Received by OCD: 11/22/2022 1:54:07 PM



[Dakota Neel] [HSE Coordinator]

April 14, 2019

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

Crystal Weaver BLM Carlsbad Field Office 620 E. Greene Street Carlsbad NM 88220

Re: Closure Request Roy Batty Federal Com #001H API #: 30-025-41099 RP#: 1RP-4983 Unit Letter M, Section 11, Township 24S, Range 33E Lea County, NM

Mr. Billings/Ms. Weaver,

COG Operating, LLC (COG) is pleased to submit the following closure report for the Roy Batty Federal Com #001H. This release occurred on February 28, 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 Bureau of Land Management (BLM).

BACKGROUND

On February 28, 2018, a produced water release occurred on the Roy Batty Federal Com #001H flowline. The ball valve on the SWD line was discovered to be in the open position resulting in the release of approximately fifteen (15) barrels of produced water with zero (0) barrels of produced water recovered.

Remediation activities were conducted in accordance with the approved work plan and NMOCD stipulations.

	Roy Batty Federal Com #001H										
Sample ID	Date	Benzene mg/Kg	BTEX mg/Kg	TPH mg/Kg							
T1- North	11/28/2018	208	<0.050	<0.300	<10.0						
T1- East	12/4/2018	64	<0.050	0.402	92						
T1- West	T1-West 11/28/2018		<0.050	0.5	543						
T2- South	11/9/2018	48	<0.050	<0.300	358						
T2- East	11/9/2018	<16.0	<0.050	<0.300	<10.0						
T2- West	11/9/2018	32	<0.050	<0.300	<10.0						

CONFIRMATION SOIL SAMPLING RESULTS

REMEDIAL ACTIONS

- The impacted areas of T1 and T2 were excavated to a depth of four (4) feet below ground surface (bgs).
- Confirmation sidewall samples were collected from the excavation per NMOCD stipulations.
- A 20 mil plastic liner was installed at approximately four (4) bgs.
- The excavation was backfilled with clean "like" material, and contoured to match the surrounding terrain. The site will be mechanically seeded using the landowner's preferred seed mixture.

April 14, 2019

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

Sincerely,

Dator New

Dakota Neel HSE Coordinator dneel2@concho.com

Enclosed:

Appendix I: Site Diagram Appendix II: Final C-141 Appendix III: Initial C-141 (Copy) Appendix IV: Approved Work plan Appendix V: Confirmation Analytical Report



Received by OCD: 11/22/2022 1:54:07 PM Roy Batty Federal Com #001H

80 IL

2/28/2018 1RP-4983 Unit Letter "M", Section 11, Township 24 South, Range 33 East Lea County, New Mexico

T1 North

тъ

T1 West O

Gri East

T2 O T2 West

Gr2 East

CT2 South

16





State of New Mexico Energy Minerals and Natural Resources

Form C-141 Revised April 3, 2017

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Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

1220 S. St. Francis Dr., Santa Fe, NM 87505 **Release Notification and Corrective Action OPERATOR** Initial Report x 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: Roy Batty Federal Com #001H Facility Type: Well Surface Owner: Private Mineral Owner: Federal API No.: 30-025-41099 LOCATION OF RELEASE Unit Letter Feet from the North/South Line Feet from the Section Township Range East/West Line County Μ 11 24S 33E Lea Latitude: 32.225435 Longitude: -103.550182 NAD83 NATURE OF RELEASE Type of Release: Produced Water Volume of Release: Volume Recovered: 15bbls **Obbls** Date and Hour of Occurrence: Source of Release: Flowline Date and Hour of Discovery: 2/28/2018 10:00am 2/28/2018 Was Immediate Notice Given? If YES, To Whom? Yes No Not Required By Whom? Date and Hour: Was a Watercourse Reached? If YES, Volume Impacting the Watercourse. ☐ Yes ⊠ No If a Watercourse was Impacted, Describe Fully.* Describe Cause of Problem and Remedial Action Taken.*

A ball valve on the SWD line was discovered to be open. The valve handle was removed and a bull plug was installed.

Describe Area Affected and Cleanup Action Taken.*

The release impacted the pasture adjacent to the lease road. This release has been remediated in accordance to the NMOCD approved workplan.

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.

Sebot Read	<u>OIL CONSER</u>	VATION I	<u>DIVISION</u>
Signature:	Approved by Environmental Special	ist: Ashk	ley Maxwell
Printed Name: Dakota Neel			0
Title: HSE Coordinator	Approval Date: 11/22/2022	Expiration D	ate:
E-mail Address: dneel2@concho.com	Conditions of Approval:		Attached
Date: 4/14/2019 Phone: 575-746-2010			

* Attach Additional Sheets If Necessary

APPENDIX III

State of New Mexico Energy Minerals and Natural Resources

Form C-141 Revised April 3, 2017

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Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

1220 S. St. Fran	cis Dr., Santa	a Fe, NM 87505	5	-		e, NM 875					
			Rele	ease Notific	atio	n and Co	orrective A	ction			
						OPERA '	ГOR	\boxtimes	Initia	l Report 🛛 Final Report	
Name of Co	ompany: C	OG Operat	ing, LLC	C (OGRID# 2291	137)	Contact: Ro	bert McNeill				
Address: 60	0 West Ill	inois Avenu	ıe, Midla	nd TX 79701		Telephone I	No.: 432-683-74	43			
Facility Nar	ne: Roy B	atty Federa	l Com #()01H		Facility Typ	be: Well				
Surface Ow	ner: Privat	e		Mineral O	wner:	Federal		A	API No	.: 30-025-41099	
				LOCA	TIO	N OF RE	LEASE				
Unit Letter M	Section 11	Township 24S	Range 33E	Feet from the	North	n/South Line	Feet from the	East/West	t Line	County Lea	
			L	atitude: 32.2254	435 L	ongitude: -1	03.550182 NAE	083			
				NAT	URE	OF REL	EASE				
Type of Rele	ase: Produc	ed Water				Volume of	Release:		Volume Recovered:		
<u> </u>						15bbls			obls		
Source of Re	lease: Flow	line				Date and F 2/28/2018	Iour of Occurrenc		Date and Hour of Discovery: 2/28/2018 10:00am		
Was Immedia	ate Notice C	Jiven?				If YES, To	Whom?	27.	20/2010	10.00am	
			Yes 🗵	No 🛛 Not Re	quired						
By Whom?						Date and H	Iour:				
Was a Water	course Read	ched?		-		If YES, Vo	olume Impacting t	he Waterco	ourse.		
			Yes 🗵] No							

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

A ball valve on the SWD line was discovered to be open. The valve handle was removed and a bull plug was installed.

Describe Area Affected and Cleanup Action Taken.*

The release impacted the pasture adjacent to the lease road. Concho will have the spill area evaluated for 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.

	OIL CONSERVATION DIVISION					
Signature: Sheldon Jutan Printed Name: Sheldon L. Hitchcock	Approved by Environmental Specia	list:				
Title: HSE Coordinator	Approval Date:	Expiration Date:				
E-mail Address: slhitchcock@concho.com	Conditions of Approval:	Attached 🗌				
Date: 3/2/2018 Phone: 575-746-2010						

* Attach Additional Sheets If Necessary

APPENDIX IV



APPROVED By Olivia Yu at 9:28 am, Jul 23, 2018

NMOCD will consider vertical delineation completed for 1RP-4983. For proposed remediation, confirmation sidewall samples at no greater than 50 ft. intervals. East-1 sample point area needs to be addressed.

June 22, 2018

Olivia Yu New Mexico Energy, Minerals and Natural Resources Department Oil Conservation Division, District 1 1625 N. French Drive Hobbs, New Mexico 88240

Shelly Tucker New Mexico Bureau of Land Management 620 E. Greene Street Carlsbad, NM 88220 Stucker@blm.gov

Re: Soil Investigation Summary and Proposed Remediation Workplan Roy Batty Federal Com #001H (1RP-4983) GPS: N 32.225785° W 103.549489° Unit Letter "M", Section 11, Township 24 South, Range 33 East, NMPM Lea County, New Mexico

Dear Ms. Yu and Ms. Tucker,

2M Environmental Services, LLC. (2M), on behalf of Concho Operating, LLC. (Concho), has prepared this Soil Investigation Summary and Proposed Remediation Workplan (Workplan) for the Roy Batty Federal Com #001H Release (Release Site). The purpose of this Workplan is to propose remediation activities designed to advance the Roy Batty Federal Com #001H Release Site toward a New Mexico Oil and Conservation District (NMOCD) approved Site Closure Status. The legal description of the Release Site is Unit Letter "M", Section 11, Township 24 South, Range 33 East, in Lea County, New Mexico. The subject property is administered by the New Mexico U.S. Department of the Interior Bureau of Land Management (BLM). The GPS coordinates for the site are N 32.225785° W 103.549489°. A Site Location Map and Site Detail and Soil Sample Locations Map are provided as Figure 1 and Figure 2, respectively.

On February 28, 2018, a produced water release occurred on the Roy Batty Federal Com #001H polyline. The ball valve on the SWD line was discovered to be in the open position resulting in the

release. On March 2, 2018, Concho submitted a Release Notification and Corrective Action Form (Form C-141) to the NMOCD District 1 Office located in Hobbs, New Mexico and the release was assigned the incident number 1RP-4983. The release was reported as approximately fifteen (15) barrels of produced water released with approximately zero (0) barrels of produced water recovered, resulting in a net loss of approximately fifteen (15) barrels of produced water. A copy of the NMOCD Release Notification and Corrective Action Form C-141 is attached to this Workplan.

A groundwater database maintained by The New Mexico Office of the State Engineer (NMOSE) did not identify the average depth to groundwater information in Section 11, Township 24 South, Range 33 East. A reference map utilized by the New Mexico Oil Conservation Division (NMOCD) Hobbs District Office indicates groundwater should be encountered at approximately seventy-five (75) feet below ground surface (bgs). Based on the NMOCD site classification system, ten (10) points will be assigned to the subject area ranking as a result of this criterion. No water wells were observed within one-thousand feet of the Release Site. Based on the NMOCD site classification system, zero (0) points will be assigned to the subject area ranking as a result of this criterion. No surface water was observed within one thousand (1,000) feet of the release. Based on the NMOCD site classification system, ten (10) points will be assigned to the subject area ranking as a result of this criterion. No surface water was observed within one thousand (1,000) feet of the release. Based on the NMOCD site classification system, ten (10) points will be assigned to the subject area ranking as a result of this criterion. No surface water was observed within one thousand (1,000) feet of the release. Based on the NMOCD site classification system, ten (10) points will be assigned to the subject area ranking as a result of this criterion.

Based on the NMOCD Site Classification criteria, the Release Site remediation levels are 10 mg/Kg for benzene, 50 mg/Kg for benzene, toluene, ethylbenzene and xylenes (BTEX) and 1,000 mg/Kg for total petroleum hydrocarbons (TPH). Chloride remediation levels for the Release Site will be 600 mg/Kg, per NMOCD request.

On March 8, 2018, 2M, on behalf of Concho, utilized a hand auger and/or a backhoe to collect thirteen (14) delineation soil samples (T-1 @ 6", T-1 @ 1', T-1 @ 2', T-1 @ 3', T-1 @ 4', T-1 @ 5', T-1 @ 6', T-2 @ 6", T-2 @ 1', T-2 @ 2', T-2 @ 3', T-2 @ 4', and T-2 @ 5') from the impacted area. Please note that T-2 @ 5' was submitted to the lab twice by error. In addition to the soil samples described above, eight (8) soil samples (North-1 @ 6", North-1 @ 1', East-1 @ 6", East-1 @ 1', South-1 @ 6", South-1 @ 1', West-1 @ 6", and West-1 @ 1') were collected utilizing a hand auger and/or backhoe approximately five (5) feet from the outer perimeter of the stained surface soil. The soil samples were submitted to Permian Basin Environmental Laboratories in Midland, Texas for determination of concentrations of BTEX using Method SW 846-8021B, TPH using Method SW 846-8015M, and chloride using Method E-300.1. The analytical results are provided as an attachment (Table 1 Concentrations of Benzene, BTEX, TPH, and Chloride in Soil).

Based on the analytical results of the soil samples collected on March 8, 2018, Concho proposes the following field activities designed to remediate the Roy Batty Federal COM # 001H Release:

- Utilizing a backhoe, excavate the area represented by sample points T-1 and T-2 to four (4) feet bgs.
- A HDPE plastic liner will be installed at approximately four (4) feet bgs. Excavated soil will be stockpiled on a plastic liner adjacent to the excavation pending disposal.
- Due to the lease road and sample point East-1 being outside the release area, one confirmation sidewall sample will be collected from the east wall of the excavation.

- Concho will backfill the excavation with locally purchased non-impacted "like" soil or caliche. In addition, impacted soil will be transported under manifest to a NMOCD approved disposal facility.
- Prepare and submit a "Remediation Summary and Site Closure Request" to the NMOCD and BLM.

Concho is prepared to begin the activities outlined in this Proposed Remediation Workplan on NMOCD and BLM approval.

If you have any questions, or if additional information is required, please feel free to call me at 432-614-6793 (office) or 432-230-3763 (cell).

Thank you,

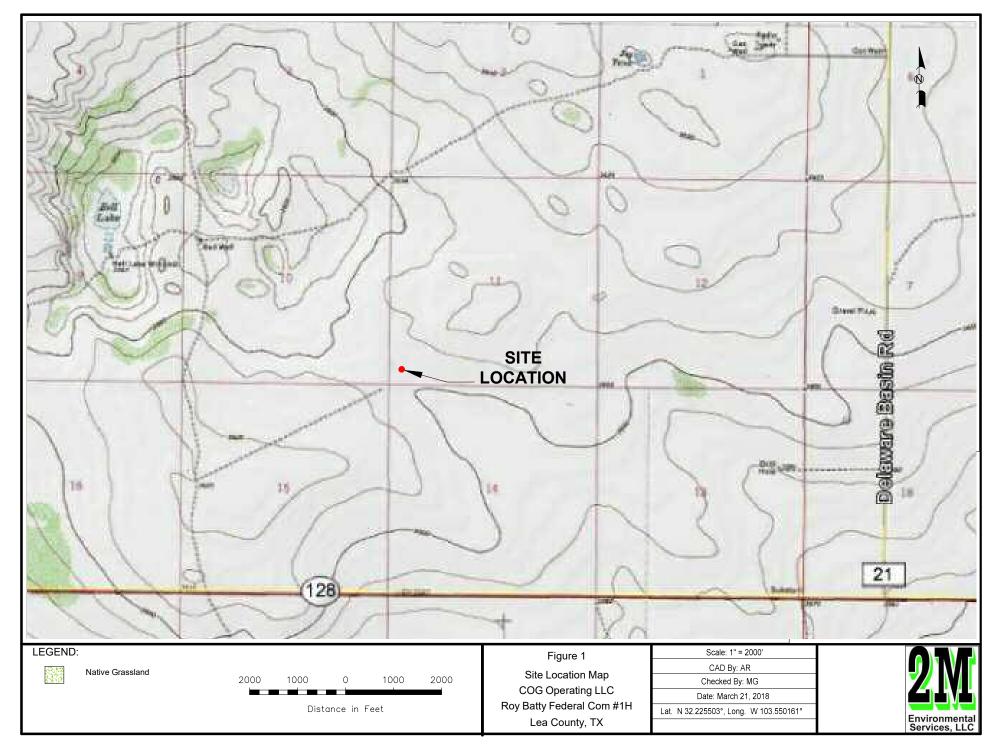
Matthew Scen

Matthew Green, P.G. President 2M Environmental Services, LLC.

