-16-18 08:45		Aug-16-18 08:50		Aug-16-18 09:00	
BTEX by EPA 8021B	*Extracted:*	Aug-25-18 07:45		Aug-25-18 07:45		Aug-25-18 07:45		Aug-25-18 07:45		Aug-25-18 07:45		Aug-25-18 07:45	
	Analyzed:	Aug-25-18 18:48		Aug-25-18 19:10		Aug-25-18 19:30		Aug-25-18 19:51		Aug-25-18 20:11		Aug-25-18 20:52	
	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	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201
m,p-Xylenes		<0.00399	0.00399	<0.00401	0.00401	<0.00403	0.00403	<0.00398	0.00398	<0.00398	0.00398	<0.00402	0.00402
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201
Chloride by EPA 300	*Extracted:*	Aug-21-18 09:00		Aug-21-18 09:00		Aug-21-18 09:00						Aug-21-18 11:30	
	Analyzed:	Aug-21-18 12:20		Aug-21-18 12:25		Aug-21-18 13:14						Aug-21-18 13:58	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL					mg/kg	RL
Chloride		3770	24.9	849	5.00	17.4	4.99					896	5.00
TPH By SW8015 Mod	*Extracted:*	Aug-20-18 16:00		Aug-20-18 16:00		Aug-20-18 16:00		Aug-20-18 16:00		Aug-20-18 16:00		Aug-20-18 16:00	
	Analyzed:	Aug-20-18 23:51		Aug-21-18 00:50		Aug-21-18 01:09		Aug-21-18 01:29		Aug-21-18 01:49		Aug-21-18 02:08	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<14.9	14.9
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	16.6	15.0	155	14.9
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<14.9	14.9
Total TPH		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	16.6	15.0	155	14.9

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

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analysis Summary 596317

COG Operating LLC, Artesia, NM

Project Name: Blue Thunder 5 Fed com #4

Project Id:
Contact: Sheldon Hitchcock
Project Location: Eddy Co, NM

Date Received in Lab: Sat Aug-18-18 09:00 am
Report Date: 27-AUG-18
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	596317-007		596317-008		596317-009			
	Field Id:	BH-2 1'		BH-2 2'		BH-2 3'			
	Depth:	1- ft		2- ft		3- ft			
	Matrix:	SOIL		SOIL		SOIL			
	Sampled:	Aug-16-18 09:05		Aug-16-18 09:10		Aug-16-18 09:15			
BTEX by EPA 8021B	***Extracted:***	Aug-26-18 09:00		Aug-26-18 09:00		Aug-26-18 09:00			
	Analyzed:	Aug-26-18 10:52		Aug-26-18 11:13		Aug-26-18 11:34			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		<0.0100	0.0100	<0.0100	0.0100	<0.0100	0.0100		
Toluene		<0.0100	0.0100	<0.0100	0.0100	<0.0100	0.0100		
Ethylbenzene		<0.0100	0.0100	<0.0100	0.0100	<0.0100	0.0100		
m,p-Xylenes		<0.0200	0.0200	<0.0200	0.0200	<0.0200	0.0200		
o-Xylene		<0.0100	0.0100	<0.0100	0.0100	<0.0100	0.0100		
Total Xylenes		<0.0100	0.0100	<0.0100	0.0100	<0.0100	0.0100		
Total BTEX		<0.0100	0.0100	<0.0100	0.0100	<0.0100	0.0100		
Chloride by EPA 300	***Extracted:***	Aug-21-18 11:30							
	Analyzed:	Aug-21-18 14:14							
	Units/RL:	mg/kg	RL						
Chloride		57.0	5.00						
TPH By SW8015 Mod	***Extracted:***	Aug-20-18 16:00		Aug-20-18 16:00		Aug-21-18 16:00			
	Analyzed:	Aug-21-18 02:28		Aug-21-18 02:48		Aug-21-18 20:17			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0		
Diesel Range Organics (DRO)		41.2	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		
Total TPH		41.2	15.0	<15.0	15.0	<15.0	15.0		

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Jessica Kramer
Project Assistant

Final 1.000

Analytical Report 596317

for

COG Operating LLC

Project Manager: Sheldon Hitchcock

Blue Thunder 5 Fed com #4

27-AUG-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-13)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-17)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-16)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

27-AUG-18

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

Reference: XENCO Report No(s): **596317**
Blue Thunder 5 Fed com #4
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) 596317. 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. 596317 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

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Sample Cross Reference 596317

COG Operating LLC, Artesia, NM

Blue Thunder 5 Fed com #4

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH-1 0'	S	08-16-18 08:30	0 ft	596317-001
BH-1 1'	S	08-16-18 08:35	1 ft	596317-002
BH-1 2'	S	08-16-18 08:40	2 ft	596317-003
BH-1 3'	S	08-16-18 08:45	3 ft	596317-004
BH-1 4'	S	08-16-18 08:50	4 ft	596317-005
BH-2 0'	S	08-16-18 09:00	0 ft	596317-006
BH-2 1'	S	08-16-18 09:05	1 ft	596317-007
BH-2 2'	S	08-16-18 09:10	2 ft	596317-008
BH-2 3'	S	08-16-18 09:15	3 ft	596317-009

CASE NARRATIVE

Client Name: COG Operating LLC

Project Name: Blue Thunder 5 Fed com #4

Project ID:
Work Order Number(s): *596317*

Report Date: *27-AUG-18*
Date Received: *08/18/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3060810 Chloride by EPA 300
Lab Sample ID 596319-008 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD).
Chloride 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: 596317-006, -007.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3061311 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3061330 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Lab Sample ID 596317-007 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD).
m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Ethylbenzene, Toluene recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 596317-007, -008, -009.
The Laboratory Control Sample for Toluene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analytical Results 596317

