SITE INFORMATION

Report Type: Closure Report

General Site Information:						
Site:	State S-19 Tank Battery					
Company:	COG Operating LLC					
Section, Township and Range	Unit J	Sec 19	T17S	R29E		
Lease Number:	30-01532502					
County:	Eddy County					
GPS:	32.8173			104.11283		
Surface Owner:	State					
Mineral Owner:						
Directions:	From the intersection of CR 217 and Hwy 82, travel west on Hwy 82 for 7.5 miles, turn right go 0.5 miles, turn right go 0.1 miles to location .					

Release Data:	Spill #1	Spill #2
Date Released:	1/12/2011	1/13/2011
Type Release:	Produced Water	Produced Water
Source of Contamination:	Tranfer line	water Tank
Fluid Released: bbls	45	20
Fluids Recovered: bbls	35	19

Official Communication:			
Name:	Pat Ellis		Ike Tavarez
Company:	COG Operating, LLC		Tetra Tech
Address:	550 W. Texas Ave. Ste. 1300		1910 N. Big Spring
P.O. Box			
City:	Midland Texas, 79701		Midland, Texas
Phone number:	(432) 686-3023		(432) 425-3878
Fax:	(432) 684-7137		
Email:	pellis@conchoresources.com		ike.tavarez@tetratech.com

Ranking Criteria		
Depth to Groundwater:	Ranking Score	Site Data
<50 ft	20	
50-99 ft	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:	0	

Acceptable Soil RRAL (mg/kg)		
Benzene	Total BTEX	TPH
10	50	5,000

TETRA TECH

January 27, 2012

Mr. Mike Bratcher
Environmental Engineer Specialist
Oil Conservation Division, District 2
1301 West Grand Avenue
Artesia, New Mexico 88210

Re: Closure Report for the COG Operating LLC., State S-19 Tank Battery, Unit J, Section 19, Township 17 South, Range 29 East, Eddy County, New Mexico.

Mr. Bratcher:

Tetra Tech, Inc. (Tetra Tech) was contacted by COG Operating LLC. (COG) to assess two spills from the State S-19 Tank Battery, Unit J, Section 19, Township 17 South, Range 29 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.81730°, W 104.11283°. The site location is shown on Figures 1 and 2.

Background

Spill #1

On January 12, 2011, a leak occurred on a water transfer line and released approximately 45 barrels of produced water. COG immediately responded and recovered 35 barrels of fluid with a vacuum truck. According to the C-141, the spill migrated onto the pad measuring 60' x 60' and an area 6' x 60' off the pad. The initial C-141 form is enclosed in Appendix A.

Spill #2

According to the State of New Mexico C-141 Initial Release Report, the leak was discovered on January 13, 2011, and released approximately twenty (20) barrels of produced fluid from a water tank due to a filter pot and alarm transducer freezing. Approximately 19 barrels were recovered using a vacuum truck. The second spill encompassed the area of the first spill. The spill initiated from the water tank impacting the pad approximately 200' x 30'-45' wide. The spill migrated south off the southern edge of the caliche pad and ran to the east and south direction. The approximate total length of the impacted pasture area measured 275' x 20'-40' wide. The initial C-141 form is enclosed in Appendix A.

Tetra Tech
1910 North Big Spring, Midland,TX 79705
Tel 432.682.4559 Fax 432.682.3946 www.tetratech.com

Groundwater

No water wells were listed within Section 19. Based on the site location and NMOCD groundwater map, the average depth to groundwater in this area is approximately 125' below surface. The average depth to ground water map is shown in Appendix B.

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 5,000 mg/kg.

Soil Assessment and Analytical Results

On January 31, 2011, Tetra Tech personnel inspected and sampled the spill area. Fifteen auger holes (AH-1 through AH-15) were installed using a stainless steel hand auger to assess the impacted soils. Select 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 submitted samples were below the RRAL for TPH and BTEX. Elevated chloride concentrations were detected in majority of the auger holes. Auger holes (AH-11, AH-12 and AH-13) did not show a chloride impact to the soils. A shallow (0-1') chloride impact was detected in the area of AH-1 and AH-10. The remaining auger holes showed a chloride impact and not vertically defined.

In order to vertically define the spill, soil borings were installed to collect deeper samples. On May 2, 2011, Tetra Tech personnel supervised the installation of ten (10) soil bores (SB-1 through SB-10) utilizing an air rotary rig. The results of the sampling are summarized in Table 1. The soil bore locations are shown on Figure 3.

Referring to Table 1, the chloride concentrations at the site significantly declined with depth. A shallow impact was detected in the area of soil borings (SB-1, SB-2 and SB-10) at depths from 3.0' to 5.0' below surface. Soil borings (SB-3, SB-4, SB-6, SB-7, SB-8 and SB-9) did show a slightly deeper impact to a soil at

depths from 5.0' to 7.0' below surface. The deepest chloride impact was detected in the area of SB-5, with declining concentrations from 10.0' to 15.0' below surface.

Closure Activities

Based on the approved work plan, Tetra Tech personnel supervised the excavation of the site. The final excavation depths of the soil remediation were met as stated in the approved work plan. A total of 1,680 cubic yards of soil were excavated and hauled to CRI Inc. for proper disposal. Once excavated to the appropriate depths, the excavation was backfilled with clean soil to grade. The excavation depths are highlighted in Table 1 and shown on Figure 4.

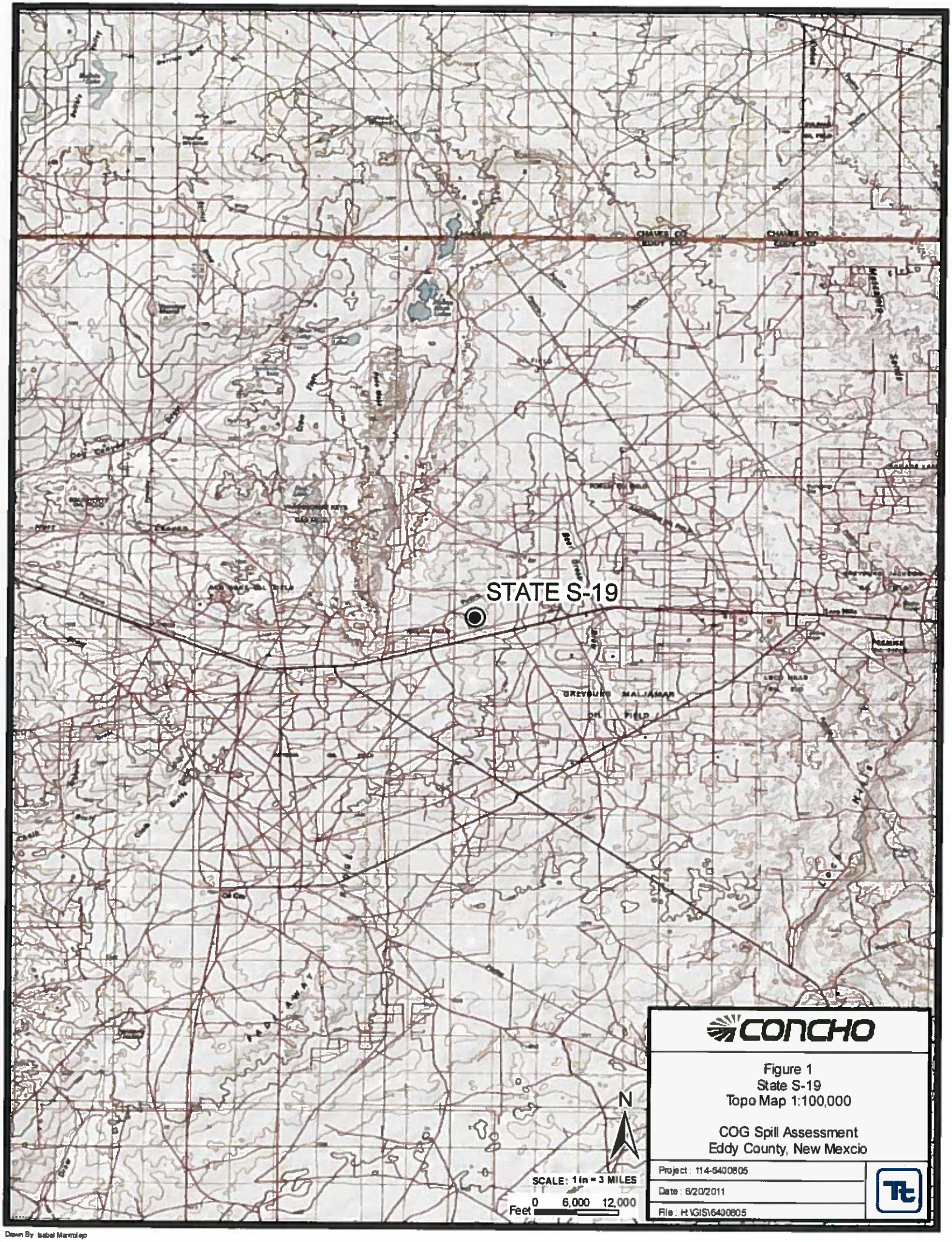
Based on the remedial activities performed, COG request closure of the site. A copy of the C-141 (Final) is included in Appendix A. If you have any questions or comments concerning the remedial activities, please call at (432) 682-4559.

