istrict I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised April 3, 2017

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company: **COG Operating, LLC** (OGRID# 229137)	Contact: **Robert McNeill**
Address: **600 West Illinois Avenue, Midland TX 79701**	Telephone No.: **432-683-7443**
Facility Name**: J C FEDERAL #027**	Facility Type**: Battery**

Surface Owner: Federal	Mineral Owner: Federal	API No.: 30-25-39247

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
M	22	17S	32E	1240	SOUTH	990	WEST	LEA

Latitude: 32.8162079 **Longitude**: -103.7596512 NAD83

NATURE OF RELEASE

Type of Release: Oil	Volume of Release: 30 bbls Oil	Volume Recovered: 25 bbls Oil
Source of Release: Gasket Failure	Date and Hour of Occurrence: 1/23/2018	Date and Hour of Discovery: 1/23/2018 4:30 P.M.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Olivia Yu (NMOCD) & Shelly Tucker (BLM)	
By Whom? Dakota Neel	Date and Hour: 1/24/2018 1124 AM	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

APPROVED
By Olivia Yu at 11:33 am, Sep 13, 2018

Describe Cause of Problem and Remedial Action Taken.*
This release was caused by a failure in the fire tube gasket on the heater treater. The gasket has been replaced.

Describe Area Affected and Cleanup Action Taken.*

This release affected the lined facility as well as a very light over spray in the adjacent pasture. Upon visual inspection of the plastic liner of the facility indicated that the liner was intact, consequently no sampling was required inside the facility. Sample results in the overspray area indicated that no further action is warranted at the site.

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

Signature: Rebecca Haskell	OIL CONSERVATION DIVISION
Printed Name: Rebecca Haskell	Approved by Environmental Specialist:
Title: Senior HSE Coordinator	Approval Date: 9/13/2018 Expiration Date: xx/xx/xxxx
E-mail Address: rhaskell@concho.com	Conditions of Approval: BLM approval Attached ☐
Date: April 11, 2018 Phone: 432-683-7443	

* Attach Additional Sheets If Necessary

nOY1803029522

From:	Tucker, Shelly
To:	Yu, Olivia, EMNRD
Cc:	mgreen@2m-environmental.com; Rebecca Haskell; DeAnn Grant; Dakota Neel; Sheldon Hitchcock
Subject:	Re: [EXTERNAL] RE: JC Federal #027 Release (1- 23-18) Investigation Summary and Site Closure Request
Date:	Monday, September 17, 2018 2:33:56 PM

BLM accepts closure request.

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

Sincerely,

Shelly J Tucker
Environmental Protection Specialist
O&G Spill/Release Coordinator

575.234.5905 - Direct
575.361.0084 - Cellular
575.234.6235 - Emergency Spill Number

stucker@blm.gov

Bureau of Land Management
620 E. Greene St
Carlsbad, NM 88220

The **BLM acceptance/approval does not** relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that may pose a threat to groundwater, surface water, human health or the environment or if the location fails to reclaim properly. **In such an event a site does not achieve successful restoration, or future issues with contaminants are encountered, the operator will be asked to address these issues until they are fully mitigated and the location is successfully reclaimed**. In addition, BLM approval does not relieve the operator of responsibility for compliance with any other federal, state or local laws/regulations.

Confidentiality Warning: This message along with any attachments are intended only for use of the individual or entity to which it is addressed and may contain information that is privileged or confidential and exempt from disclosure under applicable law. If the reader of this message is not the intended recipient or the employee or agent responsible for delivering this message to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication is strictly prohibited. If you have received this communication in error, please notify the sender immediately.

NOTE: *LPC Timing Stipulations - from* ***March 1st through June 15th****. Please plan remedial activities accordingly. Check for African Rue...treat (before it gets out of control).*

On Thu, Sep 13, 2018 at 11:42 AM Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us> wrote:

> Dear Ms. Haskell:
>
> The available information indicates **OPERATOR** has met the requirements of 19.15.29 NMAC and no further corrective action is required. NMOCD considers **nOY1803029522** closed. However, this determination by the Oil Conservation Division does not relieve Operator of responsibility should future information indicate a threat to ground water, surface water, human health, or the environment. Furthermore, it does not relieve Operator of responsibility for compliance with any federal, state, or local laws and/or regulations.

BLM approval required. BLM may have additional concerns or stipulations.

Thanks,

Olivia Yu

Environmental Specialist

NMOCD, District I

Olivia.yu@state.nm.us

575-393-6161 x113

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

From: Matt Green <mgreen@2m-environmental.com>
Sent: Friday, June 22, 2018 4:30 PM
To: Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us>; stucker@blm.gov
Cc: Rebecca Haskell <RHaskell@concho.com>; DeAnn Grant <agrant@concho.com>; Dakota Neel <DNeel2@concho.com>; Sheldon Hitchcock <SLHitchcock@concho.com>
Subject: JC Federal #027 Release (1- 23-18) Investigation Summary and Site Closure Request

Ms. Yu / Ms. Tucker,

Good afternoon, please find attached the Investigation Summary and Site Closure Request for the JC Federal #027 Release (1- 23-18) for your review and approval. Please let me know if you have any questions. Thanks and have a good day.

Regards,

Matthew Green, P.G.

President

2M Environmental Services, LLC.

Cell #: 432-230-3763

Office #: 432-614-6793

mgreen@2m-environmental.com

From:	Yu, Olivia, EMNRD
To:	"Matt Green"; stucker@blm.gov
Cc:	Rebecca Haskell; DeAnn Grant; Dakota Neel; Sheldon Hitchcock
Subject:	RE: JC Federal #027 Release (1- 23-18) Investigation Summary and Site Closure Request
Date:	Thursday, September 13, 2018 11:39:00 AM
Attachments:	approved_JC Federal #027 Investigation Summary and Site Closure Request.pdf

Dear Ms. Haskell:

The available information indicates **OPERATOR** has met the requirements of 19.15.29 NMAC and no further corrective action is required. NMOCD considers **nOY1803029522** closed. However, this determination by the Oil Conservation Division does not relieve Operator of responsibility should future information indicate a threat to ground water, surface water, human health, or the environment. Furthermore, it does not relieve Operator of responsibility for compliance with any federal, state, or local laws and/or regulations.

