



May 27, 2016

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

Re: Rocket Federal Com #5H

30-015-37778 Sec. 3, T26S-R29E Eddy County, NM

Ms. Heather Patterson,

COG Operating LLC would like to submit for your consideration the enclosed work plan for the above captioned well. The plan is in response to the C-141 Initial report dated October 28, 2015.

### Background

The release was caused when a poly flow line was hit by a vehicle and damaged resulting in the release of 200 barrels of produced water of which zero barrels were recovered. Upon discovery, the line was shut in and vacuum trucks were dispatched but were unable to recover any fluid. The release impacted an approximate area measuring 150' x 225' and is located approximately 0.75 miles northeast of the well pad. The spill area is located at the following GPS coordinates: 32.074709, -103.963601.

### Groundwater

Based on the Chevron Trend Maps, the release area would be classified at a site ranking of Zero with depth to groundwater at greater than 100'.

### Soil Assessment and Analytical Results

Sample points noted on the attached Site Diagram show chloride delineation for the release area. All sample points at a depth of 1' were tested for BTEX, TPH, and chloride, but proved to be non-detect as described in the attached analytical results, therefore are not summarized in the site diagram.

NMOCD May 27, 2016 Page 2

### **Work Plan**

COG Operating LLC proposes a 4' excavation of the areas labeled S1 and S2 and a 6' excavation of the areas labeled S3 & S4. The backfill will consist of caliche and top soil. The top soil will be brought for the remaining 2' of backfill with the finished grade at approximately 6" above the surrounding landscape. The remediated area will be reseeded in June of 2016 with a BLM #1 seed mixture.

If there are no objections or stipulations, COG Operating LLC will begin the remediation based on approval of this work plan. Please feel free to contact me with any questions or concerns at (432) 818-2369.

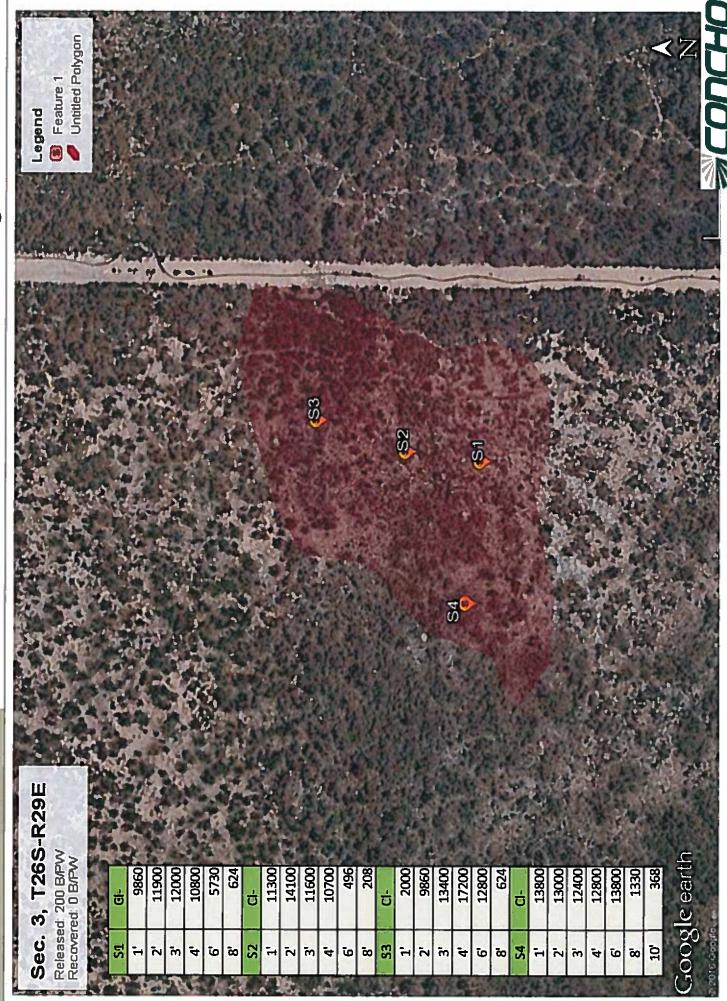
Sincerely,

Amanda T. Davis

Senior Environmental Coordinator

Enclosure(s): Site Diagram

**Analytical Results** 





February 23, 2016

**DAKOTA NEEL** 

COG OPERATING

P. O. BOX 1630

ARTESIA, NM 88210

RE: ROCKET FEDERAL COM #005H

Enclosed are the results of analyses for samples received by the laboratory on 02/17/16 10:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-15-7. 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 <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> accred certif.html.

