

Ike Tavarez ConocoPhillips 600 W. Illinois Avenue Midland, TX 79701 +1-432-701-8630

November 21, 2022

New Mexico Energy, Minerals and Natural Resources Department 1220 South St. Francis Drive Santa Fe, NM 87505

Subject: Tequiza Federal #1 Release Unit Letter O, Section 34, Township 21 South, Range 25 East Eddy County, New Mexico Incident ID nAB1805142690 2RP-4632

Sir or Madam:

ConocoPhillips Company("COPC") entered into an Agreed Compliance Order ("ACO") with the New Mexico Oil Conservation Division ("NMOCD") on December 15, 2021, related to unresolved releases from COPC's predecessor-in-interest ("COG"). The ACO required COPC to submit characterization and/or remediation plans with proposed timeframes for the ongoing corrective actions or remediations identified to the NMOCD no later than March 31, 2022. As of March 11, 2022, COPC has submitted characterization and remediation plans for all of the properties identified and owned. All documentation was submitted in accordance with ACO terms. These documents have been submitted to the NMOCD via CentreStack, a Secure Access & File Sharing platform, at the direction of Mr. Bradford Billings, NMOCD.

The Tequiza Federal #1 Release that occurred on February 17, 2018 (Incident ID nAB1805142690, 2RP-4632) was included in the above-mentioned ACO submittals. The Work Plan for the Tequiza Federal #1 Release was originally submitted to the NMOCD and BLM via email on November 12, 2018. No response was received from the NMOCD concerning the approval or rejection of said report.

Enclosed is a copy of the Work Plan for the subject line incident. As mentioned, this Work Plan has been previously submitted in its entirety via the CentreStack platform. It is now duly submitted separately via the NMOCD Fee Application portal.

If you have any questions, please contact me at 432-701-8630.

Sincerely,

Ike Tavarez, P.G. Program Manager – RMR

cc: Site Files

Attachments: Work Plan, Tequiza Federal #1 Release, Incident ID nAB1805142690, 2RP-4632

From:	Ike Tavarez
To:	Pruett, Maria, EMNRD; stucker
Cc:	mike.bratcher@state.nm.us; Rebecca Haskell; Sheldon Hitchcock; DeAnn Grant; Dakota Neel
Subject:	COG - Tequiza Federal #1 (2-17-18) 2RP 4632 - Work Plan
Date:	Monday, November 12, 2018 3:44:42 PM
Attachments:	image001.jpg
	COG - Tequiza Federal #1 (2-17-18) 2 RP 4632 - Work Plan.pdf

Maria and Shelly,

Here is the work plan for the Tequiza Federal #1 located in Eddy County, New Mexico. Let me know if you need additional information or have any questions on the report, thanks

Ike Tavarez, PG Senior HSE Supervisor COG Operating LLC 600 W Illinois Avenue | Midland, TX 79701 Direct: 432-685-2573| Main: 432-683-7443 Cell: 432-701-8630 itavarez@concho.com



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November 12, 2018

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

Shelly Tucker Bureau of Land Management 620 E. Green St. Carlsbad, NM 88220

Re: Work Plan Tequiza Federal #1 (2/17/18) RP#: 2RP-4632 GPS: 32.8150708, -103.995597 Unit Letter O, Section 34, Township 21 South, Range 25 East Eddy County, New Mexico

Ms. Pruett /Ms. Tucker,

COG Operating, LLC (COG) is pleased to submit the following work plan in response to a release that occurred at the Tequiza Federal #1 Well Site located in Unit Letter O, Section 34, Township 21 South and Range 25 East in Eddy County, New Mexico.

### BACKGROUND

The release was discovered on February 17, 2018 and a C-141 initial report was submitted and approved by the New Mexico Oil Conservation Division (NMOCD). The initial C-141 is shown in Appendix A. The crude oil and produced water release occurred when the packing failed on the well. Approximately fifteen (1.5) barrels of oil and fifteen (15) barrels of produced water were released and recovered one (1) barrel of oil and ten (10) barrels of produced water. Majority of the fluids remained on the pad, except for an area north of the pad.

### **GROUNDWATER AND REGULATORY FRAMEWORK**

According to the New Mexico Office of the State Engineer (NMOSE) and the USGS data, the depth to groundwater in the area varies from <50 to 50-100' below surface and may be due to surface elevation change. The Chevron trend map show a depth to water from 50-100' below surface. The water well information is shown in Appendix B.

A risk based evaluation and site determinations were perform in accordance to the New Mexico Oil Conservation Division (NMOCD) Rule (Title 19 Chapter 15 Part 29) for releases on oil and gas development and production in New Mexico (effective August 14, 2018). According to the site characterization

One Concho Center | 600 West Illinois Avenue | Midland, Texas 79701 | P 432.683.7443 | F 432.683.7441

evaluation, the area is in a high karst area and no other receptors (water wells, playas, water course, lake beds or ordinance boundaries) were located within each specific boundaries or distance from the site. The groundwater data and the site characterization evaluation data is summarized in Appendix B. The delineation and closure criteria are listed below:

## General Site Characterization and Groundwater:

Site Characterization	Average Groundwater Depth (ft.)
High Karst	<50 feet

## **Delineation and Closure Criteria:**

Remedial Action	n Levels (RALs)
Chlorides	600 mg/kg
TPH (GRO and DRO and MRO)	100 mg/kg
TPH (GRO and DRO)	NA
Benzene	10 mg/kg
Total BTEX	50 mg/kg

## PROPOSED WORK PLAN

- The areas of T-2 and T-3 will be excavated to a depth of 1.0 and 2.0' below surface, respectively.
- All of the excavated material will be hauled to an NMOCD approved solid waste disposal facility.
- The excavation will be backfilled with clean backfilled material.

## SAMPLING PLAN

Once the excavation is complete, soil confirmation samples will be collected from the excavated areas. To collect representative samples, composite samples (5-point composite) will be collected every 600 square feet (25 x 25) for the final confirmation sampling for the constituents of concern. Based on the proposed excavation areas, we estimate around 8-10 bottom hole samples in a grid pattern. The sidewall composite samples will be collected every 200 square feet. Discrete soil samples will be collected from the excavation if any "hot spots" are encountered during the excavation.

## REMEDIATION TIMEFRAME AND ESTIMATED VOLUME

The remediation will be performed 90 days after the work plan has been approved. Approximately 450 cubic yards of soil will be excavated from the impacted area.

## SITE RECLAMATION AND RESTORATION

Majority of the fluid remained on the pad, except for a small portion north of the pad. This area will be excavated to a depth of 1.0' below surface. Concho will perform the reclamation and revegetation in the pasture area per NMED 19.15.29.13. Once excavated, soil samples will be collected from the bottom and sidewalls to confirm the removal of impact soil greater than 600 mg/kg chlorides or background (whichever is greater). The backfilled material will be non-contaminated with concentrations below 600 mg/kg chlorides and reseeded per BLM guidelines when appropriate.

Should you have any questions or concerns on the proposed remediation activities, please do not hesitate to contact me.

Sincerely, Concho Operating, LLC

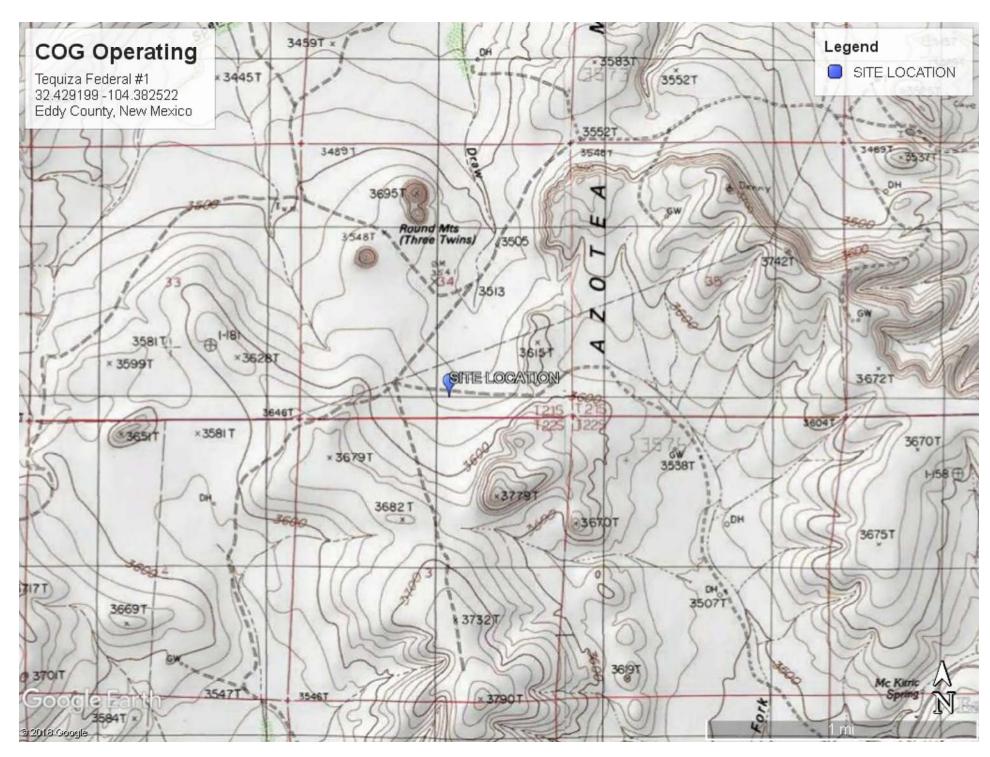
My DS

Ike Tavarez, P. G. Senior HSE Supervisor itavarez@concho.com

CC:

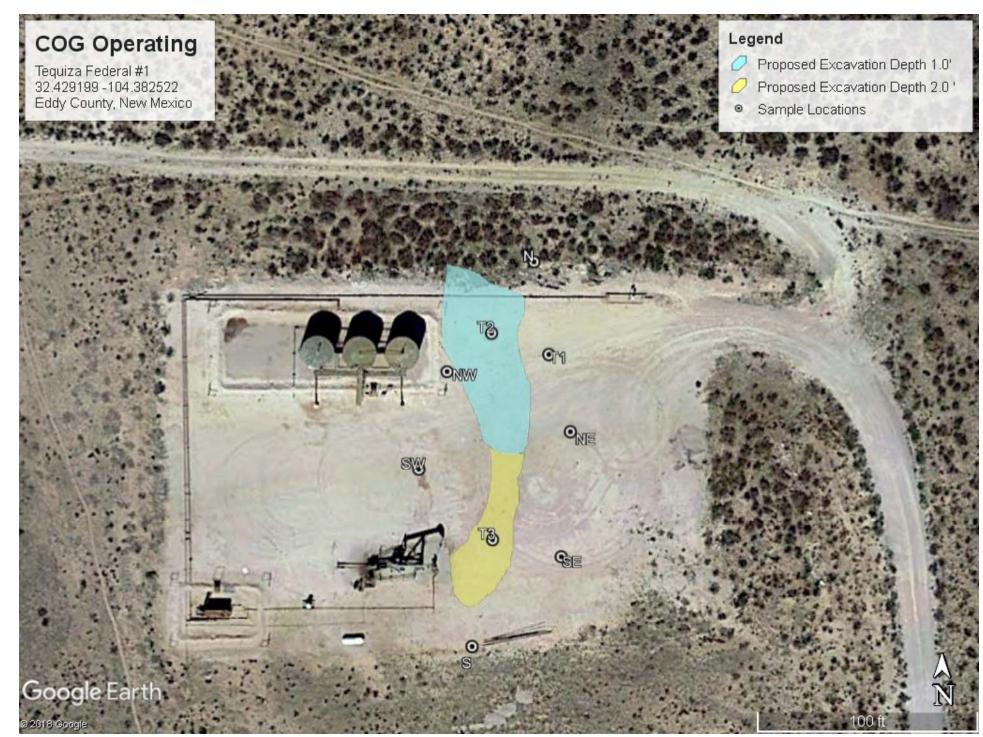
# Figures

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# Tables

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#### Table 1 COG Operating LLC. Tequiza Federal #1 Eddy County, New Mexico

Commin ID	Sample Date	Soil Status		TPH (mg/kg)					D	Total BTEX			
Sample ID	Sample Date	In-Situ	Removed	GRO	DRO	MRO	Total	GRO	DRO	Total	Benzene (mg/kg)	) (mg/kg)	Chloride (mg/kg)
Average Depth to Gro	undwater (ft)	50 -100'			•				•				
NMOCD RAL Limits	(mg/kg)			-	-	-	2,500	-	-	1,000	10	50	10,000
T-1 (6")	3/7/2018	Х		ND	ND	ND	ND	ND	ND	ND	ND	ND	24.3
T-1 (1.0')	3/7/2018	Х		ND	ND	ND	ND	ND	ND	ND	ND	ND	20.4
T-2 (6")	3/7/2018	Х		ND	ND	ND	ND	ND	ND	ND	ND	ND	8,630
T-2 (1.0')	3/7/2018	X		ND	ND	ND	ND	ND	ND	ND	ND	ND	365
T-3 (6")	3/7/2018	Х		ND	ND	ND	ND	ND	ND	ND	ND	ND	1,480
T-3 (1.0')	3/7/2018	Х		ND	ND	ND	ND	ND	ND	ND	ND	ND	1,600
T-3 (2.0')	3/7/2018	Х		-	-	-	-	-	-	-	-	-	503
South (1.0')	3/7/2018	Х		ND	ND	ND	ND	ND	ND	ND	ND	ND	13
North (1.0')	3/7/2018	Х		ND	ND	ND	ND	ND	ND	ND	ND	ND	7
Northwest (1.0')	3/7/2018	Х		ND	ND	ND	ND	ND	ND	ND	ND	ND	26.8
Southwest (1.0')	3/7/2018	Х		ND	ND	ND	ND	ND	ND	ND	ND	ND	35.5
Northeast (1.0')	3/7/2018	Х		ND	ND	ND	ND	ND	ND	ND	ND	ND	45.8
Southeast (1.0')	3/7/2018	Х		ND	ND	ND	ND	ND	ND	ND	ND	ND	229
South -1 (6")	3/19/2018	X		ND	ND	ND	ND	ND	ND	ND	ND	ND	15.2
North -1 (6")	3/20/2018	X		ND	ND	ND	ND	ND	ND	ND	ND	ND	1.4
Northwest (6")	3/20/2018	X		ND	ND	ND	ND	ND	ND	ND	ND	ND	28.6
Southwest (6")	3/20/2018	X		ND	ND	ND	ND	ND	ND	ND	ND	ND	30.7
Northeast (6")	3/20/2018	X		ND	ND	ND	ND	ND	ND	ND	ND	ND	48.3
Southeast (6")	3/20/2018	X		ND	ND	ND	ND	ND	ND	ND	ND	0.015	234
	Proposed Excavation												

(-) Not Analyzed

ND - Not Detected - Below Reporting Limit

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# Appendix A

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District 1 1625 N. French Dr., Hobbs, NM 88240 District II

1000 Rio Brazos Road, Aztec, NM 87410

1220 S. St. Francis Dr., Santa Fe, NM 87505

811 S. First St., Artesia, NM 88210 District III

District IV

### NM OIL CONSERVATION

ARTESIA DISTRICT

FEB 1 9 2018

Subscription appropriate District Office in accordance with 19.15.29 NMAC.

