

Closure Report

Site Description

Site Name:	Loving 1 State #002
Company:	COG Operating LLC
Legal Description:	U/L N, Section 1, T24S, R27E
County:	Eddy County, NM
GPS Coordinates:	N 32.24223° W 104.14611°

Release Data

Date of Release:	04/12/2016
Type of Release:	Oil and Produced water
Source of Release:	Heater treater
Volume of Release:	10 bbls oil, 5 bbls produced water
Volume Recovered:	2 bbls oil

Remediation Specifications

Remediation Parameters:	Excavate to a depth of 6 in. to 1 ft in the area of SP1. In the area of SP2, excavate to 1 ft, take field screen CL samples to reach to 250 ppm, and place an impermeable (clay or bentonite) liner in the excavation. Excavate to a depth of 6 in. in the area of SP3 & SP4. Excavate to 1 ft in the area of SP5. Backfill with clean soil.	
Remediation Activities:	09/06/2016 to 09/19/2016	
Plan Sent to OCD:	07/11/2016	Email from Cliff Brunson to Mike Bratcher
OCD Approval of Plan:	07/25/2016	Email from Mike Bratcher to Cliff Brunson
Plan Sent to SLO:	07/11/2016	Email from Cliff Brunson to Amber Groves
BLM Approval of Plan:	08/01/2016	Email from Amber Groves to Cliff Brunson

Supporting Documentation

Initial C-141	Signed 04/26/2016
Final C-141	Signed 09/23/2016
Site Diagram	April 2016
Groundwater Plot	<50'
TOPO Maps	June 2016
Lab Summary	05/23/2016 and 09/12/2016
Lab Analysis	05/23/2016 and 09/12/2016
Correspondence	Request and approval of remediation plan via email

Request for Closure

Based on the completion of the remediation plan as agreed upon, BBC International requests closure approval from NMOCD.

Cliff Brunson, President of BBC International Inc.

09/27/2016

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
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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
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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.

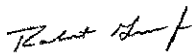
Describe Area Affected and Cleanup Action Taken.*

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:



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 .

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 I State #2	Facility Type: Battery

Surface Owner: State	Mineral Owner:	API No. 30-015-2449
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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
N	1	24S	27E	990	South	2110	West	Eddy County, NM

Latitude N 32.82109° Longitude W 104.07641°

NATURE OF RELEASE

Type of Release: Oil and produced water	Volume of Release: 10 bbls oil, 5 bbls produced water	Volume Recovered: 2 bbls oil, 0 bbls produced water
Source of Release: Heater Treater	Date and Hour of Occurrence 04/12/2016 @ 11:00 am	Date and Hour of Discovery 04/12/2016 @ 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.*

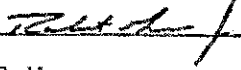
This release was caused by a failure of the heater treater. Crews were dispatched to recover fluid and conduct initial clean-up.

Describe Area Affected and Cleanup Action Taken.*

This release impacted the battery and the pasture outside the bermed area. The site was delineated and a remediation plan was created. The remediation plan was approved by Mike Bratcher of NMOCD via email on 07/25/2016 and approved by Amber Groves of the SLO via email on 08/01/2016. Remediation was completed in accordance with the approved plan.