Cardinal Laboratories is accreditated 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.

Celeg D. Keine

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



**COG OPERATING DAKOTA NEEL** P. O. BOX 1630 ARTESIA NM, 88210 Fax To: NONE

Received:

02/17/2016

Sampling Date:

02/11/2016

Reported:

02/23/2016

Sampling Type:

Soil

Project Name:

**ROCKET FEDERAL COM #005H** 

Sampling Condition:

Cool & Intact

Project Number: Project Location: NONE GIVEN **NOT GIVEN** 

Sample Received By:

Jodi Henson

Sample ID: S1-1' (H600369-01)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/19/2016	ND	2.04	102	2.00	0.658	
Toluene*	<0.050	0.050	02/19/2016	ND	2.01	101	2.00	0.555	
Ethylbenzene*	<0.050	0.050	02/19/2016	ND	1.82	91.1	2.00	0.118	
Total Xylenes*	<0.150	0.150	02/19/2016	ND	5.64	94.0	6.00	0.224	
Total BTEX	<0.300	0.300	02/19/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIE	107 5	% 73 6-14	o						
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9860	16.0	02/19/2016	ND	384	96.0	400	11.8	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/19/2016	ND	198	99.1	200	5.85	
DRO >C10-C28	<10.0	10.0	02/19/2016	ND	216	108	200	12.2	
Surrogate: 1-Chlorooctane	94.7	% 35-147		10 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					
Surrogate: 1-Chlorooctadecane	105 9	6 28-171							

### Sample ID: S1-2' (H600369-02)

Chloride, SM4500Ct-B	mg.	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	85	% Recovery	True Value QC	RPD	Qualifier
Chloride	11900	16.0	02/19/2016	ND	384	96.0	400	11.8	

### Cardinal Laboratories

\*=Accredited Analyte

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Chy & Kina

COG OPERATING **DAKOTA NEEL** P. O. BOX 1630 ARTESIA NM, 88210 Fax To: NONE

Received:

02/17/2016

Reported:

02/23/2016

Project Name:

**ROCKET FEDERAL COM #005H** 

Project Number:

**NONE GIVEN** 

Project Location:

**NOT GIVEN** 

Sampling Date:

02/11/2016

Sampling Type:

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: S1-3' (H600369-03)

Chloride, SM4500Cl-B

Chloride

Chloride

mg/kg

Analyzed By: AP

Analyte

Result 12000

Reporting Limit 16.0

Reporting Limit

16.0

Reporting Limit

Analyzed 02/19/2016 Method Blank ND

B\$

% Recovery True Value QC RPD

11.8

Sample ID: S1-4' (H600369-04)

mg/kg

Analyzed By: AP

384

BS

384

96.0

400

400

Qualifier

Analyte

Analyte

Analyte

Chloride, SM4500Cl-B

Result

10800

Analyzed

02/19/2016

Method Blank

ND

% Recovery

True Value QC

RPD Qualifier

11.8

Sample ID: S1-6' (H600369-05)

Chloride, SM4500CI-B

mg/kg

Analyzed By: AP

Method Blank

% Recovery

96.0

True Value QC

Qualifier

Chloride

Result 5730

16.0

Analyzed 02/19/2016

ND

BS 384

96.0

400

RPD

11.8

Sample ID: S1-8' (H600369-06)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AP

Method Blank

BS

% Recovery

True Value QC

RPD

Chloride

Result 624

Reporting Limit 16.0

Analyzed 02/19/2016

ND

384

96.0

400

Qualifier 11.8

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Celley & Kanne

Celey D. Keene, Lab Director/Quality Manager

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COG OPERATING DAKOTA NEEL P. O. BOX 1630 ARTESIA NM, 88210 Fax To: NONE

Received:

02/17/2016

Reported:

02/23/2016

Project Name:

**ROCKET FEDERAL COM #005H** 

Project Number: Project Location:

NONE GIVEN

Sampling Date:

02/11/2016

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: S2-1' (H600369-07)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/19/2016	ND	2.04	102	2.00	0.658	
Toluene*	<0.050	0.050	02/19/2016	ND	2.01	101	2.00	0.555	
Ethylbenzene*	<0.050	0.050	02/19/2016	ND	1.82	91.1	2.00	0.118	
Total Xylenes*	< 0.150	0.150	02/19/2016	ND	5.64	94.0	6.00	0.224	
Total BTEX	<0.300	0.300	02/19/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIC	108 9	6 73.6-140	0						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	11300	16.0	02/19/2016	ND	384	96.0	400	11.8	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/19/2016	ND	198	99.1	200	5.85	
DRO >C10-C28	<10.0	10.0	02/19/2016	ND	216	108	200	12.2	
Surrogate: 1-Chlorooctane	97.8 9	% 35-147							
Surrogate: 1-Chlorooctadecane	106 %	6 28-171							