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Form C-141 Revised April 3, 2017

Energy Minerals and Natural Resources Oil Conservation Division 1220 South St. Francis Dr.

Santa Fe, NM 87505

State of New Mexico

# Release Notification and Corrective Action

	e i vouncaux	m and corrective Action	/11	
NAB1805142640		OPERATOR	🛛 Initial Report	Final Report
Name of Company: COG Operating, LLC (O	Contact: Robert McNeill			
Address: 600 West Illinois Avenue, Midland	Telephone No.: 432-683-7443			
Facility Name: Tequiza Federal #001	Facility Type: Oil Well			
Surface Owner: BI M		API No · 30-015-3	35849	

### LOCATION OF RELEASE

Unit Letter Section Township Range Feet from the North/South Line Feet from the East/West Line County	_					<b>H V V</b> .					
0 34 218 25E 330 South 2310 East Eddy		Unit Letter	<u>a</u>	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County	
	L	0	34	218	25E	330	South	2310	East	Eddy	

Latitude: 32.4291992 Longitude: -104.3825226 NAD83

NATURE OF RELEASE

Type of Release: Oil and Produced Water	Volume of Release: 1.5bbls Oil & 15bbls PW	Volume Recovered: 1bbls Oil & 10bbls PW		
Source of Release: Stuffing Box	Date and Hour of Occurrence: 2/17/2018	Date and Hour of Discovery: 2/17/2018 1:00pm		
Was Immediate Notice Given?	If YES, To Whom?			
By Whom?	Date and Hour:			
Was a Watercourse Reached?	If YES, Volume Impacting the Wa	tercourse.		
If a Watercourse was Impacted, Describe Fully.*				
Describe Cause of Problem and Remedial Action Taken.*				
The packing failed and fluid was released out of the top of the packing gl	and. The packing was replaced.			
Describe Area Affected and Cleanup Action Taken.*				
All of the fluid remained on location. A vacuum truck was utilized to recover all freestanding fluids. Concho will have the spill area evaluated for an possible impact from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation activity				
I hereby certify that the information given above is true and complete to regulations all operators are required to report and/or file certain release r public health or the environment. The acceptance of a C-141 report by th should their operations have failed to adequately investigate and remedia or the environment. In addition, NMOCD acceptance of a C-141 report of federal, state, or local laws and/or regulations.	notifications and perform corrective ac ne NMOCD marked as "Final Report" te contamination that pose a threat to a	ctions for releases which may endanger does not relieve the operator of liability ground water, surface water, human health		
	OIL CONSER'	VATION DIVISION		
Signature: Sheldon Juiton	Approved by Environmental Special	Alle Branna		
Title: HSE Coordinator	Approval Date: 2 2018	Expiration Date: NIA		
E-mail Address: slhitchcock@concho.com	Conditions of Approval:	Attached Attached		
Date: 2/19/2018 Phone: 575-746-2010	SEE UTTAL	INU ARP-440C		

\* Attach Additional Sheets If Necessary

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Oil Conservation Division

Incident ID	
District RP	2RP 4632
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# Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>&lt;50(ft bgs)</u>
Did this release impact groundwater or surface water?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	🗌 Yes 🛛 No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	🗌 Yes 🛛 No
515 Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	🗌 Yes 🛛 No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	🗌 Yes 🛛 No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a wetland?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying a subsurface mine?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying an unstable area such as karst geology?	🛛 Yes 🗌 No
Are the lateral extents of the release within a 100-year floodplain?	🗌 Yes 🛛 No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	🛛 Yes 🗌 No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

#### Characterization Report Checklist: Each of the following items must be included in the report.

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data

Page 3

- Data table of soil contaminant concentration data
- $\square$  Depth to water determination
- Determination of water sources and significant watercourses within <sup>1</sup>/<sub>2</sub>-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
- Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

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			Incident ID	
age 4	Oil Conservation Divis	sion	District RP	2RP 4632
			Facility ID	
			Application ID	
public health or the enviro failed to adequately invest addition, OCD acceptance and/or regulations. Printed Name: <u>Ike Tava</u>	re required to report and/or file certain releanment. The acceptance of a C-141 report bigate and remediate contamination that pose of a C-141 report does not relieve the operators are the operators are the operators are the the operators are the the operators are the the operators are the operators are the the the operators are the operators a	y the OCD does not relieve the a threat to groundwater, sur- ator of responsibility for com 	he operator of liability sh face water, human health pliance with any other fe upervisor	ould their operations have or the environment. In
OCD Only Received by: Joce	yn Harimon	Date:	11/21/2022	

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Oil Conservation Division

<u>Remediation Plan Checklist</u>: Each of the following items must be included in the plan.

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# **Remediation Plan**

Detailed description of proposed remediation technique Scaled sitemap with GPS coordinates showing delineation points Estimated volume of material to be remediated Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required) Deferral Requests Only: Each of the following items must be confirmed as part of any request for deferral of remediation. Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction. Extents of contamination must be fully delineated. Contamination does not cause an imminent risk to human health, the environment, or groundwater. I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. Title: Senior HSE Supervisor Printed Name: Ike Tavarez 04778 Date: 11/8/18 Signature: email: itavarez@concho.com Telephone: <u>432-683-7443</u> **OCD Only** Jocelyn Harimon Date: 11/21/2022 Received by: Approved with Attached Conditions of Approval Approved Denied Deferral Approved uttan Hall Signature: Date: 11/29/2022

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Oil Conservation Division

Incident ID	
District RP	2RP 4632
Facility ID	
Application ID	

# Closure

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

Closure Report Attachment Checklist: Each of the following items must be included in the closure report. A scaled site and sampling diagram as described in 19.15.29.11 NMAC Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection) Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling) Description of remediation activities I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete. Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_ Telephone: \_\_\_\_\_ email: **OCD Only** Received by: \_\_\_\_\_ Date: Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible

Closure Approved by:	Date:
Printed Name:	Title:

party of compliance with any other federal, state, or local laws and/or regulations.

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# Appendix B

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# COG Operating

Tequiza Federal #1 32.429199 -104.382522 Eddy County, New Mexico Legend 🥖 High Low Medium SITE LOCATION

**SITE LOCATION** 

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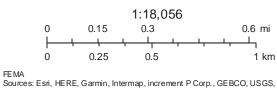
3 2018 Google



# New Mexico NFHL Data

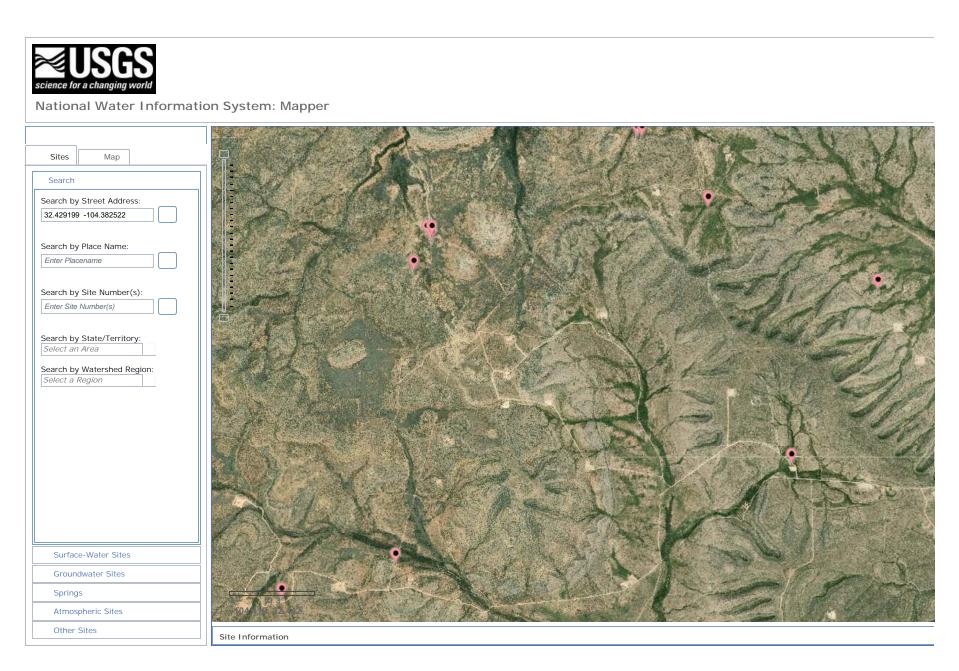


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https://maps.waterdata.usgs.gov/mapper/index.html



USGS Water Resources

Data Category: Geographic Area: Groundwater

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- Please see news on new formats
- UPDATE, 11/9: As of November 8, the USGS has successfully restored all of the operational gages that stopped transmitting due to an issue with the satellite telemetry system that records and transmits data. The USGS will now focus on restoring other equipment that experienced the telemetry issues, including about 85 rapid deployment gages that are used periodically for emergency response. Read <u>more</u>

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Groundwater levels for New Mexico

Click to hide state-specific text

#### Search Results -- 1 sites found

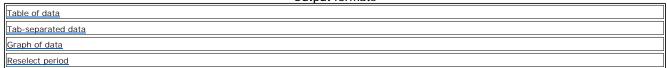
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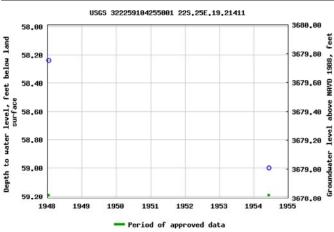
• 322259104255001

**Minimum number of levels** = 1 <u>Save file of selected sites</u> to local disk for future upload

#### USGS 322259104255001 22S.25E.19.21411

Available data for this site Groundwater: Field measurements V GO Eddy County, New Mexico Hydrologic Unit Code --Latitude 32°22'59", Longitude 104°25'50" NAD27 Land-surface elevation 3,738 feet above NAVD88 The depth of the well is 75 feet below land surface. This well is completed in the Yates Formation, Guadalupe Group (313YATS) local aquifer. Output formats





Breaks in the plot represent a gap of at least one year between field measurements. Download a presentation-quality graph



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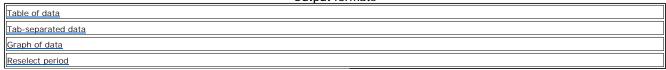
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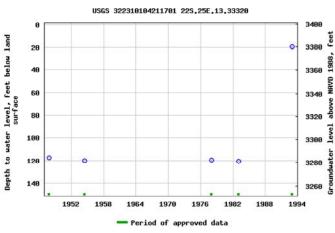
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**Minimum number of levels** = 1 <u>Save file of selected sites</u> to local disk for future upload

#### USGS 322310104211701 22S.25E.13.33320

Available data for this site Groundwater: Field measurements V GO Eddy County, New Mexico Hydrologic Unit Code --Latitude 32°23'10", Longitude 104°21'17" NAD27 Land-surface elevation 3,401 feet above NAVD88 The depth of the well is 160 feet below land surface. This well is completed in the Yates Formation, Guadalupe Group (313YATS) local aquifer. Output formats





Breaks in the plot represent a gap of at least one year between field measurements. Download a presentation-quality graph



USGS Water Resources

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- UPDATE, 11/9: As of November 8, the USGS has successfully restored all of the operational gages that stopped transmitting due to an issue with the satellite telemetry system that records and transmits data. The USGS will now focus on restoring other equipment that experienced the telemetry issues, including about 85 rapid deployment gages that are used periodically for emergency response. Read <u>more</u>

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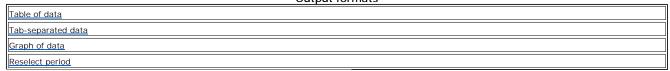
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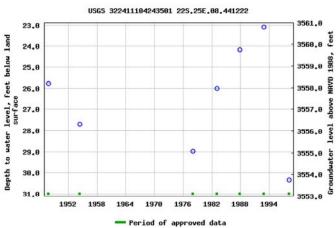
Agency code = usgs site\_no list = • 322411104243501

**Minimum number of levels** = 1 <u>Save file of selected sites</u> to local disk for future upload

#### USGS 322411104243501 22S.25E.08.441222

Available data for this site Groundwater: Field measurements GO Eddy County, New Mexico Hydrologic Unit Code --Latitude 32°24'11", Longitude 104°24'35" NAD27 Land-surface elevation 3,584 feet above NAVD88 The depth of the well is 43 feet below land surface. This well is completed in the Yates Formation, Guadalupe Group (313YATS) local aquifer. Output formats





Breaks in the plot represent a gap of at least one year between field measurements. Download a presentation-quality graph



USGS Water Resources

Data Category: Geographic Area:

 Groundwater
 V
 Go
 GO

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- Please see news on new formats
- UPDATE, 11/9: As of November 8, the USGS has successfully restored all of the operational gages that stopped transmitting due to an issue with the satellite telemetry system that records and transmits data. The USGS will now focus on restoring other equipment that experienced the telemetry issues, including about 85 rapid deployment gages that are used periodically for emergency response. Read <u>more</u>

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Groundwater levels for New Mexico

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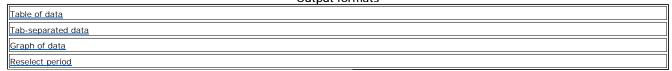
#### Search Results -- 1 sites found

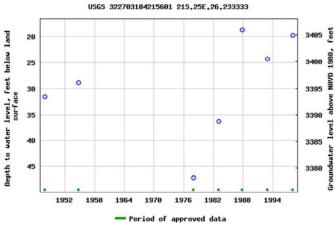
Agency code = usgs site\_no list = • 322703104215601

