



Lupe Carrasco
Environmental Coordinator

July 7, 2014

Bureau of Land Management
Carlsbad Field Office
620 E. Greene Street
Carlsbad, NM 88220

Re: Burch Keely Unit #232
30-015-27992
Sec. 23, T17S-R29E
Eddy County, NM

Mr. Jeffery Robertson,

COG Operating LLC would like to submit for your consideration the enclosed sample analysis for the above captioned well. This data is in response to the email received dated May 23, 2014, requesting further delineation of the impacted area.

On June 5, 2014, the impacted area was delineated further using a backhoe. S5 was delineated down to an approximate depth of 15'. S6 was sampled due to the hazards involved with S1 and S2. S6 is approximately 20' west of the original S1 and S2 sampling points and was sampled to a depth of approximately 14' (see attached site diagram). The data results for S6 depict a practical representation of the impacted area. Total depths reached were based on full extent of backhoe and positioning of the sampling trench.

If there are no objections or further stipulations, COG Operating LLC would like to begin the remediation process based on approval of the initial work plan submitted on May 8, 2014. Please feel free to contact me with any questions or concerns at (575) 748-6933

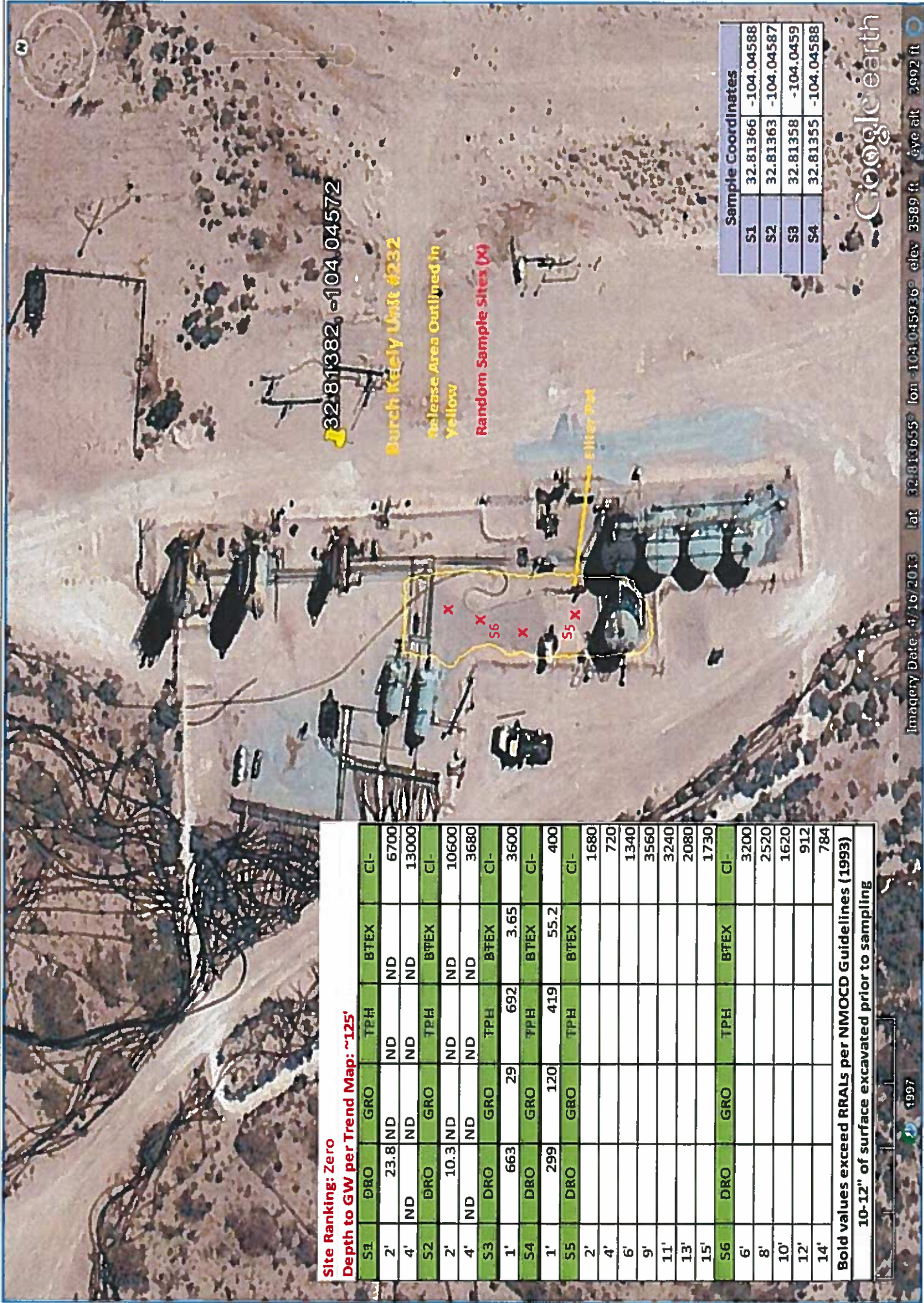
Sincerely,

A handwritten signature in dark ink, appearing to read "Lupe Carrasco", written over a faint, larger version of the same signature.

Lupe Carrasco
Environmental Coordinator

Enclosure(s): Site Diagram
Analytical Results (H401784, H401870)

BKU Satellite E Battery (BKU #232)



Site Ranking: Zero

Depth to GW per Trend Map: ~125'

S1	DRO	GRO	TPH	BTEX	CI-
2'	23.8	ND	ND	ND	6700
4'	ND	ND	ND	ND	13000
S2	DRO	GRO	TPH	BTEX	CI-
2'	10.3	ND	ND	ND	10600
4'	ND	ND	ND	ND	3680
S3	DRO	GRO	TPH	BTEX	CI-
1'	663	29	692	3.65	3600
S4	DRO	GRO	TPH	BTEX	CI-
1'	299	120	419	55.2	400
S5	DRO	GRO	TPH	BTEX	CI-
2'					1680
4'					720
6'					1340
9'					3560
11'					3240
13'					2080
15'					1730
S6	DRO	GRO	TPH	BTEX	CI-
6'					3200
8'					2520
10'					1620
12'					912
14'					784

Bold values exceed RRAIs per NMOCD Guidelines (1993)

10-12" of surface excavated prior to sampling

June 18, 2014

LUPE CARRASCO

COG OPERATING