BLM approval required. BLM may have additional concerns or stipulations.

Thanks,

Olivia Yu
Environmental Specialist
NMOCD, District I
Olivia.yu@state.nm.us
575-393-6161 x113

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Sent: Friday, June 22, 2018 4:30 PM
To: Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us>; stucker@blm.gov
Cc: Rebecca Haskell <RHaskell@concho.com>; DeAnn Grant <agrant@concho.com>; Dakota Neel <DNeel2@concho.com>; Sheldon Hitchcock <SLHitchcock@concho.com>
Subject: JC Federal #027 Release (1- 23-18) Investigation Summary and Site Closure Request

Ms. Yu / Ms. Tucker,

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Regards,

Matthew Green, P.G.
President
2M Environmental Services, LLC.
Cell #: 432-230-3763
Office #: 432-614-6793
mgreen@2m-environmental.com

APPROVED
By Olivia Yu at 11:32 am, Sep 13, 2018

NMOCD approves
nOY1803029522
for closure.

Environmental
Services, LLC
1219 W. University Blvd.
Odessa, TX 79764

June 22, 2018

Olivia Yu
New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division, District 1
1625 N. French Drive
Hobbs, New Mexico 88210

Shelly Tucker
U.S Department of the Interior
Bureau of Land Management
620 E. Greene Street
Carlsbad, NM 88220
Stucker@blm.gov

Re: Soil Investigation Summary and Site Closure Request
J C Federal #027
GPS: N 32.8162079 W 103.7596512
Unit Letter "M", Section 22, Township 17 South, Range 32 East, NMPM
Lea County, New Mexico

Dear Ms. Yu and Ms. Tucker,

2M Environmental Services, LLC. (2M), on behalf of COG Operating, LLC. (Concho), has prepared this Soil Investigation Summary and Site Closure Letter Report (Report) for the J C Federal #027 Release Site (Release Site). The purpose of this Report is to document soil investigation activities and to request a New Mexico Oil and Conservation District (NMOCD) approved Site Closure Status for the J C Federal #027 Release Site. The legal description of the Release Site is Unit Letter "M", Section 22, Township 17 South, Range 32 East, in Lea County, New Mexico. The subject property is administered by the New Mexico U.S. Department of the Interior Bureau of Land Management (BLM). The GPS coordinates for the site are N 32.8162079 W 103.7596512. A Site Location Map and Site Details and Soil Sample Locations Map are provided as Figure 1 and Figure 2, respectively. Release Site photographs are attached to this Report.

On January 23, 2018, a crude oil release occurred at the J C Federal #027. The release was the result of the fire tube on the heater treater failing, which resulted in the release of crude oil within the plastic lined, metal bermed secondary containment and over sprayed area outside of the secondary containment west of the tank battery. On January 24, 2018, Concho reported the release to the NMOCD District 1 Office, located in Hobbs, New Mexico, and BLM. The release was not assigned an incident number. A Release Notification and Corrective Action Form (Form C-141) was subsequently submitted to the NMOCD on January 28, 2018. The release was reported as approximately thirty (30) barrels of crude oil released with approximately twenty-five (25) barrels of crude oil recovered, resulting in a net loss of approximately five (5) barrels of crude oil. A copy of the NMOCD Release Notification and Corrective Action Form C-141 is attached to this Report.

A groundwater database maintained by The New Mexico Office of the State Engineer (NMOSE) did not identify the average depth to groundwater information in Section 22, Township 17 South, Range 32 East. A reference map utilized by the New Mexico Oil Conservation Division (NMOCD) Hobbs District Office indicates groundwater should be encountered at approximately seventy-five (75) feet below ground surface (bgs). Based on the NMOCD site classification system, ten (10) points will be assigned to the subject area ranking as a result of this criterion. No water wells were observed within one-thousand feet of the Release Site. Based on the NMOCD site classification system, zero (0) points will be assigned to the subject area ranking as a result of this criterion. No surface water was observed within one thousand (1,000) feet of the release. Based on the NMOCD site classification system, ten (10) points will be assigned to the subject area ranking as a result of this criterion.

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

On February 28, 2018 and March 19, 2018, 2M, on behalf of Concho, utilized a hand auger to collect three (3) delineation soil samples (AH-1 @ Surface, AH-1 @ 6", and AH-1 @ 1') from the overspray area west of the secondary containment. The plastic liner was observed to be intact, consequently sampling within the plastic lined, earthen berm secondary containment was not warranted. In addition to the soil samples described above, four (4) soil samples (North @ 1', South @ 1', East @ 1', and West @ 1') were collected utilizing a hand auger approximately five (5) feet from the outer perimeter of the overspray area. The soil samples were submitted to Xenco Laboratories in Midland, Texas and Permian Basin Environmental Labs in Midland Texas for determination of concentrations of BTEX using Method SW 846-8021B, TPH using Method SW 846-8015M, and chloride using Method E-300.1. The analytical results indicated benzene concentrations, BTEX concentrations, TPH concentration, and chloride concentrations were below the applicable laboratory method detection limit (MDL) and NMOCD regulatory guidelines (Table 1).

Based on the analytical results of the soil samples collected on February 28 and March 19, 2018, Concho requests NMOCD to grant Site Closure Status to the J C Federal #027 Release Site.

