SITE INFORMATION

Report Type: Work Plan

General Site Information:		
Site:	SENM SWD System (Northwest Central) - west	
Company:	COG Operating LLC	
Section, Township and Range	Unit N - Sec. 17 - T-17S - R-30E	
Lease Number:	NMNM-86025	
County:	Eddy Conty	
GPS:	32.83047° N	103.99600° W
Surface Owner:	Federal	
Mineral Owner:		
Directions:	From Loco Hills at the intersection of Hwy 82 and CR-217 (Hagerman Cuttoff), travel north on CR-217 0.6 mi, turn left 0.4 mi, turn right 300' to location.	

Release Data:	Spill #1	Spill #2
Date Released:	5/12/2010 2RP-536	12/15/2011 2RP-573
Type Release:	Produced water	Oil
Source of Contamination:	6" Poly line weld failed	Oil Tank
Fluid Released:	300 bbls	23 bbls
Fluids Recovered:	200 bbls	20 bbls

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		432-682-4559
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	
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

RECEIVED
OCT 17 2011
NMOCD ARTESIA

TETRA TECH

October 6, 2011

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

Re: Assessment and Work Plan for the COG Operating LLC., SENM SWD System (Northwest Central), Unit N, Section 17, Township 17 South, Range 30 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 SENM SWD System (Northwest Central) located in Unit N, Section 17, Township 17 South, Range 30 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.83047°, W 103.99600°. The site location is shown on Figures 1 and 2.

Background

Spill #1

According to the State of New Mexico C-141 Initial Report, a leak was discovered on May 12, 2010, when approximately three hundred (300) barrels of produced water released from a poly line weld on a 6" transmission line. To alleviate the problem, COG personnel repaired the poly line. Two hundred (200) barrels of standing fluids were recovered. The spill initiated on the north of the facility, flowed south approximately 325' and migrated approximately 150' off the facility pad. 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

Spill #2

On December 15, 2010, an oil tank overflowed caused by a plugged equalizer line, releasing approximately 23 barrels of oil. COG recovered 20 barrels using a vacuum truck. The spill flowed south of the facility pad measuring approximately 3' x 100' and migrated on top of the spill #1 footprint.

Groundwater

No water wells were listed within Section 17. According to the NMOCD groundwater map, the average depth to groundwater in this area appears to be 250' to 275' below surface. The groundwater data 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

Spill #1

On June 23, 2010, Tetra Tech personnel inspected and sampled the spill area. A total of seven (7) auger holes (AH-1 through AH-7) were installed using a stainless steel hand auger to assess the impacted soils. Auger holes were not installed east of the tanks, due to the dense surface caliche in the area. In addition, the area of AH-4 appears to be near a closed reserve pit area. 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 results of the sampling are summarized in Table 1. The spill area and auger hole locations are shown on Figure 3.

Referring to Table 1, all of the submitted samples were below the RRAL for TPH and BTEX. Elevated chloride concentrations were detected in the majority of the auger holes. Auger holes (AH-2 and AH-4) were vertically defined at 7'-8' and 2'-3', respectively. The remaining auger holes required additional delineation.

On August 17, 2010, Tetra Tech supervised the installation of eight (8) soil borings (SB-1 through SB-8). In the area north of the facility, additional soil borings were not installed due to the buried electrical lines and active underground lines in the area. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The sampling results are summarized in Table 2. The soil boring locations are shown on Figure 3.

Referring to Table 1, all of the soil borings were vertically defined and show a shallow chloride impact to the subsurface soils ranging from 1.0' to 7.0' below surface. Soil boring (SB-3 and SB-6) showed a shallow impact to the soil at 1.0' and 2.0' below surface. SB-2, SB-4, SB-5, SB-7 and SB-8 were vertically defined at approximately 3.0' to 5.0' below surface. The area of SB-1 did show the deepest impact of 5.0' to 7.0' below surface.

Spill #2

On December 15, 2010, a second spill occurred at the site when the tank overflowed east of the tank battery and flowed south encompassing part of the spill #1 footprint. On February 25, 2011, Tetra Tech supervised the installation of seven (7) soil borings (SB-1 through SB-7). 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 2. The spill area and auger hole locations are shown on Figure 3.

Referring to Table 2, all of the submitted samples were below the RRAL for TPH and BTEX. The soil boring results showed a shallow chloride impact to the subsurface soils and were all defined at depths ranging from 3.0' to 7.0' below surface.

Work Plan

COG proposes to removal of impacted material as highlighted (green) in Table 1 and shown on Figure 4. In order to remove the elevated chloride concentrations, the excavations will range from 1.0' to 7.0' below surface. All of the excavated soil will be transported to proper disposal. Once excavated to the appropriate depths, the excavations will be backfilled with clean soil.

