Bratcher, Mike, EMNRD

From: Tavarez, Ike <Ike.Tavarez@tetratech.com>
Sent: Thursday, October 17, 2013 1:34 PM
To: Bratcher, Mike, EMNRD
Cc: Robert McNeill; Robert Grubbs; Michelle Mullins (MMullins@concho.com)
Subject: COG Operating - Texaco State and Lakewood AQE State - Work Plan Approval Request
Attachments: COG-Work Plan - TEXACO_STATE_BE.pdf; COG-Work Plan LAKEWOOD_AQE_STATE_SWD_#001.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Mike,

Please find the enclosed Work Plans for the above reference spill sites located in Eddy County, New Mexico. The spills have been assessed and the remedial recommendations are included in the work plans. I will mail you a hard copy of the work plans for your files. Once approved, Tetra Tech will schedule the soil remediation and notify you prior to implementing the work plans. Please let me know if you need additional information or call me if you have any questions

Ike Tavarez, PG | Senior Project Manager

Main: 432.682.4559 | Fax: 432.682.3946 | Cell: 432.425.3878

Ike.Tavarez@tetratech.com

Tetra Tech | Complex World, Clear Solutions™

1910 North Big Spring | Midland, TX 79705 | www.tetratech.com

SITE INFORMATION

Report Type: Work Plan

General Site Information:						
Site:	Lakewood AQE State SWD #001					
Company:	COG Operating LLC					
Section, Township and Range	Unit F	Sec 30	T19S	R26E		
Lease Number:	API-30-015-22233					
County:	Eddy County					
GPS:	32.63342° N			104.42331° W		
Surface Owner:	State					
Mineral Owner:						
Directions:	From Artesia travel south for approx. 15 miles on hwy. 285. Turn west on county road 23 and travel 0.60 miles turning north on lease road traveling 0.61 miles north then 0.15 miles west to the location.					

Release Data:	
Date Released:	7/22/2013
Type Release:	Produced Water
Source of Contamination:	Steel Flowline
Fluid Released:	500 bbls
Fluids Recovered:	480 bbls

Official Communication:			
Name:	Robert McNeill		Ike Tavarez
Company:	COG Operating, LLC		Tetra Tech
Address:	One Concho Center		4000 N. Big Spring St.
	600 W. Illinois Ave.		
City:	Midland Texas, 79701		Midland, Texas
Phone number:	(432) 686-3023		(432) 682-4559
Fax:	(432) 684-7137		
Email:	rmcneill@conchoresources.com		ike.tavarez@tetratech.com

Ranking Criteria		
Depth to Groundwater:	***Ranking Score***	***Site Data***
<50 ft	20	
50-99 ft	10	10
>100 ft.	0	0
WellHead Protection:	***Ranking Score***	***Site Data***
Water Source <1,000 ft., Private <200 ft.	*20*	
Water Source >1,000 ft., Private >200 ft.	0	0
Surface Body of Water:	***Ranking Score***	***Site Data***
<200 ft.	*20*	
200 ft - 1,000 ft.	10	
>1,000 ft.	0	0
Total Ranking Score:	10	

Acceptable Soil RRAL (mg/kg)		
Benzene	***Total BTEX***	***TPH***
10	50	1,000

TETRA TECH

October 8, 2013

Mr. Mike Bratcher
Environmental Engineer Specialist
Oil Conservation Division, District 2
811 S. First Street
Artesia, New Mexico 88210

Re: Work Plan for the COG Operating LLC., Lakewood AQE St SWD #1, Unit F, Section 30, Township 19 South, Range 26 East, Eddy County, New Mexico.

Mr. Bratcher:

Tetra Tech, Inc. (Tetra Tech) was contacted by COG Operating LLC. (COG) to assess a spill from the Lakewood AQE St SWD #1 located in Unit F, Section 30, Township 19 South, Range 26 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.63342°, W 104.42331°. The site location is shown on Figures 1 and 2.

Background

According to the State of New Mexico C-141 Initial Report, the leak was discovered on July 22, 2013, and released approximately five hundred (500) barrels of produced water from a steel flowline. To alleviate the problem, COG personnel replaced the flowline. Four hundred and eighty (480) barrels of produced water were recovered. The spill was initiated on the pad and flowed into the pasture affecting areas approximately 45' X 160' and 80' x 340'. The initial C-141 form is enclosed in Appendix A.

Groundwater

According to the New Mexico State Engineers Office there is one well listed in Section 30 with a depth to groundwater of 105' below surface. According to the NMOCD groundwater map the depth to groundwater is between 50' and 100' below surface. The groundwater data is shown in Appendix B.

Tetra Tech
4000 North Big Spring, Midland, TX 79705
Tel 432.682.4559 Fax 432.682.3946 www.tetratech.com

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Regulatory

A risk-based evaluation was performed for the Site in accordance with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and Releases, dated August 13, 1993. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene and xylene (collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) in soil. The proposed RRAL for benzene was determined to be 10 parts per million (ppm) or milligrams per kilogram (mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene, and xylene). Based upon the depth to groundwater, the proposed RRAL for TPH is 1,000 mg/kg.

Soil Assessment and Analytical Results

On August 21, 2013, Tetra Tech personnel inspected and sampled the spill area. Fifteen (15) auger holes (AH-1 through AH-15) were installed using a stainless steel hand auger to assess the impacted soils. Selected samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The sampling results are summarized in Table 1. The auger hole locations are shown on Figure 3.

Referring to Table 1, all auger hole samples were below the RRAL for BTEX and TPH and no hydrocarbon impact was detected in the subsurface soils.

