



[Sheldon L. Hitchcock]
[HSE Coordinator]

March 28, 2019

Bradford Billings
Oil Conservation Division
1220 S. St Francis Dr. #3
Santa Fe, NM 87505

Crystal Weaver
Bureau of Land Management, CFO
620 E. Green Street
Carlsbad, NM 88220

Re: Closure Letter
GC Federal #055
API #: 30-025-40007
RP#: 1RP-5052
Unit Letter I, Section 19, Township 17 S, Range 32 E
Lea County, New Mexico

Mr. Billings/Ms. Weaver,

COG Operating, LLC (COG) is pleased to submit for your consideration the following closure report for the GC Federal #055. This release occurred on May 7, 2018. Following the release an assessment of impacted soils was conducted. A remediation work plan was submitted to and subsequently approved by the New Mexico Oil Conservation Division (NMOCD) and the Bureau of Land Management (BLM). A copy of the approved work plan is attached in Appendix V.

BACKGROUND

The GC Federal #055 release was located in Unit Letter I, Section 19, Township 17 South and Range 32 East in Eddy County, New Mexico. More specifically the latitude and longitude for this release are 32.8173409 North and -103.8004608 West.

On May 7, 2018, a flowline failed resulting in the release of approximately thirty (30) barrels (bbls) of produced water and ten (10) bbls of oil. A vacuum truck was utilized to recover all freestanding fluids.

Remediation activities were conducted in accordance with the approved work plan and NMOCD stipulations. The analytical results from the stipulated confirmation soil sampling activities are summarized in the table below. A site diagram of the excavated area is presented in Appendix I.

March 28, 2019

GROUNDWATER AND SITE RANKING

According New Mexico Office of the State Engineer groundwater in the project vicinity is approximately eighty-one (81) feet below ground surface (BGS) (Appendix II). No water well or surface water was observed within one-thousand (1,000) feet of the release site. Therefore the site ranking for this release is ten (10) based on the following:

Depth to groundwater 50-100-feet
 Distance to surface water body >1000-feet
 Wellhead Protection Area >1000-feet

CONFIRMATION SOIL SAMPLING RESULTS

Sample ID	Sample Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
		In-Situ	Removed	GRO	DRO	MRO	Total			
NMOCD RRAL Limits (mg/kg)				-	-	-	1,000	10	50	600
N. T-3	N/A	X		<10.0	<10.0	<10.0	0.0	<0.05	<0.300	400
S. T-3	N/A	X		<10.0	<10.0	<10.0	0.0	<0.05	<0.300	320
E. T-3	N/A	X		<10.0	<10.0	<10.0	0.0	<0.05	<0.300	80
W. T-3	N/A		X	<10.0	<10.0	<10.0	0.0	<0.05	<0.300	1360
N. T-5	N/A	X		<10.0	<10.0	<10.0	0.0	<0.05	<0.300	128
S. T-5	N/A	X		<10.0	<10.0	<10.0	0.0	<0.05	<0.300	272
E. T-5	N/A		X	<10.0	<10.0	<10.0	0.0	<0.05	<0.300	992
W. T-5	N/A	X		<10.0	<10.0	<10.0	0.0	<0.05	<0.300	176
E. T-5	N/A	X		#	#	#	#	#	#	48
(#)	Not Analyzed									

March 28, 2019

REMEDIAL ACTIONS

- The impacted areas in the vicinity of sample locations T-3 and T-5 were excavated to a depth of four (4) feet BGS. The western boundary of the T-3 area was excavated to the maximum extent possible. However due to its proximity to the wellhead and other infrastructure further excavation was neither possible nor safe.
- All of the excavated material was hauled to an NMOCD approved solid waste disposal facility.
- Confirmation sidewall samples were collected from the excavations per NMOCD stipulations.
- Upon receipt of analytical results from stipulated confirmation soil sampling activities a 20-mil poly liner was installed in the bottom of the excavations in order to encapsulate the remaining chloride impacts. The excavations were backfilled with clean “like” material and contoured to match the surrounding location.

March 28, 2019

CLOSURE REQUEST

COG Operating, LLC respectfully requests that the New Mexico Oil Conservation Division and the Bureau of Land Management grant closure approval for the GC Federal #055 incident that occurred on May 7, 2018.

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

Sincerely,



Sheldon L. Hitchcock
HSE Coordinator
slhitchcock@concho.com

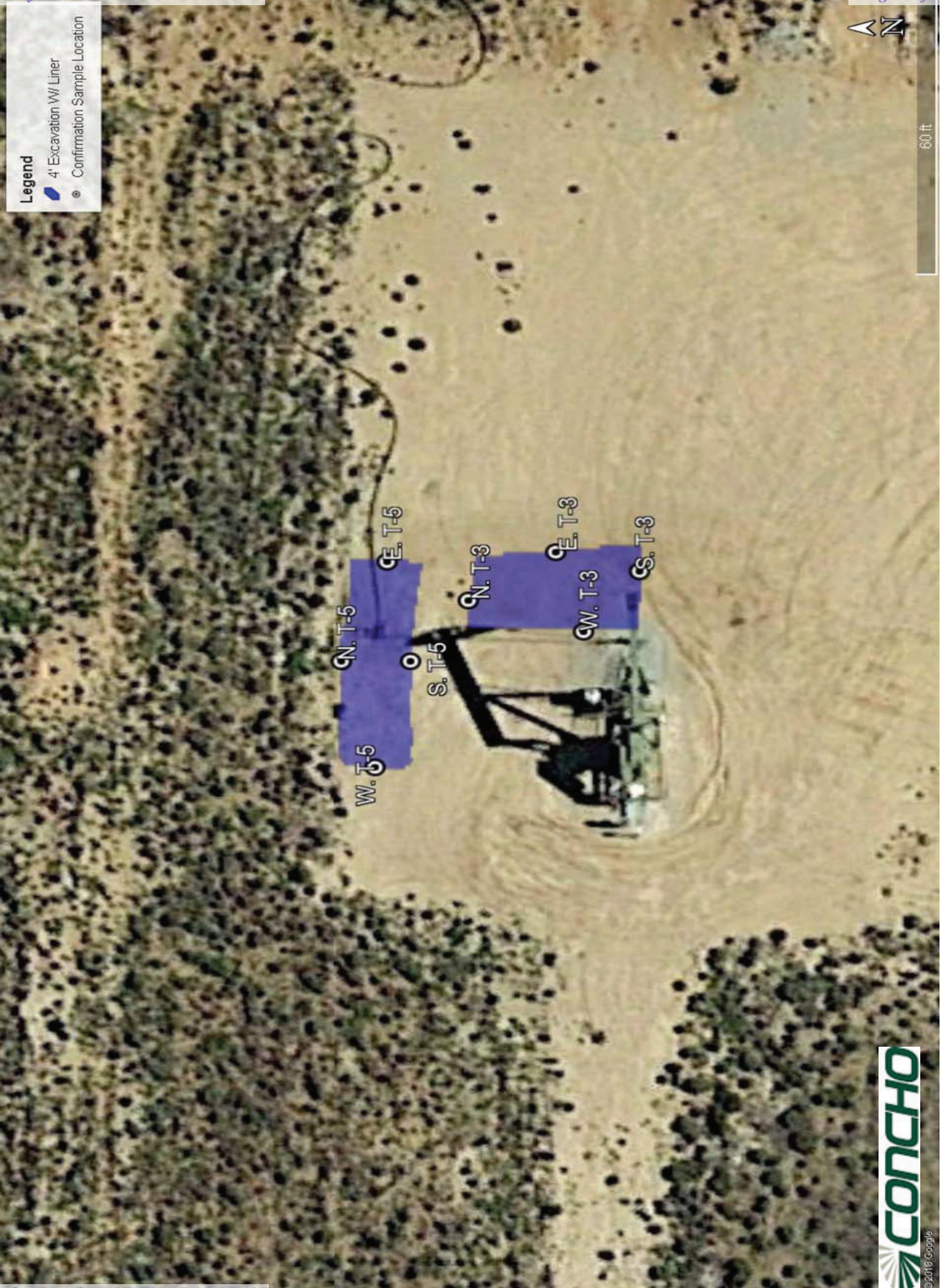
Enclosed:

- Appendix I: Site Diagram
- Appendix II: Groundwater Data
- Appendix III: Initial C-141 (Copy)
- Appendix IV: Final C-141
- Appendix V: Work Plan (Copy)
- Appendix VI: Photographic Documentation
- Appendix VII: Analytical Reports and Chain-of-Custody Forms

APPENDIX I

GC Federal #055

May 7, 2018



APPENDIX II



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
RA 10175			LE	2	1	28	17S	32E		614814	3631005*	2574	158		
RA 12020 POD1			LE	2	2	1	28	17S	32E	614828	3630954	2600	120	81	39
RA 12042 POD1			LE	2	2	1	28	17S	32E	614891	3631181	2609	400		

Average Depth to Water: **81 feet**

Minimum Depth: **81 feet**

Maximum Depth: **81 feet**

Record Count: 3

UTMNAD83 Radius Search (in meters):

Easting (X): 612328.52

Northing (Y): 3631675.18

Radius: 4828

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

7/11/18 4:21 PM

Page 1 of 1

WATER COLUMN/ AVERAGE
DEPTH TO WATER

APPENDIX III

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 April 3, 2017
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 (OGRID #229137)	Contact: Robert McNeill
Address: 600 West Illinois Avenue, Midland TX 79701	Telephone No. 432-683-7443
Facility Name: GC Federal #055	Facility Type: Flowline
Surface Owner: Federal	Mineral Owner: Federal
API No. 30-025-40007	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
I	19	17S	32E	1,630	South	990	East	Lea

Latitude 32.8173409 Longitude -103.8004608 NAD83

NATURE OF RELEASE

Type of Release: Oil & Produced Water	Volume of Release: 10 bbl. Oil 30 bbl. Produced Water	Volume Recovered: 8 bbl. Oil 25 bbl. Produced Water
Source of Release: Flowline Corrosion	Date and Hour of Occurrence: May 7, 2018 9:00am	Date and Hour of Discovery: May 7, 2018 9:00am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Olivia Yu – NMOCD Henryetta Price – BLM Shelley Tucker - BLM	
By Whom? Sheldon Hitchcock	Date and Hour: May 7, 2018 9:42am	
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.*

RECEIVED

By Olivia Yu at 11:04 am, May 09, 2018



Describe Cause of Problem and Remedial Action Taken.*

The release was caused by a hole in a steel flowline due to corrosion. The flowline is being replaced.