### Sample ID: S2-2' (H600369-08)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	14100	16.0	02/19/2016	ND	384	96.0	400	11.8	

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Celon D. Kenne

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Received:

02/17/2016

Reported:

02/23/2016

Project Name:

**ROCKET FEDERAL COM #005H** 

Project Number:

Analyte

Analyte

NONE GIVEN **NOT GIVEN** 

Project Location:

Sampling Date:

02/11/2016

Sampling Type: Sampling Condition: Soil Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: S2-3' (H600369-09)

Chloride, SM4500CI-B

Chloride

Chloride

Chloride

Chloride

mg/kg

Analyzed By: AP

Result

11600

Result

10700

Result

496

Result

208

Reporting Limit 16.0

Reporting Limit

16.0

Reporting Limit

16.0

Reporting Limit

16.0

Analyzed 02/19/2016 Method Blank ND

Method Blank

ND

BS

384

BS

384

% Recovery True Value QC RPD

Qualifier

Sample ID: S2-4' (H600369-10)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AP

96.0

% Recovery

96.0

400

True Value QC

400

True Value QC

400

11.8

RPD

11.8

Sample ID: S2-6' (H600369-11)

Chloride, SM4500Cl-B

Analyte

Analyte

mg/kg

Analyzed By: AP

Analyzed

02/19/2016

Analyzed

02/19/2016

Analyzed

02/19/2016

Method Blank ND

85 % Recovery

11,8

11.8

RPD Qualifier

Qualifier

Sample ID: S2-8' (H600369-12)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AP

Method Blank

ND

BS 384

384

% Recovery 96.0

96.0

True Value QC 400

RPD Qualifier

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Clay & Kenne

Celey D. Keene, Lab Director/Quality Manager

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COG OPERATING **DAKOTA NEEL** P. O. BOX 1630 ARTESIA NM, 88210 Fax To: NONE

Received:

02/17/2016

Reported:

02/23/2016

Project Name:

**ROCKET FEDERAL COM #005H** 

Project Number: Project Location: NONE GIVEN **NOT GIVEN** 

Sampling Date: Sampling Type: 02/11/2016

Sampling Condition:

Soil Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: S3-1' (H600369-13)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/19/2016	ND	2.04	102	2.00	0.658	
Toluene*	<0.050	0.050	02/19/2016	ND	2.01	101	2.00	0.555	
Ethylbenzene*	<0.050	0.050	02/19/2016	ND	1.82	91.1	2.00	0.118	
Total Xylenes*	<0.150	0.150	02/19/2016	ND	5.64	94.0	6.00	0.224	
Total BTEX	<0.300	0.300	02/19/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIL	107 9	6 73 6-14	0						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2000	16.0	02/19/2016	ND	384	96.0	400	11.8	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/19/2016	ND	198	99.1	200	5.85	
DRO >C10-C28	<10.0	10.0	02/19/2016	ND	216	108	200	12.2	
Surrogate: 1-Chlorooctane	100 9	6 35-147							
Surrogate 1-Chlorooctadecane	109 9	6 28-171							

### Sample ID: 53-2' (H600369-14)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9860	16.0	02/19/2016	ND	384	96.0	400	11.8	

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\*=Accredited Analyte

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College Kanne



**COG OPERATING DAKOTA NEEL** P. O. BOX 1630 ARTESIA NM, 88210 Fax To: NONE

Received:

02/17/2016

Reported:

02/23/2016

Project Name:

**ROCKET FEDERAL COM #005H** 

Reporting Limit

16.0

16.0

Reporting Limit

Reporting Limit

16.0

Project Number: Project Location:

Analyte

NONE GIVEN

**NOT GIVEN** 

Result

13400

Result

17200

Sampling Date:

02/11/2016

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

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

Jodi Henson

Sample ID: S3-3' (H600369-15)

Chloride, SM4500Cl-B

Chloride

Chloride

mg/kg

Analyzed By: AP

Analyzed

02/19/2016

Method Blank

BS

384

BS

384

% Recovery

96.0

True Value QC 400

RPD

11.8

Sample ID: S3-4' (H600369-16)

mg/kg

Analyzed By: AP

ND

Qualifier

Chloride, SM4500Cl-B

Analyte

Analyte

Analyte

Reporting Limit Analyzed

Method Blank ND

% Recovery

True Value QC

400

RPD 11.8

Qualifier

Sample ID: 53-6' (H600369-17)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AP

