Robert Grubbs Jr.
Senior Environmental Coordinator

April 25, 2016

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

Re: Crossman 25 State #1
30-15-38948
Sec. 24, T25S-R27E
Eddy County, NM

Mr. Mike Bratcher,

COG Operating LLC would like to submit for your consideration the enclosed revised work plan for the above captioned well. The plan is in response to the C-141 Initial report dated October 20, 2014.

Background

The release was caused by torrential rains that resulted in mass flooding. Flood waters washed tanks, debris, and pad material downstream. 280 bbls of oil and 100 bbls of produced water were lost and unrecoverable. GL Environmental Inc. (GLE) was contracted by the State Land Office to complete a site survey combined with a sampling and analysis effort of the affected portions of the draw. GLE identified one sample with elevated chloride concentrations on the pad through composite sampling of 3 discrete samples.

After discussions with OCD, COG conducted additional sampling on October 14, 2015 to further identify the areas of contamination at sample point T- 5 with discrete samples. (See attached map)

On January 21, 2016, COG met with Bradford Billings, Mike Bratcher and Heather Patterson in the Artesia, OCD District 2 office to discuss sample results and closure of this site. At this meeting, it was decided to install a temporary well in the vicinity of the T-5 sample location. A water sample will be collected from the temporary well and a surface water sample will be collected immediately upstream of the pad location.

On March 8, 2016, a temporary well (TW-1) was installed at the Crossman well pad. The well was completed to a total depth of approximately 21 feet below ground surface. The well was developed by installing a submersible pump into the well and purging approximately 40 gallons of water from the well. The purge water was stored onsite in a

55 gallon drum. After development, the well was allowed to stabilize for approximately 48 hours.

On March 10, 2016, COG personnel met with SLO representatives at Crossman well pad. The temporary well was purged three (3) casing volumes of water with a clean disposable bailer. The well was allowed to recover while a surface water sample was collected from pooled water in the draw upgradient of the Crossman well pad. Once this sample was collected, a new disposable bailer was lowered into TW-1 and a sample collected. Both sets of samples were placed into laboratory supplied sample containers and placed on ice for transport to the laboratory for analysis of chlorides by EPA method 300.0.

Results of the sample analyses showed the water upgradient in the pooled surface water to contain 1,150 mg/L of chlorides. The sample from the temporary well (TW-1) exhibited a chloride concentration of 2,160 mg/L. These sample results were submitted to both OCD and SLO for review on March 18, 2016.

On April 1, 2016, COG received e-mail from Mr. Bradford Billings with the OCD stating that the sample results are consistent with historical and background chloride levels, and COG can plug and abandon the temporary well.

On April 12, 2016, the temporary well was plugged.

Soil Assessment and Analytical Results, and Engineered berm

The pad area was divided into 5 quadrants for sampling purposes. Chloride concentrations were elevated in three of the sampling areas (T-2, T-3 and T-5) which were above the NMOCD's target of 1,000 mg/kg for the remediation of chlorides (see attached site diagram). All excavated material will be sent to a proper disposal and will not be reused for any backfill or berm material.

On February 11, 2016, COG met with Mr. Will Barnes and Mr. Robert Kasuboski with SLO at the Crossman well pad to discuss SLO requirements for an engineered berm for erosion control and reconstruction of the pad. On March 15, 2016, an engineered berm and reconstruction plan was submitted by Smith Engineering, a third party engineering firm to SLO for approval. On March 18, 2016, the reconstruction and engineered berm plan was approved by the SLO.

On April 1, 2016, Concho received an email from Bradford Billings with the OCD, stating that after concurrence with the SLO, OCD is requesting that the area of T-2 and T-3 be excavated to a depth of 2 feet, and the area of T-5 be excavated to a depth of 10 feet.

Work Plan

COG proposes the following excavations:

T1 – No Excavation

T2 – Excavate 2', approximate 100' x 100' area

T3 – Excavate 2', approximate 100' x 100' area

T4 – No Excavation

T5 – Excavate 10', approximate 75' x 100' area

An engineered berm will be constructed around the Crossman pad area after the soil remediation is completed.

COG Operating LLC would like to begin the remediation process based on approval of this work plan. Please feel free to contact me with any questions or concerns at (432) 661-6601.

Sincerely,

Robert Grubbs Jr.

