

October 19, 2017

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

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

Re: Deferment Request Letter

Foster Eddy #011 (2RP-3574)

API#: 30-015-26231

Unit Letter J Section 17, Township 17S, Range 31E

Eddy County, NM

Mr. Bratcher/Ms. Tucker,

COG Operating, LLC (COG) is pleased to submit for your consideration the following deferral request for the Foster Eddy #11. This release occurred on February 12, 2016 and impacted an area of pasture adjacent to Foster Eddy #011 well pad. Background information, laboratory results, summary of remedial actions, and deferment requested are submitted herein.

### Background

On February 12, 2016, a poly flowline ruptured resulting in the release of approximately 3bbls of oil and 2bbls of produced water into the pasture adjacent to the Foster Eddy #011 well pad. A vacuum truck was dispatched to the site to recover freestanding fluids. Approximately 2bbls of oil and 1bbl of produced water were recovered.

On March 16, 2016, COG personnel conducted soil sampling within the impacted area in preparation for the construction of a remediation work plan (laboratory results are summarized in the tables below). Due to safety concerns presented by the three (3) gas lines intersecting the impacted area (see attached site diagram) vertical delineation by mechanical means was impossible prior to beginning remediation activities.

On July 25, 2016, the Bureau of Land Management (BLM) issued approval of the remediation work plan. On July 26, 2016, the New Mexico Oil Conservation Division (NMOCD) also approved the remediation work plan.

### **Ground water and Site Ranking**

Based on the 2005 Chevron Texaco ground water trend map, ground water in the project vicinity is approximately 325-feet below ground surface (BGS). The New Mexico Office of the State Engineer's Water Rights Reporting System does not indicate water in any of the wells within the project vicinity. Therefore the site ranking for this release is zero (0) based on the following:

Depth to ground water >100-feet
Distance to surface water body >1000-feet
Wellhead Protection Area >1000-feet

## **Laboratory Results**

Initial Sampling Event March 16, 2016

Sample ID	Depth (feet)	Benzene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)
S1	1	2.72	194	2120	2500	13800
S1	2	4.67	285	496	3160	15900
S1	3	< 0.050	5.44	528	44.2	355
S1	4	< 0.50	< 0.300	48	<10.0	<10.0
S1	5	< 0.050	< 0.300	336	<10.0	10
S2	1	3.69	273	7860	3240	11200
S2	2	5.79	411	4400	4050	11000
S2	3	3.21	294	3760	4150	11900
S2	4	<2.00	241	3840	2760	8330
S2	5	< 2.00	194	3840	2660	8290
S3	1	< 0.050	5.01	4400	67.2	632
S3	2	< 0.050	< 0.300	1680	<10.0	<10.0
S3	3	< 0.050	< 0.300	144	<10.0	<10.0
S3	4	< 0.050	< 0.300	64	<10.0	<10.0
S3	5	< 0.050	< 0.300	144	<10.0	107

Delineation Sampling Event September 12, 2016

Sample ID	Depth (feet)	-		Chloride (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)
S2	7	<1.00	263	3840	2480	8160
S2	9	<1.00	190	4480	2100	8580

### **Remedial Actions**

- The impacted area in the vicinity of sample locations S1 and S3 were excavated to a depth of 3-feet BGS.
- The impacted area in the vicinity of sample location S2 was excavated to a depth of 9-feet BGS. This was the maximum depth feasible without threatening the surrounding pipelines and posing a safety risk to personnel in the area.
- All of the excavated soil was hauled to an NMOCD approved solid waste disposal facility.
- The excavation was backfilled with sand, contoured to match the surrounding terrain and seeded with BLM LPC seed mixture.

## **Deferral Request**

Due to the underground infrastructure present at this location and the safety hazards associated with any further excavation activities COG Operating, LLC respectfully requests that any further remedial activities be deferred until abandonment of the conflicting infrastructure.

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

Sincerely,

Sheldan Alices Sheldon L. Hitchcock HSE Coordinator

slhitchcock@concho.com

### Enclosed:

- (1) Site Diagram
- (2) Laboratory Analytical Reports and Chain-of-Custody Forms
- (3) Initial C-141
- (4) Final C-141

Foster Eddy #11 30-015-26231



March 31, 2016

**DAKOTA NEEL** 

COG OPERATING

P. O. BOX 1630

ARTESIA, NM 88210

RE: FOSTER EDDY #11 (TB) (YESO)

Enclosed are the results of analyses for samples received by the laboratory on 03/23/16 10:30.

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/qa/lab-accred-certif.html">www.tceq.texas.gov/field/qa/lab-accred-certif.html</a>.

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)

Celey D. Keine

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



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

Received:

03/23/2016

Sampling Date:

03/16/2016

Reported:

03/31/2016

Sampling Type:

Soil

Project Name:

FOSTER EDDY #11 (TB) (YESO)

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Jodi Henson

Project Location:

NOT GIVEN

Sample ID: S1 - 1' (H600630-01)

BTEX 8021B	mg	/kg	Analyze	d By: MS	10			- 1	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	2.72	2.00	03/28/2016	ND	1.99	99.4	2.00	0.600	
Toluene*	43.8	2.00	03/28/2016	ND	1.90	95.0	2.00	0.817	
Ethylbenzene*	51.5	2.00	03/28/2016	ND	1.68	84.1	2.00	1.60	
Total Xylenes*	96.0	6.00	03/28/2016	ND	5.26	87.7	6.00	0.288	
Total BTEX	194	12.0	03/28/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIL	109	% 73.6-14	10		7 7				
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AP		P.F			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2120	16.0	03/24/2016	ND	400	100	400	3.92	
TPH 8015M	mg	/kg	Analyze	d By: MS		Latina III		100	S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	2500	200	03/24/2016	ND	196	97.9	200	3.19	
DRO >C10-C28	13800	200	03/24/2016	ND	200	99.8	200	7.50	
Surrogate: 1-Chlorooctane	674	% 35-147	7						- 5.0
Surrogate: 1-Chlorooctadecane	1150	% 28-171							

### Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene



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

Received: Reported: 03/23/2016

03/31/2016

Project Name: Project Number: FOSTER EDDY #11 (TB) (YESO)

NONE GIVEN

Project Location:

**NOT GIVEN** 

Sampling Date:

03/16/2016

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Jodi Henson

### Sample ID: S1 - 2' (H600630-02)

BTEX 8021B	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	4.67	2.00	03/28/2016	ND	1.99	99.4	2.00	0.600	
Toluene*	69.9	2.00	03/28/2016	ND	1.90	95.0	2.00	0.817	
Ethylbenzene*	74.8	2.00	03/28/2016	ND	1.68	84.1	2.00	1.60	
Total Xylenes*	136	6.00	03/28/2016	ND	5.26	87.7	6.00	0.288	
Total BTEX	285	12.0	03/28/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIL	109	% 73.6-14	0	5., W.					5-7-5
Chloride, SM4500CI-B	mg/	/kg	Analyze	d By: AP	u T				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	496	16.0	03/24/2016	ND	400	100	400	3.92	
TPH 8015M	mg/	/kg	Analyze	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	3160	200	03/24/2016	ND	196	97.9	200	3.19	
DRO >C10-C28	15900	200	03/24/2016	ND	200	99.8	200	7.50	
Surrogate: 1-Chlorooctane	305	% 35-147						19.77	Market State
Surrogate: 1-Chlorooctadecane	382 9	% 28-171							

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sive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such

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

Received:

03/23/2016

Sampling Date:

03/16/2016

Reported:

Sampling Type:

Soil

03/31/2016

Sampling Condition: Sample Received By:

Cool & Intact Jodi Henson

Project Name: Project Number: Project Location: FOSTER EDDY #11 (TB) (YESO) NONE GIVEN

**NOT GIVEN** 

Sample ID: S1 - 3' (H600630-03)

BTEX 8021B	mg/	kg	Analyze	ed By: MS	14 5				Let 010
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/28/2016	ND	1.99	99.4	2.00	0.600	
Toluene*	0.339	0.050	03/28/2016	ND	1.90	95.0	2.00	0.817	
Ethylbenzene*	1.56	0.050	03/28/2016	ND	1.68	84.1	2.00	1.60	
Total Xylenes*	3.53	0.150	03/28/2016	ND	5.26	87.7	6.00	0.288	
Total BTEX	5.44	0.300	03/28/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIL	115 9	% 73.6-14	0				745 80		
Chloride, SM4500Cl-B	mg/	kg	Analyzed By: AP						1
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	528	16.0	03/24/2016	ND	400	100	400	3.92	
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	44.2	10.0	03/24/2016	ND	196	97.9	200	3.19	QM-07
DRO >C10-C28	355	10.0	03/24/2016	ND	200	99.8	200	7.50	QM-07
Surrogate: 1-Chlorooctane	89.6	% 35-147				10110			
Surrogate: 1-Chlorooctadecane	90.7	% 28-171							

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

Received:

03/23/2016

Sampling Date:

03/16/2016

Reported:

Sampling Type:

Soil

03/31/2016

Cool & Intact

Project Name:

FOSTER EDDY #11 (TB) (YESO)

Sampling Condition: Sample Received By:

Jodi Henson

Project Number:

NONE GIVEN

Project Location:

**NOT GIVEN** 

Sample ID: S1 - 4' (H600630-04)

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	03/28/2016	ND	1.99	99.4	2.00	0.600	
Toluene*	<0.050	0.050	03/28/2016	ND	1.90	95.0	2.00	0.817	
Ethylbenzene*	<0.050	0.050	03/28/2016	ND	1.68	84.1	2.00	1.60	
Total Xylenes*	<0.150	0.150	03/28/2016	ND	5.26	87.7	6.00	0.288	
Total BTEX	<0.300	0.300	03/28/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIL	99.2	% 73.6-14	0		7.17				
Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: AP		Jan Bart			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	03/24/2016	ND	400	100	400	3.92	
			100000						
TPH 8015M	mg/	kg	Analyze	d By: MS					
TPH 8015M  Analyte	mg/ Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Analyte GRO C6-C10		1-3158 % F			BS 196	% Recovery 97.9	True Value QC	RPD 3.19	Qualifier

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

Received:

03/23/2016

Sampling Date:

03/16/2016

Reported:

03/31/2016

Sampling Type:

Soil

Project Name:

FOSTER EDDY #11 (TB) (YESO)

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Jodi Henson

Project Location:

**NOT GIVEN** 

Sample ID: S1 - 5' (H600630-05)

BTEX 8021B	mg	/kg	Analyze	ed By: MS					A STATE OF THE STATE OF
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/28/2016	ND	1.99	99.4	2.00	0.600	
Toluene*	<0.050	0.050	03/28/2016	ND	1.90	95.0	2.00	0.817	
Ethylbenzene*	<0.050	0.050	03/28/2016	ND	1.68	84.1	2.00	1.60	
Total Xylenes*	<0.150	0.150	03/28/2016	ND	5.26	87.7	6.00	0.288	
Total BTEX	<0.300	0.300	03/28/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIL	101	% 73.6-14	0						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AP				- 31	Levigi
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	03/24/2016	ND	400	100	400	3.92	
TPH 8015M	mg,	/kg	Analyze	d By: MS			e Soù be a		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/25/2016	ND	196	97.9	200	3.19	
DRO >C10-C28	10.0	10.0	03/25/2016	ND	200	99.8	200	7.50	
Surrogate: 1-Chlorooctane	83.8	% 35-147	7					7.	
Surrogate: 1-Chlorooctadecane	96.1	% 28-171							

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

Received:

03/23/2016

Sampling Date:

03/16/2016

Reported:

03/31/2016

Sampling Type:

Soil

Project Name:

FOSTER EDDY #11 (TB) (YESO)

Sampling Type.

