



## **COG – LOVING 1 STATE #2**

### **REMEDIATION PLAN**



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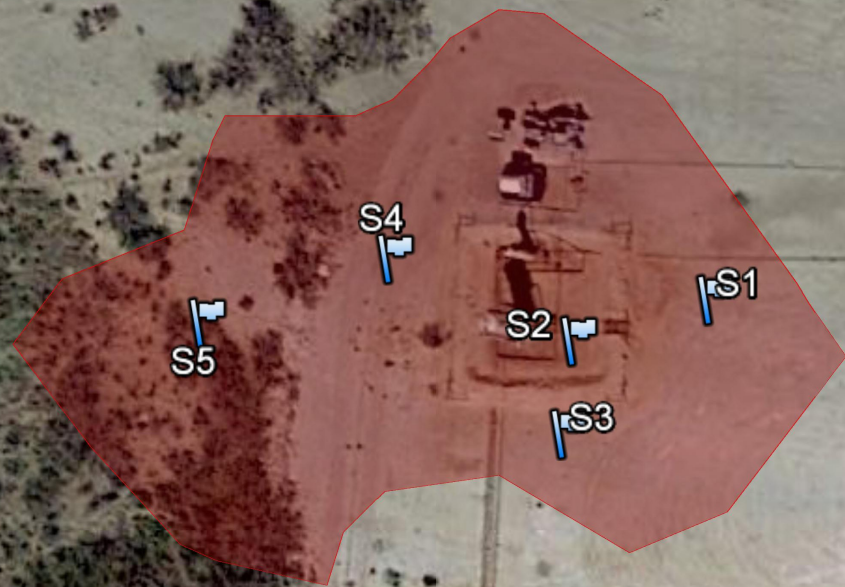
COG will excavate the spill area as depicted on the following site diagram. The spill area near sample point SP1 will be excavated to a depth of 6 inches to 1 foot. In the area of SP2, the excavation will be 1 foot then an impermeable liner will be placed into the excavation. In addition, during excavation, samples will be taken and field screened for chloride in order to delineate to a chloride range of 400 ppm. In the areas of SP3 and SP-4, 6 inches will be removed and in the area of SP-5, 1 foot will be excavated. The entire site will be backfilled with clean soil.

All excavated materials will be disposed of at an NMOCD-approved disposal facility.