**Minimum number of levels** = 1 <u>Save file of selected sites</u> to local disk for future upload

#### USGS 322703104215601 21S.25E.26.233333

Available data for this site Groundwater: Field measurements V GO Eddy County, New Mexico Hydrologic Unit Code --Latitude 32°27'03", Longitude 104°21'56" NAD27 Land-surface elevation 3,425 feet above NAVD88 The depth of the well is 125 feet below land surface. This well is completed in the Rustler Formation (312RSLR) local aquifer. Output formats





Breaks in the plot represent a gap of at least one year between field measurements. Download a presentation-quality graph



USGS Water Resources

Data Category: Geographic Area: Groundwater

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- UPDATE, 11/9: As of November 8, the USGS has successfully restored all of the operational gages that stopped transmitting due to an issue with the satellite telemetry system that records and transmits data. The USGS will now focus on restoring other equipment that experienced the telemetry issues, including about 85 rapid deployment gages that are used periodically for emergency response. Read <u>more</u>

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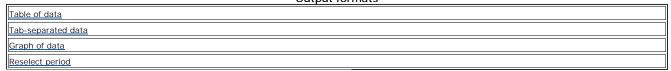
#### Search Results -- 1 sites found

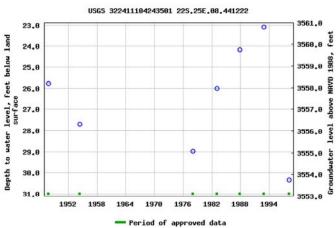
Agency code = usgs site\_no list = • 322411104243501

**Minimum number of levels** = 1 <u>Save file of selected sites</u> to local disk for future upload

#### USGS 322411104243501 22S.25E.08.441222

Available data for this site Groundwater: Field measurements V GO Eddy County, New Mexico Hydrologic Unit Code --Latitude 32°24'11", Longitude 104°24'35" NAD27 Land-surface elevation 3,584 feet above NAVD88 The depth of the well is 43 feet below land surface. This well is completed in the Yates Formation, Guadalupe Group (313YATS) local aquifer. Output formats





Breaks in the plot represent a gap of at least one year between field measurements. <u>Download a presentation-quality graph</u>



USGS Water Resources

Data Category: Geographic Area: Groundwater

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- Please see news on new formats
- UPDATE, 11/9: As of November 8, the USGS has successfully restored all of the operational gages that stopped transmitting due to an issue with the satellite telemetry system that records and transmits data. The USGS will now focus on restoring other equipment that experienced the telemetry issues, including about 85 rapid deployment gages that are used periodically for emergency response. Read <u>more</u>

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Click to hide state-specific text

#### Search Results -- 1 sites found

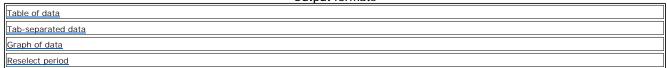
Agency code = usgs site\_no list =

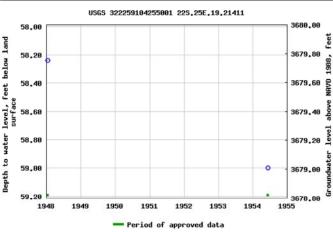
• 322259104255001

**Minimum number of levels** = 1 <u>Save file of selected sites</u> to local disk for future upload

#### USGS 322259104255001 22S.25E.19.21411

Available data for this site Groundwater: Field measurements V GO Eddy County, New Mexico Hydrologic Unit Code --Latitude 32°22'59", Longitude 104°25'50" NAD27 Land-surface elevation 3,738 feet above NAVD88 The depth of the well is 75 feet below land surface. This well is completed in the Yates Formation, Guadalupe Group (313YATS) local aquifer. Output formats





Breaks in the plot represent a gap of at least one year between field measurements. Download a presentation-quality graph



# New Mexico Office of the State Engineer Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)	(R=POD replaced, O=orpha C=the fil	ned,	(գւ					/ 2=NI est to la		/ 4=SE)	3 UTM in meter		(In feet)	
	closed)	POD Sub-		Q	Q	Q							,	Water
POD Number           C_00107	Code	CUB	County ED	-	<b>16</b> 3	<b>4</b> 3	<b>Sec</b> 09	1 ws 21S	25E	<b>X</b> 555822	<b>Y</b> 3594647*	DepthWellDe	epth water C	olumn
<u>C_00384</u>		С	ED	1	4	1	17	21S	25E	554431	3593935	994	220	774
<u>C 00384 CLW201180</u>	0	С	ED	3	2	1	17	21S	25E	554411	3594236*	994	220	774
<u>C 00384 CLW201207</u>	0	С	ED	3	2	1	17	21S	25E	554411	3594236*	994	220	774
<u>C_00550</u>		С	ED	1	1	2	11	21S	25E	559689	3596136*	97		
<u>C_00885</u>		С	ED	3	4	2	05	21S	25E	555204	3597091*	348		
C 00885 POD2		С	ED	3	4	2	05	21S	25E	555204	3597091*	379	348	31
<u>C_01041</u>		С	ED	3	3	3	03	21S	25E	557260	3596343*	85	65	20
<u>C 01166</u>		С	ED		1	3	11	21S	25E	558976	3595176*	550		
<u>C 01399</u>		С	LE	3	3	2	15	21S	25E	558068	3593839*	200		
<u>C 01451</u>		С	ED		3	3	22	21S	25E	557373	3591507*	290	260	30
<u>C_01455</u>		С	ED		3	2	26	21S	25E	559780	3590713*	125	90	35
<u>C_01456</u>	R	С	ED		2	2	33	21S	25E	557012	3589339	60	17	43
<u>C 01456 POD2</u>		С	ED	4	2	2	33	21S	25E	557012	3589339	80	60	20
<u>C_01470</u>		С	ED		2	4	06	21S	25E	553698	3596774*	284	264	20
<u>C 02066</u>		С	ED	3	3	3	04	21S	25E	555616	3596280*	120	97	23
<u>C 02268</u>		CUB	ED	1	4	3	11	21S	25E	559277	3594853*	30	25	5
<u>C_02643</u>		С	ED		3	3	03	21S	25E	557361	3596444*	145	33	112
<u>C 02731</u>		С	ED	1	3	4	18	21S	25E	553218	3593208*	233	60	173
<u>C 03618 POD1</u>		С	ED	2	2	1	03	21S	25E	557943	3597754	160	80	80
											Average Depth t	o Water:	137 fe	eet
												ım Depth:	17 fe	
											Maximu	m Depth:	348 fe	eet

Record Count: 20

#### PLSS Search:

Township: 21S Range: 25E

#### \*UTM location was derived from PLSS - see Help

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

11/12/18 9:20 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER

**Released to Imaging: 11/29/2022 12:19:24 PM** 



# New Mexico Office of the State Engineer Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a	(R=POD replaced, O=orpha C=the fil	ned,		ıarte	ers a	are 1	l=NW	/ 2=NI	E 3=SW	/ 4=SE)				
water right file.)	closed)		(գւ	larte	ers a	are s	smalle	est to la	argest)	(NAD8	3 UTM in meters)	(I	n feet)	
	<i>.</i> .	POD Sub-			Q		a	-						Vater
POD Number C 00959	Code	basin C	County ED		- <b>16</b> 1		<b>Sec</b> 27	<b>Tws</b> 22S	Rng 25E	<b>X</b> 557349	Y De 3581495*	pthWellDept	hWater Co	lumn
<u>C 00960</u>		C	ED		1		28	225	25E	556534	3581303*	69	52	17
<u>C_00961</u>		С	ED	4	1	2	19	22S	25E	553461	3582890*	80	60	20
<u>C 00988</u>		С	ED			4	01	22S	25E	561503	3586854*	55	20	35
<u>C 01288</u>		С	ED		1	4	20	22S	25E	554996	3582193*	800		
<u>C 01492</u>		С	ED	1	2	4	30	22S	25E	553689	3580659*			
<u>C_01738</u>		С	ED	4	2	3	16	22S	25E	556273	3583728*	204		
<u>C 01758</u>		С	ED	4	2	3	16	22S	25E	556273	3583728*			
<u>C 01856</u>		С	ED			4	09	22S	25E	556774	3585236*	460		
<u>C 02362</u>		CUB	ED	1	3	3	29	22S	25E	554108	3580247*	83	60	23
<u>C 02874</u>		С	ED	4	3	2	11	22S	25E	559796	3585738*	740	385	355
C 03552 POD1		С	ED	4	4	2	15	22S	25E	558548	3584192	250	150	100
											Average Depth to W	ater:	121 fee	:t
											Minimum D	Depth:	20 fee	t
											Maximum D	epth:	385 fee	t
Record Count: 12														
PLSS Search:														

Township: 228 Range: 25E

#### \*UTM location was derived from PLSS - see Help

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11/12/18 9:46 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER

Released to Imaging: 11/29/2022 12:19:24 PM

http://nmwrrs.ose.state.nm.us/...ction%22%3A%22%2C%0A%22Township%22%3A%2222S%22%2C%0A%22Range%22%3A%2225E%22%7D[11/12/2018 10:49:16 AM]



USGS Water Resources

Data Category: Geographic Area:

 Groundwater
 New Mexico
 GO

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- UPDATE, 11/9: As of November 8, the USGS has successfully restored all of the operational gages that stopped transmitting due to an issue with the satellite telemetry system that records and transmits data. The USGS will now focus on restoring other equipment that experienced the telemetry issues, including about 85 rapid deployment gages that are used periodically for emergency response. Read <u>more</u>

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Groundwater levels for New Mexico

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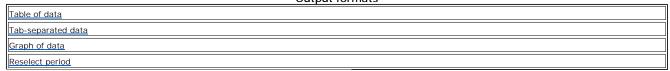
#### Search Results -- 1 sites found

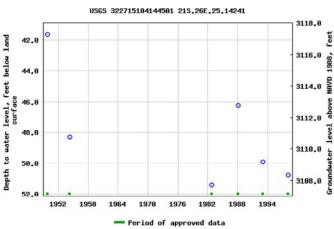
Agency code = usgs site\_no list = • 322715104144501

**Minimum number of levels** = 1 <u>Save file of selected sites</u> to local disk for future upload

#### USGS 322715104144501 21S.26E.25.14241

Available data for this site Groundwater: Field measurements V GO Eddy County, New Mexico Hydrologic Unit Code --Latitude 32°27'15", Longitude 104°14'45" NAD27 Land-surface elevation 3,159 feet above NAVD88 The depth of the well is 464 feet below land surface. This well is completed in the Capitan Limestone (313CPTN) local aquifer. Output formats





Breaks in the plot represent a gap of at least one year between field measurements. Download a presentation-quality graph

•

# Appendix C

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

Lab Order Number: 8C14004



NELAP/TCEQ # T104704516-17-8

Report Date: 03/21/18

2M Environmental Services, LLC.	Project:	COG Tequiza Federal 001H	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 @ 6"	8C14004-01	Soil	03/07/18 09:05	03-14-2018 09:15
T-1 @1'	8C14004-02	Soil	03/07/18 09:07	03-14-2018 09:15
T-2 @ 6"	8C14004-03	Soil	03/07/18 09:15	03-14-2018 09:15
T-2 @ 1'	8C14004-04	Soil	03/07/18 09:20	03-14-2018 09:15
T-3 @ 6"	8C14004-05	Soil	03/07/18 09:40	03-14-2018 09:15
T-3 @ 1'	8C14004-06	Soil	03/07/18 09:47	03-14-2018 09:15
South-1@1'	8C14004-07	Soil	03/07/18 10:00	03-14-2018 09:15
North-1@1'	8C14004-08	Soil	03/07/18 10:15	03-14-2018 09:15
Northwest-1@1'	8C14004-09	Soil	03/07/18 10:25	03-14-2018 09:15
Southwest-2@1'	8C14004-10	Soil	03/07/18 10:35	03-14-2018 09:15
Northeast-1@1'	8C14004-11	Soil	03/07/18 11:00	03-14-2018 09:15
Southeast-2@1'	8C14004-12	Soil	03/07/18 11:45	03-14-2018 09:15

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

### T-1 @ 6'' 8C14004-01 (Soil)

80.14004-01 (8011)												
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Not			
	Perr	nian Basin F	Environmer	ital Lab, I	L.P.							
Organics by GC												
Benzene	ND	0.00108	mg/kg dry	1	P8C1504	03/15/18	03/16/18	EPA 8021B				
Toluene	ND	0.0108	mg/kg dry	1	P8C1504	03/15/18	03/16/18	EPA 8021B				
Ethylbenzene	ND	0.00538	mg/kg dry	1	P8C1504	03/15/18	03/16/18	EPA 8021B				
Xylene (p/m)	ND	0.0215	mg/kg dry	1	P8C1504	03/15/18	03/16/18	EPA 8021B				
Xylene (o)	ND	0.0108	mg/kg dry	1	P8C1504	03/15/18	03/16/18	EPA 8021B				
Surrogate: 4-Bromofluorobenzene		125 %	75-1	25	P8C1504	03/15/18	03/16/18	EPA 8021B	-			
Surrogate: 1,4-Difluorobenzene		95.2 %	75-1	25	P8C1504	03/15/18	03/16/18	EPA 8021B				
General Chemistry Parameters by EPA	Standard Metho	ds										
Chloride	24.3	1.08	mg/kg dry	1	P8C1903	03/19/18	03/20/18	EPA 300.0				
% Moisture	7.0	0.1	%	1	P8C1503	03/15/18	03/15/18	ASTM D2216				
Total Petroleum Hydrocarbons C6-C35	by EPA Method 8	015M										
C6-C12	ND	26.9	mg/kg dry	1	P8C1507	03/15/18	03/16/18	TPH 8015M				
>C12-C28	ND	26.9	mg/kg dry	1	P8C1507	03/15/18	03/16/18	TPH 8015M				
>C28-C35	ND	26.9	mg/kg dry	1	P8C1507	03/15/18	03/16/18	TPH 8015M				
Surrogate: 1-Chlorooctane		106 %	70-1	30	P8C1507	03/15/18	03/16/18	TPH 8015M				
Surrogate: o-Terphenyl		111 %	70-1	30	P8C1507	03/15/18	03/16/18	TPH 8015M				
Total Petroleum Hydrocarbon C6-C35	ND	26.9	mg/kg dry	1	[CALC]	03/15/18	03/16/18	calc				

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.