Respectfully submitted,
TETRA TECH

Ike Tavarez, PG
Project Manager

cc: Pat Ellis – COG

Figures



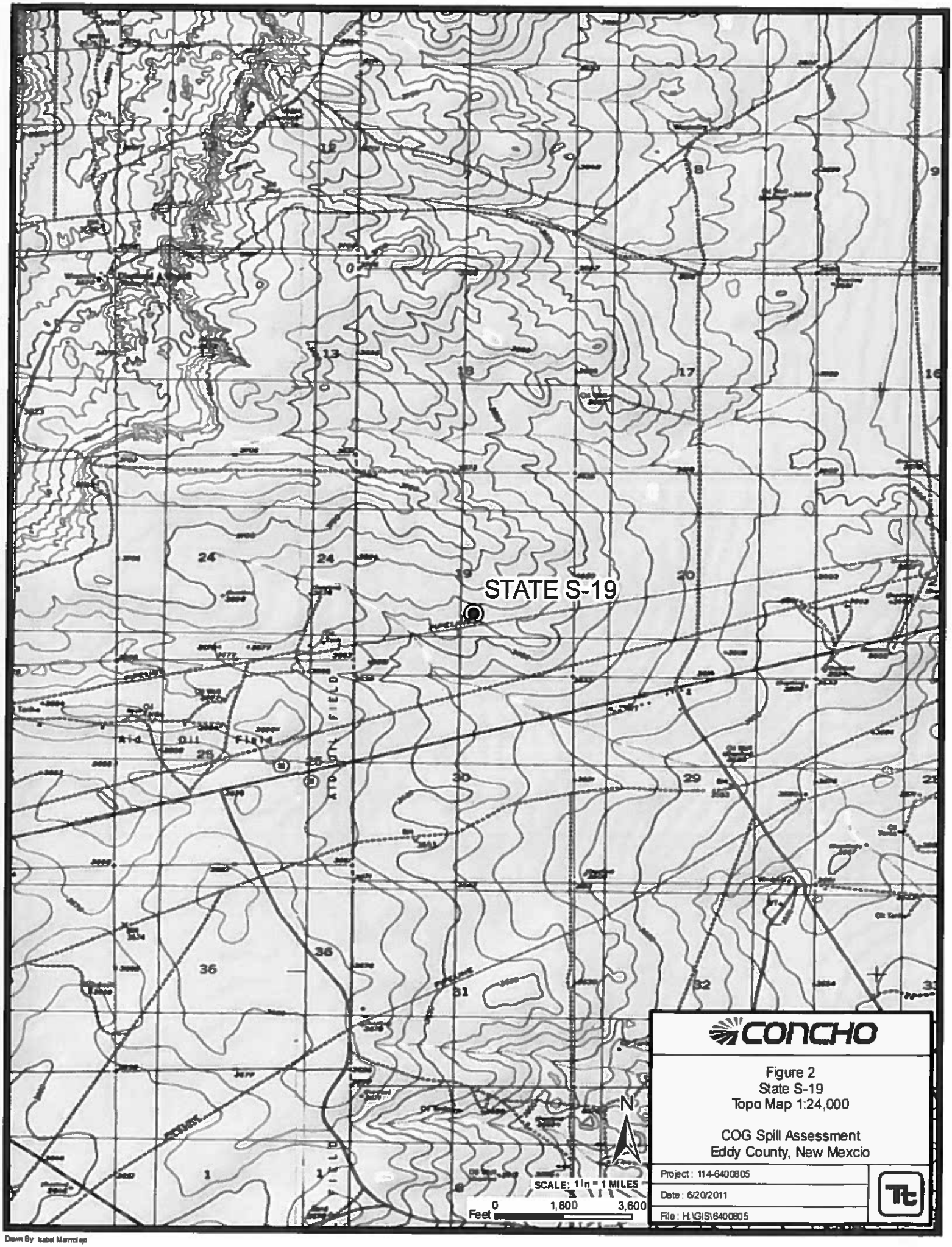
CONCHO

Figure 1
State S-19
Topo Map 1:100,000