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Jodi Henson

Project Location:

NOT GIVEN

Sample ID: S2 - 1' (H600630-06)

BTEX 8021B	mg/	kg	Analyze	ed By: MS		19.5		<u> </u>	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	3.69	2.00	03/28/2016	ND	1.99	99.4	2.00	0.600	
Toluene*	72.0	2.00	03/28/2016	ND	1.90	95.0	2.00	0.817	
Ethylbenzene*	67.2	2.00	03/28/2016	ND	1.68	84.1	2.00	1.60	
Total Xylenes*	130	6.00	03/28/2016	ND	5.26	87.7	6.00	0.288	
Total BTEX	273	12.0	03/28/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIL	107 9	% 73.6-14	0				***;		
Chloride, SM4500Cl-B	mg/	kg	Analyzed By: AP				la diese		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7860	16.0	03/24/2016	ND	400	100	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	3240	100	03/25/2016	ND	196	97.9	200	3.19	
DRO >C10-C28	11200	100	03/25/2016	ND	200	99.8	200	7.50	
Surrogate: 1-Chlorooctane	184 9	% 35-147							
Surrogate: 1-Chlorooctadecane	265 9	% 28-171							

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Celeg D. Keine



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

Received:

03/23/2016

Sampling Date:

03/16/2016

Reported:

Sampling Type:

Soil

03/31/2016

Cool & Intact

Project Name: Project Number:

FOSTER EDDY #11 (TB) (YESO) NONE GIVEN

Sampling Condition: Sample Received By:

Jodi Henson

Project Location:

**NOT GIVEN** 

Sample ID: S2 - 2' (H600630-07)

BTEX 8021B	mg	/kg	Analyze	ed By: MS	and the				and the base
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	5.79	2.00	03/28/2016	ND	1.99	99.4	2.00	0.600	
Toluene*	116	2.00	03/28/2016	ND	1.90	95.0	2.00	0.817	
Ethylbenzene*	106	2.00	03/28/2016	ND	1.68	84.1	2.00	1.60	
Total Xylenes*	182	6.00	03/28/2016	ND	5.26	87.7	6.00	0.288	
Total BTEX	411	12.0	03/28/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIL	110	% 73.6-14	10						
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4400	16.0	03/24/2016	ND	400	100	400	3.92	
TPH 8015M	mg	/kg	Analyze	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	4050	100	03/25/2016	ND	196	97.9	200	3.19	
DRO >C10-C28	11000	100	03/25/2016	ND	200	99.8	200	7.50	
Surrogate: 1-Chlorooctane	175	% 35-147	7		- 7				
Surrogate: 1-Chlorooctadecane	262	% 28-171	Sec 8						

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Celeg D. Keene



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

Received:

03/23/2016

Reported:

Sampling Date:

03/16/2016

03/31/2016

Sampling Type:

Soil

Project Name:

FOSTER EDDY #11 (TB) (YESO)

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

Project Number:

NONE GIVEN

289 %

28-171

Project Location: **NOT GIVEN** 

Sample ID: S2 - 3' (H600630-08)

BTEX 8021B	mg	/kg	Analyze	d By: MS			A 201 AVE	1.17	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	3.21	2.00	03/28/2016	ND	1.99	99.4	2.00	0.600	
Toluene*	78.0	2.00	03/28/2016	ND	1.90	95.0	2.00	0.817	
Ethylbenzene*	77.1	2.00	03/28/2016	ND	1.68	84.1	2.00	1.60	
Total Xylenes*	136	6.00	03/28/2016	ND	5.26	87.7	6.00	0.288	
Total BTEX	294	12.0	03/28/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIL	107	% 73.6-14	0					= 127	
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3760	16.0	03/24/2016	ND	400	100	400	3.92	
TPH 8015M	mg	/kg	Analyze	d By: MS			L.Vo.		S-06
		Demonstrum Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Analyte	Result	Reporting Limit	Allalyzeu	PICCIOU DIBIIK	00	70 INCCOVERY	True value QC	I CI D	Qualifici
Analyte GRO C6-C10	4150	100	03/25/2016	ND	196	97.9	200	3.19	Qualifici

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Surrogate: 1-Chlorooctadecane

\*=Accredited Analyte

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

Received:

03/23/2016

Sampling Date:

03/16/2016

Reported:

Sampling Type:

Soil

03/31/2016

Sampling Condition:

Cool & Intact

Project Name: Project Number: FOSTER EDDY #11 (TB) (YESO) NONE GIVEN

Sample Received By:

Jodi Henson

Project Location:

**NOT GIVEN** 

Sample ID: S2 - 4' (H600630-09)

BTEX 8021B	mg	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<2.00	2.00	03/28/2016	ND	1.99	99.4	2.00	0.600	
Toluene*	58.3	2.00	03/28/2016	ND	1.90	95.0	2.00	0.817	
Ethylbenzene*	65.5	2.00	03/28/2016	ND	1.68	84.1	2.00	1.60	
Total Xylenes*	117	6.00	03/28/2016	ND	5.26	87.7	6.00	0.288	
Total BTEX	241	12.0	03/28/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIL	107	% 73.6-14	0						
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP				كالطياء	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3840	16.0	03/24/2016	ND	400	100	400	3.92	
TPH 8015M	mg	kg	Analyze	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	2760	100	03/25/2016	ND	196	97.9	200	3.19	
DRO >C10-C28	8330	100	03/25/2016	ND	200	99.8	200	7.50	
Surrogate: I-Chlorooctane	161	% 35-147							
Surrogate: 1-Chlorooctadecane	190	% 28-171							

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Received:

03/23/2016

Sampling Date:

03/16/2016

Reported:

03/31/2016

Sampling Type:

Soil

Project Name:

FOSTER EDDY #11 (TB) (YESO)

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Jodi Henson

Project Location:

NOT GIVEN

Sample ID: S2 - 5' (H600630-10)

