



**Lupe Carrasco**  
Environmental Coordinator

September 12, 2014

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

**Re: RJU Unit #136**  
**30-015-37139**  
**Sec. 27, T17S-R29E**  
**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 July 8, 2014.

### **Background**

The release was due to a 3" steel line that corroded and developed a leak. The initial release consisted of approximately 10 barrels of oil and 40 barrels of produced water of which 8 barrels of oil and 15 barrels of produced water were recovered. The release occurred in the pasture impacting a long narrow path measuring 2'-15' wide by ~280' long.

### **Groundwater**

Based on the Chevron Trend Maps, the release area would be classified at a site ranking of Zero due to the depth of groundwater at greater than 150'. No well information could be found for Section 30 per NMOSE.

### **Soil Assessment and Analytical Results**

Initial soil samples were taken on July 23, 2014 with approximate sample locations depicted on the attached Site Diagram (S1, S2, S3, and S4). Due to elevated levels of TPH and BTEX, it was determined that further sampling would be required for S1 and S2 which was done on August 7, 2014. The attached Site Diagram contains a summary of the analytical results for each sample point (Analytical Results attached).

## Work Plan

COG Operating LLC proposes the following remediation plan:

- **S1:** Excavate down to 10' and backfill with caliche with the exception of the top 2' which will be backfilled with topsoil.
- **S2:** Excavate down to 16' and backfill with caliche with the exception of the top 2' which will be backfilled with topsoil
- **S3:** Excavate down to 3' and backfill with 1' of caliche and 2' of top soil.
- **S4:** No excavation other than an initial scrape.

If topsoil is readily available from adjacent locations, it will be used as backfill in place of caliche with the exception of S3 where caliche will be used to isolate further migration of chlorides. All impacted material excavated will be hauled to an approved NMOCD facility for disposal. The excavated or disturbed areas will be reseeded in the spring of 2015 with a BLM approved seed mixture.

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) 725-0787.

Sincerely,



Lupe Carrasco  
Environmental Coordinator

Enclosed

- (1) C-141 Initial (copy)
- (2) Site Diagram and Summary Table
- (3) Laboratory Analysis

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1200 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 October 10, 2003

Submit 2 Copies to appropriate  
District Office in accordance  
with Rule 116 on back  
side of form

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	RJ Unit #136	Facility Type	Flowline
Surface Owner	Federal	Mineral Owner	
		Lease No. (API#)	30-015-34975

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	27	17S	29E					Eddy

Latitude 32 48.210

Longitude 104 03.928

NATURE OF RELEASE

Type of Release	Oil and Produced water	Volume of Release	10bbls of oil 40bbls of produced water	Volume Recovered	8bbls of oil 15bbls of produced water
Source of Release	Steel flowline	Date and Hour of Occurrence	06-25-2014	Date and Hour of Discovery	06-25-2014 2:00pm
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Jeff Robertson - BLM		
By Whom?	Michelle Mullins	Date and Hour	06-25-2014 4:23pm		
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.\*


3" steel line corroded due to age, the line will be replaced with poly.

Describe Area Affected and Cleanup Action Taken.\*

Initially 10bbls of oil and 40bbls of produced water were released. We were able to recover 8bbls of oil and 15bbls of produced water with a vacuum truck. All free fluids have been recovered. Concho will have the spill site sampled to delineate any possible contamination from the release and we will present a remediation work plan to the NMOCD/BLM 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.

