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

June 21, 2018

Mike Bratcher
New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division, District 2
811 S. First Street
Artesia, New Mexico 88210

Ryan Mann
New Mexico State Land Office
2827 N. Dal Paso Suite 117
Hobbs, New Mexico 88240
rmann@slo.state.nm.us

Re: Soil Investigation Summary and Proposed Remediation Workplan
SRO State COM # 006H Release (2RP-4589)
GPS: N 32.0771141 W 104.1169739
Unit Letter "D", Section 5, Township 26 South, Range 28 East, NMPM
Eddy County, New Mexico

Dear Mr. Bratcher and Mr. Mann,

2M Environmental Services, LLC. (2M), on behalf of COG Operating, LLC. (Concho), has prepared this Soil Investigation Summary and Proposed Remediation Workplan (Workplan) for the SRO State COM # 006H Release Site (Release Site). The purpose of this Workplan is to propose remediation activities designed to advance the SRO State COM #006H Release Site toward a New Mexico Oil and Conservation District (NMOCD) approved Site Closure Status. The legal description of the Release Site is Unit Letter "D", Section 5, Township 26 South, Range 28 East, in Eddy County, New Mexico. The subject property is administered by the New Mexico State Land Office (NMSLO). The GPS coordinates for the site are N 32.0771141 W 104.1169739. A Site Location Map and Site Detail and Soil Sample Locations Map are provided as Figure 1 and Figure 2, respectively.

On January 20, 2018, a produced water release occurred at the SRO State COM # 006H. The release was the result of a hole developing on the water leg of the heater treater, which resulted in the release of produced water within the unlined secondary containment and on the caliche pad. On January 24, 2018,

Concho submitted the Release Notification and Corrective Action Form (Form C-141) to the NMOCD District 2 Office located in Artesia, New Mexico and the release was assigned the incident number 2RP-4589. The release was reported as approximately five (5) barrels of produced water released with approximately four (4) barrels of produced water recovered, resulting in a net loss of approximately one (1) barrels of produced water. A copy of the NMOCD Release Notification and Corrective Action Form C-141 is attached to this Workplan.

A groundwater database maintained by The New Mexico Office of the State Engineer (NMOSE) did not identify the average depth to groundwater information in Section 5, Township 26 South, Range 28 East. A reference map utilized by the New Mexico Oil Conservation Division (NMOCD) Artesia District Office indicates groundwater should be encountered at approximately twenty-five (25) feet below ground surface (bgs). Based on the NMOCD site classification system, twenty (20) 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, twenty (20) 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 100 mg/Kg for total petroleum hydrocarbons (TPH). Chloride remediation levels for the Release Site will be 600 mg/Kg, per NMOCD request.

On February 27, 2018, 2M, on behalf of Concho, utilized a hand auger and/or a backhoe to collect three (3) delineation soil samples (T-1 @ 1', T-2 @ 2', and T-3 @ 2') from the impacted area. In addition to the soil samples described above, four (4) soil samples (North @ 1', East @ 1', South @ 1', and West @ 1') were collected utilizing a hand auger and/or backhoe approximately five (5) feet from the outer perimeter of the stained surface soil. The soil samples were submitted to Xenco Laboratories in Midland, Texas for determination of concentrations of BTEX using Method SW 846-8021B, TPH using Method SW 846-8015M, and chloride using Method E-300.1. The analytical results are provided as an attachment (Table 1 Concentrations of Benzene, BTEX, TPH, and Chloride in Soil).

Based on the analytical results of the soil samples collected on February 27, 2018, Concho proposes the following field activities designed to remediate the SRO State COM # 006H Release:

- Utilizing a backhoe, excavate the impacted area to a minimum of two and half (2.5) feet bgs.
- Concurrently with excavation activities, additional vertical delineation activities will be conducted in the areas represented by sample points T-1, T-2, and T-3 at the Release Site.
- Based on field screen activities, excavation depths may exceed two and half (2.5) feet bgs. Excavated soil will be stockpiled on a plastic liner adjacent to the excavation pending disposal.
- If depth of chloride impact exceeds four (4) feet bgs., a HDPE plastic liner will be placed at approximately four (4) feet bgs.
- Concho will backfill the excavation with locally purchased non-impacted "like" soil or caliche. In addition, impacted soil will be transported under manifest to a NMOCD approved disposal facility.

