

# Closure Report

## Site Description

Site Name:	COG Operating LLC
Company:	Lusk Deep Unit A #023H
Legal Description:	U/L P, Section 19, T19S, R32E
County:	Lea County, NM
GPS Coordinates:	N 32.63897° W-103.79800°

## Release Data

Date of Release:	06/10/2016
Type of Release:	Produced water
Source of Release:	Poly flow line
Volume of Release:	210 bbls
Volume Recovered:	190 bbls

## Remediation Specifications

Remediation Parameters:	Excavate the areas of SP1 and SP4 to a depth of 5 feet. Excavate the areas of SP2 and SP3 to a depth of 2 feet. Excavate the area of SP5 to a depth of 4 feet. Obtain confirmation bottom samples at excavation borders and confirmation sidewall samples. Backfill the site with clean soil.	
Remediation Activities:	06/01/2018 to 06/18/2018	
Plan Sent to OCD:	10/27/2017	Email from Cliff Brunson to Olivia Yu
OCD Approval of Plan:	12/04/2017	Email from Olivia Yu to Cliff Brunson
Plan Sent to BLM:	10/27/2017	Email from Cliff Brunson to Henryetta Price
BLM Approval of Plan:	11/01/2017	Email from Henryetta Price to Cliff Brunson

## Supporting Documentation

Initial C-141	Signed 06/20/2016
Final C-141	Signed 06/25/2018
Site Diagram	January 2017
Groundwater Plot	600'
TOPO Maps	January 2017
Lab Summary	07/14/16, 01/31/17, 10/31/17, and 6/8/18
Lab Analysis	07/14/16, 01/31/17, 10/31/17, and 6/8/18
Correspondence	Request and approval of remediation plan via email

## Request for Closure

Based on the completion of the remediation plan, BBC International requests closure approval from NMOCD.

Cliff Brunson, President, BBC International, Inc.

06/26/2018

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

State of New Mexico  
Energy Minerals and Natural Resources

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

Form C-141  
Revised August 8, 2011

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

## Release Notification and Corrective Action

### OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: COG Operating LLC	Contact: Robert McNeill	
Address: 600 West Illinois Avenue, Midland TX 79701	Telephone No. 432-683-7443	
Facility Name: LUSK DEEP UNIT A #023H	Facility Type: Battery	
Surface Owner: Federal	Mineral Owner: Federal	API No. 30-025-40260

### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
P	19	19S	32E	330'	South	380'	East	Lea

Latitude Longitude

### NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: 210 bbls PW	Volume Recovered: 190 bbls PW
Source of Release: Poly Flowline	Date and Hour of Occurrence: 6/10/2016 unknown	Date and Hour of Discovery: 6/10/2016 5:00 am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Jaime Keyes – NMOCD / Shelly Tucker – BLM	
By Whom? Amanda Trujillo Davis	Date and Hour: Friday, June 10, 2016 8:59 PM	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

**RECEIVED**

**By Olivia Yu at 9:59 am, Mar 27, 2017**

Describe Cause of Problem and Remedial Action Taken.\*

This release was caused by poly flowline on the backside of the battery. Vacuum trucks were dispatched to recover all standing fluid.

Describe Area Affected and Cleanup Action Taken.\*

This release occurred behind the battery in the pasture. The weld was repaired and the fluids recovered. Concho will have the spill site sampled to delineate any possible contamination from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation work.

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: <i>Amanda T. Davis</i>	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Amanda Trujillo Davis	Approved by Environmental Specialist: <i>dy</i>	
Title: Senior Environmental Coordinator	Approval Date: <b>3/27/2017</b>	Expiration Date:
E-mail Address: atrujillo@concho.com	Conditions of Approval: <b>see attached directive</b>	Attached <input checked="" type="checkbox"/>
Date: June 20, 2016 Phone: 575-748-6940		

\* Attach Additional Sheets If Necessary

**1RP-4657**

**nOY1708636444**

**pOY1708636781**

Operator/Responsible Party,

The OCD has received the form C-141 you provided on 3/20/2017 regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number 1R-4657 has been assigned. **Please refer to this case number in all future correspondence.**

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

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

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District 1 office in Hobbs on or before 4/27/2017. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

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

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C<sub>6</sub> thru C<sub>36</sub>), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.
- Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C<sub>6</sub> thru C<sub>36</sub>), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.
- Nominal detection limits for field and laboratory analyses must be provided.
- Composite sampling is not generally allowed.
- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

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

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

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

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

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

**Jim Griswold**

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

District I  
1625 N. French Dr., Hobbs, NM 88240  
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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

### OPERATOR

☐ Initial Report ☒ Final Report

Name of Company	COG Operating LLC	Contact	Robert McNeill
Address	600 West Illinois Avenue; Midland, TX 79701	Telephone No.	432-683-7443
Facility Name	Lusk Deep Unit A #023H	Facility Type	Battery
Surface Owner	Federal	Mineral Owner	Federal
		API No.	30-025-40260

### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
P	19	19S	32E	330	South	380	East	Lea County, NM

Latitude N 32.63897° Longitude W -103.79800°

### NATURE OF RELEASE

Type of Release	Produced water	Volume of Release	210 bbls	Volume Recovered	190 bbls
Source of Release	Poly flowline	Date and Hour of Occurrence	06/10/2016 unknown	Date and Hour of Discovery	06/10/2016 @ 5:00am
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Jamie Keyes, NMOCD; Shelly Tucker, BLM			
By Whom?	Amanda Trujillo Davis	Date and Hour 06/10/2016 @ 8:59 pm			
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.\*

N/A

Describe Cause of Problem and Remedial Action Taken.\*

The release was caused by a compromised poly flow line on the backside of the battery. Vacuum trucks were dispatched to recover all standing fluid.

Describe Area Affected and Cleanup Action Taken.\*

This release occurred behind the battery in the pasture. The weld was repaired and the fluids recovered. The site was delineated and a remediation plan was agreed upon. Remediation was completed in accordance with the remediation plan approved by Olivia Yu of NMOCD via email on 12/04/2017 and approved by Henryetta Price of the BLM via email on 11/01/2017.

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.

### OIL CONSERVATION DIVISION

Approved by Environmental Specialist:

Signature:

*Rebecca Haskell*

Printed Name: Rebecca Haskell

Title: Senior HSE Coordinator

Approval Date:

Expiration Date:

E-mail Address: RHaskell@concho.com

Conditions of Approval:

Attached ☐

Date: June 25, 2018

Phone: 432-683-7443

\* Attach Additional Sheets If Necessary

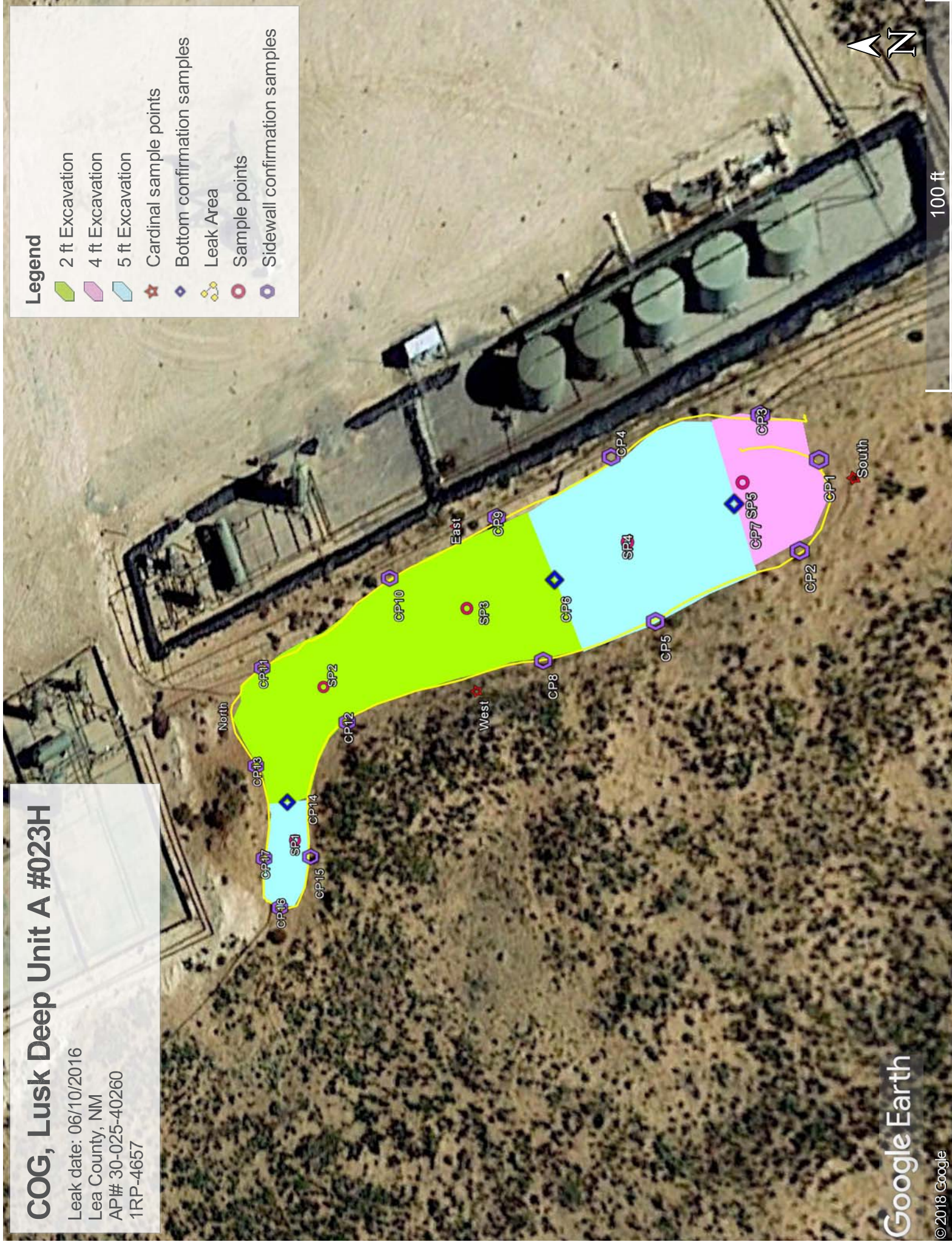


# COG, Lusk Deep Unit A #023H

Leak date: 06/10/2016  
Lea County, NM  
API# 30-025-40260  
1RP-4657

## Legend

- 2 ft Excavation
- 4 ft Excavation
- 5 ft Excavation
- Cardinal sample points
- Bottom confirmation samples
- Leak Area
- Sample points
- Sidewall confirmation samples



## COG, Lusk Deep Unit A #023H

### Samples, Hand Auger:

SP1, N 32.63955° W-103.79891°

SP2, N 32.63952° W-103.79875°

SP3, N 32.63938° W-103.79867°

SP4, N 32.63924° W-103.79861°

SP5, N 32.63915° W-103.79856°

### Samples, Hand Auger:

North Sample, N 32.63963° W-103.79878°

South Sample, N 32.63907° W-103.79856°

East Sample, N 32.63939° W-103.79859°

West Sample, N 32.63937° W-103.79875°

### Confirmation Samples

CP1, N 32.63909 W-103.79854

CP16, N 32.63956 W-103.79898

CP2, N 32.63910 W-103.79862

CP17, N 32.63958 W-103.79893

CP3, N 32.63913 W-103.79850

CP4, N 32.63925 W-103.79853

CP5, N 32.63921 W-103.79868

CP6, N 32.63929 W-103.79864

CP7, N 32.63915 W-103.79857

CP8, N 32.63930 W-103.79871

CP9, N 32.63935 W-103.79858

CP10, N 32.63945 W-103.79863

CP11, N 32.63958 W-103.79873

CP12, N 32.63949 W-103.79878

CP13, N 32.63958 W-103.79883

CP14, N 32.63955 W-103.79887

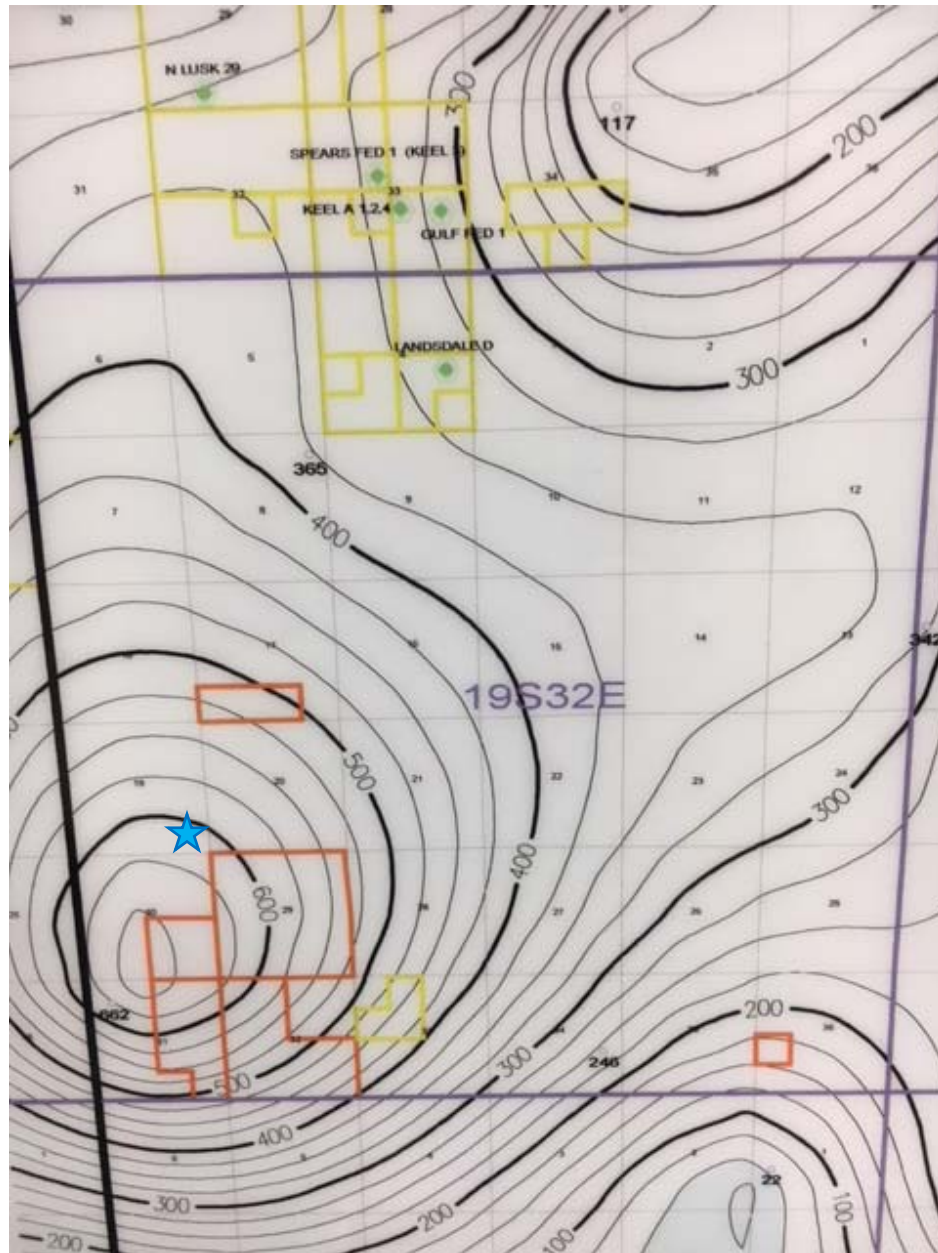
CP15, N 32.63953 W-103.79892



**COG, Lusk Deep Unit A #023H**

**U/L P, Section 19, T19S, R32E**

**Groundwater: 600'**







# New Mexico Office of the State Engineer

## Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced,  
O=orphaned,  
C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
<a href="#">CP 00639 POD1</a>		CP	LE	3	1	20	19S	32E	613029	3612880*	<input type="text"/>	897	350	345	5
<a href="#">CP 00640 POD1</a>		CP	LE	2	2	19	19S	32E	612621	3613280*	<input type="text"/>	1207	260	102	158
<a href="#">CP 00563 POD1</a>		CP	LE	1	1	2	19	19S	32E	612118	3613376*	<input type="text"/>	1402	300	
<a href="#">CP 00642 POD1</a>		CP	ED	2	2	25	19S	31E	611025	3611657*	<input type="text"/>	1664	250		