Describe Area Affected and Cleanup Action Taken.*

The release occurred on location. A vacuum truck was dispatched to remove all freestanding fluids. Concho will have the spill area sampled to delineate any possible impact from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation activities.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: 		OIL CONSERVATION DIVISION	
Printed Name: DeAnn Grant		Approved by Environmental Specialist: 	
Title: HSE Administrative Assistant	Approval Date: 5/9/2018	Expiration Date:	
E-mail Address: agrant@concho.com	Conditions of Approval: see attached directive	Attached <input checked="" type="checkbox"/>	
Date: May 9, 2018	Phone: 432-253-4513		

* Attach Additional Sheets If Necessary

1RP-5052

nOY1812939986

APPENDIX IV

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 Department

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	COG Operating, LLC	OGRID	229137
Contact Name	Jennifer Knowlton	Contact Telephone	(432) 683-7443
Contact email	jknowlton@concho.com	Incident # (assigned by OCD)	
Contact mailing address	600 West Illinois Avenue, Midland, Texas 79701		

Location of Release Source

Latitude 32.8173409 Longitude -103.8004608
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	GC Federal #055	Site Type	Well
Date Release Discovered	May 7, 2018	API# (if applicable)	30-025-40007

Unit Letter	Section	Township	Range	County
I	19	17S	32E	Lea

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (Name: _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 10	Volume Recovered (bbls) 8
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 30	Volume Recovered (bbls) 25
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

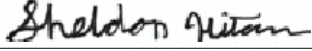
A steel flowline failed due to corrosion. The flowline was replaced.

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? >25bbbls
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes: To: Olivia Yu-OCD & Shelly Tucker-BLM By: Sheldon Hitchcock-COG Via: Email	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: 	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.	
Printed Name: <u>Sheldon L. Hitchcock</u>	Title: <u>HSE Coordinator</u>
Signature: <u></u>	Date: <u>3/28/2019</u>
email: <u>slhitchcock@concho.com</u>	Telephone: <u>575-746-2010</u>
<u>OCD Only</u> Received by: _____ Date: _____	

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: *Each of the following items must be included in the closure report.*

- ☐ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☐ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☐ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☐ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Sheldon L. Hitchcock

Title: HSE Coordinator

Signature: Sheldon Hitchcock

Date: 3/28/2019

email: slhitchcock@concho.com

Telephone: 575-746-2010

OCD Only

Received by: _____

Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Brittany Hall

Date: 5/9/2023

Printed Name: Brittany Hall

Title: Environmental Specialist

APPENDIX V

**HRL**
COMPLIANCE
SOLUTIONSP.O. Box 1708 • Artesia, NM 88211
www.hrlcomp.com

July 13, 2018

NMOCD District I
Olivia Yu
1625 North French Drive
Hobbs, New Mexico 88240Bureau of Land Management
Henryetta Price
620 E Greene Street
Carlsbad, New Mexico 88220SUBJECT: SOIL REMEDIATION WORK PLAN FOR THE INCIDENT AT THE GC Federal 055, LEA COUNTY,
NEW MEXICO

Ms. Yu:

On behalf of COG Operating, LLC, HRL Compliance Solutions, Inc (HRL) has prepared this work plan that describes the assessment, initial characterization, and proposed remediation for a release associated with the GC Federal #055 release. The site is in Unit I, SECTION 19, TOWNSHIP 17S, RANGE 32E, NMPM, Lea County, New Mexico, on Federal land. Figure 1 illustrates the location and surrounding area.

Table 1 below, summarizes information regarding the release.

1.0 Background

The release at the GC Federal #055 was due to a hole in a steel flowline that developed due to corrosion as outlined in the NMOCD C-141 report (Appendix A). All released material remained on location within the perimeter of the well pad. A vacuum truck was used to remove all freestanding liquids. Samples were collected from the impacted area to delineate the vertical and horizontal extent of impacts.

2.0 Site Ranking and Land Jurisdiction

The release site is located approximately 3.3 miles south-southwest of Maljamar, with an elevation of approximately 4,595 feet above sea level. Due to the lack of water wells in the near vicinity an alternative method of water depth determination was utilized. An evaluation of the site using the Chevron Texaco Groundwater Trend Map (2005) shows depth to groundwater is approximately 175 feet below ground surface (bgs). Recommended Remediation Action Levels (RRALs) are determined by the site ranking according to the NMOCD *Guidelines for Remediation of Leaks, Spills, and Releases* (1993). Table 2 presents the remediation standards and the site ranking for this location. Justification for this site ranking is found in Appendix B.

INNOVATIVE SOLUTIONS DELIVERED



Table 1: Release Information and Site Ranking

Name	GC Federal #055
Company	COG Operating, LLC
RP Number	1RP-5052
API Number	30-025-40007
Location	32.8173409, -103.8004608
Estimated Date of Release	05/07/2018
Date Reported to NMOCD	05/07/2018
Land Owner	Federal
Reported to	OCD/BLM
Source of Release	Hole in steel flow line
Released Material	Oil and Produced Water
Released Volume	10 bbls oil, 30 bbls produced water
Recovered Volume	8 bbls oil, 25 bbls produced water
Net Release Volume	2 bbls oil, 5 bbls water
Nearest Waterway	9.8 miles to White Lake
Depth to Groundwater	175 feet bgs
Nearest Domestic Water Source	> 1 mile
NMOCD Ranking	0
Response Date	05/07/18

Table 2: Remediation Standards

Soil Remediation Standards	0 to 9	10 to 19	>19
Benzene	10 PPM	10 PPM	10 PPM
BTEX	50 PPM	50 PPM	50 PPM
TPH	5000 PPM	1000 PPM	100 PPM

Depth to Groundwater	NMOCD Numeric Rank
< 50 BGS = 20	
50' to 99' = 10	
>100' = 0	0
Distance to Nearest Surface Water	NMOCD Numeric Rank
< 200' = 20	
200' - 1000' = 10	
>1000' = 0	0
Well Head Protection	NMOCD Numeric Rank
<1000' (or <200' domestic) = 20	
> 1000' = 0	0
Total Site Ranking	0



3.0 Release Characterization

Upon receiving clearance from the underground utility locate (811) on May 30, 2018, COG field personnel assessed the impacted area. Samples were collected on 5/30/2018 to characterize the extent of impacts and calculate a volume of soil to be excavated for disposal. All samples were collected and analyzed at a Nationally Environmental Laboratory Accreditation Program (NELAP) laboratory and in accordance with NMOCD soil sampling procedures. The samples were submitted to Cardinal Laboratories for analyses including chlorides by Method 300.0, volatile organics (BTEX) by Method 8021B, and MRO, DRO, and GRO by EPA Method 8015D. Sample locations are depicted in Figure 2. All field screening and laboratory results are summarized in Table 3 with raw analytical reports included in Appendix C.

4.0 Soil Remediation Workplan

HRL will begin the excavation of the impacted soils, after approval from area utilities owners via 811 and NMOCD. HRL will oversee the excavation activities. Excavation will occur to a depth of four (4) feet bgs for the areas labeled as T3 and T5 with a liner placed at the four foot depth. Impacted soils will be stockpiled on location within a lined earthen berm containment cell prior to disposal. Confirmation samples will be collected from the sidewalls of the sample site to be analyzed for total chlorides. It is anticipated that approximately 100 cubic yards of contaminated soil is to be excavated and disposed at an approved solid waste disposal facility. GPS coordinates of the excavated area will be taken and mapped to show the area of final excavation. Clean native soils and caliche from an approved pit will be used to backfill the excavation and the impacted area will be recontoured to the surrounding area. The contaminated soil will be disposed at an approved disposal facility.

5.0 Revegetation

As the impacted soil is limited to the existing well pad, no revegetation will occur.



6.0 Scope and Limitations

The scope of HRL's services consist of performing site characterization and remediation, verification of release stabilization, regulatory liaison, and preparation of this work plan. All work has been performed in accordance with generally accepted professional environmental consulting practices for oil and gas releases in the Permian Basin in New Mexico.

If there are any questions regarding this report, please contact Jennifer Knowlton at 505-238-3588.

Submitted by:
HRL Compliance Solutions, Inc

Jennifer Knowlton
Regional Manager - Permian

Attachments:

Figure 1: Vicinity and Wellhead Protection Map

Figure 2: Site and Sample Location Map

Table 3: Summary of Sample Results

Appendix A: Form C141 Initial

Appendix B: NMOSE Well Report

Appendix C: Laboratory Analytical Reports



Figure 1:
Site Vicinity Map

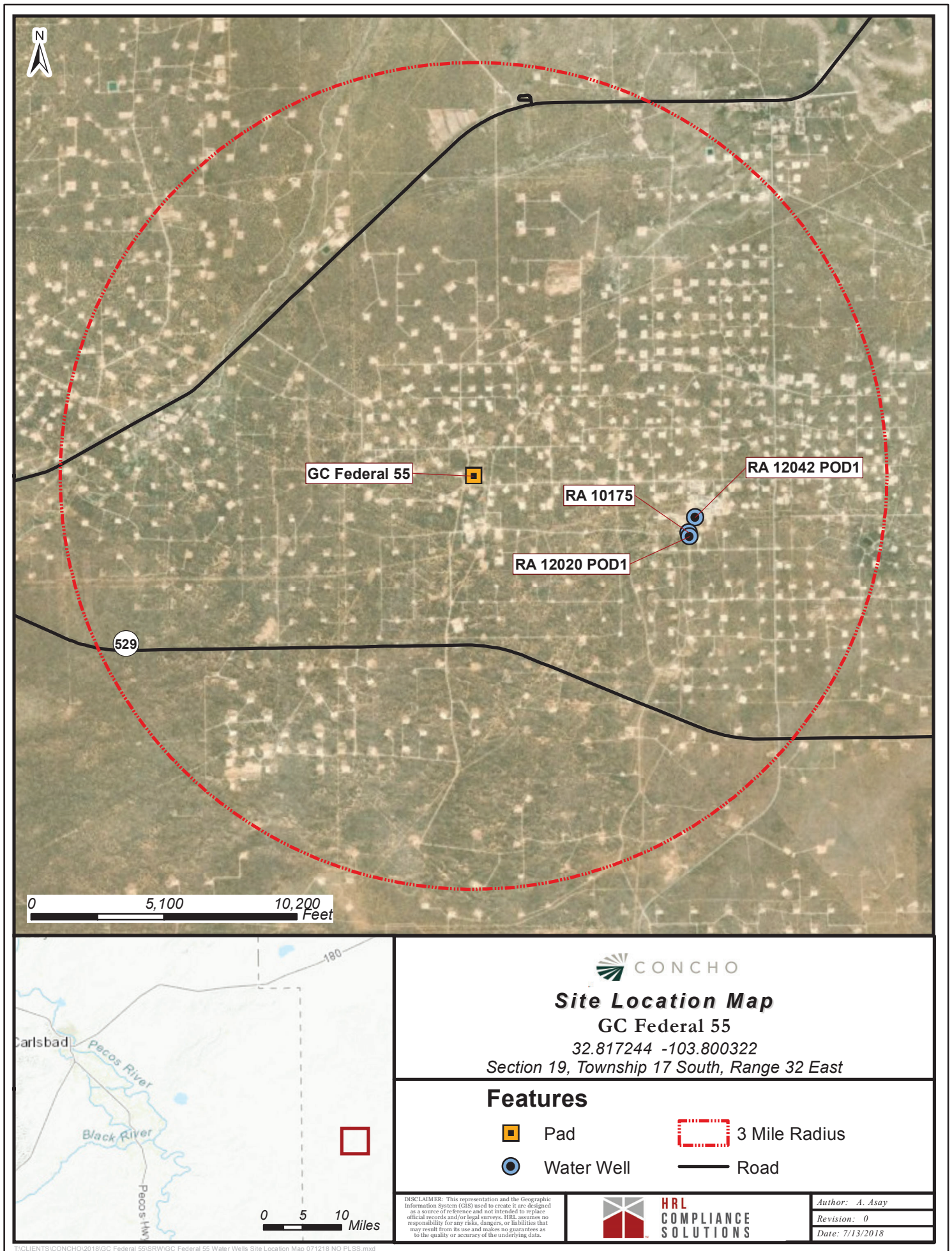




Figure 2:
Site and Sample Location Map

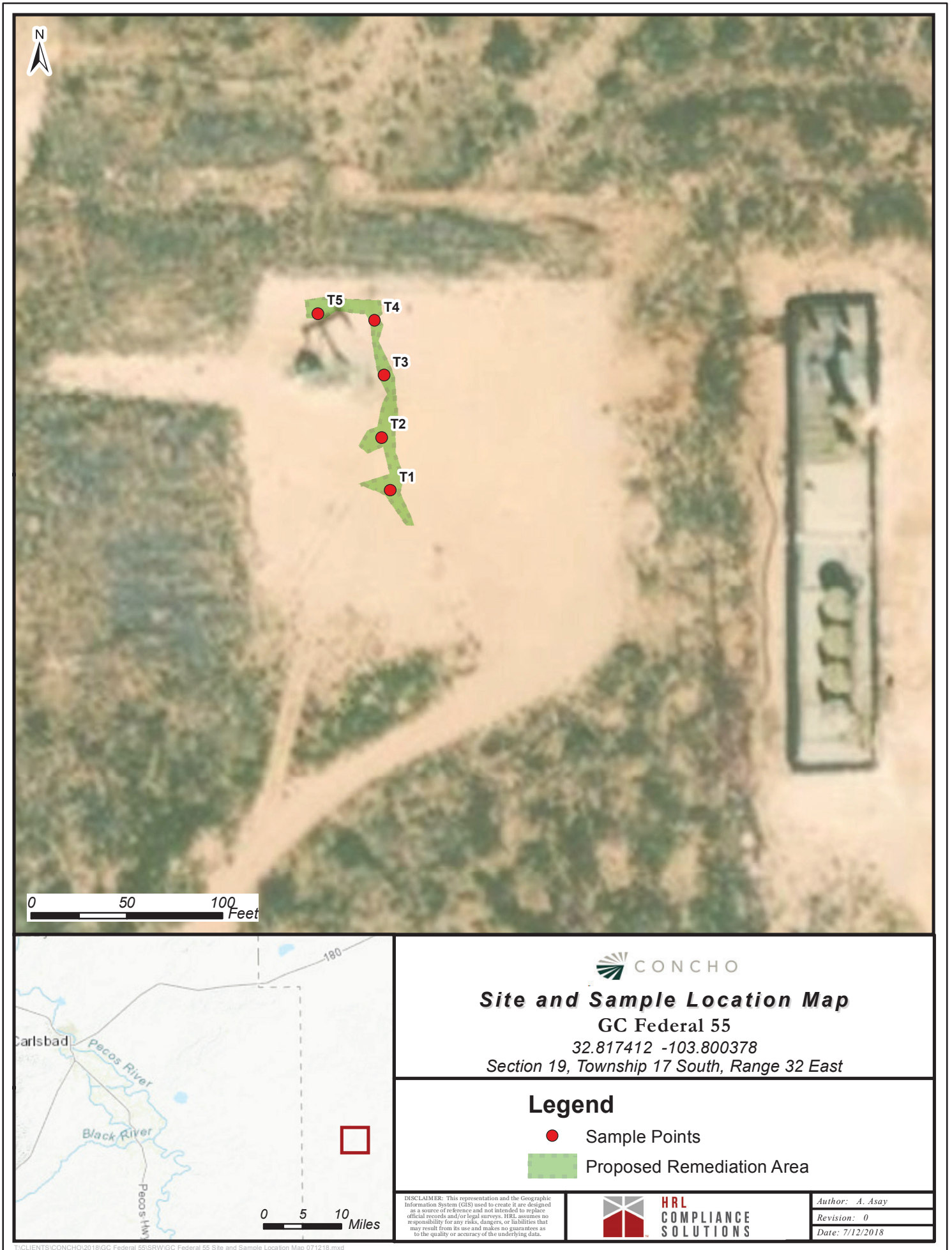




Table 3: Analytical Results Summary

TABLE 1												
Summary of Delineation Sampling Analytical Results												
Concentrations of Benzene, BTEX, TPH & Chloride in Soil												
Concho												
GC Federal #055												
Lea County, New Mexico												
NMOCD REF: 2RP-5052												
SAMPLE LOCATION	SAMPLE DEPTH (bgs)	SAMPLE DATE	SOIL STATUS	8021B					8015M			300.0
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYLBENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	Total TPH (mg/Kg)	CHLORIDE (mg/Kg)
NMOCD - Guidelines for Remediation of Leaks, Spills and Releases				10	NE	NE	NE	50	NE	NE	5,000	600
Vertical Delineation Sampling												
T1	Surface	5/30/2018	In-Situ	<0.05	<0.05	<0.05	<0.150	<0.300	<10.0	<0.10	<10.0	80
T1	1'	5/30/2018	In-Situ	<0.05	<0.05	<0.05	<0.150	<0.300	<10.0	<0.10	<10.0	-
T1	2'	5/30/2018	In-Situ	<0.05	<0.05	<0.05	<0.150	<0.300	<10.0	<0.10	<10.0	-
T1	3'	5/30/2018	In-Situ	<0.05	<0.05	<0.05	<0.150	<0.300	<10.0	<0.10	<10.0	-
T2	Surface	5/30/2018	In-Situ	<0.05	<0.05	<0.05	<0.150	<0.300	<10.0	<0.10	<10.0	16
T2	1'	5/30/2018	In-Situ	<0.05	<0.05	<0.05	<0.150	<0.300	<10.0	<0.10	<10.0	-
T2	2'	5/30/2018	In-Situ	<0.05	<0.05	<0.05	<0.150	<0.300	<10.0	<0.10	<10.0	-
T2	3'	5/30/2018	In-Situ	<0.05	<0.05	<0.05	<0.150	<0.300	<10.0	<0.10	<10.0	-
T2	4'	5/30/2018	In-Situ	<0.05	<0.05	<0.05	<0.150	<0.300	<10.0	<0.10	<10.0	-
T2	5'	5/30/2018	In-Situ	<0.05	<0.05	<0.05	<0.150	<0.300	<10.0	<0.10	<10.0	-
T3	Surface	5/30/2018	In-Situ	<0.05	<0.05	<0.05	<0.150	<0.300	<10.0	<0.10	<10.0	12,700
T3	1'	5/30/2018	In-Situ	<0.05	<0.05	<0.05	<0.150	<0.300	<10.0	<0.10	<10.0	6,400
T3	2'	5/30/2018	In-Situ	<0.05	<0.05	<0.05	<0.150	<0.300	<10.0	<0.10	<10.0	3,200
T3	3'	5/30/2018	In-Situ	<0.05	<0.05	<0.05	<0.150	<0.300	<10.0	<0.10	<10.0	4,200
T3	4'	5/30/2018	In-Situ	<0.05	<0.05	<0.05	<0.150	<0.300	<10.0	<0.10	<10.0	832
T3	5'	5/30/2018	In-Situ	<0.05	<0.05	<0.05	<0.150	<0.300	<10.0	<0.10	<10.0	1,010
T3	6'	5/30/2018	In-Situ	<0.05	<0.05	<0.05	<0.150	<0.300	<10.0	<0.10	<10.0	528
T3	8'	5/30/2018	In-Situ	<0.05	<0.05	<0.05	<0.150	<0.300	<10.0	<0.10	<10.0	-
T3	10'	5/30/2018	In-Situ	<0.05	<0.05	<0.05	<0.150	<0.300	<10.0	<0.10	<10.0	-
T4	Surface	5/30/2018	In-Situ	<0.05	<0.05	<0.05	<0.150	<0.300	<10.0	<0.10	<10.0	128
T4	1'	5/30/2018	In-Situ	<0.05	<0.05	<0.05	<0.150	<0.300	<10.0	<0.10	<10.0	-
T4	2'	5/30/2018	In-Situ	<0.05	<0.05	<0.05	<0.150	<0.300	<10.0	<0.10	<10.0	-
T4	3'	5/30/2018	In-Situ	<0.05	<0.05	<0.05	<0.150	<0.300	<10.0	<0.10	<10.0	-
T4	4'	5/30/2018	In-Situ	<0.05	<0.05	<0.05	<0.150	<0.300	<10.0	<0.10	<10.0	-
T4	5'	5/30/2018	In-Situ	<0.05	<0.05	<0.05	<0.150	<0.300	<10.0	<0.10	<10.0	-
T5	Surface	5/30/2018	In-Situ	<0.05	<0.05	<0.05	<0.150	<0.300	<10.0	<0.10	<10.0	3,160
T5	1'	5/30/2018	In-Situ	<0.05	<0.05	<0.05	<0.150	<0.300	<10.0	<0.10	<10.0	2,720
T5	2'	5/30/2018	In-Situ	<0.05	<0.05	<0.05	<0.150	<0.300	<10.0	<0.10	<10.0	3,800
T5	3'	5/30/2018	In-Situ	<0.05	<0.05	<0.05	<0.150	<0.300	<10.0	<0.10	<10.0	1,620
T5	4'	5/30/2018	In-Situ	<0.05	<0.05	<0.05	<0.150	<0.300	<10.0	<0.10	<10.0	800
T5	5'	5/30/2018	In-Situ	<0.05	<0.05	<0.05	<0.150	<0.300	<10.0	<0.10	<10.0	848
T5	6'	5/30/2018	In-Situ	<0.05	<0.05	<0.05	<0.150	<0.300	<10.0	<0.10	<10.0	704
T5	8'	5/30/2018	In-Situ	<0.05	<0.05	<0.05	<0.150	<0.300	<10.0	<0.10	<10.0	384
T5	10'	5/30/2018	In-Situ	<0.05	<0.05	<0.05	<0.150	<0.300	<10.0	<0.10	<10.0	-
mg/Kg - milligrams per Kilogram												
— = Not Established												
Concentrations in BOLD exceed the NMOCD Guidelines												
	Proposed excavated area											



Appendix A: Form C141 Initial

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 April 3, 2017
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 (OGRID #229137)	Contact: Robert McNeill
Address: 600 West Illinois Avenue, Midland TX 79701	Telephone No. 432-683-7443
Facility Name: GC Federal #055	Facility Type: Flowline
Surface Owner: Federal	Mineral Owner: Federal
API No. 30-025-40007	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
I	19	17S	32E	1,630	South	990	East	Lea

Latitude 32.8173409 Longitude -103.8004608 NAD83

NATURE OF RELEASE

Type of Release: Oil & Produced Water	Volume of Release: 10 bbl. Oil 30 bbl. Produced Water	Volume Recovered: 8 bbl. Oil 25 bbl. Produced Water
Source of Release: Flowline Corrosion	Date and Hour of Occurrence: May 7, 2018 9:00am	Date and Hour of Discovery: May 7, 2018 9:00am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Olivia Yu – NMOCD Henryetta Price – BLM Shelley Tucker - BLM	
By Whom? Sheldon Hitchcock	Date and Hour: May 7, 2018 9:42am	
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.*

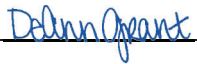
Describe Cause of Problem and Remedial Action Taken.*

The release was caused by a hole in a steel flowline due to corrosion. The flowline is being replaced.

