



November 17, 2014

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

**Re: Michalada Federal #3-D
30-015-35157
Sec. 3, T22S-R25E
Eddy County, NM**

Mr. Mike Bratcher,

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 13, 2014.

Background

The release was due to a hole that developed at the bottom of the tank near the seam. Hydrostatic pressure from the fluid inside the tank caused the hole to give and fluid rushed out of the tank which was contained within the bermed facility. A vacuum truck was dispatched to recover standing fluid of which 100 barrels were recovered of the 311 barrels of oil released. The impacted area was excavated to a depth of approximately 4-6" with all saturated berms removed and replaced with clean caliche.

Groundwater

Based on the information obtained on the NMOSE website (Sec. 11, T22S-R25E), the release area would be classified at a site ranking of Zero with depth to groundwater at approximately 385'.

Soil Assessment and Analytical Results

Sample points S1, S2, and S3 were selected based on the most practical sampling points within the existing infrastructure of the battery. The attached Site Diagram depicts the approximate location of the sample points chosen along with a Sample Summary Table which summarizes the included Analytical Results. S2 and S3 were chosen because of the close proximity to the initial point of release.

Sample results show TPH and BTEX levels to be above RRAL's for the sample points chosen at different depths. S1 results show elevated levels to a depth of 1'. S2 results

show elevated levels to a depth of 5' with 4' showing numbers below RRAL's. S3 results show elevated levels to a depth of 4'. Depths below these elevated points fall below RRAL's in accordance to the limits set in the NMOCD Guidelines of Remediation of Leaks, Spills, and Releases (1993).

Work Plan

COG Operating LLC proposes the excavation of the following sample areas:

S1 - Excavate the impacted 2' of material.

S2 - Excavate the impacted 6' of material

S3 - Excavate the impacted 4.5' of material.

S1	GRO	DRO	TPH	BTEX
1'	4740	6680	11420	500
2'	1030	1330	2360	81.8
3'	52.5	277	329.5	3.16
S2	GRO	DRO	TPH	BTEX
1'	5900	9470	15370	724
2'	6620	8390	15010	1230
3'	10100	13000	23100	1090
4'	ND	ND	0	0.892
5'	3110	4420	7530	423
7'	ND	ND	0	0.628
9'	ND	ND	0	ND
S3	GRO	DRO	TPH	BTEX
1'	7840	11400	19240	1040
2'	7920	9930	17850	880
3'	8380	10500	18880	929
4'	497	801	1298	244
5'	ND	ND	0	ND

Areas excavated within the battery will be handled in the most practical manner to promote worker safety and stability of the existing infrastructure. The excavated areas will be backfilled with clean caliche immediately following excavation. All impacted material will be hauled to an NMOCD approved disposal facility.

If there are no objections or further stipulations, COG Operating LLC would like to begin the remediation process based on approval of this work plan. Please feel free to contact me with any questions or concerns at (575) 748-6940.

Sincerely,

Lupe Carrasco
Environmental Coordinator

Enclosure(s): Site Diagram, Analytical Results, C-141 Initial (Copy)

Michalada Federal #3-D

Sec 3, T22S-R25E

Released: 311 B/O
Recovered: 100 B/O

S1	GRO	DRO	TPH	BTEX
1'	4740	6680	11420	500
2'	1030	1330	2360	81.8
3'	52.5	277	329.5	3.16
S2	GRO	DRO	TPH	BTEX
1'	5900	9470	15370	724
2'	6620	8390	15010	1230
3'	10100	13000	23100	1090
4'	ND	ND	0	0.892
5'	3110	4420	7530	423
7'	ND	ND	0	0.628
9'	ND	ND	0	ND
S3	GRO	DRO	TPH	BTEX
1'	7840	11400	19240	1040
2'	7920	9930	17850	880
3'	8380	10500	18880	929
4'	497	801	1298	244
5'	ND	ND	0	ND



October 14, 2014

LUPE CARRASCO

COG OPERATING

P. O. BOX 1630

ARTESIA, NM 88210

RE: MICHALADA FEDERAL #3-D

Enclosed are the results of analyses for samples received by the laboratory on 10/09/14 13:50.

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.