Auger holes (AH-2, AH-3, AH-4, AH-5, AH-6 and AH-8) showed chloride concentrations at 0-1' ranging from 1,290 mg/kg to 2,450 mg/kg. Deeper samples could not be collected due to the dense formation. These areas were not vertically defined. The areas of AH-7, AH-11, AH-12 and AH-14 showed a shallow chloride impact to the soils, with decrease with depth and vertically defined at 1-1.5' below surface. The area of AH-13 declined with depth to <20 mg/kg at 1-1.5', however, spiked at 2-2.5' with a concentration of 2,280 mg/kg.

Work Plan

COG proposes to remove impacted material as highlighted (green) in Table 1 and shown on Figure 4. Prior to excavating, the areas of AH-2, AH-3, AH-4, AH-5, AH-6 and AH-7 will be trenches with a backhoe to define extents. Based on the field results, these areas will be excavated to the appropriate depths.

Auger hole (AH-7, AH-11, AH-12 and AH-13) will be excavated to a depth of 1.0' to remove the elevated chlorides. The area of AH-13 will also be trenched with a backhoe to confirm the impact detected at 2-2.5' and if confirmed, the impact will be vertically defined. Based on the results, the area will be excavated to the appropriate depth.

TETRA TECH

All of the impacted material will be transported to proper disposal and the excavations will be backfilled with clean soil to grade.

The proposed excavation depths may not be reached due to wall cave ins and safety concerns for onsite personnel. In addition, impacted soil around oil and gas equipment, structures or lines may not be feasible or practicable to be removed due to safely concerns. As such, Tetra Tech will excavate the soils to the maximum extent practicable.

Upon completion, a final report will be submitted to the NMOCD. If you have any questions or comments concerning the assessment or the proposed remediation activities for this site, please call me at (432) 682-4559.

Respectfully submitted,
TETRA TECH

Ike Tavarez, PG
Senior Project Manager

cc: Robert McNeill – COG

Table 1
COG Operating LLC.
Lakewood AQE St SWD #1
Eddy County, New Mexico

Sample ID	Sample Date	BEB Sample Depth (ft)	Excavation Bottom Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total						
AH-1	8/21/2013	0-1	0	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	877
AH-2 Trench	8/21/2013	0-6"	0	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	1,780
AH-3 Trench	8/21/2013	0-1	0	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	2,450
AH-4 Trench	8/21/2013	0-1	0	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	1,420
AH-5 Trench	8/21/2013	0-1	0	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	1,290
AH-6 Trench	8/21/2013	0-1	0	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	1,330
AH-7	8/21/2013	0-1	0	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	1,020
	"	1-1.5	"	X		-	-	-	-	-	-	-	-	<20.0
	"	2-2.5	"	X		-	-	-	-	-	-	-	-	<20.0
	"	3-3.5	"	x		-	-	-	-	-	-	-	-	262
AH-8 Trench	8/21/2013	0	0	X		-	-	-	-	-	-	-	-	1,630
AH-9	8/21/2013	0-1	0	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	812
AH-10	8/21/2013	0-1	0	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	901
AH-11	8/21/2013	0-1	0	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	2,400
		1-1.5												<20.0
AH-12	8/21/2013	0-1	0	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	1,680
		1-1.5												190
AH-13	8/21/2013	0-1	0	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	6,730
	"	1-1.5	"	X		-	-	-	-	-	-	-	-	<20.0
Trench	"	2-2.5	"	X		-	-	-	-	-	-	-	-	2,280
AH-14	8/21/2013	0-1	0	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	1,080
	"	1-1.5	"	X		-	-	-	-	-	-	-	-	<20.0
	"	2-2.5	"	X		-	-	-	-	-	-	-	-	<20.0
AH-15	8/21/2013	0-1	0	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	480
	"	1-1.5	"	X		-	-	-	-	-	-	-	-	145
	"	2-2.5	"	X		-	-	-	-	-	-	-	-	<20.0
	"	3-3.5	"	X		-	-	-	-	-	-	-	-	305.0