- Prepare and submit a "Remediation Summary and Site Closure Request" to the NMOCD and NMSLO.

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

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

Thank you,

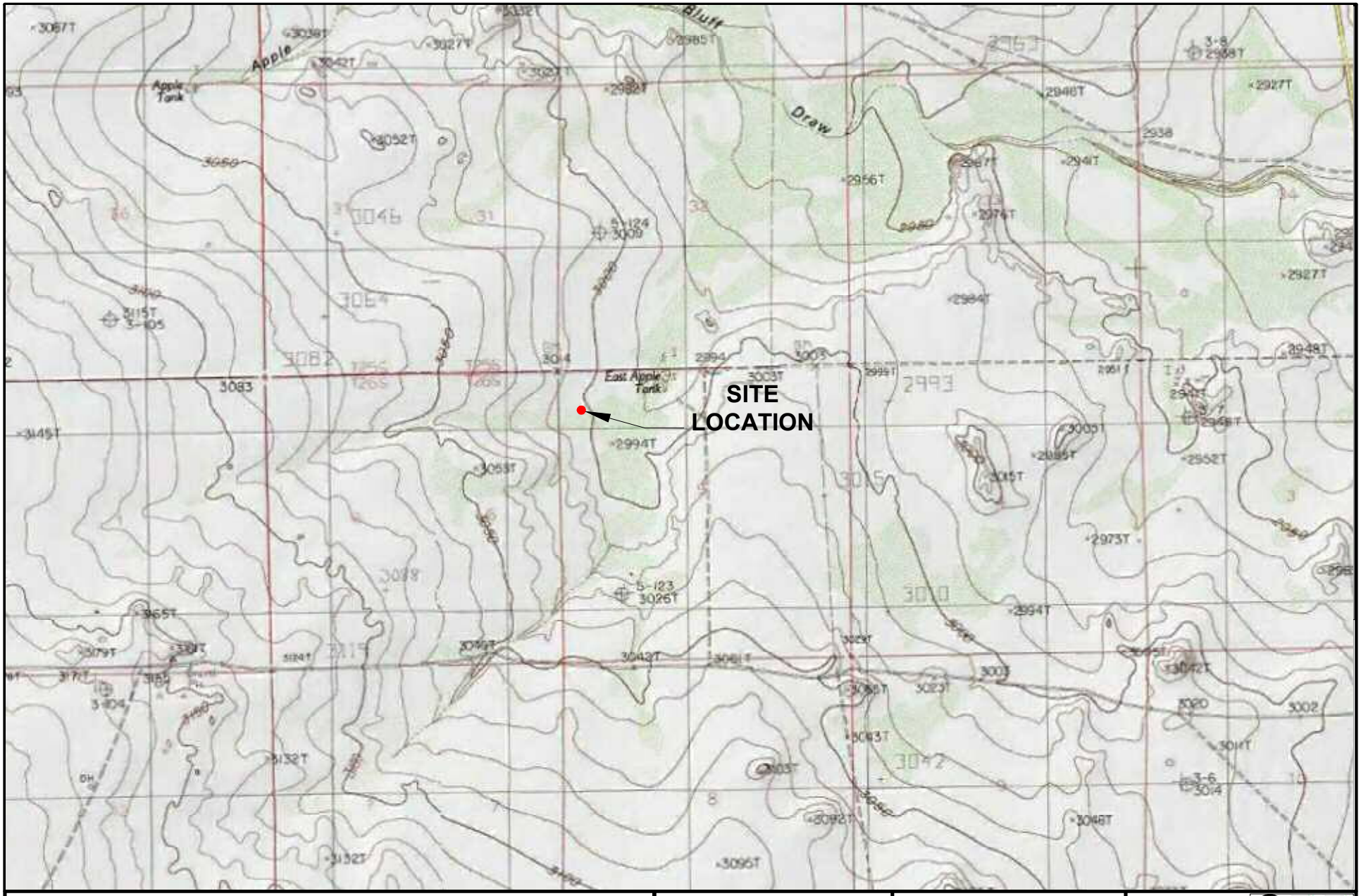
Matthew Green

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
Laboratory Analytical Results
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