Attachments:

Figure 1 - Site Location Map Figure 2 - Site Detail and Soil Sample Location Map Table 1 - Concentrations of Benzene, BTEX, TPH and Chloride in Soil Laboratory Analytical Results Release Notification and Corrective Action (Form C-141)

cc: File



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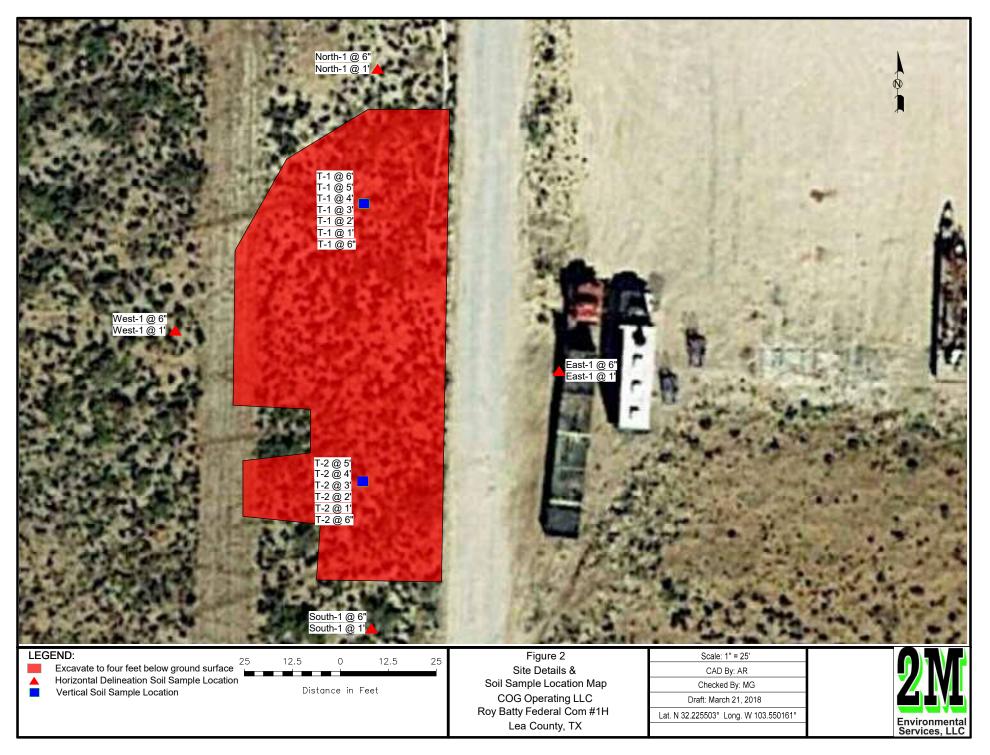


TABLE 1

CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN SOIL

CONCHO OPERATING, LLC

ROY BATTY FEDERAL COM #1H RELEASE SITE LEA COUNTY, NEW MEXICO

All concentrations are reported in mg/Kg

				METHODS:	SW 846-80211		re reported in mg/K	8	М	ETHOD: SW 801	5M		E 300.1
SAMPLE LOCATION	SAMPLE DATE	BENZENE	TOLUENE	ETHYL- BENZENE	m, p - XYLENES	0 - XYLENE	TOTAL XYLENES	TOTAL BTEX	TPH GRO C ₆ -C ₁₂	TPH DRO C ₁₂ -C ₂₈	TPH ORO C ₂₈ -C ₃₅	TOTAL TPH C ₆ -C ₃₅	CHLORIDE
Limits		10 mg/Kg						50 mg/Kg				5,000 mg/Kg	600
East-1 @ 6"	3/8/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	522
East-1 @ 1'	3/8/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	987
T-1 @ 6"	3/8/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9,630
T-1 @ 1'	3/8/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7,490
T-1 @ 2'	3/8/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8,490
T-1 @ 3'	3/8/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4,800
T-1 @ 4'	3/8/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,840
T-1 @ 5'	3/8/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	751
T-1 @ 6'	3/8/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	578
North-1 @ 6"	3/8/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	15.0
North-1 @ 1'	3/8/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.13
West-1 @ 6"	3/8/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
West-1 @ 1'	3/8/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
South-1 @ 6"	3/8/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
South-1 @ 1'	3/8/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
T-2 @ 6"	3/8/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4,070
T-2 @ 1'	3/8/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2,750
T-2 @ 2'	3/8/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5,880
T-2 @ 3'	3/8/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8,470
T-2 @ 4'	3/8/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4,010
T-2 @ 5'	3/8/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	162
T-2 @ 5'*	3/8/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	76.5

PERMIAN BASIN ENVIRONMENTAL LAB, LP 1400 Rankin Hwy Midland, TX 79701



Analytical Report

Prepared for:

Matt Green 2M Environmental Services, LLC. 1219 W. University Blvd. Odessa, TEXAS 79764

Project: COG Tequiza Federal 001H Project Number: [none] Location: Eddy County, NM

Lab Order Number: 8C20016



NELAP/TCEQ # T104704516-17-8

Report Date: 04/13/18

2M Environmental Services, LLC.	Project:	COG Tequiza Federal 001H	Fax:
1219 W. University Blvd.	Project Number:	[none]	
Odessa TEXAS, 79764	Project Manager: 1	Matt Green	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
South-1 @6"	8C20016-01	Soil	03/19/18 09:00	03-20-2018 15:10
North-1 @6"	8C20016-02	Soil	03/19/18 09:05	03-20-2018 15:10
Northwest-1 @6"	8C20016-03	Soil	03/19/18 09:10	03-20-2018 15:10
Southwest -2 @6"	8C20016-04	Soil	03/19/18 09:15	03-20-2018 15:10
Northeast -1 @6"	8C20016-05	Soil	03/19/18 09:20	03-20-2018 15:10
Southeast -2 @6"	8C20016-06	Soil	03/19/18 09:25	03-20-2018 15:10

2M Environmental Services, LLC.	Project:	COG Tequiza Federal 001H	Fax:
1219 W. University Blvd.	Project Number:	[none]	
Odessa TEXAS, 79764	Project Manager:	Matt Green	

South-1 @6'' 8C20016-01 (Soil)

Ind British B			8C20	016-01 (So	il)					
Organics by GC Benzene ND 0.0204 mg/kg dry 20 P8C2014 03/20/18 03/21/18 EPA 8021F Toluene ND 0.204 mg/kg dry 20 P8C2014 03/20/18 03/21/18 EPA 8021F Ethylbenzene ND 0.102 mg/kg dry 20 P8C2014 03/20/18 03/21/18 EPA 8021F Kylene (p/m) ND 0.408 mg/kg dry 20 P8C2014 03/20/18 03/21/18 EPA 8021F Surrogate: 4-Bromofluorobenzene ND 0.204 mg/kg dry 20 P8C2014 03/20/18 03/21/18 EPA 8021F Surrogate: 1.4-Difluorobenzene ND 0.204 mg/kg dry 20 P8C2014 03/20/18 03/21/18 EPA 8021F General Chemistry Parameters by EPA / Standard Methods 114 % 75-125 P8C2014 03/20/18 03/21/18 EPA 8021F Choride 15.2 1.02 mg/kg dry 1 P8C2017 03/20/18 03/21/18 EPA 8021F Cotal<	Analyte	Result		Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Benzene ND 0.0204 mg/kg dry 20 P8C2014 0.3/20/18 0.3/21/18 EPA 80214 Toluene ND 0.204 mg/kg dry 20 P8C2014 0.3/20/18 0.3/21/18 EPA 80214 Ethylbenzene ND 0.102 mg/kg dry 20 P8C2014 0.3/20/18 0.3/21/18 EPA 80214 Xylene (p/m) ND 0.408 mg/kg dry 20 P8C2014 0.3/20/18 0.3/21/18 EPA 80214 Xylene (o) ND 0.408 mg/kg dry 20 P8C2014 0.3/20/18 0.3/21/18 EPA 80214 Xylene (o) ND 0.204 mg/kg dry 20 P8C2014 0.3/20/18 0.3/21/18 EPA 80214 Surrogate: 1.4-Difluorobenzene 114.% 75-125 P8C2014 0.3/20/18 0.3/21/18 EPA 80214 Surrogate: 1.4-Difluorobenzene 114.% 75-125 P8C2017 0.3/20/18 0.3/21/18 EPA 80214 Surrogate: 1.4-Difluorobenzene 1.9 P8C2017 0.3/20/18 0.3/2		Perm	ian Basin E	Environme	ıtal Lab, l	L. P.				
Toluene ND 0.204 mg/kg dry 20 P8C2014 03/20/18 03/21/18 EPA 8021E Ethylbenzene ND 0.102 mg/kg dry 20 P8C2014 03/20/18 03/21/18 EPA 8021E Xylene (p/m) ND 0.408 mg/kg dry 20 P8C2014 03/20/18 03/21/18 EPA 8021E Surrogate: 4-Bromofluorobenzene ND 0.204 mg/kg dry 20 P8C2014 03/20/18 03/21/18 EPA 8021E Surrogate: 4-Bromofluorobenzene ND 0.204 mg/kg dry 20 P8C2014 03/20/18 03/21/18 EPA 8021E Surrogate: 1,4-Difluorobenzene ND 0.204 mg/kg dry 20 P8C2014 03/20/18 03/21/18 EPA 8021E Surrogate: 1,4-Difluorobenzene 114 % 75-125 P8C2017 03/20/18 03/21/18 EPA 8021E General Chemistry Parameters by EPA / Standard Methods 1 P8C2017 03/20/18 03/21/18 EPA 8021E Choride 15.2 1.02 mg/kg dry <td>Organics by GC</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Organics by GC									
Ethylbenzene ND 0.102 mg/kg dry 20 P8C2014 03/20/18 03/21/18 EPA 8021E Xylene (p/m) ND 0.408 mg/kg dry 20 P8C2014 03/20/18 03/21/18 EPA 8021E Xylene (o) ND 0.204 mg/kg dry 20 P8C2014 03/20/18 03/21/18 EPA 8021E Surrogate: 4-Bromofluorobenzene 114 % 75-125 P8C2014 03/20/18 03/21/18 EPA 8021E Surrogate: 1,4-Difluorobenzene 114 % 75-125 P8C2014 03/20/18 03/21/18 EPA 8021E General Chemistry Parameters by EPA / Standard Methods E E EPA 8021E EPA 8021E General Chemistry Parameters by EPA / Standard Methods 1.02 mg/kg dry 1 P8C2017 03/20/18 03/21/18 EPA 8021E % Moisture 2.0 0.1 % 1 P8C2017 03/20/18 03/21/18 EPA 300.0 % Moisture 2.0 0.1 % 1 P8C2017 03/20/18 03/21/18 EPA 300.0 C6-C12 ND 25.5 mg/kg dry 1<	Benzene	ND	0.0204	mg/kg dry	20	P8C2014	03/20/18	03/21/18	EPA 8021B	
Xylene (p/m) ND 0.408 mg/kg dry 20 P8C2014 03/21/18 EPA 8021E Xylene (o) ND 0.204 mg/kg dry 20 P8C2014 03/20/18 03/21/18 EPA 8021E Surrogate: 4-Bromofluorobenzene 114 % 75-125 P8C2014 03/20/18 03/21/18 EPA 8021E Surrogate: 1,4-Difluorobenzene 114 % 75-125 P8C2014 03/20/18 03/21/18 EPA 8021E General Chemistry Parameters by EPA / Standard Methods 84.3 % 75-125 P8C2017 03/20/18 03/21/18 EPA 8021E General Chemistry Parameters by EPA / Standard Methods 1 P8C2017 03/20/18 03/21/18 EPA 300.0 % Moisture 2.0 0.1 % 1 P8C2017 03/20/18 03/21/18 EPA 300.0 C6-C12 ND 25.5 mg/kg dry 1 P8C2015 03/20/18 03/20/18 TPH 8015N C12-C28 ND 25.5 mg/kg dry 1 P8C2015 03/20/18 03/20/18 TPH 8015N Surrogate: 1-Chlorooctane 77.1 % 70-130 P8C2015	Toluene	ND	0.204	mg/kg dry	20	P8C2014	03/20/18	03/21/18	EPA 8021B	
Nine (nin) ND 0.204 mg/kg dry 20 P8C2014 03/20/18 03/21/18 EPA 8021E Surrogate: 4-Bromofluorobenzene 114 % 75-125 P8C2014 03/20/18 03/21/18 EPA 8021E Surrogate: 1,4-Difluorobenzene 84.3 % 75-125 P8C2014 03/20/18 03/21/18 EPA 8021E General Chemistry Parameters by EPA / Standard Methods Email (nin) 0.101 % 1 P8C2017 03/20/18 03/21/18 EPA 8021E General Chemistry Parameters by EPA / Standard Methods 1.02 mg/kg dry 1 P8C2017 03/20/18 03/21/18 EPA 8021E General Chemistry Parameters by EPA / Standard Methods 1.02 mg/kg dry 1 P8C2017 03/20/18 03/21/18 EPA 8021E General Chemistry Parameters by EPA / Standard Methods 1.02 mg/kg dry 1 P8C2017 03/20/18 03/21/18 EPA 300.0 % Moisture 2.0 0.1 % 1 P8C2012 03/21/18 BATM D221 C6-C12 ND 25.5 mg/kg dry 1 P8C2015 03/20/18 TPH 8015N	Ethylbenzene	ND	0.102	mg/kg dry	20	P8C2014	03/20/18	03/21/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene 114 % 75-125 P8C2014 03/20/18 03/21/18 EPA 8021E Surrogate: 1.4-Difluorobenzene 84.3 % 75-125 P8C2014 03/20/18 03/21/18 EPA 8021E General Chemistry Parameters by EPA / Standard Methods 84.3 % 75-125 P8C2017 03/20/18 03/21/18 EPA 8021E General Chemistry Parameters by EPA / Standard Methods 1.02 mg/kg dry 1 P8C2017 03/20/18 03/21/18 EPA 8021E General Chemistry Parameters by EPA / Standard Methods 1.02 mg/kg dry 1 P8C2017 03/20/18 03/21/18 EPA 300.0 % Moisture 2.0 0.1 % 1 P8C2017 03/20/18 03/21/18 EPA 300.0 % Moisture 2.0 0.1 % 1 P8C2017 03/20/18 03/21/18 EPA 300.0 % Moisture 2.0 0.1 % 1 P8C2012 03/20/18 03/21/18 EPA 300.0 C6-C12 ND 25.5 mg/kg dry 1 P8C2015 03/20/18 03/20/18 TPH 8015N	Xylene (p/m)	ND	0.408	mg/kg dry	20	P8C2014	03/20/18	03/21/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene 84.3 % 75-125 P8C2014 03/20/18 03/21/18 EPA 8021E General Chemistry Parameters by EPA / Standard Methods Email of the standard Methods 1 P8C2017 03/20/18 03/21/18 EPA 8021E Chloride 15.2 1.02 mg/kg dry 1 P8C2017 03/20/18 03/21/18 EPA 300.0 % Moisture 2.0 0.1 % 1 P8C2012 03/21/18 BEPA 300.0 C6-C12 ND 25.5 mg/kg dry 1 P8C2015 03/20/18 03/20/18 TPH 8015M >C12-C28 ND 25.5 mg/kg dry 1 P8C2015 03/20/18 03/20/18 TPH 8015M >C28-C35 ND 25.5 mg/kg dry 1 P8C2015 03/20/18 TPH 8015M Surrogate: 1-Chlorooctane 77.1 % 70-130 P8C2015 03/20/18 TPH 8015M Surrogate: o-Terphenyl 82.2 % 70-130 P8C2015 03/20/18 TPH 8015M	Xylene (o)	ND	0.204	mg/kg dry	20	P8C2014	03/20/18	03/21/18	EPA 8021B	
General Chemistry Parameters by EPA / Standard Methods Chloride 15.2 1.02 mg/kg dry 1 P8C2017 03/20/18 03/21/18 EPA 300.0 % Moisture 2.0 0.1 % 1 P8C2102 03/21/18 03/21/18 ASTM D221 Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M E E E E C6-C12 ND 25.5 mg/kg dry 1 P8C2015 03/20/18 03/20/18 TPH 8015M >C12-C28 ND 25.5 mg/kg dry 1 P8C2015 03/20/18 03/20/18 TPH 8015M >C28-C35 ND 25.5 mg/kg dry 1 P8C2015 03/20/18 03/20/18 TPH 8015M Surrogate: 1-Chlorooctane 77.1 % 70-130 P8C2015 03/20/18 03/20/18 TPH 8015M Surrogate: o-Terphenyl 82.2 % 70-130 P8C2015 03/20/18 TPH 8015M	Surrogate: 4-Bromofluorobenzene		114 %	75-1	25	P8C2014	03/20/18	03/21/18	EPA 8021B	
Chloride 15.2 1.02 mg/kg dry 1 P8C2017 03/20/18 03/21/18 EPA 300.0 % Moisture 2.0 0.1 % 1 P8C2102 03/21/18 EPA 300.0 Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M EPA Method 8015M 03/21/18 ASTM D221 C6-C12 ND 25.5 mg/kg dry 1 P8C2015 03/20/18 03/20/18 TPH 8015M >C12-C28 ND 25.5 mg/kg dry 1 P8C2015 03/20/18 03/20/18 TPH 8015M >C28-C35 ND 25.5 mg/kg dry 1 P8C2015 03/20/18 03/20/18 TPH 8015M Surrogate: 1-Chlorooctane 77.1 % 70-130 P8C2015 03/20/18 03/20/18 TPH 8015M Surrogate: o-Terphenyl 82.2 % 70-130 P8C2015 03/20/18 03/20/18 TPH 8015M	Surrogate: 1,4-Difluorobenzene		84.3 %	75-1	25	P8C2014	03/20/18	03/21/18	EPA 8021B	
ND 25.5 mg/kg dry 1 P8C2015 03/20/18 03/20/18 ASTM D221 Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M E E E E C6-C12 ND 25.5 mg/kg dry 1 P8C2015 03/20/18 03/20/18 TPH 8015N >C12-C28 ND 25.5 mg/kg dry 1 P8C2015 03/20/18 03/20/18 TPH 8015N >C28-C35 ND 25.5 mg/kg dry 1 P8C2015 03/20/18 03/20/18 TPH 8015N Surrogate: 1-Chlorooctane 77.1 % 70-130 P8C2015 03/20/18 03/20/18 TPH 8015N Surrogate: o-Terphenyl 82.2 % 70-130 P8C2015 03/20/18 TPH 8015N	General Chemistry Parameters by EPA	A / Standard Method	s							
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M C6-C12 ND 25.5 mg/kg dry 1 P8C2015 03/20/18 TPH 8015N >C12-C28 ND 25.5 mg/kg dry 1 P8C2015 03/20/18 TPH 8015N >C28-C35 ND 25.5 mg/kg dry 1 P8C2015 03/20/18 TPH 8015N Surrogate: 1-Chlorooctane 77.1 % 70-130 P8C2015 03/20/18 TPH 8015N Surrogate: o-Terphenyl 82.2 % 70-130 P8C2015 03/20/18 TPH 8015N	Chloride	15.2	1.02	mg/kg dry	1	P8C2017	03/20/18	03/21/18	EPA 300.0	
ND 25.5 mg/kg dry 1 P8C2015 03/20/18 TPH 8015N >C12-C28 ND 25.5 mg/kg dry 1 P8C2015 03/20/18 TPH 8015N >C28-C35 ND 25.5 mg/kg dry 1 P8C2015 03/20/18 TPH 8015N Surrogate: 1-Chlorooctane 77.1 % 70-130 P8C2015 03/20/18 03/20/18 TPH 8015N Surrogate: o-Terphenyl 82.2 % 70-130 P8C2015 03/20/18 TPH 8015N	% Moisture	2.0	0.1	%	1	P8C2102	03/21/18	03/21/18	ASTM D2216	
ND 25.5 mg/kg dry 1 P8C2015 03/20/18 TPH 8015N >C28-C35 ND 25.5 mg/kg dry 1 P8C2015 03/20/18 03/20/18 TPH 8015N Surrogate: 1-Chlorooctane 77.1 % 70-130 P8C2015 03/20/18 03/20/18 TPH 8015N Surrogate: o-Terphenyl 82.2 % 70-130 P8C2015 03/20/18 03/20/18 TPH 8015N	Total Petroleum Hydrocarbons C6-C3	5 by EPA Method 80)15M							
>C28-C35 ND 25.5 mg/kg dry 1 P8C2015 03/20/18 TPH 8015M Surrogate: 1-Chlorooctane 77.1% 70-130 P8C2015 03/20/18 03/20/18 TPH 8015M Surrogate: o-Terphenyl 82.2% 70-130 P8C2015 03/20/18 03/20/18 TPH 8015M	C6-C12	ND	25.5	mg/kg dry	1	P8C2015	03/20/18	03/20/18	TPH 8015M	
Surrogate: o-Terphenyl The set of the	>C12-C28	ND	25.5	mg/kg dry	1	P8C2015	03/20/18	03/20/18	TPH 8015M	
Surrogate: o-Terphenyl 82.2 % 70-130 P8C2015 03/20/18 03/20/18 TPH 8015M	>C28-C35	ND	25.5	mg/kg dry	1	P8C2015	03/20/18	03/20/18	TPH 8015M	
	Surrogate: 1-Chlorooctane		77.1 %	70-1	30	P8C2015	03/20/18	03/20/18	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35 ND 25.5 mg/kg dry 1 [CALC] 03/20/18 03/20/18 calc	Surrogate: o-Terphenyl		82.2 %	70-1	30	P8C2015	03/20/18	03/20/18	TPH 8015M	
	Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	03/20/18	03/20/18	calc	