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

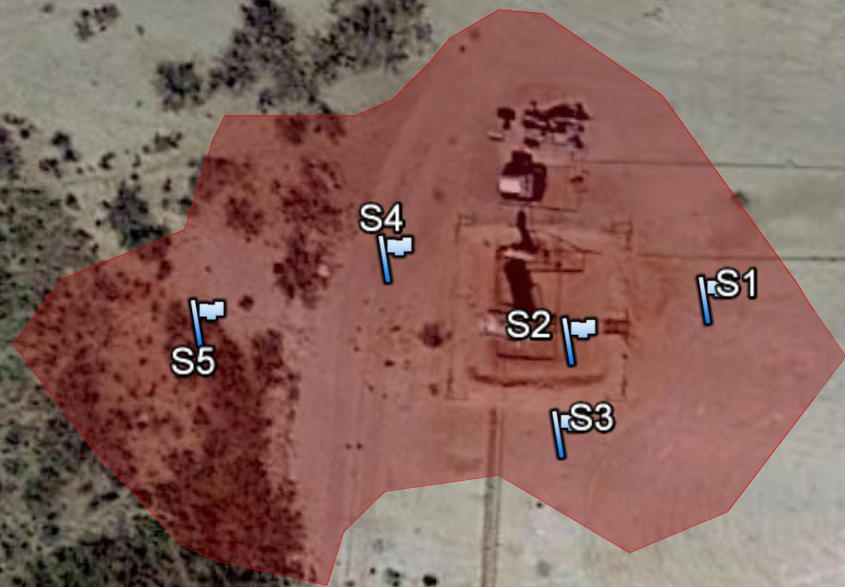
Signature: 	Approved by Environmental Specialist:		
Printed Name: Robert Grubbs			
Title: Senior Environmental Coordinator	Approval Date:	Expiration Date:	
E-mail Address: rgrubbs@concho.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: September 23, 2016	Phone: (432) 683-7443		