OIL CONSERVATION DIVISION

Signature:			
Printed Name:	Robert Grubbs Jr.	Approved by District Supervisor:	
Title:	Senior Environmental Coordinator	Approval Date:	Expiration Date:
E-mail Address:	rgrubbs@concho.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date:	07-08-2014	Phone:	432-661-6601

Attach Additional Sheets If Necessary



# RJ Unit #136 (30-015-37139)



Site Ranking: Zero

Depth to GW per SEO: 150'

S1	DRO	GRO	TPH	BTEX	CI-
2'	13700	1940	15640	92.3	4160
4'	13800	2270	16070	121	3320
6'	21800	400	22200	295	2080
8'	25200	5140	30340	450	6720
10'	12700	3040	15740	304	7600
12'	4910	582	5492	39.9	7200
14'	2930	764	3694	98.3	7680
16'	ND	ND	ND	ND	1100
18'	216	52.3	268.3	ND	304
20'	310	74.8	384.8	ND	432
S2	DRO	GRO	TPH	BTEX	CI-
2'	6190	1080	7270	13.3	5680
4'	5720	1430	7150	77.8	2360
6'	6790	1500	8290	59.3	6800
8'	1990	5700	7690	311	8560
10'	112	35.5	147.5	4.13	6400
12'	11100	5020	16120	694	6960
16'	12100	5330	17430	731	3200
18'	ND	10.2	ND	0.675	224
20'	ND	ND	ND	ND	160
S3	DRO	GRO	TPH	BTEX	CI-
2'	< 10.0	< 10.0	< 10.0	0.616	2400
4'	< 10.0	< 10.0	< 10.0	< 0.300	2200
6'	< 10.0	< 10.0	< 10.0	< 0.300	3600
8'	< 10.0	< 10.0	< 10.0	< 0.300	6080
10'	< 10.0	< 10.0	< 10.0	< 0.300	800
12'	< 10.0	< 10.0	< 10.0	< 0.300	< 16.0
S4	DRO	GRO	TPH	BTEX	CI-
2'	< 10.0	< 10.0	< 10.0	< 0.300	160
4'	< 10.0	< 10.0	< 10.0	< 0.300	112
6'	< 10.0	< 10.0	< 10.0	< 0.300	32
8'	< 10.0	< 10.0	< 10.0	< 0.300	< 16.0

Bold values exceed RRLs per NMOCD Guidelines (1993)



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

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August 12, 2014

LUPE CARRASCO

COG OPERATING

P. O. BOX 1630

ARTESIA, NM 88210

RE: RJU #136

Enclosed are the results of analyses for samples received by the laboratory on 08/08/14 10:10.

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](http://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,

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: 08/08/2014  
Reported: 08/12/2014  
Project Name: RJU #136  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/07/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S-1 12' (H402442-01)**

BTEX 8021B		mg/kg	Analyzed By: CK					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>0.701</b>	0.500	08/11/2014	ND	1.87	93.6	2.00	10.4	
<b>Toluene*</b>	<b>2.44</b>	0.500	08/11/2014	ND	1.94	97.1	2.00	9.53	
<b>Ethylbenzene*</b>	<b>21.8</b>	0.500	08/11/2014	ND	1.97	98.5	2.00	9.53	
<b>Total Xylenes*</b>	<b>14.9</b>	1.50	08/11/2014	ND	6.10	102	6.00	9.11	
<b>Total BTEX</b>	<b>39.9</b>	3.00	08/11/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 153 % 89.4-126

Chloride, SM4500Cl-B		mg/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>7200</b>	16.0	08/11/2014	ND	400	100	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS					S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10</b>	<b>582</b>	100	08/08/2014	ND	180	89.8	200	4.12	
<b>DRO &gt;C10-C28</b>	<b>4910</b>	100	08/08/2014	ND	190	94.9	200	4.04	

Surrogate: 1-Chlorooctane 124 % 65.2-140

Surrogate: 1-Chlorooctadecane 167 % 63.6-154

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: 08/08/2014  
Reported: 08/12/2014  
Project Name: RJU #136  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/07/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S-1 14' (H402442-02)**