Permian Basin Environmental Lab, L.P.

2M Environmental Services, LLC. 1219 W. University Blvd. Odessa TEXAS, 79764		Project Num	ect: COG Te ber: [none] ger: Matt Gre		eral 001H			Fax:	
			rth-1 @6'' 016-02 (Soil)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pern	nian Basin E	Environment	al Lab, l	L.P.				
Organics by GC									
Benzene	ND	0.00106	mg/kg dry	1	P8C2014	03/20/18	03/20/18	EPA 8021B	
Toluene	ND	0.0106	mg/kg dry	1	P8C2014	03/20/18	03/20/18	EPA 8021B	
Ethylbenzene	ND	0.00532	mg/kg dry	1	P8C2014	03/20/18	03/20/18	EPA 8021B	
Xylene (p/m)	ND	0.0213	mg/kg dry	1	P8C2014	03/20/18	03/20/18	EPA 8021B	
Xylene (o)	ND	0.0106	mg/kg dry	1	P8C2014	03/20/18	03/20/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		93.9 %	75-12	5	P8C2014	03/20/18	03/20/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		158 %	75-12	5	P8C2014	03/20/18	03/20/18	EPA 8021B	S-GC
General Chemistry Parameters by EPA /	Standard Metho	ds							
Chloride	1.38	1.06	mg/kg dry	1	P8C2017	03/20/18	03/21/18	EPA 300.0	
% Moisture	6.0	0.1	%	1	P8C2102	03/21/18	03/21/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 h	y EPA Method 8	015M							
C6-C12	ND	26.6	mg/kg dry	1	P8C2015	03/20/18	03/20/18	TPH 8015M	
>C12-C28	ND	26.6	mg/kg dry	1	P8C2015	03/20/18	03/20/18	TPH 8015M	
>C28-C35	ND	26.6	mg/kg dry	1	P8C2015	03/20/18	03/20/18	TPH 8015M	
Surrogate: 1-Chlorooctane		82.9 %	70-13	0	P8C2015	03/20/18	03/20/18	TPH 8015M	
Surrogate: o-Terphenyl		89.8 %	70-13	0	P8C2015	03/20/18	03/20/18	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	26.6	mg/kg dry	1	[CALC]	03/20/18	03/20/18	calc	

Permian Basin Environmental Lab, L.P.

2M Environmental Services, LLC. 1219 W. University Blvd. Odessa TEXAS, 79764		Proj Project Num Project Mana		Fax:					
			1west-1 @6' 016-03 (Soil)						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Peri	nian Basin F	Environmenta	ıl Lab, I	L .P.				
Organics by GC									
Benzene	ND	0.00109	mg/kg dry	1	P8C2014	03/20/18	03/20/18	EPA 8021B	
Toluene	ND	0.0109	mg/kg dry	1	P8C2014	03/20/18	03/20/18	EPA 8021B	
Ethylbenzene	ND	0.00543	mg/kg dry	1	P8C2014	03/20/18	03/20/18	EPA 8021B	
Xylene (p/m)	ND	0.0217	mg/kg dry	1	P8C2014	03/20/18	03/20/18	EPA 8021B	
Xylene (o)	ND	0.0109	mg/kg dry	1	P8C2014	03/20/18	03/20/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		163 %	75-125		P8C2014	03/20/18	03/20/18	EPA 8021B	S-GC
Surrogate: 1,4-Difluorobenzene		104 %	75-125		P8C2014	03/20/18	03/20/18	EPA 8021B	
General Chemistry Parameters by EPA /	Standard Metho	ds							
Chloride	28.6	1.09	mg/kg dry	1	P8C2018	03/20/18	03/21/18	EPA 300.0	
% Moisture	8.0	0.1	%	1	P8C2102	03/21/18	03/21/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 b	y EPA Method 8	015M							
C6-C12	ND	27.2	mg/kg dry	1	P8C2015	03/20/18	03/21/18	TPH 8015M	
>C12-C28	ND	27.2	mg/kg dry	1	P8C2015	03/20/18	03/21/18	TPH 8015M	
>C28-C35	ND	27.2	mg/kg dry	1	P8C2015	03/20/18	03/21/18	TPH 8015M	
Surrogate: 1-Chlorooctane		84.1 %	70-130)	P8C2015	03/20/18	03/21/18	TPH 8015M	
Surrogate: o-Terphenyl		88.5 %	70-130)	P8C2015	03/20/18	03/21/18	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	27.2	mg/kg dry	1	[CALC]	03/20/18	03/21/18	calc	

2M Environmental Services, LLC. 1219 W. University Blvd. Odessa TEXAS, 79764		Project Num	iect: COG Te ber: [none] ger: Matt Gre	1	eral 001H			Fax:	
			west -2 @0 016-04 (Soil						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perr	nian Basin F	Environmen	tal Lab, I	L .P.				
Organics by GC									
Benzene	ND	0.00111	mg/kg dry	1	P8C2014	03/20/18	03/20/18	EPA 8021B	
Toluene	ND	0.0111	mg/kg dry	1	P8C2014	03/20/18	03/20/18	EPA 8021B	
Ethylbenzene	ND	0.00556	mg/kg dry	1	P8C2014	03/20/18	03/20/18	EPA 8021B	
Xylene (p/m)	ND	0.0222	mg/kg dry	1	P8C2014	03/20/18	03/20/18	EPA 8021B	
Xylene (o)	ND	0.0111	mg/kg dry	1	P8C2014	03/20/18	03/20/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		97.1 %	75-12	25	P8C2014	03/20/18	03/20/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		103 %	75-12	25	P8C2014	03/20/18	03/20/18	EPA 8021B	
General Chemistry Parameters by EPA /	Standard Metho	ds							
Chloride	30.7	1.11	mg/kg dry	1	P8C2018	03/20/18	03/21/18	EPA 300.0	
% Moisture	10.0	0.1	%	1	P8C2102	03/21/18	03/21/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 I	oy EPA Method 8	015M							
C6-C12	ND	27.8	mg/kg dry	1	P8C2015	03/20/18	03/21/18	TPH 8015M	
>C12-C28	ND	27.8	mg/kg dry	1	P8C2015	03/20/18	03/21/18	TPH 8015M	
>C28-C35	ND	27.8	mg/kg dry	1	P8C2015	03/20/18	03/21/18	TPH 8015M	
Surrogate: 1-Chlorooctane		74.9 %	70-13	80	P8C2015	03/20/18	03/21/18	TPH 8015M	
Surrogate: o-Terphenyl		78.0 %	70-13	80	P8C2015	03/20/18	03/21/18	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	27.8	mg/kg dry	1	[CALC]	03/20/18	03/21/18	calc	

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2M Environmental Services, LLC. 1219 W. University Blvd. Odessa TEXAS, 79764		Proj Project Num Project Mana		1	eral 001H			Fax:	
			neast -1 @ 016-05 (Soi						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pern	1ian Basin F	Invironmen	tal Lab, I	L .P.				
Organics by GC									
Benzene	ND	0.0222	mg/kg dry	20	P8C2014	03/20/18	03/21/18	EPA 8021B	
Toluene	ND	0.222	mg/kg dry	20	P8C2014	03/20/18	03/21/18	EPA 8021B	
Ethylbenzene	ND	0.111	mg/kg dry	20	P8C2014	03/20/18	03/21/18	EPA 8021B	
Xylene (p/m)	ND	0.444	mg/kg dry	20	P8C2014	03/20/18	03/21/18	EPA 8021B	
Xylene (o)	ND	0.222	mg/kg dry	20	P8C2014	03/20/18	03/21/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		93.1 %	75-1.	25	P8C2014	03/20/18	03/21/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		132 %	75-1.	25	P8C2014	03/20/18	03/21/18	EPA 8021B	S-GC
General Chemistry Parameters by EPA /	Standard Method	ls							
Chloride	48.3	1.11	mg/kg dry	1	P8C2018	03/20/18	03/21/18	EPA 300.0	
% Moisture	10.0	0.1	%	1	P8C2102	03/21/18	03/21/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 h	y EPA Method 8	015M							
C6-C12	ND	27.8	mg/kg dry	1	P8C2015	03/20/18	03/21/18	TPH 8015M	
>C12-C28	ND	27.8	mg/kg dry	1	P8C2015	03/20/18	03/21/18	TPH 8015M	
>C28-C35	ND	27.8	mg/kg dry	1	P8C2015	03/20/18	03/21/18	TPH 8015M	
Surrogate: 1-Chlorooctane		78.1 %	70-1.	30	P8C2015	03/20/18	03/21/18	TPH 8015M	
Surrogate: o-Terphenyl		82.0 %	70-1.	30	P8C2015	03/20/18	03/21/18	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	27.8	mg/kg dry	1	[CALC]	03/20/18	03/21/18	calc	