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,



Caley D. Keene

Lab Director/Quality Manager

Analytical Results For:

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

Received: 10/09/2014
Reported: 10/14/2014
Project Name: MICHALADA FEDERAL #3-D
Project Number: NONE GIVEN
Project Location: NONE GIVEN

Sampling Date: 10/03/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kathy Perez

Sample ID: S1-1' (H403095-01)

BTEX 8021B		mg/kg	Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	7.40	5.00	10/13/2014	ND	1.91	95.3	2.00	3.60	
Toluene*	141	5.00	10/13/2014	ND	1.81	90.4	2.00	3.47	
Ethylbenzene*	49.3	5.00	10/13/2014	ND	1.72	86.1	2.00	3.32	
Total Xylenes*	303	15.0	10/13/2014	ND	5.17	86.1	6.00	3.57	
Total BTEX	500	30.0	10/13/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 61-154

TPH 8015M		mg/kg		Analyzed By: ms				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	4740	200	10/10/2014	ND	182	90.8	200	1.56	
DRO >C10-C28	6680	200	10/10/2014	ND	184	91.9	200	3.04	

Surrogate: 1-Chlorooctane 190 % 47.2-157

Surrogate: 1-Chlorooctadecane 169 % 52.1-176

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: 10/09/2014
Reported: 10/14/2014
Project Name: MICHALADA FEDERAL #3-D
Project Number: NONE GIVEN
Project Location: NONE GIVEN

Sampling Date: 10/03/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kathy Perez

Sample ID: S1-2' (H403095-02)

BTEX 8021B		mg/kg	Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	1.44	1.00	10/13/2014	ND	1.91	95.3	2.00	3.60	
Toluene*	22.7	1.00	10/13/2014	ND	1.81	90.4	2.00	3.47	
Ethylbenzene*	7.39	1.00	10/13/2014	ND	1.72	86.1	2.00	3.32	
Total Xylenes*	50.3	3.00	10/13/2014	ND	5.17	86.1	6.00	3.57	
Total BTEX	81.8	6.00	10/13/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 61-154

TPH 8015M		mg/kg	Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	1030	100	10/10/2014	ND	182	90.8	200	1.56	
DRO >C10-C28	1330	100	10/10/2014	ND	184	91.9	200	3.04	

Surrogate: 1-Chlorooctane 145 % 47.2-157

Surrogate: 1-Chlorooctadecane 131 % 52.1-176

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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: 10/09/2014
Reported: 10/14/2014
Project Name: MICHALADA FEDERAL #3-D
Project Number: NONE GIVEN
Project Location: NONE GIVEN

Sampling Date: 10/03/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kathy Perez

Sample ID: S1-3' (H403095-03)

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	10/13/2014	ND	1.91	95.3	2.00	3.60	
Toluene*	0.353	0.050	10/13/2014	ND	1.81	90.4	2.00	3.47	
Ethylbenzene*	0.321	0.050	10/13/2014	ND	1.72	86.1	2.00	3.32	
Total Xylenes*	2.49	0.150	10/13/2014	ND	5.17	86.1	6.00	3.57	
Total BTEX	3.16	0.300	10/13/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 61-154

TPH 8015M		mg/kg	Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	52.5	50.0	10/10/2014	ND	182	90.8	200	1.56	
DRO >C10-C28	277	50.0	10/10/2014	ND	184	91.9	200	3.04	

Surrogate: 1-Chlorooctane 92.1 % 47.2-157

Surrogate: 1-Chlorooctadecane 105 % 52.1-176

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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: 10/09/2014
Reported: 10/14/2014
Project Name: MICHALADA FEDERAL #3-D
Project Number: NONE GIVEN
Project Location: NONE GIVEN

Sampling Date: 10/03/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kathy Perez

Sample ID: S2-1' (H403095-04)

BTEX 8021B		mg/kg	Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	8.27	5.00	10/13/2014	ND	1.91	95.3	2.00	3.60	
Toluene*	180	5.00	10/13/2014	ND	1.81	90.4	2.00	3.47	
Ethylbenzene*	68.6	5.00	10/13/2014	ND	1.72	86.1	2.00	3.32	
Total Xylenes*	466	15.0	10/13/2014	ND	5.17	86.1	6.00	3.57	
Total BTEX	724	30.0	10/13/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 61-154

TPH 8015M		mg/kg	Analyzed By: ms							S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	5900	200	10/11/2014	ND	182	90.8	200	1.56		
DRO >C10-C28	9470	200	10/11/2014	ND	184	91.9	200	3.04		