# Loving 1 State #2

## Legend

-  Release Area
-  Sample Points





# Groundwater Plot

## Concho Loving 1 State #2

County  
Eddy

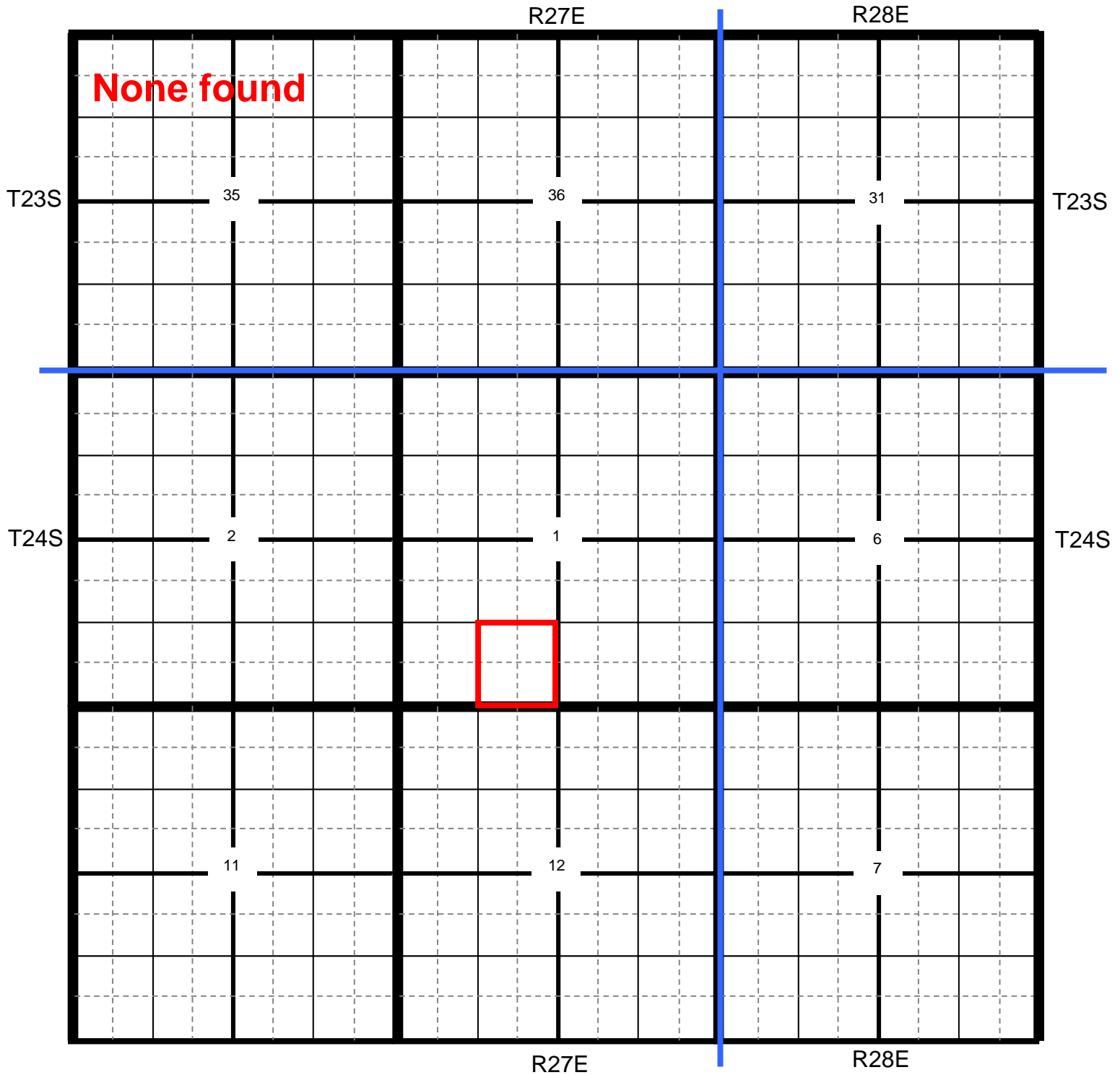
Unit Letter  
N

Section  
1

Township  
24S

Range  
27E

Trend Map <50'



📍 Location

● OCD

● USGS

● SEO

● All Databases



## Concho Loving 1 State #002

**County** Eddy     
 **Unit Letter** N     
 **Section** 1     
 **Township** 24S     
 **Range** 27E

Trend Map <50'

1

2

NW/NW <b>None found</b>	NE/NW	NW/NE	NE/NE
Unit Letter D	Unit Letter C	Unit Letter B	Unit Letter A
SW/NW	SE/NW	SW/NE	SE/NE
Unit Letter E	Unit Letter F	Unit Letter G	Unit Letter H
NW/SW	NE/SW	NW/SE	NE/SE
Unit Letter L	Unit Letter K	Unit Letter J	Unit Letter I
SW/SW	SE/SW	SW/SE	SE/SE
Unit Letter M	Unit Letter N	Unit Letter O	Unit Letter P

3

4

**Laboratory Analytical Results Summary  
Loving 1 State #2**

		Sample	SP1 @ 1'	SP1 @ 2'	SP1 @ 3'	SP1 @ 4'	SP1 @ 6'	SP1 @ 8'	SP1 @ 10'	SP1 @ 12'
Analyte	Method	Date	5/23/16	5/23/16	5/23/16	5/23/16	5/23/16	5/23/16	5/23/16	5/23/16
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050	n/a	n/a	n/a	n/a
Toluene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050	n/a	n/a	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050	n/a	n/a	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	<0.150	<0.150	<0.150	n/a	n/a	n/a	n/a
Total BTEX	BTEX 8021B		<0.300	<0.300	<0.300	<0.300	n/a	n/a	n/a	n/a
Chloride	SM4500Cl-B		576	<16.0	16	32	32	144	160	368
GRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0	n/a	n/a	n/a	n/a
DRO	TPH 8015M		21.9	<10.0	<10.0	<10.0	n/a	n/a	n/a	n/a

		Sample	SP5 @ Surface	SP5 @ 1'
Analyte	Method	Date	5/23/16	5/23/16
			mg/Kg	mg/Kg
Benzene	BTEX 8021B		<2.00	<0.050
Toluene	BTEX 8021B		25.8	<0.050
Ethylbenzene	BTEX 8021B		16	0.062
Total Xylenes	BTEX 8021B		33	0.638
Total BTEX	BTEX 8021B		175	0.701
Chloride	SM4500Cl-B		1150	80
GRO	TPH 8015M		3670	17.5
DRO	TPH 8015M		30000	169