2M Environmental Services, LLC. 1219 W. University Blvd.		Fax:							
Odessa TEXAS, 79764		Project Mana	ger: Matt Gr	een					
			Г-1 @1'						
		8C14	004-02 (Soi	l)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perr	nian Basin F	Environmen	tal Lab, l	L <b>.P.</b>				
Organics by GC									
Benzene	ND	0.00109	mg/kg dry	1	P8C1504	03/15/18	03/16/18	EPA 8021B	
Toluene	ND	0.0109	mg/kg dry	1	P8C1504	03/15/18	03/16/18	EPA 8021B	
Ethylbenzene	ND	0.00543	mg/kg dry	1	P8C1504	03/15/18	03/16/18	EPA 8021B	
Xylene (p/m)	ND	0.0217	mg/kg dry	1	P8C1504	03/15/18	03/16/18	EPA 8021B	
Xylene (o)	ND	0.0109	mg/kg dry	1	P8C1504	03/15/18	03/16/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		71.3 %	75-12	25	P8C1504	03/15/18	03/16/18	EPA 8021B	S-GC
Surrogate: 4-Bromofluorobenzene		110 %	75-12	25	P8C1504	03/15/18	03/16/18	EPA 8021B	
General Chemistry Parameters by EPA /	Standard Metho	ds							
Chloride	20.4	1.09	mg/kg dry	1	P8C1903	03/19/18	03/20/18	EPA 300.0	
% Moisture	8.0	0.1	%	1	P8C1503	03/15/18	03/15/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 h	oy EPA Method 8	015M							
C6-C12	ND	27.2	mg/kg dry	1	P8C1507	03/15/18	03/16/18	TPH 8015M	
>C12-C28	ND	27.2	mg/kg dry	1	P8C1507	03/15/18	03/16/18	TPH 8015M	
>C28-C35	ND	27.2	mg/kg dry	1	P8C1507	03/15/18	03/16/18	TPH 8015M	
Surrogate: 1-Chlorooctane		96.4 %	70-1.	30	P8C1507	03/15/18	03/16/18	TPH 8015M	
Surrogate: o-Terphenyl		102 %	70-1.	30	P8C1507	03/15/18	03/16/18	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	27.2	mg/kg dry	1	[CALC]	03/15/18	03/16/18	calc	

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2M Environmental Services, LLC. 1219 W. University Blvd. Odessa TEXAS, 79764		Fax:							
			7-2 @ 6'' 004-03 (Soi	I)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pern	nian Basin F	Environmen	tal Lab, l	L <b>.P.</b>				
Organics by GC									
Benzene	ND	0.00112	mg/kg dry	1	P8C1504	03/15/18	03/16/18	EPA 8021B	
Toluene	ND	0.0112	mg/kg dry	1	P8C1504	03/15/18	03/16/18	EPA 8021B	
Ethylbenzene	ND	0.00562	mg/kg dry	1	P8C1504	03/15/18	03/16/18	EPA 8021B	
Xylene (p/m)	ND	0.0225	mg/kg dry	1	P8C1504	03/15/18	03/16/18	EPA 8021B	
Xylene (o)	ND	0.0112	mg/kg dry	1	P8C1504	03/15/18	03/16/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		83.6 %	75-12	25	P8C1504	03/15/18	03/16/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		114 %	75-12	25	P8C1504	03/15/18	03/16/18	EPA 8021B	
General Chemistry Parameters by EPA /	Standard Metho	ds							
Chloride	8630	28.1	mg/kg dry	25	P8C1903	03/19/18	03/20/18	EPA 300.0	
% Moisture	11.0	0.1	%	1	P8C1503	03/15/18	03/15/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 h	y EPA Method 8	015M							
C6-C12	ND	28.1	mg/kg dry	1	P8C1507	03/15/18	03/16/18	TPH 8015M	
>C12-C28	ND	28.1	mg/kg dry	1	P8C1507	03/15/18	03/16/18	TPH 8015M	
>C28-C35	ND	28.1	mg/kg dry	1	P8C1507	03/15/18	03/16/18	TPH 8015M	
Surrogate: 1-Chlorooctane		103 %	70-13	30	P8C1507	03/15/18	03/16/18	TPH 8015M	
Surrogate: o-Terphenyl		113 %	70-13	30	P8C1507	03/15/18	03/16/18	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	28.1	mg/kg dry	1	[CALC]	03/15/18	03/16/18	calc	

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.

2M Environmental Services, LLC. 1219 W. University Blvd. Odessa TEXAS, 79764		Project Num	ect: COG Teq ber: [none] ger: Matt Gree		eral 001H			Fax:	
			[-2 @ 1' 004-04 (Soil)						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perr	nian Basin F	Environment	al Lab, l	L <b>.P.</b>				
Organics by GC									
Benzene	ND	0.00114	mg/kg dry	1	P8C1504	03/15/18	03/16/18	EPA 8021B	
Toluene	ND	0.0114	mg/kg dry	1	P8C1504	03/15/18	03/16/18	EPA 8021B	
Ethylbenzene	ND	0.00568	mg/kg dry	1	P8C1504	03/15/18	03/16/18	EPA 8021B	
Xylene (p/m)	ND	0.0227	mg/kg dry	1	P8C1504	03/15/18	03/16/18	EPA 8021B	
Xylene (o)	ND	0.0114	mg/kg dry	1	P8C1504	03/15/18	03/16/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		65.8 %	75-125	ī	P8C1504	03/15/18	03/16/18	EPA 8021B	S- $GC$
Surrogate: 4-Bromofluorobenzene		101 %	75-125	ī	P8C1504	03/15/18	03/16/18	EPA 8021B	
General Chemistry Parameters by EPA	Standard Metho	ds							
Chloride	365	1.14	mg/kg dry	1	P8C1903	03/19/18	03/20/18	EPA 300.0	
% Moisture	12.0	0.1	%	1	P8C1503	03/15/18	03/15/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35	by EPA Method 8	015M							
C6-C12	ND	28.4	mg/kg dry	1	P8C1507	03/15/18	03/16/18	TPH 8015M	
>C12-C28	ND	28.4	mg/kg dry	1	P8C1507	03/15/18	03/16/18	TPH 8015M	
>C28-C35	ND	28.4	mg/kg dry	1	P8C1507	03/15/18	03/16/18	TPH 8015M	
Surrogate: 1-Chlorooctane		95.3 %	70-130	)	P8C1507	03/15/18	03/16/18	TPH 8015M	
Surrogate: o-Terphenyl		102 %	70-130	)	P8C1507	03/15/18	03/16/18	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	28.4	mg/kg dry	1	[CALC]	03/15/18	03/16/18	calc	

2M Environmental Services, LLC. 1219 W. University Blvd. Odessa TEXAS, 79764		Project: COG Tequiza Federal 001H Project Number: [none] Project Manager: Matt Green						Fax:	
1			-3 @ 6''						
Γ		8014	004-05 (Soil)						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Peri	nian Basin E	Environmenta	al Lab, l	L <b>.P.</b>				
Organics by GC									
Benzene	ND	0.00109	mg/kg dry	1	P8C1610	03/16/18	03/16/18	EPA 8021B	
Toluene	ND	0.0109	mg/kg dry	1	P8C1610	03/16/18	03/16/18	EPA 8021B	
Ethylbenzene	ND	0.00543	mg/kg dry	1	P8C1610	03/16/18	03/16/18	EPA 8021B	
Xylene (p/m)	ND	0.0217	mg/kg dry	1	P8C1610	03/16/18	03/16/18	EPA 8021B	
Xylene (o)	ND	0.0109	mg/kg dry	1	P8C1610	03/16/18	03/16/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		120 %	75-125	ī	P8C1610	03/16/18	03/16/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		86.8 %	75-125	ī	P8C1610	03/16/18	03/16/18	EPA 8021B	
General Chemistry Parameters by EPA	Standard Metho	ds							
Chloride	1480	5.43	mg/kg dry	5	P8C1903	03/19/18	03/20/18	EPA 300.0	
% Moisture	8.0	0.1	%	1	P8C1503	03/15/18	03/15/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35	by EPA Method 8	015M							
C6-C12	ND	27.2	mg/kg dry	1	P8C1507	03/15/18	03/16/18	TPH 8015M	
>C12-C28	ND	27.2	mg/kg dry	1	P8C1507	03/15/18	03/16/18	TPH 8015M	
>C28-C35	ND	27.2	mg/kg dry	1	P8C1507	03/15/18	03/16/18	TPH 8015M	
Surrogate: 1-Chlorooctane		118 %	70-130	)	P8C1507	03/15/18	03/16/18	TPH 8015M	
Surrogate: o-Terphenyl		125 %	70-130	)	P8C1507	03/15/18	03/16/18	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	27.2	mg/kg dry	1	[CALC]	03/15/18	03/16/18	calc	

2M Environmental Services, LLC. 1219 W. University Blvd. Odessa TEXAS, 79764		Project: COG Tequiza Federal 001H Project Number: [none] Project Manager: Matt Green						Fax:	
			Г-3 @ 1' 004-06 (Soil)						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Peri	nian Basin F	Environmenta	al Lab, I	L <b>.P.</b>				
Organics by GC									
Benzene	ND	0.00111	mg/kg dry	1	P8C1610	03/16/18	03/16/18	EPA 8021B	
Toluene	ND	0.0111	mg/kg dry	1	P8C1610	03/16/18	03/16/18	EPA 8021B	
Ethylbenzene	ND	0.00556	mg/kg dry	1	P8C1610	03/16/18	03/16/18	EPA 8021B	
Xylene (p/m)	ND	0.0222	mg/kg dry	1	P8C1610	03/16/18	03/16/18	EPA 8021B	
Xylene (o)	ND	0.0111	mg/kg dry	1	P8C1610	03/16/18	03/16/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		83.5 %	75-125	;	P8C1610	03/16/18	03/16/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		106 %	75-125	;	P8C1610	03/16/18	03/16/18	EPA 8021B	
General Chemistry Parameters by EPA	Standard Metho	ds							
Chloride	1600	5.56	mg/kg dry	5	P8C1903	03/19/18	03/20/18	EPA 300.0	
% Moisture	10.0	0.1	%	1	P8C1503	03/15/18	03/15/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35	by EPA Method 8	015M							
C6-C12	ND	27.8	mg/kg dry	1	P8C1507	03/15/18	03/16/18	TPH 8015M	
>C12-C28	ND	27.8	mg/kg dry	1	P8C1507	03/15/18	03/16/18	TPH 8015M	
>C28-C35	ND	27.8	mg/kg dry	1	P8C1507	03/15/18	03/16/18	TPH 8015M	
Surrogate: 1-Chlorooctane		92.3 %	70-130	)	P8C1507	03/15/18	03/16/18	TPH 8015M	
Surrogate: o-Terphenyl		99.1 %	70-130	)	P8C1507	03/15/18	03/16/18	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	27.8	mg/kg dry	1	[CALC]	03/15/18	03/16/18	calc	

2M Environmental Services, LLC.		Project: COG Tequiza Federal 001H							Fax:		
1219 W. University Blvd.		Project Num	ber: [none]								
Odessa TEXAS, 79764		Project Mana	ger: Matt Gre	een							
		So	uth-1@1'								
		8C14	004-07 (Soil	)							
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes		
	Perm	ian Basin F	Invironment	tal Lab, I	L.P.						
Organics by GC											
Benzene	ND	0.0208	mg/kg dry	20	P8C1610	03/16/18	03/20/18	EPA 8021B			
Toluene	ND	0.208	mg/kg dry	20	P8C1610	03/16/18	03/20/18	EPA 8021B			
Ethylbenzene	ND	0.104	mg/kg dry	20	P8C1610	03/16/18	03/20/18	EPA 8021B			
Xylene (p/m)	ND	0.417	mg/kg dry	20	P8C1610	03/16/18	03/20/18	EPA 8021B			
Xylene (o)	ND	0.208	mg/kg dry	20	P8C1610	03/16/18	03/20/18	EPA 8021B			
Surrogate: 4-Bromofluorobenzene		112 %	75-12	5	P8C1610	03/16/18	03/20/18	EPA 8021B			
Surrogate: 1,4-Difluorobenzene		86.4 %	75-12	5	P8C1610	03/16/18	03/20/18	EPA 8021B			
General Chemistry Parameters by EPA	/ Standard Method	s									
Chloride	13.0	1.04	mg/kg dry	1	P8C1903	03/19/18	03/20/18	EPA 300.0			
% Moisture	4.0	0.1	%	1	P8C1503	03/15/18	03/15/18	ASTM D2216			
Total Petroleum Hydrocarbons C6-C35	by EPA Method 80	15M									
C6-C12	ND	26.0	mg/kg dry	1	P8C1507	03/15/18	03/16/18	TPH 8015M			
>C12-C28	ND	26.0	mg/kg dry	1	P8C1507	03/15/18	03/16/18	TPH 8015M			
>C28-C35	ND	26.0	mg/kg dry	1	P8C1507	03/15/18	03/16/18	TPH 8015M			
Surrogate: 1-Chlorooctane		91.2 %	70-13	0	P8C1507	03/15/18	03/16/18	TPH 8015M			
Surrogate: o-Terphenyl		94.9 %	70-13	0	P8C1507	03/15/18	03/16/18	TPH 8015M			
Total Petroleum Hydrocarbon C6-C35	ND	26.0	mg/kg dry	1	[CALC]	03/15/18	03/16/18	calc			