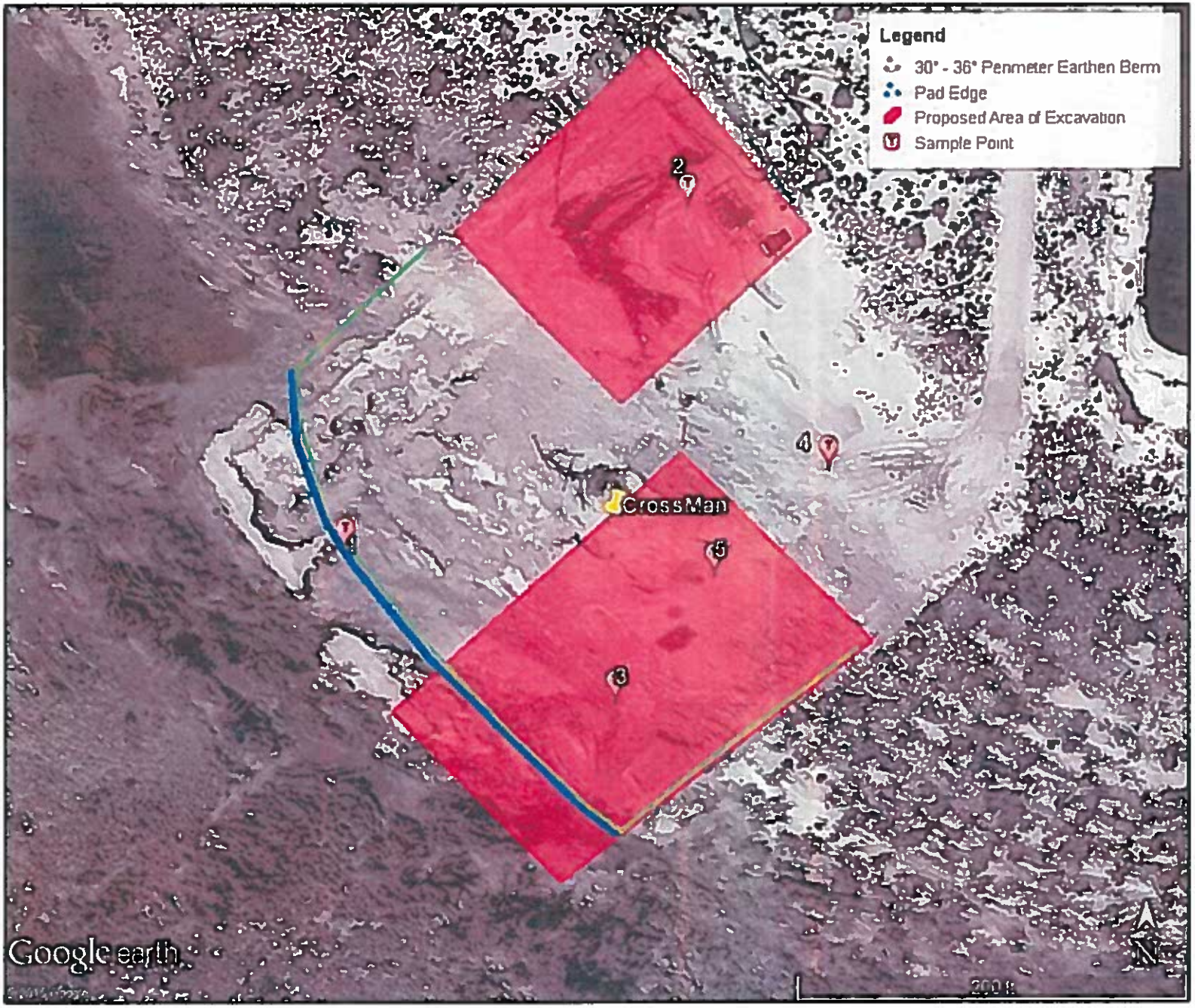
Senior Environmental Coordinator

Enclosed

(1) C-141 Initial (Copy)
(2) Site Diagram and Summary Table
(3) Laboratory Analysis

September 23, 2015

Crossman 25 State #1



Depth to GW per SEO: <50'

T1	DRO	Cl-
0-1'	<50.0	490
2	<50.0	490
4	<50.0	196
6'	<50.0	196
8'	<50.0	392
10'	<50.0	94
T2	**DRO**	**Cl-**
0-1'	<50.0	1970
2	<50.0	939
4	<50.0	751
6'	<50.0	563
8'	<50.0	188
10'	<50.0	94
T3	**DRO**	**Cl-**
0-1'	<50.0	11,000
2	<50.0	1690
4	<50.0	282
6'	<50.0	190
8'	<50.0	397
10'	<50.0	<20
T4	**DRO**	**Cl-**
0-1'	<50.0	474
2	<50.0	190
4'	<50.0	664
6'	<50.0	474
8'	<50.0	95
10'	<50.0	<20
T5	**DRO**	**Cl-**
2	-	3400
4'	-	2360
6'	-	1510
8'	-	1600
10'	-	1980
12'	-	571

Bold values exceed RRALs

CONCHO

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 August 8, 2011

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	Contact: Robert McNeill
Address: 600 West Illinois Avenue, Midland TX 79701	Telephone No. 432-230-0077
Facility Name: Crossman 25 State #1H	Facility Type: Battery