Describe Area Affected and Cleanup Action Taken.*

The release occurred on location. A vacuum truck was dispatched to remove all freestanding fluids. Concho will have the spill area sampled to delineate any possible impact from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation activities.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: 		<u>OIL CONSERVATION DIVISION</u>	
Printed Name: DeAnn Grant		Approved by Environmental Specialist:	
Title: HSE Administrative Assistant	Approval Date:	Expiration Date:	
E-mail Address: agrant@concho.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: May 9, 2018	Phone: 432-253-4513		

* Attach Additional Sheets If Necessary



Appendix B: NMOSE Well Report



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
RA 10175			LE	2	1	28	17S	32E		614814	3631005*	2574	158		
RA 12020 POD1			LE	2	2	1	28	17S	32E	614828	3630954	2600	120	81	39
RA 12042 POD1			LE	2	2	1	28	17S	32E	614891	3631181	2609	400		

Average Depth to Water: **81 feet**

Minimum Depth: **81 feet**

Maximum Depth: **81 feet**

Record Count: 3

UTMNAD83 Radius Search (in meters):

Easting (X): 612328.52

Northing (Y): 3631675.18

Radius: 4828

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

7/11/18 4:21 PM

Page 1 of 1

WATER COLUMN/ AVERAGE
DEPTH TO WATER



Appendix C: Laboratory Analytical Reports



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

June 08, 2018

DAKOTA NEEL

COG OPERATING

P. O. BOX 1630

ARTESIA, NM 88210

RE: GC FEDERAL #55

Enclosed are the results of analyses for samples received by the laboratory on 05/31/18 11:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-10. 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, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 05/31/2018
 Reported: 06/08/2018
 Project Name: GC FEDERAL #55
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 05/30/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T1 - SURFACE (H801489-01)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/04/2018	ND	2.17	108	2.00	0.751		
Toluene*	<0.050	0.050	06/04/2018	ND	2.16	108	2.00	0.514		
Ethylbenzene*	<0.050	0.050	06/04/2018	ND	2.12	106	2.00	0.363		
Total Xylenes*	<0.150	0.150	06/04/2018	ND	6.24	104	6.00	0.166		
Total BTEX	<0.300	0.300	06/04/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 112 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	06/05/2018	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2018	ND	196	98.0	200	0.929	
DRO >C10-C28*	<10.0	10.0	06/02/2018	ND	211	105	200	1.20	
EXT DRO >C28-C36	<10.0	10.0	06/02/2018	ND					

Surrogate: 1-Chlorooctane 82.8 % 41-142

Surrogate: 1-Chlorooctadecane 73.2 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 05/31/2018
 Reported: 06/08/2018
 Project Name: GC FEDERAL #55
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 05/30/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T1 - 1' (H801489-02)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/04/2018	ND	2.17	108	2.00	0.751	
Toluene*	<0.050	0.050	06/04/2018	ND	2.16	108	2.00	0.514	
Ethylbenzene*	<0.050	0.050	06/04/2018	ND	2.12	106	2.00	0.363	
Total Xylenes*	<0.150	0.150	06/04/2018	ND	6.24	104	6.00	0.166	
Total BTEX	<0.300	0.300	06/04/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 69.8-142

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2018	ND	196	98.0	200	0.929	
DRO >C10-C28*	35.3	10.0	06/02/2018	ND	211	105	200	1.20	
EXT DRO >C28-C36	<10.0	10.0	06/02/2018	ND					

Surrogate: 1-Chlorooctane 89.8 % 41-142

Surrogate: 1-Chlorooctadecane 82.4 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 05/31/2018
 Reported: 06/08/2018
 Project Name: GC FEDERAL #55
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 05/30/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T1 - 2' (H801489-03)

BTEX 8021B			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/04/2018	ND	2.17	108	2.00	0.751		
Toluene*	<0.050	0.050	06/04/2018	ND	2.16	108	2.00	0.514		
Ethylbenzene*	<0.050	0.050	06/04/2018	ND	2.12	106	2.00	0.363		
Total Xylenes*	<0.150	0.150	06/04/2018	ND	6.24	104	6.00	0.166		
Total BTEX	<0.300	0.300	06/04/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 69.8-142

TPH 8015M			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	06/02/2018	ND	196	98.0	200	0.929		
DRO >C10-C28*	<10.0	10.0	06/02/2018	ND	211	105	200	1.20		
EXT DRO >C28-C36	<10.0	10.0	06/02/2018	ND						

Surrogate: 1-Chlorooctane 89.9 % 41-142

Surrogate: 1-Chlorooctadecane 81.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 05/31/2018
 Reported: 06/08/2018
 Project Name: GC FEDERAL #55
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 05/30/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T1 - 3' (H801489-04)

BTEx 8021B			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/04/2018	ND	2.17	108	2.00	0.751		
Toluene*	<0.050	0.050	06/04/2018	ND	2.16	108	2.00	0.514		
Ethylbenzene*	<0.050	0.050	06/04/2018	ND	2.12	106	2.00	0.363		
Total Xylenes*	<0.150	0.150	06/04/2018	ND	6.24	104	6.00	0.166		
Total BTEX	<0.300	0.300	06/04/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 69.8-142

TPH 8015M			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	06/02/2018	ND	196	98.0	200	0.929		
DRO >C10-C28*	<10.0	10.0	06/02/2018	ND	211	105	200	1.20		
EXT DRO >C28-C36	<10.0	10.0	06/02/2018	ND						

Surrogate: 1-Chlorooctane 88.9 % 41-142

Surrogate: 1-Chlorooctadecane 80.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 05/31/2018
 Reported: 06/08/2018
 Project Name: GC FEDERAL #55
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 05/30/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T2 - SURFACE (H801489-05)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/04/2018	ND	2.17	108	2.00	0.751		
Toluene*	<0.050	0.050	06/04/2018	ND	2.16	108	2.00	0.514		
Ethylbenzene*	<0.050	0.050	06/04/2018	ND	2.12	106	2.00	0.363		
Total Xylenes*	<0.150	0.150	06/04/2018	ND	6.24	104	6.00	0.166		
Total BTEX	<0.300	0.300	06/04/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.8 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	06/05/2018	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2018	ND	196	98.0	200	0.929	
DRO >C10-C28*	<10.0	10.0	06/02/2018	ND	211	105	200	1.20	
EXT DRO >C28-C36	<10.0	10.0	06/02/2018	ND					

Surrogate: 1-Chlorooctane 85.7 % 41-142

Surrogate: 1-Chlorooctadecane 77.0 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 05/31/2018
 Reported: 06/08/2018
 Project Name: GC FEDERAL #55
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 05/30/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T2 - 1' (H801489-06)

BTEx 8021B			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/04/2018	ND	2.17	108	2.00	0.751		
Toluene*	<0.050	0.050	06/04/2018	ND	2.16	108	2.00	0.514		
Ethylbenzene*	<0.050	0.050	06/04/2018	ND	2.12	106	2.00	0.363		
Total Xylenes*	<0.150	0.150	06/04/2018	ND	6.24	104	6.00	0.166		
Total BTEX	<0.300	0.300	06/04/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 69.8-142

TPH 8015M			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	06/02/2018	ND	196	98.0	200	0.929		
DRO >C10-C28*	<10.0	10.0	06/02/2018	ND	211	105	200	1.20		
EXT DRO >C28-C36	<10.0	10.0	06/02/2018	ND						

Surrogate: 1-Chlorooctane 90.7 % 41-142

Surrogate: 1-Chlorooctadecane 82.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 05/31/2018
 Reported: 06/08/2018
 Project Name: GC FEDERAL #55
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 05/30/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T2 - 2' (H801489-07)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/02/2018	ND	1.80	90.0	2.00	1.24		
Toluene*	<0.050	0.050	06/02/2018	ND	1.76	88.0	2.00	1.44		
Ethylbenzene*	<0.050	0.050	06/02/2018	ND	1.74	87.2	2.00	0.914		
Total Xylenes*	<0.150	0.150	06/02/2018	ND	5.36	89.3	6.00	0.940		
Total BTEX	<0.300	0.300	06/02/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 117 % 69.8-142

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2018	ND	196	98.0	200	0.929	
DRO >C10-C28*	<10.0	10.0	06/02/2018	ND	211	105	200	1.20	
EXT DRO >C28-C36	<10.0	10.0	06/02/2018	ND					

Surrogate: 1-Chlorooctane 93.2 % 41-142

Surrogate: 1-Chlorooctadecane 83.4 % 37.6-147

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Analytical Results For:

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

Received: 05/31/2018
 Reported: 06/08/2018
 Project Name: GC FEDERAL #55
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 05/30/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T2 - 3' (H801489-08)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/02/2018	ND	1.80	90.0	2.00	1.24		
Toluene*	<0.050	0.050	06/02/2018	ND	1.76	88.0	2.00	1.44		
Ethylbenzene*	<0.050	0.050	06/02/2018	ND	1.74	87.2	2.00	0.914		
Total Xylenes*	<0.150	0.150	06/02/2018	ND	5.36	89.3	6.00	0.940		
Total BTEX	<0.300	0.300	06/02/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 114 % 69.8-142

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2018	ND	196	98.0	200	0.929	
DRO >C10-C28*	<10.0	10.0	06/02/2018	ND	211	105	200	1.20	
EXT DRO >C28-C36	<10.0	10.0	06/02/2018	ND					

Surrogate: 1-Chlorooctane 84.6 % 41-142

Surrogate: 1-Chlorooctadecane 76.2 % 37.6-147

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Analytical Results For:

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

Received: 05/31/2018
 Reported: 06/08/2018
 Project Name: GC FEDERAL #55
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 05/30/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T2 - 4' (H801489-09)