BTEx 8021B		mg/kg		Analyzed By: CK				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>2.96</b>	0.500	08/11/2014	ND	1.87	93.6	2.00	10.4	
<b>Toluene*</b>	<b>15.7</b>	0.500	08/11/2014	ND	1.94	97.1	2.00	9.53	
<b>Ethylbenzene*</b>	<b>49.0</b>	0.500	08/11/2014	ND	1.97	98.5	2.00	9.53	
<b>Total Xylenes*</b>	<b>30.6</b>	1.50	08/11/2014	ND	6.10	102	6.00	9.11	
<b>Total BTEx</b>	<b>98.3</b>	3.00	08/11/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 159 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>7680</b>	16.0	08/11/2014	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10</b>	<b>764</b>	100	08/09/2014	ND	180	89.8	200	4.12	
<b>DRO &gt;C10-C28</b>	<b>2930</b>	100	08/09/2014	ND	190	94.9	200	4.04	

Surrogate: 1-Chlorooctane 113 % 65.2-140

Surrogate: 1-Chlorooctadecane 144 % 63.6-154

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: 08/08/2014  
Reported: 08/12/2014  
Project Name: RJU #136  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/07/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S-1 16' (H402442-03)**

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/11/2014	ND	1.87	93.6	2.00	10.4	
Toluene*	<b>0.065</b>	0.050	08/11/2014	ND	1.94	97.1	2.00	9.53	
Ethylbenzene*	<b>0.103</b>	0.050	08/11/2014	ND	1.97	98.5	2.00	9.53	
Total Xylenes*	<0.150	0.150	08/11/2014	ND	6.10	102	6.00	9.11	
Total BTEX	<0.300	0.300	08/11/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<b>1100</b>	16.0	08/11/2014	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/09/2014	ND	180	89.8	200	4.12	
DRO >C10-C28	<10.0	10.0	08/09/2014	ND	190	94.9	200	4.04	

Surrogate: 1-Chlorooctane 87.9 % 65.2-140

Surrogate: 1-Chlorooctadecane 98.6 % 63.6-154

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\*=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: 08/08/2014  
Reported: 08/12/2014  
Project Name: RJU #136  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/07/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S-1 18' (H402442-04)**

BTEX 8021B		mg/kg	Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/11/2014	ND	1.87	93.6	2.00	10.4	
Toluene*	<0.050	0.050	08/11/2014	ND	1.94	97.1	2.00	9.53	
Ethylbenzene*	<0.050	0.050	08/11/2014	ND	1.97	98.5	2.00	9.53	
Total Xylenes*	<0.150	0.150	08/11/2014	ND	6.10	102	6.00	9.11	
Total BTEX	<0.300	0.300	08/11/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 89.4-126

Chloride, SM4500Cl-B		mg/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	08/11/2014	ND	400	100	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	52.3	50.0	08/09/2014	ND	180	89.8	200	4.12	
DRO >C10-C28	216	50.0	08/09/2014	ND	190	94.9	200	4.04	

Surrogate: 1-Chlorooctane 89.6 % 65.2-140

Surrogate: 1-Chlorooctadecane 112 % 63.6-154

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\*=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: 08/08/2014  
Reported: 08/12/2014  
Project Name: RJU #136  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/07/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S-1 20' (H402442-05)**
**BTEX 8021B**

mg/kg

Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/11/2014	ND	1.87	93.6	2.00	10.4	
Toluene*	<0.050	0.050	08/11/2014	ND	1.94	97.1	2.00	9.53	
Ethylbenzene*	<b>0.167</b>	0.050	08/11/2014	ND	1.97	98.5	2.00	9.53	
Total Xylenes*	<0.150	0.150	08/11/2014	ND	6.10	102	6.00	9.11	
Total BTEX	<0.300	0.300	08/11/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 111 % 89.4-126

**Chloride, SM4500Cl-B**

mg/kg

Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<b>432</b>	16.0	08/11/2014	ND	400	100	400	0.00	

**TPH 8015M**

mg/kg

Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<b>74.8</b>	50.0	08/09/2014	ND	180	89.8	200	4.12	
DRO >C10-C28	<b>310</b>	50.0	08/09/2014	ND	190	94.9	200	4.04	