BTEX 8021B	mg	kg	Analyze	d By: MS		Cycliffe 1			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<2.00	2.00	03/28/2016	ND	1.99	99.4	2.00	0.600	
Toluene*	45.5	2.00	03/28/2016	ND	1.90	95.0	2.00	0.817	
Ethylbenzene*	52.3	2.00	03/28/2016	ND	1.68	84.1	2.00	1.60	
Total Xylenes*	96.7	6.00	03/28/2016	ND	5.26	87.7	6.00	0.288	
Total BTEX	194	12.0	03/28/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIL	105	% 73.6-14	0						
Chloride, SM4500CI-B	mg,	/kg	Analyzed By: AP			1 1			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3840	16.0	03/24/2016	ND	400	100	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	2660	100	03/25/2016	ND	196	97.9	200	3.19	
DRO >C10-C28	8290	100	03/25/2016	ND	200	99.8	200	7.50	
Surrogate: I-Chlorooctane	168 9	% 35-147	,						7.5
Surrogate: 1-Chlorooctadecane	206	% 28-171							

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

Received:

03/23/2016

Sampling Date:

03/16/2016

Reported:

03/31/2016

Sampling Type:

Project Name:

FOSTER EDDY #11 (TB) (YESO)

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Jodi Henson

Project Location:

NOT GIVEN

Sample ID: S3 - 1' (H600630-11)

BTEX 8021B	mg/	kg	Analyze	d By: MS			salent.	11	QM-07
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/29/2016	ND	2.07	104	2.00	5.25	
Toluene*	0.431	0.050	03/29/2016	ND	1.96	97.8	2.00	7.05	
Ethylbenzene*	1.31	0.050	03/29/2016	ND	1.72	85.9	2.00	8.63	
Total Xylenes*	3.28	0.150	03/29/2016	ND	5.28	87.9	6.00	8.62	
Total BTEX	5.01	0.300	03/29/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIL	120 9	% 73.6-14	0	7 37 7					
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP				31de	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4400	16.0	03/24/2016	ND	400	100	400	3.92	
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	67.2	10.0	03/25/2016	ND	196	97.9	200	3.19	
DRO >C10-C28	632	10.0	03/25/2016	ND	200	99.8	200	7.50	
Surrogate: 1-Chlorooctane	100 9	% 35-147	, , , , , , ,		77.3				
Surrogate: 1-Chlorooctadecane	97.4	% 28-171							

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Received:

03/23/2016

Sampling Date:

03/16/2016

Reported:

03/31/2016

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Project Name: Project Number: FOSTER EDDY #11 (TB) (YESO) NONE GIVEN

Sample Received By:

Jodi Henson

Project Location:

**NOT GIVEN** 

Sample ID: S3 - 2' (H600630-12)

BTEX 8021B	mg/	kg	Analyze	d By: MS	100	14.7	Products		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/29/2016	ND	2.07	104	2.00	5.25	
Toluene*	0.065	0.050	03/29/2016	ND	1.96	97.8	2.00	7.05	
Ethylbenzene*	0.051	0.050	03/29/2016	ND	1.72	85.9	2.00	8.63	
Total Xylenes*	<0.150	0.150	03/29/2016	ND	5.28	87.9	6.00	8.62	
Total BTEX	<0.300	0.300	03/29/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIL	100 9	% 73.6-14	0		7	i la	A	147)	
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AP				Line i	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1680	16.0	03/24/2016	ND	400	100	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: MS	I Hall	Mar III.			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/25/2016	ND	196	97.9	200	3.19	
DRO >C10-C28	<10.0	10.0	03/25/2016	ND	200	99.8	200	7.50	
Surrogate: 1-Chlorooctane	87.5	% 35-147	1 200	1. 77		4			
Surrogate: 1-Chlorooctadecane	87.1	% 28-171							

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

Received:

03/23/2016

Sampling Date:

03/16/2016

Reported:

03/31/2016

Sampling Type:

Soil

Project Name:

FOSTER EDDY #11 (TB) (YESO)

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Jodi Henson

Project Location:

NOT GIVEN

Sample ID: S3 - 3' (H600630-13)

BTEX 8021B	mg	kg	Analyze	d By: MS	100				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/29/2016	ND	2.07	104	2.00	5.25	
Toluene*	<0.050	0.050	03/29/2016	ND	1.96	97.8	2.00	7.05	
Ethylbenzene*	<0.050	0.050	03/29/2016	ND	1.72	85.9	2.00	8.63	
Total Xylenes*	<0.150	0.150	03/29/2016	ND	5.28	87.9	6.00	8.62	
Total BTEX	<0.300	0.300	03/29/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIL	101	% 73.6-14	0	. ,744					
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AP	A.				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	03/24/2016	ND	400	100	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: MS			1 12011		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/25/2016	ND	196	97.9	200	3.19	
DRO >C10-C28	<10.0	10.0	03/25/2016	ND	200	99.8	200	7.50	
Surrogate: 1-Chlorooctane	79.6	% 35-147	41						
Surrogate: 1-Chlorooctadecane	90.1	% 28-171							

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

Received:

03/23/2016

Sampling Date:

03/16/2016

Reported:

Sampling Type:

03/31/2016

Soil

Project Name:

FOSTER EDDY #11 (TB) (YESO)

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

Project Number:

NONE GIVEN

Project Location:

NOT GIVEN

Sample ID: S3 - 4' (H600630-14)

BTEX 8021B	mg,	/kg	Analyze	ed By: MS				100	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/29/2016	ND	2.07	104	2.00	5.25	
Toluene*	<0.050	0.050	03/29/2016	ND	1.96	97.8	2.00	7.05	
Ethylbenzene*	<0.050	0.050	03/29/2016	ND	1.72	85.9	2.00	8.63	
Total Xylenes*	<0.150	0.150	03/29/2016	ND	5.28	87.9	6.00	8.62	
Total BTEX	<0.300	0.300	03/29/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIL	101	% 73.6-14	0			77 77		4 47	
Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: AP	· Albi				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	03/24/2016	ND	400	100	400	3.92	
TPH 8015M	mg/	'kg	Analyze	d By: MS				417	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/25/2016	ND	196	97.9	200	3.19	
DRO >C10-C28	<10.0	10.0	03/25/2016	ND	200	99.8	200	7.50	
Surrogate: 1-Chlorooctane	85.5	% 35-147	,						
Surrogate: 1-Chlorooctadecane	93.9	% 28-171							

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

Received: 03/23/2016 Reported: 03/31/2016

Project Name: FOSTER EDDY #11 (TB) (YESO)