P. O. BOX 1630

ARTESIA, NM 88210

RE: BKU #232 (BKU SATELLITE E BATTERY)

Enclosed are the results of analyses for samples received by the laboratory on 06/11/14 11:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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.

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,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

 COG OPERATING
 LUPE CARRASCO
 P. O. BOX 1630
 ARTESIA NM, 88210
 Fax To: NONE

Received:	06/11/2014	Sampling Date:	06/05/2014
Reported:	06/18/2014	Sampling Type:	Soil
Project Name:	BKU #232 (BKU SATELLITE E BATTERY)	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: S5 - 9' (H401784-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3560	16.0	06/18/2014	ND	432	108	400	3.64		

Sample ID: S5 - 11' (H401784-02)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: HM							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3240	16.0	06/18/2014	ND	432	108	400	3.64		

Sample ID: S6 - 6' (H401784-03)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3200	16.0	06/18/2014	ND	432	108	400	3.64	

Sample ID: S6 - 8' (H401784-04)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: HM							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2520	16.0	06/18/2014	ND	432	108	400	3.64		

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:COG OPERATING
LUPE CARRASCO
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received:	06/11/2014	Sampling Date:	06/05/2014
Reported:	06/18/2014	Sampling Type:	Soil
Project Name:	BKU #232 (BKU SATELLITE E BATTERY)	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: S6 - 10' (H401784-05)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1620	16.0	06/18/2014	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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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



CARDINAL
Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: COG Operating LLC

Project Manager: Lupe Carrasco

Address: 2208 West Main

City: Artesia State: NM Zip: 88210

Phone #: (575) 748-6940 Fax #:

Project #: Project Owner:

Project Name: BKU #232 (Satellite E Battery)

Project Location:

Sampler Name: Lupe Carrasco

FOR LAB USE ONLY

Lab I.D. Sample I.D.