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

Thank you,

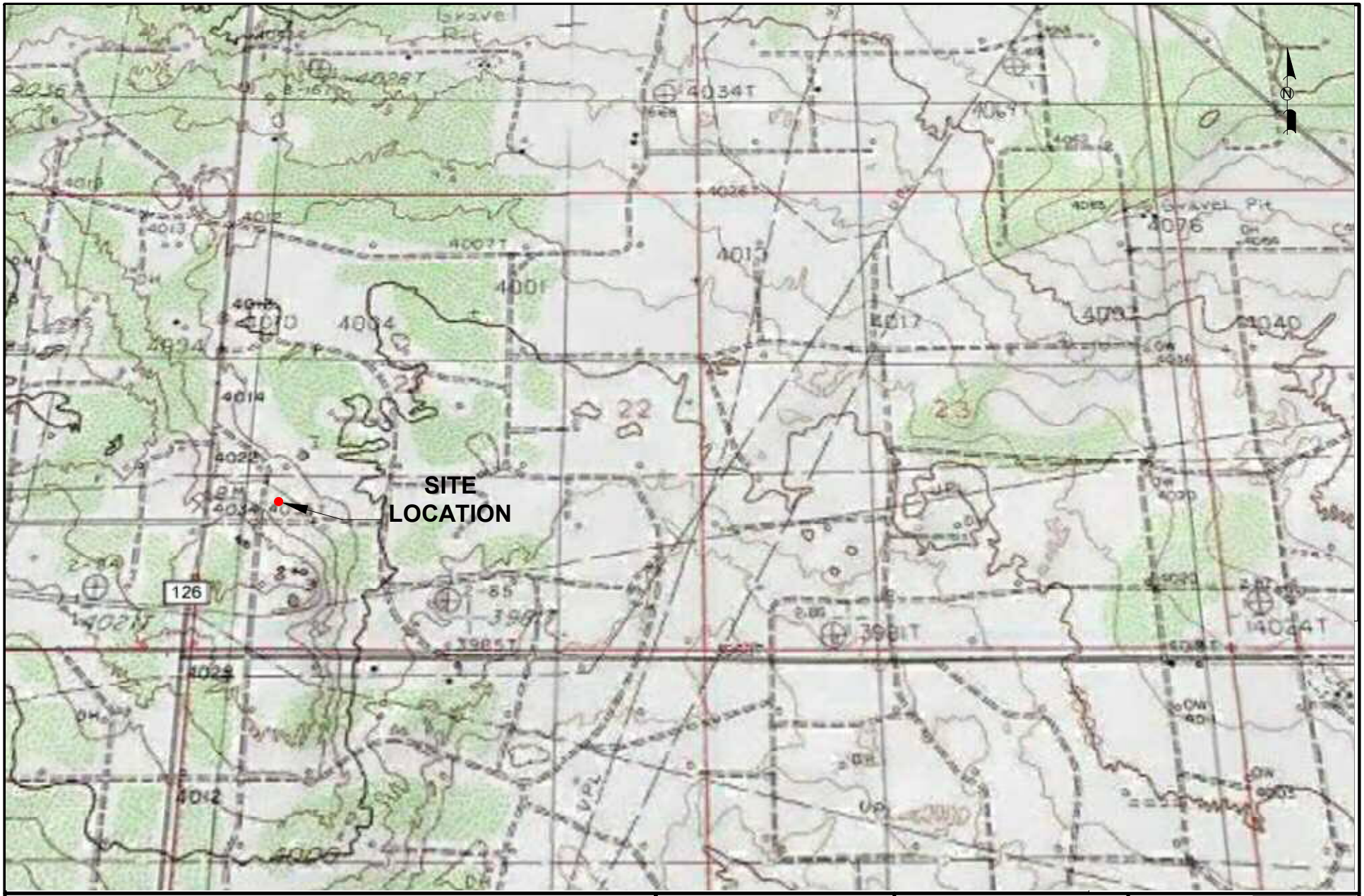
Matthew Green

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

Attachments:

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

cc: File



LEGEND:

Native Grassland

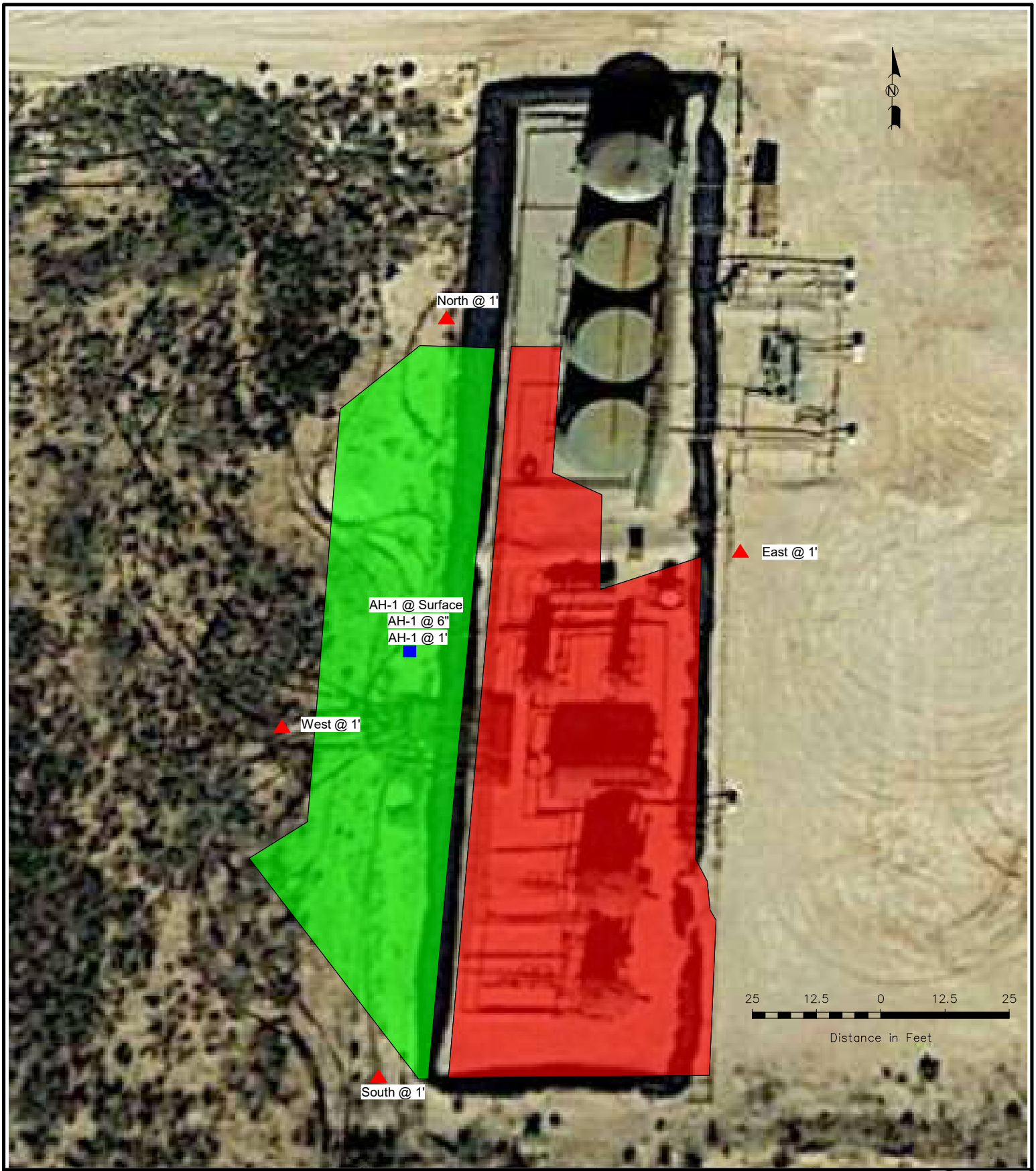
2000 1000 0 1000 2000

Distance in Feet

Figure 1
Site Location Map
COG Operating LLC
JC Federal #027 Tank Battery
Lea County, TX

Scale: 1" = 2000'
CAD By: AR
Checked By: MG
Date: March 18, 2018
Lat. N 32.8162079°, Long. W 103.7596512°

2M Environmental Services, LLC



LEGEND:
- Aesthetically Address Surface Staining
- Lined Secondary Containment
- Horizontal Delineation Soil Sample Location
- Vertical Soil Sample Location

Figure 2
Site Details &
Soil Sample Location Map
COG Operating LLC
JC Federal #027 Tank Battery
Lea County, TX

Scale: 1" = 25'
CAD By: AR
Checked By: MG
Draft: March 18, 2018
Lat. N 32.8162079° , Long. W 103.7596512°

2M Environmental Services, LLC

TABLE 1

CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN SOIL

COG OPERATING, LLC

JC Federal #027 RELEASE SITE
LEA COUNTY, NEW MEXICO

All concentrations are reported in mg/Kg

SAMPLE LOCATION	SAMPLE DATE	METHODS: SW 846-8021B						METHOD: SW 8015M				E 300.1
		BENZENE	TOLUENE	ETHYL-BENZENE	m, p - XYLENES	o - XYLENE	TOTAL XYLENES	TOTAL BTEX	TPH GRO C_6-C_{12}	TPH DRO C_{12}-C_{28}	TPH ORO C_{28}-C_{35}	TOTAL TPH C_6-C_{35}	CHLORIDE
Limits		**10**						**50**				**1,000**	**600**
AH-1 @ 6"	2/28/2018	<0.00199	<0.00199	<0.00199	<0.00398	<0.00199	<0.00398	<0.00398	<15.0	<15.0	<15.0	<15.0	<5.00
AH-1 @ 1'	2/28/2018	<0.00200	<0.00200	<0.00200	<0.00399	<0.00200	<0.00399	<0.00399	<15.0	<15.0	<15.0	<15.0	<4.99
North @ 1'	2/28/2018	<0.00200	<0.00200	<0.00200	<0.00401	<0.00200	<0.00401	<0.00401	<15.0	<15.0	<15.0	<15.0	<4.98
South @ 1'	2/28/2018	<0.00200	<0.00200	<0.00200	<0.00399	<0.00200	<0.00399	<0.00399	<15.0	<15.0	<15.0	<15.0	<4.97
East @ 1'	2/28/2018	<0.00201	<0.00201	<0.00201	<0.00402	<0.00201	<0.00402	<0.00402	<15.0	<15.0	<15.0	<15.0	<4.98
West @ 1'	2/28/2018	<0.00202	<0.00202	<0.00202	<0.00404	<0.00202	<0.00404	<0.00404	<15.0	<15.0	<15.0	<15.0	<4.98
AH-1 @ Surface	3/19/2018	<0.00101	<0.0101	<0.00505	<0.0202	<0.0101	<0.0202	<0.0202	<25.3	<25.3	<25.3	<25.3	<1.01

Site Name: *JC Federal # 027*
Date: *4/11/20118*
2M Environmental Project #: *8052-03*
Site Location: *Lea County, New Mexico*

Photographic Documentation

Photograph No. 1 **Date:** **2/28/2018** **Direction:** **South** **Description:** **View of release area.**	
Photograph No. 2 **Date:** **2/28/2018** **Direction:** **Southwest** **Description:** **View of release area.**	

Site Name: *JC Federal # 027* **Date:** *4/11/20118*

2M Environmental Project #: *8052-03* **Site Location:** *Lea County, New Mexico*

Photographic Documentation

Photograph No. 3 **Date:** **2/28/2018** **Direction:** **South** **Description:** **View of release area.**	
Photograph No. 4 **Date:** **6/22/2018** **Direction:** **South** **Description:** **View of intact liner.**	

Certificate of Analysis Summary 578120

2M Enviromental Services LLC, Odessa, TX

Project Name: COG JC Federal #027H

Project Id:
Contact: Matt Green
Project Location: Eddy County NM

Date Received in Lab: Fri Mar-02-18 04:41 pm
Report Date: 13-MAR-18
Project Manager: Jessica Kramer