Surrogate: 1-Chlorooctane 231 % 47.2-157

Surrogate: 1-Chlorooctadecane 243 % 52.1-176

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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: 10/09/2014
Reported: 10/14/2014
Project Name: MICHALADA FEDERAL #3-D
Project Number: NONE GIVEN
Project Location: NONE GIVEN

Sampling Date: 10/03/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kathy Perez

Sample ID: S2-2' (H403095-05)

BTEX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	37.0	5.00	10/13/2014	ND	1.91	95.3	2.00	3.60	
Toluene*	391	5.00	10/13/2014	ND	1.81	90.4	2.00	3.47	
Ethylbenzene*	110	5.00	10/13/2014	ND	1.72	86.1	2.00	3.32	
Total Xylenes*	691	15.0	10/13/2014	ND	5.17	86.1	6.00	3.57	
Total BTEX	1230	30.0	10/13/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 61-154

TPH 8015M		mg/kg		Analyzed By: ms						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	6620	200	10/11/2014	ND	182	90.8	200	1.56		
DRO >C10-C28	8390	200	10/11/2014	ND	184	91.9	200	3.04		

Surrogate: 1-Chlorooctane 221 % 47.2-157

Surrogate: 1-Chlorooctadecane 206 % 52.1-176

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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: 10/09/2014
Reported: 10/14/2014
Project Name: MICHALADA FEDERAL #3-D
Project Number: NONE GIVEN
Project Location: NONE GIVEN

Sampling Date: 10/03/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kathy Perez

Sample ID: S2-3' (H403095-06)

BTEX 8021B		mg/kg	Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	25.6	10.0	10/13/2014	ND	1.91	95.3	2.00	3.60	
Toluene*	342	10.0	10/13/2014	ND	1.81	90.4	2.00	3.47	
Ethylbenzene*	99.9	10.0	10/13/2014	ND	1.72	86.1	2.00	3.32	
Total Xylenes*	620	30.0	10/13/2014	ND	5.17	86.1	6.00	3.57	
Total BTEX	1090	60.0	10/13/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 61-154

TPH 8015M		mg/kg		Analyzed By: ms				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	10100	200	10/11/2014	ND	182	90.8	200	1.56	
DRO >C10-C28	13000	200	10/11/2014	ND	184	91.9	200	3.04	

Surrogate: 1-Chlorooctane 529 % 47.2-157

Surrogate: 1-Chlorooctadecane 337 % 52.1-176

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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: 10/09/2014
Reported: 10/14/2014
Project Name: MICHALADA FEDERAL #3-D
Project Number: NONE GIVEN
Project Location: NONE GIVEN

Sampling Date: 10/03/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kathy Perez

Sample ID: S3-1' (H403095-07)

BTEX 8021B		mg/kg	Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	16.5	5.00	10/13/2014	ND	1.91	95.3	2.00	3.60	
Toluene*	290	5.00	10/13/2014	ND	1.81	90.4	2.00	3.47	
Ethylbenzene*	98.8	5.00	10/13/2014	ND	1.72	86.1	2.00	3.32	
Total Xylenes*	636	15.0	10/13/2014	ND	5.17	86.1	6.00	3.57	
Total BTEX	1040	30.0	10/13/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 61-154

TPH 8015M		mg/kg		Analyzed By: ms				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	7840	200	10/11/2014	ND	182	90.8	200	1.56	
DRO >C10-C28	11400	200	10/11/2014	ND	184	91.9	200	3.04	

Surrogate: 1-Chlorooctane 248 % 47.2-157

Surrogate: 1-Chlorooctadecane 291 % 52.1-176

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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: 10/09/2014
Reported: 10/14/2014
Project Name: MICHALADA FEDERAL #3-D
Project Number: NONE GIVEN
Project Location: NONE GIVEN

Sampling Date: 10/03/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kathy Perez

Sample ID: S3-2' (H403095-08)

BTEX 8021B		mg/kg	Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	15.5	5.00	10/13/2014	ND	1.91	95.3	2.00	3.60	
Toluene*	259	5.00	10/13/2014	ND	1.81	90.4	2.00	3.47	
Ethylbenzene*	82.5	5.00	10/13/2014	ND	1.72	86.1	2.00	3.32	
Total Xylenes*	523	15.0	10/13/2014	ND	5.17	86.1	6.00	3.57	
Total BTEX	880	30.0	10/13/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 61-154