COG Operating LLC, Artesia, NM

Blue Thunder 5 Fed com #4

Sample Id:	**BH-1 0'**	Matrix:	Soil	Date Received:	08.18.18 09.00
Lab Sample Id:	596317-001	Date Collected:	08.16.18 08.30	Sample Depth:	0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.21.18 09.00	Basis:	Wet Weight
Seq Number:	3060742				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3770**	24.9	mg/kg	08.21.18 12.20		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.20.18 16.00	Basis:	Wet Weight
Seq Number:	3060714				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.20.18 23.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.20.18 23.51	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.20.18 23.51	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.20.18 23.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	08.20.18 23.51	
o-Terphenyl	84-15-1	92	%	70-135	08.20.18 23.51	

Certificate of Analytical Results 596317

COG Operating LLC, Artesia, NM

Blue Thunder 5 Fed com #4

Sample Id:	**BH-1 0'**	Matrix:	Soil	Date Received:	08.18.18 09.00
Lab Sample Id:	596317-001	Date Collected:	08.16.18 08.30	Sample Depth:	0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.25.18 07.45	Basis:	Wet Weight
Seq Number:	3061311				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.25.18 18.48	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.25.18 18.48	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.25.18 18.48	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.25.18 18.48	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.25.18 18.48	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.25.18 18.48	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.25.18 18.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.25.18 18.48	
4-Bromofluorobenzene	460-00-4	98	%	70-130	08.25.18 18.48	

Certificate of Analytical Results 596317

COG Operating LLC, Artesia, NM

Blue Thunder 5 Fed com #4

Sample Id:	**BH-1 1'**	Matrix:	Soil	Date Received:	08.18.18 09.00
Lab Sample Id:	596317-002	Date Collected:	08.16.18 08.35	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.21.18 09.00	Basis:	Wet Weight
Seq Number:	3060742				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**849**	5.00	mg/kg	08.21.18 12.25		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.20.18 16.00	Basis:	Wet Weight
Seq Number:	3060714				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.21.18 00.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.21.18 00.50	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.21.18 00.50	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.21.18 00.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	08.21.18 00.50	
o-Terphenyl	84-15-1	95	%	70-135	08.21.18 00.50	

Certificate of Analytical Results 596317

COG Operating LLC, Artesia, NM

Blue Thunder 5 Fed com #4

Sample Id:	**BH-1 1'**	Matrix:	Soil	Date Received:	08.18.18 09.00
Lab Sample Id:	596317-002	Date Collected:	08.16.18 08.35	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.25.18 07.45	Basis:	Wet Weight
Seq Number:	3061311				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.25.18 19.10	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.25.18 19.10	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.25.18 19.10	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.25.18 19.10	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.25.18 19.10	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.25.18 19.10	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.25.18 19.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	08.25.18 19.10	
4-Bromofluorobenzene	460-00-4	96	%	70-130	08.25.18 19.10	

Certificate of Analytical Results 596317

COG Operating LLC, Artesia, NM

Blue Thunder 5 Fed com #4

Sample Id:	**BH-1 2'**	Matrix:	Soil	Date Received:	08.18.18 09.00
Lab Sample Id:	596317-003	Date Collected:	08.16.18 08.40	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.21.18 09.00	Basis:	Wet Weight
Seq Number:	3060742				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**17.4**	4.99	mg/kg	08.21.18 13.14		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.20.18 16.00	Basis:	Wet Weight
Seq Number:	3060714				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	08.21.18 01.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	08.21.18 01.09	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	08.21.18 01.09	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	08.21.18 01.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	08.21.18 01.09	
o-Terphenyl	84-15-1	93	%	70-135	08.21.18 01.09	

Certificate of Analytical Results 596317

COG Operating LLC, Artesia, NM

Blue Thunder 5 Fed com #4

Sample Id:	**BH-1 2'**	Matrix:	Soil	Date Received:	08.18.18 09.00
Lab Sample Id:	596317-003	Date Collected:	08.16.18 08.40	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.25.18 07.45	Basis:	Wet Weight
Seq Number:	3061311				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.25.18 19.30	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.25.18 19.30	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.25.18 19.30	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	08.25.18 19.30	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.25.18 19.30	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.25.18 19.30	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.25.18 19.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	70-130	08.25.18 19.30	
1,4-Difluorobenzene	540-36-3	94	%	70-130	08.25.18 19.30	

Certificate of Analytical Results 596317

COG Operating LLC, Artesia, NM

Blue Thunder 5 Fed com #4

Sample Id:	**BH-1 3'**	Matrix:	Soil	Date Received:	08.18.18 09.00
Lab Sample Id:	596317-004	Date Collected:	08.16.18 08.45	Sample Depth:	3 ft

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.20.18 16.00	Basis:	Wet Weight
Seq Number:	3060714				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.21.18 01.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.21.18 01.29	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.21.18 01.29	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.21.18 01.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	08.21.18 01.29	
o-Terphenyl	84-15-1	91	%	70-135	08.21.18 01.29	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.25.18 07.45	Basis:	Wet Weight
Seq Number:	3061311				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.25.18 19.51	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.25.18 19.51	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.25.18 19.51	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.25.18 19.51	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.25.18 19.51	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.25.18 19.51	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.25.18 19.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	70-130	08.25.18 19.51	
1,4-Difluorobenzene	540-36-3	98	%	70-130	08.25.18 19.51	

Certificate of Analytical Results 596317

COG Operating LLC, Artesia, NM

Blue Thunder 5 Fed com #4

Sample Id:	**BH-1 4'**	Matrix:	Soil	Date Received:	08.18.18 09.00
Lab Sample Id:	596317-005	Date Collected:	08.16.18 08.50	Sample Depth:	4 ft