* Attach Additional Sheets If Necessary

Loving 1 State #2

Legend

-  Release Area
-  Sample Points





Groundwater Plot

Concho Loving 1 State #2

County
Eddy

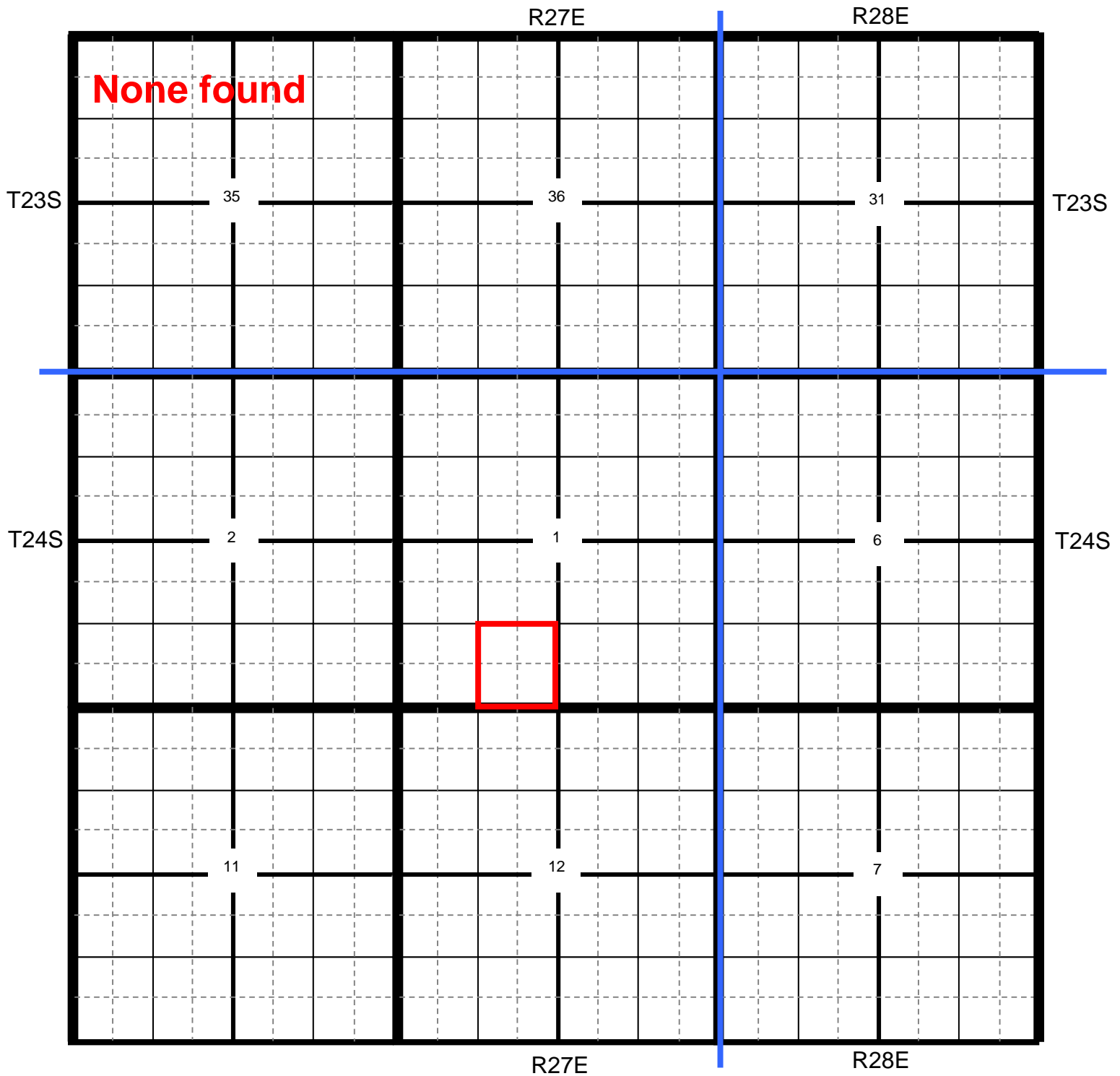
Unit Letter
N

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 None found	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