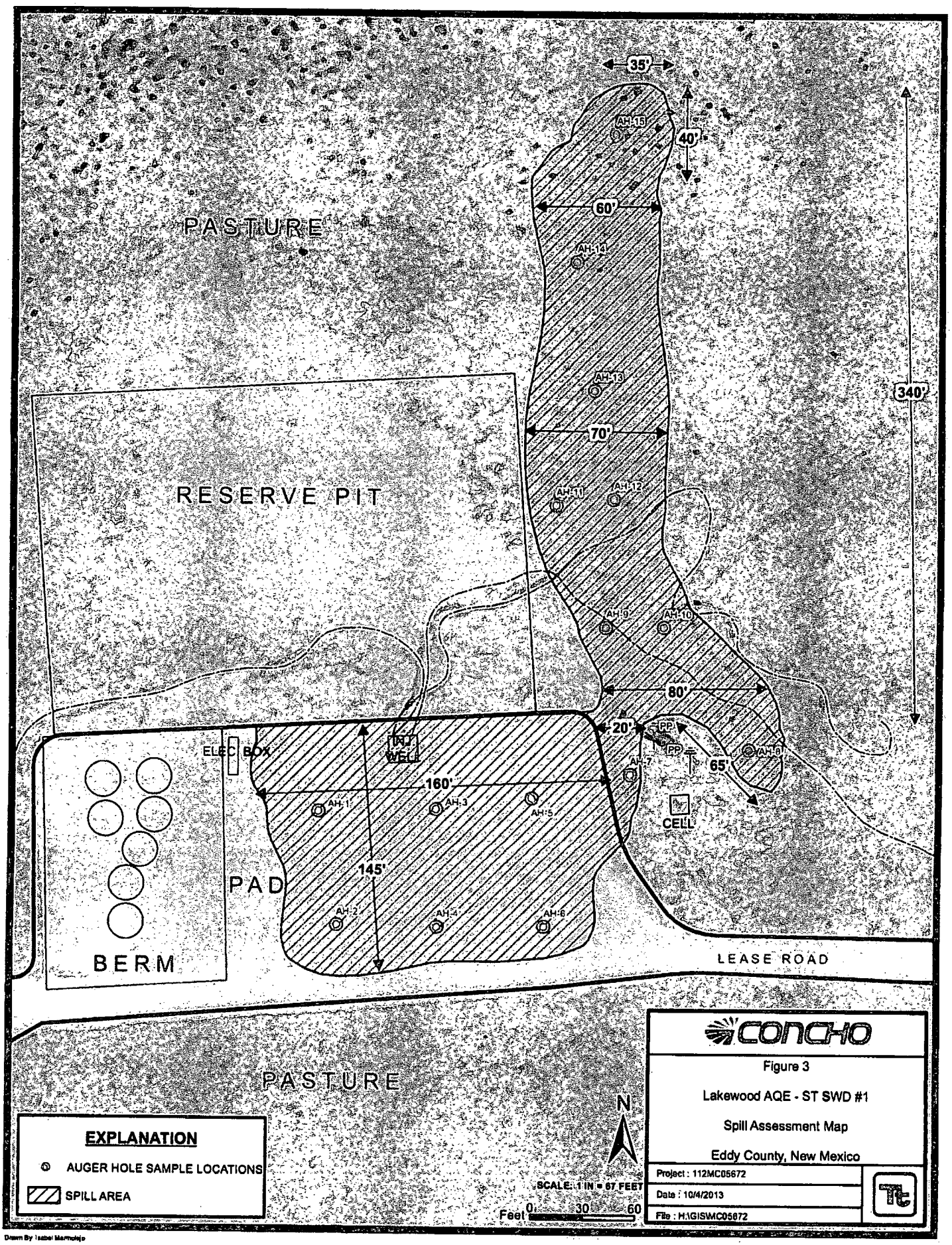
(-) Not Analyzed

(BEB) Below Excavation Bottom

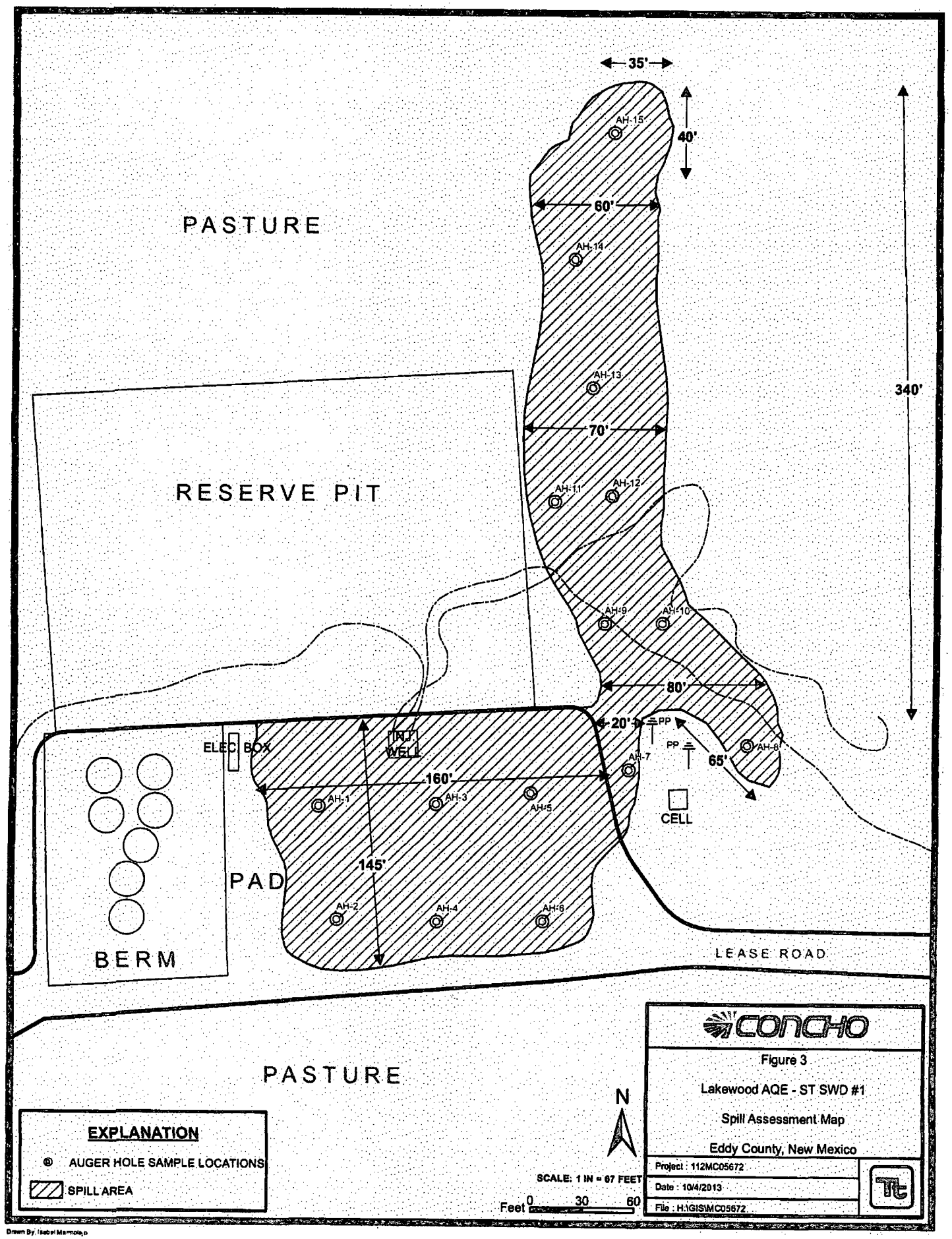
Proposed Excavation Depths

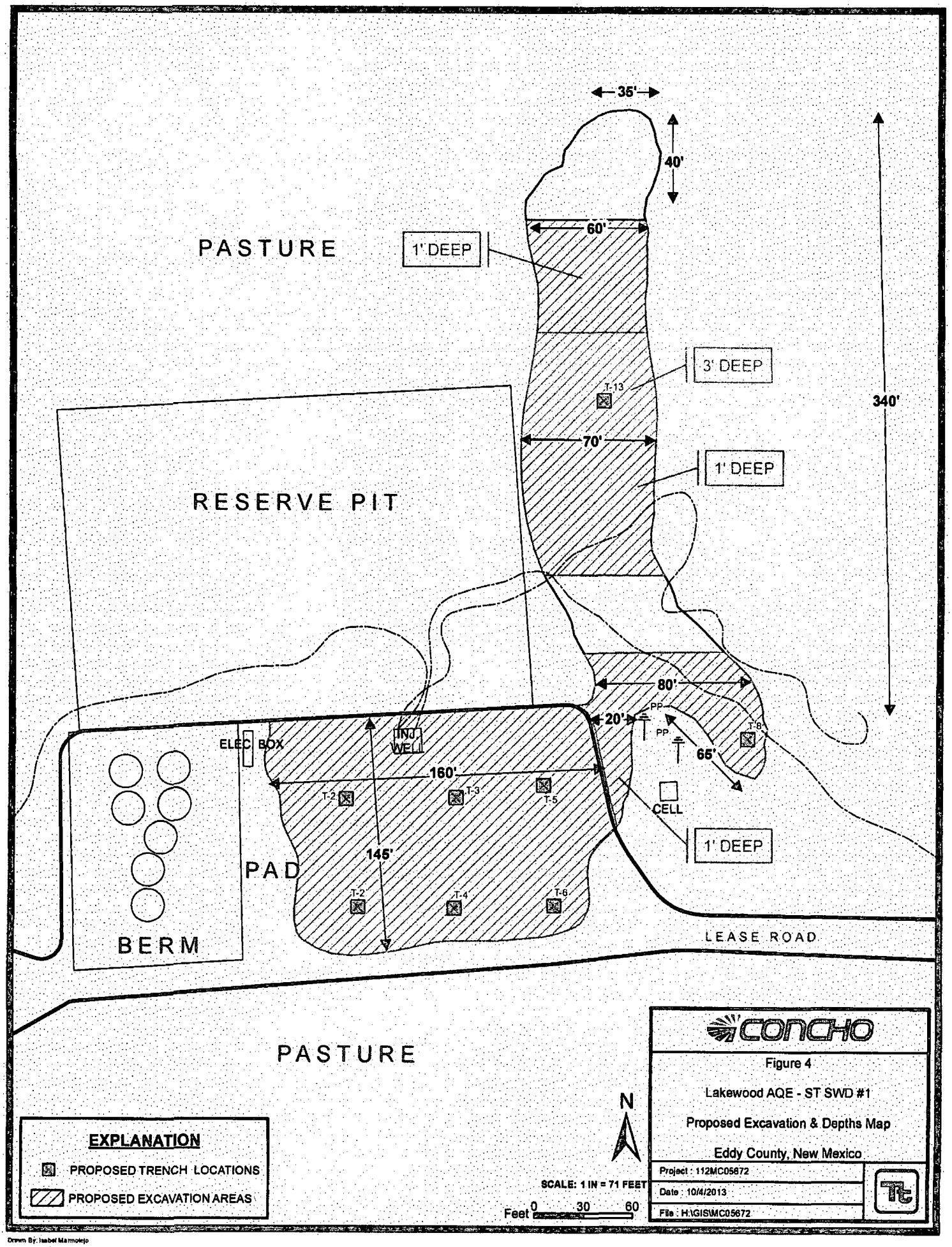
Trench Proposed Trench to Define

Date modified: 09/10/2013 112MC05672



Drawn By: Isabel Marmolejo


35'
40'
AH-15
60'
AH-14
PASTURE
AH-13
340'
70'
RESERVE PIT
AH-11
AH-12
AH-9
AH-10
80'
20'
PP
PP
AH-8
65'
AH-7
ELEC BOX
INJ. WELL
160'
AH-1
AH-3
AH-5
CELL
145'
PAD
AH-2
AH-4
AH-6
BERM
LEASE ROAD
PASTURE
N
EXPLANATION
AUGER HOLE SAMPLE LOCATIONS
SPILL AREA
SCALE: 1 IN = 67 FEET
Feet 0 30 60
CONCHO
Figure 3
Lakewood AQE - ST SWD #1
Spill Assessment Map
Eddy County, New Mexico
Project : 112MC05672
Date : 10/4/2013
File : H:\GIS\MC05672
Drawn By: Isabel Marmolejo