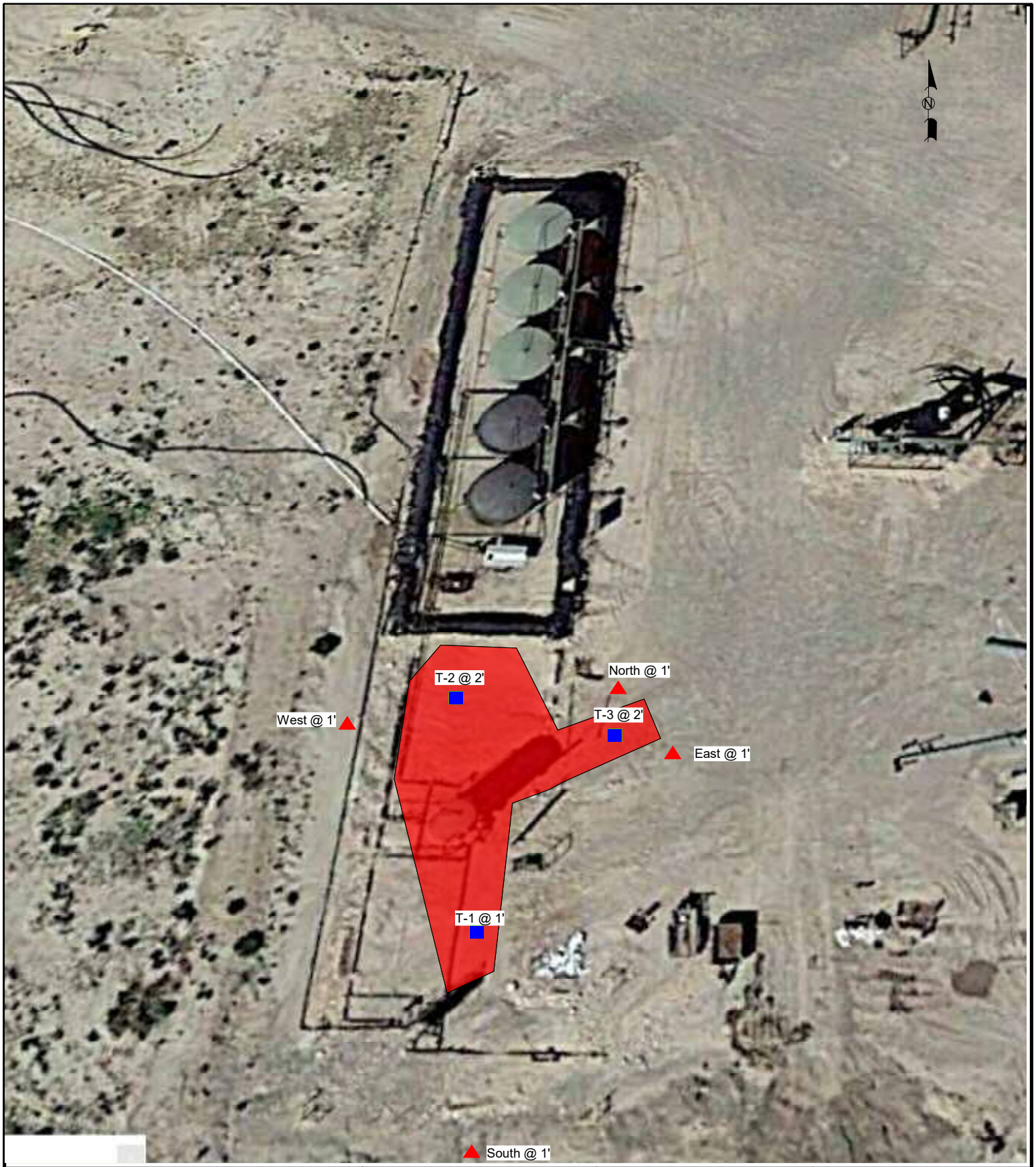
COG Operating LLC

SRO State Com #006H Tank Battery

Eddy County, TX

Scale: 1" = 2000'
CAD By: JR
Checked By: MG
Date: March 18, 2018
Lat. N 32.0771141°, Long. W 104.1169739°