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.20.18 16.00	Basis:	Wet Weight
Seq Number:	3060714				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.21.18 01.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	**16.6**	15.0	mg/kg	08.21.18 01.49		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.21.18 01.49	U	1
Total TPH	PHC635	**16.6**	15.0	mg/kg	08.21.18 01.49		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	08.21.18 01.49	
o-Terphenyl	84-15-1	93	%	70-135	08.21.18 01.49	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.25.18 07.45	Basis:	Wet Weight
Seq Number:	3061311				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.25.18 20.11	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.25.18 20.11	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.25.18 20.11	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.25.18 20.11	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.25.18 20.11	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.25.18 20.11	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.25.18 20.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	08.25.18 20.11	
1,4-Difluorobenzene	540-36-3	99	%	70-130	08.25.18 20.11	

Certificate of Analytical Results 596317

COG Operating LLC, Artesia, NM

Blue Thunder 5 Fed com #4

Sample Id:	**BH-2 0'**	Matrix:	Soil	Date Received:	08.18.18 09.00
Lab Sample Id:	596317-006	Date Collected:	08.16.18 09.00	Sample Depth:	0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.21.18 11.30	Basis:	Wet Weight
Seq Number:	3060810				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**896**	5.00	mg/kg	08.21.18 13.58		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.20.18 16.00	Basis:	Wet Weight
Seq Number:	3060714				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	08.21.18 02.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	**155**	14.9	mg/kg	08.21.18 02.08		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	08.21.18 02.08	U	1
Total TPH	PHC635	**155**	14.9	mg/kg	08.21.18 02.08		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	08.21.18 02.08	
o-Terphenyl	84-15-1	97	%	70-135	08.21.18 02.08	

Certificate of Analytical Results 596317

COG Operating LLC, Artesia, NM

Blue Thunder 5 Fed com #4

Sample Id:	**BH-2 0'**	Matrix:	Soil	Date Received:	08.18.18 09.00
Lab Sample Id:	596317-006	Date Collected:	08.16.18 09.00	Sample Depth:	0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.25.18 07.45	Basis:	Wet Weight
Seq Number:	3061311				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.25.18 20.52	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.25.18 20.52	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.25.18 20.52	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.25.18 20.52	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.25.18 20.52	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.25.18 20.52	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.25.18 20.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	70-130	08.25.18 20.52	
4-Bromofluorobenzene	460-00-4	102	%	70-130	08.25.18 20.52	

Certificate of Analytical Results 596317

COG Operating LLC, Artesia, NM

Blue Thunder 5 Fed com #4

Sample Id:	**BH-2 1'**	Matrix:	Soil	Date Received:	08.18.18 09.00
Lab Sample Id:	596317-007	Date Collected:	08.16.18 09.05	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.21.18 11.30	Basis:	Wet Weight
Seq Number:	3060810				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**57.0**	5.00	mg/kg	08.21.18 14.14		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.20.18 16.00	Basis:	Wet Weight
Seq Number:	3060714				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.21.18 02.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	**41.2**	15.0	mg/kg	08.21.18 02.28		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.21.18 02.28	U	1
Total TPH	PHC635	**41.2**	15.0	mg/kg	08.21.18 02.28		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	08.21.18 02.28	
o-Terphenyl	84-15-1	95	%	70-135	08.21.18 02.28	

Certificate of Analytical Results 596317

COG Operating LLC, Artesia, NM

Blue Thunder 5 Fed com #4

Sample Id:	**BH-2 1'**	Matrix:	Soil	Date Received:	08.18.18 09.00
Lab Sample Id:	596317-007	Date Collected:	08.16.18 09.05	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.26.18 09.00	Basis:	Wet Weight
Seq Number:	3061330				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0100	0.0100	mg/kg	08.26.18 10.52	U	1
Toluene	108-88-3	<0.0100	0.0100	mg/kg	08.26.18 10.52	U	1
Ethylbenzene	100-41-4	<0.0100	0.0100	mg/kg	08.26.18 10.52	U	1
m,p-Xylenes	179601-23-1	<0.0200	0.0200	mg/kg	08.26.18 10.52	U	1
o-Xylene	95-47-6	<0.0100	0.0100	mg/kg	08.26.18 10.52	U	1
Total Xylenes	1330-20-7	<0.0100	0.0100	mg/kg	08.26.18 10.52	U	1
Total BTEX		<0.0100	0.0100	mg/kg	08.26.18 10.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	95	%	70-130	08.26.18 10.52	
4-Bromofluorobenzene	460-00-4	98	%	70-130	08.26.18 10.52	

Certificate of Analytical Results 596317

COG Operating LLC, Artesia, NM

Blue Thunder 5 Fed com #4

Sample Id:	**BH-2 2'**	Matrix:	Soil	Date Received:	08.18.18 09.00
Lab Sample Id:	596317-008	Date Collected:	08.16.18 09.10	Sample Depth:	2 ft

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.20.18 16.00	Basis:	Wet Weight
Seq Number:	3060714				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.21.18 02.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.21.18 02.48	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.21.18 02.48	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.21.18 02.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	08.21.18 02.48	
o-Terphenyl	84-15-1	90	%	70-135	08.21.18 02.48	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.26.18 09.00	Basis:	Wet Weight
Seq Number:	3061330				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0100	0.0100	mg/kg	08.26.18 11.13	U	1
Toluene	108-88-3	<0.0100	0.0100	mg/kg	08.26.18 11.13	U	1
Ethylbenzene	100-41-4	<0.0100	0.0100	mg/kg	08.26.18 11.13	U	1
m,p-Xylenes	179601-23-1	<0.0200	0.0200	mg/kg	08.26.18 11.13	U	1
o-Xylene	95-47-6	<0.0100	0.0100	mg/kg	08.26.18 11.13	U	1
Total Xylenes	1330-20-7	<0.0100	0.0100	mg/kg	08.26.18 11.13	U	1
Total BTEX		<0.0100	0.0100	mg/kg	08.26.18 11.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	92	%	70-130	08.26.18 11.13	
4-Bromofluorobenzene	460-00-4	95	%	70-130	08.26.18 11.13	