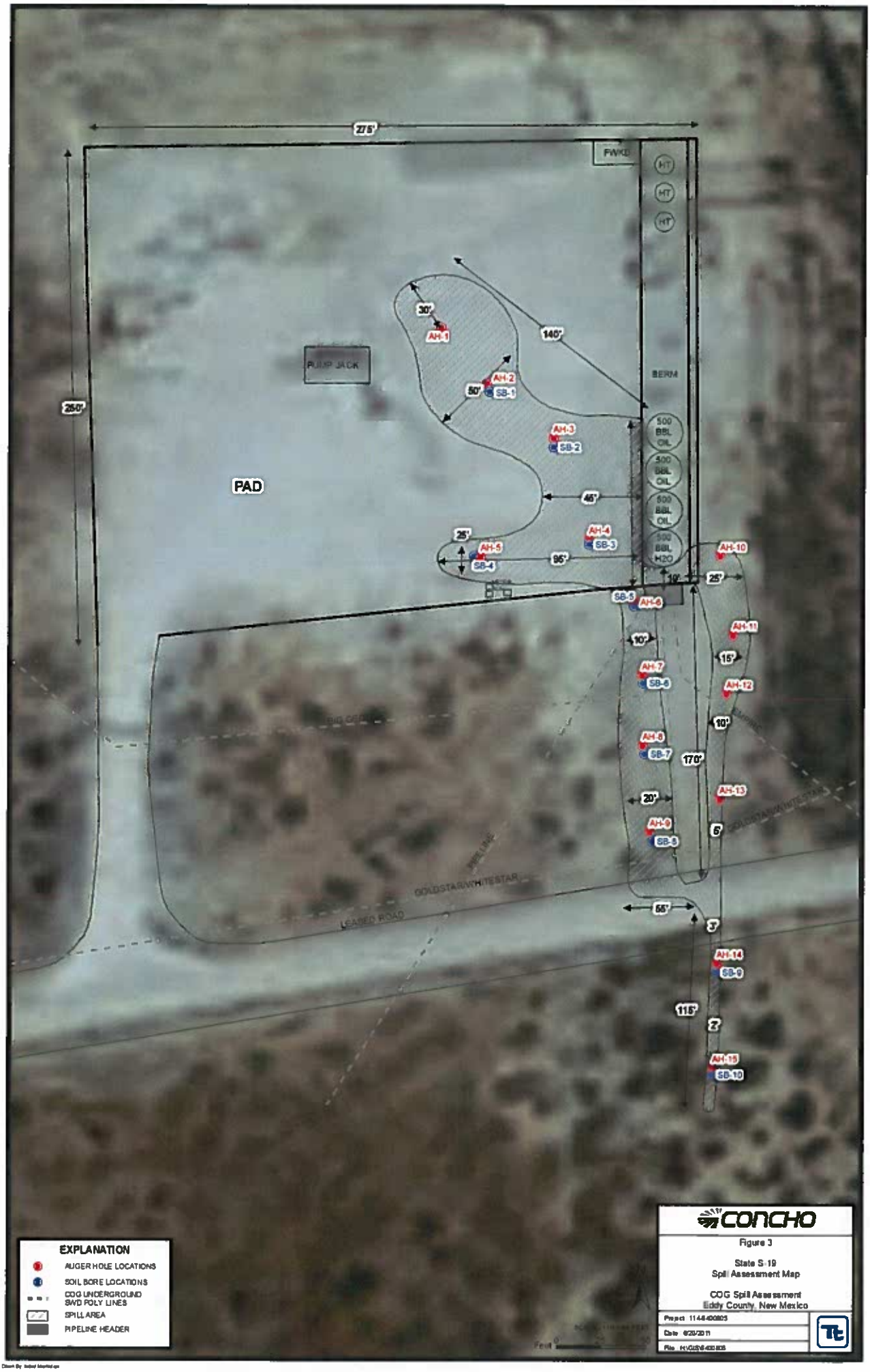
COG Spill Assessment
Eddy County, New Mexcio

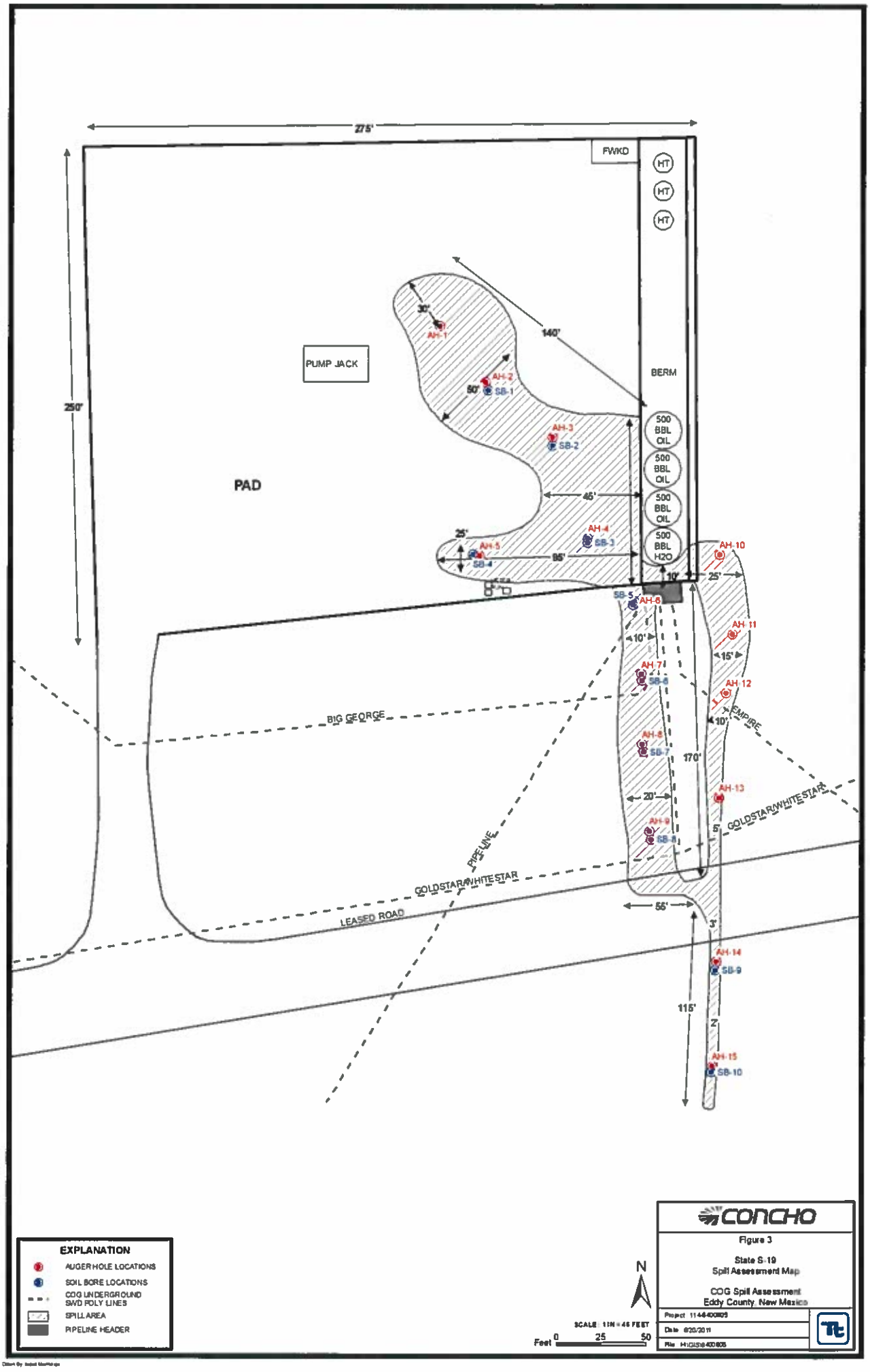
Project : 114-6400805	
Date : 6/20/2011	
File : H:\GIS\6400805	