2M Environmental Services, LLC



LEGEND:
- Excavate Area to >600 mg/Kg for chlorides
- Horizontal Delineation Soil Sample Location
- Vertical Soil Sample Location

32 16 0 16 32

Distance in Feet

Figure 2
Site Details &
Soil Sample Location Map
COG Operating LLC
SRO State Com #006H Tank Battery
Eddy County, TX

Scale: 1" = 32'	
CAD By: AR	
Checked By: MG	
Draft: March 18, 2018	
Lat. N 32.0771141° , Long. W 104.1169739°	

2M Environmental Services, LLC

TABLE 1

CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN SOIL

CONCHO OPERATING, LLC

SRO STATE COM #006H RELEASE SITE

EDDY 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 mg/Kg						50 mg/Kg				100 mg/Kg	600
T-1 @ 1'	2/27/2018	<0.00201	<0.00201	<0.00201	<0.00402	<0.00201	<0.00402	<0.00402	<15.0	<15.0	<15.0	<15.0	**1,010**
T-2 @ 2'	2/27/2018	<0.00199	<0.00199	<0.00199	<0.00398	<0.00199	<0.00398	<0.00398	<15.0	<15.0	<15.0	<15.0	**723**
T-3 @ 2'	2/27/2018	<0.00200	<0.00200	<0.00200	<0.00399	<0.00200	<0.00399	<0.00399	<14.9	<14.9	<14.9	<14.9	**1,220**
North @ 1'	2/27/2018	<0.00200	<0.00200	<0.00200	<0.00401	<0.00200	<0.00401	<0.00401	<15.0	<15.0	<15.0	<15.0	31.9
East @ 1'	2/27/2018	<0.00199	<0.00199	<0.00199	<0.00398	<0.00199	<0.00398	<0.00398	<15.0	<15.0	<15.0	<15.0	48.3
South @ 1'	2/27/2018	<0.00200	<0.00200	<0.00200	<0.00401	<0.00200	<0.00401	<0.00401	<15.0	<15.0	<15.0	<15.0	44.0
West @ 1'	2/27/2018	<0.00202	<0.00202	<0.00202	<0.00403	<0.00202	<0.00403	<0.00403	<14.9	<14.9	<14.9	<14.9	66.3

Certificate of Analysis Summary 578119

2M Enviromental Services LLC, Odessa, TX

Project Name: COG SRO State COM #006H

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:*	578119-001		578119-002		578119-003		578119-004		578119-005		578119-006	
	Field Id:	T-1 @1'		T-2 @2'		T-3 @2'		North @ 1'		East @ 1'		South @ 1'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-27-18 14:55		Feb-27-18 15:30		Feb-27-18 16:20		Feb-27-18 16:40		Feb-27-18 16:45		Feb-27-18 16:50	
BTEX by EPA 8021B	*Extracted:*	Mar-09-18 16:45		Mar-09-18 16:45		Mar-09-18 16:45		Mar-09-18 16:45		Mar-09-18 16:45		Mar-09-18 17:00	
	Analyzed:	Mar-10-18 04:34		Mar-10-18 04:53		Mar-10-18 05:12		Mar-10-18 07:07		Mar-10-18 07:26		Mar-10-18 12:08	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200
Toluene		<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200
Ethylbenzene		<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200
m,p-Xylenes		<0.00402	0.00402	<0.00398	0.00398	<0.00399	0.00399	<0.00401	0.00401	<0.00398	0.00398	<0.00401	0.00401
o-Xylene		<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200
Total Xylenes		<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200
Total BTEX		<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200
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 17:24		Mar-12-18 17:29		Mar-12-18 17:35		Mar-12-18 17:40		Mar-12-18 17:45		Mar-12-18 18:01	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		1010	25.0	723	4.98	1220	24.6	31.9	4.93	48.3	4.94	44.0	4.95
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 08:08		Mar-11-18 08:33		Mar-11-18 08:58		Mar-11-18 09:24		Mar-11-18 09:50		Mar-11-18 11:05	
	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	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 578119