		Sample	SP2 @ Surface	SP2 @ 1'	SP2 @ 2'	SP2 @ 3'	SP2 @ 4'
Analyte	Method	Date	5/23/16	5/23/16	5/23/16	5/23/16	5/23/16
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050	<0.050
Toluene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050	<0.050
Ethylbenzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050	<0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150	<0.150	<0.150	<0.150
Total BTEX	BTEX 8021B		<0.300	<0.300	<0.300	<0.300	<0.300
Chloride	SM4500Cl-B		304	880	1280	1060	912
GRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0	<10.0
DRO	TPH 8015M		15.2	<10.0	<10.0	<10.0	<10.0

		Sample	SP3 @ Surface	SP3 @ 1'	SP3 @ 2'	SP3 @ 3'	SP3 @ 4'	SP3 @ 6'
Analyte	Method	Date	5/23/16	5/23/16	5/23/16	5/23/16	5/23/16	5/23/16
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050	<0.050	n/a
Toluene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050	<0.050	n/a
Ethylbenzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050	<0.050	n/a
Total Xylenes	BTEX 8021B		0.202	<0.150	<0.150	<0.150	<0.150	n/a
Total BTEX	BTEX 8021B		<0.300	<0.300	<0.300	<0.300	<0.300	n/a
Chloride	SM4500Cl-B		416	<16.0	<16.0	<16.0	32	48
GRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0	<10.0	n/a
DRO	TPH 8015M		183	<10.0	<10.0	<10.0	<10.0	n/a

		Sample	SP4 @ Surface	SP4 @ 1'	SP4 @ 2'	SP4 @ 3'	SP4 @ 4'
Analyte	Method	Date	5/23/16	5/23/16	5/23/16	5/23/16	5/23/16
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050	<0.050
Toluene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050	<0.050
Ethylbenzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050	<0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150	<0.150	<0.150	<0.150
Total BTEX	BTEX 8021B		<0.300	<0.300	<0.300	<0.300	<0.300
Chloride	SM4500Cl-B		112	480	112	240	192
GRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0	<10.0
DRO	TPH 8015M		15.5	<10.0	<10.0	<10.0	<10.0



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

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June 02, 2016

LUPE CARRASCO

COG OPERATING

P. O. BOX 1630

ARTESIA, NM 88210

RE: LOVING 1 STATE #2

Enclosed are the results of analyses for samples received by the laboratory on 05/25/16 14:05.

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 [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://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: 05/25/2016  
Reported: 06/02/2016  
Project Name: LOVING 1 STATE #2  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 05/23/2016  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Celey D. Keene

**Sample ID: S1 - 1' (H601149-01)**

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	05/31/2016	ND	1.81	90.5	2.00	2.15	
Toluene*	<0.050	0.050	05/31/2016	ND	1.87	93.7	2.00	1.33	
Ethylbenzene*	<0.050	0.050	05/31/2016	ND	1.73	86.5	2.00	1.12	
Total Xylenes*	<0.150	0.150	05/31/2016	ND	5.42	90.4	6.00	0.639	
Total BTEX	<0.300	0.300	05/31/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	576	16.0	06/01/2016	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	05/27/2016	ND	184	92.0	200	4.56	
DRO >C10-C28	21.9	10.0	05/27/2016	ND	196	97.9	200	4.36	

Surrogate: 1-Chlorooctane 84.8 % 35-147

Surrogate: 1-Chlorooctadecane 108 % 28-171

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: 05/25/2016  
Reported: 06/02/2016  
Project Name: LOVING 1 STATE #2  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 05/23/2016  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Celey D. Keene

**Sample ID: S1 - 2' (H601149-02)**

BTX 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	05/31/2016	ND	1.81	90.5	2.00	2.15	
Toluene*	<0.050	0.050	05/31/2016	ND	1.87	93.7	2.00	1.33	
Ethylbenzene*	<0.050	0.050	05/31/2016	ND	1.73	86.5	2.00	1.12	
Total Xylenes*	<0.150	0.150	05/31/2016	ND	5.42	90.4	6.00	0.639	
Total BTX	<0.300	0.300	05/31/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/01/2016	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	05/27/2016	ND	184	92.0	200	4.56	
DRO >C10-C28	<10.0	10.0	05/27/2016	ND	196	97.9	200	4.36	

Surrogate: 1-Chlorooctane 78.3 % 35-147

Surrogate: 1-Chlorooctadecane 103 % 28-171

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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: 05/25/2016  
Reported: 06/02/2016  
Project Name: LOVING 1 STATE #2  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 05/23/2016  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Celey D. Keene