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

Sampling Date: Sampling Type:

Sampling Condition:

Cool & Intact Sample Received By: Jodi Henson

03/16/2016

Soil

Sample ID: S3 - 5' (H600630-15)

BTEX 8021B	mg/	kg	Analyze	d By: MS	4 12			- 2	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/29/2016	ND	2.07	104	2.00	5.25	
Toluene*	<0.050	0.050	03/29/2016	ND	1.96	97.8	2.00	7.05	
Ethylbenzene*	<0.050	0.050	03/29/2016	ND	1.72	85.9	2.00	8.63	
Total Xylenes*	<0.150	0.150	03/29/2016	ND	5.28	87.9	6.00	8.62	
Total BTEX	<0.300	0.300	03/29/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIL	102 9	% 73.6-14	0			<b>19-791</b>			
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP	300				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	03/24/2016	ND	400	100	400	3.92	
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	03/25/2016	ND	196	97.9	200	3.19	
DRO >C10-C28	107	10.0	03/25/2016	ND	200	99.8	200	7.50	
Surrogate: 1-Chlorooctane	83.2 9	% 35-147							
Surrogate: 1-Chlorooctadecane	94.5 9	% 28-171							

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### **Notes and Definitions**

S-06	The recovery of this matrix interference's	surrogate is outside control limits due to sample diluti .	tion required from high analyte concentration and/or	
QR-		ne sample duplicate or MS/MSD was outside if QC acce CS and/or LCSD recovery and/or RPD values.	ceptance limits due to matrix interference. QC batch	
QM-	The spike recovery w recovery.	vas outside acceptance limits for the MS and/or MSD.	. The batch was accepted based on acceptable LCS	
ND	Analyte NOT DETECT	ED at or above the reporting limit		
RPD	Relative Percent Diffe	erence		
**	Samples not received	at proper temperature of 6°C or below.		
***	Insufficient time to re-	ach temperature.		
2	Chloride by SM4500Cl	-B does not require samples be received at or below 6	6°C	
	Samples reported on	an as received basis (wet) unless otherwise noted or	n report	

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# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: COG Operating LLC		AND ALL AND RESIDENCE				
Project Manager: Dakota Neel		NIE WIGHT				ANALYSIS REQUEST
8						
City: Artesia State: NM	Zip 88210	Attn: Robert Manual	Robert Modelli			
Phone #: (575) 748-6930 Fax #:		SSS	600 W Illinois	-		
Project #: Project Owner:	er:		1			
Project Name: Foster Eddy #11 (TB) (Yeso)		TX Zin	701			
Project Location:		Dhone # //20\ 00103	0		-	
Sampler Name: Dakota Neel		F 110116 #. (402) 221-0368	08	-		
ECHIPTE WAITE. DANOIG NEED		Fax #:				
LAN THE MET MITTER		PRESERV. S	SAMPLING			
Lab I.D. Sample I.D.	OGE	ER: I/BASE: COOL ER:			ide	
Medical	# C GR WA SOI OIL SLU	ACII	TIME	ГРН	hlo	
	×		11:00 AM	-	×	
7 C C C C C C C C C C C C C C C C C C C	×	3/16/16	11:00 AM		×	
	×	3/16/16	11:00 AM X	×	×	
) - q	×	3/16/16	11:00 AM X	×	×	
0 0 0	×	3/16/16	11:00 AM X	×	×	
6 32-1	×	3/16/16	11:00 AM X	×	×	
	×	3/16/16	11:00 AM		×	
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	×	3/16/16	11:00 AM X	×	×	
	×	3/16/16	11:00 AM X	×	×	
PLEASE NOTE: Limiting and Darmages. Cardinate's liability and client's production monoch for production action. X 3/16/16 11:00 AM	×	3/16/16	11:00 AM X		×	
analyses. All claims including those for negligence and any other cause whatboever shall be deemed waked unless made in witing and received by Cardinal within 30 days after completion of the applicable enviror. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits focured by cardinal, its substitution, 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 stand resource or otherwise.	Cause whatboower shall be deemed waked unless made in writing and received by Cardinal to the amount paid by the client for the equential damages, including without limitation, business interruptions, loss of use, or loss of profits ecurred by client, its substitution of the client is substitution.	The second in constant or curt, state the timing to the afficient to the afficient to the second to the afficient to the second by Cardinal within 30 days after. Dutareas interruptions, loss of use, or loss of profits ancurred by the of whether such claim is based upon any of the abness stand or the of whether such claim is based upon any of the abness stand or	aid by the client for the ter completion of the applica client, its subsidiaries,	able		
Relinquished By:  Date:  3/23/2016  Time:  10:30  Date:		di Henson	Phone Result:	□ Yes □ Yes	No o	Add'l Phone #: Add'l Fax #:
Time:			icarrasco@concho.com	ncho.co	m	
Delivered Bv: (Circle One)	Sample Condition	n CHECKED BY:	atrujillo@concho.com	ho.com	,	
Samplegrading R Bus - Other:						
	H	104				



# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: COG O	COG Operating LLC		B/LL TO				ANALYSIS RE	REQUEST	
Project Manager: Dakota Neel	Neel		P.O. #:						
Address: 2208 West Main			Company: cogo	COG Operating LLC					
City: Artesia	State: NM Zip	88210		Robert McNeill					
Phone #: (575) 748-6930	-6930 Fax #:		Address: 600 \	600 W Illinois					
Project #:	Project Owner:		City: Midland	and					
Project Name: Foster Eddy	Foster Eddy #11 (TB) (Yeso)	40	State: TX Zip: 79701	9701					
Project Location:			(43%	388					
Sampler Name: Dakota Neel	Neel		Fax #:						
FOR LAB USE ONLY		MATRIX	PRESERV.	SAMPLING					
Lab I.D. Sa	(G)RAB OR (C)ON # CONTAINERS	GROUNDWATER WASTEWATER SOIL OIL SLUDGE	OTHER: ACID/BASE: ICE / COOL OTHER:	BTEX	ТРН	Chloride			A CONTRACTOR OF THE CONTRACTOR
S3-1'		×		11:00 AM X	×	×			
12 83-2		×	3/16/16	11:00 AM X	×	×			
3 S3-3'		×	3/16/16	6 11:00 AM X	×	×			
j <b>4</b> 83-4		×	3/16/16	-	×	×			
<b>5</b> 83-51		×	3/16/16	6 11:00 AM X	×	×			
PLEASE NOTE: Liability and Dumages: Cardin analyses. All claims including those for negliger services in 10 search shall Cardinal by Islands of the Islands	PLEASE NOTE: Lability and Damages. Cardinal's lability and client's acclusive remody for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whetherever the deemed unless modeling those for negligence and any other cause whetherever the deemed unless modeling those for negligence and any other cause whetherever the deemed unless model in writing and received by Cerdinal within 30 days after completion of the applicable cannot be applicable.	whether based in contract or d unless made in writing and n	tort, shall be limited to the amoun	a paid by the client for the	able -				
Relinquished By: DAKOTA NEEL	BO BAY:  DAKOTA NEEL  Time:  10:30  1	ed By:	Received By:  And Aunders  Received By:	Fax Result:  Yes Fax Result:  Yes REMARKS:	☐ Yes ☐ Yes	N N	Add'l Phone #: Add'l Fax #:		
	Time:			carrasco@concho.co	ncho.c	m			
Deliment But (Circle O				atrujillo@concho.com	cho.co	3			

Delivered By: (Circle One)
Samples R. Bys - Other:

Sample Condition
Cool\_Intact
Ves (4 Yes
No | No

CHECKED BY:



September 27, 2016

DAKOTA NEEL
COG OPERATING
P. O. BOX 1630
ARTESIA, NM 88210

RE: FOSTER EDDY #11 (TB) (YESO)

Enclosed are the results of analyses for samples received by the laboratory on 09/21/16 13:00.

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 <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.

Celey 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 NONE Fax To:

Received:

09/21/2016

Sampling Date:

09/12/2016

Reported:

09/27/2016

Sampling Type:

Soil

Project Name:

FOSTER EDDY #11 (TB) (YESO)

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Celey D. Keene

Project Location:

**NOT GIVEN** 

Sample ID: S2 - 7' (H602126-01)

BTEX 8021B	mg	/kg	Analyze	ed By: MS			34 8		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<1.00	1.00	09/24/2016	ND	1.82	91.1	2.00	0.992	
Toluene*	47.5	1.00	09/24/2016	ND	1.84	92.1	2.00	0.714	
Ethylbenzene*	73.1	1.00	09/24/2016	ND	1.77	88.4	2.00	0.904	
Total Xylenes*	142	3.00	09/24/2016	ND	5.32	88.7	6.00	1.05	
Total BTEX	263	6.00	09/24/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIL	117	% 73.6-14	10						
Chloride, SM4500Cl-B	mg	/kg	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3840	16.0	09/26/2016	ND	432	108	400	3.64	
TPH 8015M	mg	/kg	Analyze	ed By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	2480	100	09/22/2016	ND	178	89.2	200	7.92	
DRO >C10-C28	8160	100	09/22/2016	ND	176	88.0	200	8.92	
Surrogate: 1-Chlorooctane	299	% 35-147	, 1,				1.1	12.7	
Surrogate: 1-Chlorooctadecane	196	% 28-171							

Cardinal Laboratories

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential dams including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg D. Kreene

\*=Accredited Analyte



### **Notes and Definitions**

S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.

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

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keine



# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	COG Operating LLC	N3144	B/LL 70			ANALYSIS REQUEST	
Project Manager:	Dakota Neel	P.O. #:	**				
Address: 2208 V	2208 West Main	Соп	Company: COG Operating LLC	ng LLC			
City: Artesia	State: NM	Zip 88210 Attn:	1: Robert McNeill	e			
Phone #:	432-215-2783 Fax #:	Add	Address: 600 W Illinois	nois			
Project #:	Project Owner:	City:	. Midland				
Project Name: Fo	Foster Eddy #11	Stat	State: TX Zip: 79701				
Project Location:		Pho	Phone #: (432) 221-0388				
Sampler Name:	Dakota Neel	Fax #:	*				
FOR LAB USE ONLY		MATRIX	PRESERV. SAMPLING	G			
Lab I.D.	Sample I.D.	(G)RAB OR (C)OM # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER:	ACID/BASE: ICE / COOL OTHER :	BTEX	TPH Chloride		
_	S2-7		9/12/16	9:00 a.m. x	×		
PLEASE NOTE: Liability and Da analyses. All claims including th service. In no event shall Cardin affiliates or successors arising ou	PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any cleam arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses all claims including those for negligence and any other cause whatscener shall be deemed waved 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 instation, business interruptogs, loss of use, or loss of profits incurred by client, its substitutives, settlements or exercises a setting out of or related to the performance of services hereunder by Cardinal, recardings of whether substitution is based outern any of the above stated reasons or otherwise.	any claim arising whether based in contract or tort, st reemed waved unless made in writing and receives g without limitation, business interruptions, loss of us Cardinal regardless of whether such claim is based	shall be limited to the amount paid by days after country by Cardinal within 30 days after country or class of profits incurred by clier upon any of the above stated reason.	by the client for the completion of the applicable ent, its subsidiaries, sons or otherwise.			ı
Relinquished By:  Relinquished By:	Date: Date: Date:	Received By:  Received By:		:: :::	□ Yes □ No □ Yes □ No	o Add'l Phone #: o Add'l Fax #:	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Circle One) Bus - Other:	Sample Condition Cool Intact Larges Larges	CHECKED BY:				



September 27, 2016

DAKOTA NEEL
COG OPERATING
P. O. BOX 1630

ARTESIA, NM 88210

RE: FOSTER EDDY #11 (TB) (YESO)

Enclosed are the results of analyses for samples received by the laboratory on 09/21/16 13:00.

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 <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.