2M Enviromental Services LLC, Odessa, TX

Project Name: COG SRO State COM #006H

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:	578119-007					
	Field Id:	West @ 1'					
	Depth:						
	Matrix:	SOIL					
	Sampled:	Feb-27-18 16:55					
BTEX by EPA 8021B	***Extracted:***	Mar-09-18 17:00					
	Analyzed:	Mar-10-18 04:58					
	Units/RL:	mg/kg	RL				
Benzene		<0.00202	0.00202				
Toluene		<0.00202	0.00202				
Ethylbenzene		<0.00202	0.00202				
m,p-Xylenes		<0.00403	0.00403				
o-Xylene		<0.00202	0.00202				
Total Xylenes		<0.00202	0.00202				
Total BTEX		<0.00202	0.00202				
Chloride by EPA 300	***Extracted:***	Mar-12-18 10:30					
	Analyzed:	Mar-12-18 18:17					
	Units/RL:	mg/kg	RL				
Chloride		66.3	5.00				
TPH By SW8015 Mod	***Extracted:***	Mar-10-18 16:00					
	Analyzed:	Mar-11-18 11:30					
	Units/RL:	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<14.9	14.9				
Diesel Range Organics (DRO)		<14.9	14.9				
Oil Range Hydrocarbons (ORO)		<14.9	14.9				
Total TPH		<14.9	14.9				

Analytical Report 578119

for

2M Enviromental Services LLC

Project Manager: Matt Green

COG SRO State COM #006H

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): **578119**
COG SRO State COM #006H
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) 578119. 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. 578119 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

Sample Cross Reference 578119

2M Enviromental Services LLC, Odessa, TX

COG SRO State COM #006H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
T-1 @1'	S	02-27-18 14:55		578119-001
T-2 @2'	S	02-27-18 15:30		578119-002
T-3 @2'	S	02-27-18 16:20		578119-003
North @ 1'	S	02-27-18 16:40		578119-004
East @ 1'	S	02-27-18 16:45		578119-005
South @ 1'	S	02-27-18 16:50		578119-006
West @ 1'	S	02-27-18 16:55		578119-007

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3043351 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

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 578119

2M Enviromental Services LLC, Odessa, TX

COG SRO State COM #006H

Sample Id:	**T-1 @1'**	Matrix:	Soil	Date Received:	03.02.18 16.41
Lab Sample Id:	578119-001	Date Collected:	02.27.18 14.55		

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	**1010**	25.0	mg/kg	03.12.18 17.24		5

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 08.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.11.18 08.08	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	03.11.18 08.08	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.11.18 08.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	03.11.18 08.08	
o-Terphenyl	84-15-1	102	%	70-135	03.11.18 08.08	

Certificate of Analytical Results 578119

2M Enviromental Services LLC, Odessa, TX

COG SRO State COM #006H

Sample Id:	**T-1 @1'**	Matrix:	Soil	Date Received:	03.02.18 16.41
Lab Sample Id:	578119-001	Date Collected:	02.27.18 14.55		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.09.18 16.45	Basis:	Wet Weight
Seq Number:	3043351				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.10.18 04.34	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.10.18 04.34	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.10.18 04.34	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.10.18 04.34	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.10.18 04.34	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.10.18 04.34	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.10.18 04.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	03.10.18 04.34	
1,4-Difluorobenzene	540-36-3	87	%	70-130	03.10.18 04.34	

Certificate of Analytical Results 578119

2M Enviromental Services LLC, Odessa, TX

COG SRO State COM #006H

Sample Id:	**T-2 @2'**	Matrix:	Soil	Date Received:	03.02.18 16.41
Lab Sample Id:	578119-002	Date Collected:	02.27.18 15.30		