2M Environmental Services, LLC. 1219 W. University Blvd. Odessa TEXAS, 79764		Proj Project Num Project Mana		1	eral 001H			Fax:	
			neast -2 @0 016-06 (Soi						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perr	nian Basin F	Environmen	tal Lab, l	P.				
Organics by GC									
Benzene	ND	0.00111	mg/kg dry	1	P8C2014	03/20/18	03/21/18	EPA 8021B	
Toluene	ND	0.0111	mg/kg dry	1	P8C2014	03/20/18	03/21/18	EPA 8021B	
Ethylbenzene	0.0150	0.00556	mg/kg dry	1	P8C2014	03/20/18	03/21/18	EPA 8021B	
Xylene (p/m)	ND	0.0222	mg/kg dry	1	P8C2014	03/20/18	03/21/18	EPA 8021B	
Xylene (o)	ND	0.0111	mg/kg dry	1	P8C2014	03/20/18	03/21/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		89.3 %	75-12	25	P8C2014	03/20/18	03/21/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		76.7 %	75-12	25	P8C2014	03/20/18	03/21/18	EPA 8021B	
General Chemistry Parameters by EPA	/ Standard Metho	ds							
Chloride	234	1.11	mg/kg dry	1	P8C2018	03/20/18	03/21/18	EPA 300.0	
% Moisture	10.0	0.1	%	1	P8C2102	03/21/18	03/21/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35	by EPA Method 8	015M							
C6-C12	ND	27.8	mg/kg dry	1	P8C2015	03/20/18	03/21/18	TPH 8015M	
>C12-C28	ND	27.8	mg/kg dry	1	P8C2015	03/20/18	03/21/18	TPH 8015M	
>C28-C35	ND	27.8	mg/kg dry	1	P8C2015	03/20/18	03/21/18	TPH 8015M	
Surrogate: 1-Chlorooctane		79.1 %	70-1.	30	P8C2015	03/20/18	03/21/18	TPH 8015M	
Surrogate: o-Terphenyl		82.3 %	70-1.	30	P8C2015	03/20/18	03/21/18	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	27.8	mg/kg dry	1	[CALC]	03/20/18	03/21/18	calc	

2M Environmental Services, LLC.	Project:	COG Tequiza Federal 001H	Fax:	
1219 W. University Blvd.	Project Number:	[none]		
Odessa TEXAS, 79764	Project Manager:	Matt Green		

Organics by GC - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
		Dimit	eme	Level	Result	Juidee	Linits	Iu D	Linit	110105
Batch P8C2014 - General Preparation (GC)										
Blank (P8C2014-BLK1)				Prepared &	Analyzed:	03/20/18				
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.0100	"							
Ethylbenzene	ND	0.00500	"							
Xylene (p/m)	ND	0.0200	"							
Xylene (o)	ND	0.0100	"							
Surrogate: 1,4-Difluorobenzene	0.0574		"	0.0600		95.6	75-125			
Surrogate: 4-Bromofluorobenzene	0.0780		"	0.0600		130	75-125			S-G0
LCS (P8C2014-BS1)				Prepared &	Analyzed:	03/20/18				
Benzene	0.102	0.00100	mg/kg wet	0.100		102	70-130			
Toluene	0.103	0.0100	"	0.100		103	70-130			
Ethylbenzene	0.111	0.00500	"	0.100		111	70-130			
Xylene (p/m)	0.220	0.0200	"				70-130			
Xylene (o)	0.118	0.0100	"				70-130			
Surrogate: 1,4-Difluorobenzene	0.0592		"	0.0600		98.6	75-125			
Surrogate: 4-Bromofluorobenzene	0.0731		"	0.0600		122	75-125			
LCS Dup (P8C2014-BSD1)				Prepared &	Analyzed:	03/20/18				
Benzene	0.0920	0.00100	mg/kg wet	0.100		92.0	70-130	10.5	20	
Toluene	0.101	0.0100	"	0.100		101	70-130	2.11	20	
Ethylbenzene	0.109	0.00500	"	0.100		109	70-130	2.36	20	
Xylene (p/m)	0.210	0.0200	"				70-130		20	
Xylene (o)	0.119	0.0100	"				70-130		20	
Surrogate: 1,4-Difluorobenzene	0.0597		"	0.0600		99.6	75-125			
Surrogate: 4-Bromofluorobenzene	0.0660		"	0.0600		110	75-125			
Matrix Spike (P8C2014-MS1)	Sou	ırce: 8C20020	-01	Prepared: 0	3/20/18 Ai	nalyzed: 03	/21/18			
Benzene	0.0689	0.00101	mg/kg dry	0.101	ND	68.2	80-120			QM-0:
Toluene	0.0566	0.0101	"	0.101	ND	56.1	80-120			QM-0:
Ethylbenzene	0.0530	0.00505		0.101	ND	52.5	80-120			QM-0:
Xylene (p/m)	0.0883	0.0202	"		0.00225		80-120			
Xylene (o)	0.0408	0.0101			ND		80-120			
Surrogate: 1,4-Difluorobenzene	0.0615		"	0.0606		102	75-125			
Surrogate: 4-Bromofluorobenzene	0.0661		"	0.0606		109	75-125			

Permian Basin Environmental Lab, L.P.

2M Environmental Services, LLC.	Project: COG Tequiza Federal 001H	Fax:
1219 W. University Blvd.	Project Number: [none]	
Odessa TEXAS, 79764	Project Manager: Matt Green	

Organics by GC - Quality Control

Permian Basin Environmental Lab, L.P.

	Reporting		Spike	Source		%REC		RPD	
Analyte Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch P8C2014 - General Preparation (GC)

Matrix Spike Dup (P8C2014-MSD1)	Sour	rce: 8C20020	-01	Prepared:	03/20/18 Ai	nalyzed: 03	3/21/18			
Benzene	0.0782	0.00101	mg/kg dry	0.101	ND	77.4	80-120	12.7	20	QM-05
Toluene	0.0724	0.0101	"	0.101	ND	71.7	80-120	24.4	20	QM-05
Ethylbenzene	0.0787	0.00505	"	0.101	ND	77.9	80-120	39.0	20	QM-05
Xylene (p/m)	0.133	0.0202	"		0.00225		80-120		20	
Xylene (o)	0.0687	0.0101	"		ND		80-120		20	
Surrogate: 1,4-Difluorobenzene	0.0678		"	0.0606		112	75-125			
Surrogate: 4-Bromofluorobenzene	0.0703		"	0.0606		116	75-125			

Permian Basin Environmental Lab, L.P.

2M Environmental Services, LLC.	Project:	COG Tequiza Federal 001H	Fax:	
1219 W. University Blvd.	Project Number:	[none]		
Odessa TEXAS, 79764	Project Manager:	Matt Green		

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P8C2017 - *** DEFAULT PREP ***										
Blank (P8C2017-BLK1)				Prepared &	analyzed:	03/20/18				
Chloride	ND	1.00	mg/kg wet							
LCS (P8C2017-BS1)				Prepared &	analyzed:	03/20/18				
Chloride	415	1.00	mg/kg wet	400		104	80-120			
LCS Dup (P8C2017-BSD1)				Prepared &	k Analyzed:	03/20/18				
Chloride	414	1.00	mg/kg wet	400		103	80-120	0.290	20	
Duplicate (P8C2017-DUP1)	Sou	rce: 8C16011	-15	Prepared &	analyzed:	03/20/18				
Chloride	622	1.09	mg/kg dry		614			1.18	20	
Duplicate (P8C2017-DUP2)	Sou	irce: 8C20014	-01	Prepared: 03/20/18 Analyzed: 03/21/18						
Chloride	228	1.04	mg/kg dry		230			0.769	20	
Matrix Spike (P8C2017-MS1)	Sou	rce: 8C16011	-15	Prepared &	analyzed:	03/20/18				
Chloride	1750	1.09	mg/kg dry	1090	614	105	80-120			
Batch P8C2018 - *** DEFAULT PREP ***										
Blank (P8C2018-BLK1)				Prepared: (03/20/18 A	nalyzed: 03	/21/18			
Chloride	ND	1.00	mg/kg wet							
LCS (P8C2018-BS1)				Prepared: (03/20/18 A	nalyzed: 03	/21/18			
Chloride	411	1.00	mg/kg wet	400		103	80-120			
LCS Dup (P8C2018-BSD1)				Prepared: (03/20/18 A	nalyzed: 03	/21/18			
Chloride	406	1.00	mg/kg wet	400		101	80-120	1.15	20	

2M Environmental Services, LLC.	Project: COG Tequiza Federal 001H	Fax:
1219 W. University Blvd.	Project Number: [none]	
Odessa TEXAS, 79764	Project Manager: Matt Green	

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian	Basin	Environmental	Lab, L.P.
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	Reporting		Spike	Source		%REC		RPD	
Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Sour	ce: 8C20016-	03	Prepared: (03/20/18 A	nalyzed: 03	/21/18			
25.5	1.09	mg/kg dry		28.6			11.7	20	
Sour	ce: 8C20016-	03	Prepared: (03/20/18 A	nalyzed: 03	/21/18			
1100	1.09	mg/kg dry	1090	28.6	98.6	80-120			
			Prepared &	Analyzed:	03/21/18				
ND	0.1	%							
Sour	ce: 8C16011-	13	Prepared &	Analyzed:	03/21/18				
9.0	0.1	%		9.0			0.00	20	
Sour	ce: 8C20002-	05	Prepared &	Analyzed:	03/21/18				
8.0	0.1	%		8.0			0.00	20	
Sour	ce: 8C20008-	02	Prepared &	Analyzed:	03/21/18				
13.0	0.1	%		12.0			8.00	20	
	Sour 25.5 Sour 1100 ND Sour 9.0 Sour 8.0 Sour	Result Limit Source: 8C20016- 25.5 1.09 Source: 8C20016- 1100 1.09 ND 0.1 Source: 8C16011- 9.0 0.1 Source: 8C20002- 8.0 0.1 Source: 8C20002-	Result Limit Units Source: 8C20016-03 3000000000000000000000000000000000000	ResultLimitUnitsLevelSource: 8C20016-03Prepared: 025.51.09mg/kg dryPrepared: 025.51.09mg/kg dryPrepared: 0Source: 8C20016-03Prepared: 011001.09mg/kg dry109011000.1%Prepared &ND0.1%Prepared &9.00.1%Prepared &8.00.1%Prepared &8.00.1%Prepared &9.00.1%Prepared &9.0	Result Limit Units Level Result Source: 8C20016-03 Prepared: 03/20/18 A 25.5 1.09 mg/kg dry 28.6 28.6 Source: 8C20016-03 Prepared: 03/20/18 A 1100 1.09 mg/kg dry 1090 28.6 ND 0.1 % Prepared & Analyzed: 9.0 9.0 0.1 % 9.0 9.0 8.0 Source: 8C20002-05 Prepared & Analyzed: 8.0 8.0 8.0 0.1 % 8.0 8.0 8.0	ResultLimitUnitsLevelResult%RECSource: 8C20016-03Prepared: 03/20/18Analyzed: 0325.51.09mg/kg dry28.628.6Source: 8C20016-03Prepared: 03/20/18Analyzed: 0311001.09mg/kg dry109028.611001.09mg/kg dry109028.698.6ND0.1%Prepared & Analyzed: 03/21/189.00.1%9.09.0Source: 8C16011-13Prepared & Analyzed: 03/21/189.00.1%9.0Source: 8C20002-05Prepared & Analyzed: 03/21/188.00.1%8.0Source: 8C20008-02Prepared & Analyzed: 03/21/18	ResultLimitUnitsLevelResult%RECLimitsSource: 8C20016-03Prepared: 03/20/18Analyzed: 03/21/1825.51.09mg/kg dry28.6 $3/20/18$ Analyzed: 03/21/18Source: 8C20016-03Prepared: 03/20/18Analyzed: 03/21/1811001.09mg/kg dry109028.698.680-120Prepared & Analyzed: 03/21/1811000.1% 9.6 98.680-120Prepared & Analyzed: 03/21/18ND0.1% 9.0 9.0 9.0 Source: 8C16011-13Prepared & Analyzed: 03/21/189.00.1% 9.0 9.0 9.0 Source: 8C20002-05Prepared & Analyzed: 03/21/188.00.1% 8.0 8.0	Result Limit Units Level Result %REC Limits RPD Source: 8C20016-03 Prepared: 03/20/18 Analyzed: 03/21/18 25.5 1.09 mg/kg dry 28.6 11.7 Source: 8C20016-03 Prepared: 03/20/18 Analyzed: 03/21/18 11.7 1100 1.09 mg/kg dry 1090 28.6 98.6 80-120 Prepared: 03/20/18 Analyzed: 03/21/18 1100 1.09 mg/kg dry 1090 28.6 98.6 80-120 Prepared & Analyzed: 03/21/18 ND 0.1 % 9.0 0.00 Source: 8C16011-13 Prepared & Analyzed: 03/21/18 9.0 0.1 % 9.0 0.00 Source: 8C20002-05 Prepared & Analyzed: 03/21/18 8.0 0.1 % 8.0 0.00 Source: 8C20008-02 Prepared & Analyzed: 03/21/18	ResultLimitUnitsLevelResult%RECLimitsRPDLimitSource:8C20016-03Prepared: $03/20/18$ Analyzed: $03/21/18$ 10720Source:8C20016-03Prepared: $03/20/18$ Analyzed: $03/21/18$ 11.720Source:8C20016-03Prepared: $03/20/18$ Analyzed: $03/21/18$ 11.720Source:8C20016-03Prepared: $03/20/18$ Analyzed: $03/21/18$ 11.720ND1.09mg/kg dry109028.698.680-12011.711.711.7ND0.1%Prepared & Analyzed: $03/21/18$ 11.711.711.711.79.00.1%9.00.00202011.711.711.711.79.00.1%9.00.00202011.7 <td< td=""></td<>

Permian Basin Environmental Lab, L.P.