Celey 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 NONE Fax To:

Received:

09/21/2016

Sampling Date:

09/12/2016

Reported:

09/27/2016

Sampling Type:

Soil

Project Name:

FOSTER EDDY #11 (TB) (YESO)

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Celey D. Keene

Project Location:

**NOT GIVEN** 

Sample ID: S2 - 9' (H602125-01)

BTEX 8021B	mg	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<1.00	1.00	09/24/2016	ND	1.82	91.1	2.00	0.992	
Toluene*	30.9	1.00	09/24/2016	ND	1.84	92.1	2.00	0.714	
Ethylbenzene*	52.9	1.00	09/24/2016	ND	1.77	88.4	2.00	0.904	
Total Xylenes*	106	3.00	09/24/2016	ND	5.32	88.7	6.00	1.05	
Total BTEX	190	6.00	09/24/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIL	114	% 73.6-14	0					7	
Chloride, SM4500Cl-B	mg,	kg	Analyze	d By: AC	1 ,011	<u>. 19 </u>			L PARTY
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4480	16.0	09/26/2016	ND	432	108	400	3.64	
TPH 8015M	mg/	kg	Analyze	d By: MS		Turana.	March H		S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	2100	100	09/22/2016	ND	178	89.2	200	7.92	
DRO >C10-C28	8580	100	09/22/2016	ND	176	88.0	200	8.92	
Surrogate: 1-Chlorooctane	287	% 35-147	7	. = NF Y			P		
Surrogate: 1-Chlorooctadecane	157	% 28-171							

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any daim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claims is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg D. Keene



### **Notes and Definitions**

S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.

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

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keine



# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

State: NW Lip 88210  Address: 600 W III  ct #: Project Owner: City: Midland ct Name: Foster Eddy #11  ct Name: Foster Eddy #11  State: TX Zip: 7970  ct Location: State: TX Zip: 7970  ct Location: Phone #: (432) 221-0388  Fax #: Project Owner: Midland State: TX Zip: 7970  State: TX Zip: 7970  Phone #: (432) 221-0388  Fax #: PRESERV SAMPUII  S2-9'  GGRAB OR (C)OMP.  # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER: ACID/BASE: ICE / COOL OTHER 9/12/16	Dakota Neel  Sample I.D.  GC COS  GC COOL  G	ct Man	ame: COG Operating LLC ager: Dakota Neel 2208 West Main		P.O. #:  Company: COG Operating LLC	ating LLC		ANALYSIS REQUEST
Foster Eddy #11  Foster Eddy #11  State: TX Zip: 7970  State: TX Zip: 7970  Phone #: (432) 221-0388  Pax #:  GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER: ACID/BASE: ICE / COOL OTHER: 9/12/16	Project Name: Foster Eddy #11  Project Name: Dakota Neel  Project Location:  Sampler Name: Dakota Neel  Project Location:  Dakota Neel  Project Owner:  Dakota Neel  Dakota Neel	Phone #:		Zip 88210	ي	Neill		
State: TX Zip: 7970  Phone #: (432) 221-0388  Sample I.D.  Fax #:  Preserv Sampli  Fax #:  Preserv Sampli  Fax #:  Preserv Sampli  Fax #:  Preserv Sampli  Fax #:  Sample I.D.  Date  Sample I.D.  Sample I.D.  Sample I.D.  Phone #: (432) 221-0388  Fax #:  Date  Sample I.D.  Sample I.D.  Phone #: (432) 221-0388  Fax #:  Phone #: (432)	Sampler Location:  Sample Location:  Dakota Neel  Project Location:  Dakota Neel  Program District Research Location:  Dakota Neel  Program District Research Location:  Dakota Neel  Program District Research Location:  Dakota Neel  Program District Neel  Dakota Neel  Program District Neel  Program Dis				!			
Sample I.D.  (G)RAB OR (C)OMP.  # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER: ACID/BASE: ICE / COOL OTHER: 9/12/16	Sampler Name: Dakota Neel Fax #:  For Use Use Only  Lab I.D. Sample I.D. GON  Sample I.D. GON  ACTUAL PRESERY, SAMPLING  PRESERY, SAMPLING  ON  ACTUAL SAMPLING  ACTUAL SAMPLING  ACTUAL SAMPLING  ACTUAL SAMPLING  ON  ACTUAL SAMPLING  ON  ACTUAL SAMPLING  ON  ACTUAL SAMPLING  ON  ACTUAL SAMPLING  ACTUAL	Project Location:	See Looy #11		State:   X	3		
S2-9'  (G)RAB OR (C)OMP.  # CONTAINERS  GROUNDWATER  WASTEWATER  SOIL  OIL  SLUDGE  OTHER:  ACID/BASE: ICE / COOL  OTHER:  9/12/16	Lab I.D.  Sample I.D.  GRADIE I	Sampler Name:	Dakota Neel		Fax #:			
Sample I.D.  (G)RAB OR (C)OM # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER: ACID/BASE: ICE / COOL OTHER: 9/12/16	Lab I.D.  Sample I.D.  G. C.	FOR LAB USE ONLY		MATRIX	ESERV.	S		
9/12/16	S2-9'  9/12/16 9:0	Lab I.D.	Sample I.D.	# CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE	ACID/BASE: ICE / COOL OTHER :	_	BTEX	
	REASE NOTE: Lability and Damages. Cardinal's liability and cleant's exclusive remody for any claim arising whether based in contract of lost, shall be limited to the amount paid by the relation for the contract of lost, shall be limited to the amount paid by the relation or contract of lost, shall be limited to the amount paid by the relation for relation of or related to the performance of sewuces breastern dering where distribution becames may purplices, loss of lose, or loss of profits mounted by claims. Relinquished By:    Date:		S2-9'			99		×
	CCircle One)  Sample Condition Cool Intact Laves Laves I No	Alexand By:	Time; 3; on Date:			Phone Fax Res		Result:
Date: Received By:		Delivered Bv: (Ci		Sample Condition Cool Intact La Yes La Yes L1 No   No				

### **NM OIL CONSERVATION**

ARTESIA DISTRICT

District I
1625 N. French Dr., Hobbs, NM 88240
District III
81 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

MAR 0 1 2016

Form C-141 Revised August 8, 2011

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

Submit L Copy to appropriate District Office in RELEVAL STREET WITH 19.15.29 NMAC.