Average Depth to Water: **223 feet**

Minimum Depth: **102 feet**

Maximum Depth: **345 feet**

**Record Count:** 4

**UTMNAD83 Radius Search (in meters):**

**Easting (X):** 612637

**Northing (Y):** 3612073

**Radius:** 1700

\*UTM location was derived from PLSS - see Help

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

2/27/17 11:16 AM

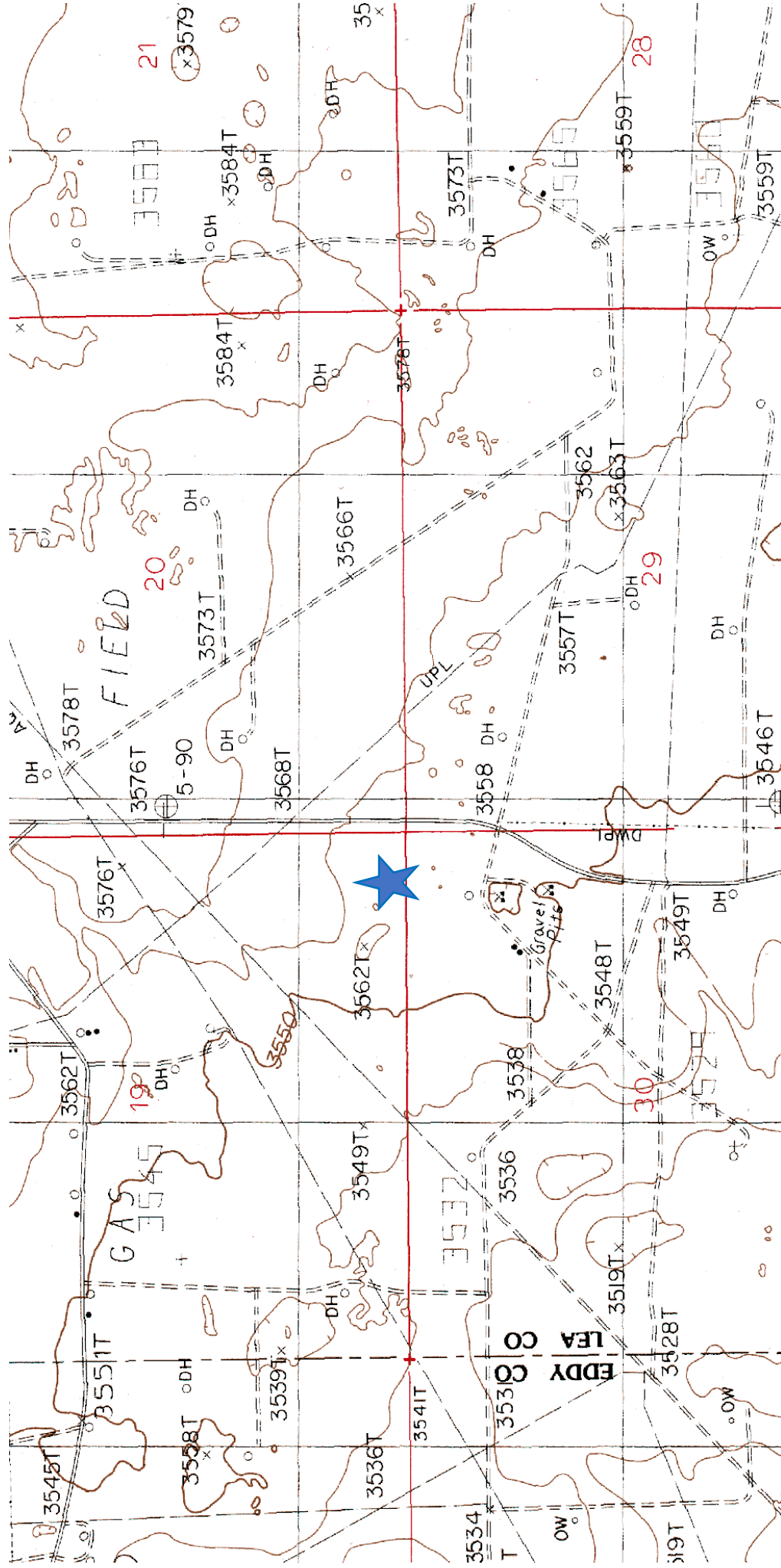
WATER COLUMN/ AVERAGE DEPTH TO WATER





COG

Lusk Deep Unit A #023H



Laboratory Analytical Results Summary  
Lusk Deep Unit A #23

Analyte	Sample		SP1 @ 1'	SP1 @ 2'	SP1 @ 3'	SP1 @ 4'	SP1 @ 5'	SP1 @ 6'	SP1 @ 10'
	Method	Date	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	<0.050	n/a	n/a	n/a	n/a	n/a
Toluene	BTEX 8021B		<0.050	<0.050	n/a	n/a	n/a	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.050	<0.050	n/a	n/a	n/a	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	<0.150	n/a	n/a	n/a	n/a	n/a
Total BTEX	BTEX 8021B		<0.300	<0.300	n/a	n/a	n/a	n/a	n/a
Chloride	SM4500Cl-B		432	2160	2720	1560	240	128	192
GRO	TPH 8015M		<10.0	<10.0	n/a	n/a	n/a	n/a	n/a
DRO	TPH 8015M			72.2	n/a	n/a	n/a	n/a	n/a

Analyte	Sample		SP2 @ 1'	SP2 @ 2'	SP2 @ 3'	SP2 @ 8'
	Method	Date	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	<0.050	n/a	n/a
Toluene	BTEX 8021B		<0.050	<0.050	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.050	<0.050	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	<0.150	n/a	n/a
Total BTEX	BTEX 8021B		<0.300	<0.300	n/a	n/a
Chloride	SM4500Cl-B		3080	272	32	160
GRO	TPH 8015M		<10.0	<10.0	n/a	n/a
DRO	TPH 8015M		<10.0	<10.0	n/a	n/a

Analyte	Sample		SP3 @ 1'	SP3 @ 2'	SP3 @ 3'	SP3 @ 7'
	Method	Date	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	<0.050	<0.050	n/a
Toluene	BTEX 8021B		<0.050	<0.050	<0.050	n/a
Ethylbenzene	BTEX 8021B		<0.050	<0.050	<0.050	n/a
Total Xylenes	BTEX 8021B		<0.150	<0.150	<0.150	n/a
Total BTEX	BTEX 8021B		<0.300	<0.300	<0.300	n/a
Chloride	SM4500Cl-B		1360	112	32	176
GRO	TPH 8015M		<10.0	<10.0	<10.0	n/a
DRO	TPH 8015M		<10.0	<10.0	<10.0	n/a

Analyte	Sample		SP4 @ 1'	SP4 @ 2'	SP4 @ 3'	SP4 @ 4'	SP4 @ 5'	SP4 @ 6'	SP4 @ 10'
	Method	Date	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	<0.050	n/a	n/a	n/a	n/a	n/a
Toluene	BTEX 8021B		<0.050	<0.050	n/a	n/a	n/a	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.050	<0.050	n/a	n/a	n/a	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	<0.150	n/a	n/a	n/a	n/a	n/a
Total BTEX	BTEX 8021B		<0.300	<0.300	n/a	n/a	n/a	n/a	n/a
Chloride	SM4500Cl-B		2920	2920	3120	1280	224	192	176
GRO	TPH 8015M		<10.0	<10.0	n/a	n/a	n/a	n/a	n/a
DRO	TPH 8015M		<10.0	<10.0	n/a	n/a	n/a	n/a	n/a

Analyte	Sample		SP5 @ 1'	SP5 @ 2'	SP5 @ 3'	SP5 @ 4'	SP5 @ 5'	SP5 @ 6'	SP5 @ 9'
	Method	Date	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	<0.050	n/a	n/a	n/a	n/a	n/a
Toluene	BTEX 8021B		<0.050	<0.050	n/a	n/a	n/a	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.050	<0.050	n/a	n/a	n/a	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	<0.150	n/a	n/a	n/a	n/a	n/a
Total BTEX	BTEX 8021B		<0.300	<0.300	n/a	n/a	n/a	n/a	n/a
Chloride	SM4500Cl-B		10000	1520	832	208	240	192	176
GRO	TPH 8015M		<10.0	<10.0	n/a	n/a	n/a	n/a	n/a
DRO	TPH 8015M		<10.0	<10.0	n/a	n/a	n/a	n/a	n/a