BTX 8021B			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/02/2018	ND	1.80	90.0	2.00	1.24		
Toluene*	<0.050	0.050	06/02/2018	ND	1.76	88.0	2.00	1.44		
Ethylbenzene*	<0.050	0.050	06/02/2018	ND	1.74	87.2	2.00	0.914		
Total Xylenes*	<0.150	0.150	06/02/2018	ND	5.36	89.3	6.00	0.940		
Total BTX	<0.300	0.300	06/02/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 113 % 69.8-142

TPH 8015M			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	06/02/2018	ND	196	98.0	200	0.929		
DRO >C10-C28*	<10.0	10.0	06/02/2018	ND	211	105	200	1.20		
EXT DRO >C28-C36	<10.0	10.0	06/02/2018	ND						

Surrogate: 1-Chlorooctane 89.1 % 41-142

Surrogate: 1-Chlorooctadecane 80.6 % 37.6-147

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Analytical Results For:

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

Received: 05/31/2018
 Reported: 06/08/2018
 Project Name: GC FEDERAL #55
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 05/30/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T2 - 5' (H801489-10)

BTX 8021B			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/02/2018	ND	1.80	90.0	2.00	1.24		
Toluene*	<0.050	0.050	06/02/2018	ND	1.76	88.0	2.00	1.44		
Ethylbenzene*	<0.050	0.050	06/02/2018	ND	1.74	87.2	2.00	0.914		
Total Xylenes*	<0.150	0.150	06/02/2018	ND	5.36	89.3	6.00	0.940		
Total BTX	<0.300	0.300	06/02/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 69.8-142

TPH 8015M			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	06/02/2018	ND	196	98.0	200	0.929		
DRO >C10-C28*	<10.0	10.0	06/02/2018	ND	211	105	200	1.20		
EXT DRO >C28-C36	<10.0	10.0	06/02/2018	ND						

Surrogate: 1-Chlorooctane 89.7 % 41-142

Surrogate: 1-Chlorooctadecane 80.3 % 37.6-147

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Analytical Results For:

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

Received: 05/31/2018
 Reported: 06/08/2018
 Project Name: GC FEDERAL #55
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 05/30/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T3 - SURFACE (H801489-11)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/02/2018	ND	1.80	90.0	2.00	1.24		
Toluene*	<0.050	0.050	06/02/2018	ND	1.76	88.0	2.00	1.44		
Ethylbenzene*	<0.050	0.050	06/02/2018	ND	1.74	87.2	2.00	0.914		
Total Xylenes*	<0.150	0.150	06/02/2018	ND	5.36	89.3	6.00	0.940		
Total BTEx	<0.300	0.300	06/02/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	12700	16.0	06/05/2018	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2018	ND	196	98.0	200	0.929	
DRO >C10-C28*	<10.0	10.0	06/02/2018	ND	211	105	200	1.20	
EXT DRO >C28-C36	<10.0	10.0	06/02/2018	ND					

Surrogate: 1-Chlorooctane 79.1 % 41-142

Surrogate: 1-Chlorooctadecane 71.3 % 37.6-147

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Analytical Results For:

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

Received: 05/31/2018
 Reported: 06/08/2018
 Project Name: GC FEDERAL #55
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 05/30/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T3 - 1' (H801489-12)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/02/2018	ND	1.80	90.0	2.00	1.24		
Toluene*	<0.050	0.050	06/02/2018	ND	1.76	88.0	2.00	1.44		
Ethylbenzene*	<0.050	0.050	06/02/2018	ND	1.74	87.2	2.00	0.914		
Total Xylenes*	<0.150	0.150	06/02/2018	ND	5.36	89.3	6.00	0.940		
Total BTEx	<0.300	0.300	06/02/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6400	16.0	06/05/2018	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2018	ND	196	98.0	200	0.929	
DRO >C10-C28*	<10.0	10.0	06/02/2018	ND	211	105	200	1.20	
EXT DRO >C28-C36	<10.0	10.0	06/02/2018	ND					

Surrogate: 1-Chlorooctane 87.3 % 41-142

Surrogate: 1-Chlorooctadecane 78.9 % 37.6-147

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Analytical Results For:

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

Received: 05/31/2018
 Reported: 06/08/2018
 Project Name: GC FEDERAL #55
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 05/30/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T3 - 2' (H801489-13)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/02/2018	ND	1.80	90.0	2.00	1.24	
Toluene*	<0.050	0.050	06/02/2018	ND	1.76	88.0	2.00	1.44	
Ethylbenzene*	<0.050	0.050	06/02/2018	ND	1.74	87.2	2.00	0.914	
Total Xylenes*	<0.150	0.150	06/02/2018	ND	5.36	89.3	6.00	0.940	
Total BTEX	<0.300	0.300	06/02/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3200	16.0	06/05/2018	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2018	ND	196	98.0	200	0.929	
DRO >C10-C28*	<10.0	10.0	06/02/2018	ND	211	105	200	1.20	
EXT DRO >C28-C36	<10.0	10.0	06/02/2018	ND					

Surrogate: 1-Chlorooctane 88.0 % 41-142

Surrogate: 1-Chlorooctadecane 79.9 % 37.6-147

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Analytical Results For:

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

Received: 05/31/2018
 Reported: 06/08/2018
 Project Name: GC FEDERAL #55
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 05/30/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T3 - 3' (H801489-14)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/02/2018	ND	1.80	90.0	2.00	1.24		
Toluene*	<0.050	0.050	06/02/2018	ND	1.76	88.0	2.00	1.44		
Ethylbenzene*	<0.050	0.050	06/02/2018	ND	1.74	87.2	2.00	0.914		
Total Xylenes*	<0.150	0.150	06/02/2018	ND	5.36	89.3	6.00	0.940		
Total BTEX	<0.300	0.300	06/02/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4200	16.0	06/05/2018	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2018	ND	196	98.0	200	0.929	
DRO >C10-C28*	<10.0	10.0	06/02/2018	ND	211	105	200	1.20	
EXT DRO >C28-C36	<10.0	10.0	06/02/2018	ND					

Surrogate: 1-Chlorooctane 85.5 % 41-142

Surrogate: 1-Chlorooctadecane 77.7 % 37.6-147

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Analytical Results For:

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

Received: 05/31/2018
 Reported: 06/08/2018
 Project Name: GC FEDERAL #55
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 05/30/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T3 - 4' (H801489-15)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/02/2018	ND	1.80	90.0	2.00	1.24		
Toluene*	<0.050	0.050	06/02/2018	ND	1.76	88.0	2.00	1.44		
Ethylbenzene*	<0.050	0.050	06/02/2018	ND	1.74	87.2	2.00	0.914		
Total Xylenes*	<0.150	0.150	06/02/2018	ND	5.36	89.3	6.00	0.940		
Total BTEx	<0.300	0.300	06/02/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	832	16.0	06/05/2018	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2018	ND	196	98.0	200	0.929	
DRO >C10-C28*	<10.0	10.0	06/02/2018	ND	211	105	200	1.20	
EXT DRO >C28-C36	<10.0	10.0	06/02/2018	ND					

Surrogate: 1-Chlorooctane 86.7 % 41-142

Surrogate: 1-Chlorooctadecane 81.2 % 37.6-147

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

Analytical Results For:

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

Received: 05/31/2018
 Reported: 06/08/2018
 Project Name: GC FEDERAL #55
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 05/30/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T3 - 5' (H801489-16)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/02/2018	ND	1.80	90.0	2.00	1.24		
Toluene*	<0.050	0.050	06/02/2018	ND	1.76	88.0	2.00	1.44		
Ethylbenzene*	<0.050	0.050	06/02/2018	ND	1.74	87.2	2.00	0.914		
Total Xylenes*	<0.150	0.150	06/02/2018	ND	5.36	89.3	6.00	0.940		
Total BTEX	<0.300	0.300	06/02/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1010	16.0	06/05/2018	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2018	ND	196	98.0	200	0.929	
DRO >C10-C28*	<10.0	10.0	06/02/2018	ND	211	105	200	1.20	
EXT DRO >C28-C36	<10.0	10.0	06/02/2018	ND					

Surrogate: 1-Chlorooctane 81.4 % 41-142

Surrogate: 1-Chlorooctadecane 72.6 % 37.6-147

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Analytical Results For:

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

Received: 05/31/2018
 Reported: 06/08/2018
 Project Name: GC FEDERAL #55
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 05/30/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T3 - 6' (H801489-17)

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/02/2018	ND	1.80	90.0	2.00	1.24		
Toluene*	<0.050	0.050	06/02/2018	ND	1.76	88.0	2.00	1.44		
Ethylbenzene*	<0.050	0.050	06/02/2018	ND	1.74	87.2	2.00	0.914		
Total Xylenes*	<0.150	0.150	06/02/2018	ND	5.36	89.3	6.00	0.940		
Total BTX	<0.300	0.300	06/02/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	528	16.0	06/05/2018	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/01/2018	ND	170	85.0	200	12.3	
DRO >C10-C28*	<10.0	10.0	06/01/2018	ND	174	87.2	200	11.9	
EXT DRO >C28-C36	<10.0	10.0	06/01/2018	ND					

Surrogate: 1-Chlorooctane 44.4 % 41-142

Surrogate: 1-Chlorooctadecane 46.0 % 37.6-147

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Analytical Results For:

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

Received: 05/31/2018
 Reported: 06/08/2018
 Project Name: GC FEDERAL #55
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 05/30/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T3 - 8' (H801489-18)

BTEx 8021B			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/02/2018	ND	1.80	90.0	2.00	1.24		
Toluene*	<0.050	0.050	06/02/2018	ND	1.76	88.0	2.00	1.44		
Ethylbenzene*	<0.050	0.050	06/02/2018	ND	1.74	87.2	2.00	0.914		
Total Xylenes*	<0.150	0.150	06/02/2018	ND	5.36	89.3	6.00	0.940		
Total BTEX	<0.300	0.300	06/02/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 69.8-142

TPH 8015M			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	06/01/2018	ND	170	85.0	200	12.3		
DRO >C10-C28*	<10.0	10.0	06/01/2018	ND	174	87.2	200	11.9		
EXT DRO >C28-C36	<10.0	10.0	06/01/2018	ND						

Surrogate: 1-Chlorooctane 47.2 % 41-142

Surrogate: 1-Chlorooctadecane 49.4 % 37.6-147

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Analytical Results For:

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

Received: 05/31/2018
 Reported: 06/08/2018
 Project Name: GC FEDERAL #55
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 05/30/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T3 - 10' (H801489-19)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/02/2018	ND	1.80	90.0	2.00	1.24		
Toluene*	<0.050	0.050	06/02/2018	ND	1.76	88.0	2.00	1.44		
Ethylbenzene*	<0.050	0.050	06/02/2018	ND	1.74	87.2	2.00	0.914		
Total Xylenes*	<0.150	0.150	06/02/2018	ND	5.36	89.3	6.00	0.940		
Total BTEX	<0.300	0.300	06/02/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 107 % 69.8-142