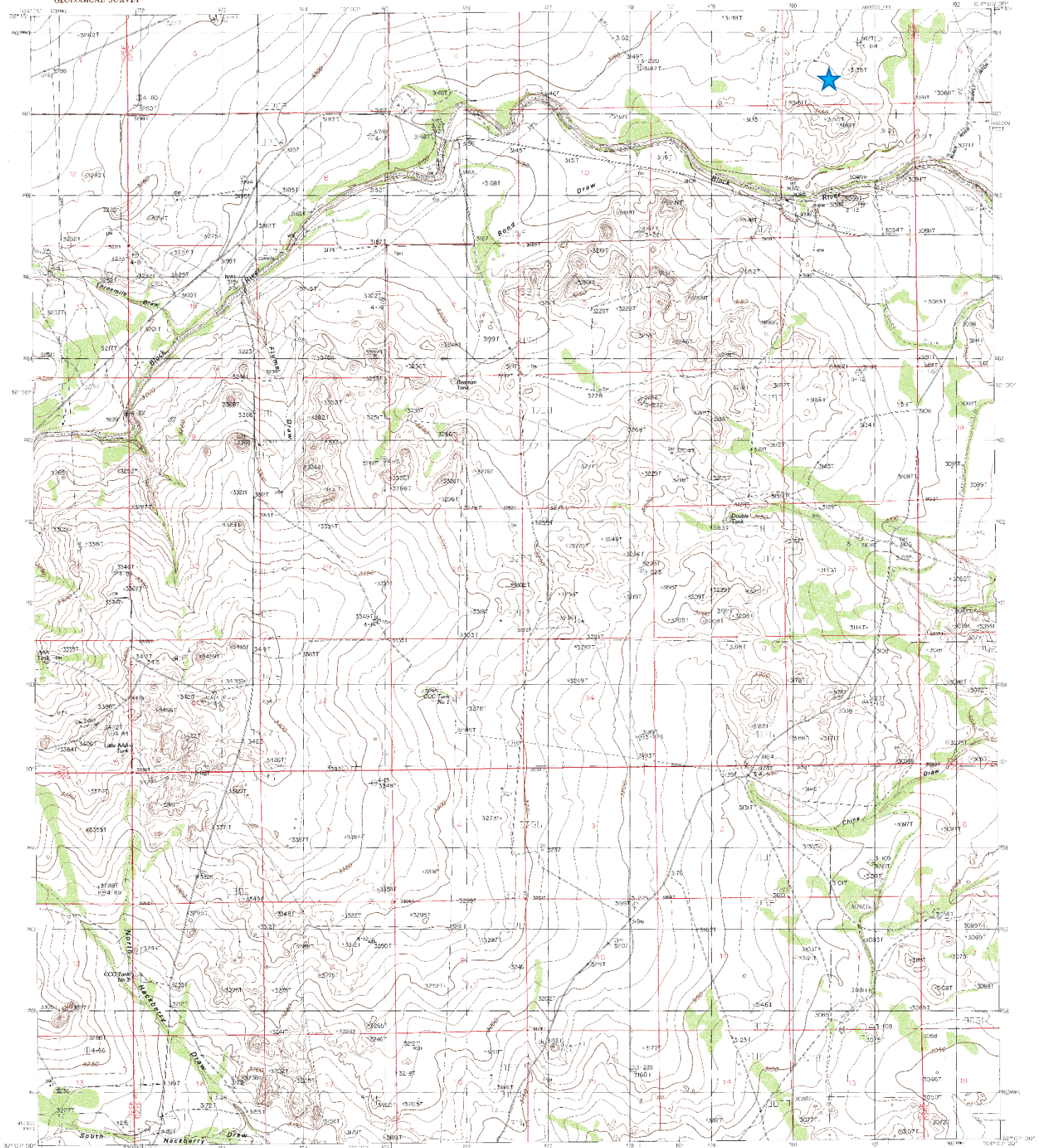
3

4

Loving 1 State #2

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

BOND DRAW QUADRANGLE
NEW MEXICO-EDDY CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)



PRODUCED BY THE UNITED STATES GEOLOGICAL SURVEY
CONTINENT BY URSI, NEW MEXICO 1987
FIELD CHECKED 1978 MAP EDITED
EDITED BY TRANSMISSIVE METERIC ZONE II
BORDER STATE GRID TICS NEW MEXICO, EAST ZONE
MAGNETIC NORTH DECLINATION °W EAST
VERTICAL DATUM NATIONAL GEODESIC VERTICAL DATUM OF 1960
TO place on the predicated North American Datum of 1983,
make the projection lines as shown by dashed corner ticks
(6 meters south and 46 meters east)
There may be private interests within the boundaries of any
State or State Division which own on this map
All marginal data and lettering generated and positioned by
automated type placement procedures

PROVISIONAL MAP
Produced from original
manuscript drawings. Infor-
mation shown as of date of
field check. 3

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225
OR RESTON, VIRGINIA 22092

1	2	3	1 Kishan Gove
			2 Ona
			3 Laring
4		5	4 Black River Village
			5 Midaga
			6 Jomaring Spring
6	7	8	7 Gatomong Hills
			8 Hot Bath