I MY I'M	LOHA	4N43C				OPERA'	ГOR		✓ Initial	Report		inal Rep	
Name of Company: COG Operating LLC 239/37						Contact: Robert McNeill							
Address: 600 West Illinois Avenue, Midland TX 79701						Telephone No. 432-230-0077							
Facility Name: FOSTER EDDY #011 Surface Owner: Federal Mineral Owner						Facility Type: Well							
I I all I alam	[ C	(Ph)	D			N OF RE	Feet from the	Cost/M	Inst I inc		County		
Unit Letter						South	2160'	East/West Line East		Eddy			
						9 Longitude	-103.8903885 EASE						
Type of Rele						Volume of			Volume Re				
Oil & Produ						_	: 2 bbls PW		2 bbls Oil :				
Source of Re Flowline	elease:					2/12/16 1:	four of Occurrent 00 pm	ce:	Date and He 2/12/16 1:0		scovery:		
Was Immedi	ate Notice (		Yes	No Not Re	quired	If YES, To							
By Whom?						Date and I							
Was a Water	course Read		Yes ⊠	No		If YES, Ve	olume Impacting	the Water	rcourse.				
		em and Reme I by a poly-flo		n Taken.* vacuum truck was (	dispatcl	hed to recove	r standing fluid.						
This release	was caused	l by a poly-flo	wline. A v	n Taken.* acuum truck was (	dispate	hed to recove	r standing fluid.						
This release  Describe Are  This release  contamination	was caused ea Affected occurred in on from the	and Cleanup A the pasture aprelease and we	Action Take	n Taken.* racuum truck was o	of the v	wellhead. Con	ocho will have the	al prior to	any signific	ant reme	diation w	ork.	
This release  Oescribe Are  This release contamination thereby cert cgulations a public health thould their or the environt the environ	was caused  a Affected  occurred in  in from the  ify that the ill operators  or the envi operations h  mment. In a	and Cleanup and Cleanup at the pasture aprelease and we information gare required a ronment. The nave failed to	Action Take opproximate will present the will present to report and adequately OCD acceptance.	n Taken.* vacuum truck was o	of the v work pl lete to the lease nort by the	wellhead. Con lan to the NM the best of my notifications a ic NMOCD in te contaminat	cho will have the OCD for approvation of the Country of the Countr	understan ctive active Report" de reat to gre responsi	d that pursus ons for relea oes not relies ound water, bility for cor	ant remediant to NM ses which we the operation with	IOCD rules a may enderator of later, hunwith any	ork. les and langer liability nan health	
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<u>District I</u> 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 <u>District IV</u> 1220 S. St. Francis Dr., Santa Fe, NM 87505

## State of New Mexico **Energy Minerals and Natural Resources**

Form C-141 Revised April 3, 2017 Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

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

			Rele	ease Notifica	atio	n and Co	orrective A	ction					
젊은 그 나는 나는 아이를 받는 그리고 있다.						OPERATOR Initial Report Final Report							
Name of Company: COG Operating, LLC (OGRID# 229137)						Contact: Robert McNeill							
Address: 600 West Illinois Avenue, Midland TX 79701 Facility Name: Foster Eddy #011						Telephone No.: 432-683-7443							
						Facility Type: Well							
Surface Ow	ner: BLM	1.74 M 9C		Mineral Ov	vner:	Federal			API No	0.: 30-015-2	6231	4.115	
				LOCA	ΤΙΟ	N OF RE	LEASE						
Unit Letter J					North	n/South Line South	Feet from the 2160	East/West Line East		County Eddy			
			Lati	tude: 32.8318329	2 Lo	ongitude: -1	03.8903885 N	IAD83					
				NATU	JRE	OF REL	EASE						
Type of Release: Oil & Produced Water						Volume of Release: Volume Recovered: 3bbls Oil & 2bbls PW 2bbls Oil & 1bbl PW							
Source of Re	lease: Flow	line			-4		Year of Occurrence	ce:	2bbls Oil & 1bbl PW  Date and Hour of Discovery:				
				and the state of the state of	15	2/2/2016 1	2/12/2016			Alle			
Was Immedi	ate Notice C		Yes 🗵	No 🛭 Not Req	uired								
By Whom?	D	1 10				Date and Hour:  If YES, Volume Impacting the Watercourse.							
Was a Watercourse Reached?  ☐ Yes ☑ No						If YES, Vo	olume Impacting	the Wate	rcourse.				
If a Watercou	irse was Im	pacted, Descr	ibe Fully.		7								
Describe Are The release of developed a rapproved wo submitted to I hereby certifications alpublic health should their of the state of	a Affected a eccurred in tremediation rk plan. Exc NMOCD ar fy that the ill operators or the envir	he pasture apply work plan the cavation limited BLM.  Information give are required to comment. The ave failed to a	Action Take proximatel at was sub- ations were even above o report are acceptance	s of oil and 1bbl of  ten.*  ly 275-feet northeas sequently approved e encountered due to  is true and comple ad/or file certain rel te of a C-141 report investigate and rer tance of a C-141 re	st of the by No under the to the ease it by the media	he wellhead. Of MOCD and Belerground pipe the best of my notifications and the NMOCD mete contaminati	Concho conducted LM. The soil remelines intersecting knowledge and und perform correcarked as "Final Ron that pose a thr	inderstantive active ac	at this site acted area.  d that purs ons for rele oes not reli ound water	was carried A deferment suant to NMO eases which leve the oper	out per the t request was DCD rules a may endang ator of liabiter, human	and ger ility health	
		ws and/or regu						2 Kille					
						OIL CONSERVATION DIVISION							
Signature:  Printed Name: Sheldon L. Hitchcock						Approved by Environmental Specialist:							
Title: HSE C	1977					Approval Date:		F	Expiration Date:				
E-mail Address: slhitchcock@concho.com						Conditions of Approval:			Attached				
Date: 10/6/2		ets If Necess		ne: 575-746-2010						Attached			