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	**723**	4.98	mg/kg	03.12.18 17.29		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 08.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.11.18 08.33	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	03.11.18 08.33	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.11.18 08.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	03.11.18 08.33	
o-Terphenyl	84-15-1	101	%	70-135	03.11.18 08.33	

Certificate of Analytical Results 578119

2M Enviromental Services LLC, Odessa, TX

COG SRO State COM #006H

Sample Id:	**T-2 @2'**	Matrix:	Soil	Date Received:	03.02.18 16.41
Lab Sample Id:	578119-002	Date Collected:	02.27.18 15.30		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.09.18 16.45	Basis:	Wet Weight
Seq Number:	3043351				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.10.18 04.53	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.10.18 04.53	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.10.18 04.53	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.10.18 04.53	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.10.18 04.53	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.10.18 04.53	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.10.18 04.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	03.10.18 04.53	
1,4-Difluorobenzene	540-36-3	86	%	70-130	03.10.18 04.53	

Certificate of Analytical Results 578119

2M Enviromental Services LLC, Odessa, TX

COG SRO State COM #006H

Sample Id:	**T-3 @2'**	Matrix:	Soil	Date Received:	03.02.18 16.41
Lab Sample Id:	578119-003	Date Collected:	02.27.18 16.20		

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	**1220**	24.6	mg/kg	03.12.18 17.35		5

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	<14.9	14.9	mg/kg	03.11.18 08.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	03.11.18 08.58	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	03.11.18 08.58	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	03.11.18 08.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	03.11.18 08.58	
o-Terphenyl	84-15-1	103	%	70-135	03.11.18 08.58	

Certificate of Analytical Results 578119

2M Enviromental Services LLC, Odessa, TX

COG SRO State COM #006H

Sample Id:	**T-3 @2'**	Matrix:	Soil	Date Received:	03.02.18 16.41
Lab Sample Id:	578119-003	Date Collected:	02.27.18 16.20		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.09.18 16.45	Basis:	Wet Weight
Seq Number:	3043351				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.10.18 05.12	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.10.18 05.12	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.10.18 05.12	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.10.18 05.12	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.10.18 05.12	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.10.18 05.12	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.10.18 05.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	03.10.18 05.12	
1,4-Difluorobenzene	540-36-3	90	%	70-130	03.10.18 05.12	

Certificate of Analytical Results 578119

2M Enviromental Services LLC, Odessa, TX

COG SRO State COM #006H

Sample Id:	**North @ 1'**	Matrix:	Soil	Date Received:	03.02.18 16.41
Lab Sample Id:	578119-004	Date Collected:	02.27.18 16.40		

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	**31.9**	4.93	mg/kg	03.12.18 17.40		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 09.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.11.18 09.24	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	03.11.18 09.24	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.11.18 09.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	03.11.18 09.24	
o-Terphenyl	84-15-1	98	%	70-135	03.11.18 09.24	

Certificate of Analytical Results 578119

2M Enviromental Services LLC, Odessa, TX

COG SRO State COM #006H

Sample Id:	**North @ 1'**	Matrix:	Soil	Date Received:	03.02.18 16.41
Lab Sample Id:	578119-004	Date Collected:	02.27.18 16.40		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.09.18 16.45	Basis:	Wet Weight
Seq Number:	3043351				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.10.18 07.07	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.10.18 07.07	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.10.18 07.07	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.10.18 07.07	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.10.18 07.07	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.10.18 07.07	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.10.18 07.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	03.10.18 07.07	
1,4-Difluorobenzene	540-36-3	80	%	70-130	03.10.18 07.07	

Certificate of Analytical Results 578119

2M Enviromental Services LLC, Odessa, TX

COG SRO State COM #006H

Sample Id:	**East @ 1'**	Matrix:	Soil	Date Received:	03.02.18 16.41
Lab Sample Id:	578119-005	Date Collected:	02.27.18 16.45		

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	**48.3**	4.94	mg/kg	03.12.18 17.45		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 09.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.11.18 09.50	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	03.11.18 09.50	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.11.18 09.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	03.11.18 09.50	
o-Terphenyl	84-15-1	94	%	70-135	03.11.18 09.50	