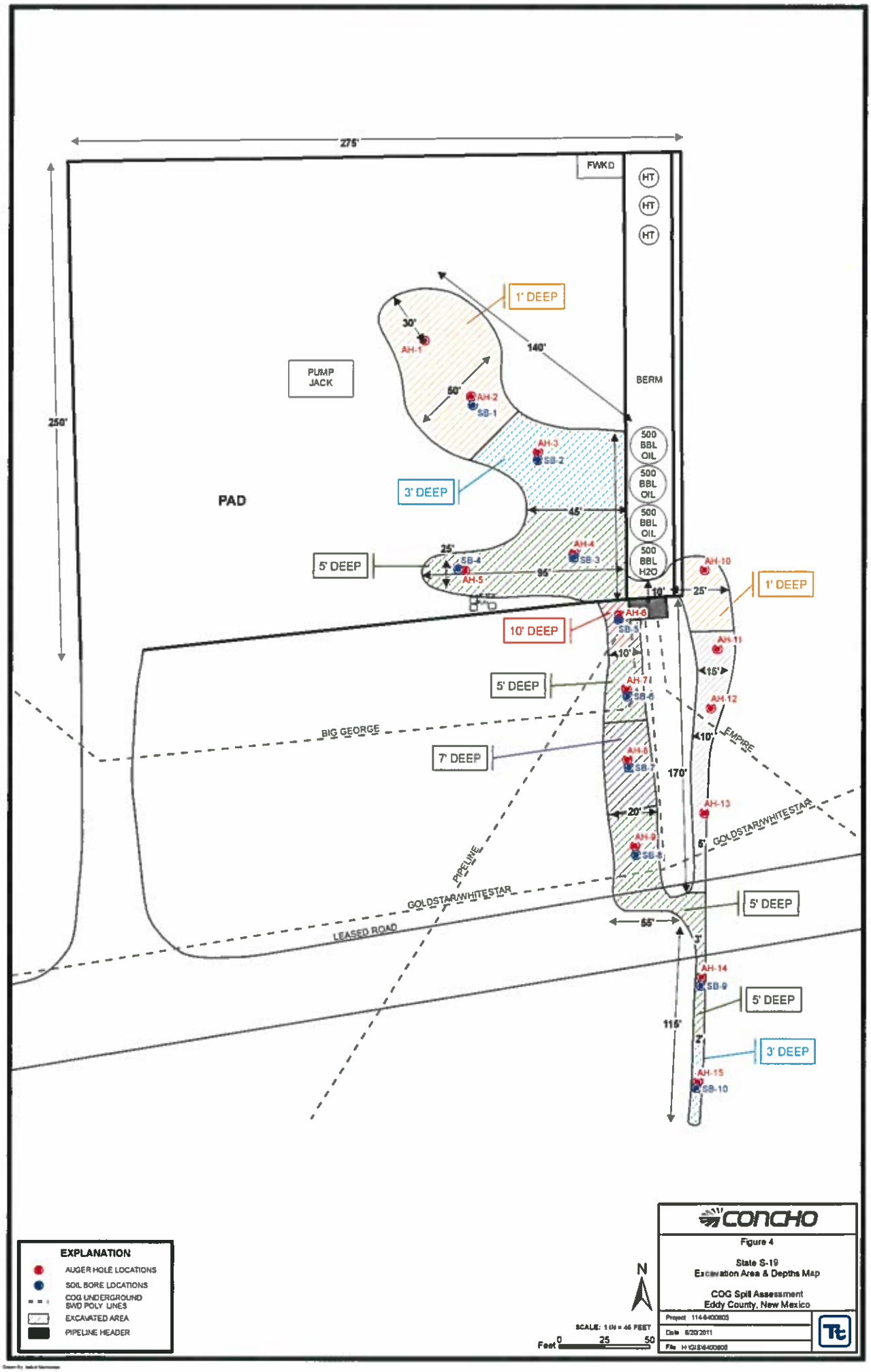
Drawn By: Isabel Marmolejo



Drawn By: Isabel Marmolejo


275'
260'
PAD
PUMP JACK
FW KO
HT
HT
HT
BERM
500 BBL OIL
500 BBL OIL
500 BBL OIL
500 BBL H2O
30'
140'
50'
46'
25'
95'
10'
25'
15'
10'
170'
20'
5'
55'
3'
115'
2'
AH-1
AH-2
SB-1
AH-3
SB-2
AH-4
SB-3
AH-5
SB-4
AH-6
SB-5
AH-7
SB-6
AH-8
SB-7
AH-9
SB-8
AH-10
AH-11
AH-12
AH-13
AH-14
SB-9
AH-15
SB-10
LEASE ROAD
GOLDSTAR/WHITESTAR
PIPELINE
EXPLANATION
AUGER HOLE LOCATIONS
SOIL BORE LOCATIONS
COG UNDERGROUND SWD POLY LINES
SPILL AREA
PIPELINE HEADER
CONCHO
Figure 3
State S-19
Spill Assessment Map
COG Spill Assessment
Eddy County, New Mexico
Project 1144400805
Date 6/23/2011


275'
250'
FWKD
HT
HT
HT
PUMP JACK
PAD
BERM
140'
30'
AH-1
AH-2
SB-1
80'
AH-3
SB-2
500 BBL OIL
500 BBL OIL
500 BBL OIL
500 BBL H2O
45'
25'
AH-4
SB-3
AH-5
SB-4
85'
10'
AH-10
25'
SB-5
AH-6
10'
AH-11
15'
AH-7
SB-6
AH-12
10'
EMPIRE
BIG GEORGE
AH-8
SB-7
170'
20'
AH-13
AH-9
SB-8
5'
GOLDSTAR/WHITESTAR
PIPELINE
GOLDSTAR/WHITESTAR
LEASED ROAD
55'
3'
AH-14
SB-9
115'
2'
AH-15
SB-10
EXPLANATION
AUGER HOLE LOCATIONS
SOIL BORE LOCATIONS
COG UNDERGROUND SWD POLY LINES
SPILL AREA
PIPELINE HEADER
N
SCALE: 1 IN = 46 FEET
Feet 0 25 50
CONCHO
Figure 3
State S-19
Spill Assessment Map
COG Spill Assessment
Eddy County, New Mexico
Project: 1144400805
Date: 6/20/2011
File: H:\GIS\1400805


275'
250'
FWKD
HT
HT
HT
1' DEEP
30'
AH-1
140'
PUMP JACK
BERM
50'
AH-2
SB-1
500 BBL OIL
AH-3
SB-2
500 BBL OIL
3' DEEP
PAD
45'
500 BBL OIL
25'
AH-4
SB-4
SB-3
5' DEEP
AH-5
95'
500 BBL H2O
AH-10
1' DEEP
10'
25'
AH-6
SB-5
10' DEEP
AH-11
10'
15'
5' DEEP
AH-7
SB-6
AH-12
BIG GEORGE
EMPIRE
10'
7' DEEP
AH-8
SB-7
170'
AH-13
20'
AH-9
SB-8
5'
GOLDSTAR/WHITESTAR
PIPELINE
GOLDSTAR/WHITESTAR
5' DEEP
LEASED ROAD
55'
3'
AH-14
SB-9
5' DEEP
115'
2'
3' DEEP
AH-15
SB-10
EXPLANATION
AUGER HOLE LOCATIONS
SOIL BORE LOCATIONS
COG UNDERGROUND SWD POLY LINES
EXCAVATED AREA
PIPELINE HEADER
N
SCALE: 1 IN = 45 FEET
Feet 0 25 50
CONCHO
Figure 4
State S-19
Excavation Area & Depths Map
COG Spill Assessment
Eddy County, New Mexico
Project 1148400805
Date 6/20/2011
File H:\GIS\1148400805

Tables

Table 1
COG Operating LLC.
State S-19 #6
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	Total					
AH-1	1/31/2011	0-1'		X	14.8	<50.0	14.8	<0.0200	0.121	0.156	0.486	7,960
	"	1-1.5'	X		-	-	-	-	-	-	-	<200
	"	2-2.5'	X		-	-	-	-	-	-	-	<200
	"	3-3.5'	X		-	-	-	-	-	-	-	<200
	"	4-4.5'	X		-	-	-	-	-	-	-	<200
	"	5-5.5'	X		-	-	-	-	-	-	-	<200
AH-2	1/31/2011	0-0.5'		X	3.87	<50.0	3.87	<0.0200	<0.0200	0.120	0.39	2,780
SB-1	5/2/2011	0-1'		X	-	-	-	-	-	-	-	8,520
	"	3'	X		-	-	-	-	-	-	-	661
	"	5'	X		-	-	-	-	-	-	-	261
	"	7'	X		-	-	-	-	-	-	-	626
	"	10'	X		-	-	-	-	-	-	-	<200
	"	15'	X		-	-	-	-	-	-	-	<200
	"	20'	X		-	-	-	-	-	-	-	<200