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/01/2018	ND	170	85.0	200	12.3	
DRO >C10-C28*	<10.0	10.0	06/01/2018	ND	174	87.2	200	11.9	
EXT DRO >C28-C36	<10.0	10.0	06/01/2018	ND					

Surrogate: 1-Chlorooctane 60.5 % 41-142

Surrogate: 1-Chlorooctadecane 63.5 % 37.6-147

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Analytical Results For:

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

Received: 05/31/2018
 Reported: 06/08/2018
 Project Name: GC FEDERAL #55
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 05/30/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T4 - SURFACE (H801489-20)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/02/2018	ND	1.80	90.0	2.00	1.24		
Toluene*	<0.050	0.050	06/02/2018	ND	1.76	88.0	2.00	1.44		
Ethylbenzene*	<0.050	0.050	06/02/2018	ND	1.74	87.2	2.00	0.914		
Total Xylenes*	<0.150	0.150	06/02/2018	ND	5.36	89.3	6.00	0.940		
Total BTEx	<0.300	0.300	06/02/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	06/05/2018	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/01/2018	ND	170	85.0	200	12.3	
DRO >C10-C28*	<10.0	10.0	06/01/2018	ND	174	87.2	200	11.9	
EXT DRO >C28-C36	<10.0	10.0	06/01/2018	ND					

Surrogate: 1-Chlorooctane 68.3 % 41-142

Surrogate: 1-Chlorooctadecane 71.5 % 37.6-147

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Analytical Results For:

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

Received: 05/31/2018
 Reported: 06/08/2018
 Project Name: GC FEDERAL #55
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 05/30/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T4 - 1' (H801489-21)

BTX 8021B			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/02/2018	ND	1.80	90.0	2.00	1.24		
Toluene*	<0.050	0.050	06/02/2018	ND	1.76	88.0	2.00	1.44		
Ethylbenzene*	<0.050	0.050	06/02/2018	ND	1.74	87.2	2.00	0.914		
Total Xylenes*	<0.150	0.150	06/02/2018	ND	5.36	89.3	6.00	0.940		
Total BTX	<0.300	0.300	06/02/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.8-142

TPH 8015M			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	06/01/2018	ND	170	85.0	200	12.3		
DRO >C10-C28*	<10.0	10.0	06/01/2018	ND	174	87.2	200	11.9		
EXT DRO >C28-C36	<10.0	10.0	06/01/2018	ND						

Surrogate: 1-Chlorooctane 71.3 % 41-142

Surrogate: 1-Chlorooctadecane 74.8 % 37.6-147

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Analytical Results For:

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

Received: 05/31/2018
 Reported: 06/08/2018
 Project Name: GC FEDERAL #55
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 05/30/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T4 - 2' (H801489-22)

BTEx 8021B			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/02/2018	ND	1.80	90.0	2.00	1.24		
Toluene*	<0.050	0.050	06/02/2018	ND	1.76	88.0	2.00	1.44		
Ethylbenzene*	<0.050	0.050	06/02/2018	ND	1.74	87.2	2.00	0.914		
Total Xylenes*	<0.150	0.150	06/02/2018	ND	5.36	89.3	6.00	0.940		
Total BTEX	<0.300	0.300	06/02/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.8-142

TPH 8015M			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	06/01/2018	ND	170	85.0	200	12.3		
DRO >C10-C28*	<10.0	10.0	06/01/2018	ND	174	87.2	200	11.9		
EXT DRO >C28-C36	<10.0	10.0	06/01/2018	ND						

Surrogate: 1-Chlorooctane 64.6 % 41-142

Surrogate: 1-Chlorooctadecane 65.7 % 37.6-147

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Analytical Results For:

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

Received: 05/31/2018
 Reported: 06/08/2018
 Project Name: GC FEDERAL #55
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 05/30/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T4 - 3' (H801489-23)

BTX 8021B			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/02/2018	ND	1.80	90.0	2.00	1.24		
Toluene*	<0.050	0.050	06/02/2018	ND	1.76	88.0	2.00	1.44		
Ethylbenzene*	<0.050	0.050	06/02/2018	ND	1.74	87.2	2.00	0.914		
Total Xylenes*	<0.150	0.150	06/02/2018	ND	5.36	89.3	6.00	0.940		
Total BTX	<0.300	0.300	06/02/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 69.8-142

TPH 8015M			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	06/01/2018	ND	170	85.0	200	12.3		
DRO >C10-C28*	<10.0	10.0	06/01/2018	ND	174	87.2	200	11.9		
EXT DRO >C28-C36	<10.0	10.0	06/01/2018	ND						

Surrogate: 1-Chlorooctane 70.9 % 41-142

Surrogate: 1-Chlorooctadecane 74.0 % 37.6-147

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Analytical Results For:

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

Received: 05/31/2018
 Reported: 06/08/2018
 Project Name: GC FEDERAL #55
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 05/30/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T4 - 4' (H801489-24)

BTEx 8021B			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/02/2018	ND	1.80	90.0	2.00	1.24		
Toluene*	<0.050	0.050	06/02/2018	ND	1.76	88.0	2.00	1.44		
Ethylbenzene*	<0.050	0.050	06/02/2018	ND	1.74	87.2	2.00	0.914		
Total Xylenes*	<0.150	0.150	06/02/2018	ND	5.36	89.3	6.00	0.940		
Total BTEX	<0.300	0.300	06/02/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 69.8-142

TPH 8015M			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	06/01/2018	ND	170	85.0	200	12.3		
DRO >C10-C28*	<10.0	10.0	06/01/2018	ND	174	87.2	200	11.9		
EXT DRO >C28-C36	<10.0	10.0	06/01/2018	ND						

Surrogate: 1-Chlorooctane 61.3 % 41-142

Surrogate: 1-Chlorooctadecane 64.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 05/31/2018
 Reported: 06/08/2018
 Project Name: GC FEDERAL #55
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 05/30/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T4 - 5' (H801489-25)

BTEx 8021B			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/04/2018	ND	2.08	104	2.00	2.18		
Toluene*	<0.050	0.050	06/04/2018	ND	2.06	103	2.00	2.34		
Ethylbenzene*	<0.050	0.050	06/04/2018	ND	2.06	103	2.00	2.02		
Total Xylenes*	<0.150	0.150	06/04/2018	ND	6.40	107	6.00	2.30		
Total BTEX	<0.300	0.300	06/04/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 69.8-142

TPH 8015M			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	06/01/2018	ND	170	85.0	200	12.3		
DRO >C10-C28*	<10.0	10.0	06/01/2018	ND	174	87.2	200	11.9		
EXT DRO >C28-C36	<10.0	10.0	06/01/2018	ND						

Surrogate: 1-Chlorooctane 73.6 % 41-142

Surrogate: 1-Chlorooctadecane 77.9 % 37.6-147

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Analytical Results For:

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

Received: 05/31/2018
 Reported: 06/08/2018
 Project Name: GC FEDERAL #55
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 05/30/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T5 - SURFACE (H801489-26)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/04/2018	ND	2.08	104	2.00	2.18		
Toluene*	<0.050	0.050	06/04/2018	ND	2.06	103	2.00	2.34		
Ethylbenzene*	<0.050	0.050	06/04/2018	ND	2.06	103	2.00	2.02		
Total Xylenes*	<0.150	0.150	06/04/2018	ND	6.40	107	6.00	2.30		
Total BTEx	<0.300	0.300	06/04/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 113 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3160	16.0	06/05/2018	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/01/2018	ND	170	85.0	200	12.3	
DRO >C10-C28*	471	10.0	06/01/2018	ND	174	87.2	200	11.9	
EXT DRO >C28-C36	118	10.0	06/01/2018	ND					

Surrogate: 1-Chlorooctane 77.5 % 41-142

Surrogate: 1-Chlorooctadecane 119 % 37.6-147

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Analytical Results For:

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

Received: 05/31/2018
 Reported: 06/08/2018
 Project Name: GC FEDERAL #55
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 05/30/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T5 - 1' (H801489-27)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/04/2018	ND	2.08	104	2.00	2.18	
Toluene*	<0.050	0.050	06/04/2018	ND	2.06	103	2.00	2.34	
Ethylbenzene*	<0.050	0.050	06/04/2018	ND	2.06	103	2.00	2.02	
Total Xylenes*	<0.150	0.150	06/04/2018	ND	6.40	107	6.00	2.30	
Total BTEX	<0.300	0.300	06/04/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2720	16.0	06/05/2018	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/01/2018	ND	170	85.0	200	12.3	
DRO >C10-C28*	<10.0	10.0	06/01/2018	ND	174	87.2	200	11.9	
EXT DRO >C28-C36	<10.0	10.0	06/01/2018	ND					

Surrogate: 1-Chlorooctane 72.0 % 41-142

Surrogate: 1-Chlorooctadecane 78.1 % 37.6-147

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Analytical Results For:

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

Received: 05/31/2018
 Reported: 06/08/2018
 Project Name: GC FEDERAL #55
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 05/30/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T5 - 2' (H801489-28)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/04/2018	ND	2.08	104	2.00	2.18	
Toluene*	<0.050	0.050	06/04/2018	ND	2.06	103	2.00	2.34	
Ethylbenzene*	<0.050	0.050	06/04/2018	ND	2.06	103	2.00	2.02	
Total Xylenes*	<0.150	0.150	06/04/2018	ND	6.40	107	6.00	2.30	
Total BTEX	<0.300	0.300	06/04/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3800	16.0	06/05/2018	ND	432	108	400	0.00	QM-07	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/01/2018	ND	170	85.0	200	12.3	
DRO >C10-C28*	<10.0	10.0	06/01/2018	ND	174	87.2	200	11.9	
EXT DRO >C28-C36	<10.0	10.0	06/01/2018	ND					

Surrogate: 1-Chlorooctane 72.3 % 41-142

Surrogate: 1-Chlorooctadecane 77.2 % 37.6-147

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Analytical Results For:

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

Received: 05/31/2018
 Reported: 06/08/2018
 Project Name: GC FEDERAL #55
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 05/30/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T5 - 3' (H801489-29)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/04/2018	ND	2.08	104	2.00	2.18		
Toluene*	<0.050	0.050	06/04/2018	ND	2.06	103	2.00	2.34		
Ethylbenzene*	<0.050	0.050	06/04/2018	ND	2.06	103	2.00	2.02		
Total Xylenes*	<0.150	0.150	06/04/2018	ND	6.40	107	6.00	2.30		
Total BTEX	<0.300	0.300	06/04/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 112 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1620	16.0	06/05/2018	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2018	ND	170	85.0	200	12.3	
DRO >C10-C28*	<10.0	10.0	06/02/2018	ND	174	87.2	200	11.9	
EXT DRO >C28-C36	<10.0	10.0	06/02/2018	ND					