2M Environmental Services, LLC. 1219 W. University Blvd.		Project: COG Tequiza Federal 001H Project Number: [none]							
Odessa TEXAS, 79764	-	Project Mana	ger: Matt Gr	reen					
		No	orth-1@1'						
		8C14	004-08 (Soi	l)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perm	ian Basin E	Environmen	tal Lab, l	L <b>.P.</b>				
Organics by GC									
Benzene	ND	0.0215	mg/kg dry	20	P8C1610	03/16/18	03/20/18	EPA 8021B	
Toluene	ND	0.215	mg/kg dry	20	P8C1610	03/16/18	03/20/18	EPA 8021B	
Ethylbenzene	ND	0.108	mg/kg dry	20	P8C1610	03/16/18	03/20/18	EPA 8021B	
Xylene (p/m)	ND	0.430	mg/kg dry	20	P8C1610	03/16/18	03/20/18	EPA 8021B	
Xylene (o)	ND	0.215	mg/kg dry	20	P8C1610	03/16/18	03/20/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		90.8 %	75-1	25	P8C1610	03/16/18	03/20/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		115 %	75-1	25	P8C1610	03/16/18	03/20/18	EPA 8021B	
General Chemistry Parameters by EPA	Standard Method	s							
Chloride	ND	1.08	mg/kg dry	1	P8C1903	03/19/18	03/20/18	EPA 300.0	
% Moisture	7.0	0.1	%	1	P8C1609	03/16/18	03/16/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35	by EPA Method 80	15M							
C6-C12	ND	26.9	mg/kg dry	1	P8C1603	03/16/18	03/16/18	TPH 8015M	
>C12-C28	ND	26.9	mg/kg dry	1	P8C1603	03/16/18	03/16/18	TPH 8015M	
>C28-C35	ND	26.9	mg/kg dry	1	P8C1603	03/16/18	03/16/18	TPH 8015M	
Surrogate: 1-Chlorooctane		122 %	70-1	30	P8C1603	03/16/18	03/16/18	TPH 8015M	
Surrogate: o-Terphenyl		128 %	70-1	30	P8C1603	03/16/18	03/16/18	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	26.9	mg/kg dry	1	[CALC]	03/16/18	03/16/18	calc	

2M Environmental Services, LLC.	Proj		Fax:					
1219 W. University Blvd. Odessa TEXAS, 79764	Project Num Project Mana		een					
	110jeet Mana	gen: maar on						
	Nort	hwest-1@1	l <b>'</b>					
	8C14	004-09 (Soi	l)					
Analyte Rest	Reporting Ilt Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Permian Basin H	Environmen	tal Lab, l	L.P.				
Organics by GC								
Benzene N	D 0.0225	mg/kg dry	20	P8C1610	03/16/18	03/20/18	EPA 8021B	
Γoluene N	D 0.225	mg/kg dry	20	P8C1610	03/16/18	03/20/18	EPA 8021B	
Ethylbenzene N	D 0.112	mg/kg dry	20	P8C1610	03/16/18	03/20/18	EPA 8021B	
Xylene (p/m) N	D 0.449	mg/kg dry	20	P8C1610	03/16/18	03/20/18	EPA 8021B	
Xylene (o) N	D 0.225	mg/kg dry	20	P8C1610	03/16/18	03/20/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene	113 %	75-12	25	P8C1610	03/16/18	03/20/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene	157 %	75-12	25	P8C1610	03/16/18	03/20/18	EPA 8021B	S-GC
<u>General Chemistry Parameters by EPA / Standard N</u>	lethods							
Chloride 28	.6 1.12	mg/kg dry	1	P8C1903	03/19/18	03/20/18	EPA 300.0	
% Moisture 11	.0 0.1	%	1	P8C1609	03/16/18	03/16/18	ASTM D2216	
<b>Fotal Petroleum Hydrocarbons C6-C35 by EPA Met</b>	hod 8015M							
C6-C12 N	D 28.1	mg/kg dry	1	P8C1603	03/16/18	03/16/18	TPH 8015M	
>C12-C28 N	D 28.1	mg/kg dry	1	P8C1603	03/16/18	03/16/18	TPH 8015M	
>C28-C35 N	D 28.1	mg/kg dry	1	P8C1603	03/16/18	03/16/18	TPH 8015M	
Surrogate: 1-Chlorooctane	116 %	70-13	30	P8C1603	03/16/18	03/16/18	TPH 8015M	
Surrogate: o-Terphenyl	123 %	70-13	80	P8C1603	03/16/18	03/16/18	TPH 8015M	
Fotal Petroleum Hydrocarbon C6-C35 N	D 28.1	mg/kg dry	1	[CALC]	03/16/18	03/16/18	calc	

2M Environmental Services, LLC. 1219 W. University Blvd. Odessa TEXAS, 79764		Project: COG Tequiza Federal 001H Project Number: [none] Project Manager: Matt Green						Fax:	
			hwest-2@1 004-10 (Soil						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perr	nian Basin E	Invironment	al Lab, l	<b>P.</b>				
Organics by GC									
Benzene	ND	0.00114	mg/kg dry	1	P8C1610	03/16/18	03/16/18	EPA 8021B	
Toluene	ND	0.0114	mg/kg dry	1	P8C1610	03/16/18	03/16/18	EPA 8021B	
Ethylbenzene	ND	0.00568	mg/kg dry	1	P8C1610	03/16/18	03/16/18	EPA 8021B	
Xylene (p/m)	ND	0.0227	mg/kg dry	1	P8C1610	03/16/18	03/16/18	EPA 8021B	
Xylene (o)	ND	0.0114	mg/kg dry	1	P8C1610	03/16/18	03/16/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		93.6 %	75-12	5	P8C1610	03/16/18	03/16/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		108 %	75-12	5	P8C1610	03/16/18	03/16/18	EPA 8021B	
General Chemistry Parameters by EPA / S	Standard Metho	ds							
Chloride	35.3	1.14	mg/kg dry	1	P8C1903	03/19/18	03/20/18	EPA 300.0	
% Moisture	12.0	0.1	%	1	P8C1609	03/16/18	03/16/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by	EPA Method 8	015M							
C6-C12	ND	28.4	mg/kg dry	1	P8C1603	03/16/18	03/16/18	TPH 8015M	
>C12-C28	ND	28.4	mg/kg dry	1	P8C1603	03/16/18	03/16/18	TPH 8015M	
>C28-C35	ND	28.4	mg/kg dry	1	P8C1603	03/16/18	03/16/18	TPH 8015M	
Surrogate: 1-Chlorooctane		125 %	70-13	0	P8C1603	03/16/18	03/16/18	TPH 8015M	
Surrogate: o-Terphenyl		131 %	70-13	0	P8C1603	03/16/18	03/16/18	TPH 8015M	S-GC
Total Petroleum Hydrocarbon C6-C35	ND	28.4	mg/kg dry	1	[CALC]	03/16/18	03/16/18	calc	

Permian Basin Environmental Lab, L.P.

2M Environmental Services, LLC. 1219 W. University Blvd. Odessa TEXAS, 79764		Project: COG Tequiza Federal 001H Project Number: [none] Project Manager: Matt Green						Fax:	
			heast-1@1 004-11 (Soil)						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perm	ian Basin F	Environment	al Lab, l	L <b>.P.</b>				
Organics by GC									
Benzene	ND	0.0225	mg/kg dry	20	P8C1610	03/16/18	03/20/18	EPA 8021B	
Toluene	ND	0.225	mg/kg dry	20	P8C1610	03/16/18	03/20/18	EPA 8021B	
Ethylbenzene	ND	0.112	mg/kg dry	20	P8C1610	03/16/18	03/20/18	EPA 8021B	
Xylene (p/m)	ND	0.449	mg/kg dry	20	P8C1610	03/16/18	03/20/18	EPA 8021B	
Xylene (o)	ND	0.225	mg/kg dry	20	P8C1610	03/16/18	03/20/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		138 %	75-12.	5	P8C1610	03/16/18	03/20/18	EPA 8021B	S-GC
Surrogate: 1,4-Difluorobenzene		100 %	75-12.	5	P8C1610	03/16/18	03/20/18	EPA 8021B	
General Chemistry Parameters by EPA /	Standard Method	s							
Chloride	45.8	1.12	mg/kg dry	1	P8C1903	03/19/18	03/20/18	EPA 300.0	
% Moisture	11.0	0.1	%	1	P8C1609	03/16/18	03/16/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 h	oy EPA Method 80	15M							
C6-C12	ND	28.1	mg/kg dry	1	P8C1603	03/16/18	03/16/18	TPH 8015M	
>C12-C28	ND	28.1	mg/kg dry	1	P8C1603	03/16/18	03/16/18	TPH 8015M	
>C28-C35	ND	28.1	mg/kg dry	1	P8C1603	03/16/18	03/16/18	TPH 8015M	
Surrogate: 1-Chlorooctane		117 %	70-13	0	P8C1603	03/16/18	03/16/18	TPH 8015M	
Surrogate: o-Terphenyl		123 %	70-13	0	P8C1603	03/16/18	03/16/18	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	28.1	mg/kg dry	1	[CALC]	03/16/18	03/16/18	calc	

Permian Basin Environmental Lab, L.P.

2M Environmental Services, LLC. 1219 W. University Blvd. Odessa TEXAS, 79764		Project: COG Tequiza Federal 001H Project Number: [none] Project Manager: Matt Green						Fax:	
		Sout	heast-2@1 004-12 (Soil	•					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perr	nian Basin F	Invironmen	tal Lab, l	<b>P.</b>				
Organics by GC									
Benzene	ND	0.00114	mg/kg dry	1	P8C1610	03/16/18	03/16/18	EPA 8021B	
Toluene	ND	0.0114	mg/kg dry	1	P8C1610	03/16/18	03/16/18	EPA 8021B	
Ethylbenzene	ND	0.00568	mg/kg dry	1	P8C1610	03/16/18	03/16/18	EPA 8021B	
Xylene (p/m)	ND	0.0227	mg/kg dry	1	P8C1610	03/16/18	03/16/18	EPA 8021B	
Xylene (o)	ND	0.0114	mg/kg dry	1	P8C1610	03/16/18	03/16/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		94.5 %	75-12	25	P8C1610	03/16/18	03/16/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		107 %	75-12	25	P8C1610	03/16/18	03/16/18	EPA 8021B	
General Chemistry Parameters by EPA / S	Standard Metho	ds							
Chloride	229	1.14	mg/kg dry	1	P8C1903	03/19/18	03/20/18	EPA 300.0	
% Moisture	12.0	0.1	%	1	P8C1609	03/16/18	03/16/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by	EPA Method 8	015M							
C6-C12	ND	28.4	mg/kg dry	1	P8C1603	03/16/18	03/16/18	TPH 8015M	
>C12-C28	ND	28.4	mg/kg dry	1	P8C1603	03/16/18	03/16/18	TPH 8015M	
>C28-C35	ND	28.4	mg/kg dry	1	P8C1603	03/16/18	03/16/18	TPH 8015M	
Surrogate: 1-Chlorooctane		115 %	70-13	30	P8C1603	03/16/18	03/16/18	TPH 8015M	
Surrogate: o-Terphenyl		122 %	70-13	30	P8C1603	03/16/18	03/16/18	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	28.4	mg/kg dry	1	[CALC]	03/16/18	03/16/18	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		

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P8C1504 - General Preparation	(GC)									
Blank (P8C1504-BLK1)				Prepared &	Analyzed:	03/15/18				
Benzene	ND	0.00100	mg/kg wet	1						
Toluene	ND	0.0100	"							
Ethylbenzene	ND	0.00500	"							
Xylene (p/m)	ND	0.0200	"							
Xylene (o)	ND	0.0100	"							
Surrogate: 1,4-Difluorobenzene	0.0640		"	0.0600		107	75-125			
Surrogate: 4-Bromofluorobenzene	0.0869		"	0.0600		145	75-125			S-GC
LCS (P8C1504-BS1)				Prepared &	Analyzed:	03/15/18				
Benzene	0.0986	0.00100	mg/kg wet	0.100		98.6	70-130			
Toluene	0.109	0.0100	"	0.100		109	70-130			
Ethylbenzene	0.117	0.00500	"	0.100		117	70-130			
Xylene (p/m)	0.211	0.0200	"				70-130			
Xylene (o)	0.116	0.0100	"				70-130			
Surrogate: 1,4-Difluorobenzene	0.0562		"	0.0600		93.6	75-125			
Surrogate: 4-Bromofluorobenzene	0.0669		"	0.0600		112	75-125			
LCS Dup (P8C1504-BSD1)				Prepared &	Analyzed:	03/15/18				
Benzene	0.0979	0.00100	mg/kg wet	0.100		97.9	70-130	0.733	20	
Toluene	0.112	0.0100	"	0.100		112	70-130	2.39	20	
Ethylbenzene	0.110	0.00500	"	0.100		110	70-130	6.26	20	
Xylene (p/m)	0.215	0.0200	"				70-130		20	
Xylene (o)	0.113	0.0100	"				70-130		20	
Surrogate: 4-Bromofluorobenzene	0.0638		"	0.0600		106	75-125			
Surrogate: 1,4-Difluorobenzene	0.0536		"	0.0600		89.4	75-125			
Matrix Spike (P8C1504-MS1)	Sou	ırce: 8C14004	-04	Prepared: 0	3/15/18 A	nalyzed: 03	/16/18			
Benzene	0.0985	0.00114	mg/kg dry	0.114	ND	86.7	80-120			
Toluene	0.0885	0.0114	"	0.114	ND	77.9	80-120			
Ethylbenzene	0.104	0.00568	"	0.114	ND	91.2	80-120			
Xylene (p/m)	0.180	0.0227	"		ND		80-120			
Xylene (o)	0.0986	0.0114	"		ND		80-120			
Surrogate: 4-Bromofluorobenzene	0.0898		"	0.0682		132	75-125			S-GC
Surrogate: 1,4-Difluorobenzene	0.0733		"	0.0682		107	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	

Permian Basin Environmental Lab, L.P.