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COG Operating LLC.
State S-19 #6
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	Total					
AH-3	1/31/2011	0-0.5'		X	<2.00	<50.0	<50.0	-	-	-	-	8,750
SB-2	5/2/2011	0-1'		X	-	-	-	-	-	-	-	4,890
	"	3'		X	-	-	-	-	-	-	-	2,090
	"	5'	X		-	-	-	-	-	-	-	<200
	"	7'	X		-	-	-	-	-	-	-	206
	"	10'	X		-	-	-	-	-	-	-	<200
	"	15'	X		-	-	-	-	-	-	-	<200
	"	20'	X		-	-	-	-	-	-	-	<200
AH-4	1/31/2011	0-0.5'		X	<2.00	<50.0	<50.0	-	-	-	-	10,800
SB-3	5/2/2011	0-1'		X	-	-	-	-	-	-	-	8,890
	"	3'		X	-	-	-	-	-	-	-	1,330
	"	5'		X	-	-	-	-	-	-	-	3,810
	"	7'	X		-	-	-	-	-	-	-	<200
	"	10'	X		-	-	-	-	-	-	-	<200
	"	15'	X		-	-	-	-	-	-	-	<200
	"	20'	X		-	-	-	-	-	-	-	<200

Table 1
COG Operating LLC.
State S-19 #6
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	Total					
AH-5	1/31/2011	0-0.5'		X	<2.00	<50.0	<50.0	-	-	-	-	10,900
SB-4	5/2/2011	0-1'		X	-	-	-	-	-	-	-	11,200
	"	3'		X	-	-	-	-	-	-	-	1,700
	"	5'		X	-	-	-	-	-	-	-	6,070
	"	7'	X		-	-	-	-	-	-	-	<200
	"	10'	X		-	-	-	-	-	-	-	<200
	"	15'	X		-	-	-	-	-	-	-	234
	"	20'	X		-	-	-	-	-	-	-	<200
	"	25'	X		-	-	-	-	-	-	-	<200
	"	30'	X		-	-	-	-	-	-	-	204

Table 1
COG Operating LLC.
State S-19 #6
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	Total					
AH-6	1/31/2011	0-1'		X	<2.00	<50.0	<50.0	-	-	-	-	9,280
SB-5	5/3/2011	0-1'		X	-	-	-	-	-	-	-	6,740
	"	3'		X	-	-	-	-	-	-	-	9,740
	"	5'		X	-	-	-	-	-	-	-	7,880
	"	7'		X	-	-	-	-	-	-	-	6,950
	"	10'		X	-	-	-	-	-	-	-	4,240
	"	15'	X		-	-	-	-	-	-	-	901
	"	20'	X		-	-	-	-	-	-	-	682
	"	25'	X		-	-	-	-	-	-	-	326
	"	30'	X		-	-	-	-	-	-	-	<200
	"	40'	X		-	-	-	-	-	-	-	<200

Table 1
COG Operating LLC.
State S-19 #6
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	Total					
AH-7	1/31/2011	0-1'		X	<2.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	5,000
	"	1-1.5'		X	-	-	-	-	-	-	-	9,960
SB-6	5/3/2011	3'		X	-	-	-	-	-	-	-	7,070
	"	5'		X	-	-	-	-	-	-	-	3,400
	"	7'	X		-	-	-	-	-	-	-	1,630
	"	10'	X		-	-	-	-	-	-	-	1,730
	"	15'	X		-	-	-	-	-	-	-	<200
	"	20'	X		-	-	-	-	-	-	-	280
	"	25'	X		-	-	-	-	-	-	-	<200
	"	30'	X		-	-	-	-	-	-	-	227
	"	40'	X		-	-	-	-	-	-	-	<200

Table 1
COG Operating LLC.
State S-19 #6
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	Total					
AH-8	1/31/2011	0-1'		X	<2.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	8,500
	"	1-1.5'		X	-	-	-	-	-	-	-	10,200
SB-7	5/3/2011	3'		X	-	-	-	-	-	-	-	7,860
	"	5'		X	-	-	-	-	-	-	-	7,990
	"	7'		X	-	-	-	-	-	-	-	7,920
	"	10'	X		-	-	-	-	-	-	-	1,360
	"	15'	X		-	-	-	-	-	-	-	394
	"	20'	X		-	-	-	-	-	-	-	232
	"	25'	X		-	-	-	-	-	-	-	232
	"	30'	X		-	-	-	-	-	-	-	<200

Table 1
COG Operating LLC.
State S-19 #6
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	Total					
AH-9	1/31/2011	0-1'		X	<2.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	8,760
	"	1-1.5'		X	-	-	-	-	-	-	-	13,500
SB-8	5/3/2011	3'		X	-	-	-	-	-	-	-	13,700
	"	5'		X	-	-	-	-	-	-	-	12,600
	"	7'	X		-	-	-	-	-	-	-	1,600
	"	10'	X		-	-	-	-	-	-	-	788
	"	15'	X		-	-	-	-	-	-	-	311
	"	20'	X		-	-	-	-	-	-	-	284
	"	25'	X		-	-	-	-	-	-	-	289
	"	30'	X		-	-	-	-	-	-	-	<200
AH-10	1/31/23011	0-1'		X	<2.00	<50.0	<50.0	-	-	-	-	2,020
	"	1-1.5'	X		-	-	-	-	-	-	-	<200
	"	2-2.5'	X		-	-	-	-	-	-	-	433
AH-11	1/31/2011	0-1'	X		<2.00	<50.0	<50.0	<0.200	<0.200	<0.200	<0.200	352
	"	1-1.5'	X		-	-	-	-	-	-	-	449

Table 1
COG Operating LLC.
State S-19 #6
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	Total					
AH-12	1/31/2011	0-0.5'	X		<2.00	<50.0	<50.0	-	-	-	-	209
AH-13	1/31/2011	0-1'	X		<2.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	617
AH-14	1/31/2011	0-1'		X	<2.00	<50.0	<50.0	-	-	-	-	9,140
SB-9	5/4/2011	0-1'		X	-	-	-	-	-	-	-	5,840
	"	3'		X	-	-	-	-	-	-	-	12,200
	"	5'		X	-	-	-	-	-	-	-	8,070
	"	7'	X		-	-	-	-	-	-	-	1,540
	"	10'	X		-	-	-	-	-	-	-	204
	"	15'	X		-	-	-	-	-	-	-	<200
	"	20'	X		-	-	-	-	-	-	-	<200

Table 1
COG Operating LLC.
State S-19 #6
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	Total					
AH-15	1/31/2011	0-0.5'		X	<2.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	918
SB-10	5/4/2011	0-1'		X	-	-	-	-	-	-	-	6,020
	"	3'		X	-	-	-	-	-	-	-	5,410
	"	5'	X		-	-	-	-	-	-	-	745
	"	7'	X		-	-	-	-	-	-	-	2,570
	"	10'	X		-	-	-	-	-	-	-	249
	"	15'	X		-	-	-	-	-	-	-	314
	"	20'	X		-	-	-	-	-	-	-	259