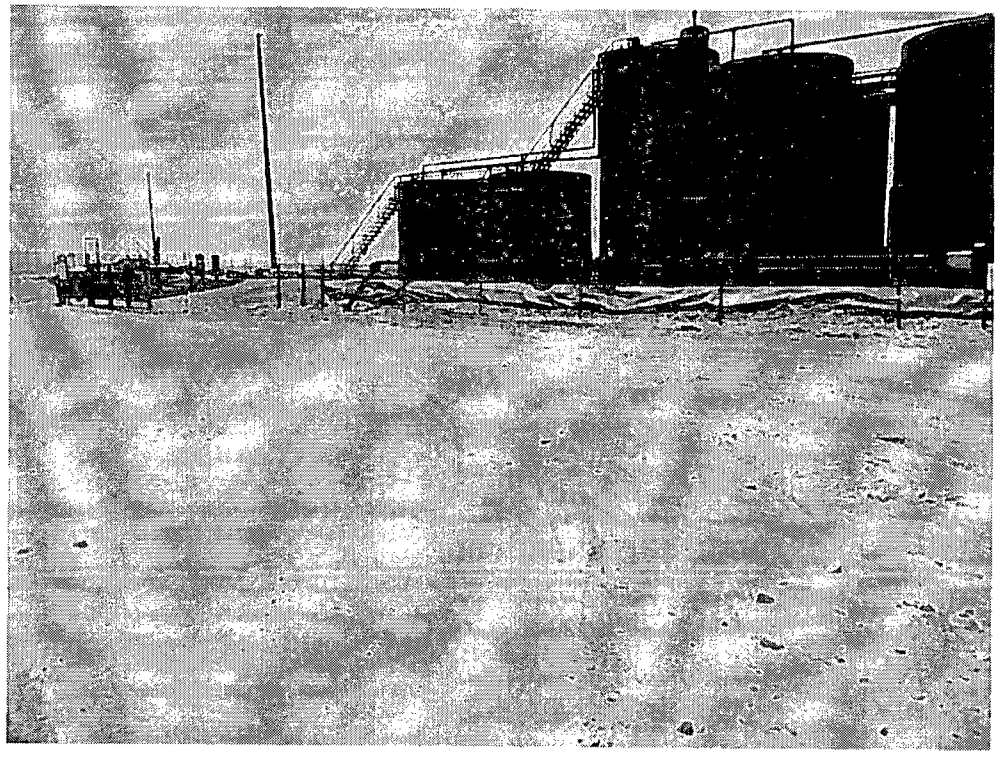


Drawn By: Isabel Marmolejo

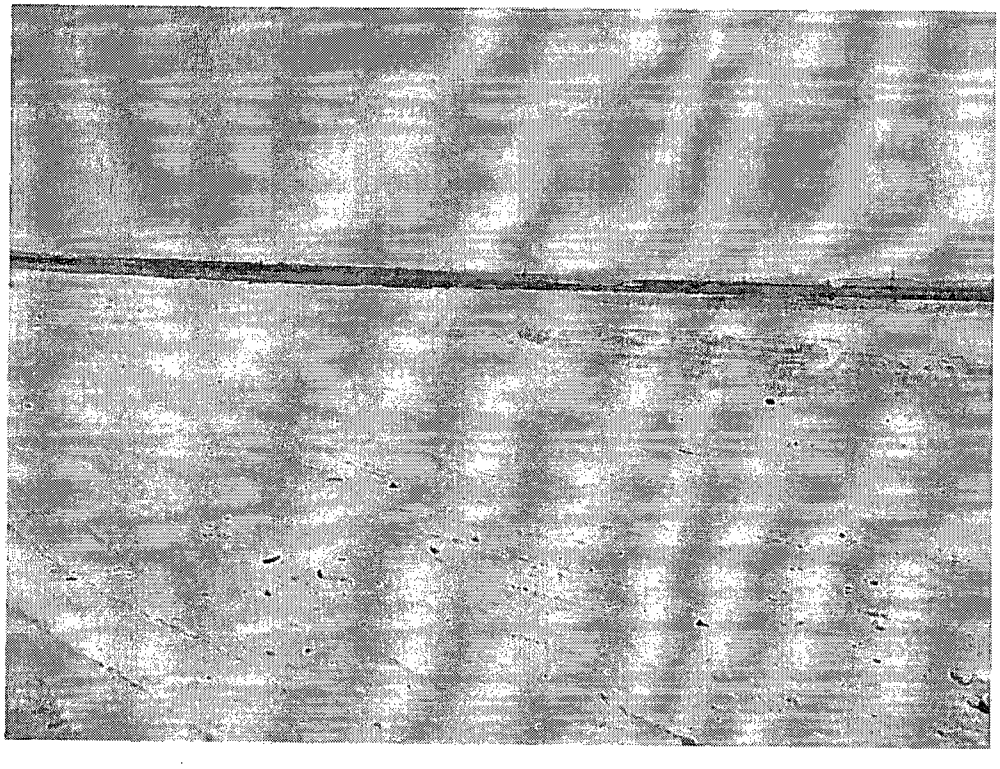
PHOTOGRAPHS

COG Operating LLC
Lakewood AQE State SWD #001
Eddy County, New Mexico

TETRA TECH



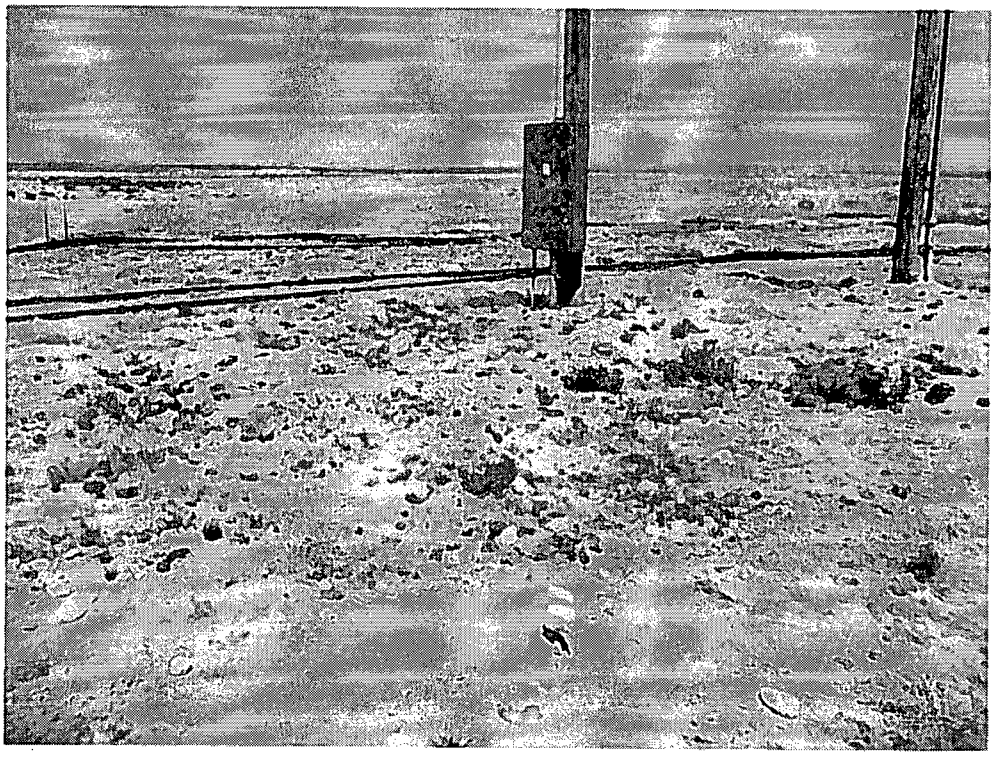
View East – Area of AH-1



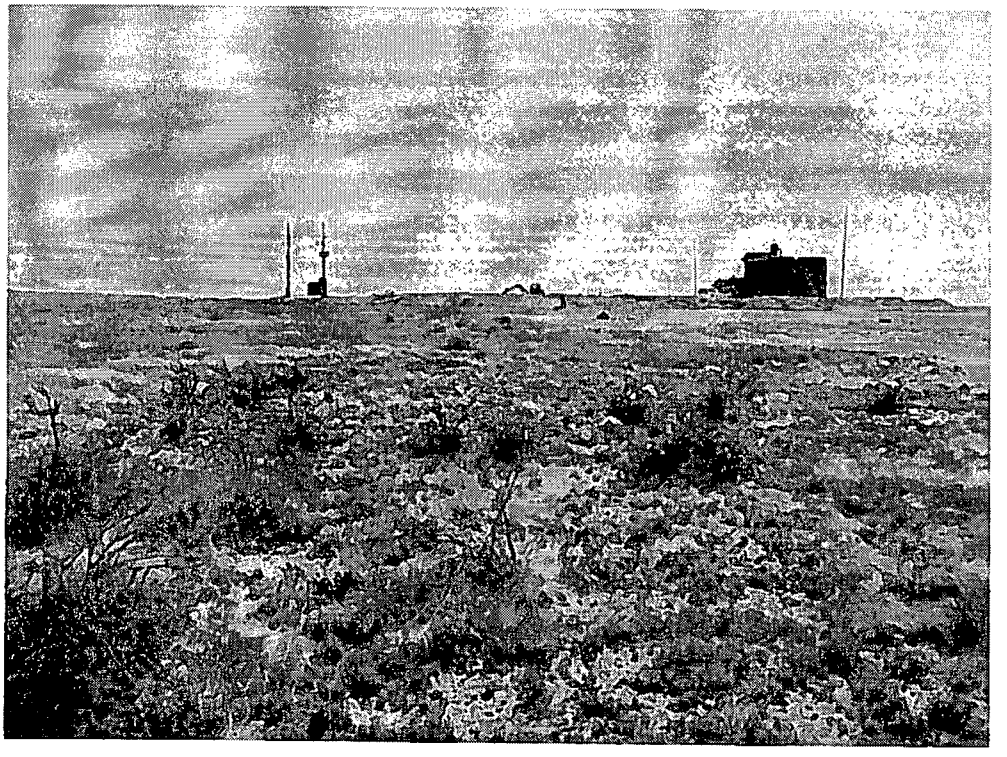
View South – Area of AH-2 and AH-4

COG Operating LLC
Lakewood AQE State SWD #001
Eddy County, New Mexico

TETRA TECH



View Northeast – Area of AH-7



View East – Area of AH-15

TABLES

Table 1
COG Operating LLC.
Lakewood AQE St SWD #1
Eddy County, New Mexico

Sample ID	Sample Date	BEB Sample Depth (ft)	Excavation Bottom Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total						
AH-1	8/21/2013	0-1	0	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	877
AH-2 Trench	8/21/2013	0-6"	0	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	1,780
AH-3 Trench	8/21/2013	0-1	0	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	2,450
AH-4 Trench	8/21/2013	0-1	0	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	1,420
AH-5 Trench	8/21/2013	0-1	0	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	1,290