TPH 8015M		mg/kg		Analyzed By: ms				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	7920	200	10/11/2014	ND	182	90.8	200	1.56	
DRO >C10-C28	9930	200	10/11/2014	ND	184	91.9	200	3.04	

Surrogate: 1-Chlorooctane 235 % 47.2-157

Surrogate: 1-Chlorooctadecane 246 % 52.1-176

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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: 10/09/2014
Reported: 10/14/2014
Project Name: MICHALADA FEDERAL #3-D
Project Number: NONE GIVEN
Project Location: NONE GIVEN

Sampling Date: 10/03/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kathy Perez

Sample ID: S3-3' (H403095-09)

BTEX 8021B		mg/kg	Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	19.0	5.00	10/13/2014	ND	1.91	95.3	2.00	3.60	
Toluene*	287	5.00	10/13/2014	ND	1.81	90.4	2.00	3.47	
Ethylbenzene*	83.2	5.00	10/13/2014	ND	1.72	86.1	2.00	3.32	
Total Xylenes*	540	15.0	10/13/2014	ND	5.17	86.1	6.00	3.57	
Total BTEX	929	30.0	10/13/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 61-154

TPH 8015M		mg/kg		Analyzed By: ms				5-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	8380	200	10/11/2014	ND	182	90.8	200	1.56	
DRO >C10-C28	10500	200	10/11/2014	ND	184	91.9	200	3.04	

Surrogate: 1-Chlorooctane 440 % 47.2-157

Surrogate: 1-Chlorooctadecane 266 % 52.1-176

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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. 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: COG Operating LLC

Project Manager: Lupe Carrasco

Address: 2208 West Main

City: Artesia

Phone #: (575) 748-6940

Project #:

Project Name: Michalada Federal #3-D

Project Location:

Sampler Name: Lupe Carrasco

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

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX					DATE	TIME										
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE			OTHER :	ACID/BASE:	ICE / COOL	OTHER :						
H403084	S1-1'								10/3/14		X	X								
	S1-2'								10/3/14		X	X								
	S1-3'								10/3/14		X	X								
	S2-1'								10/3/14		X	X								
	S2-2'								10/3/14		X	X								
	S2-3'								10/3/14		X	X								
	S3-1'								10/3/14		X	X								
	S3-2'								10/3/14		X	X								
	S3-3'								10/3/14		X	X								

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Relinquished By:

Refiniquished By:

Delivered By: (Circle One)

Sample Returns: R Bus - Other:

Date: 10/9/14
Time: 1:30
Received By: [Signature]
Date: [Signature]
Time: [Signature]

Sample Condition

Cool Intact

Yes Yes No No

CHECKED BY:

(Initials)

Phone Result: ☐ Yes ☐ No Add'l Phone #:

Fax Result: ☐ Yes ☐ No Add'l Fax #:

REMARKS: 9ccarrasco@concho.com

atruillo@concho.com

October 21, 2014

LUPE CARRASCO

COG OPERATING

P. O. BOX 1630

ARTESIA, NM 88210

RE: MICHALADA FEDERAL #3-D

Enclosed are the results of analyses for samples received by the laboratory on 10/16/14 11:00.

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: 10/16/2014
Reported: 10/21/2014
Project Name: MICHALADA FEDERAL #3-D
Project Number: NONE GIVEN
Project Location: NONE GIVEN

Sampling Date: 10/03/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kathy Perez

Sample ID: S2-4' (H403182-01)

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	10/17/2014	ND	1.80	90.2	2.00	3.12	
Toluene*	0.150	0.050	10/17/2014	ND	1.68	83.9	2.00	3.24	
Ethylbenzene*	0.073	0.050	10/17/2014	ND	1.58	79.1	2.00	3.79	
Total Xylenes*	0.669	0.150	10/17/2014	ND	4.68	78.0	6.00	3.92	
Total BTEX	0.892	0.300	10/17/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 104 % 61-154

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	10/17/2014	ND	188	93.9	200	0.805	
DRO >C10-C28	<10.0	10.0	10/17/2014	ND	190	95.0	200	2.86	

Surrogate: 1-Chlorooctane 104 % 47.2-157

Surrogate: 1-Chlorooctadecane 116 % 52.1-176

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: 10/16/2014
Reported: 10/21/2014
Project Name: MICHALADA FEDERAL #3-D
Project Number: NONE GIVEN
Project Location: NONE GIVEN