**Sample ID: S1 - 3' (H601149-03)**

BTX 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	05/31/2016	ND	1.81	90.5	2.00	2.15	
Toluene*	<0.050	0.050	05/31/2016	ND	1.87	93.7	2.00	1.33	
Ethylbenzene*	<0.050	0.050	05/31/2016	ND	1.73	86.5	2.00	1.12	
Total Xylenes*	<0.150	0.150	05/31/2016	ND	5.42	90.4	6.00	0.639	
Total BTX	<0.300	0.300	05/31/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	06/01/2016	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	05/27/2016	ND	184	92.0	200	4.56	
DRO >C10-C28	<10.0	10.0	05/27/2016	ND	196	97.9	200	4.36	

Surrogate: 1-Chlorooctane 92.7 % 35-147

Surrogate: 1-Chlorooctadecane 122 % 28-171

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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: 05/25/2016  
Reported: 06/02/2016  
Project Name: LOVING 1 STATE #2  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 05/23/2016  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Celey D. Keene

**Sample ID: S1 - 4' (H601149-04)**

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	05/31/2016	ND	1.81	90.5	2.00	2.15	
Toluene*	<0.050	0.050	05/31/2016	ND	1.87	93.7	2.00	1.33	
Ethylbenzene*	<0.050	0.050	05/31/2016	ND	1.73	86.5	2.00	1.12	
Total Xylenes*	<0.150	0.150	05/31/2016	ND	5.42	90.4	6.00	0.639	
Total BTEx	<0.300	0.300	05/31/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.9 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	06/01/2016	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	05/27/2016	ND	184	92.0	200	4.56	
DRO >C10-C28	<10.0	10.0	05/27/2016	ND	196	97.9	200	4.36	

Surrogate: 1-Chlorooctane 92.0 % 35-147

Surrogate: 1-Chlorooctadecane 120 % 28-171

**Sample ID: S1 - 6' (H601149-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	06/01/2016	ND	400	100	400	3.92	

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received: 05/25/2016  
Reported: 06/02/2016  
Project Name: LOVING 1 STATE #2  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 05/23/2016  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Celey D. Keene

**Sample ID: S1 - 8' (H601149-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	06/01/2016	ND	400	100	400	3.92	

**Sample ID: S1 - 10' (H601149-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	06/01/2016	ND	400	100	400	3.92	

**Sample ID: S1 - 12' (H601149-08)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	368	16.0	06/01/2016	ND	400	100	400	3.92	

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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: 05/25/2016  
Reported: 06/02/2016  
Project Name: LOVING 1 STATE #2  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 05/23/2016  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Celey D. Keene

**Sample ID: S2 - SURFACE (H601149-09)**

BTX 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	05/31/2016	ND	1.81	90.5	2.00	2.15	
Toluene*	<0.050	0.050	05/31/2016	ND	1.87	93.7	2.00	1.33	
Ethylbenzene*	<0.050	0.050	05/31/2016	ND	1.73	86.5	2.00	1.12	
Total Xylenes*	<0.150	0.150	05/31/2016	ND	5.42	90.4	6.00	0.639	
Total BTX	<0.300	0.300	05/31/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.6 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	06/01/2016	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	05/27/2016	ND	184	92.0	200	4.56	
DRO >C10-C28	15.2	10.0	05/27/2016	ND	196	97.9	200	4.36	

Surrogate: 1-Chlorooctane 85.5 % 35-147

Surrogate: 1-Chlorooctadecane 116 % 28-171

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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: 05/25/2016  
Reported: 06/02/2016  
Project Name: LOVING 1 STATE #2  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 05/23/2016  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Celey D. Keene

**Sample ID: S2 - 1' (H601149-10)**

BTX 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	05/31/2016	ND	1.81	90.5	2.00	2.15	
Toluene*	<0.050	0.050	05/31/2016	ND	1.87	93.7	2.00	1.33	
Ethylbenzene*	<0.050	0.050	05/31/2016	ND	1.73	86.5	2.00	1.12	
Total Xylenes*	<0.150	0.150	05/31/2016	ND	5.42	90.4	6.00	0.639	
Total BTX	<0.300	0.300	05/31/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	880	16.0	06/01/2016	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	05/28/2016	ND	184	92.0	200	4.56	
DRO >C10-C28	<10.0	10.0	05/28/2016	ND	196	97.9	200	4.36	

Surrogate: 1-Chlorooctane 86.4 % 35-147

Surrogate: 1-Chlorooctadecane 106 % 28-171

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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: 05/25/2016  
Reported: 06/02/2016  
Project Name: LOVING 1 STATE #2  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 05/23/2016  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Celey D. Keene