AH-6 Trench	8/21/2013	0-1	0	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	1,330
AH-7	8/21/2013	0-1	0	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	1,020
	"	1-1.5	"	X		-	-	-	-	-	-	-	-	<20.0
	"	2-2.5	"	X		-	-	-	-	-	-	-	-	<20.0
	"	3-3.5	"	x		-	-	-	-	-	-	-	-	262
AH-8 Trench	8/21/2013	0	0	X		-	-	-	-	-	-	-	-	1,630
AH-9	8/21/2013	0-1	0	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	812
AH-10	8/21/2013	0-1	0	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	901
AH-11	8/21/2013	0-1	0	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	2,400
		1-1.5												<20.0
AH-12	8/21/2013	0-1	0	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	1,680
		1-1.5												190
AH-13	8/21/2013	0-1	0	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	6,730
	"	1-1.5	"	X		-	-	-	-	-	-	-	-	<20.0
Trench	"	2-2.5	"	X		-	-	-	-	-	-	-	-	2,280
AH-14	8/21/2013	0-1	0	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	1,080
	"	1-1.5	"	X		-	-	-	-	-	-	-	-	<20.0
	"	2-2.5	"	X		-	-	-	-	-	-	-	-	<20.0
AH-15	8/21/2013	0-1	0	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	480
	"	1-1.5	"	X		-	-	-	-	-	-	-	-	145
	"	2-2.5	"	X		-	-	-	-	-	-	-	-	<20.0
	"	3-3.5	"	X		-	-	-	-	-	-	-	-	305.0