Sampling Date: 10/03/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kathy Perez

Sample ID: S2-5' (H403182-02)

BTEX 8021B		mg/kg	Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	7.18	0.200	10/17/2014	ND	1.80	90.2	2.00	3.12	
Toluene*	112	0.200	10/17/2014	ND	1.68	83.9	2.00	3.24	
Ethylbenzene*	48.5	0.200	10/17/2014	ND	1.58	79.1	2.00	3.79	
Total Xylenes*	256	0.600	10/17/2014	ND	4.68	78.0	6.00	3.92	
Total BTEX	423	1.20	10/17/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 110 % 61-154

TPH 8015M		mg/kg	Analyzed By: ms					S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	3110	50.0	10/17/2014	ND	184	91.8	200	1.79	
DRO >C10-C28	4420	50.0	10/17/2014	ND	198	99.0	200	2.93	

Surrogate: 1-Chlorooctane 184 % 47.2-157

Surrogate: 1-Chlorooctadecane 144 % 52.1-176

Cardinal Laboratories

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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: 10/16/2014
 Reported: 10/21/2014
 Project Name: MICHALADA FEDERAL #3-D
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

 Sampling Date: 10/03/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kathy Perez

Sample ID: S2-7' (H403182-03)

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	10/17/2014	ND	1.80	90.2	2.00	3.12	
Toluene*	0.281	0.050	10/17/2014	ND	1.68	83.9	2.00	3.24	
Ethylbenzene*	0.051	0.050	10/17/2014	ND	1.58	79.1	2.00	3.79	
Total Xylenes*	0.296	0.150	10/17/2014	ND	4.68	78.0	6.00	3.92	
Total BTX	0.628	0.300	10/17/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 61-154

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	10/17/2014	ND	184	91.8	200	1.79	
DRO >C10-C28	<10.0	10.0	10/17/2014	ND	198	99.0	200	2.93	

Surrogate: 1-Chlorooctane 108 % 47.2-157

Surrogate: 1-Chlorooctadecane 121 % 52.1-176

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: 10/16/2014
Reported: 10/21/2014
Project Name: MICHALADA FEDERAL #3-D
Project Number: NONE GIVEN
Project Location: NONE GIVEN

Sampling Date: 10/03/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kathy Perez

Sample ID: S2-9' (H403182-04)

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	10/17/2014	ND	1.80	90.2	2.00	3.12	
Toluene*	0.176	0.050	10/17/2014	ND	1.68	83.9	2.00	3.24	
Ethylbenzene*	<0.050	0.050	10/17/2014	ND	1.58	79.1	2.00	3.79	
Total Xylenes*	<0.150	0.150	10/17/2014	ND	4.68	78.0	6.00	3.92	
Total BTX	<0.300	0.300	10/17/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 61-154

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	10/17/2014	ND	184	91.8	200	1.79	
DRO >C10-C28	<10.0	10.0	10/17/2014	ND	198	99.0	200	2.93	

Surrogate: 1-Chlorooctane 108 % 47.2-157

Surrogate: 1-Chlorooctadecane 119 % 52.1-176

Cardinal Laboratories

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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: 10/16/2014
Reported: 10/21/2014
Project Name: MICHALADA FEDERAL #3-D
Project Number: NONE GIVEN
Project Location: NONE GIVEN

Sampling Date: 10/03/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kathy Perez

Sample ID: S3-4' (H403182-05)

BTX 8021B		mg/kg	Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	3.21	0.200	10/17/2014	ND	1.80	90.2	2.00	3.12	
Toluene*	62.3	0.200	10/17/2014	ND	1.68	83.9	2.00	3.24	
Ethylbenzene*	26.7	0.200	10/17/2014	ND	1.58	79.1	2.00	3.79	
Total Xylenes*	152	0.600	10/17/2014	ND	4.68	78.0	6.00	3.92	
Total BTX	244	1.20	10/17/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 112 % 61-154

TPH 8015M		mg/kg	Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	497	10.0	10/17/2014	ND	184	91.8	200	1.79	
DRO >C10-C28	801	10.0	10/17/2014	ND	198	99.0	200	2.93	