2M Environmental Services, LLC.	Project:	COG Tequiza Federal 001H	Fax:	
1219 W. University Blvd.	Project Number:	[none]		
Odessa TEXAS, 79764	Project Manager:	Matt Green		

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P8C2015 - General Preparation (GC)										
Blank (P8C2015-BLK1)				Prepared &	Analyzed	: 03/20/18				
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	76.8		"	100		76.8	70-130			
Surrogate: o-Terphenyl	40.2		"	50.0		80.4	70-130			
LCS (P8C2015-BS1)				Prepared &	Analyzed	: 03/20/18				
C6-C12	1030	25.0	mg/kg wet	1000		103	75-125			
>C12-C28	933	25.0	"	1000		93.3	75-125			
Surrogate: 1-Chlorooctane	113		"	100		113	70-130			
Surrogate: o-Terphenyl	47.0		"	50.0		94.0	70-130			
LCS Dup (P8C2015-BSD1)				Prepared &	Analyzed	: 03/20/18				
C6-C12	1090	25.0	mg/kg wet	1000		109	75-125	5.04	20	
>C12-C28	986	25.0	"	1000		98.6	75-125	5.56	20	
Surrogate: 1-Chlorooctane	115		"	100		115	70-130			
Surrogate: o-Terphenyl	52.6		"	50.0		105	70-130			
Matrix Spike (P8C2015-MS1)	Sou	rce: 8C20020	-01	Prepared: (03/20/18 A	nalyzed: 03	/21/18			
C6-C12	1060	25.3	mg/kg dry	1010	13.0	103	75-125			
>C12-C28	1060	25.3	"	1010	24.0	102	75-125			
Surrogate: 1-Chlorooctane	122		"	101		120	70-130			
Surrogate: o-Terphenyl	45.3		"	50.5		89.8	70-130			
Matrix Spike Dup (P8C2015-MSD1)	Sou	irce: 8C2002(-01	Prepared: (03/20/18 A	nalyzed: 03	/21/18			
C6-C12	1080	25.3	mg/kg dry	1010	13.0	105	75-125	1.98	20	
>C12-C28	1060	25.3	"	1010	24.0	103	75-125	0.420	20	
Surrogate: 1-Chlorooctane	126		"	101		124	70-130			
Surrogate: o-Terphenyl	53.6		"	50.5		106	70-130			

Permian Basin Environmental Lab, L.P.

2M Environmental Services, LLC.	Project:	COG Tequiza Federal 001H	Fax:
1219 W. University Blvd.	Project Number:	[none]	
Odessa TEXAS, 79764	Project Manager:	Matt Green	

Notes and Definitions

S-GC	Surrogate recovery outside of control limits.	The data was accepted based on val	id recovery of the remaining surrogate.
0.00	Surrogate recovery cluster of control minus.	The data was accepted subed on ta	a reectery of the remaining surrogate.

- QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
- BULK Samples received in Bulk soil containers
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- LCS Laboratory Control Spike
- MS Matrix Spike

Report Approved By:

Dup Duplicate

Sun Barron

Date: 4/13/2018

Brent Barron, Laboratory Director/Technical Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

Permian Basin Environmental Lab, L.P.

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CHAIN OF	Matt Green	2M Environmental Services, LLC	Company Address: 1219 W. University Blvd.	Odessa, Texas 79764	(432)230-3763		- / IDINIMAN	4	001(o	PIELD CODE	South-1 @ 6"	North-1 @ 6'	Northwest -1 @ 6"	Bouthwest -2 @ 6"	Northeast -1 @ 6"	Southeast -2 @ 6"			1 yrsy zam		
PIBIDIA	Project Manager:	Company Name	Company Address	City/State/Zip:	Telephone No:	Samular Sinnatura		(lab use only) 🔜 🥂 🔿	ORDER#: N		80	Š	North	Bouth	North	Anoe.					
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PERMIAN BASIN ENVIRONMENTAL LAB, LP 1400 Rankin Hwy Midland, TX 79701



Analytical Report

Prepared for:

Matt Green 2M Environmental Services, LLC. 1219 W. University Blvd. Odessa, TEXAS 79764

Project: COG Roy Batty Federal COM 1H Project Number: [none] Location: Lea County NM

Lab Order Number: 8C27003



NELAP/TCEQ # T104704516-17-8

Report Date: 04/03/18

2M Environmental Services, LLC.	Project:	COG Roy Batty Federal COM 1H	Fax:
1219 W. University Blvd.	Project Number:	[none]	
Odessa TEXAS, 79764	Project Manager:	Matt Green	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
T-1@1'	8C27003-01	Soil	03/08/17 09:23	03-27-2018 16:35
T-1@2'	8C27003-02	Soil	03/08/17 09:31	03-27-2018 16:35
T-1 @3'	8C27003-03	Soil	03/08/17 09:48	03-27-2018 16:35
T-1 @ 4'	8C27003-04	Soil	03/08/17 10:03	03-27-2018 16:35
T-1@5'	8C27003-05	Soil	03/08/17 10:12	03-27-2018 16:35
T-2@1'	8C27003-06	Soil	03/08/17 11:15	03-27-2018 16:35
T-2@2'	8C27003-07	Soil	03/08/17 11:20	03-27-2018 16:35
T-2@3'	8C27003-08	Soil	03/08/17 11:25	03-27-2018 16:35
T-2@4'	8C27003-09	Soil	03/08/17 11:32	03-27-2018 16:35
T-2@5'	8C27003-10	Soil	03/08/17 11:44	03-27-2018 16:35

2M Environmental Services, LLC.	Project:	COG Roy Batty Federal COM 1H	Fax:
1219 W. University Blvd.	Project Number:	[none]	
Odessa TEXAS, 79764	Project Manager:	Matt Green	

T-1@1' 8C27003-01 (Soil)

		8027	003-01 (801	1)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
	Perr	nian Basin F	Invironmen	tal Lab, l	L.P.				
Organics by GC									
Benzene	ND	0.00102	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Toluene	ND	0.0102	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Ethylbenzene	ND	0.00510	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Xylene (p/m)	ND	0.0204	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Xylene (o)	ND	0.0102	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		111 %	75-1	25	P8C2803	03/28/18	03/28/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		96.1 %	75-1.	25	P8C2803	03/28/18	03/28/18	EPA 8021B	
General Chemistry Parameters by EPA	Standard Metho	ds							
Chloride	7490	25.5	mg/kg dry	25	P8D0202	04/02/18	04/03/18	EPA 300.0	
% Moisture	2.0	0.1	%	1	P8C2905	03/29/18	03/29/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35	by EPA Method 8	015M							
C6-C12	ND	25.5	mg/kg dry	1	P8C2802	03/28/18	03/28/18	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P8C2802	03/28/18	03/28/18	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P8C2802	03/28/18	03/28/18	TPH 8015M	
Surrogate: 1-Chlorooctane		81.9 %	70-1.	30	P8C2802	03/28/18	03/28/18	TPH 8015M	
Surrogate: o-Terphenyl		88.6 %	70-1.	30	P8C2802	03/28/18	03/28/18	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	03/28/18	03/28/18	calc	

Permian Basin Environmental Lab, L.P.

2M Environmental Services, LLC. 1219 W. University Blvd. Odessa TEXAS, 79764		Proj Project Num Project Mana		5 5	ederal COM	1H		Fax:	
			T-1@2' 003-02 (Soil)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Per	mian Basin F	Invironmen	tal Lab, l	L.P.				
Organics by GC									
Benzene	ND	0.00112	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Toluene	ND	0.0112	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Ethylbenzene	ND	0.00562	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Xylene (p/m)	ND	0.0225	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Xylene (o)	ND	0.0112	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		117 %	75-12	25	P8C2803	03/28/18	03/28/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		87.7 %	75-12	5	P8C2803	03/28/18	03/28/18	EPA 8021B	
General Chemistry Parameters by EPA / Sta	undard Metho	ods							
Chloride	8490	28.1	mg/kg dry	25	P8D0202	04/02/18	04/03/18	EPA 300.0	
% Moisture	11.0	0.1	%	1	P8C2905	03/29/18	03/29/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by F	CPA Method 8	8015M							
C6-C12	ND	28.1	mg/kg dry	1	P8C2802	03/28/18	03/28/18	TPH 8015M	
>C12-C28	ND	28.1	mg/kg dry	1	P8C2802	03/28/18	03/28/18	TPH 8015M	
>C28-C35	ND	28.1	mg/kg dry	1	P8C2802	03/28/18	03/28/18	TPH 8015M	
Surrogate: 1-Chlorooctane		81.2 %	70-13	0	P8C2802	03/28/18	03/28/18	TPH 8015M	
Surrogate: o-Terphenyl		87.5 %	70-13	0	P8C2802	03/28/18	03/28/18	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	28.1	mg/kg dry	1	[CALC]	03/28/18	03/28/18	calc	

2M Environmental Services, LLC. 1219 W. University Blvd. Odessa TEXAS, 79764		Project Num	ect: COG Roy ber: [none] ger: Matt Gree	5	ederal COM	1H		Fax:	
			Г-1 @3' 003-03 (Soil)						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Per	mian Basin F	Environmenta	ıl Lab, l	L .P.				
Organics by GC									
Benzene	ND	0.00125	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Toluene	ND	0.0125	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Ethylbenzene	ND	0.00625	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Xylene (p/m)	ND	0.0250	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Xylene (o)	ND	0.0125	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		86.5 %	75-125		P8C2803	03/28/18	03/28/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		114 %	75-125		P8C2803	03/28/18	03/28/18	EPA 8021B	
General Chemistry Parameters by EPA	Standard Metho	ds							
Chloride	4800	31.2	mg/kg dry	25	P8D0202	04/02/18	04/03/18	EPA 300.0	
% Moisture	20.0	0.1	%	1	P8C2905	03/29/18	03/29/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35	by EPA Method 8	8015M							
C6-C12	ND	31.2	mg/kg dry	1	P8C2802	03/28/18	03/28/18	TPH 8015M	
>C12-C28	ND	31.2	mg/kg dry	1	P8C2802	03/28/18	03/28/18	TPH 8015M	
>C28-C35	ND	31.2	mg/kg dry	1	P8C2802	03/28/18	03/28/18	TPH 8015M	
Surrogate: 1-Chlorooctane		93.6 %	70-130)	P8C2802	03/28/18	03/28/18	TPH 8015M	
Surrogate: o-Terphenyl		101 %	70-130)	P8C2802	03/28/18	03/28/18	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	31.2	mg/kg dry	1	[CALC]	03/28/18	03/28/18	calc	

2M Environmental Services, LLC. 1219 W. University Blvd. Odessa TEXAS, 79764		Proj Project Num Project Mana		Fax:					
			[-1 @ 4' 003-04 (Soil)						
		0027	003-04 (3011)						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Peri	nian Basin F	Environmenta	ıl Lab, l	L.P.				
Organics by GC									
Benzene	ND	0.00115	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Toluene	ND	0.0115	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Ethylbenzene	ND	0.00575	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Xylene (p/m)	ND	0.0230	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Xylene (o)	ND	0.0115	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		109 %	75-125		P8C2803	03/28/18	03/28/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		124 %	75-125		P8C2803	03/28/18	03/28/18	EPA 8021B	
General Chemistry Parameters by EPA	/ Standard Metho	ds							
Chloride	1840	5.75	mg/kg dry	5	P8D0202	04/02/18	04/03/18	EPA 300.0	
% Moisture	13.0	0.1	%	1	P8C2905	03/29/18	03/29/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35	by EPA Method 8	015M							
C6-C12	ND	28.7	mg/kg dry	1	P8C2802	03/28/18	03/28/18	TPH 8015M	
>C12-C28	ND	28.7	mg/kg dry	1	P8C2802	03/28/18	03/28/18	TPH 8015M	
>C28-C35	ND	28.7	mg/kg dry	1	P8C2802	03/28/18	03/28/18	TPH 8015M	
Surrogate: 1-Chlorooctane		88.5 %	70-130		P8C2802	03/28/18	03/28/18	TPH 8015M	
Surrogate: o-Terphenyl		94.1 %	70-130	1	P8C2802	03/28/18	03/28/18	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	28.7	mg/kg dry	1	[CALC]	03/28/18	03/28/18	calc	

2M Environmental Services, LLC. 1219 W. University Blvd. Odessa TEXAS, 79764		Project: COG Roy Batty Federal COM 1H Project Number: [none] Project Manager: Matt Green							
			Г-1@5'						
		8027	003-05 (Soil)						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perr	nian Basin F	Environment	al Lab, l	L.P.				
Organics by GC									
Benzene	ND	0.00114	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Toluene	ND	0.0114	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Ethylbenzene	ND	0.00568	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Xylene (p/m)	ND	0.0227	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Xylene (o)	ND	0.0114	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		123 %	75-12	5	P8C2803	03/28/18	03/28/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		108 %	75-12:	5	P8C2803	03/28/18	03/28/18	EPA 8021B	
General Chemistry Parameters by EPA	/ Standard Metho	ds							
Chloride	751	5.68	mg/kg dry	5	P8D0202	04/02/18	04/03/18	EPA 300.0	
% Moisture	12.0	0.1	%	1	P8C2905	03/29/18	03/29/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35	by EPA Method 8	015M							
C6-C12	ND	28.4	mg/kg dry	1	P8C2802	03/28/18	03/28/18	TPH 8015M	
>C12-C28	ND	28.4	mg/kg dry	1	P8C2802	03/28/18	03/28/18	TPH 8015M	
>C28-C35	ND	28.4	mg/kg dry	1	P8C2802	03/28/18	03/28/18	TPH 8015M	
Surrogate: 1-Chlorooctane		87.1 %	70-130)	P8C2802	03/28/18	03/28/18	TPH 8015M	
Surrogate: o-Terphenyl		93.3 %	70-130)	P8C2802	03/28/18	03/28/18	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	28.4	mg/kg dry	1	[CALC]	03/28/18	03/28/18	calc	

Permian Basin Environmental Lab, L.P.