(--) Not Analyzed

Excavated Depths

Photos

COG Operating LLC
State S-19 Tank Battery
Eddy County, New Mexico

TETRA TECH

View North – SB-6 and 5

View South – SB-7 and 8

COG Operating LLC
State S-19 Tank Battery
Eddy County, New Mexico

TETRA TECH

View South – SB-9 and 10

View West – SB-1

COG Operating LLC
State S-19 Tank Battery
Eddy County, New Mexico

TETRA TECH

View East – SB-3

View East – SB-4

COG Operating LLC
State S-19 Tank Battery
Eddy County, New Mexico

TETRA TECH

Backfill

Backfill

Appendix A

Spill #7

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	550 W. Texas, Suite 100, Midland, TX 79701	Telephone No.	432-230-0077
Facility Name	State S-19	Facility Type	Tank Battery

Surface Owner State	Mineral Owner	Lease No. (API#) 30-015-32502

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	19	17S	29E					Eddy

Latitude 32 49.042 Longitude 104 06.767

NATURE OF RELEASE

Type of Release Produced water	Volume of Release 45bbls	Volume Recovered 35bbls
Source of Release Water transfer line	Date and Hour of Occurrence 01/12/2011	Date and Hour of Discovery 01/12/2011 8:00 a.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher—OCD	
By Whom? Josh Russo	Date and Hour 01/12/2010 11:03 p.m.	
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.*

Water transfer line ruptured. The line has been replaced with plastic coated steel.

Describe Area Affected and Cleanup Action Taken.*

Initially 45bbls was released from the ruptured line and we were able to recover 35bbls with a vacuum truck. Skim of produced water traveled from source to pad location measuring area 60' x 60'. Also, 6' x 60' area off of pad. All fluid has been picked up, pad location has been scraped of contaminates. Tetra Tech will sample the spill site area to delineate any possible contamination from the release and we will submit a remediation work plan 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:	OIL CONSERVATION DIVISION	
Printed Name: Josh Russo	Approved by District Supervisor:	
Title: HSE Coordinator	Approval Date:	Expiration Date:
E-mail Address: jrusso@conchoresources.com	Conditions of Approval:	Attached ☐
Date: 01/24/2011 Phone: 432-212-2399		

* Attach Additional Sheets If Necessary

Spill #2

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

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Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	COG OPERATING LLC	Contact	Pat Ellis
Address	550 W. Texas, Suite 100, Midland, TX 79701	Telephone No.	432-230-0077
Facility Name	State S-19	Facility Type	Tank Battery

Surface Owner State	Mineral Owner	Lease No. (API#) 30-015-32502

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	19	17S	29E					Eddy

Latitude 32 49.042 Longitude 104 06.767

NATURE OF RELEASE

Type of Release Produced water	Volume of Release 20bbls	Volume Recovered 19bbls
Source of Release Water tank	Date and Hour of Occurrence 01/13/2011	Date and Hour of Discovery 01/13/2011 8:00 a.m.
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.*

Filter pot and alarm transducer froze. Thawed out the filter pot and replaced filters; repaired alarm transducer.

Describe Area Affected and Cleanup Action Taken.*

Initially 20bbls was released from the water tank and we were able to recover 19bbls of fluid. The spill was completely contained on the location and the released fluid traveled the same path as previous spill. All fluid has been picked up, pad location has been scraped of contaminates. Tetra Tech will sample the spill site area to delineate any possible contamination from the release and we will submit a remediation work plan 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:	OIL CONSERVATION DIVISION	
Printed Name: Josh Russo	Approved by District Supervisor:	
Title: HSE Coordinator	Approval Date:	Expiration Date:
E-mail Address: jrusso@conchoresources.com	Conditions of Approval:	Attached ☐
Date: 01/25/2011 Phone: 432-212-2399		

* Attach Additional Sheets If Necessary

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

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Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company **COG Operating LLC**	Contact **Pat Ellis**
Address **550 W. Texas, Suite 1300 Midland, Texas 79701**	Telephone No. **(432) 230-0077**
Facility Name State S-19	Facility Type **Tank Battery**

Surface Owner: State	Mineral Owner	Lease No. (API#) 30-015-32502

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	19	17S	29E					Eddy

Latitude 32 49.042 **Longitude** 104 06.767

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release 45 bbls	Volume Recovered 35 bbls
Source of Release: Water Transfer Line	Date and Hour of Occurrence 01/12/2011	Date and Hour of Discovery 01/12/2011 8:00 a.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher--OCD	
By Whom? Josh Russo	Date and Hour 01/12/2010 11:03 p.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*

N/A

Describe Cause of Problem and Remedial Action Taken.*

Water transfer line ruptured. The line has been replaced with plastic coated steel.

Describe Area Affected and Cleanup Action Taken.*

Tetra Tech personal inspected the site and collected samples to define the spills extent. The soil that exceeded RRAL was removed and hauled away for proper disposal. The site was then brought up to surface grade with clean backfill material. Tetra Tech prepared a closure report and submitted it to the NMOCD for review.

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:	OIL CONSERVATION DIVISION	
Printed Name: Ike Tavarez (Agent for COG)	Approved by District Supervisor:	
Title: Project Manager	Approval Date:	Expiration Date:
E-mail Address: Ike.Tavarez@TetraTech.com	Conditions of Approval:	Attached ☐
Date: 1-27-12 Phone: (432) 682-4559		

* Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
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Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company **COG Operating LLC**	Contact **Pat Ellis**
Address **550 W. Texas, Suite 1300 Midland, Texas 79701**	Telephone No. **(432) 230-0077**
Facility Name State S-19	Facility Type **Tank Battery**

Surface Owner: State	Mineral Owner	Lease No. (API#) 30-015-32502

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	19	17S	29E					Eddy

Latitude 32 49.042 **Longitude** 104 06.767

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release 20 bbls	Volume Recovered 19 bbls
Source of Release: Water Tank	Date and Hour of Occurrence 01/13/2011	Date and Hour of Discovery 01/13/2011 8:00 a.m.
Was Immediate Notice Given? ☐ Yes ☒ No ☒ Not Required	If YES, To Whom?	
By Whom? Josh Russo	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*

N/A

Describe Cause of Problem and Remedial Action Taken.*

Filter pot and alarm transducer froze. Thawed out the filter pot and replaced filtered; repaired alarm transducer.

Describe Area Affected and Cleanup Action Taken.*

Tetra Tech personal inspected the site and collected samples to define the spill extents. The soil that exceeded RRAL was removed and hauled away for proper disposal. The site was then brought up to surface grade with clean backfill material. Tetra Tech prepared a closure report and submitted it to the NMOCD for review.