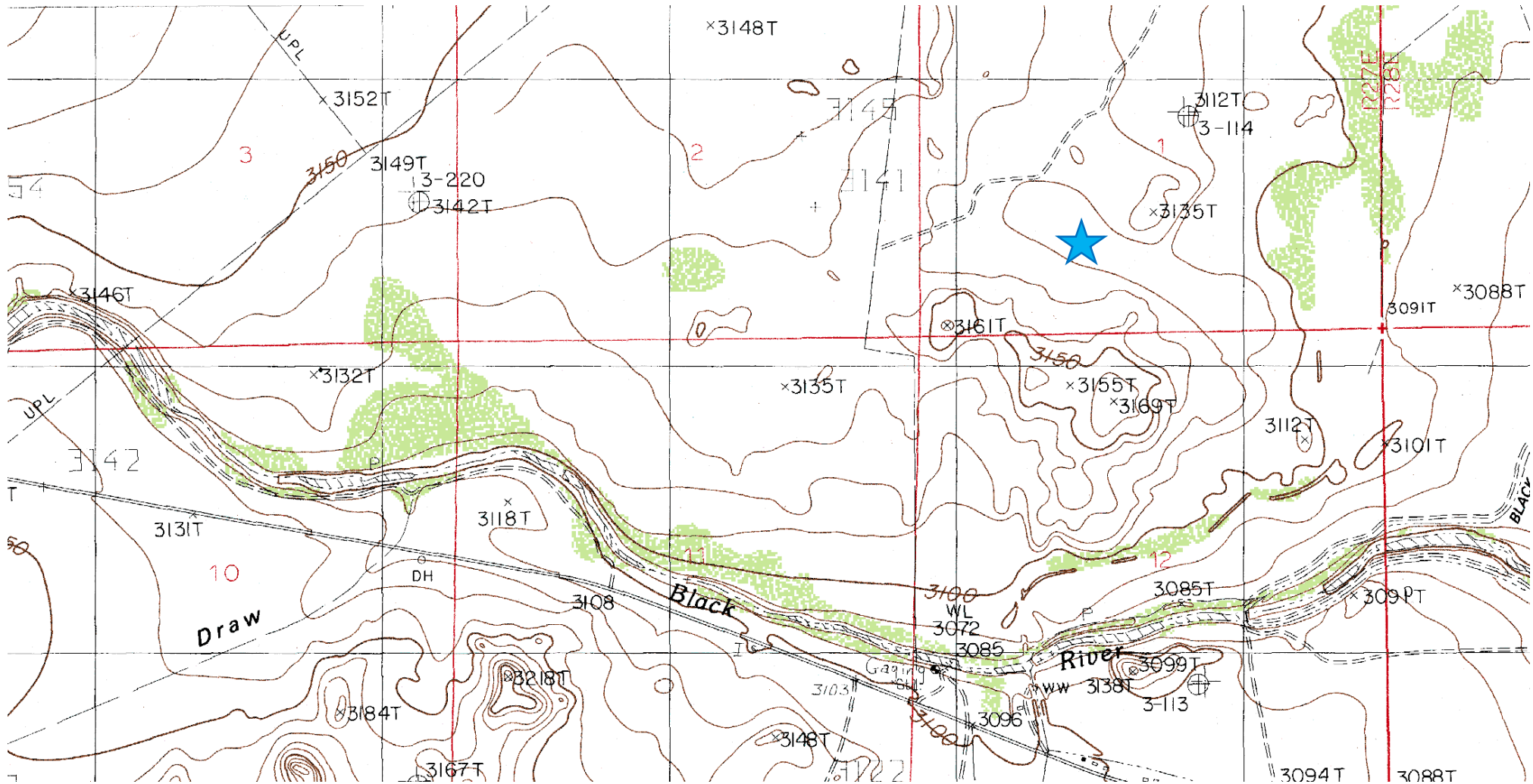
ROAD LEGEND

.....
Road
.....
Route  U.S. Route  State Route

BOND DRAW, NEW MEXICO
PROVISIONAL EDITION 1985

32104-B2-TF-324

Loving 1 State #2



**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

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.

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)

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, 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

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



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)

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	<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

Cardinal Laboratories

*=Accredited Analyte

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



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)

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	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:

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 - 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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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)

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	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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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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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: 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, SM4500Cl-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	
Total Xylenes*	0.202	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)

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 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)

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	<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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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, SM4500CI-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	

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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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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)

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	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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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)

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*	<0.050	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 BTX	<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)

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*	<0.050	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 BTX	<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, SM4500CI-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

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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

285

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

ANALYSIS REQUEST

P.O. #:

Company: COG Operating LLC

Attn: Robert McNeill

Address: 600 W Illinois

City: Midland

State: TX Zip: 79701

Phone #: (432) 221-0388

Fax #:

FOR LAB USE ONLY

Lab I.D.

Sample I.D.

H001149

-9

-10

-11

-12

-13

6851 +4

S2-SURFACE

S2-1'

S2-2'

S2-3'

S2-4'

(G)RAB OR (C)OMP.

CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

DATE

TIME

BTEX

TPH

Chloride

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Reinquished By:

Date:

Time:

Received By:

Date:

Time:

Reinquished By:

Date:

Time:

Received By:

Date:

Time:

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

FORM-006 R.2.0

Sample Condition

Cool Intact

Yes No

CHECKED BY:

(Initials)

3.08

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS: gcarrasco@concho.com
atrujillo@concho.com



COG Operating LLC
(575) 393-2326 FAX (575) 393-2476

+ Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476



2/20/5

Page 28 of 29



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

September 14, 2016

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: LOVING 1 STATE #2

Enclosed are the results of analyses for samples received by the laboratory on 09/13/16 10:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at 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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

BBC International, Inc.
Cliff Brunson
P.O. Box 805
Hobbs NM, 88241
Fax To: (575) 397-0397