Analysis Requested	*Lab Id:*	578120-001		578120-002		578120-003		578120-004		578120-005		578120-006	
	Field Id:	AH-1 @ 6"		AH-1 @ 1'		North @ 1'		South @ 1'		East @ 1'		West @ 1'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-28-18 09:30		Feb-28-18 09:35		Feb-28-18 10:00		Feb-28-18 10:05		Feb-28-18 10:10		Feb-28-18 10:15	
BTEX by EPA 8021B	*Extracted:*	Mar-09-18 17:00		Mar-09-18 17:00		Mar-09-18 17:00		Mar-09-18 17:00		Mar-09-18 17:00		Mar-09-18 17:00	
	Analyzed:	Mar-10-18 05:17		Mar-10-18 05:36		Mar-10-18 05:54		Mar-10-18 06:12		Mar-10-18 06:31		Mar-10-18 06:50	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202
Toluene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202
Ethylbenzene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202
m,p-Xylenes		<0.00398	0.00398	<0.00399	0.00399	<0.00401	0.00401	<0.00399	0.00399	<0.00402	0.00402	<0.00404	0.00404
o-Xylene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202
Total Xylenes		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202
Total BTEX		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202
Chloride by EPA 300	*Extracted:*	Mar-12-18 10:30		Mar-12-18 10:30		Mar-12-18 10:30		Mar-12-18 10:30		Mar-12-18 10:30		Mar-12-18 10:30	
	Analyzed:	Mar-12-18 18:22		Mar-12-18 18:28		Mar-12-18 18:33		Mar-12-18 18:44		Mar-12-18 18:49		Mar-12-18 18:54	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<5.00	5.00	<4.99	4.99	<4.98	4.98	<4.97	4.97	<4.98	4.98	<4.98	4.98
TPH By SW8015 Mod	*Extracted:*	Mar-10-18 16:00		Mar-10-18 16:00		Mar-10-18 16:00		Mar-10-18 16:00		Mar-10-18 16:00		Mar-10-18 16:00	
	Analyzed:	Mar-11-18 11:55		Mar-11-18 12:20		Mar-11-18 12:45		Mar-11-18 13:10		Mar-11-18 13:35		Mar-11-18 14:00	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Jessica Kramer
Project Assistant

Analytical Report 578120

for

2M Enviromental Services LLC

Project Manager: Matt Green

COG JC Federal #027H

13-MAR-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-18-24), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab code: TX01468):
Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-18-14)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)

13-MAR-18

Project Manager: **Matt Green**
2M Enviromental Services LLC
1219 W University Blvd
Odessa, TX 79764

Reference: XENCO Report No(s): **578120**
COG JC Federal #027H
Project Address: Eddy County NM

Matt Green:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 578120. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 578120 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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Sample Cross Reference 578120

2M Enviromental Services LLC, Odessa, TX

COG JC Federal #027H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
AH-1 @ 6"	S	02-28-18 09:30		578120-001
AH-1 @ 1'	S	02-28-18 09:35		578120-002
North @ 1'	S	02-28-18 10:00		578120-003
South @ 1'	S	02-28-18 10:05		578120-004
East @ 1'	S	02-28-18 10:10		578120-005
West @ 1'	S	02-28-18 10:15		578120-006

Client Name: 2M Enviromental Services LLC

Project Name: COG JC Federal #027H

Project ID:
Work Order Number(s): *578120*

Report Date: *13-MAR-18*
Date Received: *03/02/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3043352 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analytical Results 578120

2M Enviromental Services LLC, Odessa, TX

COG JC Federal #027H

Sample Id:	**AH-1 @ 6"**	Matrix:	Soil	Date Received:	03.02.18 16.41
Lab Sample Id:	578120-001	Date Collected:	02.28.18 09.30		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	03.12.18 10.30	Basis:	Wet Weight
Seq Number:	3043528				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	03.12.18 18.22	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.10.18 16.00	Basis:	Wet Weight
Seq Number:	3043415				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.11.18 11.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.11.18 11.55	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	03.11.18 11.55	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.11.18 11.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	03.11.18 11.55	
o-Terphenyl	84-15-1	95	%	70-135	03.11.18 11.55	

Certificate of Analytical Results 578120

2M Enviromental Services LLC, Odessa, TX

COG JC Federal #027H

Sample Id:	**AH-1 @ 6"**	Matrix:	Soil	Date Received:	03.02.18 16.41
Lab Sample Id:	578120-001	Date Collected:	02.28.18 09.30		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.09.18 17.00	Basis:	Wet Weight
Seq Number:	3043352				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.10.18 05.17	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.10.18 05.17	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.10.18 05.17	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.10.18 05.17	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.10.18 05.17	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.10.18 05.17	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.10.18 05.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	82	%	70-130	03.10.18 05.17	
4-Bromofluorobenzene	460-00-4	108	%	70-130	03.10.18 05.17	

Certificate of Analytical Results 578120

2M Enviromental Services LLC, Odessa, TX

COG JC Federal #027H

Sample Id:	**AH-1 @ 1'**	Matrix:	Soil	Date Received:	03.02.18 16.41
Lab Sample Id:	578120-002	Date Collected:	02.28.18 09.35		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	03.12.18 10.30	Basis:	Wet Weight
Seq Number:	3043528				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	03.12.18 18.28	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.10.18 16.00	Basis:	Wet Weight
Seq Number:	3043415				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.11.18 12.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.11.18 12.20	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	03.11.18 12.20	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.11.18 12.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	03.11.18 12.20	
o-Terphenyl	84-15-1	99	%	70-135	03.11.18 12.20	

Certificate of Analytical Results 578120

2M Enviromental Services LLC, Odessa, TX

COG JC Federal #027H

Sample Id:	**AH-1 @ 1'**	Matrix:	Soil	Date Received:	03.02.18 16.41
Lab Sample Id:	578120-002	Date Collected:	02.28.18 09.35		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.09.18 17.00	Basis:	Wet Weight
Seq Number:	3043352				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.10.18 05.36	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.10.18 05.36	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.10.18 05.36	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.10.18 05.36	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.10.18 05.36	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.10.18 05.36	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.10.18 05.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	112	%	70-130	03.10.18 05.36	
1,4-Difluorobenzene	540-36-3	88	%	70-130	03.10.18 05.36	

Certificate of Analytical Results 578120

2M Enviromental Services LLC, Odessa, TX

COG JC Federal #027H

Sample Id:	**North @ 1'**	Matrix:	Soil	Date Received:	03.02.18 16.41
Lab Sample Id:	578120-003	Date Collected:	02.28.18 10.00		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	03.12.18 10.30	Basis:	Wet Weight
Seq Number:	3043528				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	03.12.18 18.33	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.10.18 16.00	Basis:	Wet Weight
Seq Number:	3043415				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.11.18 12.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.11.18 12.45	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	03.11.18 12.45	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.11.18 12.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	03.11.18 12.45	
o-Terphenyl	84-15-1	97	%	70-135	03.11.18 12.45	