Certificate of Analytical Results 578119

2M Enviromental Services LLC, Odessa, TX

COG SRO State COM #006H

Sample Id:	**East @ 1'**	Matrix:	Soil	Date Received:	03.02.18 16.41
Lab Sample Id:	578119-005	Date Collected:	02.27.18 16.45		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.09.18 16.45	Basis:	Wet Weight
Seq Number:	3043351				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.10.18 07.26	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.10.18 07.26	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.10.18 07.26	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.10.18 07.26	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.10.18 07.26	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.10.18 07.26	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.10.18 07.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	03.10.18 07.26	
1,4-Difluorobenzene	540-36-3	83	%	70-130	03.10.18 07.26	

Certificate of Analytical Results 578119

2M Enviromental Services LLC, Odessa, TX

COG SRO State COM #006H

Sample Id:	**South @ 1'**	Matrix:	Soil	Date Received:	03.02.18 16.41
Lab Sample Id:	578119-006	Date Collected:	02.27.18 16.50		

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	**44.0**	4.95	mg/kg	03.12.18 18.01		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 11.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.11.18 11.05	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	03.11.18 11.05	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.11.18 11.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	03.11.18 11.05	
o-Terphenyl	84-15-1	99	%	70-135	03.11.18 11.05	

Certificate of Analytical Results 578119

2M Enviromental Services LLC, Odessa, TX

COG SRO State COM #006H

Sample Id:	**South @ 1'**	Matrix:	Soil	Date Received:	03.02.18 16.41
Lab Sample Id:	578119-006	Date Collected:	02.27.18 16.50		
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 12.08	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.10.18 12.08	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.10.18 12.08	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.10.18 12.08	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.10.18 12.08	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.10.18 12.08	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.10.18 12.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	86	%	70-130	03.10.18 12.08	
4-Bromofluorobenzene	460-00-4	112	%	70-130	03.10.18 12.08	

Certificate of Analytical Results 578119

2M Enviromental Services LLC, Odessa, TX

COG SRO State COM #006H

Sample Id:	**West @ 1'**	Matrix:	Soil	Date Received:	03.02.18 16.41
Lab Sample Id:	578119-007	Date Collected:	02.27.18 16.55		

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	**66.3**	5.00	mg/kg	03.12.18 18.17		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	<14.9	14.9	mg/kg	03.11.18 11.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	03.11.18 11.30	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	03.11.18 11.30	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	03.11.18 11.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	03.11.18 11.30	
o-Terphenyl	84-15-1	101	%	70-135	03.11.18 11.30	

Certificate of Analytical Results 578119

2M Enviromental Services LLC, Odessa, TX

COG SRO State COM #006H

Sample Id:	**West @ 1'**	Matrix:	Soil	Date Received:	03.02.18 16.41
Lab Sample Id:	578119-007	Date Collected:	02.27.18 16.55		
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 04.58	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	03.10.18 04.58	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	03.10.18 04.58	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	03.10.18 04.58	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.10.18 04.58	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	03.10.18 04.58	U	1
Total BTEX		<0.00202	0.00202	mg/kg	03.10.18 04.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	81	%	70-130	03.10.18 04.58	
4-Bromofluorobenzene	460-00-4	108	%	70-130	03.10.18 04.58	

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 578119

2M Enviromental Services LLC

COG SRO State COM #006H

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 578119

2M Enviromental Services LLC

COG SRO State COM #006H

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: 3043351 Matrix: Solid Date Prep: 03.09.18
MB Sample Id: 7640522-1-BLK LCS Sample Id: 7640522-1-BKS LCSD Sample Id: 7640522-1-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	0.0842	84	0.0895	90	70-130	6	35	mg/kg	03.10.18 00:44	
Toluene	<0.00200	0.0998	0.0894	90	0.0952	95	70-130	6	35	mg/kg	03.10.18 00:44	
Ethylbenzene	<0.00200	0.0998	0.101	101	0.107	107	70-130	6	35	mg/kg	03.10.18 00:44	
m,p-Xylenes	<0.00399	0.200	0.199	100	0.213	107	70-130	7	35	mg/kg	03.10.18 00:44	
o-Xylene	<0.00200	0.0998	0.0980	98	0.104	104	70-130	6	35	mg/kg	03.10.18 00:44	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	83		95		85		70-130	%	03.10.18 00:44
4-Bromofluorobenzene	99		110		103		70-130	%	03.10.18 00:44