(-) Not Analyzed

(BEB) Below Excavation Bottom

Proposed Excavation Depths

Trench Proposed Trench to Define

Date modified: 09/10/2013

1;12MC05672

APPENDIX A

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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 October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	COG OPERATING LLC	Contact	Pat Ellis
Address	600 West Illinois Avenue, Midland, TX 79701	Telephone No.	432-230-0077
Facility Name	Lakewood AQE State SWD #001	Facility Type	SWD

Surface Owner State	Mineral Owner	Lease No. (API#) 30-015-22233

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	30	19S	26E					Eddy

Latitude 32.63342 **Longitude** 104.42331

NATURE OF RELEASE

Type of Release Produced water	Volume of Release 500bbls	Volume Recovered 480bbls
Source of Release Steel flowline	Date and Hour of Occurrence 07-22-2013	Date and Hour of Discovery 07-22-2013 06:15am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher - NMOCD	
By Whom? Michelle Mullins	Date and Hour 07-22-2013 6:39pm	
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.*

A hole developed on the steel flowline due to corrosion. The line has been replaced to prevent reoccurrence

Describe Area Affected and Cleanup Action Taken.*

Initially 500bbls of produced water were released from a steel flowline we were able to recover 480bbls with vacuum trucks. All free fluid has been recovered. The spill was located north of the pad in the adjacent pasture. Tetra Tech will sample the spill site area to delineate any possible contamination from the release and we will present a work plan to the NMOCD for approval prior to any significant remediation work.

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: Robert Grubbs Jr.	OIL CONSERVATION DIVISION	
Printed Name: Robert Grubbs Jr.	Approved by District Supervisor:	
Title: Senior Environmental Coordinator	Approval Date:	Expiration Date:
E-mail Address: rgrubbs@concho.com	Conditions of Approval:	Attached ☐
Date: 07-24-2013 Phone: 432-661-6601		

* Attach Additional Sheets If Necessary

APPENDIX B

Water Well Data
Average Depth to Groundwater (ft)
COG - Lakewood AQE State SWD #001
Eddy County, New Mexico

18 South 25 East

6	5	4 155	3 184	2 175	1 187
7	8	9	10 168	11	12
18 230	17	16	15	14	13
19	20	21	22	23 117	24 159
30	29	28	27	26 200	25
31	32	33	34	35	36 270

18 South 26 East

6 200	5 95	4 24	3 65	2 50 14	1 Ste
7	8	9 70	10 8 40	11	12
18 55	17	16 61	15	14	13
19	20	21	22 98	23	24 19
30	29	28 95	27	26	25
31	32	33	34	35	36

18 South 27 East

6	5	4	3	2	1
7	8	9	10 50	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28 100	27	26	25
31 95	32	33	34	35	36

19 South 25 East

6	5 305	4	3	2 100	1 172
7	8	9 250	10	11	12
18	17 93	16	15 59	14	13
19 310	20	21	22 130	23	24
30 222	29	28	27 60	26	25 60
31 140	32	33	34	35	36

19 South 26 East

6	5	4 70	3	2	1 70
7	8	9	10 50	11	12 24
18 69	17	16	15	14 67	13
19	20 52	21	22	23 80	24
30 106	29	28	27 49	26	25
31 96	32 95	33	34	35	36

19 South 27 East

6	5 20	4	3	2	1
7	8 60	9	10	11	12
18	17	16 18	15	1482.4 107.7	13 93.7
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

20 South 25 East

6	5	4	3	2	1 121
7	8 249	9	10 130	11 70	12 102
18	17 170	16 129	15 67	14	13
19	20 228	21 80	22	23	24
30	29	28	27	26	25
31 312	32 100	33	34	35	36

20 South 26 East

6 65	5 20	4	3	2	1
7 5 60	8	9	10	11 48	12
18	17 51	16	15	14	13
19	20	21	22	23 195	24
30 190	29	28	27	26	25
31	32 51	33	34 135	35 52	36 123

20 South 27 East

6	5 50	4	3	2	1
7 66	8	9	10	11	12
18	17	16	15	14 66 74	13
19	20	21 153	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

- New Mexico State Engineers Well Reports
- USGS Well Reports
- Geology and Groundwater Conditions in Southern Eddy, County, NM
- NMOCD - Groundwater Data
- Field water level
- New Mexico Water and Infrastructure Data System

New Mexico Office of the State Engineer
Wells with Well Log Information

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right | (R=POD has been replaced, O=orphaned, C=the file is closed) | (quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) | (NAD83 UTM in meters) | (in feet)

POD Number	POD Code	POD Subbasin	County	Source	q q q 64 16 4	Sec	Twn	Rng	X	Y	Start Date	Finish Date	Log File Date	Depth Well	Depth Water	Driller	License Number
[redacted]			ED	Shallow	3 3	30	19S	26E	553699	3609975*	12/09/1982	12/30/1982	07/05/1983	135	105	EXISTING WELL	749

Record Count: 1

PLSS Search:

Section(s): 30 Township: 19S Range: 26E

*UTM location was derived from PLSS - see Help

APPENDIX C

Summary Report

Ike Tavarez
Tetra Tech
1910 N. Big Spring Street
Midland, TX 79705

Report Date: September 3, 2013

Work Order: 13082312

Project Location: Eddy Co., NM
Project Name: COG/Lakewood AQE St SWD #1
Project Number: TBD