Certificate of Analytical Results 596317

COG Operating LLC, Artesia, NM

Blue Thunder 5 Fed com #4

Sample Id:	**BH-2 3'**	Matrix:	Soil	Date Received:	08.18.18 09.00
Lab Sample Id:	596317-009	Date Collected:	08.16.18 09.15	Sample Depth:	3 ft

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.21.18 16.00	Basis:	Wet Weight
Seq Number:	3060852				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.21.18 20.17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.21.18 20.17	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.21.18 20.17	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.21.18 20.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	08.21.18 20.17	
o-Terphenyl	84-15-1	93	%	70-135	08.21.18 20.17	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.26.18 09.00	Basis:	Wet Weight
Seq Number:	3061330				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0100	0.0100	mg/kg	08.26.18 11.34	U	1
Toluene	108-88-3	<0.0100	0.0100	mg/kg	08.26.18 11.34	U	1
Ethylbenzene	100-41-4	<0.0100	0.0100	mg/kg	08.26.18 11.34	U	1
m,p-Xylenes	179601-23-1	<0.0200	0.0200	mg/kg	08.26.18 11.34	U	1
o-Xylene	95-47-6	<0.0100	0.0100	mg/kg	08.26.18 11.34	U	1
Total Xylenes	1330-20-7	<0.0100	0.0100	mg/kg	08.26.18 11.34	U	1
Total BTEX		<0.0100	0.0100	mg/kg	08.26.18 11.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	08.26.18 11.34	
1,4-Difluorobenzene	540-36-3	92	%	70-130	08.26.18 11.34	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 596317

COG Operating LLC

Blue Thunder 5 Fed com #4

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3060742 — Matrix: Solid — Date Prep: 08.21.18
MB Sample Id: 7660830-1-BLK — LCS Sample Id: 7660830-1-BKS — LCSD Sample Id: 7660830-1-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	08.21.18 10:08	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3060810 — Matrix: Solid — Date Prep: 08.21.18
MB Sample Id: 7660842-1-BLK — LCS Sample Id: 7660842-1-BKS — LCSD Sample Id: 7660842-1-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	271	108	272	109	90-110	0	20	mg/kg	08.21.18 13:47	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3060742 — Matrix: Soil — Date Prep: 08.21.18
Parent Sample Id: 596391-002 — MS Sample Id: 596391-002 S — MSD Sample Id: 596391-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.99	250	249	100	248	99	90-110	0	20	mg/kg	08.21.18 11:41	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3060742 — Matrix: Soil — Date Prep: 08.21.18
Parent Sample Id: 596419-001 — MS Sample Id: 596419-001 S — MSD Sample Id: 596419-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	426	250	660	94	656	92	90-110	1	20	mg/kg	08.21.18 10:25	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3060810 — Matrix: Soil — Date Prep: 08.21.18
Parent Sample Id: 596317-006 — MS Sample Id: 596317-006 S — MSD Sample Id: 596317-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	896	250	1100	82	1100	82	90-110	0	20	mg/kg	08.21.18 14:03	X

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 596317

COG Operating LLC

Blue Thunder 5 Fed com #4

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3060810 — Matrix: Soil — Date Prep: 08.21.18
Parent Sample Id: 596319-008 — MS Sample Id: 596319-008 S — MSD Sample Id: 596319-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	28.4	249	278	100	278	100	90-110	0	20	mg/kg	08.21.18 15:26	

Analytical Method: TPH By SW8015 Mod — Prep Method: TX1005P
Seq Number: 3060714 — Matrix: Solid — Date Prep: 08.20.18
MB Sample Id: 7660778-1-BLK — LCS Sample Id: 7660778-1-BKS — LCSD Sample Id: 7660778-1-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	963	96	1110	111	70-135	14	20	mg/kg	08.20.18 23:12	
Diesel Range Organics (DRO)	<15.0	1000	983	98	1140	114	70-135	15	20	mg/kg	08.20.18 23:12	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	86		117		128		70-135	%	08.20.18 23:12
o-Terphenyl	89		99		119		70-135	%	08.20.18 23:12

Analytical Method: TPH By SW8015 Mod — Prep Method: TX1005P
Seq Number: 3060852 — Matrix: Solid — Date Prep: 08.21.18
MB Sample Id: 7660865-1-BLK — LCS Sample Id: 7660865-1-BKS — LCSD Sample Id: 7660865-1-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	984	98	1000	100	70-135	2	20	mg/kg	08.21.18 19:38	
Diesel Range Organics (DRO)	<15.0	1000	989	99	1000	100	70-135	1	20	mg/kg	08.21.18 19:38	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	94		119		121		70-135	%	08.21.18 19:38
o-Terphenyl	95		102		102		70-135	%	08.21.18 19:38

Analytical Method: TPH By SW8015 Mod — Prep Method: TX1005P
Seq Number: 3060714 — Matrix: Soil — Date Prep: 08.20.18
Parent Sample Id: 596317-001 — MS Sample Id: 596317-001 S — MSD Sample Id: 596317-001 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	999	892	89	903	90	70-135	1	20	mg/kg	08.21.18 00:11	
Diesel Range Organics (DRO)	<15.0	999	914	91	886	89	70-135	3	20	mg/kg	08.21.18 00:11	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	107		125		70-135	%	08.21.18 00:11
o-Terphenyl	98		103		70-135	%	08.21.18 00:11

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 596317

COG Operating LLC

Blue Thunder 5 Fed com #4

Analytical Method: TPH By SW8015 Mod — Prep Method: TX1005P
Seq Number: 3060852 — Matrix: Soil — Date Prep: 08.21.18
Parent Sample Id: 596317-009 — MS Sample Id: 596317-009 S — MSD Sample Id: 596317-009 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	1000	100	995	100	70-135	1	20	mg/kg	08.22.18 06:58	
Diesel Range Organics (DRO)	<15.0	1000	1030	103	1010	101	70-135	2	20	mg/kg	08.22.18 06:58	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	119		125		70-135	%	08.22.18 06:58
o-Terphenyl	102		102		70-135	%	08.22.18 06:58