Analyte	Sample		NORTH @ 1'
	Method	Date	mg/Kg
Chloride	SM4500Cl-B		<16.0

Analyte	Sample		EAST @ 1'
	Method	Date	mg/Kg
Chloride	SM4500Cl-B		32

Analyte	Sample		WEST @ 1'
	Method	Date	mg/Kg
Chloride	SM4500Cl-B		16

Analyte	Sample		SOUTH @ 1'
	Method	Date	mg/Kg
Chloride	SM4500Cl-B		16



Laboratory Analytical Results Summary  
Lusk Deep Unit A #023H

	Sample ID	CP1
Analyte	Method	6/8/18
		mg/kg
Chloride	SM4500Cl-B	<16.0

	Sample ID	CP2
Analyte	Method	6/8/18
		mg/kg
Chloride	SM4500Cl-B	<16.0

	Sample ID	CP3
Analyte	Method	6/8/18
		mg/kg
Chloride	SM4500Cl-B	<16.0

	Sample ID	CP4
Analyte	Method	6/8/18
		mg/kg
Chloride	SM4500Cl-B	<16.0

	Sample ID	CP5
Analyte	Method	6/8/18
		mg/kg
Chloride	SM4500Cl-B	<16.0

	Sample ID	CP6
Analyte	Method	6/8/18
		mg/kg
Chloride	SM4500Cl-B	<16.0

	Sample ID	CP7
Analyte	Method	6/8/18
		mg/kg
Chloride	SM4500Cl-B	<16.0

	Sample ID	CP8
Analyte	Method	6/8/18
		mg/kg
Chloride	SM4500Cl-B	<16.0

	Sample ID	CP9
Analyte	Method	6/8/18
		mg/kg
Chloride	SM4500Cl-B	<16.0

	Sample ID	CP10
Analyte	Method	6/8/18
		mg/kg
Chloride	SM4500Cl-B	<16.0

	Sample ID	C11
Analyte	Method	6/8/18
		mg/kg
Chloride	SM4500Cl-B	<16.0

	Sample ID	CP12
Analyte	Method	6/8/18
		mg/kg
Chloride	SM4500Cl-B	<16.0

	Sample ID	CP13
Analyte	Method	6/8/18
		mg/kg
Chloride	SM4500Cl-B	<16.0

	Sample ID	CP14
Analyte	Method	6/8/18
		mg/kg
Chloride	SM4500Cl-B	<16.0

	Sample ID	CP15
Analyte	Method	6/8/18
		mg/kg
Chloride	SM4500Cl-B	32

	Sample ID	CP16
Analyte	Method	6/8/18
		mg/kg
Chloride	SM4500Cl-B	16

	Sample ID	CP17
Analyte	Method	6/8/18
		mg/kg
Chloride	SM4500Cl-B	32



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

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July 20, 2016

AMANDA TRUJILLO  
COG Operating, LLC  
500 W. ILLINOIS  
Midland, TX 79701

RE: LUSK DEEP UNIT A #23

Enclosed are the results of analyses for samples received by the laboratory on 07/14/16 12:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene  
Lab Director/Quality Manager

**Analytical Results For:**

 COG Operating, LLC  
 AMANDA TRUJILLO  
 500 W. ILLINOIS  
 Midland TX, 79701  
 Fax To: None

 Received: 07/14/2016  
 Reported: 07/20/2016  
 Project Name: LUSK DEEP UNIT A #23  
 Project Number: NONE GIVEN  
 Project Location: NONE GIVEN

 Sampling Date: 07/14/2016  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: S1-1' (H601585-01)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/15/2016	ND	1.86	93.2	2.00	1.20	
Toluene*	<0.050	0.050	07/15/2016	ND	2.08	104	2.00	1.83	
Ethylbenzene*	<0.050	0.050	07/15/2016	ND	2.06	103	2.00	2.00	
Total Xylenes*	<0.150	0.150	07/15/2016	ND	6.25	104	6.00	1.71	
Total BTEx	<0.300	0.300	07/15/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	432	16.0	07/18/2016	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/15/2016	ND	182	91.0	200	2.49	
DRO >C10-C28	<10.0	10.0	07/15/2016	ND	194	97.0	200	3.69	

Surrogate: 1-Chlorooctane 86.4 % 35-147

Surrogate: 1-Chlorooctadecane 90.4 % 28-171

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

COG Operating, LLC  
AMANDA TRUJILLO  
500 W. ILLINOIS  
Midland TX, 79701  
Fax To: None

Received: 07/14/2016  
Reported: 07/20/2016  
Project Name: LUSK DEEP UNIT A #23  
Project Number: NONE GIVEN  
Project Location: NONE GIVEN

Sampling Date: 07/14/2016  
Sampling Type: Soil  
Sampling Condition: \*\* (See Notes)  
Sample Received By: Jodi Henson

**Sample ID: S1-2' (H601585-02)**

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/15/2016	ND	1.86	93.2	2.00	1.20		
Toluene*	<0.050	0.050	07/15/2016	ND	2.08	104	2.00	1.83		
Ethylbenzene*	<0.050	0.050	07/15/2016	ND	2.06	103	2.00	2.00		
Total Xylenes*	<0.150	0.150	07/15/2016	ND	6.25	104	6.00	1.71		
Total BTEx	<0.300	0.300	07/15/2016	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2160	16.0	07/18/2016	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/15/2016	ND	182	91.0	200	2.49	
DRO >C10-C28	72.2	10.0	07/15/2016	ND	194	97.0	200	3.69	

Surrogate: 1-Chlorooctane 88.2 % 35-147

Surrogate: 1-Chlorooctadecane 93.8 % 28-171

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



### Analytical Results For:

COG Operating, LLC  
AMANDA TRUJILLO  
500 W. ILLINOIS  
Midland TX, 79701  
Fax To: None

Received: 07/14/2016  
Reported: 07/20/2016  
Project Name: LUSK DEEP UNIT A #23  
Project Number: NONE GIVEN  
Project Location: NONE GIVEN

Sampling Date: 07/14/2016  
Sampling Type: Soil  
Sampling Condition: \*\* (See Notes)  
Sample Received By: Jodi Henson

### Sample ID: S2-1' (H601585-03)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/15/2016	ND	1.86	93.2	2.00	1.20	
Toluene*	<0.050	0.050	07/15/2016	ND	2.08	104	2.00	1.83	
Ethylbenzene*	<0.050	0.050	07/15/2016	ND	2.06	103	2.00	2.00	
Total Xylenes*	<0.150	0.150	07/15/2016	ND	6.25	104	6.00	1.71	
Total BTEx	<0.300	0.300	07/15/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3080	16.0	07/18/2016	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/15/2016	ND	182	91.0	200	2.49	
DRO >C10-C28	<10.0	10.0	07/15/2016	ND	194	97.0	200	3.69	

Surrogate: 1-Chlorooctane 80.3 % 35-147

Surrogate: 1-Chlorooctadecane 83.7 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

COG Operating, LLC  
AMANDA TRUJILLO  
500 W. ILLINOIS  
Midland TX, 79701  
Fax To: None

Received: 07/14/2016  
Reported: 07/20/2016  
Project Name: LUSK DEEP UNIT A #23  
Project Number: NONE GIVEN  
Project Location: NONE GIVEN

Sampling Date: 07/14/2016  
Sampling Type: Soil  
Sampling Condition: \*\* (See Notes)  
Sample Received By: Jodi Henson

**Sample ID: S2-2' (H601585-04)**

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/15/2016	ND	1.86	93.2	2.00	1.20		
Toluene*	<0.050	0.050	07/15/2016	ND	2.08	104	2.00	1.83		
Ethylbenzene*	<0.050	0.050	07/15/2016	ND	2.06	103	2.00	2.00		
Total Xylenes*	<0.150	0.150	07/15/2016	ND	6.25	104	6.00	1.71		
Total BTEx	<0.300	0.300	07/15/2016	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	07/18/2016	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/15/2016	ND	182	91.0	200	2.49	
DRO >C10-C28	<10.0	10.0	07/15/2016	ND	194	97.0	200	3.69	

Surrogate: 1-Chlorooctane 69.4 % 35-147

Surrogate: 1-Chlorooctadecane 72.2 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

COG Operating, LLC  
AMANDA TRUJILLO  
500 W. ILLINOIS  
Midland TX, 79701  
Fax To: None

Received: 07/14/2016  
Reported: 07/20/2016  
Project Name: LUSK DEEP UNIT A #23  
Project Number: NONE GIVEN  
Project Location: NONE GIVEN

Sampling Date: 07/14/2016  
Sampling Type: Soil  
Sampling Condition: \*\* (See Notes)  
Sample Received By: Jodi Henson

**Sample ID: S3-1' (H601585-05)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/15/2016	ND	1.86	93.2	2.00	1.20	
Toluene*	<0.050	0.050	07/15/2016	ND	2.08	104	2.00	1.83	
Ethylbenzene*	<0.050	0.050	07/15/2016	ND	2.06	103	2.00	2.00	
Total Xylenes*	<0.150	0.150	07/15/2016	ND	6.25	104	6.00	1.71	
Total BTEx	<0.300	0.300	07/15/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1360	16.0	07/18/2016	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/15/2016	ND	182	91.0	200	2.49	
DRO >C10-C28	<10.0	10.0	07/15/2016	ND	194	97.0	200	3.69	

Surrogate: 1-Chlorooctane 66.3 % 35-147

Surrogate: 1-Chlorooctadecane 67.2 % 28-171

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

COG Operating, LLC  
AMANDA TRUJILLO  
500 W. ILLINOIS  
Midland TX, 79701  
Fax To: None

Received: 07/14/2016  
Reported: 07/20/2016  
Project Name: LUSK DEEP UNIT A #23  
Project Number: NONE GIVEN  
Project Location: NONE GIVEN

Sampling Date: 07/14/2016  
Sampling Type: Soil  
Sampling Condition: \*\* (See Notes)  
Sample Received By: Jodi Henson