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:	OIL CONSERVATION DIVISION	
Printed Name: Ike Tavarez (agent for COG)	Approved by District Supervisor:	
Title: Project Manager	Approval Date:	Expiration Date:
E-mail Address: Ike.Tavarez@TetraTech.com	Conditions of Approval:	Attached ☐
Date: 1-27-12 Phone: (432) 682-4559		

* Attach Additional Sheets If Necessary

Appendix B

Water Well Data
Average Depth to Groundwater (ft)
COG - State S-19
Eddy County, New Mexico

16 South 28 East

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

16 South 29 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19 110	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

16 South 30 East

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

17 South 28 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22 79	23	24
30	29	28	27	26	25
31	32	33	34 53	35	36

17 South 29 East

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

17 South 30 East

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

18 South 28 East

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

18 South 29 East

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

18 South 30 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	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
- Site Location - State S-19

Appendix C

Summary Report

Kim Dorey
Tetra Tech
1910 N. Big Spring Street
Midland, TX 79705

Report Date: May 18, 2011

Work Order: 11050412

Project Location: Eddy Co., NM
Project Name: COG/State S-19
Project Number: 114-6400805

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
265469	SB-1 0-1'	soil	2011-05-02	00:00	2011-05-04
265470	SB-1 3'	soil	2011-05-02	00:00	2011-05-04
265471	SB-1 5'	soil	2011-05-02	00:00	2011-05-04
265472	SB-1 7'	soil	2011-05-02	00:00	2011-05-04
265473	SB-1 10'	soil	2011-05-02	00:00	2011-05-04
265474	SB-1 15'	soil	2011-05-02	00:00	2011-05-04
265475	SB-1 20'	soil	2011-05-02	00:00	2011-05-04
265476	SB-2 0-1'	soil	2011-05-02	00:00	2011-05-04
265477	SB-2 3'	soil	2011-05-02	00:00	2011-05-04
265478	SB-2 5'	soil	2011-05-02	00:00	2011-05-04
265479	SB-2 7'	soil	2011-05-02	00:00	2011-05-04
265480	SB-2 10'	soil	2011-05-02	00:00	2011-05-04
265481	SB-2 15'	soil	2011-05-02	00:00	2011-05-04
265482	SB-2 20'	soil	2011-05-02	00:00	2011-05-04
265483	SB-3 0-1'	soil	2011-05-02	00:00	2011-05-04
265484	SB-3 3'	soil	2011-05-02	00:00	2011-05-04
265485	SB-3 5'	soil	2011-05-02	00:00	2011-05-04
265486	SB-3 7'	soil	2011-05-02	00:00	2011-05-04
265487	SB-3 10'	soil	2011-05-02	00:00	2011-05-04
265488	SB-3 15'	soil	2011-05-02	00:00	2011-05-04
265489	SB-3 20'	soil	2011-05-02	00:00	2011-05-04
265490	SB-4 0-1'	soil	2011-05-02	00:00	2011-05-04
265491	SB-4 3'	soil	2011-05-02	00:00	2011-05-04
265492	SB-4 5'	soil	2011-05-02	00:00	2011-05-04
265493	SB-4 7'	soil	2011-05-02	00:00	2011-05-04
265494	SB-4 10'	soil	2011-05-02	00:00	2011-05-04
265495	SB-4 15'	soil	2011-05-02	00:00	2011-05-04
265496	SB-4 20'	soil	2011-05-02	00:00	2011-05-04
265497	SB-4 25'	soil	2011-05-02	00:00	2011-05-04
265498	SB-4 30'	soil	2011-05-02	00:00	2011-05-04

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
265499	SB-5 0-1'	soil	2011-05-03	00:00	2011-05-04
265500	SB-5 3'	soil	2011-05-03	00:00	2011-05-04
265501	SB-5 5'	soil	2011-05-03	00:00	2011-05-04
265502	SB-5 7'	soil	2011-05-03	00:00	2011-05-04
265503	SB-5 10'	soil	2011-05-03	00:00	2011-05-04
265504	SB-5 15'	soil	2011-05-03	00:00	2011-05-04
265505	SB-5 20'	soil	2011-05-03	00:00	2011-05-04
265506	SB-5 25'	soil	2011-05-03	00:00	2011-05-04
265507	SB-5 30'	soil	2011-05-03	00:00	2011-05-04
265508	SB-5 40'	soil	2011-05-03	00:00	2011-05-04
265509	SB-6 3'	soil	2011-05-03	00:00	2011-05-04
265510	SB-6 5'	soil	2011-05-03	00:00	2011-05-04
265511	SB-6 7'	soil	2011-05-03	00:00	2011-05-04
265512	SB-6 10'	soil	2011-05-03	00:00	2011-05-04
265513	SB-6 15'	soil	2011-05-03	00:00	2011-05-04
265514	SB-6 20'	soil	2011-05-03	00:00	2011-05-04
265515	SB-6 25'	soil	2011-05-03	00:00	2011-05-04
265516	SB-6 30'	soil	2011-05-03	00:00	2011-05-04
265517	SB-6 40'	soil	2011-05-03	00:00	2011-05-04
265518	SB-7 3'	soil	2011-05-03	00:00	2011-05-04
265519	SB-7 5'	soil	2011-05-03	00:00	2011-05-04
265520	SB-7 7'	soil	2011-05-03	00:00	2011-05-04
265521	SB-7 10'	soil	2011-05-03	00:00	2011-05-04
265522	SB-7 15'	soil	2011-05-03	00:00	2011-05-04
265523	SB-7 20'	soil	2011-05-03	00:00	2011-05-04
265524	SB-7 25'	soil	2011-05-03	00:00	2011-05-04
265525	SB-7 30'	soil	2011-05-03	00:00	2011-05-04
265526	SB-8 3'	soil	2011-05-03	00:00	2011-05-04
265527	SB-8 5'	soil	2011-05-03	00:00	2011-05-04
265528	SB-8 7'	soil	2011-05-03	00:00	2011-05-04
265529	SB-8 10'	soil	2011-05-03	00:00	2011-05-04
265530	SB-8 15'	soil	2011-05-03	00:00	2011-05-04
265531	SB-8 20'	soil	2011-05-03	00:00	2011-05-04
265532	SB-8 25'	soil	2011-05-03	00:00	2011-05-04
265533	SB-8 30'	soil	2011-05-03	00:00	2011-05-04

Sample: 265469 - SB-1 0-1'

Param	Flag	Result	Units	RL
Chloride		**8520**	mg/Kg	4

Sample: 265470 - SB-1 3'

continued ...

sample 265470 continued ...

Param	Flag	Result	Units	RL

Param	Flag	Result	Units	RL
Chloride		**661**	mg/Kg	4

Sample: 265471 - SB-1 5'

Param	Flag	Result	Units	RL
Chloride		**261**	mg/Kg	4

Sample: 265472 - SB-1 7'

Param	Flag	Result	Units	RL
Chloride		**626**	mg/Kg	4

Sample: 265473 - SB-1 10'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 265474 - SB-1 15'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 265475 - SB-1 20'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 265476 - SB-2 0-1'

Param	Flag	Result	Units	RL
Chloride		**4890**	mg/Kg	4

Sample: 265477 - SB-2 3'

Param	Flag	Result	Units	RL
Chloride		**2090**	mg/Kg	4

Sample: 265478 - SB-2 5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 265479 - SB-2 7'

Param	Flag	Result	Units	RL
Chloride		**206**	mg/Kg	4

Sample: 265480 - SB-2 10'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 265481 - SB-2 15'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 265482 - SB-2 20'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 265483 - SB-3 0-1'

Param	Flag	Result	Units	RL
Chloride		**8890**	mg/Kg	4

Sample: 265484 - SB-3 3'

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

Sample: 265485 - SB-3 5'

Param	Flag	Result	Units	RL
Chloride		**3810**	mg/Kg	4

Sample: 265486 - SB-3 7'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 265487 - SB-3 10'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 265488 - SB-3 15'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 265489 - SB-3 20'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 265490 - SB-4 0-1'