Surrogate: 1-Chlorooctane 72.8 % 41-142

Surrogate: 1-Chlorooctadecane 76.7 % 37.6-147

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Analytical Results For:

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

Received: 05/31/2018
 Reported: 06/08/2018
 Project Name: GC FEDERAL #55
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 05/30/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T5 - 4' (H801489-30)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/04/2018	ND	2.08	104	2.00	2.18		
Toluene*	<0.050	0.050	06/04/2018	ND	2.06	103	2.00	2.34		
Ethylbenzene*	<0.050	0.050	06/04/2018	ND	2.06	103	2.00	2.02		
Total Xylenes*	<0.150	0.150	06/04/2018	ND	6.40	107	6.00	2.30		
Total BTEX	<0.300	0.300	06/04/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	800	16.0	06/05/2018	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2018	ND	170	85.0	200	12.3	
DRO >C10-C28*	<10.0	10.0	06/02/2018	ND	174	87.2	200	11.9	
EXT DRO >C28-C36	<10.0	10.0	06/02/2018	ND					

Surrogate: 1-Chlorooctane 75.7 % 41-142

Surrogate: 1-Chlorooctadecane 80.1 % 37.6-147

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Analytical Results For:

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

Received: 05/31/2018
 Reported: 06/08/2018
 Project Name: GC FEDERAL #55
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 05/30/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T5 - 5' (H801489-31)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/04/2018	ND	2.08	104	2.00	2.18		
Toluene*	<0.050	0.050	06/04/2018	ND	2.06	103	2.00	2.34		
Ethylbenzene*	<0.050	0.050	06/04/2018	ND	2.06	103	2.00	2.02		
Total Xylenes*	<0.150	0.150	06/04/2018	ND	6.40	107	6.00	2.30		
Total BTEX	<0.300	0.300	06/04/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	848	16.0	06/05/2018	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2018	ND	170	85.0	200	12.3	
DRO >C10-C28*	<10.0	10.0	06/02/2018	ND	174	87.2	200	11.9	
EXT DRO >C28-C36	<10.0	10.0	06/02/2018	ND					

Surrogate: 1-Chlorooctane 67.2 % 41-142

Surrogate: 1-Chlorooctadecane 70.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received: 05/31/2018
 Reported: 06/08/2018
 Project Name: GC FEDERAL #55
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 05/30/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T5 - 6' (H801489-32)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/04/2018	ND	2.08	104	2.00	2.18		
Toluene*	<0.050	0.050	06/04/2018	ND	2.06	103	2.00	2.34		
Ethylbenzene*	<0.050	0.050	06/04/2018	ND	2.06	103	2.00	2.02		
Total Xylenes*	<0.150	0.150	06/04/2018	ND	6.40	107	6.00	2.30		
Total BTEX	<0.300	0.300	06/04/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 107 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	704	16.0	06/05/2018	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2018	ND	170	85.0	200	12.3	
DRO >C10-C28*	<10.0	10.0	06/02/2018	ND	174	87.2	200	11.9	
EXT DRO >C28-C36	<10.0	10.0	06/02/2018	ND					

Surrogate: 1-Chlorooctane 74.5 % 41-142

Surrogate: 1-Chlorooctadecane 79.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 05/31/2018
 Reported: 06/08/2018
 Project Name: GC FEDERAL #55
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 05/30/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T5 - 8' (H801489-33)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/04/2018	ND	2.08	104	2.00	2.18		
Toluene*	<0.050	0.050	06/04/2018	ND	2.06	103	2.00	2.34		
Ethylbenzene*	<0.050	0.050	06/04/2018	ND	2.06	103	2.00	2.02		
Total Xylenes*	<0.150	0.150	06/04/2018	ND	6.40	107	6.00	2.30		
Total BTEX	<0.300	0.300	06/04/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	384	16.0	06/05/2018	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2018	ND	170	85.0	200	12.3	
DRO >C10-C28*	<10.0	10.0	06/02/2018	ND	174	87.2	200	11.9	
EXT DRO >C28-C36	<10.0	10.0	06/02/2018	ND					

Surrogate: 1-Chlorooctane 75.5 % 41-142

Surrogate: 1-Chlorooctadecane 79.9 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 05/31/2018
 Reported: 06/08/2018
 Project Name: GC FEDERAL #55
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 05/30/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: T5 - 10' (H801489-34)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/04/2018	ND	2.08	104	2.00	2.18		
Toluene*	<0.050	0.050	06/04/2018	ND	2.06	103	2.00	2.34		
Ethylbenzene*	<0.050	0.050	06/04/2018	ND	2.06	103	2.00	2.02		
Total Xylenes*	<0.150	0.150	06/04/2018	ND	6.40	107	6.00	2.30		
Total BTEX	<0.300	0.300	06/04/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 69.8-142

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2018	ND	170	85.0	200	12.3	
DRO >C10-C28*	<10.0	10.0	06/02/2018	ND	174	87.2	200	11.9	
EXT DRO >C28-C36	<10.0	10.0	06/02/2018	ND					

Surrogate: 1-Chlorooctane 64.9 % 41-142

Surrogate: 1-Chlorooctadecane 67.3 % 37.6-147

Cardinal Laboratories

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Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

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A handwritten signature in black ink, appearing to read "Celey D. Keene", is written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

10F4

Company Name: COG Operating LLC				P.O. #:				BILL TO				ANALYSIS REQUEST			
Project Manager: Dakota Neel				Company: COG Operating LLC											
Address: 2208 West Main				Attn: Robert McNeill											
City: Artesia	State: NM			Zip: 88210			Address: 600 W Illinois								
Phone #: (575) 748-6930	Fax #:			City: Midland				State: TX				Zip: 79701			
Project #:				Project Owner:				Phone #: (432) 221-0388				Fax #:			
Project Location:				Sampler Name: Dakota Neel											
FOR LAB USE ONLY															
Lab I.D. Sample I.D.				(G)RAB OR (C)OMP.				# CONTAINERS				DATE TIME			
				T1-SURFACE											
H801489 1 2 3 4 5 T2-SURFACE T2-1' T2-2' T2-3' T2-4' T2-5'				T1-1'				X				5/30/18 8:00 AM			
				T1-2'											
				T1-3'				X				5/30/18 8:00 AM			
				T2-SURFACE											
				T2-1'				X				5/30/18 8:00 AM			
				T2-2'											
				T2-3'				X				5/30/18 8:00 AM			
				T2-4'											
				T2-5'				X				5/30/18 8:00 AM			
				MATRIX				PRESERV.				SAMPLING			
				GROUNDWATER											
				WASTEWATER				ACID/BASE:				ICE / COOL			
				SOIL											
				OIL				OTHER :				OTHER :			
				SLUDGE											
				OTHER :				BTEx				TPH			
				CLORIDE											
				CLORIDE				X				X			



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2054

Page 38 of 40



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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 39 of 40

BILL TO										ANALYSIS REQUEST																																							
Company Name: COG Operating LLC										P.O. #:																																							
Project Manager: Dakota Neel										Company: COG Operating LLC																																							
Address: 2208 West Main										Attn: Robert McNeill																																							
City: Artesia					State: NM					Zip: 88210					Address: 600 W Illinois																																		
Phone #: (575) 748-6930					Fax #:					City: Midland					State: TX																																		
Project #: GC Federal #55										Zip: 79701																																							
Project Location:										Phone #: (432) 221-0388																																							
Sample Name: Dakota Neel										Fax #:																																							
FOR LAB USE ONLY																																																	
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					BTEX					TPH					Chloride									
F801489										T4-SURFACE										X					X					X					X					X									
20										T4-1'										X					X					X					X					X									
21										T4-2'										X					X					X					X					X									
22										T4-3'										X					X					X					X					X									
23										T4-4'										X					X					X					X					X									
24										T4-5'										X					X					X					X					X									
25																																																	

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Reinquired By: _____	Date: 5-31-18	Received By: [Signature]
Relinquished By: _____	Time: 11:30	Received By: [Signature]
Delivered By: (Circle One)	Time: _____	SAMPLE CONDITION <input checked="" type="checkbox"/> Cool <input checked="" type="checkbox"/> Intact <input type="checkbox"/> Yes <input type="checkbox"/> No
Sampler - UPS - Bus - Other: _____	Time: _____	CHECKED BY: (Initials) YD HNS

REMARKS: dneel@concho.com

PHONE RESULT: ☐ YES ☐ NO ADD'l PHONE #: _____
 FAX RESULT: ☐ YES ☐ NO ADD'l FAX #: _____



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name:	COG Operating LLC	P.O. #:	
Project Manager:	Dakota Neel	Company:	COG Operating LLC
Address:	2208 West Main	Attn:	Robert McNeill
City:	Artesia	State:	NM
Phone #:	(575) 748-6930	Fax #:	600 W Illinois
Project #:		City:	Midland
Project Name:	GC Federal #55	State:	TX
Project Location:		Zip:	79701
Sample Name:	Dakota Neel	Phone #:	(432) 221-0388
		Fax #:	

FOR LAB USE ONLY		Sample I.D.		DATE		TIME		BTEX		TPH		Chloride																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
		(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										

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Relinquished By:

Received By:

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

Fax Result: ☐ Yes ☐ No Add'l Fax #:

REMARKS: dneel2@concho.com

Relinquished By:

Received By:

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

Fax Result: ☐ Yes ☐ No Add'l Fax #:

REMARKS:

Delivered By: (Circle One)

Sample Condition

CHECKED BY:

Sampler - UPS - Bus - Other:

Cool ☐ Intact ☒

(Initials)

3. Please fax written changes to 575-393-2476

APPENDIX VI

09/18/2018 08:06

 **CONCHO** COG Operating LLC

G C FEDERAL #55

UNIT 1, SEC. 19-T17S-R32E

1630' FSL & 990' FEL

LEA CO., NM NMLC-029405B

API #30-025-40007

09/18/2018 16:01



09/20/2018 11:37



APPENDIX VII



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

September 24, 2018

LUPE CARRASCO

HRL COMPLIANCE SOLUTIONS, INC.