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3061311 — Matrix: Solid — Date Prep: 08.25.18
MB Sample Id: 7661176-1-BLK — LCS Sample Id: 7661176-1-BKS — LCSD Sample Id: 7661176-1-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	0.0906	91	0.0936	94	70-130	3	35	mg/kg	08.25.18 16:22	
Toluene	<0.00200	0.0998	0.0880	88	0.0892	89	70-130	1	35	mg/kg	08.25.18 16:22	
Ethylbenzene	<0.00200	0.0998	0.0957	96	0.0991	99	70-130	3	35	mg/kg	08.25.18 16:22	
m,p-Xylenes	<0.00399	0.200	0.202	101	0.208	104	70-130	3	35	mg/kg	08.25.18 16:22	
o-Xylene	<0.00200	0.0998	0.0937	94	0.0984	98	70-130	5	35	mg/kg	08.25.18 16:22	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		106		108		70-130	%	08.25.18 16:22
4-Bromofluorobenzene	89		87		100		70-130	%	08.25.18 16:22

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3061330 — Matrix: Solid — Date Prep: 08.26.18
MB Sample Id: 7661188-1-BLK — LCS Sample Id: 7661188-1-BKS — LCSD Sample Id: 7661188-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0100	0.500	0.506	101	0.479	96	70-130	5	35	mg/kg	08.26.18 08:50	
Toluene	<0.0100	0.500	0.496	99	0.481	96	70-130	3	35	mg/kg	08.26.18 08:50	
Ethylbenzene	<0.0100	0.500	0.505	101	0.498	100	70-130	1	35	mg/kg	08.26.18 08:50	
m,p-Xylenes	<0.0200	1.00	0.968	97	1.01	101	70-130	4	35	mg/kg	08.26.18 08:50	
o-Xylene	<0.0100	0.500	0.461	92	0.472	94	70-130	2	35	mg/kg	08.26.18 08:50	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	90		96		97		70-130	%	08.26.18 08:50
4-Bromofluorobenzene	99		98		108		70-130	%	08.26.18 08:50

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 596317

COG Operating LLC

Blue Thunder 5 Fed com #4

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3061311 | Matrix: Soil | Date Prep: 08.25.18
Parent Sample Id: 596313-021 | MS Sample Id: 596313-021 S | MSD Sample Id: 596313-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0916	92	0.0865	87	70-130	6	35	mg/kg	08.25.18 17:04	
Toluene	<0.00199	0.0996	0.0850	85	0.0804	80	70-130	6	35	mg/kg	08.25.18 17:04	
Ethylbenzene	<0.00199	0.0996	0.0888	89	0.0851	85	70-130	4	35	mg/kg	08.25.18 17:04	
m,p-Xylenes	<0.00398	0.199	0.188	94	0.178	89	70-130	5	35	mg/kg	08.25.18 17:04	
o-Xylene	<0.00199	0.0996	0.0864	87	0.0835	84	70-130	3	35	mg/kg	08.25.18 17:04	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		110		70-130	%	08.25.18 17:04
4-Bromofluorobenzene	103		109		70-130	%	08.25.18 17:04

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3061330 | Matrix: Soil | Date Prep: 08.26.18
Parent Sample Id: 596317-007 | MS Sample Id: 596317-007 S | MSD Sample Id: 596317-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0100	0.500	0.444	89	0.383	77	70-130	15	35	mg/kg	08.26.18 09:31	
Toluene	<0.0100	0.500	0.356	71	0.269	54	70-130	28	35	mg/kg	08.26.18 09:31	X
Ethylbenzene	<0.0100	0.500	0.354	71	0.268	54	70-130	28	35	mg/kg	08.26.18 09:31	X
m,p-Xylenes	<0.0200	1.00	0.675	68	0.513	51	70-130	27	35	mg/kg	08.26.18 09:31	X
o-Xylene	<0.0100	0.500	0.316	63	0.241	48	70-130	27	35	mg/kg	08.26.18 09:31	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		95		70-130	%	08.26.18 09:31
4-Bromofluorobenzene	97		97		70-130	%	08.26.18 09:31

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

XENCO LABORATORIES

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Midland, Texas (432-704-5251)
Phoenix, Arizona (480-355-0900)
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CHAIN OF CUSTODY

Page 1 Of 1

Xenco Quote #

Xenco Job # 596317

Client / Reporting Information

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

Project Information

Project Name/Number: Blue Thunder 5 Fed com#4
Project Location: Eddy co. NM
Invoice To: COG Operating, LLC
Attn: Robert McNeill
600 W. Illnois Ave.
Midland Tx, 79701
PO Number:

Analytical Information

Matrix Codes

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

No.	Field ID / Point of Collection	Collection: Sample Depth	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	ICE	TPH EXTENDED (EPA8015M)	BTEX (EPA 8021B)	CHLORIDES (EPA 300)	Field Comments
1	BH-1 0'	0	8/16/18	8:30	S	1								X	/	/	/	
2	BH-1 1'	1	~~8/16/18~~	8:35	S	1								X	/	/	/	
3	BH-1 2'	2	~~8/16/18~~	8:40	S	1								X	/	/	/	
4	BH-1 3'	3	~~8/16/18~~	8:45	S	1								X	/	/	/	
5	BH-1 4'	4	~~8/16/18~~	8:50	S	1								X	/	/	/	
6	BH-2 0'	0	~~8/16/18~~	9:00	S	1								X	/	/	/	
7	BH-2 1'	1	~~8/16/18~~	9:05	S	1								X	/	/	/	
8	BH-2 2'	2	~~8/16/18~~	9:10	S	1								X	/	/	/	
9	BH-2 3'	3	~~8/16/18~~	9:15	S	1								X	/	/	/	
10			~~8/16/18~~		S	1								X				

Turnaround Time (Business days)

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

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

Data Deliverable Information

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

Notes:

Stop Cl⁻ if ≤ 600 mg/kg

FED-EX / UPS: Tracking # 778044794797

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

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	Sheldon Hitchcock	8/16/18 14:00	Chasity Pedraza	Chasity Pedraza	8/17/18 15:30	Robert McNeill 8-18-18
2	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
3						CDCO
4	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice ✓ Cooler Temp. 1.3 Thermo. Corr. Factor 1.00 0.0
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.