Surrogate: 1-Chlorooctane 91.7 % 65.2-140

Surrogate: 1-Chlorooctadecane 117 % 63.6-154

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: 08/08/2014  
Reported: 08/12/2014  
Project Name: RJU #136  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/07/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S-2 16' (H402442-06)**

BTX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>37.9</b>	5.00	08/11/2014	ND	1.87	93.6	2.00	10.4	
<b>Toluene*</b>	<b>232</b>	5.00	08/11/2014	ND	1.94	97.1	2.00	9.53	
<b>Ethylbenzene*</b>	<b>254</b>	5.00	08/11/2014	ND	1.97	98.5	2.00	9.53	
<b>Total Xylenes*</b>	<b>207</b>	15.0	08/11/2014	ND	6.10	102	6.00	9.11	
<b>Total BTX</b>	<b>731</b>	30.0	08/11/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 118 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>3200</b>	16.0	08/11/2014	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>GRO C6-C10</b>	<b>5330</b>	200	08/09/2014	ND	180	89.8	200	4.12		
<b>DRO &gt;C10-C28</b>	<b>12100</b>	200	08/09/2014	ND	190	94.9	200	4.04		

Surrogate: 1-Chlorooctane 205 % 65.2-140

Surrogate: 1-Chlorooctadecane 298 % 63.6-154

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: 08/08/2014  
Reported: 08/12/2014  
Project Name: RJU #136  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/07/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S-2 18' (H402442-07)**

BTX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>0.158</b>	0.050	08/11/2014	ND	1.87	93.6	2.00	10.4	
<b>Toluene*</b>	<b>0.349</b>	0.050	08/11/2014	ND	1.94	97.1	2.00	9.53	
<b>Ethylbenzene*</b>	<b>0.168</b>	0.050	08/11/2014	ND	1.97	98.5	2.00	9.53	
<b>Total Xylenes*</b>	<b>&lt;0.150</b>	0.150	08/11/2014	ND	6.10	102	6.00	9.11	
<b>Total BTX</b>	<b>0.675</b>	0.300	08/11/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>224</b>	16.0	08/11/2014	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10</b>	<b>10.2</b>	10.0	08/09/2014	ND	180	89.8	200	4.12	
<b>DRO &gt;C10-C28</b>	<b>&lt;10.0</b>	10.0	08/09/2014	ND	190	94.9	200	4.04	

Surrogate: 1-Chlorooctane 99.4 % 65.2-140

Surrogate: 1-Chlorooctadecane 108 % 63.6-154

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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: 08/08/2014  
Reported: 08/12/2014  
Project Name: RJU #136  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/07/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S-2 20' (H402442-08)**
**BTEX 8021B**

mg/kg

Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/11/2014	ND	1.87	93.6	2.00	10.4	
Toluene*	<0.050	0.050	08/11/2014	ND	1.94	97.1	2.00	9.53	
Ethylbenzene*	<0.050	0.050	08/11/2014	ND	1.97	98.5	2.00	9.53	
Total Xylenes*	<0.150	0.150	08/11/2014	ND	6.10	102	6.00	9.11	
Total BTEX	<0.300	0.300	08/11/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 89.4-126

**Chloride, SM4500Cl-B**

mg/kg

Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	08/11/2014	ND	400	100	400	0.00	

**TPH 8015M**

mg/kg

Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/09/2014	ND	180	89.8	200	4.12	
DRO >C10-C28	<10.0	10.0	08/09/2014	ND	190	94.9	200	4.04	

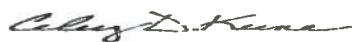
Surrogate: 1-Chlorooctane 90.3 % 65.2-140

Surrogate: 1-Chlorooctadecane 104 % 63.6-154

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\*=Accredited Analyte

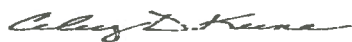
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Celey D. Keene, Lab Director/Quality Manager

**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.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report



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Celey D. Keene, Lab Director/Quality Manager