**Sample ID: S3-2' (H601585-06)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/15/2016	ND	1.86	93.2	2.00	1.20	
Toluene*	<0.050	0.050	07/15/2016	ND	2.08	104	2.00	1.83	
Ethylbenzene*	<0.050	0.050	07/15/2016	ND	2.06	103	2.00	2.00	
Total Xylenes*	<0.150	0.150	07/15/2016	ND	6.25	104	6.00	1.71	
Total BTEx	<0.300	0.300	07/15/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	07/18/2016	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/15/2016	ND	182	91.0	200	2.49	
DRO >C10-C28	<10.0	10.0	07/15/2016	ND	194	97.0	200	3.69	

Surrogate: 1-Chlorooctane 66.3 % 35-147

Surrogate: 1-Chlorooctadecane 63.4 % 28-171

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

COG Operating, LLC  
AMANDA TRUJILLO  
500 W. ILLINOIS  
Midland TX, 79701  
Fax To: None

Received: 07/14/2016  
Reported: 07/20/2016  
Project Name: LUSK DEEP UNIT A #23  
Project Number: NONE GIVEN  
Project Location: NONE GIVEN

Sampling Date: 07/14/2016  
Sampling Type: Soil  
Sampling Condition: \*\* (See Notes)  
Sample Received By: Jodi Henson

**Sample ID: S3-3' (H601585-07)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/15/2016	ND	1.86	93.2	2.00	1.20	
Toluene*	<0.050	0.050	07/15/2016	ND	2.08	104	2.00	1.83	
Ethylbenzene*	<0.050	0.050	07/15/2016	ND	2.06	103	2.00	2.00	
Total Xylenes*	<0.150	0.150	07/15/2016	ND	6.25	104	6.00	1.71	
Total BTEx	<0.300	0.300	07/15/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	07/18/2016	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/15/2016	ND	182	91.0	200	2.49	
DRO >C10-C28	<10.0	10.0	07/15/2016	ND	194	97.0	200	3.69	

Surrogate: 1-Chlorooctane 72.5 % 35-147

Surrogate: 1-Chlorooctadecane 73.7 % 28-171

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

COG Operating, LLC  
AMANDA TRUJILLO  
500 W. ILLINOIS  
Midland TX, 79701  
Fax To: None

Received: 07/14/2016  
Reported: 07/20/2016  
Project Name: LUSK DEEP UNIT A #23  
Project Number: NONE GIVEN  
Project Location: NONE GIVEN

Sampling Date: 07/14/2016  
Sampling Type: Soil  
Sampling Condition: \*\* (See Notes)  
Sample Received By: Jodi Henson

**Sample ID: S4-1' (H601585-08)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/18/2016	ND	2.13	107	2.00	0.111	
Toluene*	<0.050	0.050	07/18/2016	ND	2.18	109	2.00	0.365	
Ethylbenzene*	<0.050	0.050	07/18/2016	ND	2.10	105	2.00	0.234	
Total Xylenes*	<0.150	0.150	07/18/2016	ND	6.33	106	6.00	0.107	
Total BTX	<0.300	0.300	07/18/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2920	16.0	07/18/2016	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/15/2016	ND	182	91.0	200	2.49	
DRO >C10-C28	<10.0	10.0	07/15/2016	ND	194	97.0	200	3.69	

Surrogate: 1-Chlorooctane 75.7 % 35-147

Surrogate: 1-Chlorooctadecane 79.3 % 28-171

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

COG Operating, LLC  
AMANDA TRUJILLO  
500 W. ILLINOIS  
Midland TX, 79701  
Fax To: None

Received: 07/14/2016  
Reported: 07/20/2016  
Project Name: LUSK DEEP UNIT A #23  
Project Number: NONE GIVEN  
Project Location: NONE GIVEN

Sampling Date: 07/14/2016  
Sampling Type: Soil  
Sampling Condition: \*\* (See Notes)  
Sample Received By: Jodi Henson

**Sample ID: S4-2' (H601585-09)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/18/2016	ND	2.13	107	2.00	0.111	
Toluene*	<0.050	0.050	07/18/2016	ND	2.18	109	2.00	0.365	
Ethylbenzene*	<0.050	0.050	07/18/2016	ND	2.10	105	2.00	0.234	
Total Xylenes*	<0.150	0.150	07/18/2016	ND	6.33	106	6.00	0.107	
Total BTX	<0.300	0.300	07/18/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2920	16.0	07/18/2016	ND	416	104	400	0.00	QM-07

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/15/2016	ND	182	91.0	200	2.49	
DRO >C10-C28	<10.0	10.0	07/15/2016	ND	194	97.0	200	3.69	

Surrogate: 1-Chlorooctane 74.7 % 35-147

Surrogate: 1-Chlorooctadecane 77.1 % 28-171

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

COG Operating, LLC  
AMANDA TRUJILLO  
500 W. ILLINOIS  
Midland TX, 79701  
Fax To: None

Received: 07/14/2016  
Reported: 07/20/2016  
Project Name: LUSK DEEP UNIT A #23  
Project Number: NONE GIVEN  
Project Location: NONE GIVEN

Sampling Date: 07/14/2016  
Sampling Type: Soil  
Sampling Condition: \*\* (See Notes)  
Sample Received By: Jodi Henson

**Sample ID: S5-1' (H601585-10)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/18/2016	ND	2.13	107	2.00	0.111	
Toluene*	<0.050	0.050	07/18/2016	ND	2.18	109	2.00	0.365	
Ethylbenzene*	<0.050	0.050	07/18/2016	ND	2.10	105	2.00	0.234	
Total Xylenes*	<0.150	0.150	07/18/2016	ND	6.33	106	6.00	0.107	
Total BTX	<0.300	0.300	07/18/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	10000	16.0	07/18/2016	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/18/2016	ND	173	86.5	200	1.10	
DRO >C10-C28	<10.0	10.0	07/18/2016	ND	180	90.2	200	3.58	

Surrogate: 1-Chlorooctane 75.2 % 35-147

Surrogate: 1-Chlorooctadecane 84.0 % 28-171

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

COG Operating, LLC  
AMANDA TRUJILLO  
500 W. ILLINOIS  
Midland TX, 79701  
Fax To: None

Received: 07/14/2016  
Reported: 07/20/2016  
Project Name: LUSK DEEP UNIT A #23  
Project Number: NONE GIVEN  
Project Location: NONE GIVEN

Sampling Date: 07/14/2016  
Sampling Type: Soil  
Sampling Condition: \*\* (See Notes)  
Sample Received By: Jodi Henson

**Sample ID: S5-2' (H601585-11)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/18/2016	ND	2.13	107	2.00	0.111	
Toluene*	<0.050	0.050	07/18/2016	ND	2.18	109	2.00	0.365	
Ethylbenzene*	<0.050	0.050	07/18/2016	ND	2.10	105	2.00	0.234	
Total Xylenes*	<0.150	0.150	07/18/2016	ND	6.33	106	6.00	0.107	
Total BTX	<0.300	0.300	07/18/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1520	16.0	07/18/2016	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/18/2016	ND	173	86.5	200	1.10	
DRO >C10-C28	<10.0	10.0	07/18/2016	ND	180	90.2	200	3.58	

Surrogate: 1-Chlorooctane 73.4 % 35-147

Surrogate: 1-Chlorooctadecane 81.2 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240

(575) 393-2326 FAX (575) 393-2476

+ Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326



# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

[illegible]



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

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February 09, 2017

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: LUSK DEEP UNIT A #023H

Enclosed are the results of analyses for samples received by the laboratory on 02/02/17 15:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



**Analytical Results For:**

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

Received:	02/02/2017	Sampling Date:	01/31/2017
Reported:	02/09/2017	Sampling Type:	Soil
Project Name:	LUSK DEEP UNIT A #023H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Brittany Feller
Project Location:	LEA COUNTY, NM		

**Sample ID: SP1 @ 3' (H700259-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2720	16.0	02/06/2017	ND	416	104	400	0.00	

**Sample ID: SP1 @ 4' (H700259-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1560	16.0	02/06/2017	ND	416	104	400	0.00	

**Sample ID: SP1 @ 5' (H700259-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	02/06/2017	ND	416	104	400	0.00	

**Sample ID: SP1 @ 6' (H700259-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	02/06/2017	ND	416	104	400	0.00	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

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

 Received: 02/02/2017  
 Reported: 02/09/2017  
 Project Name: LUSK DEEP UNIT A #023H  
 Project Number: NONE GIVEN  
 Project Location: LEA COUNTY, NM

 Sampling Date: 01/31/2017  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Brittany Feller

**Sample ID: SP4 @ 3' (H700259-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3120	16.0	02/06/2017	ND	416	104	400	0.00	