1401784
1
2
3
4
5
S5 - 9'
S5 - 11'
S6 - 6'
S6 - 8'
S6 - 10'

(G)RAB OR (C)OMP.

CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER

ACID/BASE:

ICE / COOL

OTHER

DATE
6/15/14

TIME

BTEX

TPH

Chloride

X X X X X X X

BILL TO

P.O. #:

Company: COG Operating LLC

Attn: Robert McNeill

Address: 600 W Illinois

City: Midland

State: TX Zip: 79701

Phone #: (432) 221-0388

Fax #:

ANALYSIS REQUEST

PLEASE NOTE: Liability and Damages. Cardinal's liability and claims are limited to the amount paid by the client for the analysis. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruption, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated theories or otherwise.

Relinquished By:

Date: 6/11/14

Received By: Lupe Carrasco

Phone Result: ☐ Yes ☐ No

Phone Result: ☐ Yes ☐ No

ADD'l Phone #:

ADD'l Fax #:

REMARKS:

gcarrasco@cgcnco.com

Relinquished By:

Date: 6/11/14

Received By:

Phone Result: ☐ Yes ☐ No

Phone Result: ☐ Yes ☐ No

ADD'l Phone #:

ADD'l Fax #:

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

Sample Condition
Cool ☐ Intact ☒
Yes ☒ No ☐

CHECKED BY: [Signature]

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476

#54

June 26, 2014

LUPE CARRASCO
COG OPERATING
P. O. BOX 1630
ARTESIA, NM 88210

RE: BKU #232 (BKU SATELLITE E BATTERY)

Enclosed are the results of analyses for samples received by the laboratory on 06/23/14 7:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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/ga/lab_accred_certif.html.

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Sincerely,



Celey D. Keene
Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
LUPE CARRASCO
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 06/23/2014
Reported: 06/26/2014
Project Name: BKU #232 (BKU SATELLITE E BATTERY)
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 06/05/2014
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Jodi Henson

Sample ID: S5-13' (H401870-01)

Chloride, SM4500CI-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2080	16.0	06/23/2014	ND	416	104	400	0.00	

Sample ID: S5-15' (H401870-02)

Chloride, SM4500CI-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1730	16.0	06/23/2014	ND	416	104	400	0.00	

Sample ID: S6-12' (H401870-03)

Chloride, SM4500CI-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	912	16.0	06/24/2014	ND	416	104	400	0.00	

Sample ID: S6-14' (H401870-04)

Chloride, SM4500CI-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	784	16.0	06/24/2014	ND	416	104	400	8.00	

Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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***	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

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: <u>COG</u>		P.O. #:		BILL TO											
Project Manager:		Company: <u>COG</u>		ANALYSIS REQUEST											
Address:		Alt: <u>Robert McNeill</u>													
City: <u>Albuquerque</u>		Address:													
Phone #: <u>575-725-0787</u>		City:													
Fax #:		State:													
Project #: <u>844 #232</u>		Zip:													
Project Name:		Phone #:													
Project Location:		Fax #:													
Sampler Name: <u>Lucy Carrasco</u>		Matrix:													
FOR LAB USE ONLY		PRESERV													
Lab I.D.		SAMPLE													
Sample I.D.		DATE		TIME											
1 <u>55-13'</u>		4/5		X											
2 <u>55-15'</u>		4/5		X											
3 <u>56-12'</u>		4/5		X											
4 <u>56-19'</u>		4/5		X											
5 <u>56-19'</u>		4/5		X											
6 <u>56-19'</u>		4/5		X											
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72 <u>56-19'</u>		4/5		X											
73 <u>56-19'</u>		4/5		X											
74 <u>56-19'</u>		4/5		X											
75 <u>56-19'</u>		4/5		X											
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88 <u>56-19'</u>		4/5		X											
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94 <u>56-19'</u>		4/5		X											
95 <u>56-19'</u>		4/5		X											
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99 <u>56-19'</u>		4/5		X											
100 <u>56-19'</u>		4/5		X											