02/19/2016

Analyzed

BS

% Recovery

96.0

True Value QC

RPD Qualifier

Chloride

Chloride

Result 12800

Result

624

16.0

02/19/2016

Analyzed

02/19/2016

Method Blank ND

384

96.0

400

11.8

Sample ID: S3-8' (H600369-18)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AP

Method Blank

ND

BS

384

% Recovery

96.0

True Value QC

400

RPD Qualifier

11.8

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\*=Accredited Analyte

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Celley & trame

Celey D. Keene, Lab Director/Quality Manager

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COG OPERATING **DAKOTA NEEL** P. O. BOX 1630 ARTESIA NM, 88210 Fax To: NONE

Received:

02/17/2016

Reported:

02/23/2016

Project Name:

**ROCKET FEDERAL COM #005H** 

Project Number:

NONE GIVEN

Sampling Date:

02/11/2016

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact Jodi Henson

Project Location:

NOT GIVEN

Sample ID: S4-1' (H600369-19)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Benzene*	<0.050	0.050	02/19/2016	ND	2.04	102	2.00	0.658	
Toluene*	<0.050	0.050	02/19/2016	ND	2.01	101	2.00	0.555	
Ethylbenzene*	<0.050	0.050	02/19/2016	ND	1.82	91.1	2.00	0.118	
Total Xylenes*	<0.150	0.150	02/19/2016	ND	5.64	94.0	6.00	0.224	
Total BTEX	<0.300	0.300	02/19/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIE	108 9	6 73 6-14	0						
Chloride, SM4500Cl-B	mg/	kg	Anaiyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	13800	16.0	02/19/2016	ND	384	96.0	400	11.8	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/19/2016	ND	198	99.1	200	5.85	
DRO >C10-C28	<10.0	10.0	02/19/2016	ND	216	108	200	12.2	
Surrogate: 1-Chlorooctane	99.2	% 35-147							
Surrogate: 1-Chlorooctadecane	109 9	6 28-171							

### Sample ID: S4-2' (H600369-20)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	13000	16.0	02/19/2016	ND	384	96.0	400	11.8	

### Cardinal Laboratories

\*=Accredited Analyte

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Clay & Kana



COG OPERATING DAKOTA NEEL P. O. BOX 1630 ARTESIA NM, 88210 Fax To: NONE

Received:

02/17/2016

Reported:

Chinada Charcocci n

02/23/2016

Project Name:

**ROCKET FEDERAL COM #005H** 

Project Number: Project Location:

NONE GIVEN

-----

NOT GIVEN

Sampling Date:

02/11/2016

Sampling Type: Soil

Sampling Condition:

Cool & Intact

Sample Received By:

eived By: Jodi Henson

### Sample ID: S4-3' (H600369-21)

True Value QC 400 True Value QC 400	RPD 3.92 RPD 3.92	Qualifier  Qualifier
True Value QC	RPD	Qualifier
		Qualifier
		Qualifier
		Qualifier
400	3.92	
True Value QC	RPD	Qualifier
400	3.92	
True Value QC	RPD	Qualifier
400	3.92	
True Value QC	RPD	Qualifier
400	3.92	
_	True Value QC 400	400 3.92  True Value QC RPD 400 3.92  True Value QC RPD

Applement Des AD

### Cardinal Laboratories

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Celley Kenne

Celey D. Keene, Lab Director/Quality Manager



ND

### **Notes and Definitions**

RPD	Relative Percent Difference	ė.
altralia	Samples not received at proper temperature of 6	°C or below.
***	Insufficient time to reach temperature.	
	Chloride by SM4500Cl-B does not require sample	s be received at or below 6°C
	Samples reported on an as received basis (wet)	unless otherwise noted on report

Analyte NOT DETECTED at or above the reporting limit

Cardinal Laboratories

\*=Accredited Analyte

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COG Operating LLC	TC		
Project Manager: Dakota Neel		8/14.70	ANALYSIS REQUEST
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City: Artesia	State: NM Zin R8240	pany:	
Phone #: (575) 748-6930		Address Robert McNeill	
Project #:	Project Owner:		
Project Name: ROCKET FEDERAL COM #005H	COM #005H		
Project Location:		State: IX Zip: 79701	
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