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P8C1610 - General Preparation (C	GC)									
Blank (P8C1610-BLK1)				Prepared &	Analyzed:	03/16/18				
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: 4-Bromofluorobenzene	0.0755		"	0.0600		126	75-125			S-GC
Surrogate: 1,4-Difluorobenzene	0.0585		"	0.0600		97.5	75-125			
LCS (P8C1610-BS1)				Prepared &	Analyzed:	03/16/18				
Benzene	0.108	0.00100	mg/kg wet	0.100		108	70-130			
Toluene	0.115	0.0100	"	0.100		115	70-130			
Ethylbenzene	0.118	0.00500	"	0.100		118	70-130			
Xylene (p/m)	0.218	0.0200	"				70-130			
Xylene (o)	0.120	0.0100					70-130			
Surrogate: 4-Bromofluorobenzene	0.0747		"	0.0600		125	75-125			
Surrogate: 1,4-Difluorobenzene	0.0560		"	0.0600		93.3	75-125			
LCS Dup (P8C1610-BSD1)				Prepared &	Analyzed:	03/16/18				
Benzene	0.0967	0.00100	mg/kg wet	0.100		96.7	70-130	11.5	20	
Toluene	0.108	0.0100	"	0.100		108	70-130	6.70	20	
Ethylbenzene	0.109	0.00500	"	0.100		109	70-130	8.01	20	
Xylene (p/m)	0.215	0.0200					70-130		20	
Xylene (o)	0.116	0.0100					70-130		20	
Surrogate: 4-Bromofluorobenzene	0.0652		"	0.0600		109	75-125			
Surrogate: 1,4-Difluorobenzene	0.0561		"	0.0600		93.6	75-125			
Matrix Spike (P8C1610-MS1)	Sou	rce: 8C14005	5-10	Prepared: 0	03/16/18 A	nalyzed: 03	/17/18			
Benzene	0.0886	0.00106	mg/kg dry	0.106	ND	83.3	80-120			
Toluene	0.0861	0.0106		0.106	ND	80.9	80-120			
Ethylbenzene	0.104	0.00532		0.106	ND	97.7	80-120			
Xylene (p/m)	0.195	0.0213			ND		80-120			
Xylene (o)	0.0992	0.0106	"		ND		80-120			
Surrogate: 4-Bromofluorobenzene	0.0683		"	0.0638		107	75-125			
Surrogate: 1,4-Difluorobenzene	0.0650		"	0.0638		102	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	

#### Permian Basin Environmental Lab, L.P.

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

#### **Batch P8C1610 - General Preparation (GC)**

Matrix Spike Dup (P8C1610-MSD1)	Sour	rce: 8C14005	5-10	Prepared: 0	3/16/18 A	nalyzed: 03	3/17/18		
Benzene	0.0864	0.00106	mg/kg dry	0.106	ND	81.2	80-120	2.58	20
Toluene	0.0862	0.0106	"	0.106	ND	81.1	80-120	0.173	20
Ethylbenzene	0.102	0.00532	"	0.106	ND	96.0	80-120	1.83	20
Xylene (p/m)	0.194	0.0213	"		ND		80-120		20
Xylene (o)	0.0982	0.0106	"		ND		80-120		20
Surrogate: 1,4-Difluorobenzene	0.0737		"	0.0638		115	75-125		
Surrogate: 4-Bromofluorobenzene	0.0797		"	0.0638		125	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
Anaryte	Result	Liint	Ollits	Level	Result	70KEC	Lillits	Ki D	Linin	Notes
Batch P8C1503 - *** DEFAULT PREP ***										
Blank (P8C1503-BLK1)				Prepared &	Analyzed:	03/15/18				
% Moisture	ND	0.1	%							
Duplicate (P8C1503-DUP1)	Sou	rce: 8C13007-	08	Prepared &	Analyzed:	03/15/18				
% Moisture	9.0	0.1	%		8.0			11.8	20	
Duplicate (P8C1503-DUP2)	Sou	rce: 8C13009-	19	Prepared &	Analyzed:	03/15/18				
% Moisture	11.0	0.1	%		11.0			0.00	20	
Duplicate (P8C1503-DUP3)	Sou	rce: 8C14002-	16	Prepared &	Analyzed:	03/15/18				
% Moisture	6.0	0.1	%		6.0			0.00	20	
Duplicate (P8C1503-DUP4)	Sou	rce: 8C14004-	07	Prepared &	Analyzed:	03/15/18				
% Moisture	4.0	0.1	%		4.0			0.00	20	
Batch P8C1609 - *** DEFAULT PREP ***										
Blank (P8C1609-BLK1)				Prepared &	Analyzed:	03/16/18				
% Moisture	ND	0.1	%							
Batch P8C1903 - *** DEFAULT PREP ***										
Blank (P8C1903-BLK1)				Prepared: (	)3/19/18 A	nalyzed: 03/	/20/18			
Chloride	ND	1.00	mg/kg wet							
LCS (P8C1903-BS1)				Prepared: (	03/19/18 A	nalyzed: 03/	/20/18			
Chloride	417	1.00	mg/kg wet	400		104	80-120			

Permian Basin Environmental Lab, L.P.

2M Environmental Services, LLC.	Project:	COG Tequiza Federal 001H	Fax:
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Odessa TEXAS, 79764	Project Manager:	Matt Green	

#### General Chemistry Parameters by EPA / Standard Methods - 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 P8C1903 - *** DEFAULT PREP ***										
LCS Dup (P8C1903-BSD1)				Prepared: (	03/19/18 A	nalyzed: 03	/20/18			
Chloride	415	1.00	mg/kg wet	400		104	80-120	0.534	20	
Duplicate (P8C1903-DUP1)	Sourc	e: 8C14003	-11	Prepared: (	03/19/18 A	nalyzed: 03	/20/18			
Chloride	4120	10.8	mg/kg dry		4070			1.21	20	
Duplicate (P8C1903-DUP2)	Sourc	e: 8C14004	-09	Prepared: (	03/19/18 A	nalyzed: 03	/20/18			
Chloride	28.0	1.12	mg/kg dry		28.6			2.11	20	
Matrix Spike (P8C1903-MS1)	Sourc	e: 8C14003	-11	Prepared: (	03/19/18 A	nalyzed: 03	/20/18			
Chloride	5290	10.8	mg/kg dry	1080	4070	114	80-120			

Permian Basin Environmental Lab, L.P.

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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 P8C1507 - General Preparation (GC)										
Blank (P8C1507-BLK1)				Prepared: (	03/15/18 A	nalyzed: 03	/16/18			
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	129		"	100		129	70-130			
Surrogate: o-Terphenyl	67.8		"	50.0		136	70-130			
LCS (P8C1507-BS1)				Prepared: (	)3/15/18 A	nalyzed: 03	/16/18			
C6-C12	1130	25.0	mg/kg wet	1000		113	75-125			
>C12-C28	1110	25.0	"	1000		111	75-125			
Surrogate: 1-Chlorooctane	120		"	100		120	70-130			
Surrogate: o-Terphenyl	59.8		"	50.0		120	70-130			
LCS Dup (P8C1507-BSD1)				Prepared: (	)3/15/18 A	nalyzed: 03	/16/18			
C6-C12	1130	25.0	mg/kg wet	1000		113	75-125	0.166	20	
>C12-C28	1110	25.0	"	1000		111	75-125	0.133	20	
Surrogate: 1-Chlorooctane	126		"	100		126	70-130			
Surrogate: o-Terphenyl	60.6		"	50.0		121	70-130			
Matrix Spike (P8C1507-MS1)	Sou	rce: 8C14002	2-19	Prepared: (	)3/15/18 A	nalyzed: 03	/16/18			
C6-C12	1020	26.3	mg/kg dry	1050	13.3	95.5	75-125			
>C12-C28	993	26.3	"	1050	38.5	90.7	75-125			
Surrogate: 1-Chlorooctane	128		"	105		121	70-130			
Surrogate: o-Terphenyl	61.6		"	52.6		117	70-130			
Matrix Spike Dup (P8C1507-MSD1)	Sou	rce: 8C14002	2-19	Prepared: (	)3/15/18 A	nalyzed: 03	/16/18			
C6-C12	1040	26.3	mg/kg dry	1050	13.3	97.1	75-125	1.66	20	
>C12-C28	1010	26.3	"	1050	38.5	91.9	75-125	1.29	20	
Surrogate: 1-Chlorooctane	129		"	105		122	70-130			
Surrogate: o-Terphenyl	62.3		"	52.6		118	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 valid recovery of the remaining surrog	ted based on valid recovery of the remaining surrogate.
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- 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

Barron

Report Approved By:

Date: <u>3/21/2018</u>

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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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:	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	8C20016-01 (Soil)													
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. <b>P.</b>								
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 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       P8C2012       03/21/18       ASTM D221         Col-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	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		Proj Project Num Project Mana		Fax:					
		No	rth-1 @6''						
		8C20	016-02 (Soil	)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pern	nian Basin F	Environment	al Lab, l	L <b>.P.</b>				
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	by 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	

2M Environmental Services, LLC. 1219 W. University Blvd. Odessa TEXAS, 79764		Proj Project Num Project Mana		Fax:					
,		North	1west-1 @6						
		8C20	016-03 (Soil	)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pern	nian Basin F	Invironmen	tal Lab, l	L <b>.P.</b>				
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 %	75-12	5	P8C2014	03/20/18	03/20/18	EPA 8021B	S-GC
Surrogate: 1,4-Difluorobenzene		104 %	75-12	5	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	by 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 %	70-13	0	P8C2015	03/20/18	03/21/18	TPH 8015M	
Surrogate: o-Terphenyl		88.5 %	70-13	0	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.		Proj Project Num		Fax:					
Odessa TEXAS, 79764		5	ger: Matt Gre	en					
		South	west -2 @6	,,,					
		8C20	016-04 (Soil)	)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pern	nian Basin F	Environment	al Lab, l	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	5	P8C2014	03/20/18	03/20/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		103 %	75-12	5	P8C2014	03/20/18	03/20/18	EPA 8021B	
General Chemistry Parameters by EPA /	Standard Metho	ls							
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	
<u>Total Petroleum Hydrocarbons C6-C35 h</u>	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	0	P8C2015	03/20/18	03/21/18	TPH 8015M	
Surrogate: o-Terphenyl		78.0 %	70-13	0	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.	Fax:								
Odessa TEXAS, 79764	-	Project Mana	ger: Matt Gre	en					
		North	1 ast -1	••					
		8C20	016-05 (Soil	)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perm	ian Basin F	Invironment	al Lab, l	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 %	75-12	5	P8C2014	03/20/18	03/21/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		132 %	75-12	5	P8C2014	03/20/18	03/21/18	EPA 8021B	S-GC
General Chemistry Parameters by EPA /	Standard Method	s							
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	
<u>Total Petroleum Hydrocarbons C6-C35 h</u>	oy EPA Method 80	15M							
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 %	70-13	0	P8C2015	03/20/18	03/21/18	TPH 8015M	
Surrogate: o-Terphenyl		82.0 %	70-13	0	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		Fax:					
	South	1east -2 @6 016-06 (Soil	••					
Analyte Resul	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Permian Basin E	Invironment	al Lab, I	<b>P.</b>				
Organics by GC								
Benzene NE	0.00111	mg/kg dry	1	P8C2014	03/20/18	03/21/18	EPA 8021B	
Toluene NE	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) NE	0.0222	mg/kg dry	1	P8C2014	03/20/18	03/21/18	EPA 8021B	
Xylene (o) NE	0.0111	mg/kg dry	1	P8C2014	03/20/18	03/21/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene	89.3 %	75-12	5	P8C2014	03/20/18	03/21/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene	76.7 %	75-12	5	P8C2014	03/20/18	03/21/18	EPA 8021B	
General Chemistry Parameters by EPA / Standard M	ethods							
Chloride 234	<b>1</b> .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 Meth	od 8015M							
C6-C12 NE	27.8	mg/kg dry	1	P8C2015	03/20/18	03/21/18	TPH 8015M	
>C12-C28 NE	27.8	mg/kg dry	1	P8C2015	03/20/18	03/21/18	TPH 8015M	
>C28-C35 NE	27.8	mg/kg dry	1	P8C2015	03/20/18	03/21/18	TPH 8015M	
Surrogate: 1-Chlorooctane	79.1 %	70-13	0	P8C2015	03/20/18	03/21/18	TPH 8015M	
Surrogate: o-Terphenyl	82.3 %	70-13	0	P8C2015	03/20/18	03/21/18	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35 NE	27.8	mg/kg dry	1	[CALC]	03/20/18	03/21/18	calc	

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		

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			<i>S-G</i> (
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	

## 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)	Sou	rce: 8C20020	)-01	Prepared:	03/20/18 Ar	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
Anaryte	Kesun	Liiiit	Units	Level	Kesun	70KEC	Lillins	KFD.	Liiiit	INOLES
Batch P8C2017 - *** DEFAULT PREP ***										
Blank (P8C2017-BLK1)				Prepared &	k Analyzed:	03/20/18				
Chloride	ND	1.00	mg/kg wet							
LCS (P8C2017-BS1)				Prepared &	2 Analyzed:	03/20/18				
Chloride	415	1.00	mg/kg wet	400		104	80-120			
LCS Dup (P8C2017-BSD1)				Prepared &	analyzed:	03/20/18				
Chloride	414	1.00	mg/kg wet	400		103	80-120	0.290	20	
Duplicate (P8C2017-DUP1)	Sou	ırce: 8C16011	-15	Prepared &	k Analyzed:	03/20/18				
Chloride	622	1.09	mg/kg dry		614			1.18	20	
Duplicate (P8C2017-DUP2)	Source: 8C20014-01		Prepared: (	03/20/18 A	nalyzed: 03	/21/18				
Chloride	228	1.04	mg/kg dry		230			0.769	20	
Matrix Spike (P8C2017-MS1)	Sou	ırce: 8C16011	-15	Prepared &	k Analyzed:					
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	5/21/18			
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	

Permian Basin Environmental Lab, L.P.

2M Environmental Services, LLC.	Project: COG Tequiza Federal 001H	Fax:
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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	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P8C2018 - *** DEFAULT PREP ***										
Duplicate (P8C2018-DUP1)	Sour	ce: 8C20016-	-03	Prepared: (	03/20/18 A	nalyzed: 03	/21/18			
Chloride	25.5	1.09	mg/kg dry		28.6			11.7	20	
Matrix Spike (P8C2018-MS1)	Sour	ce: 8C20016-	-03	Prepared: (	)3/20/18 A	nalyzed: 03	/21/18			
Chloride	1100	1.09	mg/kg dry	1090	28.6	98.6	80-120			
Batch P8C2102 - *** DEFAULT PREP ***										
Blank (P8C2102-BLK1)				Prepared &	Analyzed:	03/21/18				
% Moisture	ND	0.1	%							
Duplicate (P8C2102-DUP1)	Sour	ce: 8C16011	-13	Prepared &	Analyzed:	03/21/18				
% Moisture	9.0	0.1	%		9.0			0.00	20	
Duplicate (P8C2102-DUP2)	Sour	ce: 8C20002-	-05	Prepared &	Analyzed:	03/21/18				
% Moisture	8.0	0.1	%		8.0			0.00	20	
Duplicate (P8C2102-DUP3)	Sour	ce: 8C20008-	-02	Prepared &	Analyzed:	03/21/18				
% Moisture	13.0	0.1	%		12.0			8.00	20	

Permian Basin Environmental Lab, L.P.

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## 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 &	2 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 &	k 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 &	k 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 vali	d recovery 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.