Param	Flag	Result	Units	RL
Chloride		**11200**	mg/Kg	4

Sample: 265491 - SB-4 3'

Param	Flag	Result	Units	RL
Chloride		**1700**	mg/Kg	4

Sample: 265492 - SB-4 5'

Param	Flag	Result	Units	RL
Chloride		**6070**	mg/Kg	4

Sample: 265493 - SB-4 7'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 265494 - SB-4 10'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 265495 - SB-4 15'

Param	Flag	Result	Units	RL
Chloride		**234**	mg/Kg	4

Sample: 265496 - SB-4 20'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 265497 - SB-4 25'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 265498 - SB-4 30'

Param	Flag	Result	Units	RL
Chloride		**204**	mg/Kg	4

Sample: 265499 - SB-5 0-1'

Param	Flag	Result	Units	RL
Chloride		**6740**	mg/Kg	4

Sample: 265500 - SB-5 3'

Param	Flag	Result	Units	RL
Chloride		**9740**	mg/Kg	4

Sample: 265501 - SB-5 5'

Param	Flag	Result	Units	RL
Chloride		**7880**	mg/Kg	4

Sample: 265502 - SB-5 7'

Param	Flag	Result	Units	RL
Chloride		**6950**	mg/Kg	4

Sample: 265503 - SB-5 10'

Param	Flag	Result	Units	RL
Chloride		**4240**	mg/Kg	4

Sample: 265504 - SB-5 15'

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

Sample: 265505 - SB-5 20'

Param	Flag	Result	Units	RL
Chloride		**682**	mg/Kg	4

Sample: 265506 - SB-5 25'

Param	Flag	Result	Units	RL
Chloride		**326**	mg/Kg	4

Sample: 265507 - SB-5 30'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 265508 - SB-5 40'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 265509 - SB-6 3'

Param	Flag	Result	Units	RL
Chloride		**7070**	mg/Kg	4

Sample: 265510 - SB-6 5'

Param	Flag	Result	Units	RL
Chloride		**3400**	mg/Kg	4

Sample: 265511 - SB-6 7'

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

Sample: 265512 - SB-6 10'

Param	Flag	Result	Units	RL
Chloride		**1730**	mg/Kg	4

Sample: 265513 - SB-6 15'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 265514 - SB-6 20'

Param	Flag	Result	Units	RL
Chloride		**280**	mg/Kg	4

Sample: 265515 - SB-6 25'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 265516 - SB-6 30'

Param	Flag	Result	Units	RL
Chloride		**227**	mg/Kg	4

Sample: 265517 - SB-6 40'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 265518 - SB-7 3'

Param	Flag	Result	Units	RL
Chloride		**7860**	mg/Kg	4

Sample: 265519 - SB-7 5'

Param	Flag	Result	Units	RL
Chloride		**7990**	mg/Kg	4

Sample: 265520 - SB-7 7'

Param	Flag	Result	Units	RL
Chloride		**7920**	mg/Kg	4

Sample: 265521 - SB-7 10'

Param	Flag	Result	Units	RL
Chloride		**1360**	mg/Kg	4

Sample: 265522 - SB-7 15'

Param	Flag	Result	Units	RL
Chloride		**394**	mg/Kg	4

Sample: 265523 - SB-7 20'

Param	Flag	Result	Units	RL
Chloride		**232**	mg/Kg	4

Sample: 265524 - SB-7 25'

Param	Flag	Result	Units	RL
Chloride		**232**	mg/Kg	4

Sample: 265525 - SB-7 30'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 265526 - SB-8 3'

Param	Flag	Result	Units	RL
Chloride		**13700**	mg/Kg	4

Sample: 265527 - SB-8 5'

Param	Flag	Result	Units	RL
Chloride		**12600**	mg/Kg	4

Sample: 265528 - SB-8 7'

Param	Flag	Result	Units	RL
Chloride		**1600**	mg/Kg	4

Sample: 265529 - SB-8 10'

Param	Flag	Result	Units	RL
Chloride		**788**	mg/Kg	4

Sample: 265530 - SB-8 15'

Param	Flag	Result	Units	RL
Chloride		**311**	mg/Kg	4

Sample: 265531 - SB-8 20'

Param	Flag	Result	Units	RL
Chloride		**284**	mg/Kg	4

Sample: 265532 - SB-8 25'

Param	Flag	Result	Units	RL
Chloride		**289**	mg/Kg	4

Sample: 265533 - SB-8 30'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Summary Report

Kim Dorey
Tetra Tech
1910 N. Big Spring Street
Midland, TX 79705

Report Date: May 19, 2011

Work Order: 11050603

Project Location: Eddy Co., NM
Project Name: COG/State S-19
Project Number: 114-6400805

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
265749	SB-9 0-1'	soil	2011-05-04	00:00	2011-05-05
265750	SB-9 3'	soil	2011-05-04	00:00	2011-05-05
265751	SB-9 5'	soil	2011-05-04	00:00	2011-05-05
265752	SB-9 7'	soil	2011-05-04	00:00	2011-05-05
265753	SB-9 10'	soil	2011-05-04	00:00	2011-05-05
265754	SB-9 15'	soil	2011-05-04	00:00	2011-05-05
265755	SB-9 20'	soil	2011-05-04	00:00	2011-05-05
265756	SB-10 0-1'	soil	2011-05-04	00:00	2011-05-05
265757	SB-10 3'	soil	2011-05-04	00:00	2011-05-05
265758	SB-10 5'	soil	2011-05-04	00:00	2011-05-05
265759	SB-10 7'	soil	2011-05-04	00:00	2011-05-05
265760	SB-10 10'	soil	2011-05-04	00:00	2011-05-05
265761	SB-10 15'	soil	2011-05-04	00:00	2011-05-05
265762	SB-10 20'	soil	2011-05-04	00:00	2011-05-05

Sample: 265749 - SB-9 0-1'

Param	Flag	Result	Units	RL
Chloride		**5840**	mg/Kg	4

Sample: 265750 - SB-9 3'

Param	Flag	Result	Units	RL
Chloride		**12200**	mg/Kg	4

Sample: 265751 - SB-9 5'

Param	Flag	Result	Units	RL
Chloride		**8070**	mg/Kg	4

Sample: 265752 - SB-9 7'

Param	Flag	Result	Units	RL
Chloride		**1540**	mg/Kg	4

Sample: 265753 - SB-9 10'

Param	Flag	Result	Units	RL
Chloride		**204**	mg/Kg	4

Sample: 265754 - SB-9 15'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 265755 - SB-9 20'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 265756 - SB-10 0-1'

Param	Flag	Result	Units	RL
Chloride		**6020**	mg/Kg	4

Sample: 265757 - SB-10 3'

Param	Flag	Result	Units	RL
Chloride		**5410**	mg/Kg	4

Sample: 265758 - SB-10 5'

Param	Flag	Result	Units	RL
Chloride		**745**	mg/Kg	4

Sample: 265759 - SB-10 7'

Param	Flag	Result	Units	RL
Chloride		**2570**	mg/Kg	4

Sample: 265760 - SB-10 10'

Param	Flag	Result	Units	RL
Chloride		**249**	mg/Kg	4

Sample: 265761 - SB-10 15'

Param	Flag	Result	Units	RL
Chloride		**314**	mg/Kg	4

Sample: 265762 - SB-10 20'

Param	Flag	Result	Units	RL
Chloride		**259**	mg/Kg	4