Received: 09/13/2016
Reported: 09/14/2016
Project Name: LOVING 1 STATE #2
Project Number: NONE GIVEN
Project Location: LOVING, NM

Sampling Date: 09/12/2016
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 2 @ 1' (H602042-01)**Chloride, SM4500Cl-B****mg/kg****Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	09/14/2016	ND	432	108	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

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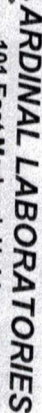
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Celey D. Keene, Lab Director/Quality Manager



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(505) 393-2326 FAX (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 4 of 4

Kathy Purvis

From: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>
Sent: Monday, July 25, 2016 8:57 AM
To: Cliff Brunson
Cc: Robert Grubbs; Patterson, Heather, EMNRD; Ken Swinney; Jennifer Gilkey; Kathy Purvis; 'agroves@slo.state.nm.us'
Subject: RE: COG Loving 1 State #2 - Remediation Plan

RE: COG * Loving 1 St 2 * **2RP-3666** * DOR: 4/12/16

Cliff,

Your proposal for remediation of the above referenced release is approved. Target goal for chloride delineation is 250 mg/kg, and as discussed, field screens are acceptable for the SP-2 delineation. It is OCD's understanding that the proposed barrier will be clay/bentonite. Please advise if liner medium is revised, and, once remedial activities have been scheduled.

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

If you have any questions or concerns, and for notification, please contact me.

Mike Bratcher
NMOCD District 2
811 S. First Street
Artesia, NM 88210
O: 575-748-1283 X108
C: 575-626-0857
F: 575-748-9720

From: Cliff Brunson [mailto:cbrunson@bbcinternational.com]
Sent: Monday, July 11, 2016 5:17 PM
To: Bratcher, Mike, EMNRD
Cc: Robert Grubbs; Patterson, Heather, EMNRD; Ken Swinney; Jennifer Gilkey; Kathy Purvis
Subject: COG Loving 1 State #2 - Remediation Plan

Mike,

This e-mail is to confirm our discussion concerning the remediation plan for the COG Loving 1 State #2 release. I have attached the information packet that we used in our discussion with a cover page describing the remediation plan that we agreed upon.

If you would please reply back via e-mail with your concurrence on this plan, it would be greatly appreciated.

Thanks, Cliff

Cliff P. Brunson, CEI, CRS
President
BBC International, Inc.
World-Wide Environmental Specialists
Mailing Address:
P. O. Box 805
Hobbs, NM 88241-0805 USA
Shipping Address:
1324 W. Marland St.
Hobbs, NM 88240 USA
Phone: (575) 397-6388
Fax: (575) 397-0397
E-Mail: cbrunson@bbcinternational.com

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From: [Groves, Amber](#)
To: [Bratcher, Mike, EMNRD](#); [Cliff Brunson](#)
Cc: [Robert Grubbs](#); [Patterson, Heather, EMNRD](#); [Ken Swinney](#); [Jennifer Gilkey](#); [Kathy Purvis](#)
Subject: RE: COG Loving 1 State #2 - Remediation Plan
Date: Monday, August 1, 2016 7:56:10 AM
Attachments: [image001.png](#)
[image003.png](#)

Cliff,

NMSLO is in agreement with NMOCD.

Thank you,

Amber Groves

Remediation Specialist

Field Operations Division

(575)392-3697

(575)263-3209 cell

New Mexico State Land Office

2827 N. Dal Paso Suite 117

Hobbs, NM 88260

.....
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From: Bratcher, Mike, EMNRD [mailto:mike.bratcher@state.nm.us]
Sent: Monday, July 25, 2016 8:57 AM
To: Cliff Brunson <cbrunson@bbcinational.com>
Cc: Robert Grubbs <RGrubbs@concho.com>; Patterson, Heather, EMNRD <Heather.Patterson@state.nm.us>; Ken Swinney <kswinney@bbcinational.com>; Jennifer Gilkey <jgilkey@bbcinational.com>; Kathy Purvis <kathy@bbcinational.com>; Groves, Amber <agroves@slo.state.nm.us>
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Thanks, Cliff

Cliff P. Brunson, CEI, CRS
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