	COG Tequiza Federal #001H		W					5 UTS	.48, 7	Chiorides E 300	x X X	×	×	×	×	×				Laboratory Comments: Sample Containers Intac? VOCS Free of Headspace? Y N	Labels on container(s) (Custody seals on container(s) Y N Custody seals on container(s) Y N Oustody seals on cooler(s) Y N	Y Y FedEx Lone Star	- 11 A
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l REQUEST Permian Basin Environmental Lab, LP 10014 S. County Road 1213 Midand Tavas 70706						uom			1	Total #. of Containers	-	4	1	t.	-	-				]			k
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Sno		s, LL(				2	Š			Beginning Depth									_	1-2			Ļ
CHAIN OF	sr. Matt Green	e 2M Environmental Services, LLC	Company Address: 1219 W. University Blvd.	Odessa, Texas 79764	(432)239-3763		MIG. / MININAN	1.001		FIELD CODE	South-1 @ 6"	North-1 @ 6'	Northwest -1 @ 6"	Bouthwest -2 @ 6"	Northeast -1 @ 6"	Southeest -2 @ 6"				Kuree rush (			
PBBBDA	Project Manager:	Company Name	Company Addre	City/State/Zip:	Telephone No:	Samular Signafilitar		(lab use only)	ORDER#: XC 0				Noi	<b>10</b> 0	ION .	<b>OO</b>							
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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 Tequiza Federal 001H Project Number: [none] Location: Eddy County NM

Lab Order Number: 8C23003



NELAP/TCEQ # T104704516-17-8

Report Date: 03/26/18

2M Environmental Services, LLC.	Project: COG Tequiza Federal 001H	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-3 @ 2'	8C23003-01	Soil	03/07/18 09:51	03-23-2018 13:45

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

#### T-3 @ 2' 8C23003-01 (Soil)

8(23003-01 (801)											
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes		
Permian Basin Environmental Lab, L.P.											
General Chemistry Parameters by EPA	General Chemistry Parameters by EPA / Standard Methods										
Chloride	503	1.09	mg/kg dry	1	P8C2607	03/26/18	03/26/18	EPA 300.0			
% Moisture	8.0	0.1	%	1	P8C2610	03/26/18	03/26/18	ASTM D2216			

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 P8C2607 - *** DEFAULT PREP ***										
Blank (P8C2607-BLK1)				Prepared &	Analyzed:	03/26/18				
Chloride	ND	1.00	mg/kg wet							
LCS (P8C2607-BS1)				Prepared &	Analyzed:	03/26/18				
Chloride	414	1.00	mg/kg wet	400		103	80-120			
LCS Dup (P8C2607-BSD1)				Prepared &	Analyzed:	03/26/18				
Chloride	410	1.00	mg/kg wet	400		103	80-120	0.903	20	
Duplicate (P8C2607-DUP1)	Source: 8C23003-01 Pr		Prepared &	Analyzed:	03/26/18					
Chloride	507	1.09	mg/kg dry		503			0.657	20	
Duplicate (P8C2607-DUP2)	Source: 8C20021-03 P		Prepared &	Prepared & Analyzed: 03/26/18						
Chloride	ND	1.11	mg/kg dry		ND				20	
Matrix Spike (P8C2607-MS1)	Sou	rce: 8C23003	-01	Prepared & Analyzed: 03/26/18						
Chloride	1600	1.09	mg/kg dry	1090	503	101	80-120			
Batch P8C2610 - % Solids										
Blank (P8C2610-BLK1)				Prepared &	Analyzed:	03/26/18				
% Moisture	ND	0.1	%							
Duplicate (P8C2610-DUP1)	Source: 8C22004-27 H		Prepared & Analyzed: 03/26/18							
% Moisture	12.0	0.1	%		13.0			8.00	20	
Duplicate (P8C2610-DUP2)	Sou	rce: 8C23004	-05	Prepared & Analyzed: 03/26/18						
% Moisture	7.0	0.1	%		11.0			44.4	20	

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**

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

un Barron

Report Approved By:

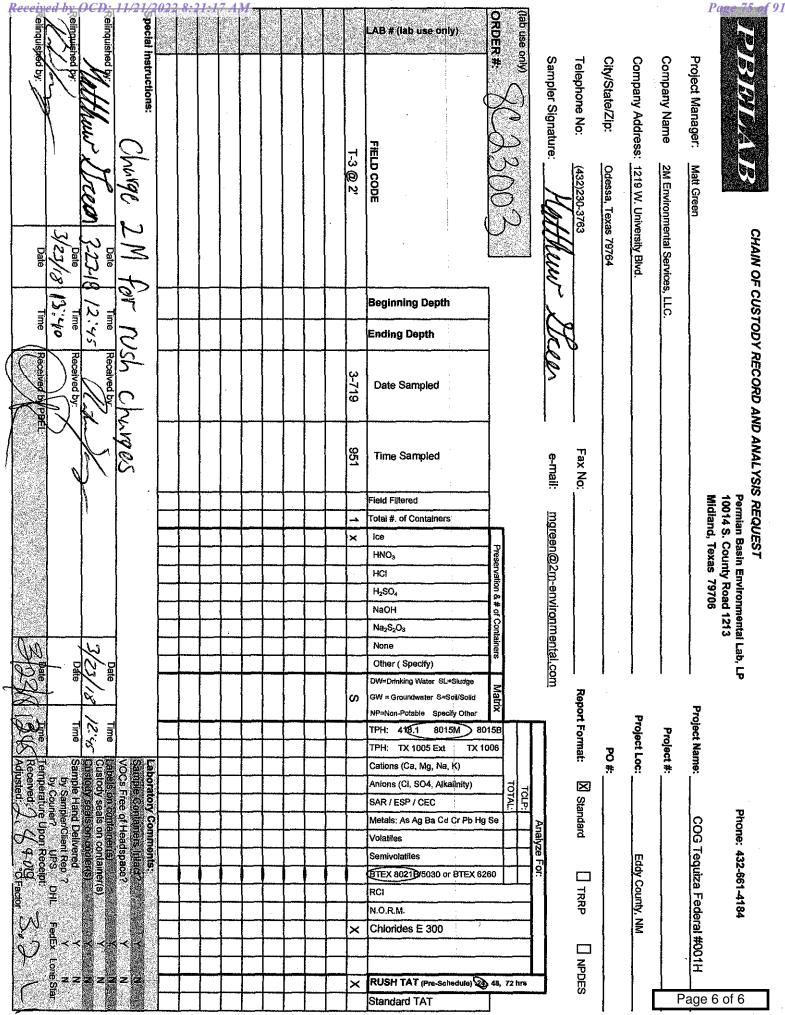
Date: 3/26/2018

Brent Barron, Laboratory Director/Technical Director

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

Permian Basin Environmental Lab, L.P.



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: 03/21/18

2M Environmental Services, LLC.	Project:	COG Tequiza Federal 001H	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
South-1 @6"	8C20016-01	Soil	03/19/18 09:00	03-20-2018 15:10
North-1 @6"	8C20016-02	Soil	03/20/18 09:05	03-20-2018 15:10
Northwest-1 @6"	8C20016-03	Soil	03/20/18 09:10	03-20-2018 15:10
Southwest -2 @6"	8C20016-04	Soil	03/20/18 09:15	03-20-2018 15:10
Northeast -1 @6"	8C20016-05	Soil	03/20/18 09:20	03-20-2018 15:10
Southeast -2 @6"	8C20016-06	Soil	03/20/18 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)

8C20016-01 (Soil)											
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes		
	Pern	nian Basin F	Environme	ntal Lab, l	L.P.						
Organics by GC											
Benzene	ND	0.0204	mg/kg dry	20	P8C2014	03/20/18	03/21/18	EPA 8021B			
Toluene	ND	0.204	mg/kg dry	20	P8C2014	03/20/18	03/21/18	EPA 8021B			
Ethylbenzene	ND	0.102	mg/kg dry	20	P8C2014	03/20/18	03/21/18	EPA 8021B			
Xylene (p/m)	ND	0.408	mg/kg dry	20	P8C2014	03/20/18	03/21/18	EPA 8021B			
Xylene (o)	ND	0.204	mg/kg dry	20	P8C2014	03/20/18	03/21/18	EPA 8021B			
Surrogate: 4-Bromofluorobenzene		114 %	75-1	25	P8C2014	03/20/18	03/21/18	EPA 8021B			
Surrogate: 1,4-Difluorobenzene		84.3 %	75-1	25	P8C2014	03/20/18	03/21/18	EPA 8021B			
General Chemistry Parameters by EPA /	Standard Method	ls									
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 D2216			
Total Petroleum Hydrocarbons C6-C35 I	oy EPA Method 80	015M									
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 %	70-1	30	P8C2015	03/20/18	03/20/18	TPH 8015M			
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.     Project: COG Tequiza Federal 001H       1219 W. University Blvd.     Project Number: [none]								Fax:	
Odessa TEXAS, 79764		5	ger: Matt Gre	en					
		No	rth-1 @6''						
		8C20	016-02 (Soil)	)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pern	nian Basin F	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 Method	ls							
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	
<u>Total Petroleum Hydrocarbons C6-C35 h</u>	oy EPA Method 80	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	

Benzene       ND       0.00109       mg         Toluene       ND       0.00109       mg         Ethylbenzene       ND       0.00109       mg         Xylene (p/m)       ND       0.00109       mg         Xylene (o)       ND       0.00109       mg         Surrogate: 4-Bromofluorobenzene       163 %       Surrogate: 1,4-Difluorobenzene       104 %	est-1 @6'' 5-03 (Soil) Units Dilution ironmental Lab, g/kg dry 1 g/kg dry 1 g/kg dry 1 g/kg dry 1		Prepared 03/20/18 03/20/18 03/20/18	Analyzed 03/20/18 03/20/18 03/20/18	Method EPA 8021B EPA 8021B	Notes
AnalyteResultLimitUPermian Basin EnviOrganics by GCBenzeneND0.00109mgTolueneND0.00543mgEthylbenzeneND0.00543mgXylene (p/m)ND0.0217mgSurrogate: 4-Bromofluorobenzene163 %surrogate: 1,4-DifluorobenzeneSurrogate: 1,4-Difluorobenzene104 %Ceneral Chemistry Parameters by EPA / Standard Methods1.09mg	<b>ironmental Lab,</b> 2/kg dry 1 2/kg dry 1 2/kg dry 1	L.P. P8C2014 P8C2014 P8C2014	03/20/18 03/20/18	03/20/18 03/20/18	EPA 8021B EPA 8021B	Notes
Organics by GC           Benzene         ND         0.00109         mg           Toluene         ND         0.0109         mg           Ethylbenzene         ND         0.00543         mg           Xylene (p/m)         ND         0.0217         mg           Xylene (o)         ND         0.0109         mg           Surrogate: 4-Bromofluorobenzene         163 %         104 %           General Chemistry Parameters by EPA / Standard Methods         Chloride         28.6         1.09         mg	2/kg dry 1 2/kg dry 1 2/kg dry 1	P8C2014 P8C2014 P8C2014	03/20/18	03/20/18	EPA 8021B	
Benzene         ND         0.00109         mg           Toluene         ND         0.0109         mg           Ethylbenzene         ND         0.00543         mg           Xylene (p/m)         ND         0.0217         mg           Xylene (o)         ND         0.0109         mg           Surrogate: 4-Bromofluorobenzene         163 %         163 %           Surrogate: 1,4-Difluorobenzene         104 %         104 %           Ceneral Chemistry Parameters by EPA / Standard Methods         1.09         mg	g/kg dry 1 g/kg dry 1	P8C2014 P8C2014	03/20/18	03/20/18	EPA 8021B	
Toluene         ND         0.0109         mg           Ethylbenzene         ND         0.00543         mg           Xylene (p/m)         ND         0.0217         mg           Xylene (o)         ND         0.0109         mg           Surrogate: 4-Bromofluorobenzene         163 %         163 %           Surrogate: 1,4-Difluorobenzene         104 %         104 %           General Chemistry Parameters by EPA / Standard Methods         1.09         mg	g/kg dry 1 g/kg dry 1	P8C2014 P8C2014	03/20/18	03/20/18	EPA 8021B	
Ethylbenzene         ND         0.00543         mg           Xylene (p/m)         ND         0.0217         mg           Xylene (o)         ND         0.0109         mg           Surrogate: 4-Bromofluorobenzene         163 %         163 %           Surrogate: 1,4-Difluorobenzene         104 %         104 %           General Chemistry Parameters by EPA / Standard Methods         1.09         mg	g/kg dry 1	P8C2014				
Xylene (p/m)     ND     0.0217     mg       Xylene (o)     ND     0.0109     mg       Surrogate: 4-Bromofluorobenzene     163 %       Surrogate: 1,4-Difluorobenzene     104 %       General Chemistry Parameters by EPA / Standard Methods     1.09       Chloride     28.6     1.09     mg			03/20/18	02/20/19	ED4 0021D	
Xylene (o)ND0.0109mgSurrogate: 4-Bromofluorobenzene163 %Surrogate: 1,4-Difluorobenzene104 %General Chemistry Parameters by EPA / Standard MethodsChloride28.61.09mg	g/kg dry 1	D8C2014		03/20/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene       163 %         Surrogate: 1,4-Difluorobenzene       104 %         General Chemistry Parameters by EPA / Standard Methods       1.09 mg		F 6C2014	03/20/18	03/20/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene       104 %         General Chemistry Parameters by EPA / Standard Methods         Chloride       28.6       1.09 mg	g/kg dry 1	P8C2014	03/20/18	03/20/18	EPA 8021B	
General Chemistry Parameters by EPA / Standard Methods           Chloride         28.6         1.09 mg	75-125	P8C2014	03/20/18	03/20/18	EPA 8021B	S-GC
<b>Chloride 28.6</b> 1.09 mg	75-125	P8C2014	03/20/18	03/20/18	EPA 8021B	
% Moisture 8.0 0.1	g/kg dry 1	P8C2018	03/20/18	03/21/18	EPA 300.0	
	% 1	P8C2102	03/21/18	03/21/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M						
· · ·	g/kg dry 1	P8C2015	03/20/18	03/21/18	TPH 8015M	
>C12-C28 ND 27.2 mg	g/kg dry 1	P8C2015	03/20/18	03/21/18	TPH 8015M	
>C28-C35 ND 27.2 mg	g/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	g/kg dry 1	[CALC]	03/20/18	03/21/18	calc	