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
339662	AH-1 0-1'	soil	2013-08-21	00:00	2013-08-23
339663	AH-2 0-6"	soil	2013-08-21	00:00	2013-08-23
339664	AH-3 0-1'	soil	2013-08-21	00:00	2013-08-23
339665	AH-4 0-1'	soil	2013-08-21	00:00	2013-08-23
339666	AH-5 0-1'	soil	2013-08-21	00:00	2013-08-23
339667	AH-6 0-1'	soil	2013-08-21	00:00	2013-08-23
339668	AH-7 0-1'	soil	2013-08-21	00:00	2013-08-23
339669	AH-7 1-1.5'	soil	2013-08-21	00:00	2013-08-23
339670	AH-7 2-2.5'	soil	2013-08-21	00:00	2013-08-23
339671	AH-7 3-3.5'	soil	2013-08-21	00:00	2013-08-23
339672	AH-8 0-1'	soil	2013-08-21	00:00	2013-08-23
339673	AH-9 0-1'	soil	2013-08-21	00:00	2013-08-23
339674	AH-10 0-1'	soil	2013-08-21	00:00	2013-08-23
339675	AH-11 0-1'	soil	2013-08-21	00:00	2013-08-23
339676	AH-11 1-1.5'	soil	2013-08-21	00:00	2013-08-23
339677	AH-12 0-1'	soil	2013-08-21	00:00	2013-08-23
339678	AH-12 1-1.5'	soil	2013-08-21	00:00	2013-08-23
339679	AH-13 0-1'	soil	2013-08-21	00:00	2013-08-23
339680	AH-13 1-1.5'	soil	2013-08-21	00:00	2013-08-23
339681	AH-13 2-2.5'	soil	2013-08-21	00:00	2013-08-23
339682	AH-14 0-1'	soil	2013-08-21	00:00	2013-08-23
339683	AH-14 1-1.5'	soil	2013-08-21	00:00	2013-08-23
339684	AH-14 2-2.5'	soil	2013-08-21	00:00	2013-08-23
339685	AH-15 0-1'	soil	2013-08-21	00:00	2013-08-23
339686	AH-15 1-1.5'	soil	2013-08-21	00:00	2013-08-23
339687	AH-15 2-2.5'	soil	2013-08-21	00:00	2013-08-23
339688	AH-15 3-3.5'	soil	2013-08-21	00:00	2013-08-23

Sample - Field Code	BTEX Benzene (mg/Kg)	BTEX Toluene (mg/Kg)	BTEX Ethylbenzene (mg/Kg)	BTEX Xylene (mg/Kg)	TPH DRO - NEW DRO (mg/Kg)	TPH GRO GRO (mg/Kg)
339662 - AH-1 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
339663 - AH-2 0-6"	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
339664 - AH-3 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
339665 - AH-4 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
339666 - AH-5 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
339667 - AH-6 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
339668 - AH-7 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
339672 - AH-8 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
339673 - AH-9 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
339674 - AH-10 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
339675 - AH-11 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
339677 - AH-12 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
339679 - AH-13 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
339682 - AH-14 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
339685 - AH-15 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00

Sample: 339662 - AH-1 0-1'

Param	Flag	Result	Units	RL
Chloride		**877**	mg/Kg	4

Sample: 339663 - AH-2 0-6"

Param	Flag	Result	Units	RL
Chloride		**1780**	mg/Kg	4

Sample: 339664 - AH-3 0-1'

Param	Flag	Result	Units	RL
Chloride		**2450**	mg/Kg	4

Sample: 339665 - AH-4 0-1'

Param	Flag	Result	Units	RL
Chloride		**1420**	mg/Kg	4

Sample: 339666 - AH-5 0-1'

Param	Flag	Result	Units	RL
Chloride		**1290**	mg/Kg	4

Sample: 339667 - AH-6 0-1'

Param	Flag	Result	Units	RL
Chloride		**1330**	mg/Kg	4

Sample: 339668 - AH-7 0-1'

Param	Flag	Result	Units	RL
Chloride		**1020**	mg/Kg	4

Sample: 339669 - AH-7 1-1.5'

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

Sample: 339670 - AH-7 2-2.5'

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

Sample: 339671 - AH-7 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**262**	mg/Kg	4

Sample: 339672 - AH-8 0-1'

Param	Flag	Result	Units	RL
Chloride		**1630**	mg/Kg	4

Sample: 339673 - AH-9 0-1'

Param	Flag	Result	Units	RL
Chloride		**812**	mg/Kg	4

Sample: 339674 - AH-10 0-1'

Param	Flag	Result	Units	RL
Chloride		**901**	mg/Kg	4

Sample: 339675 - AH-11 0-1'

Param	Flag	Result	Units	RL
Chloride		**2400**	mg/Kg	4

Sample: 339676 - AH-11 1-1.5'

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

Sample: 339677 - AH-12 0-1'

Param	Flag	Result	Units	RL
Chloride		**1680**	mg/Kg	4

Sample: 339678 - AH-12 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**190**	mg/Kg	4

Sample: 339679 - AH-13 0-1'

Param	Flag	Result	Units	RL
Chloride		**6730**	mg/Kg	4

Sample: 339680 - AH-13 1-1.5'

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

Sample: 339681 - AH-13 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**2280**	mg/Kg	4

Sample: 339682 - AH-14 0-1'

Param	Flag	Result	Units	RL
Chloride		**1080**	mg/Kg	4

Sample: 339683 - AH-14 1-1.5'

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

Sample: 339684 - AH-14 2-2.5'

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

Sample: 339685 - AH-15 0-1'

Param	Flag	Result	Units	RL
Chloride		**480**	mg/Kg	4

Sample: 339686 - AH-15 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**145**	mg/Kg	4

Sample: 339687 - AH-15 2-2.5'

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

Sample: 339688 - AH-15 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**305**	mg/Kg	4