**Sample ID: S2 - 2' (H601149-11)**

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	05/31/2016	ND	1.81	90.5	2.00	2.15	
Toluene*	<0.050	0.050	05/31/2016	ND	1.87	93.7	2.00	1.33	
Ethylbenzene*	<0.050	0.050	05/31/2016	ND	1.73	86.5	2.00	1.12	
Total Xylenes*	<0.150	0.150	05/31/2016	ND	5.42	90.4	6.00	0.639	
Total BTEx	<0.300	0.300	05/31/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1280	16.0	06/01/2016	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	05/28/2016	ND	184	92.0	200	4.56	
DRO >C10-C28	<10.0	10.0	05/28/2016	ND	196	97.9	200	4.36	

Surrogate: 1-Chlorooctane 73.3 % 35-147

Surrogate: 1-Chlorooctadecane 103 % 28-171

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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: 05/25/2016  
Reported: 06/02/2016  
Project Name: LOVING 1 STATE #2  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 05/23/2016  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Celey D. Keene

**Sample ID: S2 - 3' (H601149-12)**

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	05/31/2016	ND	1.81	90.5	2.00	2.15	
Toluene*	<0.050	0.050	05/31/2016	ND	1.87	93.7	2.00	1.33	
Ethylbenzene*	<0.050	0.050	05/31/2016	ND	1.73	86.5	2.00	1.12	
Total Xylenes*	<0.150	0.150	05/31/2016	ND	5.42	90.4	6.00	0.639	
Total BTEx	<0.300	0.300	05/31/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.5 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1060	16.0	06/01/2016	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	05/28/2016	ND	184	92.0	200	4.56	
DRO >C10-C28	<10.0	10.0	05/28/2016	ND	196	97.9	200	4.36	

Surrogate: 1-Chlorooctane 76.3 % 35-147

Surrogate: 1-Chlorooctadecane 98.4 % 28-171

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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: 05/25/2016  
Reported: 06/02/2016  
Project Name: LOVING 1 STATE #2  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 05/23/2016  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Celey D. Keene

**Sample ID: S2 - 4' (H601149-13)**

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	05/31/2016	ND	1.81	90.5	2.00	2.15	
Toluene*	<0.050	0.050	05/31/2016	ND	1.87	93.7	2.00	1.33	
Ethylbenzene*	<0.050	0.050	05/31/2016	ND	1.73	86.5	2.00	1.12	
Total Xylenes*	<0.150	0.150	05/31/2016	ND	5.42	90.4	6.00	0.639	
Total BTEx	<0.300	0.300	05/31/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	912	16.0	06/01/2016	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	05/28/2016	ND	184	92.0	200	4.56	
DRO >C10-C28	<10.0	10.0	05/28/2016	ND	196	97.9	200	4.36	

Surrogate: 1-Chlorooctane 80.3 % 35-147

Surrogate: 1-Chlorooctadecane 107 % 28-171

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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: 05/25/2016  
Reported: 06/02/2016  
Project Name: LOVING 1 STATE #2  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 05/23/2016  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Celey D. Keene

**Sample ID: S3 - SURFACE (H601149-14)**

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	05/31/2016	ND	1.81	90.5	2.00	2.15	
Toluene*	<0.050	0.050	05/31/2016	ND	1.87	93.7	2.00	1.33	
Ethylbenzene*	<0.050	0.050	05/31/2016	ND	1.73	86.5	2.00	1.12	
<b>Total Xylenes*</b>	<b>0.202</b>	0.150	05/31/2016	ND	5.42	90.4	6.00	0.639	
Total BTEx	<0.300	0.300	05/31/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 116 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	416	16.0	06/01/2016	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	05/28/2016	ND	184	92.0	200	4.56	
DRO >C10-C28	183	10.0	05/28/2016	ND	196	97.9	200	4.36	

Surrogate: 1-Chlorooctane 80.5 % 35-147

Surrogate: 1-Chlorooctadecane 108 % 28-171

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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: 05/25/2016  
Reported: 06/02/2016  
Project Name: LOVING 1 STATE #2  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 05/23/2016  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Celey D. Keene

**Sample ID: S3 - 1' (H601149-15)**

BTX 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	05/31/2016	ND	1.81	90.5	2.00	2.15	
Toluene*	<0.050	0.050	05/31/2016	ND	1.87	93.7	2.00	1.33	
Ethylbenzene*	<0.050	0.050	05/31/2016	ND	1.73	86.5	2.00	1.12	
Total Xylenes*	<0.150	0.150	05/31/2016	ND	5.42	90.4	6.00	0.639	
Total BTX	<0.300	0.300	05/31/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/01/2016	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	05/28/2016	ND	184	92.0	200	4.56	
DRO >C10-C28	<10.0	10.0	05/28/2016	ND	196	97.9	200	4.36	