2385 F 1/2 ROAD

GRAND JUNCTION, CO 81505

RE: GC FERDERAL #55

Enclosed are the results of analyses for samples received by the laboratory on 09/19/18 12:03.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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



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

Analytical Results For:

HRL COMPLIANCE SOLUTIONS, INC.
 LUPE CARRASCO
 2385 F 1/2 ROAD
 GRAND JUNCTION CO, 81505
 Fax To:

Received: 09/19/2018
 Reported: 09/24/2018
 Project Name: GC FERDERAL #55
 Project Number: NONE GIVEN
 Project Location: COG

Sampling Date: 09/18/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Brittany Feller

Sample ID: NORTH T5 (H802649-01)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/21/2018	ND	2.14	107	2.00	0.780	
Toluene*	<0.050	0.050	09/21/2018	ND	2.21	111	2.00	2.22	
Ethylbenzene*	<0.050	0.050	09/21/2018	ND	2.29	114	2.00	2.08	
Total Xylenes*	<0.150	0.150	09/21/2018	ND	6.60	110	6.00	1.99	
Total BTX	<0.300	0.300	09/21/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	09/22/2018	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/21/2018	ND	213	106	200	2.64	
DRO >C10-C28*	<10.0	10.0	09/21/2018	ND	184	92.0	200	3.46	
EXT DRO >C28-C36	<10.0	10.0	09/21/2018	ND					

Surrogate: 1-Chlorooctane 85.3 % 41-142

Surrogate: 1-Chlorooctadecane 84.0 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

HRL COMPLIANCE SOLUTIONS, INC.
 LUPE CARRASCO
 2385 F 1/2 ROAD
 GRAND JUNCTION CO, 81505
 Fax To:

Received: 09/19/2018
 Reported: 09/24/2018
 Project Name: GC FERDERAL #55
 Project Number: NONE GIVEN
 Project Location: COG

Sampling Date: 09/18/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Brittany Feller

Sample ID: SOUTH T5 (H802649-02)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/21/2018	ND	2.14	107	2.00	0.780	
Toluene*	<0.050	0.050	09/21/2018	ND	2.21	111	2.00	2.22	
Ethylbenzene*	<0.050	0.050	09/21/2018	ND	2.29	114	2.00	2.08	
Total Xylenes*	<0.150	0.150	09/21/2018	ND	6.60	110	6.00	1.99	
Total BTX	<0.300	0.300	09/21/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	272	16.0	09/22/2018	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/21/2018	ND	213	106	200	2.64	
DRO >C10-C28*	<10.0	10.0	09/21/2018	ND	184	92.0	200	3.46	
EXT DRO >C28-C36	<10.0	10.0	09/21/2018	ND					

Surrogate: 1-Chlorooctane 87.8 % 41-142

Surrogate: 1-Chlorooctadecane 85.4 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

HRL COMPLIANCE SOLUTIONS, INC.
 LUPE CARRASCO
 2385 F 1/2 ROAD
 GRAND JUNCTION CO, 81505
 Fax To:

Received: 09/19/2018
 Reported: 09/24/2018
 Project Name: GC FERDERAL #55
 Project Number: NONE GIVEN
 Project Location: COG

Sampling Date: 09/18/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Brittany Feller

Sample ID: EAST T5 (H802649-03)

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/21/2018	ND	2.14	107	2.00	0.780		
Toluene*	<0.050	0.050	09/21/2018	ND	2.21	111	2.00	2.22		
Ethylbenzene*	<0.050	0.050	09/21/2018	ND	2.29	114	2.00	2.08		
Total Xylenes*	<0.150	0.150	09/21/2018	ND	6.60	110	6.00	1.99		
Total BTX	<0.300	0.300	09/21/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	992	16.0	09/22/2018	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/21/2018	ND	213	106	200	2.64	
DRO >C10-C28*	<10.0	10.0	09/21/2018	ND	184	92.0	200	3.46	
EXT DRO >C28-C36	<10.0	10.0	09/21/2018	ND					

Surrogate: 1-Chlorooctane 84.8 % 41-142

Surrogate: 1-Chlorooctadecane 82.6 % 37.6-147

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

HRL COMPLIANCE SOLUTIONS, INC.
 LUPE CARRASCO
 2385 F 1/2 ROAD
 GRAND JUNCTION CO, 81505
 Fax To:

Received: 09/19/2018
 Reported: 09/24/2018
 Project Name: GC FERDERAL #55
 Project Number: NONE GIVEN
 Project Location: COG

Sampling Date: 09/18/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Brittany Feller

Sample ID: WEST T5 (H802649-04)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/21/2018	ND	2.14	107	2.00	0.780	
Toluene*	<0.050	0.050	09/21/2018	ND	2.21	111	2.00	2.22	
Ethylbenzene*	<0.050	0.050	09/21/2018	ND	2.29	114	2.00	2.08	
Total Xylenes*	<0.150	0.150	09/21/2018	ND	6.60	110	6.00	1.99	
Total BTEx	<0.300	0.300	09/21/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	176	16.0	09/22/2018	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/21/2018	ND	213	106	200	2.64	
DRO >C10-C28*	<10.0	10.0	09/21/2018	ND	184	92.0	200	3.46	
EXT DRO >C28-C36	<10.0	10.0	09/21/2018	ND					

Surrogate: 1-Chlorooctane 91.6 % 41-142

Surrogate: 1-Chlorooctadecane 92.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

HRL COMPLIANCE SOLUTIONS, INC.
 LUPE CARRASCO
 2385 F 1/2 ROAD
 GRAND JUNCTION CO, 81505
 Fax To:

Received: 09/19/2018
 Reported: 09/24/2018
 Project Name: GC FERDERAL #55
 Project Number: NONE GIVEN
 Project Location: COG

Sampling Date: 09/18/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Brittany Feller

Sample ID: NORTH T3 (H802649-05)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/21/2018	ND	2.14	107	2.00	0.780		
Toluene*	<0.050	0.050	09/21/2018	ND	2.21	111	2.00	2.22		
Ethylbenzene*	<0.050	0.050	09/21/2018	ND	2.29	114	2.00	2.08		
Total Xylenes*	<0.150	0.150	09/21/2018	ND	6.60	110	6.00	1.99		
Total BTEX	<0.300	0.300	09/21/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	400	16.0	09/22/2018	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/21/2018	ND	213	106	200	2.64	
DRO >C10-C28*	<10.0	10.0	09/21/2018	ND	184	92.0	200	3.46	
EXT DRO >C28-C36	<10.0	10.0	09/21/2018	ND					

Surrogate: 1-Chlorooctane 87.6 % 41-142

Surrogate: 1-Chlorooctadecane 86.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

HRL COMPLIANCE SOLUTIONS, INC.
 LUPE CARRASCO
 2385 F 1/2 ROAD
 GRAND JUNCTION CO, 81505
 Fax To:

Received: 09/19/2018
 Reported: 09/24/2018
 Project Name: GC FERDERAL #55
 Project Number: NONE GIVEN
 Project Location: COG

Sampling Date: 09/18/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Brittany Feller

Sample ID: SOUTH T3 (H802649-06)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/21/2018	ND	2.14	107	2.00	0.780	
Toluene*	<0.050	0.050	09/21/2018	ND	2.21	111	2.00	2.22	
Ethylbenzene*	<0.050	0.050	09/21/2018	ND	2.29	114	2.00	2.08	
Total Xylenes*	<0.150	0.150	09/21/2018	ND	6.60	110	6.00	1.99	
Total BTX	<0.300	0.300	09/21/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	320	16.0	09/22/2018	ND	416	104	400	3.77	QM-07	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2018	ND	189	94.7	200	2.02	
DRO >C10-C28*	<10.0	10.0	09/20/2018	ND	179	89.3	200	2.71	
EXT DRO >C28-C36	<10.0	10.0	09/20/2018	ND					

Surrogate: 1-Chlorooctane 93.9 % 41-142

Surrogate: 1-Chlorooctadecane 93.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

HRL COMPLIANCE SOLUTIONS, INC.
 LUPE CARRASCO
 2385 F 1/2 ROAD
 GRAND JUNCTION CO, 81505
 Fax To:

Received: 09/19/2018
 Reported: 09/24/2018
 Project Name: GC FERDERAL #55
 Project Number: NONE GIVEN
 Project Location: COG

Sampling Date: 09/18/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Brittany Feller

Sample ID: EAST T3 (H802649-07)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/21/2018	ND	2.14	107	2.00	0.780		
Toluene*	<0.050	0.050	09/21/2018	ND	2.21	111	2.00	2.22		
Ethylbenzene*	<0.050	0.050	09/21/2018	ND	2.29	114	2.00	2.08		
Total Xylenes*	<0.150	0.150	09/21/2018	ND	6.60	110	6.00	1.99		
Total BTEX	<0.300	0.300	09/21/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	09/22/2018	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2018	ND	189	94.7	200	2.02	
DRO >C10-C28*	<10.0	10.0	09/20/2018	ND	179	89.3	200	2.71	
EXT DRO >C28-C36	<10.0	10.0	09/20/2018	ND					

Surrogate: 1-Chlorooctane 95.2 % 41-142

Surrogate: 1-Chlorooctadecane 94.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

HRL COMPLIANCE SOLUTIONS, INC.
 LUPE CARRASCO
 2385 F 1/2 ROAD
 GRAND JUNCTION CO, 81505
 Fax To:

Received: 09/19/2018
 Reported: 09/24/2018
 Project Name: GC FERDERAL #55
 Project Number: NONE GIVEN
 Project Location: COG

Sampling Date: 09/18/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Brittany Feller

Sample ID: WEST T3 (H802649-08)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/21/2018	ND	2.14	107	2.00	0.780	
Toluene*	<0.050	0.050	09/21/2018	ND	2.21	111	2.00	2.22	
Ethylbenzene*	<0.050	0.050	09/21/2018	ND	2.29	114	2.00	2.08	
Total Xylenes*	<0.150	0.150	09/21/2018	ND	6.60	110	6.00	1.99	
Total BTEX	<0.300	0.300	09/21/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1360	16.0	09/22/2018	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2018	ND	189	94.7	200	2.02	
DRO >C10-C28*	<10.0	10.0	09/20/2018	ND	179	89.3	200	2.71	
EXT DRO >C28-C36	<10.0	10.0	09/20/2018	ND					

Surrogate: 1-Chlorooctane 92.6 % 41-142

Surrogate: 1-Chlorooctadecane 92.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

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Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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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A handwritten signature in black ink, appearing to read "C. D. Keene", is written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

40

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

[illegible]



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

September 28, 2018

LUPE CARRASCO

HRL COMPLIANCE SOLUTIONS, INC.

2385 F 1/2 ROAD

GRAND JUNCTION, CO 81505

RE: GC FERDERAL #55

Enclosed are the results of analyses for samples received by the laboratory on 09/26/18 11:52.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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



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

Analytical Results For:

HRL COMPLIANCE SOLUTIONS, INC.
 LUPE CARRASCO
 2385 F 1/2 ROAD
 GRAND JUNCTION CO, 81505
 Fax To:

Received: 09/26/2018
 Reported: 09/28/2018
 Project Name: GC FERDERAL #55
 Project Number: NONE GIVEN
 Project Location: COG

Sampling Date: 09/18/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: EAST T5 (H802724-01)**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	09/27/2018	ND	432	108	400	0.00	

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Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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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A handwritten signature in black ink, appearing to read "Celey D. Keene", is written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager



CARDINAL
Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

[illegible]

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 206271

CONDITIONS

Operator: Spur Energy Partners LLC 9655 Katy Freeway Houston, TX 77024	OGRID: 328947
	Action Number: 206271
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
bhall	Site will need to meet the requirements of 19.15.29.13 NMAC at time of plugging and abandonment.	5/9/2023