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC

Date/ Time Received: 08/18/2018 09:00:00 AM

Work Order #: 596317

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)?	1.3	
#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**	Spoke to Sheldon on 8/20 and he advised me to correct dates on COC- KL
#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: 08/20/2018

Checklist reviewed by: Jessica Kramer Date: 08/20/2018

Certificate of Analysis Summary 596320

COG Operating LLC, Artesia, NM

Project Name: Blue Thunder 5 Fed com #4

Project Id:
Contact: Sheldon Hitchcock
Project Location: Eddy Co, NM

Date Received in Lab: Sat Aug-18-18 09:00 am
Report Date: 27-AUG-18
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	596320-001		596320-002		596320-003					
	Field Id:	N. 0'		S. 0'		E. 0'					
	Depth:	0- ft		0- ft		0- ft					
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	Aug-16-18 09:30		Aug-16-18 09:35		Aug-16-18 09:40					
BTEX by EPA 8021B	***Extracted:***	Aug-26-18 09:00		Aug-26-18 09:00		Aug-26-18 09:00					
	Analyzed:	Aug-26-18 15:41		Aug-26-18 15:20		Aug-26-18 14:59					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.0100	0.0100	<0.0100	0.0100	<0.0100	0.0100				
Toluene		<0.0100	0.0100	<0.0100	0.0100	<0.0100	0.0100				
Ethylbenzene		<0.0100	0.0100	<0.0100	0.0100	<0.0100	0.0100				
m,p-Xylenes		<0.0200	0.0200	<0.0200	0.0200	<0.0200	0.0200				
o-Xylene		<0.0100	0.0100	<0.0100	0.0100	<0.0100	0.0100				
Total Xylenes		<0.0100	0.0100	<0.0100	0.0100	<0.0100	0.0100				
Total BTEX		<0.0100	0.0100	<0.0100	0.0100	<0.0100	0.0100				
Chloride by EPA 300	***Extracted:***	Aug-20-18 15:30		Aug-20-18 15:30		Aug-20-18 15:30					
	Analyzed:	Aug-20-18 21:33		Aug-20-18 21:38		Aug-20-18 21:44					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		<4.97	4.97	59.4	5.01	<5.04	5.04				
TPH By SW8015 Mod	***Extracted:***	Aug-20-18 10:00		Aug-20-18 10:00		Aug-20-18 10:00					
	Analyzed:	Aug-20-18 21:34		Aug-20-18 21:53		Aug-20-18 22:13					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0				
Diesel Range Organics (DRO)		<15.0	15.0	427	15.0	<15.0	15.0				
Oil Range Hydrocarbons (ORO)		<15.0	15.0	25.8	15.0	<15.0	15.0				
Total TPH		<15.0	15.0	453	15.0	<15.0	15.0				

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

Jessica Kramer
Project Assistant

Final 1.000

Analytical Report 596320

for

COG Operating LLC

Project Manager: Sheldon Hitchcock

Blue Thunder 5 Fed com #4

27-AUG-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-13)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-17)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-16)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

27-AUG-18

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

Reference: XENCO Report No(s): **596320**
Blue Thunder 5 Fed com #4
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) 596320. 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. 596320 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

Sample Cross Reference 596320

COG Operating LLC, Artesia, NM

Blue Thunder 5 Fed com #4

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
N. 0'	S	08-16-18 09:30	0 ft	596320-001
S. 0'	S	08-16-18 09:35	0 ft	596320-002
E. 0'	S	08-16-18 09:40	0 ft	596320-003

CASE NARRATIVE

Client Name: COG Operating LLC

Project Name: Blue Thunder 5 Fed com #4

Project ID:
Work Order Number(s): *596320*

Report Date: *27-AUG-18*
Date Received: *08/18/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3061330 BTEX by EPA 8021B

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

Certificate of Analytical Results 596320

COG Operating LLC, Artesia, NM

Blue Thunder 5 Fed com #4

Sample Id:	**N. 0'**	Matrix:	Soil	Date Received:	08.18.18 09.00
Lab Sample Id:	596320-001	Date Collected:	08.16.18 09.30	Sample Depth:	0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.20.18 15.30	Basis:	Wet Weight
Seq Number:	3060705				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.97	4.97	mg/kg	08.20.18 21.33	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.20.18 10.00	Basis:	Wet Weight
Seq Number:	3060711				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.20.18 21.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.20.18 21.34	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.20.18 21.34	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.20.18 21.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	08.20.18 21.34	
o-Terphenyl	84-15-1	88	%	70-135	08.20.18 21.34	

Certificate of Analytical Results 596320

COG Operating LLC, Artesia, NM

Blue Thunder 5 Fed com #4

Sample Id:	**N. 0'**	Matrix:	Soil	Date Received:	08.18.18 09.00
Lab Sample Id:	596320-001	Date Collected:	08.16.18 09.30	Sample Depth:	0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.26.18 09.00	Basis:	Wet Weight
Seq Number:	3061330				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0100	0.0100	mg/kg	08.26.18 15.41	U	1
Toluene	108-88-3	<0.0100	0.0100	mg/kg	08.26.18 15.41	U	1
Ethylbenzene	100-41-4	<0.0100	0.0100	mg/kg	08.26.18 15.41	U	1
m,p-Xylenes	179601-23-1	<0.0200	0.0200	mg/kg	08.26.18 15.41	U	1
o-Xylene	95-47-6	<0.0100	0.0100	mg/kg	08.26.18 15.41	U	1
Total Xylenes	1330-20-7	<0.0100	0.0100	mg/kg	08.26.18 15.41	U	1
Total BTEX		<0.0100	0.0100	mg/kg	08.26.18 15.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.26.18 15.41	
1,4-Difluorobenzene	540-36-3	81	%	70-130	08.26.18 15.41	