2M Environmental Services, LLC. 1219 W. University Blvd. Odessa TEXAS, 79764		Project: COG Roy Batty Federal COM 1H Project Number: [none] Project Manager: Matt Green							
			T-2@1' /003-06 (Soil)						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Peri	nian Basin F	Environmenta	l Lab, l	L .P.				
Organics by GC									
Benzene	ND	0.00118	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Toluene	ND	0.0118	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Ethylbenzene	ND	0.00588	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Xylene (p/m)	ND	0.0235	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Xylene (o)	ND	0.0118	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		121 %	75-125		P8C2803	03/28/18	03/28/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		98.8 %	75-125		P8C2803	03/28/18	03/28/18	EPA 8021B	
General Chemistry Parameters by EPA	Standard Metho	ds							
Chloride	2750	11.8	mg/kg dry	10	P8D0202	04/02/18	04/03/18	EPA 300.0	
% Moisture	15.0	0.1	%	1	P8C2905	03/29/18	03/29/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35	by EPA Method 8	015M							
C6-C12	ND	29.4	mg/kg dry	1	P8C2802	03/28/18	03/29/18	TPH 8015M	
>C12-C28	ND	29.4	mg/kg dry	1	P8C2802	03/28/18	03/29/18	TPH 8015M	
>C28-C35	ND	29.4	mg/kg dry	1	P8C2802	03/28/18	03/29/18	TPH 8015M	
Surrogate: 1-Chlorooctane		91.3 %	70-130		P8C2802	03/28/18	03/29/18	TPH 8015M	
Surrogate: o-Terphenyl		98.3 %	70-130		P8C2802	03/28/18	03/29/18	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	29.4	mg/kg dry	1	[CALC]	03/28/18	03/29/18	calc	

2M Environmental Services, LLC. 1219 W. University Blvd. Odessa TEXAS, 79764		Proj Project Num Project Mana		Fax:					
			Г-2@2' '003-07 (Soil))					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perr	nian Basin E	Environment	al Lab, l	L.P.				
Organics by GC									
Benzene	ND	0.00128	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Toluene	ND	0.0128	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Ethylbenzene	ND	0.00641	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Xylene (p/m)	ND	0.0256	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Xylene (o)	ND	0.0128	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		88.3 %	75-12:	5	P8C2803	03/28/18	03/28/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		111 %	75-12	5	P8C2803	03/28/18	03/28/18	EPA 8021B	
General Chemistry Parameters by EPA /	Standard Metho	ds							
Chloride	5880	32.1	mg/kg dry	25	P8D0202	04/02/18	04/03/18	EPA 300.0	
% Moisture	22.0	0.1	%	1	P8C2905	03/29/18	03/29/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 b	y EPA Method 8	015M							
C6-C12	ND	32.1	mg/kg dry	1	P8C2802	03/28/18	03/29/18	TPH 8015M	
>C12-C28	ND	32.1	mg/kg dry	1	P8C2802	03/28/18	03/29/18	TPH 8015M	
>C28-C35	ND	32.1	mg/kg dry	1	P8C2802	03/28/18	03/29/18	TPH 8015M	
Surrogate: 1-Chlorooctane		96.4 %	70-130	0	P8C2802	03/28/18	03/29/18	TPH 8015M	
Surrogate: o-Terphenyl		105 %	70-130	0	P8C2802	03/28/18	03/29/18	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	32.1	mg/kg dry	1	[CALC]	03/28/18	03/29/18	calc	

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2M Environmental Services, LLC. 1219 W. University Blvd. Odessa TEXAS, 79764		Project: COG Roy Batty Federal COM 1H Project Number: [none] Project Manager: Matt Green							
			T-2@3' '003-08 (Soil	l)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perr	nian Basin F	Environmen	tal Lab, l	L.P.				
Organics by GC									
Benzene	ND	0.00118	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Toluene	ND	0.0118	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Ethylbenzene	ND	0.00588	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Xylene (p/m)	ND	0.0235	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Xylene (o)	ND	0.0118	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		135 %	75-12	25	P8C2803	03/28/18	03/28/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		106 %	75-12	25	P8C2803	03/28/18	03/28/18	EPA 8021B	
General Chemistry Parameters by EPA /	Standard Metho	ds							
Chloride	8470	29.4	mg/kg dry	25	P8D0202	04/02/18	04/03/18	EPA 300.0	
% Moisture	15.0	0.1	%	1	P8C2905	03/29/18	03/29/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 h	y EPA Method 8	015M							
C6-C12	ND	29.4	mg/kg dry	1	P8C2802	03/28/18	03/29/18	TPH 8015M	
>C12-C28	ND	29.4	mg/kg dry	1	P8C2802	03/28/18	03/29/18	TPH 8015M	
>C28-C35	ND	29.4	mg/kg dry	1	P8C2802	03/28/18	03/29/18	TPH 8015M	
Surrogate: 1-Chlorooctane		91.0 %	70-13	30	P8C2802	03/28/18	03/29/18	TPH 8015M	
Surrogate: o-Terphenyl		98.1 %	70-13	30	P8C2802	03/28/18	03/29/18	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	29.4	mg/kg dry	1	[CALC]	03/28/18	03/29/18	calc	

2M Environmental Services, LLC. 1219 W. University Blvd. Odessa TEXAS, 79764		Proj Project Num Project Mana		Fax:					
			T-2@4' /003-09 (Soil	l)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perr	nian Basin F	Environmen	tal Lab, l	L .P.				
Organics by GC									
Benzene	ND	0.00141	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Toluene	ND	0.0141	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Ethylbenzene	ND	0.00704	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Xylene (p/m)	ND	0.0282	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Xylene (o)	ND	0.0141	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		103 %	75-12	25	P8C2803	03/28/18	03/28/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		132 %	75-12	25	P8C2803	03/28/18	03/28/18	EPA 8021B	
General Chemistry Parameters by EPA /	Standard Metho	ds							
Chloride	4010	14.1	mg/kg dry	10	P8D0202	04/02/18	04/03/18	EPA 300.0	
% Moisture	29.0	0.1	%	1	P8C2905	03/29/18	03/29/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 I	oy EPA Method 8	015M							
C6-C12	ND	35.2	mg/kg dry	1	P8C2802	03/28/18	03/29/18	TPH 8015M	
>C12-C28	ND	35.2	mg/kg dry	1	P8C2802	03/28/18	03/29/18	TPH 8015M	
>C28-C35	ND	35.2	mg/kg dry	1	P8C2802	03/28/18	03/29/18	TPH 8015M	
Surrogate: 1-Chlorooctane		90.0 %	70-13	30	P8C2802	03/28/18	03/29/18	TPH 8015M	
Surrogate: o-Terphenyl		97.4 %	70-13	30	P8C2802	03/28/18	03/29/18	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	35.2	mg/kg dry	1	[CALC]	03/28/18	03/29/18	calc	

2M Environmental Services, LLC. 1219 W. University Blvd. Odessa TEXAS, 79764		Project: COG Roy Batty Federal COM 1H Project Number: [none] Project Manager: Matt Green							
			T-2@5' /003-10 (Soil)						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Peri	nian Basin F	Environmenta	al Lab, l	L.P.				
Organics by GC									
Benzene	ND	0.00120	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Toluene	ND	0.0120	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Ethylbenzene	ND	0.00602	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Xylene (p/m)	ND	0.0241	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Xylene (o)	ND	0.0120	mg/kg dry	1	P8C2803	03/28/18	03/28/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		101 %	75-125	ī	P8C2803	03/28/18	03/28/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		143 %	75-125	;	P8C2803	03/28/18	03/28/18	EPA 8021B	
General Chemistry Parameters by EPA	/ Standard Metho	ds							
Chloride	76.5	1.20	mg/kg dry	1	P8D0202	04/02/18	04/03/18	EPA 300.0	
% Moisture	17.0	0.1	%	1	P8C2905	03/29/18	03/29/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35	by EPA Method 8	015M							
C6-C12	ND	30.1	mg/kg dry	1	P8C2802	03/28/18	03/29/18	TPH 8015M	
>C12-C28	ND	30.1	mg/kg dry	1	P8C2802	03/28/18	03/29/18	TPH 8015M	
>C28-C35	ND	30.1	mg/kg dry	1	P8C2802	03/28/18	03/29/18	TPH 8015M	
Surrogate: 1-Chlorooctane		92.0 %	70-130)	P8C2802	03/28/18	03/29/18	TPH 8015M	
Surrogate: o-Terphenyl		99.6 %	70-130)	P8C2802	03/28/18	03/29/18	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	30.1	mg/kg dry	1	[CALC]	03/28/18	03/29/18	calc	

2M Environmental Services, LLC.	Project:	COG Roy Batty Federal COM 1H	Fax:
1219 W. University Blvd.	Project Number:	[none]	
Odessa TEXAS, 79764	Project Manager:	Matt Green	

Organics by GC - Quality Control

Permian Basin Environmental Lab, L.P.

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P8C2803 - General Preparation	(GC)									
Blank (P8C2803-BLK1)				Prepared &	Analyzed:	03/28/18				
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.0100	"							
Ethylbenzene	ND	0.00500	"							
Xylene (p/m)	ND	0.0200	"							
Xylene (o)	ND	0.0100	"							
Surrogate: 1,4-Difluorobenzene	0.0539		"	0.0600		89.8	75-125			
Surrogate: 4-Bromofluorobenzene	0.0660		"	0.0600		110	75-125			
LCS (P8C2803-BS1)				Prepared &	Analyzed:	03/28/18				
Benzene	0.103	0.00100	mg/kg wet	0.100		103	70-130			
Toluene	0.115	0.0100	"	0.100		115	70-130			
Ethylbenzene	0.116	0.00500	"	0.100		116	70-130			
Xylene (p/m)	0.215	0.0200	"				70-130			
Xylene (o)	0.112	0.0100	"				70-130			
Surrogate: 1,4-Difluorobenzene	0.0604		"	0.0600		101	75-125			
Surrogate: 4-Bromofluorobenzene	0.0672		"	0.0600		112	75-125			
LCS Dup (P8C2803-BSD1)				Prepared &	Analyzed:	03/28/18				
Benzene	0.104	0.00100	mg/kg wet	0.100		104	70-130	0.873	20	
Toluene	0.114	0.0100	"	0.100		114	70-130	1.15	20	
Ethylbenzene	0.118	0.00500	"	0.100		118	70-130	1.52	20	
Xylene (p/m)	0.205	0.0200	"				70-130		20	
Xylene (o)	0.107	0.0100	"				70-130		20	
Surrogate: 1,4-Difluorobenzene	0.0542		"	0.0600		90.4	75-125			
Surrogate: 4-Bromofluorobenzene	0.0712		"	0.0600		119	75-125			
Matrix Spike (P8C2803-MS1)	Sou	irce: 8C28004	-01	Prepared: ()3/28/18 Ai	nalyzed: 03	/29/18			
Benzene	0.0522	0.00104	mg/kg dry	0.104	ND	50.1	80-120			QM-0
Toluene	0.0547	0.0104	"	0.104	0.00502	47.7	80-120			QM-0
Ethylbenzene	0.0582	0.00521	"	0.104	ND	55.8	80-120			QM-0
Xylene (p/m)	0.128	0.0208	"		0.00443		80-120			
Xylene (o)	0.0473	0.0104	"		ND		80-120			
Surrogate: 1,4-Difluorobenzene	0.0576		"	0.0625		92.2	75-125			
Surrogate: 4-Bromofluorobenzene	0.0661		"	0.0625		106	75-125			

Permian Basin Environmental Lab, L.P.

2M Environmental Services, LLC.	Project:	COG Roy Batty Federal COM 1H	Fax:
1219 W. University Blvd.	Project Number:	[none]	
Odessa TEXAS, 79764	Project Manager:	Matt Green	

Organics by GC - Quality Control

Permian Basin Environmental Lab, L.P.

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch P8C2803 - General Preparation (GC)

Matrix Spike Dup (P8C2803-MSD1)	Sour	Source: 8C28004-01			03/28/18 An	alyzed: 03				
Benzene	0.0378	0.00104	mg/kg dry	0.104	ND	36.3	80-120	32.0	20	QM-05
Toluene	0.0477	0.0104	"	0.104	0.00502	40.9	80-120	15.3	20	QM-05
Ethylbenzene	0.0431	0.00521	"	0.104	ND	41.4	80-120	29.8	20	QM-05
Xylene (p/m)	0.109	0.0208	"		0.00443		80-120		20	
Xylene (o)	0.0357	0.0104			ND		80-120		20	
Surrogate: 1,4-Difluorobenzene	0.0620		"	0.0625		99.2	75-125			
Surrogate: 4-Bromofluorobenzene	0.0621		"	0.0625		<i>99.3</i>	75-125			

Permian Basin Environmental Lab, L.P.

2M Environmental Services, LLC.	Project:	COG Roy Batty Federal COM 1H	Fax:
1219 W. University Blvd.	Project Number:	[none]	
Odessa TEXAS, 79764	Project Manager:	Matt Green	

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Analyte	Kesuit	Liiiit	Units	Level	Kesuit	70KEC	Linits	KF D	Liint	notes
Batch P8C2905 - *** DEFAULT PREP ***										
Blank (P8C2905-BLK1)				Prepared &	Analyzed:	03/29/18				
% Moisture	ND	0.1	%							
Duplicate (P8C2905-DUP1)	Sou	rce: 8C26001	-26	Prepared &	Analyzed:	03/29/18				
% Moisture	12.0	0.1	%		18.0			40.0	20	
Batch P8D0202 - *** DEFAULT PREP ***										
				D 10		04/02/10				
Blank (P8D0202-BLK1)				Prepared &	Analyzed:	04/02/18				
Chloride	ND	1.00	mg/kg wet							
LCS (P8D0202-BS1)				Prepared &	Analyzed:	04/02/18				
Chloride	388	1.00	mg/kg wet	400		97.1	80-120			
LCS Dup (P8D0202-BSD1)				Prepared &	Analyzed:	04/02/18				
Chloride	389	1.00	mg/kg wet	400	5	97.2	80-120	0.129	20	
Duplicate (P8D0202-DUP1)	Sou	rce: 8C26001	-27	Prepared: (04/02/18 A	nalyzed: 04	/03/18			
Chloride	803	1.12	mg/kg dry	1	966			18.4	20	
Duplicate (P8D0202-DUP2)	Sou	rce: 8C27003	-08	Prepared: (04/02/18 A	nalyzed: 04	/03/18			
Chloride	8470		mg/kg dry	· r · · · · · ·	8470	J		0.0208	20	
Matrix Spike (P8D0202-MS1)	Som	rce: 8C26001	-27	Prepared: (04/02/18 A	nalvzed: 04	/03/18			
Chloride	1900		mg/kg dry	1120	966	83.5	80-120			

Permian Basin Environmental Lab, L.P.

2M Environmental Services, LLC.	Project:	COG Roy Batty Federal COM 1H	Fax:	
1219 W. University Blvd.	Project Number:	[none]		
Odessa TEXAS, 79764	Project Manager:	Matt Green		

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P8C2802 - General Preparation (GC)										
Blank (P8C2802-BLK1)				Prepared &	Analvzed:	03/28/18				
C6-C12	ND	25.0	mg/kg wet	- F						
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	97.3		"	100		97.3	70-130			
Surrogate: o-Terphenyl	50.7		"	50.0		101	70-130			
LCS (P8C2802-BS1)				Prepared &	Analyzed:	03/28/18				
C6-C12	1050	25.0	mg/kg wet	1000		105	75-125			
>C12-C28	962	25.0	"	1000		96.2	75-125			
Surrogate: 1-Chlorooctane	114		"	100		114	70-130			
Surrogate: o-Terphenyl	58.9		"	50.0		118	70-130			
LCS Dup (P8C2802-BSD1)				Prepared &	Analyzed:	03/28/18				
C6-C12	1040	25.0	mg/kg wet	1000		104	75-125	0.803	20	
>C12-C28	979	25.0	"	1000		97.9	75-125	1.82	20	
Surrogate: 1-Chlorooctane	128		"	100		128	70-130			
Surrogate: o-Terphenyl	51.8		"	50.0		104	70-130			
Matrix Spike (P8C2802-MS1)	Sou	rce: 8C28002	2-02	Prepared: (03/28/18 A	nalyzed: 03	/29/18			
C6-C12	952	25.3	mg/kg dry	1010	69.6	87.4	75-125			
>C12-C28	3000	25.3	"	1010	2700	29.8	75-125			
Surrogate: 1-Chlorooctane	128		"	101		127	70-130			
Surrogate: o-Terphenyl	49.2		"	50.5		97.4	70-130			
Matrix Spike Dup (P8C2802-MSD1)	Sou	rce: 8C28002	2-02	Prepared: (03/28/18 A	nalyzed: 03	/29/18			
C6-C12	931	25.3	mg/kg dry	1010	69.6	85.3	75-125	2.43	20	
>C12-C28	3040	25.3	"	1010	2700	34.1	75-125	13.5	20	
Surrogate: 1-Chlorooctane	128		"	101		126	70-130			
Surrogate: o-Terphenyl	56.0		"	50.5		111	70-130			

Permian Basin Environmental Lab, L.P.