**Sample ID: SP4 @ 4' (H700259-06)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1280	16.0	02/06/2017	ND	416	104	400	0.00	

**Sample ID: SP4 @ 5' (H700259-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	02/06/2017	ND	416	104	400	0.00	

**Sample ID: SP4 @ 6' (H700259-08)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	02/06/2017	ND	416	104	400	0.00	

**Sample ID: SP5 @ 3' (H700259-09)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	832	16.0	02/06/2017	ND	416	104	400	0.00	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	02/02/2017	Sampling Date:	01/31/2017
Reported:	02/09/2017	Sampling Type:	Soil
Project Name:	LUSK DEEP UNIT A #023H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Brittany Feller
Project Location:	LEA COUNTY, NM		

**Sample ID: SP5 @ 4' (H700259-10)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	02/06/2017	ND	416	104	400	0.00	

**Sample ID: SP5 @ 5' (H700259-11)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	02/06/2017	ND	416	104	400	0.00	

**Sample ID: SP5 @ 6' (H700259-12)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	02/06/2017	ND	416	104	400	0.00	

**Sample ID: NORTH SAMPLE @ 1' (H700259-13)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/06/2017	ND	416	104	400	0.00	

**Sample ID: EAST SAMPLE @ 1' (H700259-14)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	02/06/2017	ND	416	104	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	02/02/2017	Sampling Date:	01/31/2017
Reported:	02/09/2017	Sampling Type:	Soil
Project Name:	LUSK DEEP UNIT A #023H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Brittany Feller
Project Location:	LEA COUNTY, NM		

**Sample ID: WEST SAMPLE @ 1' (H700259-15)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	02/06/2017	ND	416	104	400	0.00	

**Sample ID: SOUTH SAMPLE @ 1' (H700259-16)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	02/06/2017	ND	416	104	400	0.00	

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Cardinal Laboratories

\*=Accredited Analyte

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---

Celey D. Keene, Lab Director/Quality Manager











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

---

October 20, 2017

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: LUSK DEEP UNIT A #023H

Enclosed are the results of analyses for samples received by the laboratory on 10/16/17 13:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

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

Received: 10/16/2017  
Reported: 10/20/2017  
Project Name: LUSK DEEP UNIT A #023H  
Project Number: NONE GIVEN  
Project Location: LEA COUNTY, NM

Sampling Date: 10/13/2017  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: SP 1 @ 10' (H702787-01)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	10/20/2017	ND	432	108	400	3.64	

**Sample ID: SP 2 @ 3' (H702787-02)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	10/20/2017	ND	432	108	400	3.64	

**Sample ID: SP 2 @ 8' (H702787-03)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	10/20/2017	ND	432	108	400	3.64	

**Sample ID: SP 3 @ 7' (H702787-04)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	10/20/2017	ND	432	108	400	3.64	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	10/16/2017	Sampling Date:	10/13/2017
Reported:	10/20/2017	Sampling Type:	Soil
Project Name:	LUSK DEEP UNIT A #023H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: SP 4 @ 10' (H702787-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	176	16.0	10/20/2017	ND	432	108	400	3.64		

**Sample ID: SP 5 @ 9' (H702787-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	10/20/2017	ND	432	108	400	3.64	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

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---

Celey D. Keene, Lab Director/Quality Manager



# CARDINAL LABORATORIES

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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: BBC International, Inc.		<b>BILL TO</b>		ANALYSIS REQUEST																							
Project Manager: Cliff Brunson		P.O. #:																									
Address: P.O. Box 805		Company: COG																									
City: Hobbs		Attn: Becky Hasbelle																									
State: NM Zip: 88241		Address:																									
Phone #: 575-397-6388 Fax #: 575-397-0397		City:																									
Project #: Project Owner: COG		State: Zip:																									
Project Name: Lusk Deep Unit A #23H		Phone #:																									
Project Location: Lea County		Fax #:																									
Sampler Name: Jeff Arnolds																											
FOR LAB USE ONLY																											
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX			PRESERV	SAMPLING																			
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME													
H702787	SP1010	G	1			✓							10/3/17	9:33	✓												
	SP203	G	1			✓								10:15	✓												
	SP208	G	1			✓								10:40	✓												
	SP307	G	1			✓								11:39	✓												
	SP4010	G	1			✓								12:49	✓												
	SP509	G	1			✓								1:58	✓												
																10/16/17											
																Jedi Shender											
																Relinquished By: Jedi Shender											
																Date: 10/15/17											
																Time: 3:30pm											
																Received By: Jedi Shender											
																Date: 10/16/17											
																Time: 1:03pm											
																Delivered By: (Circle One) #75 2.70 / 2.950											
																Sample Condition: Cool Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No											
																CHECKED BY: Initials											
																Sampler - UPS - Bus - Other: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No											
																REMARKS:											
																Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #:											
																Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Fax #:											

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

corrected + 2.50





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

---

June 13, 2018

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: LUSK DEEP UNIT A #023H

Enclosed are the results of analyses for samples received by the laboratory on 06/12/18 15:20.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-10. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

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

Received: 06/12/2018  
Reported: 06/13/2018  
Project Name: LUSK DEEP UNIT A #023H  
Project Number: NONE GIVEN  
Project Location: COG - LEA COUNTY, NM

Sampling Date: 06/08/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: CP - 1 (H801597-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/13/2018	ND	448	112	400	0.00		

**Sample ID: CP - 2 (H801597-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/13/2018	ND	448	112	400	0.00		

**Sample ID: CP - 3 (H801597-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/13/2018	ND	448	112	400	0.00		

**Sample ID: CP - 4 (H801597-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/13/2018	ND	448	112	400	0.00		

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	06/12/2018	Sampling Date:	06/08/2018
Reported:	06/13/2018	Sampling Type:	Soil
Project Name:	LUSK DEEP UNIT A #023H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA COUNTY, NM		

**Sample ID: CP - 5 (H801597-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/13/2018	ND	448	112	400	0.00		

**Sample ID: CP - 6 (H801597-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/13/2018	ND	448	112	400	0.00	

**Sample ID: CP - 7 (H801597-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/13/2018	ND	448	112	400	0.00	

**Sample ID: CP - 8 (H801597-08)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/13/2018	ND	448	112	400	0.00		

**Sample ID: CP - 9 (H801597-09)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/13/2018	ND	448	112	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

 Received: 06/12/2018  
 Reported: 06/13/2018  
 Project Name: LUSK DEEP UNIT A #023H  
 Project Number: NONE GIVEN  
 Project Location: COG - LEA COUNTY, NM

 Sampling Date: 06/08/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: CP - 10 (H801597-10)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/13/2018	ND	448	112	400	0.00		

**Sample ID: CP - 11 (H801597-11)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/13/2018	ND	448	112	400	0.00		

**Sample ID: CP - 12 (H801597-12)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/13/2018	ND	448	112	400	0.00	

**Sample ID: CP - 13 (H801597-13)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/13/2018	ND	448	112	400	0.00		

**Sample ID: CP - 14 (H801597-14)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/13/2018	ND	448	112	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received: 06/12/2018  
Reported: 06/13/2018  
Project Name: LUSK DEEP UNIT A #023H  
Project Number: NONE GIVEN  
Project Location: COG - LEA COUNTY, NM

Sampling Date: 06/11/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: CP - 15 (H801597-15)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	06/13/2018	ND	448	112	400	0.00	

**Sample ID: CP - 16 (H801597-16)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	06/13/2018	ND	448	112	400	0.00	

**Sample ID: CP - 17 (H801597-17)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	06/13/2018	ND	448	112	400	0.00	

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

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\*=Accredited Analyte

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---

Celey D. Keene, Lab Director/Quality Manager

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

**Company Name:** BBC International, Inc.

P.O. #:	
Company:	
Attn:	COG
Address:	
City:	
State:	Zip:
Phone #:	
Fax #:	

P.O. #:	
Company:	
Attn:	COG
Address:	
City:	
State:	Zip:
Phone #:	
Fax #:	

## SAMPLING

---

---

303

DATE	TIME
------	------


11	9:00
11	9:15


"	1000
"	9:45


11	10:15
----	-------


11	10:43
11	11:00


profits incurred by client, its subsidiary or any other person within 30 days after completion of the transaction, or for any other above stated reasons or otherwise.