Surrogate: 1-Chlorooctane 73.7 % 35-147

Surrogate: 1-Chlorooctadecane 103 % 28-171

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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: 05/25/2016  
Reported: 06/02/2016  
Project Name: LOVING 1 STATE #2  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 05/23/2016  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Celey D. Keene

**Sample ID: S3 - 2' (H601149-16)**

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	05/31/2016	ND	1.81	90.5	2.00	2.15	
Toluene*	<0.050	0.050	05/31/2016	ND	1.87	93.7	2.00	1.33	
Ethylbenzene*	<0.050	0.050	05/31/2016	ND	1.73	86.5	2.00	1.12	
Total Xylenes*	<0.150	0.150	05/31/2016	ND	5.42	90.4	6.00	0.639	
Total BTEx	<0.300	0.300	05/31/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/01/2016	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	05/28/2016	ND	184	92.0	200	4.56	
DRO >C10-C28	<10.0	10.0	05/28/2016	ND	196	97.9	200	4.36	

Surrogate: 1-Chlorooctane 79.6 % 35-147

Surrogate: 1-Chlorooctadecane 113 % 28-171

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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: 05/25/2016  
Reported: 06/02/2016  
Project Name: LOVING 1 STATE #2  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 05/23/2016  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Celey D. Keene

**Sample ID: S3 - 3' (H601149-17)**

BTX 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	05/31/2016	ND	1.81	90.5	2.00	2.15	
Toluene*	<0.050	0.050	05/31/2016	ND	1.87	93.7	2.00	1.33	
Ethylbenzene*	<0.050	0.050	05/31/2016	ND	1.73	86.5	2.00	1.12	
Total Xylenes*	<0.150	0.150	05/31/2016	ND	5.42	90.4	6.00	0.639	
Total BTX	<0.300	0.300	05/31/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/01/2016	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	05/28/2016	ND	184	92.0	200	4.56	
DRO >C10-C28	<10.0	10.0	05/28/2016	ND	196	97.9	200	4.36	

Surrogate: 1-Chlorooctane 82.4 % 35-147

Surrogate: 1-Chlorooctadecane 108 % 28-171

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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: 05/25/2016  
Reported: 06/02/2016  
Project Name: LOVING 1 STATE #2  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 05/23/2016  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Celey D. Keene

**Sample ID: S3 - 4' (H601149-18)**

BTX 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	05/31/2016	ND	1.81	90.5	2.00	2.15	
Toluene*	<0.050	0.050	05/31/2016	ND	1.87	93.7	2.00	1.33	
Ethylbenzene*	<0.050	0.050	05/31/2016	ND	1.73	86.5	2.00	1.12	
Total Xylenes*	<0.150	0.150	05/31/2016	ND	5.42	90.4	6.00	0.639	
Total BTX	<0.300	0.300	05/31/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	06/01/2016	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	05/28/2016	ND	184	92.0	200	4.56	
DRO >C10-C28	<10.0	10.0	05/28/2016	ND	196	97.9	200	4.36	

Surrogate: 1-Chlorooctane 90.7 % 35-147

Surrogate: 1-Chlorooctadecane 119 % 28-171

**Sample ID: S3 - 6' (H601149-19)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	06/01/2016	ND	416	104	400	0.00	

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: 05/25/2016  
 Reported: 06/02/2016  
 Project Name: LOVING 1 STATE #2  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 05/23/2016  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Celey D. Keene

**Sample ID: S4 - SURFACE (H601149-20)**

BTX 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	05/31/2016	ND	1.81	90.5	2.00	2.15	
Toluene*	<0.050	0.050	05/31/2016	ND	1.87	93.7	2.00	1.33	
Ethylbenzene*	<0.050	0.050	05/31/2016	ND	1.73	86.5	2.00	1.12	
Total Xylenes*	<0.150	0.150	05/31/2016	ND	5.42	90.4	6.00	0.639	
Total BTX	<0.300	0.300	05/31/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	06/01/2016	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	05/28/2016	ND	184	92.0	200	4.56	
DRO >C10-C28	15.5	10.0	05/28/2016	ND	196	97.9	200	4.36	