2M Environmental Services, LLC.	Project:	COG Roy Batty Federal COM 1H	Fax:
1219 W. University Blvd.	Project Number:	[none]	
Odessa TEXAS, 79764	Project Manager:	Matt Green	

Notes and Definitions

QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were
	within acceptance limits showing that the laboratory is in control and the data is acceptable.

- BULK Samples received in Bulk soil containers
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- LCS Laboratory Control Spike
- MS Matrix Spike
- Dup Duplicate

Report Approved By:

Bun Barron

4/3/2018

Brent Barron, Laboratory Director/Technical Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Date:

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State of New Mexico Energy Minerals and Natural Resources

Form C-141 Revised April 3, 2017

Page 50 of 71

.

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

220 S. St. Frar	ncis Dr., Santa l	Fe, NM 87505	i -	Sor	to E	NIN 975	305			
				Sai	на г	e, NM 875	05			
			Rele	ease Notifica	atio	n and Co	orrective A	ction		
						OPERA	ГOR	🖂 Ini	ial Report	Final Report
Name of Co	ompany: CC)G Operati	ing, LLC	C (OGRID# 2291	37)	Contact: Ro	bert McNeill			
Address: 60)0 West Illii	nois Avenu	e, Midla	nd TX 79701		Telephone I	No.: 432-683-7 4	43		
Facility Na	me : Roy Ba	tty Federa	l Com #()01H		Facility Typ	e: Well			
Surface Ow	vner: Private			Mineral Ov		Federal N OF RE	LEASE	API N	(o.: 30-025-4	41099
Unit Letter M	Section 11	Township 24S	Range 33E	Feet from the	North	South Line	Feet from the	East/West Line	County	Lea
			L	atitude : 32.2254	35 Lo	ongitude: -1	03.550182 NAI	083		
				NAT	URE	OF REL	EASE			
Type of Rele	ease: Produce	d Water				Volume of 15bbls	Release:	Volume Obbls	Recovered:	
Source of De	lesse Flowli	no				Data and L	Jour of Occurren	Data an	Hour of Die	coverv

	15bbls	Obbls
Source of Release: Flowline	Date and Hour of Occurrence:	Date and Hour of Discovery:
	2/28/2018	2/28/2018 10:00am
Was Immediate Notice Given?	If YES, To Whom?	•
\Box Yes \boxtimes No \boxtimes Not Required		
By Whom?	Date and Hour:	
Was a Watercourse Reached?	If YES, Volume Impacting the Wat	tercourse.
🗌 Yes 🖾 No		
If a Watercourse was Impacted, Describe Fully.*		
If a watercourse was impacted, Describe Fully.		
Describe Cause of Problem and Remedial Action Taken.*		
Describe Cause of Froblem and Remedial Action Taken.		
A ball valve on the SWD line was discovered to be open. The valve handle	was removed and a bull plug was in	bellet
Describe Area Affected and Cleanup Action Taken.*	, was tenioved and a buil plug was in	stance.
Describe Area Affected and Cleanup Action Taken.		
The release impacted the pasture adjacent to the lease road. Concho will have	we the spill area evaluated for any po	assible impact from the release and we will
present a remediation work plan to the NMOCD for approval prior to any		ssible impact from the release and we will
present a remediation work plan to the NNOCD for approval prior to any	significant remediation activities.	
I hereby certify that the information given above is true and complete to the	a bast of my knowledge and underste	and that nursuant to NMOCD rules and
regulations all operators are required to report and/or file certain release no		
public health or the environment. The acceptance of a C-141 report by the		
should their operations have failed to adequately investigate and remediate		
or the environment. In addition, NMOCD acceptance of a C-141 report do	bes not relieve the operator of response	sibility for compliance with any other
federal, state, or local laws and/or regulations.		
	OIL CONSERV	VATION DIVISION
Signature: Sheldon Hitan		
Signature. Or Corte in The State of A	Approved by Environmental Specialis	st:
Printed Name: Sheldon L. Hitchcock		
Finited Name. Sheldon L. Hitchcock		
Tide USE Constants	Annual Data	Englishting Deter
Title: HSE Coordinator	Approval Date:	Expiration Date:
E-mail Address: slhitchcock@concho.com	Conditions of Approval:	Attached
Date: 3/2/2018 Phone: 575-746-2010		

* Attach Additional Sheets If Necessary





November 15, 2018

SHELDON HITCHCOCK COG OPERATING P. O. BOX 1630 ARTESIA, NM 88210

RE: ROY BATTERY FEDERAL COM #1H

Enclosed are the results of analyses for samples received by the laboratory on 11/13/18 12:40.

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/ga/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



COG OPERATING SHELDON HITCHCOCK P. O. BOX 1630 ARTESIA NM, 88210 Fax To: NONE

Received:	11/13/2018	Sampling Date:	11/09/2018
Reported:	11/15/2018	Sampling Type:	Soil
Project Name:	ROY BATTERY FEDERAL COM #1H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: T 1 - BTM (H803295-01)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/14/2018	ND	1.82	90.8	2.00	1.37	
Toluene*	<0.050	0.050	11/14/2018	ND	2.01	101	2.00	4.62	
Ethylbenzene*	<0.050	0.050	11/14/2018	ND	2.10	105	2.00	4.65	
Total Xylenes*	<0.150	0.150	11/14/2018	ND	6.39	107	6.00	4.19	
Total BTEX	<0.300	0.300	11/14/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	100	% 73.3-12	9						
Chloride, SM4500Cl-B	mg/	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8200	16.0	11/15/2018	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	11/14/2018	ND	188	94.1	200	4.48	
DRO >C10-C28*	<10.0	10.0	11/14/2018	ND	196	98.2	200	2.83	
EXT DRO >C28-C36	<10.0	10.0	11/14/2018	ND					
Surrogate: 1-Chlorooctane	94.3	% 41-142							
Surrogate: 1-Chlorooctadecane	99.2	% 37.6-14	7						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



COG OPERATING SHELDON HITCHCOCK P. O. BOX 1630 ARTESIA NM, 88210 Fax To: NONE

Received:	11/13/2018	Sampling Date:	11/09/2018
Reported:	11/15/2018	Sampling Type:	Soil
Project Name:	ROY BATTERY FEDERAL COM #1H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: T 2 - BTM (H803295-02)

BTEX 8021B	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/14/2018	ND	1.82	90.8	2.00	1.37	
Toluene*	<0.050	0.050	11/14/2018	ND	2.01	101	2.00	4.62	
Ethylbenzene*	<0.050	0.050	11/14/2018	ND	2.10	105	2.00	4.65	
Total Xylenes*	<0.150	0.150	11/14/2018	ND	6.39	107	6.00	4.19	
Total BTEX	<0.300	0.300	11/14/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	101	% 73.3-12	9						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	11/15/2018	ND	432	108	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/14/2018	ND	188	94.1	200	4.48	
DRO >C10-C28*	<10.0	10.0	11/14/2018	ND	196	98.2	200	2.83	
EXT DRO >C28-C36	<10.0	10.0	11/14/2018	ND					
Surrogate: 1-Chlorooctane	83.3	% 41-142							
Surrogate: 1-Chlorooctadecane	85.4	% 37.6-14	7						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



COG OPERATING SHELDON HITCHCOCK P. O. BOX 1630 ARTESIA NM, 88210 Fax To: NONE

Received:	11/13/2018	Sampling Date:	11/09/2018
Reported:	11/15/2018	Sampling Type:	Soil
Project Name:	ROY BATTERY FEDERAL COM #1H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: T 1 - NORTH (H803295-03)

BTEX 8021B	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/14/2018	ND	1.82	90.8	2.00	1.37	
Toluene*	<0.050	0.050	11/14/2018	ND	2.01	101	2.00	4.62	
Ethylbenzene*	<0.050	0.050	11/14/2018	ND	2.10	105	2.00	4.65	
Total Xylenes*	<0.150	0.150	11/14/2018	ND	6.39	107	6.00	4.19	
Total BTEX	<0.300	0.300	11/14/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	100 9	% 73.3-12	9						
Chloride, SM4500Cl-B	mg/	′kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6500	16.0	11/15/2018	ND	432	108	400	0.00	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/14/2018	ND	188	94.1	200	4.48	
DRO >C10-C28*	<10.0	10.0	11/14/2018	ND	196	98.2	200	2.83	
EXT DRO >C28-C36	<10.0	10.0	11/14/2018	ND					
Surrogate: 1-Chlorooctane	88.0	% 41-142							
Surrogate: 1-Chlorooctadecane	91.6	% 37.6-14	7						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



COG OPERATING SHELDON HITCHCOCK P. O. BOX 1630 ARTESIA NM, 88210 Fax To: NONE

Received:	11/13/2018	Sampling Date:	11/09/2018
Reported:	11/15/2018	Sampling Type:	Soil
Project Name:	ROY BATTERY FEDERAL COM #1H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: T 1 - WEST (H803295-04)

BTEX 8021B	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/14/2018	ND	1.82	90.8	2.00	1.37	
Toluene*	<0.050	0.050	11/14/2018	ND	2.01	101	2.00	4.62	
Ethylbenzene*	<0.050	0.050	11/14/2018	ND	2.10	105	2.00	4.65	
Total Xylenes*	<0.150	0.150	11/14/2018	ND	6.39	107	6.00	4.19	
Total BTEX	<0.300	0.300	11/14/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	100 9	% 73.3-12	9						
Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1630	16.0	11/15/2018	ND	432	108	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/14/2018	ND	188	94.1	200	4.48	
DRO >C10-C28*	<10.0	10.0	11/14/2018	ND	196	98.2	200	2.83	
EXT DRO >C28-C36	<10.0	10.0	11/14/2018	ND					
Surrogate: 1-Chlorooctane	95.6	% 41-142	2						
Surrogate: 1-Chlorooctadecane	98.6	% 37.6-14	7						

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Celey D. Keene, Lab Director/Quality Manager



COG OPERATING SHELDON HITCHCOCK P. O. BOX 1630 ARTESIA NM, 88210 Fax To: NONE

Received:	11/13/2018	Sampling Date:	11/09/2018
Reported:	11/15/2018	Sampling Type:	Soil
Project Name:	ROY BATTERY FEDERAL COM #1H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: T 1 - EAST (H803295-05)

BTEX 8021B	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/15/2018	ND	1.82	90.8	2.00	1.37	
Toluene*	<0.050	0.050	11/15/2018	ND	2.01	101	2.00	4.62	
Ethylbenzene*	<0.050	0.050	11/15/2018	ND	2.10	105	2.00	4.65	
Total Xylenes*	<0.150	0.150	11/15/2018	ND	6.39	107	6.00	4.19	
Total BTEX	<0.300	0.300	11/15/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	101	% 73.3-12	9						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	12200	16.0	11/15/2018	ND	432	108	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/15/2018	ND	188	94.1	200	4.48	
DRO >C10-C28*	<10.0	10.0	11/15/2018	ND	196	98.2	200	2.83	
EXT DRO >C28-C36	<10.0	10.0	11/15/2018	ND					
Surrogate: 1-Chlorooctane	87.9	% 41-142	2						
Surrogate: 1-Chlorooctadecane	86.9	% 37.6-14	7						

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Celey D. Keene, Lab Director/Quality Manager



COG OPERATING SHELDON HITCHCOCK P. O. BOX 1630 ARTESIA NM, 88210 Fax To: NONE

Received:	11/13/2018	Sampling Date:	11/09/2018
Reported:	11/15/2018	Sampling Type:	Soil
Project Name:	ROY BATTERY FEDERAL COM #1H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: T 2 - SOUTH (H803295-06)

BTEX 8021B	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/15/2018	ND	1.82	90.8	2.00	1.37	
Toluene*	<0.050	0.050	11/15/2018	ND	2.01	101	2.00	4.62	
Ethylbenzene*	<0.050	0.050	11/15/2018	ND	2.10	105	2.00	4.65	
Total Xylenes*	<0.150	0.150	11/15/2018	ND	6.39	107	6.00	4.19	
Total BTEX	<0.300	0.300	11/15/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	101	% 73.3-12	9						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	11/15/2018	ND	432	108	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/14/2018	ND	188	94.1	200	4.48	
DRO >C10-C28*	<10.0	10.0	11/14/2018	ND	196	98.2	200	2.83	
EXT DRO >C28-C36	<10.0	10.0	11/14/2018	ND					
Surrogate: 1-Chlorooctane	87.0	% 41-142							
Surrogate: 1-Chlorooctadecane	93.0	% 37.6-14	7						

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Celey D. Keene, Lab Director/Quality Manager



COG OPERATING SHELDON HITCHCOCK P. O. BOX 1630 ARTESIA NM, 88210 Fax To: NONE

Received:	11/13/2018	Sampling Date:	11/09/2018
Reported:	11/15/2018	Sampling Type:	Soil
Project Name:	ROY BATTERY FEDERAL COM #1H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: T 2 - EAST (H803295-07)

BTEX 8021B	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/15/2018	ND	1.82	90.8	2.00	1.37	
Toluene*	<0.050	0.050	11/15/2018	ND	2.01	101	2.00	4.62	
Ethylbenzene*	<0.050	0.050	11/15/2018	ND	2.10	105	2.00	4.65	
Total Xylenes*	<0.150	0.150	11/15/2018	ND	6.39	107	6.00	4.19	
Total BTEX	<0.300	0.300	11/15/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	100 \$	% 73.3-12	9						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/15/2018	ND	432	108	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/14/2018	ND	188	94.1	200	4.48	
DRO >C10-C28*	<10.0	10.0	11/14/2018	ND	196	98.2	200	2.83	
EXT DRO >C28-C36	<10.0	10.0	11/14/2018	ND					
Surrogate: 1-Chlorooctane	91.1	% 41-142							
Surrogate: 1-Chlorooctadecane	96.9	% 37.6-14	7						

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Celey D. Keene, Lab Director/Quality Manager



COG OPERATING SHELDON HITCHCOCK P. O. BOX 1630 ARTESIA NM, 88210 Fax To: NONE

Received:	11/13/2018	Sampling Date:	11/09/2018
Reported:	11/15/2018	Sampling Type:	Soil
Project Name:	ROY BATTERY FEDERAL COM #1H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: T 2 - WEST (H803295-08)

BTEX 8021B	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/15/2018	ND	1.82	90.8	2.00	1.37	
Toluene*	<0.050	0.050	11/15/2018	ND	2.01	101	2.00	4.62	
Ethylbenzene*	<0.050	0.050	11/15/2018	ND	2.10	105	2.00	4.65	
Total Xylenes*	<0.150	0.150	11/15/2018	ND	6.39	107	6.00	4.19	
Total BTEX	<0.300	0.300	11/15/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	101 9	% 73.3-12	9						
Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/15/2018	ND	432	108	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/15/2018	ND	188	94.1	200	4.48	
DRO >C10-C28*	<10.0	10.0	11/15/2018	ND	196	98.2	200	2.83	
EXT DRO >C28-C36	<10.0	10.0	11/15/2018	ND					
Surrogate: 1-Chlorooctane	84.0	% 41-142	,						
Surrogate: 1-Chlorooctadecane	84.7	% 37.6-14	7						