Certificate of Analytical Results 578120

2M Enviromental Services LLC, Odessa, TX

COG JC Federal #027H

Sample Id:	**North @ 1'**	Matrix:	Soil	Date Received:	03.02.18 16.41
Lab Sample Id:	578120-003	Date Collected:	02.28.18 10.00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.09.18 17.00	Basis:	Wet Weight
Seq Number:	3043352				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.10.18 05.54	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.10.18 05.54	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.10.18 05.54	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.10.18 05.54	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.10.18 05.54	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.10.18 05.54	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.10.18 05.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	70-130	03.10.18 05.54	
1,4-Difluorobenzene	540-36-3	91	%	70-130	03.10.18 05.54	

Certificate of Analytical Results 578120

2M Enviromental Services LLC, Odessa, TX

COG JC Federal #027H

Sample Id:	**South @ 1'**	Matrix:	Soil	Date Received:	03.02.18 16.41
Lab Sample Id:	578120-004	Date Collected:	02.28.18 10.05		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	03.12.18 10.30	Basis:	Wet Weight
Seq Number:	3043528				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.97	4.97	mg/kg	03.12.18 18.44	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.10.18 16.00	Basis:	Wet Weight
Seq Number:	3043415				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.11.18 13.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.11.18 13.10	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	03.11.18 13.10	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.11.18 13.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	03.11.18 13.10	
o-Terphenyl	84-15-1	99	%	70-135	03.11.18 13.10	

Certificate of Analytical Results 578120

2M Enviromental Services LLC, Odessa, TX

COG JC Federal #027H

Sample Id:	**South @ 1'**	Matrix:	Soil	Date Received:	03.02.18 16.41
Lab Sample Id:	578120-004	Date Collected:	02.28.18 10.05		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.09.18 17.00	Basis:	Wet Weight
Seq Number:	3043352				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.10.18 06.12	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.10.18 06.12	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.10.18 06.12	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.10.18 06.12	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.10.18 06.12	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.10.18 06.12	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.10.18 06.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	88	%	70-130	03.10.18 06.12	
4-Bromofluorobenzene	460-00-4	108	%	70-130	03.10.18 06.12	

Certificate of Analytical Results 578120

2M Enviromental Services LLC, Odessa, TX

COG JC Federal #027H

Sample Id:	**East @ 1'**	Matrix:	Soil	Date Received:	03.02.18 16.41
Lab Sample Id:	578120-005	Date Collected:	02.28.18 10.10		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	03.12.18 10.30	Basis:	Wet Weight
Seq Number:	3043528				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	03.12.18 18.49	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.10.18 16.00	Basis:	Wet Weight
Seq Number:	3043415				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.11.18 13.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.11.18 13.35	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	03.11.18 13.35	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.11.18 13.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	03.11.18 13.35	
o-Terphenyl	84-15-1	105	%	70-135	03.11.18 13.35	

Certificate of Analytical Results 578120

2M Enviromental Services LLC, Odessa, TX

COG JC Federal #027H

Sample Id:	**East @ 1'**	Matrix:	Soil	Date Received:	03.02.18 16.41
Lab Sample Id:	578120-005	Date Collected:	02.28.18 10.10		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.09.18 17.00	Basis:	Wet Weight
Seq Number:	3043352				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.10.18 06.31	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.10.18 06.31	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.10.18 06.31	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.10.18 06.31	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.10.18 06.31	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.10.18 06.31	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.10.18 06.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	79	%	70-130	03.10.18 06.31	
4-Bromofluorobenzene	460-00-4	117	%	70-130	03.10.18 06.31	

Certificate of Analytical Results 578120

2M Enviromental Services LLC, Odessa, TX

COG JC Federal #027H

Sample Id:	**West @ 1'**	Matrix:	Soil	Date Received:	03.02.18 16.41
Lab Sample Id:	578120-006	Date Collected:	02.28.18 10.15		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	03.12.18 10.30	Basis:	Wet Weight
Seq Number:	3043528				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	03.12.18 18.54	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.10.18 16.00	Basis:	Wet Weight
Seq Number:	3043415				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.11.18 14.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.11.18 14.00	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	03.11.18 14.00	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.11.18 14.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	03.11.18 14.00	
o-Terphenyl	84-15-1	94	%	70-135	03.11.18 14.00	

Certificate of Analytical Results 578120

2M Enviromental Services LLC, Odessa, TX

COG JC Federal #027H

Sample Id:	**West @ 1'**	Matrix:	Soil	Date Received:	03.02.18 16.41
Lab Sample Id:	578120-006	Date Collected:	02.28.18 10.15		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.09.18 17.00	Basis:	Wet Weight
Seq Number:	3043352				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.10.18 06.50	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	03.10.18 06.50	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	03.10.18 06.50	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	03.10.18 06.50	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.10.18 06.50	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	03.10.18 06.50	U	1
Total BTEX		<0.00202	0.00202	mg/kg	03.10.18 06.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	120	%	70-130	03.10.18 06.50	
1,4-Difluorobenzene	540-36-3	81	%	70-130	03.10.18 06.50	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 578120

2M Enviromental Services LLC

COG JC Federal #027H

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3043528 Matrix: Solid Date Prep: 03.12.18
MB Sample Id: 7640592-1-BLK LCS Sample Id: 7640592-1-BKS LCSD Sample Id: 7640592-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	261	104	265	106	90-110	2	20	mg/kg	03.12.18 15:42	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3043528 Matrix: Soil Date Prep: 03.12.18
Parent Sample Id: 578118-001 MS Sample Id: 578118-001 S MSD Sample Id: 578118-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.99	250	232	93	232	93	90-110	0	20	mg/kg	03.12.18 15:58	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3043528 Matrix: Soil Date Prep: 03.12.18
Parent Sample Id: 578119-005 MS Sample Id: 578119-005 S MSD Sample Id: 578119-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	48.3	247	295	100	296	100	90-110	0	20	mg/kg	03.12.18 17:51	