Benzene         ND         0.00111         mg/kg dry         1         P8C2014         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 %         75-125         P8C2014         03/20/18         03/20/18         EPA 8021B           Surrogate: 1,4-Difluorobenzene         103 %         75-125         P8C2014         03/20/18         03/20/18         EPA 8021B           Surrogate: 1,4-Difluorobenzene         10.0         0.1         %         1         P8C2018         03/20/18         03/21/18         EPA 300.0           % Moisture         10.0         0.1         %         1         P8C2012         03/21/18	M Environmental Services, LLC. 219 W. University Blvd. dessa TEXAS, 79764		Project Num	ject: COG Te ber: [none] ger: Matt Gre	1	eral 001H			Fax:	
Analyte         Result         Limit         Units         Dilution         Batch         Prepared         Analyzed         Method           Permian Basin Environmental Lab, 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           Surrogate: 4-Bromofluorobenzene         97.1%         75-125         P8C2014         03/20/18         03/20/18         EPA 8021B           Surrogate: 1.4-Difluorobenzene         97.1%         75-125         P8C2014         03/20/18         03/20/18         EPA 8021B           Surrogate: 1.4-Difluorobenzene         90.7         1.11         mg/kg dry         1         P8C2018         03/20/18         03/21/18         EPA 8021B				0						
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           Surrogate: 4-Bromofluorobenzene         ND         0.0111         mg/kg dry         1         P8C2014         03/20/18         03/20/18         EPA 8021B           Surrogate: 1-4-Difluorobenzene         97.1 %         75-125         P8C2014         03/20/18         03/20/18         EPA 8021B           Surrogate: 1-4-Difluorobenzene         10.0         0.1         %         75-125         P8C2014         03/20/18         03/20/18         EPA 8021B           Choride         30.7         1.11         mg/kg dry         1         P8C2012         03/20/18         03/21/18         EPA 300.0           % Moisture         10.0	nalyte	Result	Reporting		, 	Batch	Prepared	Analyzed	Method	Notes
Initial         Initial <h< td=""><td></td><td>Perr</td><td>nian Basin F</td><td>Environment</td><td>tal Lab, l</td><td>L<b>.P.</b></td><td></td><td></td><td></td><td></td></h<>		Perr	nian Basin F	Environment	tal Lab, l	L <b>.P.</b>				
Initial         Initial <h< td=""><td>ganics by GC</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></h<>	ganics by GC									
Ethylbenzene         ND         0.00556         mg/kg dry         1         P8C2014         03/20/18         63/20/18         EPA 8021B           Xylene (p/m)         ND         0.0222         mg/kg dry         1         P8C2014         03/20/18         63/20/18         EPA 8021B           Xylene (o)         ND         0.0111         mg/kg dry         1         P8C2014         03/20/18         63/20/18         EPA 8021B           Surrogate: 4-Bromofluorobenzene         97.1 %         75-125         P8C2014         03/20/18         63/20/18         EPA 8021B           Surrogate: 1,4-Difluorobenzene         97.1 %         75-125         P8C2014         03/20/18         63/20/18         EPA 8021B           Surrogate: 1,4-Difluorobenzene         97.1 %         75-125         P8C2014         03/20/18         03/20/18         EPA 8021B           General Chemistry Parameters by EPA / Standard Methods          03/20/18         03/21/18         EPA 300.0           % Moisture         10.0         0.1         %         1         P8C2015         03/20/18         03/21/18         ASTM D2216           Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M              P8C2015         03/20/18         03	nzene	ND	0.00111	mg/kg dry	1	P8C2014	03/20/18	03/20/18	EPA 8021B	
And       Order of C P J       Description of C P J </td <td>uene</td> <td>ND</td> <td>0.0111</td> <td>mg/kg dry</td> <td>1</td> <td>P8C2014</td> <td>03/20/18</td> <td>03/20/18</td> <td>EPA 8021B</td> <td></td>	uene	ND	0.0111	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 %         75-125         P8C2014         03/20/18         03/20/18         EPA 8021B           Surrogate: 1,4-Difluorobenzene         103 %         75-125         P8C2014         03/20/18         03/20/18         EPA 8021B           General Chemistry Parameters by EPA / Standard Methods         E         E         E         E         E         A 8021B           General Chemistry Parameters by EPA / Standard Methods         30.7         1.11         mg/kg dry         1         P8C2018         03/20/18         03/21/18         EPA 300.0           % Moisture         10.0         0.1         %         1         P8C2012         03/21/18         03/21/18         ASTM D2216           Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M         E         E         E         E         E           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         TP	ylbenzene	ND	0.00556	mg/kg dry	1	P8C2014	03/20/18	03/20/18	EPA 8021B	
Surrogate:       4-Bromofluorobenzene       97.1 %       75-125       P8C2014       03/20/18       03/20/18       EPA 8021B         Surrogate:       1,4-Difluorobenzene       103 %       75-125       P8C2014       03/20/18       03/20/18       EPA 8021B         General Chemistry Parameters by EPA / Standard Methods       Epa 300.0       03/20/18       03/21/18       EPA 300.0         % Moisture       10.0       0.1       %       1       P8C2012       03/21/18       03/21/18       EPA 300.0         Choride       30.7       1.11       mg/kg dry       1       P8C2012       03/21/18       03/21/18       EPA 300.0         % Moisture       10.0       0.1       %       1       P8C2012       03/21/18       03/21/18       ASTM D2216         Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M       C       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	lene (p/m)	ND	0.0222	mg/kg dry	1	P8C2014	03/20/18	03/20/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene       103 %       75-125       P8C2014       03/20/18       C03/20/18       EPA 8021B         General Chemistry Parameters by EPA / Standard Methods       EChoride       30.7       1.11       mg/kg dry       1       P8C2018       03/20/18       03/21/18       EPA 300.0         % Moisture       10.0       0.1       %       1       P8C202       03/20/18       03/21/18       EPA 300.0         Coloride       30.7       1.11       mg/kg dry       1       P8C2012       03/20/18       03/21/18       EPA 300.0         % Moisture       10.0       0.1       %       1       P8C2012       03/20/18       03/21/18       EPA 300.0         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 %       70-130       P8C2015       03/20/18       03/21/18       TPH 8015M       Surrogate: o-Terphenyl       <	lene (o)	ND	0.0111	mg/kg dry	1	P8C2014	03/20/18	03/20/18	EPA 8021B	
General Chemistry Parameters by EPA / Standard Methods           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         P8C202         03/21/18         03/21/18         ASTM D2216           Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M           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 %         70-130         P8C2015         03/20/18         03/21/18         TPH 8015M           Surrogate: o-Terphenyl         78.0 %         70-130         P8C2015         03/20/18         03/21/18         TPH 8015M	rogate: 4-Bromofluorobenzene		97.1 %	75-12	5	P8C2014	03/20/18	03/20/18	EPA 8021B	
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 by EPA Method 8015M         EPA 300.0         0.1         %         1         P8C2012         03/21/18         03/21/18         ASTM D2216           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 %         70-130         P8C2015         03/20/18         03/21/18         TPH 8015M           Surrogate: o-Terphenyl         78.0 %         70-130         P8C2015         03/20/18         03/21/18         TPH 8015M	rogate: 1,4-Difluorobenzene		103 %	75-12	5	P8C2014	03/20/18	03/20/18	EPA 8021B	
% Moisture         10.0         0.1         %         1         P8C2102         03/21/18         ASTM D2216           Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M         EPA         Method 8015M         1         P8C2015         03/20/18         03/21/18         ASTM D2216           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 %         70-130         P8C2015         03/20/18         03/21/18         TPH 8015M           Surrogate: o-Terphenyl         78.0 %         70-130         P8C2015         03/20/18         03/21/18         TPH 8015M	neral Chemistry Parameters by EPA /	Standard Metho	ds							
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M           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 %         70-130         P8C2015         03/20/18         03/21/18         TPH 8015M           Surrogate: o-Terphenyl         78.0 %         70-130         P8C2015         03/20/18         03/21/18         TPH 8015M	loride	30.7	1.11	mg/kg dry	1	P8C2018	03/20/18	03/21/18	EPA 300.0	
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 %         70-130         P8C2015         03/20/18         03/21/18         TPH 8015M           Surrogate: o-Terphenyl         78.0 %         70-130         P8C2015         03/20/18         03/21/18         TPH 8015M	Moisture	10.0	0.1	%	1	P8C2102	03/21/18	03/21/18	ASTM D2216	
>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 %       70-130       P8C2015       03/20/18       03/21/18       TPH 8015M         Surrogate: o-Terphenyl       78.0 %       70-130       P8C2015       03/20/18       03/21/18       TPH 8015M	tal Petroleum Hydrocarbons C6-C35 b	y EPA Method 8	015M							
>C28-C35         ND         27.8 mg/kg dry         1         P8C2015         03/20/18         03/21/18         TPH 8015M           Surrogate: 1-Chlorooctane         74.9 %         70-130         P8C2015         03/20/18         03/21/18         TPH 8015M           Surrogate: o-Terphenyl         78.0 %         70-130         P8C2015         03/20/18         03/21/18         TPH 8015M	·C12	ND	27.8	mg/kg dry	1	P8C2015	03/20/18	03/21/18	TPH 8015M	
Surrogate: 1-Chlorooctane         74.9 %         70-130         P8C2015         03/20/18         03/21/18         TPH 8015M           Surrogate: o-Terphenyl         78.0 %         70-130         P8C2015         03/20/18         03/21/18         TPH 8015M	12-C28	ND	27.8	mg/kg dry	1	P8C2015	03/20/18	03/21/18	TPH 8015M	
Surrogate: o-Terphenyl 78.0 % 70-130 P8C2015 03/20/18 03/21/18 TPH 8015M	28-C35	ND	27.8	mg/kg dry	1	P8C2015	03/20/18	03/21/18	TPH 8015M	
	rogate: 1-Chlorooctane		74.9 %	70-13	0	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	rogate: o-Terphenyl		78.0 %	70-13	0	P8C2015	03/20/18	03/21/18	TPH 8015M	
	al 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 001H1219 W. University Blvd.Project Number:[none]								Fax:	
Odessa TEXAS, 79764		Project Mana	ger: Matt Gr	een					
		North	neast -1 @	6''					
		8C20	016-05 (Soi	l)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perm	ian Basin F	Environmen	tal Lab, l	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	s							
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	
<u>Total Petroleum Hydrocarbons C6-C35 b</u>	y EPA Method 80	)15M							
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	

Permian Basin Environmental Lab, L.P.

2M Environmental Services, LLC.		Proj	ect: COG Te	quiza Fede	eral 001H			Fax:		
1219 W. University Blvd.		Project Num	ber: [none]							
Odessa TEXAS, 79764		Project Mana	ger: Matt Gre	en						
		South	neast -2 @6	••						
		8C20	016-06 (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	0.00111	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	5	P8C2014	03/20/18	03/21/18	EPA 8021B		
Surrogate: 1,4-Difluorobenzene		76.7 %	75-12	5	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 %	70-13	0	P8C2015	03/20/18	03/21/18	TPH 8015M		
Surrogate: o-Terphenyl		82.3 %	70-13	0	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		

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.

	D 1	Reporting	TT '4	Spike	Source	MARC	%REC	DDD	RPD	N. (
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
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	rce: 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-05
Ethylbenzene	0.0530	0.00505		0.101	ND	52.5	80-120			QM-05
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)	Sou	rce: 8C20020	)-01	Prepared:	03/20/18 Ar	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	1	2					
LCS (P8C2017-BS1)				Prepared &	Analyzed:	03/20/18				
Chloride	415	1.00	mg/kg wet	400		104	80-120			
LCS Dup (P8C2017-BSD1)				Prepared & Analyzed: 03/20/18						
Chloride	414	1.00	mg/kg wet	400		103	80-120	0.290	20	
Duplicate (P8C2017-DUP1)	Source: 8C16011-15		Prepared & Analyzed: 03/20/18							
Chloride	622	1.09	mg/kg dry		614			1.18	20	
Duplicate (P8C2017-DUP2)	Sou	rce: 8C20014	-01	Prepared: 0	03/20/18 A	nalyzed: 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: 0	03/20/18 A	nalyzed: 03	/21/18			
Chloride	ND	1.00	mg/kg wet	-		•				
LCS (P8C2018-BS1)				Prepared: 0	03/20/18 A	nalyzed: 03	/21/18			
Chloride	411	1.00	mg/kg wet	400		103	80-120			
LCS Dup (P8C2018-BSD1)				Prepared: 0	03/20/18 A	nalyzed: 03	/21/18			
Chloride	406	1.00	mg/kg wet	400		101	80-120	1.15	20	

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.
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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	
Source: 8C20016-03 Prep		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.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Analyte	Kesuit	Liint	Units	Level	Kesuit	70KEC	Linits	KF D	Liiiit	INOLES
Batch P8C2015 - General Preparation (GC)										
Blank (P8C2015-BLK1)				Prepared &	a 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 &	z 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	rce: 8C20020	)-01	Prepared: (	)3/20/18 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 vali	d recovery 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: <u>3/21/2018</u>

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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TEAUES CHAIN O	lanager: Matt Green	/ Name 2M Environmental Services, LLC		∋/Zip: Odessa, Texas 79764	-	Allro'	Charles Commission		JUULO I	FIELD CODE	South-1 @ 6"	North-1 @ 6'	Northwest -1 @ 6"	Bouthwest -2 @ 6"	Northeast -1 @ 6"	Southeast -2 @ 6"			Owner Nuch			
PBB	Project Manager:	Company Name	Compan	City/State/Zip:	Telephone No:	Samlar		(lab use only)	ORDER #: X			調査							Pa	ne 15	of 15	

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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	160303
	Action Type:
	[C-141] Release Corrective Action (C-141)

#### CONDITIONS

CONDIN		
Created By	Condition	Condition Date
bhall	Remediation and closure must be in compliance with 19.15.29.12 and 19.15.29.13 NMAC.	11/29/2022
bhall	In the "Sampling Plan" portion of the report, it states "To collect representative samples, composite samples (5-point composite) will be collected every 600 square feet (25 x 25) for the final confirmation sampling for the constituents of concern." The OCD approves 5-point composite samples representative of NO MORE THAN 400 SQUARE FEET. All other sampling is approved per the workplan.	11/29/2022
bhall	All confirmation samples must be analyzed for all constituents listed in Table I.	11/29/2022
bhall	2RP-4632 closed. Please refer to incident #NAB1805142690 in all future communication.	11/29/2022
bhall	Please submit a complete closure report through the OCD Permitting website by 3/3/2023.	11/29/2022

Action 160303