Certificate of Analytical Results 596320

COG Operating LLC, Artesia, NM

Blue Thunder 5 Fed com #4

Sample Id:	**S. 0'**	Matrix:	Soil	Date Received:	08.18.18 09.00
Lab Sample Id:	596320-002	Date Collected:	08.16.18 09.35	Sample Depth:	0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.20.18 15.30	Basis:	Wet Weight
Seq Number:	3060705				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**59.4**	5.01	mg/kg	08.20.18 21.38		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.20.18 10.00	Basis:	Wet Weight
Seq Number:	3060711				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.20.18 21.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	**427**	15.0	mg/kg	08.20.18 21.53		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**25.8**	15.0	mg/kg	08.20.18 21.53		1
Total TPH	PHC635	**453**	15.0	mg/kg	08.20.18 21.53		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	08.20.18 21.53	
o-Terphenyl	84-15-1	95	%	70-135	08.20.18 21.53	

Certificate of Analytical Results 596320

COG Operating LLC, Artesia, NM

Blue Thunder 5 Fed com #4

Sample Id:	**S. 0'**	Matrix:	Soil	Date Received:	08.18.18 09.00
Lab Sample Id:	596320-002	Date Collected:	08.16.18 09.35	Sample Depth:	0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.26.18 09.00	Basis:	Wet Weight
Seq Number:	3061330				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0100	0.0100	mg/kg	08.26.18 15.20	U	1
Toluene	108-88-3	<0.0100	0.0100	mg/kg	08.26.18 15.20	U	1
Ethylbenzene	100-41-4	<0.0100	0.0100	mg/kg	08.26.18 15.20	U	1
m,p-Xylenes	179601-23-1	<0.0200	0.0200	mg/kg	08.26.18 15.20	U	1
o-Xylene	95-47-6	<0.0100	0.0100	mg/kg	08.26.18 15.20	U	1
Total Xylenes	1330-20-7	<0.0100	0.0100	mg/kg	08.26.18 15.20	U	1
Total BTEX		<0.0100	0.0100	mg/kg	08.26.18 15.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	91	%	70-130	08.26.18 15.20	
4-Bromofluorobenzene	460-00-4	107	%	70-130	08.26.18 15.20	

Certificate of Analytical Results 596320

COG Operating LLC, Artesia, NM

Blue Thunder 5 Fed com #4

Sample Id:	**E. 0'**	Matrix:	Soil	Date Received:	08.18.18 09.00
Lab Sample Id:	596320-003	Date Collected:	08.16.18 09.40	Sample Depth:	0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.20.18 15.30	Basis:	Wet Weight
Seq Number:	3060705				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.04	5.04	mg/kg	08.20.18 21.44	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.20.18 10.00	Basis:	Wet Weight
Seq Number:	3060711				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.20.18 22.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.20.18 22.13	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.20.18 22.13	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.20.18 22.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	08.20.18 22.13	
o-Terphenyl	84-15-1	88	%	70-135	08.20.18 22.13	

Certificate of Analytical Results 596320

COG Operating LLC, Artesia, NM

Blue Thunder 5 Fed com #4

Sample Id:	**E. 0'**	Matrix:	Soil	Date Received:	08.18.18 09.00
Lab Sample Id:	596320-003	Date Collected:	08.16.18 09.40	Sample Depth:	0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.26.18 09.00	Basis:	Wet Weight
Seq Number:	3061330				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0100	0.0100	mg/kg	08.26.18 14.59	U	1
Toluene	108-88-3	<0.0100	0.0100	mg/kg	08.26.18 14.59	U	1
Ethylbenzene	100-41-4	<0.0100	0.0100	mg/kg	08.26.18 14.59	U	1
m,p-Xylenes	179601-23-1	<0.0200	0.0200	mg/kg	08.26.18 14.59	U	1
o-Xylene	95-47-6	<0.0100	0.0100	mg/kg	08.26.18 14.59	U	1
Total Xylenes	1330-20-7	<0.0100	0.0100	mg/kg	08.26.18 14.59	U	1
Total BTEX		<0.0100	0.0100	mg/kg	08.26.18 14.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	70-130	08.26.18 14.59	
1,4-Difluorobenzene	540-36-3	89	%	70-130	08.26.18 14.59	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 596320

COG Operating LLC

Blue Thunder 5 Fed com #4

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3060705 — Matrix: Solid — Date Prep: 08.20.18
MB Sample Id: 7660762-1-BLK — LCS Sample Id: 7660762-1-BKS — LCSD Sample Id: 7660762-1-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	245	98	245	98	90-110	0	20	mg/kg	08.20.18 19:05	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3060705 — Matrix: Soil — Date Prep: 08.20.18
Parent Sample Id: 596206-014 — MS Sample Id: 596206-014 S — MSD Sample Id: 596206-014 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.97	249	253	102	251	101	90-110	1	20	mg/kg	08.20.18 19:21	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3060705 — Matrix: Soil — Date Prep: 08.20.18
Parent Sample Id: 596206-024 — MS Sample Id: 596206-024 S — MSD Sample Id: 596206-024 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	83.5	249	327	98	328	98	90-110	0	20	mg/kg	08.20.18 20:38	