Surrogate: 1-Chlorooctane 84.7 % 35-147

Surrogate: 1-Chlorooctadecane 110 % 28-171

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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: 05/25/2016  
Reported: 06/02/2016  
Project Name: LOVING 1 STATE #2  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 05/23/2016  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Celey D. Keene

**Sample ID: S4 - 1' (H601149-21)**

BTX 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	05/31/2016	ND	1.81	90.5	2.00	2.15	
Toluene*	<0.050	0.050	05/31/2016	ND	1.87	93.7	2.00	1.33	
Ethylbenzene*	<0.050	0.050	05/31/2016	ND	1.73	86.5	2.00	1.12	
Total Xylenes*	<0.150	0.150	05/31/2016	ND	5.42	90.4	6.00	0.639	
Total BTX	<0.300	0.300	05/31/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	480	16.0	06/01/2016	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	05/28/2016	ND	184	92.0	200	4.56	
DRO >C10-C28	<10.0	10.0	05/28/2016	ND	196	97.9	200	4.36	

Surrogate: 1-Chlorooctane 84.4 % 35-147

Surrogate: 1-Chlorooctadecane 113 % 28-171

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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: 05/25/2016  
Reported: 06/02/2016  
Project Name: LOVING 1 STATE #2  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 05/23/2016  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Celey D. Keene

**Sample ID: S4 - 2' (H601149-22)**

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	06/01/2016	ND	1.81	90.5	2.00	3.57	
Toluene*	<0.050	0.050	06/01/2016	ND	1.88	94.2	2.00	2.83	
Ethylbenzene*	<0.050	0.050	06/01/2016	ND	1.74	87.0	2.00	3.93	
Total Xylenes*	<0.150	0.150	06/01/2016	ND	5.41	90.2	6.00	3.99	
Total BTEx	<0.300	0.300	06/01/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	06/01/2016	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	05/28/2016	ND	184	92.0	200	4.56	
DRO >C10-C28	<10.0	10.0	05/28/2016	ND	196	97.9	200	4.36	

Surrogate: 1-Chlorooctane 77.7 % 35-147

Surrogate: 1-Chlorooctadecane 103 % 28-171

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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: 05/25/2016  
Reported: 06/02/2016  
Project Name: LOVING 1 STATE #2  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 05/23/2016  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Celey D. Keene

**Sample ID: S4 - 3' (H601149-23)**

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	06/01/2016	ND	1.81	90.5	2.00	3.57	
Toluene*	<0.050	0.050	06/01/2016	ND	1.88	94.2	2.00	2.83	
Ethylbenzene*	<0.050	0.050	06/01/2016	ND	1.74	87.0	2.00	3.93	
Total Xylenes*	<0.150	0.150	06/01/2016	ND	5.41	90.2	6.00	3.99	
Total BTEx	<0.300	0.300	06/01/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	06/01/2016	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	05/28/2016	ND	184	92.0	200	4.56	
DRO >C10-C28	<10.0	10.0	05/28/2016	ND	196	97.9	200	4.36	

Surrogate: 1-Chlorooctane 82.1 % 35-147

Surrogate: 1-Chlorooctadecane 111 % 28-171

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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: 05/25/2016  
Reported: 06/02/2016  
Project Name: LOVING 1 STATE #2  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 05/23/2016  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Celey D. Keene

**Sample ID: S4 - 4' (H601149-24)**

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	06/01/2016	ND	1.81	90.5	2.00	3.57	
Toluene*	<0.050	0.050	06/01/2016	ND	1.88	94.2	2.00	2.83	
Ethylbenzene*	<0.050	0.050	06/01/2016	ND	1.74	87.0	2.00	3.93	
Total Xylenes*	<0.150	0.150	06/01/2016	ND	5.41	90.2	6.00	3.99	
Total BTEx	<0.300	0.300	06/01/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	06/01/2016	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	05/28/2016	ND	184	92.0	200	4.56	
DRO >C10-C28	<10.0	10.0	05/28/2016	ND	196	97.9	200	4.36	

Surrogate: 1-Chlorooctane 76.4 % 35-147

Surrogate: 1-Chlorooctadecane 101 % 28-171

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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: 05/25/2016  
Reported: 06/02/2016  
Project Name: LOVING 1 STATE #2  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 05/23/2016  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Celey D. Keene

**Sample ID: S5 - SURFACE (H601149-25)**

BTX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<2.00	2.00	06/01/2016	ND	1.81	90.5	2.00	3.57	
Toluene*	25.8	2.00	06/01/2016	ND	1.88	94.2	2.00	2.83	
Ethylbenzene*	16.0	2.00	06/01/2016	ND	1.74	87.0	2.00	3.93	
Total Xylenes*	133	6.00	06/01/2016	ND	5.41	90.2	6.00	3.99	
Total BTX	175	12.0	06/01/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1150	16.0	06/01/2016	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: CK					
				S-06					