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-38948

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	25	25S	27E	330	North	330'	East	Eddy

Latitude32 1073265861973 Longitude -104 136404581729

NATURE OF RELEASE

Type of Release Oil and Produced Water	Volume of Release 280 bbls Oil ; 100 bbls PW	Volume Recovered 0 bbls Oil ; 0 bbls PW
Source of Release Flood waters washed battery away.	Date and Hour of Occurrence 9/19/2014 11:00 am	Date and Hour of Discovery 9/19/2014 11:00 am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher – OCD	
By Whom? Robert McNeill	Date and Hour. 9/22/2014 8:00 am (phone call)	
Was a Watercourse Reached? ☒ Yes ☐ No	If YES, Volume Impacting the Watercourse. Unknown	

If a Watercourse was Impacted, Describe Fully *
Torrential rains caused flood waters to rise. Waters over ran the location, taking tanks and equipment away with the water. Most of the pad was taken away with the flood waters as well. Tanks and equipment was located approximately 2 miles further down the arroyo. The steel tanks were empty and the fiberglass tanks were torn apart

Describe Cause of Problem and Remedial Action Taken *

Describe Area Affected and Cleanup Action Taken *

The impacted area shows no signs of hydrocarbon or brine impact. Once the area dries out and is accessible to heavy equipment we will conduct a more thorough search of the area for hydrocarbon impact. Equipment will be removed from the draw and disposed of at an NMOCD approved facility.

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: A Trujillo	**OIL CONSERVATION DIVISION**
Printed Name: Amanda Trujillo	Approved by Environmental Specialist:
Title: Senior Environmental Coordinator	Approval Date: / Expiration Date:
E-mail Address: atrujillo@concho.com	Conditions of Approval / Attached ☐
Date: October 20, 2014 Phone: 575-748-6940	

* Attach Additional Sheets If Necessary

Summary Report

Robert Grubbs
COG Operating, LLC
550 W. Texas Avenue
Suite 100
Midland, TX 79701

Report Date: September 10, 2015

Work Order: 15082118

Project Location: Eddy Co, NM
Project Name: Crossman 25 State

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
402936	T-1 0-1'	soil	2015-08-19	00:00	2015-08-21
402937	T-1 2'	soil	2015-08-19	00:00	2015-08-21
402938	T-1 4'	soil	2015-08-19	00:00	2015-08-21
402939	T-1 6'	soil	2015-08-19	00:00	2015-08-21
402940	T-1 8'	soil	2015-08-19	00:00	2015-08-21
402941	T-1 10'	soil	2015-08-19	00:00	2015-08-21
402942	T-2 0-1'	soil	2015-08-19	00:00	2015-08-21
402943	T-2 2'	soil	2015-08-19	00:00	2015-08-21
402944	T-2 4'	soil	2015-08-19	00:00	2015-08-21
402945	T-2 6'	soil	2015-08-19	00:00	2015-08-21
402946	T-2 8'	soil	2015-08-19	00:00	2015-08-21
402947	T-2 10'	soil	2015-08-19	00:00	2015-08-21
402948	T-3 0-1'	soil	2015-08-19	00:00	2015-08-21
402949	T-3 2'	soil	2015-08-19	00:00	2015-08-21
402950	T-3 4'	soil	2015-08-19	00:00	2015-08-21
402951	T-3 6'	soil	2015-08-19	00:00	2015-08-21
402952	T-3 8'	soil	2015-08-19	00:00	2015-08-21
402953	T-3 10'	soil	2015-08-19	00:00	2015-08-21
402954	T-4 0-1'	soil	2015-08-19	00:00	2015-08-21
402955	T-4 2'	soil	2015-08-19	00:00	2015-08-21
402956	T-4 4'	soil	2015-08-19	00:00	2015-08-21
402957	T-4 6'	soil	2015-08-19	00:00	2015-08-21
402958	T-4 8'	soil	2015-08-19	00:00	2015-08-21
402959	T-4 10'	soil	2015-08-19	00:00	2015-08-21

Sample - Field Code	TPH DRO DRO mg/Kg	TPH GRO GRO mg/Kg
402936 - T-1 0-1'	<50.0 U Q1	<1.00
402937 - T-1 2'	<50.0 U Q1	<1.00
402938 - T-1 4'	<50.0 U Q1	<1.00
402939 - T-1 6'	<50.0 U Q1	<1.00
402940 - T-1 8'	<50.0 U Q1	<1.00
402941 - T-1 10'	<50.0 U	<1.00
402942 - T-2 0-1'	<50.0 U	<1.00
402943 - T-2 2'	<50.0 U	<1.00
402944 - T-2 4'	<50.0 U	<1.00
402945 - T-2 6'	<50.0 U	<1.00
402946 - T-2 8'	<50.0 U	<1.00
402947 - T-2 10'	<50.0 U	<1.00
402948 - T-3 0-1'	<50.0 U	<1.00
402949 - T-3 2'	<50.0 U	<1.00
402950 - T-3 4'	<50.0 U	<1.00
402951 - T-3 6'	<50.0 U	<1.00
402952 - T-3 8'	<50.0 U	<1.00
402953 - T-3 10'	<50.0 U	<1.00
402954 - T-4 0-1'	<50.0 U	<1.00
402955 - T-4 2'	<50.0 U	<1.00
402956 - T-4 4'	<50.0 U	<1.00
402957 - T-4 6'	<50.0 U	<1.00
402958 - T-4 8'	<50.0 U	<1.00
402959 - T-4 10'	<50.0 U	<1.00