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

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [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 578119

2M Enviromental Services LLC

COG SRO State COM #006H

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3043351 Matrix: Soil Date Prep: 03.09.18

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
Benzene	<0.00202	0.101	0.0556	55	0.0586	59	70-130	5	35	mg/kg	03.10.18 01:22	X
Toluene	<0.00202	0.101	0.0555	55	0.0617	62	70-130	11	35	mg/kg	03.10.18 01:22	X
Ethylbenzene	<0.00202	0.101	0.0557	55	0.0675	68	70-130	19	35	mg/kg	03.10.18 01:22	X
m,p-Xylenes	<0.00403	0.202	0.108	53	0.134	67	70-130	21	35	mg/kg	03.10.18 01:22	X
o-Xylene	<0.00202	0.101	0.0543	54	0.0672	67	70-130	21	35	mg/kg	03.10.18 01:22	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	90		90		70-130	%	03.10.18 01:22
4-Bromofluorobenzene	105		117		70-130	%	03.10.18 01:22

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 SRO State COM # 006H

Project #:

Project Loc: Eddy County, NM

PO #:

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

(lab use only)

ORDER #: 578119

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: 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
	T-1 @ 1'			2/27/2018	1455		1	x								Soil	X								X			x		x
	T-2 @ 2'			2/27/2018	1530		1	x								Soil	X								X			x		x
	T-3 @ 2'			2/27/2018	1620		1	x								Soil	X								X			x		x
	North @ 1'			2/27/2018	1640		1	x								Soil	X								X			x		x
	East @ 1'			2/27/2018	1645		1	x								Soil	X								X			x		x
	South @ 1'			2/27/2018	1650		1	x								Soil	X								X			x		x
	West @ 1'			2/27/2018	1655		1	x								Soil	X								X			x		x

TCLP:
TOTAL:

Special Instructions:

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

Relinquished by: Matthew Green	Date 3-2-18	Time 1530	Received by:	Date 3-2-18	Time 1530
Relinquished by:	Date 3-2-18	Time 4:41	Received by:	Date 3/2/18	Time 441
Relinquished by:	Date	Time	Received by ELOT:	Date	Time

Labels on container(s)					
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 #: 578119

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

NM OIL CONSERVATION
ARTESIA DISTRICT
JAN 24 2018
RECEIVED

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

nAB1802933590

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: **SRO STATE COM #006H**	Facility Type: **Battery**

Surface Owner: State	Mineral Owner: State	API No.: 30-15-37467

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	05	26S	28E	660	North	330	West	Eddy

Latitude: 32.0771141 **Longitude**: -104.1169739 NAD83

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: 5 bbls PW	Volume Recovered: 4 bbls PW
Source of Release: Fittings/Connections	Date and Hour of Occurrence: 1/20/2018	Date and Hour of Discovery: 1/20/2018 11:00 AM
Was Immediate Notice Given? ☐ Yes ☒ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour:	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
This release occurred when a hole developed in the water leg on the heater treater. The water leg was replaced.

Describe Area Affected and Cleanup Action Taken.*

This release occurred within the unlined facility and on the well pad location. A vacuum truck was dispatched to recover all freestanding fluids. Concho will have the spill area evaluated for any possible impact from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation activities.

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

Signature: Dakota Neel

Printed Name: Dakota Neel

Title: HSE Coordinator

E-mail Address dneel2@concho.com

Date: 1/24/2018 Phone: 575-746-2010

OIL CONSERVATION DIVISION

Approved by Environmental Specialist:

Approval Date: 1/29/18 Expiration Date: N/A

Conditions of Approval: see attached

Attached ☒ 3RP-458

* Attach Additional Sheets If Necessary

1/26/18AB