Surrogate: 1-Chlorooctane 240 % 35-147

Surrogate: 1-Chlorooctadecane 747 % 28-171

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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: 05/25/2016  
Reported: 06/02/2016  
Project Name: LOVING 1 STATE #2  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 05/23/2016  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Celey D. Keene

**Sample ID: S5 - 1' (H601149-26)**

BTX 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	06/01/2016	ND	1.81	90.5	2.00	3.57	
Toluene*	<0.050	0.050	06/01/2016	ND	1.88	94.2	2.00	2.83	
Ethylbenzene*	0.062	0.050	06/01/2016	ND	1.74	87.0	2.00	3.93	
Total Xylenes*	0.638	0.150	06/01/2016	ND	5.41	90.2	6.00	3.99	
Total BTX	0.701	0.300	06/01/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	06/01/2016	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	17.5	10.0	05/31/2016	ND	191	95.7	200	1.97	
DRO >C10-C28	169	10.0	05/31/2016	ND	210	105	200	2.11	

Surrogate: 1-Chlorooctane 66.5 % 35-147

Surrogate: 1-Chlorooctadecane 82.5 % 28-171

Cardinal Laboratories

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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

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Celey D. Keene, Lab Director/Quality Manager



## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 25 of 29











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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

408 5

Company Name: COG Operating LLC

Project Manager: Lupe Carrasco

Address: 2208 West Main

City: Artesia

Phone #: (575) 748-6940

Project #:

Project Name: Loving 1 State #2

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

FOR LAB USE ONLY		MATRIX		PRESERV.		SAMPLING		ANALYSIS REQUEST																																					
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :		ACID/BASE:		ICE / COOL		OTHER :		DATE		TIME		BTX		TPH		Chloride											
H201149		-20		S4-SURFACE		X																				5/23/16		X		X		X													
-21		S4-1'		X																						5/23/16		X		X		X													
-22		S4-2'		X																						5/23/16		X		X		X													
-23		S4-3'		X																						5/23/16		X		X		X													
-24		S4-4'		X																						5/23/16		X		X		X													

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Relinquished By:

Date: 5/23/16

Time: 2:05

Received By: [Signature]

Date: 5/23/16

Time: 3:05

Relinquished By: [Signature]

Date: 5/23/16

Time: 3:05

Received By: [Signature]

Delivered By: (Circle One)

Sampler - UPS - Bus - Other: [Signature]

FORM-006 R 2.0

Sample Condition

Cool Intact

Yes Yes No No

CHECKED BY:

(Initials) [Signature]

5/23/16

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

Fax Result: ☐ Yes ☐ No Add'l Fax #:

REMARKS: gcarrasco@concho.com

atrullillo@concho.com



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: LOVING 1 STATE #002	Facility Type: Battery

Surface Owner:	Mineral Owner: State	API No. 30-015-2449
----------------	----------------------	---------------------

**LOCATION OF RELEASE**

Unit Letter N	Section 1	Township 24S	Range 27E	Feet from the 990'	North/South Line South	Feet from the 2110	East/West Line West	County Eddy
------------------	--------------	-----------------	--------------	-----------------------	---------------------------	-----------------------	------------------------	----------------

Latitude 32.2423477 Longitude -104.1459274

**NATURE OF RELEASE**

Type of Release: Oil & Produced Water	Volume of Release: 10 bbls Oil ; 5 bbls PW	Volume Recovered: 2 bbls Oil ; 0 bbls PW
Source of Release: Heater Treater	Date and Hour of Occurrence: 4/12/2016 11:00 am	Date and Hour of Discovery: 4/12/2016 11:00 am
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour:	
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 failure of the heater treater. Crews were dispatched to recover fluid and conduct initial clean-up.

Describe Area Affected and Cleanup Action Taken.\*

This release impacted the battery and the pasture outside 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.

**OIL CONSERVATION DIVISION**

Signature:

*Robert Grubbs Jr.*

Printed Name: Robert Grubbs Jr.

Approved by Environmental Specialist:

Title: Senior Environmental Coordinator

Approval Date:

Expiration Date:

E-mail Address: rgrubbs@concho.com

Conditions of Approval:

Attached ☐

Date: April 26, 2016

Phone: 432-683-7443

\* Attach Additional Sheets If Necessary .