Sample: 402936 - T-1 0-1'

Param	Flag	Result	Units	RL
Chloride		490	mg/Kg	4

Sample: 402937 - T-1 2'

Param	Flag	Result	Units	RL
Chloride		490	mg/Kg	4

Sample: 402938 - T-1 4'

Param	Flag	Result	Units	RL
Chloride		196	mg/Kg	4

Sample: 402939 - T-1 6'

Param	Flag	Result	Units	RL
Chloride		196	mg/Kg	4

Sample: 402940 - T-1 8'

Param	Flag	Result	Units	RL
Chloride		392	mg/Kg	1

Sample: 402941 - T-1 10'

Param	Flag	Result	Units	RL
Chloride		94.0	mg/Kg	1

Sample: 402942 - T-2 0-1'

Param	Flag	Result	Units	RL
Chloride		1970	mg/Kg	4

Sample: 402943 - T-2 2'

Param	Flag	Result	Units	RL
Chloride		939	mg/Kg	4

Sample: 402944 - T-2 4'

Param	Flag	Result	Units	RL
Chloride		761	mg/Kg	4

Sample: 402945 - T-2 6'

Param	Flag	Result	Units	RL
Chloride		583	mg/Kg	4

Sample: 402946 - T-2 8'

Param	Flag	Result	Units	RL
Chloride		188	mg/Kg	1

Sample: 402947 - T-2 10'

Param	Flag	Result	Units	RL
Chloride		94.0	mg/Kg	1

Sample: 402048 - T-3 0-1'

Param	Flag	Result	Units	RL
Chloride		11000	mg/Kg	1

Sample: 402049 - T-3 2'

Param	Flag	Result	Units	RL
Chloride		1690	mg/Kg	1

Sample: 402950 - T-3 4'

Param	Flag	Result	Units	RL
Chloride		282	mg/Kg	4

Sample: 402951 - T-3 6'

Param	Flag	Result	Units	RL
Chloride		100	mg/Kg	4

Sample: 402952 - T-3 8'

Param	Flag	Result	Units	RL
Chloride		370	mg/Kg	4

Sample: 402953 - T-3 10'

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 402954 - T-4 0-1'

Param	Flag	Result	Units	RL
Chloride		474	mg/Kg	4

Sample: 402955 - T-4 2'

Param	Flag	Result	Units	RL
Chloride		190	mg/Kg	4

Sample: 402956 - T-4 4'

Param	Flag	Result	Units	RL
Chloride		884	mg/Kg	4

Sample: 402957 - T-4 6'

Param	Flag	Result	Units	RL
Chloride		474	mg/Kg	4

Sample: 402958 - T-4 8'

Param	Flag	Result	Units	RL
Chloride		96.0	mg/Kg	4

Sample: 402959 - T-4 10'

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Summary Report

Robert Grubbs
COG Operating, LLC
550 W. Texas Avenue
Suite 100
Midland, TX 79701

Report Date: October 16, 2015

Work Order: 15101536

Project Location: Eddy Co, NM
Project Name: Crossman 25 State #1H
Project Number: ENV015_0002_1

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
406502	T-5 2'	soil	2015-10-14	00:00	2015-10-15
406503	T-5 4'	soil	2015-10-14	00:00	2015-10-15
406504	T-5 6'	soil	2015-10-14	00:00	2015-10-15
406505	T-5 8'	soil	2015-10-14	00:00	2015 10-15
406506	T-5 10'	soil	2015-10-14	00:00	2015-10-15

Sample: 406502 - T-5 2'

Param	Flag	Result	Units	RL
Chloride		3400	mg/Kg	1

Sample: 406503 - T-5 4'

Param	Flag	Result	Units	RL
Chloride		2360	mg/Kg	4

Sample: 406504 - T-5 6'

Param	Flag	Result	Units	RL
Chloride		1510	mg/Kg	4

Sample: 400505 - T-5 8'

Param	Flag	Result	Units	RL
Chloride		1600	mg/Kg	1

Sample: 400506 - T-5 10'

Param	Flag	Result	Units	RL
Chloride		1080	mg/Kg	1