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Notes and Definitions

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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Page 11 of 11

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

OF

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

Bill TO Bill TO ANALYSIS REQUEST Project Manage: 2407 Pecos Avenue company: COG company: COG Ogio: Artes: Project Mone: Fill TO Attention: Project Mane: Project Owner:CONChO chtr: Robert McNeill Project Mane: Project Owner:CONChO chtr: Project Manes: Project Mane: Project Mark Project Mark Project Mark Broject Mane: Project Mark Project Mark Project Mark Broject Mane: Project Mark Project Mark Project Mark Broject Mark Project Mark Project Mark Project Mark Broject Mark Project Mark Project Mark Project Mark Broject Mark Sample I.D. GROUNDWATER Sample Mark Lab I.D. Sample I.D. GROUNDWATER No Project Mark Lab I.D. Sample Mark GROUNDWATER No Project Mark Project Mark Lab I.D. GROUNDWATER GROUNDWATER No Project Mark Project Mark				ion CHECKED BY: (Initials) S T.O_	Sample Condition Cool Intact Pres Pres No No	(Circle One) Bus - Other: 4.6	Delivered By: (Circle One) Sampler - UPS - Bus - Other:
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XXXXXXXXX XXXXXXX XXXXXX XXXXXX YPH-EXTENDED XXXXXXX CHLORIDE ANALYSIS			mpletion of the applicable its subsidiaries	d received by Cardinal within 30 days after co loss of use or loss of profits incurred by client	e deemed waived unless made in writing an ig without limitation, business interruptions.	those for negligence and any other cause whatsoever shall b linal be liable for incidental or consequental damages, includi	analyses. All claims including t service. In no event shall Card
BILL TO ANALYSIS $m:$ Sheldon Hitchcock $PO. #:$ $TPecos Avenue company: COG a state: NIM zip: 88210 Attm: Robert McNelill TO3-6475 Fax#: Project owner: Concho city: PO.#: Project owner: Concho city: Address: Project owner: Concho city: Phone #: PO.# NATRIX Preservice Address: PO.# State: zip: PO.# NATRIX Preservice Address: PO.# State: zip: Phone #: PO.# Project owner: Concho city: Phone #: PO.# State: zip: Preservice Sampluk PO.# MATRIX Preservice Sampluk PO.# Preservice Sampluk Preservice TI - & RTM (G)RAB OR (C)OMP. Preservice Sampluk TI - & RTM GOROUNDWATER NATE TIME TI - & RTM GOROUNDWATER Soil Preservice Scophia TI - & RTM GOROUNDWATER Scophia Scophia Scophia TI - & RTM GOROUNDWATER Scophia Scophia Scophia TI$		_	the client for the	t or tort, shall be limited to the amount haid by	any claim arising whether based in contrac	Damages. Cardinal's liability and client's exclusive remedy to	PLEASE NOTE: Liability and D
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End BILL TO ANALYSIS **: Sheldon Hitchcock P.O.#: P.O.#: Company: COG 7 Pecos Avenue state: NM Zip: 88210 Atm: Robert McNeill Address: 7 Pecos Avenue Project Owner: Concho Atm: Robert McNeill Address: Project Owner: Concho City: 7 Phone # 7 T1 - BTM GROUNDWATER MATRIX PRESERV Sample I.D. Salue Soll Preserv Sample I.D. Sample I.D. Sample I.D. Preserv Sample I.D. Sample I.D. Sample I.D. <t< td=""><td></td><td></td><td>12</td><td>~</td><td></td><td>1</td><td>L</td></t<>			12	~		1	L
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BILL TO BILL TO ANALYSIS "" Sheldon Hitchcock r. Sheldon Hitchcock P.0. # Company: COG TPecos Avenue state: NM zip: 88210 Attn: Robert McNeill P.0. # 703-6475 Fax #: Project Owner: Concho Address: Project Owner: Concho Project Owner: Concho City: Address: Phone #: Phone #: Phone #: Matter Soil Slubge Other: Fax #: Phone #: Phone #: T1 - BTM GROUNDWATER MATRIX PRESERV. Sample I.D. Phone #: Phone #: <td< td=""><td></td><td></td><td></td><td>1</td><td></td><td>3</td><td>S</td></td<>				1		3	S
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#: State: NM zip: 88210 Attr: Company: COG a state: NM zip: 88210 Attr: Robert McNeill 703-6475 Fax #: roject Owner: Concho city: Project Owner: Concho city: Project Owner: Concho city: Fax #: Phone #				ACID/BASE ICE / COOL OTHER :	# CONTAIN GROUNDW WASTEWA SOIL OIL	Sample I.D.	Lab I.D.
P: Concho Resources BLL TO ANALYSIS P: Sheldon Hitchcock P.O. #: P.O. #: Company: COG P State: NM Zip: 88210 Attn: Robert McNeill Address: T03-6475 Fax #: Project Owner: Concho City: Project Owner: Concho City: Address: Project Owner: Concho City: D Project Owner: Concho Fax #: D	× 2		54		ERS ATER		
P:: Concho Resources BILL TO ANALYSIS P:: Sheldon Hitchcock P.O. #: P.O. #: 7 Pecos Avenue company: COG a state: NM Zip: 88210 Attn: Robert McNeill 1 A state: NM Zip: 88210 Attn: Robert McNeill Address: 703-6475 Fax #: Project Owner: Concho city: D Project Owner: Concho city: D M n: PLOY BLITY F\$ MALL COM M n: PLOY BLITY Phone #: M n: Fa Fa M							FOR LAB USE ONLY
Name: Concho Resources BILL TO ANALYSIS anager: Sheldon Hitchcock P.O. #: P.O. #: P.O. #: 2407 Pecos Avenue Company: COG P.O. #: P.O. #: 2407 Pecos Avenue Company: COG P.O. #: P.O. #: 2407 Pecos Avenue Company: COG P.O. #: P.O. #: 2407 Pecos Avenue Company: COG Attn: Robert McNeill P.O. #: 575-703-6475 Fax #: Address: Project Owner: Concho Attn:: City: Q ame: A.D.Y B.L.T.Y F& MALL COM # / # State: Zip: Q ame: A.D.Y B.L.T.Y F& MALL COM # / # State: Zip: Q acation: Phone #: Phone #: Phone #: Phone #: Phone #:				Fax #:			Sampler Name:
Name: Concho Resources BILL TO ANALYSIS anager: Sheldon Hitchcock P.O. #: P.O. #: <td< td=""><td></td><td>(N)</td><td></td><td>Phone #:</td><td></td><td></td><td>Project Location:</td></td<>		(N)		Phone #:			Project Location:
Name: Concho Resources BILL TO ANALYSIS anager: Sheldon Hitchcock P.O. #: 2407 Pecos Avenue Company: COG 2407 Pecos Avenue company: COG tesia state: NM zip: 88210 Attn: Robert McNeill 575-703-6475 Fax #: Address: Q Address: Project Owner: Concho city: Q Q)ź			Com #/	OY BLITY	Project Name:
Sheldon Hitchcock P.o. #: ANALYSIS 7 Pecos Avenue company: COG state: NM zip: 88210 Attn: Robert McNeill 703-6475 Fax #: Address:		D		City:	ar:Concho	Project Own	Project #:
 Concho Resources Sheldon Hitchcock P.o. #: 7 Pecos Avenue state: NM Zip: 88210 Attn: Robert McNeill 			1	Address:			Phone #:575-7
Concho Resources BILL TO ANALYSIS Sheldon Hitchcock P.o. #: ANALYSIS Pecos Avenue Company: COG Image: COG			=	Attn: Robert McNe	zip: 88210	State: NM	city: Artesia
Concho Resources BILL TO ANALYSIS Sheldon Hitchcock P.o. #: I I				Company: COG		Pecos Avenue	
Concho Resources BILL TO ANALYSIS				P.O. #:			Project Manager:
	S-04.4						Company Name:

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326



November 28, 2018

SHELDON HITCHCOCK COG OPERATING P. O. BOX 1630 ARTESIA, NM 88210

RE: ROY BATTERY FEDERAL COM #1H

Enclosed are the results of analyses for samples received by the laboratory on 11/27/18 11:00.

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/ga/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



COG OPERATING SHELDON HITCHCOCK P. O. BOX 1630 ARTESIA NM, 88210 Fax To: NONE

Received:	11/27/2018	Sampling Date:	11/27/2018
Reported:	11/28/2018	Sampling Type:	Soil
Project Name:	ROY BATTERY FEDERAL COM #1H	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO., NM		

Sample ID: T - 1 N. (H803461-01)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	11/28/2018	ND	432	108	400	3.77	

Sample ID: T - 1 E. (H803461-02)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6800	16.0	11/28/2018	ND	432	108	400	3.77	

Sample ID: T - 1 W. (H803461-03)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/28/2018	ND	432	108	400	3.77	

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

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

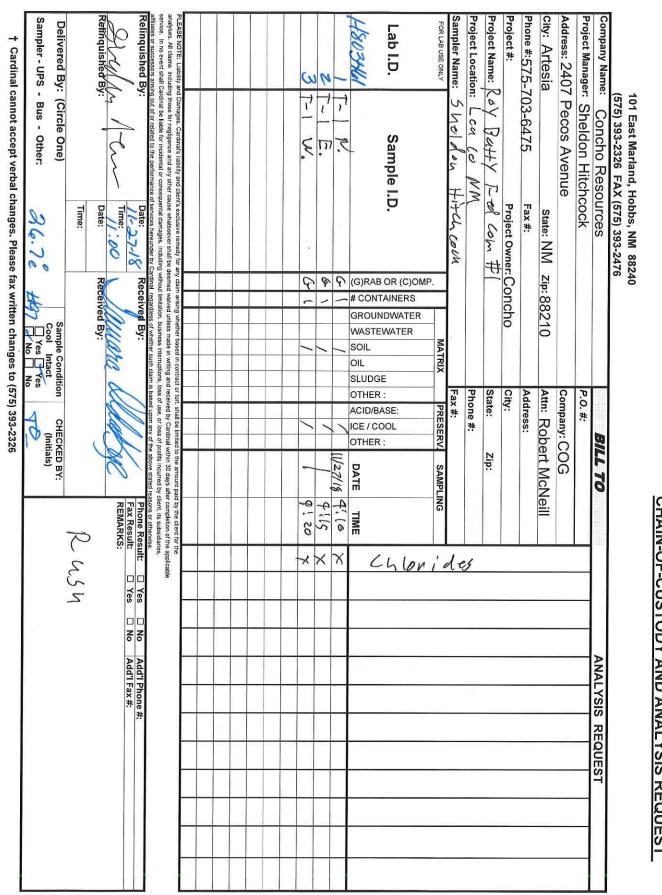
Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



20-02

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CARDINAL Laboratories

Page 4 of 4

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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December 11, 2018

DAKOTA NEEL

COG OPERATING

P. O. BOX 1630

ARTESIA, NM 88210

RE: ROY BATTERY FEDERAL COM #1H

Enclosed are the results of analyses for samples received by the laboratory on 12/06/18 15:05.

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/ga/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



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

Received:	12/06/2018	Sampling Date:	12/04/2018
Reported:	12/11/2018	Sampling Type:	Soil
Project Name:	ROY BATTERY FEDERAL COM #1H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO., NM		

Sample ID: T - 1 EAST (H803596-01)

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	12/08/2018	ND	1.95	97.3	2.00	1.76	
Toluene*	<0.050	0.050	12/08/2018	ND	1.96	98.1	2.00	1.95	
Ethylbenzene*	0.076	0.050	12/08/2018	ND	1.90	95.1	2.00	2.12	
Total Xylenes*	0.327	0.150	12/08/2018	ND	5.71	95.1	6.00	1.84	
Total BTEX	0.402	0.300	12/08/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	99.5	% 73.3-12	9						
Chloride, SM4500Cl-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	12/11/2018	ND	400	100	400	0.00	
H 8015M mg/kg		Analyze	d By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/07/2018	ND	197	98.4	200	2.38	
DRO >C10-C28*	57.4	10.0	12/07/2018	ND	206	103	200	4.30	
EXT DRO >C28-C36	34.9	10.0	12/07/2018	ND					
Surrogate: 1-Chlorooctane	99.9	% 41-142	2						
Surrogate: 1-Chlorooctadecane	115	% 37.6-14	7						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
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

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager

Received by OCD: 11/22/2022 1:54:07 PM

Laborato	ratories	CHAI	N-OF-CUSTOD	CHAIN-OF-CUSTODY AND ANALYSIS REQUEST
101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476	s, NM 88240 75) 393-2476			
Company Name: COG Operating LLC				ANALYSIS REQUEST
Project Manager: Dakota Neel		P.O. #:		
Address: 2407 Pecos Avenue	•1	Company: COG Operating LLC		
City: Artesia S	State: NM Zip 88210	Attn: Robert McNeill		
Phone #: (575) 746-2010 Fa	Fax #:	Address: 600 W Illinois		8
Project #: Pr	Project Owner:	City: Midland		
Project Name: ROY BATTY	FEDERAL CON #1	State: TX Zip: 79701		
Project Location:		Phone #: (432) 221-0388		
Sampler Name: Dakota Neel	e C	Fax #:		
FOR LAB USE ONLY	P. MATRIX	PRESERV. SAMPLING		
Lab I.D. Sample I.D.	B)RAB OR (C)OMP CONTAINERS ROUNDWATER /ASTEWATER DIL IL	LUDGE THER : CID/BASE: EE / COOL THER :	TEX PH Extended hloride	
1 TI-EAS		1 24-18 1	× -	
PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable analyses. In ne event shall Cardinal be limited to incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of pofits incurred by client, its subsidiaries, active cardinal waited analyses.	lusive remedy for any claim arising whether based in co hatsoever shall be deemed waived unless made in with damages, including without limitation, business interrupt	nract or tort, shall be limited to the amount paid by the client fo g and received by Cardinal within 30 days after completion of 1 ons, loss of use, or loss of profits incurred by client, its subsidia	for the f the applicable liaries,	
Relinquished By:	Received By:		Result:	Add'I Phone #:
Par la	Date:	REMARKS:	□ Yes	
Delivered By: (Circle One)	Time: Sample Condition Cool Intact	rdition CHECKED BY:		а,
Sampler - UPS - Bus - Other: FORM-006 R 2.0	S.9: Har I No I No	Z		
		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		

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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

Operator:	OGRID:
COG OPERATING LLC	229137
600 W Illinois Ave	Action Number:
Midland, TX 79701	160946
	Action Type:
	[IM-SD] Incident File Support Doc (ENV) (IM-BNF)
CONDITIONS	

Created By Condition Condition Date 11/22/2022 None amaxwell

CONDITIONS

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Action 160946