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3043415 Matrix: Solid Date Prep: 03.10.18
MB Sample Id: 7640554-1-BLK LCS Sample Id: 7640554-1-BKS LCSD Sample Id: 7640554-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	989	99	988	99	70-135	0	35	mg/kg	03.11.18 04:13	
Diesel Range Organics (DRO)	<15.0	1000	1040	104	1030	103	70-135	1	35	mg/kg	03.11.18 04:13	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	94		110		108		70-135	%	03.11.18 04:13
o-Terphenyl	95		111		106		70-135	%	03.11.18 04:13

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

QC Summary 578120

2M Enviromental Services LLC

COG JC Federal #027H

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3043415 Matrix: Soil Date Prep: 03.10.18
Parent Sample Id: 578118-001 MS Sample Id: 578118-001 S MSD Sample Id: 578118-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	896	90	995	100	70-135	10	35	mg/kg	03.11.18 05:33	
Diesel Range Organics (DRO)	<15.0	1000	938	94	1020	102	70-135	8	35	mg/kg	03.11.18 05:33	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	105		113		70-135	%	03.11.18 05:33
o-Terphenyl	101		110		70-135	%	03.11.18 05:33

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3043352 Matrix: Solid Date Prep: 03.09.18
MB Sample Id: 7640531-1-BLK LCS Sample Id: 7640531-1-BKS LCSD Sample Id: 7640531-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0866	87	0.0838	84	70-130	3	35	mg/kg	03.10.18 03:08	
Toluene	<0.00200	0.0998	0.0805	81	0.0883	88	70-130	9	35	mg/kg	03.10.18 03:08	
Ethylbenzene	<0.00200	0.0998	0.0830	83	0.0907	91	70-130	9	35	mg/kg	03.10.18 03:08	
m,p-Xylenes	<0.00399	0.200	0.161	81	0.176	88	70-130	9	35	mg/kg	03.10.18 03:08	
o-Xylene	<0.00200	0.0998	0.0827	83	0.0906	91	70-130	9	35	mg/kg	03.10.18 03:08	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	86		93		111		70-130	%	03.10.18 03:08
4-Bromofluorobenzene	108		114		127		70-130	%	03.10.18 03:08

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3043352 Matrix: Soil Date Prep: 03.09.18
Parent Sample Id: 578121-007 MS Sample Id: 578121-007 S MSD Sample Id: 578121-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0662	66	0.0570	56	70-130	15	35	mg/kg	03.10.18 03:44	X
Toluene	<0.00201	0.100	0.0678	68	0.0545	54	70-130	22	35	mg/kg	03.10.18 03:44	X
Ethylbenzene	<0.00201	0.100	0.0680	68	0.0533	53	70-130	24	35	mg/kg	03.10.18 03:44	X
m,p-Xylenes	<0.00402	0.201	0.132	66	0.103	51	70-130	25	35	mg/kg	03.10.18 03:44	X
o-Xylene	<0.00201	0.100	0.0670	67	0.0530	52	70-130	23	35	mg/kg	03.10.18 03:44	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		89		70-130	%	03.10.18 03:44
4-Bromofluorobenzene	121		114		70-130	%	03.10.18 03:44

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

Xenco Laboratories

The Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Matt Green

Company Name: 2M Environmental Services, LLC.

Company Address: 1219 W. University Blvd.

City/State/Zip: Odessa, TX 79764

Telephone No: 432.614.6793 Fax No: 432.897.4976

Sampler Signature: Matthew Green e-mail: mgreen@2m-environmental.com

Project Name: COG JC Federal # 027H

Project #:

Project Loc: Lea County, NM

PO #:

Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 578120

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TOTAL: TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides E 300.1			RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
	AH-1 @ 6"			2/28/2018	930		1	x								Soil	X								X			x				x
	AH-1 @ 1'			2/28/2018	935		1	x								Soil	X								X			x				x
	North @ 1'			2/28/2018	1000		1	x								Soil	X								X			x				x
	South @ 1'			2/28/2018	1005		1	x								Soil	X								X			x				x
	East @ 1'			2/28/2018	1010		1	x								Soil	X								X			x				x
	West @ 1'			2/28/2018	1015		1	x								Soil	X								X			x				x

Special Instructions:

Temp: 1.2 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 1.0

		Date	Time		Date	Time
Relinquished by:	Matthew Green	3-2-18	1530	Received by:	3-2-18	1530
Relinquished by:		3-2-18	4:31	Received by:	3/2/18	431
Relinquished by:		Date	Time	Received by ELOT:	Date	Time

	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered	Y	N
by Sampler/Client Rep. ?	Y	N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: °C

Final 1.000

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: 2M Enviromental Services LLC

Date/ Time Received: 03/02/2018 04:41:00 PM

Work Order #: 578120

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Katie Lowe Date: 03/05/2018

Checklist reviewed by: Jessica Kramer Date: 03/05/2018

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

PBELAB

Analytical Report

Prepared for:

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

Project: COG J C Federal #027
Project Number: [none]
Location: Lea County, NM

Lab Order Number: 8C20020

NELAP ACCREDITED TNI LABORATORY

NELAP/TCEQ # T104704516-17-8

Report Date: 03/21/18

2M Environmental Services, LLC.	Project: COG J C Federal #027	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
AH-1 @ Surface	8C20020-01	Soil	03/19/18 16:00	03-20-2018 15:10

AH-1 @ Surface

8C20020-01 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00101	mg/kg dry	1	P8C2014	03/20/18	03/21/18	EPA 8021B	
Toluene	ND	0.0101	mg/kg dry	1	P8C2014	03/20/18	03/21/18	EPA 8021B	
Ethylbenzene	ND	0.00505	mg/kg dry	1	P8C2014	03/20/18	03/21/18	EPA 8021B	
Xylene (p/m)	ND	0.0202	mg/kg dry	1	P8C2014	03/20/18	03/21/18	EPA 8021B	
Xylene (o)	ND	0.0101	mg/kg dry	1	P8C2014	03/20/18	03/21/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*103 %*	*75-125*		*P8C2014*	*03/20/18*	*03/21/18*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*88.6 %*	*75-125*		*P8C2014*	*03/20/18*	*03/21/18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	ND	1.01	mg/kg dry	1	P8C2018	03/20/18	03/21/18	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	P8C2102	03/21/18	03/21/18	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	P8C2015	03/20/18	03/21/18	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P8C2015	03/20/18	03/21/18	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P8C2015	03/20/18	03/21/18	TPH 8015M	
Surrogate: 1-Chlorooctane		*96.2 %*	*70-130*		*P8C2015*	*03/20/18*	*03/21/18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*93.4 %*	*70-130*		*P8C2015*	*03/20/18*	*03/21/18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	03/20/18	03/21/18	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.