Analytical Method: TPH By SW8015 Mod — Prep Method: TX1005P
Seq Number: 3060711 — Matrix: Solid — Date Prep: 08.20.18
MB Sample Id: 7660776-1-BLK — LCS Sample Id: 7660776-1-BKS — LCSD Sample Id: 7660776-1-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	938	94	938	94	70-135	0	20	mg/kg	08.20.18 12:34	
Diesel Range Organics (DRO)	<15.0	1000	967	97	955	96	70-135	1	20	mg/kg	08.20.18 12:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	84		114		129		70-135	%	08.20.18 12:34
o-Terphenyl	86		99		101		70-135	%	08.20.18 12:34

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 596320

COG Operating LLC

Blue Thunder 5 Fed com #4

Analytical Method: TPH By SW8015 Mod | Prep Method: TX1005P
Seq Number: 3060711 | Matrix: Soil | Date Prep: 08.20.18
Parent Sample Id: 596183-001 | MS Sample Id: 596183-001 S | MSD Sample Id: 596183-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	997	949	95	970	97	70-135	2	20	mg/kg	08.20.18 13:33	
Diesel Range Organics (DRO)	<15.0	997	975	98	1000	100	70-135	3	20	mg/kg	08.20.18 13:33	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	127		130		70-135	%	08.20.18 13:33
o-Terphenyl	99		99		70-135	%	08.20.18 13:33

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3061330 | Matrix: Solid | Date Prep: 08.26.18
MB Sample Id: 7661188-1-BLK | LCS Sample Id: 7661188-1-BKS | LCSD Sample Id: 7661188-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0100	0.500	0.506	101	0.479	96	70-130	5	35	mg/kg	08.26.18 08:50	
Toluene	<0.0100	0.500	0.496	99	0.481	96	70-130	3	35	mg/kg	08.26.18 08:50	
Ethylbenzene	<0.0100	0.500	0.505	101	0.498	100	70-130	1	35	mg/kg	08.26.18 08:50	
m,p-Xylenes	<0.0200	1.00	0.968	97	1.01	101	70-130	4	35	mg/kg	08.26.18 08:50	
o-Xylene	<0.0100	0.500	0.461	92	0.472	94	70-130	2	35	mg/kg	08.26.18 08:50	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	90		96		97		70-130	%	08.26.18 08:50
4-Bromofluorobenzene	99		98		108		70-130	%	08.26.18 08:50

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3061330 | Matrix: Soil | Date Prep: 08.26.18
Parent Sample Id: 596317-007 | MS Sample Id: 596317-007 S | MSD Sample Id: 596317-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0100	0.500	0.444	89	0.383	77	70-130	15	35	mg/kg	08.26.18 09:31	
Toluene	<0.0100	0.500	0.356	71	0.269	54	70-130	28	35	mg/kg	08.26.18 09:31	X
Ethylbenzene	<0.0100	0.500	0.354	71	0.268	54	70-130	28	35	mg/kg	08.26.18 09:31	X
m,p-Xylenes	<0.0200	1.00	0.675	68	0.513	51	70-130	27	35	mg/kg	08.26.18 09:31	X
o-Xylene	<0.0100	0.500	0.316	63	0.241	48	70-130	27	35	mg/kg	08.26.18 09:31	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		95		70-130	%	08.26.18 09:31
4-Bromofluorobenzene	97		97		70-130	%	08.26.18 09:31

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

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

Final 1.000

XENCO LABORATORIES

Setting the Standard since 1990

Stafford,Texas (281-240-4200)

Dallas Texas (214-902-0300)

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Midland, Texas (432-704-5251)

Phoenix, Arizona (480-355-0900)

www.xenco.com

CHAIN OF CUSTODY

Page 1 Of 1

Xenco Quote #

Xenco Job # 596320

Client / Reporting Information

Company Name / Branch: COG Operating, LLC

Company Address: 2407 Pecos Ave. Artesia NM 88210

Email: slhitchcock@concho.com Phone No: 575-703-6475
dneel2@concho.com; cgray@concho.com; rhaskell@concho.com

Project Contact: Sheldon Hitchcock

Samplers's Name: Sheldon Hitchcock

Project Information

Project Name/Number: Blue Thunder 5 Fed com # 4

Project Location:

Invoice To: COG Operating, LLC
Attn: Robert McNeill
600 W. Illinois 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	ICE	TPH EXTENDED (EPA8015M)	BTEX (EPA 8021B)	CHLORIDES (EPA 300)	Field Comments
1	N. 0'	0	8/16/18	9:30	S	1								X	X	X	X	
2	S. 0'	0	~~8/17/18~~ 8/16/18	9:35	S	1								X	X	X	X	
3	E. 0'	0	~~8/18/18~~ 8/16/18	9:40	S	1								X	X	X	X	
4			8/19/18		S	1								X				
5			8/20/18		S	1								X				
6			8/21/18		S	1								X				
7			8/22/18		S	1								X				
8			8/23/18		S	1								X				
9			8/24/18		S	1								X				
10			8/25/18		S	1								X				

Turnaround Time (Business days)

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

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

Data Deliverable Information

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

Notes:

FED-EX / UPS: Tracking # 773006404797

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	Sheldy Hitchcock	8/16/18 14:00	Patrice			
2				Patrice	8/17/18 15:30	Robert McNeill 8/18/18
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
4						0900
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice ✓ Cooler Temp. 1.5 1.0 Thermo. Corr. Factor 0.0

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.

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC

Date/ Time Received: 08/18/2018 09:00:00 AM

Work Order #: 596320

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)?	1.3	
#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**	Spoke to Sheldon on 8/20 and he advised me to correct dates on COC- KL
#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: 08/20/2018

Checklist reviewed by: Jessica Kramer Date: 08/20/2018

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

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

CONDITIONS

Action 205977

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 205977
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
bhall	Closue previously approved on 11/14/2018 by C. Eads. Historical documentation upload.	5/9/2023