10

REMARK	7
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*[Signature]*

#7



## CARDINAL LABORATORIES

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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: BBC International, Inc.		<b>BILL TO</b>		ANALYSIS REQUEST												
Project Manager: Cliff Brunson		P.O. #:														
Address: P.O. Box 805		Company:														
City: Hobbs		Attn:														
State: NM Zip: 88241		Address:		COG												
Phone #: 575-397-6388 Fax #: 575-397-0397		City:														
Project #:		State:		Zip:												
Project Name: Lusk Deep Unit A #023H		Phone #:														
Project Location:		Fax #:														
Sampler Name: P. Brunson		FOR LAB USE ONLY														
Lab I.D.		(G)RAB OR (C)OMP.		MATRIX		PRESERV		SAMPLING								
Sample I.D.		# CONTAINERS		GROUNDWATER		WASTEWATER		DATE		TIME						
H801597		1		✓		✓		6/9/18		11:15		✓				
11 CP-11		1		✓		✓		6/8/18		11:30		✓				
12 CP-12		1		✓		✓		6/8/18		11:30		✓				
13 CP-13		1		✓		✓		6/8/18		11:30		✓				
14 CP-14		1		✓		✓		6/8/18		12:30		✓				
15 CP-15		1		✓		✓		6/11/18		1:00		✓				
16 CP-16		1		✓		✓		6/11/18		1:30		✓				
17 CP-17		1		✓		✓		6/11/18		1:50		✓				

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Relinquished By: <i>Paul Brunson</i>	Date: 6/11/18	Received By: <i>Jennifer Caley</i>	Time: 5:00
Relinquished By: <i>Paul Brunson</i>	Date: 6-11-18	Received By: <i>Jennifer Caley</i>	Time: 3:20
Delivered By: (Circle One) <i>Carrier</i>	3.92	Sample Condition	CHECKED BY: <i>(Initials)</i>
Sampler - UPS - Bus - Other: <i>Consolidated - 3.92</i>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Cool <input type="checkbox"/> Intact <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
REMARKS: <i>Lusk also some head space</i>			

**From:** Yu, Olivia, EMNRD  
**To:** [Cliff Brunson](#); "[Rebecca Haskell](#)"; [Henryetta Price](#)  
**Cc:** "[Ken Swinney](#)"; "[Jennifer Gilkey](#)"; "[Kathy Purvis](#)"  
**Subject:** RE: COG - Lusk Deep Unit A #023H - Delineation Workplan  
**Date:** Monday, December 4, 2017 1:23:40 PM  
**Attachments:** [approved\\_1RP4657\\_Delineation Workplan Lusk Deep Unit A #023H.pdf](#)

---

Mr. Brunson:

NMOCD approves of the delineation completed for 1RP-4657 and the proposed remedial activities. Please establish confirmation bottom sample locations at the borders between the different excavation depths. Each area with a different excavation depth should have at least one set of sidewall samples. Include a scaled map with confirmation sample points demarcated with GPS coordinates in the remediation/closure report.

Please see the attachment for your records.

Thanks,

Olivia Yu  
Environmental Specialist  
NMOCD, District I  
[Olivia.yu@state.nm.us](mailto:Olivia.yu@state.nm.us)  
575-393-6161 x113

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

---

**From:** Cliff Brunson [mailto:[cbrunson@bbcinternational.com](mailto:cbrunson@bbcinternational.com)]  
**Sent:** Friday, October 27, 2017 12:10 PM  
**To:** Yu, Olivia, EMNRD <[Olivia.Yu@state.nm.us](mailto:Olivia.Yu@state.nm.us)>; 'Rebecca Haskell' <[RHaskell@concho.com](mailto:RHaskell@concho.com)>; Henryetta Price <[hprice@blm.gov](mailto:hprice@blm.gov)>  
**Cc:** 'Ken Swinney' <[kswinney@bbcinternational.com](mailto:kswinney@bbcinternational.com)>; 'Jennifer Gilkey' <[jgilkey@bbcinternational.com](mailto:jgilkey@bbcinternational.com)>; 'Kathy Purvis' <[kathy@bbcinternational.com](mailto:kathy@bbcinternational.com)>  
**Subject:** RE: COG - Lusk Deep Unit A #023H - Delineation Workplan

Olivia and Henryetta,

Please find attached the Delineation Workplan for the COG Lusk Deep Unit A #023H release site. Per Olivia's request below, COG has conducted further delineation at depth and has altered the excavation depth at SP5 to 4 feet instead of the original 3 feet. All other conditions will be met. COG respectfully requests both the NMOCD and BLM approve this plan so remediation activities may proceed. If you would please reply back with your approval via email, it would be greatly appreciated.

Thanks, Cliff

Cliff P. Brunson, CEI, CRS  
President  
BBC International, Inc.  
World-Wide Environmental Specialists  
Mailing Address:  
P. O. Box 805  
Hobbs, NM 88241-0805 USA  
Shipping Address:  
1324 W. Marland St.  
Hobbs, NM 88240 USA  
Phone: (575) 397-6388  
Fax: (575) 397-0397  
E-Mail: [cbrunson@bbcinternational.com](mailto:cbrunson@bbcinternational.com)



\*\*\*\*\*

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\*\*\*\*\*

---

**From:** Yu, Olivia, EMNRD [<mailto:Olivia.Yu@state.nm.us>]

**Sent:** Monday, March 27, 2017 4:52 PM

**To:** Rebecca Haskell <[RHaskell@concho.com](mailto:RHaskell@concho.com)>; Cliff Brunson <[cbrunson@bbcinternational.com](mailto:cbrunson@bbcinternational.com)>; Shelly Tucker <[stucker@blm.gov](mailto:stucker@blm.gov)>

**Cc:** Ken Swinney <[kswinney@bbcinternational.com](mailto:kswinney@bbcinternational.com)>; Jennifer Gilkey <[jgilkey@bbcinternational.com](mailto:jgilkey@bbcinternational.com)>; Kathy Purvis <[kathy@bbcinternational.com](mailto:kathy@bbcinternational.com)>

**Subject:** RE: COG - Lusk Deep Unit A #023H - Delineation Workplan

Dear Mr. Brunson:

NMOCD determines that the delineation workplan for 1RP-4657 does not provide sufficient evidence of complete vertical delineation. Please address these concerns.

1. Vertically delineate an additional 5 ft. below the depth (minimum) at which permissible chloride levels were attained for each of the sample points.
2. Excavation to 3 ft. at SP5 does not capture all the contaminated soil. Impacted soil should be removed to 4 ft. bgs for the area around SP5.
3. Bottom and confirmation sidewall samples are requested at all sample points.

Thanks,

Olivia Yu  
Environmental Specialist  
NMOCD, District I  
[Olivia.yu@state.nm.us](mailto:Olivia.yu@state.nm.us)  
575-393-6161 x113

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

---

**From:** Yu, Olivia, EMNRD

**Sent:** Monday, March 27, 2017 10:26 AM

**To:** 'Rebecca Haskell' <[RHaskell@concho.com](mailto:RHaskell@concho.com)>; Cliff Brunson <[cbrunson@bbcinternational.com](mailto:cbrunson@bbcinternational.com)>; Shelly Tucker <[stucker@blm.gov](mailto:stucker@blm.gov)>

**Cc:** Ken Swinney <[kswinney@bbcinternational.com](mailto:kswinney@bbcinternational.com)>; Jennifer Gilkey <[jgilkey@bbcinternational.com](mailto:jgilkey@bbcinternational.com)>; Kathy Purvis <[kathy@bbcinternational.com](mailto:kathy@bbcinternational.com)>

**Subject:** RE: COG - Lusk Deep Unit A #023H - Delineation Workplan

Dear Ms. Haskell:

As NMOCD does not have a record of a processed initial C141, a 1RP is issued for the incident. The delineation workplan is under review.

<b>4657</b>	3/27/2017	A	COG	Lusk Deep Unit A #023H battery	30-025-40260	19S-32E-19P	6/10/2016
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Thanks,

Olivia Yu



Environmental Specialist  
NMOCD, District I  
[Olivia.yu@state.nm.us](mailto:Olivia.yu@state.nm.us)  
575-393-6161 x113

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

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**From:** Rebecca Haskell [<mailto:RHaskell@concho.com>]  
**Sent:** Monday, March 20, 2017 12:16 PM  
**To:** Yu, Olivia, EMNRD <[Olivia.Yu@state.nm.us](mailto:Olivia.Yu@state.nm.us)>; Cliff Brunson <[cbrunson@bbcinternational.com](mailto:cbrunson@bbcinternational.com)>; Shelly Tucker <[stucker@blm.gov](mailto:stucker@blm.gov)>  
**Cc:** Ken Swinney <[kswinney@bbcinternational.com](mailto:kswinney@bbcinternational.com)>; Jennifer Gilkey <[jgilkey@bbcinternational.com](mailto:jgilkey@bbcinternational.com)>; Kathy Purvis <[kathy@bbcinternational.com](mailto:kathy@bbcinternational.com)>  
**Subject:** RE: COG - Lusk Deep Unit A #023H - Delineation Workplan

Ms. Yu,

Please see attached Notification submitted to Mr. Keyes on June 10, 2016 and the Initial C-141 submitted on June 20, 2016. Please let me know if you need any additional information.