Organics by GC - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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-GC*
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)	**Source: 8C20020-01**			Prepared: 03/20/18 Analyzed: 03/21/18						
Benzene	0.0689	0.00101	mg/kg dry	0.101	ND	68.2	80-120			QM-05
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: 4-Bromofluorobenzene	*0.0661*		*"*	*0.0606*		*109*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.0615*		*"*	*0.0606*		*102*	*75-125*			

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Organics by GC - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P8C2014 - General Preparation (GC)										
Matrix Spike Dup (P8C2014-MSD1)		**Source: 8C20020-01**		Prepared: 03/20/18 Analyzed: 03/21/18						
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: 4-Bromofluorobenzene	*0.0703*		*"*	*0.0606*		*116*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.0678*		*"*	*0.0606*		*112*	*75-125*			

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.

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 P8C2018 - * DEFAULT PREP *** **										
Blank (P8C2018-BLK1)				Prepared: 03/20/18 Analyzed: 03/21/18						
Chloride	ND	1.00	mg/kg wet							
LCS (P8C2018-BS1)				Prepared: 03/20/18 Analyzed: 03/21/18						
Chloride	411	1.00	mg/kg wet	400		103	80-120			
LCS Dup (P8C2018-BSD1)				Prepared: 03/20/18 Analyzed: 03/21/18						
Chloride	406	1.00	mg/kg wet	400		101	80-120	1.15	20	
Duplicate (P8C2018-DUP1)		**Source: 8C20016-03**		Prepared: 03/20/18 Analyzed: 03/21/18						
Chloride	25.5	1.09	mg/kg dry		28.6			11.7	20	
Matrix Spike (P8C2018-MS1)		**Source: 8C20016-03**		Prepared: 03/20/18 Analyzed: 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)		**Source: 8C16011-13**		Prepared & Analyzed: 03/21/18						
% Moisture	9.0	0.1	%		9.0			0.00	20	
Duplicate (P8C2102-DUP2)		**Source: 8C20002-05**		Prepared & Analyzed: 03/21/18						
% Moisture	8.0	0.1	%		8.0			0.00	20	
Duplicate (P8C2102-DUP3)		**Source: 8C20008-02**		Prepared & Analyzed: 03/21/18						
% Moisture	13.0	0.1	%		12.0			8.00	20	

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

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P8C2015 - General Preparation (GC)										
Blank (P8C2015-BLK1)				Prepared & Analyzed: 03/20/18						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*76.8*		*"*	*100*		*76.8*	*70-130*			
Surrogate: o-Terphenyl	*40.2*		*"*	*50.0*		*80.4*	*70-130*			
LCS (P8C2015-BS1)				Prepared & Analyzed: 03/20/18						
C6-C12	1030	25.0	mg/kg wet	1000		103	75-125			
>C12-C28	933	25.0	"	1000		93.3	75-125			
Surrogate: 1-Chlorooctane	*113*		*"*	*100*		*113*	*70-130*			
Surrogate: o-Terphenyl	*47.0*		*"*	*50.0*		*94.0*	*70-130*			
LCS Dup (P8C2015-BSD1)				Prepared & Analyzed: 03/20/18						
C6-C12	1090	25.0	mg/kg wet	1000		109	75-125	5.04	20	
>C12-C28	986	25.0	"	1000		98.6	75-125	5.56	20	
Surrogate: 1-Chlorooctane	*115*		*"*	*100*		*115*	*70-130*			
Surrogate: o-Terphenyl	*52.6*		*"*	*50.0*		*105*	*70-130*			
Matrix Spike (P8C2015-MS1)	**Source: 8C20020-01**			Prepared: 03/20/18 Analyzed: 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)	**Source: 8C20020-01**			Prepared: 03/20/18 Analyzed: 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*			

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.	Project: COG J C Federal #027	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 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
Dup	Duplicate

Report Approved By: Brent Barron Date: 3/21/2018

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.

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PBELAB

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Permian Basin Environmental Lab, LP
10014 S. County Road 1213
Midland, Texas 79706

Phone: 432-661-4184

Project Manager: Matt Green
Company Name: 2M Environmental Services, LLC.
Company Address: 1219 W. University Blvd.
City/State/Zip: Odessa, Texas 79764
Telephone No: (432)230-3763 Fax No:
Sampler Signature: Matthew Green e-mail: mgreen@2m-environmental.com

Project Name: COG J C FEDERAL #027
Project #:
Project Loc: LEA County, NM
PO #:
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only) ORDER #: 8C20020

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 8015M	TCLP: TPH: 8015B TX 1005 Ext TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	TOTAL: BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides E 300			RUSH TAT (Pre-Scheduled) 24, 48, 72 hrs	Standard TAT
	AH-1 @ Surface			3/19/2018	1600		1	x								S	X								X			X			X	

Special Instructions: Charge rush charges to 2M

Relinquished by:	Date	Time	Received by:	Date	Time
Matthew Green	3-20-18	14:11		3/20/18	14:11
	3/20/18		Received by:	Date	Time
Relinquished by:	Date	Time	Received by PBEL:	Date	Time
				3/20/18	15:10

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered	Y	N
by Sampler/Client Rep. ?	Y	N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt:
Received: °C
Adjusted: °C Factor 4.5