Surrogate: 1-Chlorooctane 129 % 47.2-157

Surrogate: 1-Chlorooctadecane 128 % 52.1-176

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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: 10/16/2014
 Reported: 10/21/2014
 Project Name: MICHALADA FEDERAL #3-D
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

 Sampling Date: 10/03/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kathy Perez

Sample ID: S3-5' (H403182-06)

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	10/17/2014	ND	1.80	90.2	2.00	3.12	
Toluene*	0.069	0.050	10/17/2014	ND	1.68	83.9	2.00	3.24	
Ethylbenzene*	<0.050	0.050	10/17/2014	ND	1.58	79.1	2.00	3.79	
Total Xylenes*	<0.150	0.150	10/17/2014	ND	4.68	78.0	6.00	3.92	
Total BTEx	<0.300	0.300	10/17/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.9 % 61-154

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	10/17/2014	ND	184	91.8	200	1.79	
DRO >C10-C28	<10.0	10.0	10/17/2014	ND	198	99.0	200	2.93	

Surrogate: 1-Chlorooctane 101 % 47.2-157

Surrogate: 1-Chlorooctadecane 101 % 52.1-176

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Celey D. Keene, Lab Director/Quality Manager

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. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: COG Operating LLC		P.O. #:		BILL TO															
Project Manager: Lupe Carrasco		Company: COG Operating LLC																	
Address: 2208 West Main		Attn: Robert McNeill																	
City: Artesia		Address: 600 W Illinois																	
Phone #: (575) 748-6940		City: Midland																	
Fax #: (575) 748-6940		State: TX Zip: 79701																	
Project #:		State: NM Zip: 88210																	
Project Name: Michalada Federal #3-D		Phone #: (432) 221-0388																	
Project Location:		Fax #:																	
Sample Name: Lupe Carrasco		PRESERV.:		SAMPLING															
FOR LAB USE ONLY		MATRIX																	
		GROUNDWATER																	
		WASTEWATER																	
		SOIL																	
		OIL																	
		SLUDGE																	
		OTHER :																	
		ACID/BASE:																	
		ICE / COOL																	
		OTHER :																	
Lab I.D. Sample I.D.		# CONTAINERS		DATE		TIME													
14C08189		(G)RAB OR (C)OMP		10/3/14		BTX													
1		S2-4'		10/3/14		TPH													
2		S2-5'		10/3/14		Chloride													
3		S2-7'		10/3/14															
4		S2-9'		10/3/14															
5		S3-4'		10/3/14															
6		S3-5'		10/3/14															
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Relinquished By: <i>[Signature]</i>		Date: 10-16-14		Received By: <i>[Signature]</i>		Time: 11:00		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 #:					
REMARKS: <i>[Signature]</i>		REMARKS: qcarrasco@concho.com atmullilo@concho.com																	
Delivered By: (Circle One) FOR UPS R 20 Sample - UPS - Bus - Other:		Sample Condition Cool <input checked="" type="checkbox"/> Intact <input type="checkbox"/> Dry <input checked="" type="checkbox"/> Wet <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/>		CHECKED BY: <i>[Signature]</i>															

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. 432-230-0077
Facility Name: Michalada Federal #3D	Facility Type: Battery

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-35157
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LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	3	22S	25E	990'	North	2287'	East	Eddy

Latitude 32.4255574702987 Longitude -104.382694970657

NATURE OF RELEASE

Type of Release: Oil	Volume of Release: 311 bbls Oil	Volume Recovered: 100 bbls Oil
Source of Release: Tank Battery	Date and Hour of Occurrence: 9/26/2014 8:03 pm	Date and Hour of Discovery: 9/26/2014 8:03 pm
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Bratcher – NMOCD ; Jim Amos – BLM	
By Whom? Amanda Trujillo	Date and Hour: 9/29/2014 6:54 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.*


Describe Cause of Problem and Remedial Action Taken.*

This release was caused by a hole in the tank bottom. Vacuum trucks were dispatched to recover standing fluid.

Describe Area Affected and Cleanup Action Taken.*

This release occurred with the bermed area, fluids were contained within the bermed area. 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: 	<u>OIL CONSERVATION DIVISION</u>		
Printed Name: Amanda Trujillo	Approved by Environmental Specialist:		
Title: Senior Environmental Coordinator	Approval Date:	Expiration Date:	
E-mail Address: atrujillo@concho.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: October 13, 2014 Phone: 575-748-6940			

* Attach Additional Sheets If Necessary