Thank You,

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



---

**From:** Yu, Olivia, EMNRD [<mailto:Olivia.Yu@state.nm.us>]  
**Sent:** Monday, March 20, 2017 12:50 PM  
**To:** Cliff Brunson; Shelly Tucker  
**Cc:** Rebecca Haskell; Ken Swinney; Jennifer Gilkey; Kathy Purvis  
**Subject:** [External] RE: COG - Lusk Deep Unit A #023H - Delineation Workplan

\*\*\*\* External email. Use caution. \*\*\*\*

Dear All:

NMOCD does not have a record of the original submission of the initial C-141. If anyone has a copy, please provide this information.

Thanks,  
Olivia

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**From:** Cliff Brunson [<mailto:cbrunson@bbcinternational.com>]  
**Sent:** Monday, March 20, 2017 11:11 AM  
**To:** Yu, Olivia, EMNRD <[Olivia.Yu@state.nm.us](mailto:Olivia.Yu@state.nm.us)>; Shelly Tucker <[stucker@blm.gov](mailto:stucker@blm.gov)>  
**Cc:** Becky Haskell <[rhaskell@concho.com](mailto:rhaskell@concho.com)>; Ken Swinney <[kswinney@bbcinternational.com](mailto:kswinney@bbcinternational.com)>; Jennifer Gilkey <[jgilkey@bbcinternational.com](mailto:jgilkey@bbcinternational.com)>; Kathy Purvis <[kathy@bbcinternational.com](mailto:kathy@bbcinternational.com)>  
**Subject:** COG - Lusk Deep Unit A #023H - Delineation Workplan



Olivia and Shelly,

Please find the attached Delineation Workplan and remediation proposal for the COG Lusk Deep Unit A #023H. There is no RP number associated with this leak that was provided by the NMOCD. We searched online as well and were not successful in locating one. COG is requesting that you review this plan and is looking forward to the OCD's and BLM's approval.

If you have any questions, please let me know.

Thanks, Cliff

Cliff P. Brunson, CEI, CRS  
President  
BBC International, Inc.  
World-Wide Environmental Specialists  
Mailing Address:  
P. O. Box 805  
Hobbs, NM 88241-0805 USA  
Shipping Address:  
1324 W. Marland St.  
Hobbs, NM 88240 USA  
Phone: (575) 397-6388  
Fax: (575) 397-0397  
E-Mail: [cbrunson@bbcinternational.com](mailto:cbrunson@bbcinternational.com)



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From: Price, Henryetta  
To: [Cliff Brunson](#)  
Cc: [Yu, Olivia](#), [EMNRD](#); [Rebecca Haskell](#); [Ken Swinney](#); [Jennifer Gilkey](#); [Kathy Purvis](#)  
Subject: Re: COG - Lusk Deep Unit A #023H - Delineation Workplan  
Date: Wednesday, November 1, 2017 11:15:34 AM

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BLM approves the proposed work plan. Must have like approval from NMOCD prior to work. Thank you.

## Henryetta Price

Environmental Protection Specialist  
Bureau Of Land Management  
[Hprice@blm.gov](mailto:Hprice@blm.gov)  
Phone 575-234-5951  
Cell 575-706-2780  
Fax 575-234-5927

On Fri, Oct 27, 2017 at 12:10 PM, Cliff Brunson <[cbrunson@bbcinternational.com](mailto:cbrunson@bbcinternational.com)> wrote:

Olivia and Henryetta,

Please find attached the Delineation Workplan for the COG Lusk Deep Unit A #023H release site. Per Olivia's request below, COG has conducted further delineation at depth and has altered the excavation depth at SP5 to 4 feet instead of the original 3 feet. All other conditions will be met. COG respectfully requests both the NMOCD and BLM approve this plan so remediation activities may proceed. If you would please reply back with your approval via email, it would be greatly appreciated.

Thanks, Cliff

Cliff P. Brunson, CEI, CRS

President

BBC International, Inc.

World-Wide Environmental Specialists

Mailing Address:

P. O. Box 805

Hobbs, NM 88241-0805 USA

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1324 W. Marland St.

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Phone: (575) 397-6388

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prohibited.

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**From:** Yu, Olivia, EMNRD [mailto:[Olivia.Yu@state.nm.us](mailto:Olivia.Yu@state.nm.us)]

**Sent:** Monday, March 27, 2017 4:52 PM

**To:** Rebecca Haskell <[RHaskell@concho.com](mailto:RHaskell@concho.com)>; Cliff Brunson <[cbrunson@bbcinternational.com](mailto:cbrunson@bbcinternational.com)>; Shelly Tucker <[stucker@blm.gov](mailto:stucker@blm.gov)>

**Cc:** Ken Swinney <[kswinney@bbcinternational.com](mailto:kswinney@bbcinternational.com)>; Jennifer Gilkey <[jgilkey@bbcinternational.com](mailto:jgilkey@bbcinternational.com)>; Kathy Purvis <[kathy@bbcinternational.com](mailto:kathy@bbcinternational.com)>

**Subject:** RE: COG - Lusk Deep Unit A #023H - Delineation Workplan

Dear Mr. Brunson:

NMOCD determines that the delineation workplan for IRP-4657 does not provide sufficient evidence of complete vertical delineation. Please address these concerns.

1. Vertically delineate an additional 5 ft. below the depth (minimum) at which permissible chloride levels were attained for each of the sample points.
2. Excavation to 3 ft. at SP5 does not capture all the contaminated soil. Impacted soil should be removed to 4 ft. bgs for the area around SP5.
3. Bottom and confirmation sidewall samples are requested at all sample points.

Thanks,

Olivia Yu

Environmental Specialist

NMOCD, District I

[Olivia.yu@state.nm.us](mailto:Olivia.yu@state.nm.us)

575-393-6161 x113

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**From:** Yu, Olivia, EMNRD

**Sent:** Monday, March 27, 2017 10:26 AM

**To:** 'Rebecca Haskell' <[RHaskell@concho.com](mailto:RHaskell@concho.com)>; Cliff Brunson <[cbrunson@bbcinternational.com](mailto:cbrunson@bbcinternational.com)>; Shelly Tucker <[stucker@blm.gov](mailto:stucker@blm.gov)>

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**Subject:** RE: COG - Lusk Deep Unit A #023H - Delineation Workplan

Dear Ms. Haskell:

As NMOCD does not have a record of a processed initial C141, a 1RP is issued for the incident. The delineation workplan is under review.

4657	3/27/2017	A	COG	Lusk Deep Unit A #023H battery	30-025- 40260	19S-32E- 19P	6/10/2016
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Thanks,

Olivia Yu  
Environmental Specialist  
NMOCD, District I  
[Olivia.yu@state.nm.us](mailto:Olivia.yu@state.nm.us)  
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**Subject:** RE: COG - Lusk Deep Unit A #023H - Delineation Workplan

Ms. Yu,

Please see attached Notification submitted to Mr. Keyes on June 10, 2016 and the Initial C-141 submitted on June 20, 2016. Please let me know if you need any additional information.

Thank You,

Becky Haskell

Senior HSE Coordinator

COG Operating LLC

600 W Illinois Avenue | Midland, TX 79701  
Direct: 432-818-2372 | Main: 432.683.7443

Cell: 432-556-5130

[rhaskell@concho.com](mailto:rhaskell@concho.com)



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**Sent:** Monday, March 20, 2017 12:50 PM  
**To:** Cliff Brunson; Shelly Tucker  
**Cc:** Rebecca Haskell; Ken Swinney; Jennifer Gilkey; Kathy Purvis  
**Subject:** [External] RE: COG - Lusk Deep Unit A #023H - Delineation Workplan

\*\*\*\* External email. Use caution. \*\*\*\*

Dear All:

NMOCD does not have a record of the original submission of the initial C-141. If anyone has a copy, please provide this information.

Thanks,

Olivia

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**Sent:** Monday, March 20, 2017 11:11 AM  
**To:** Yu, Olivia, EMNRD <[Olivia.Yu@state.nm.us](mailto:Olivia.Yu@state.nm.us)>; Shelly Tucker <[stucker@blm.gov](mailto:stucker@blm.gov)>  
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**Subject:** COG - Lusk Deep Unit A #023H - Delineation Workplan

Olivia and Shelly,

Please find the attached Delineation Workplan and remediation proposal for the COG Lusk Deep Unit A #023H. There is no RP number associated with this leak that was provided by the NMOCD. We searched online as well and were not successful in locating one. COG is requesting that you review this plan and is looking forward to the OCD's and BLM's approval.

If you have any questions, please let me know.

Thanks, Cliff

Cliff P. Brunson, CEI, CRS

President

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