Based on location of the spill area, deeper excavation of the spill may not be achieve due to proximity of oil and gas equipment, structures or above or underground lines and electrical, which may cause cave ins and safety concerns for onsite equipment and personnel. As such, Tetra Tech will excavate the soils to the maximum extent practicable. If the depths are not reached in the deeper impacted areas, a 40 mil liner will be installed at depth of 4.0' below surface to cap the impacted area.

If the shallow excavation depths are not achieved, the remaining impact will be deferred until abandonment. The limited residual chloride impact in the subsurface soils would not appear to be an environmental concern, with groundwater depth of approximately 250' to 275' below surface.

If you have any questions or comments concerning the assessment or the proposed work plan, please call me at (432) 682-4559.

Respectfully submitted,
TETRA TECH

Ike Tavarez
Project Manager

cc: Pat Ellis – COG
cc: Terry Gregston – BLM

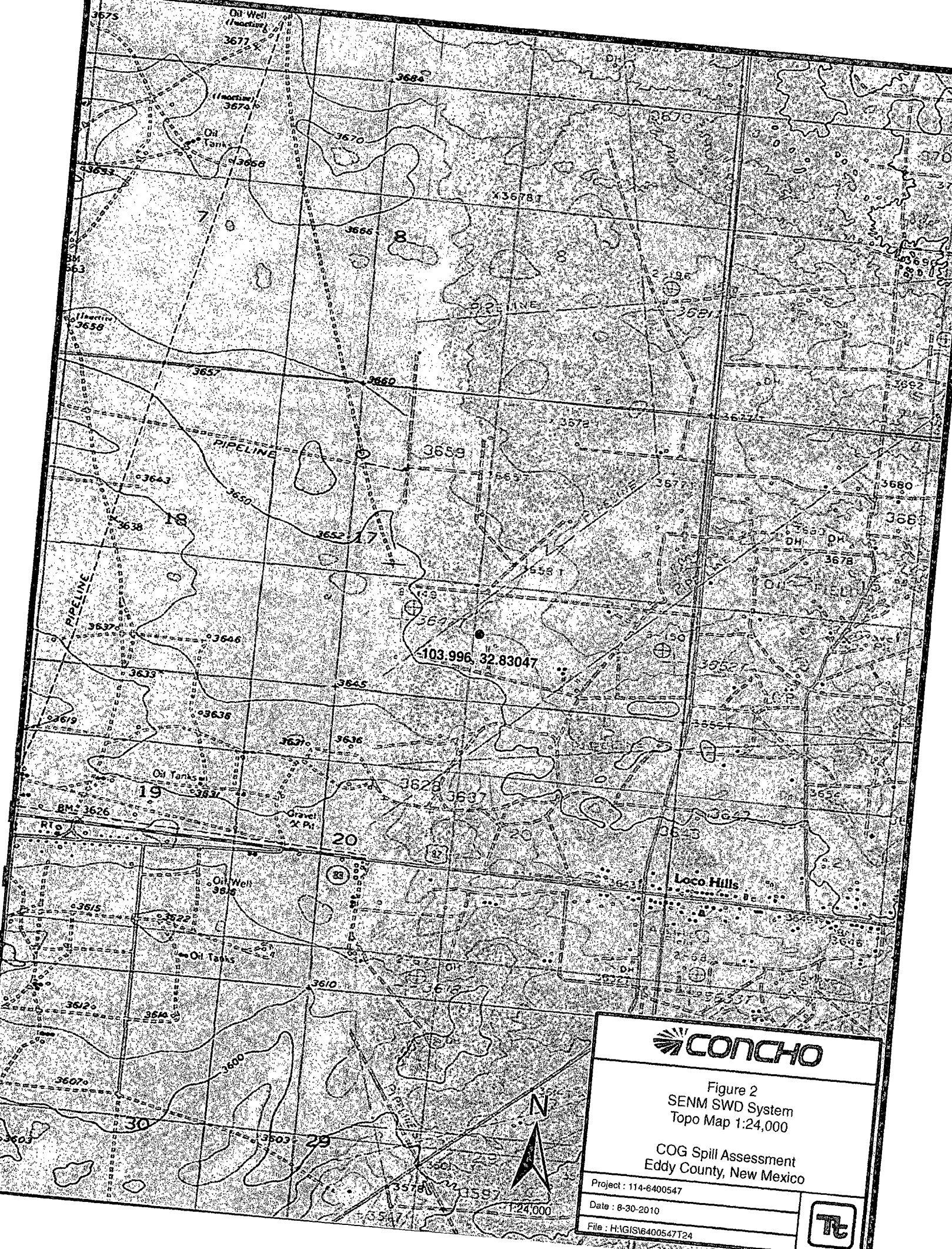
Figures

CONCHO

Figure 1
SENM SWD System
Topo Map 1:100,000

COG Spill Assessment
Eddy County, New Mexico

Project : 114-6400547	
Date : 8-30-2010	
File : H:\GIS\6400547T100	



CONCHO

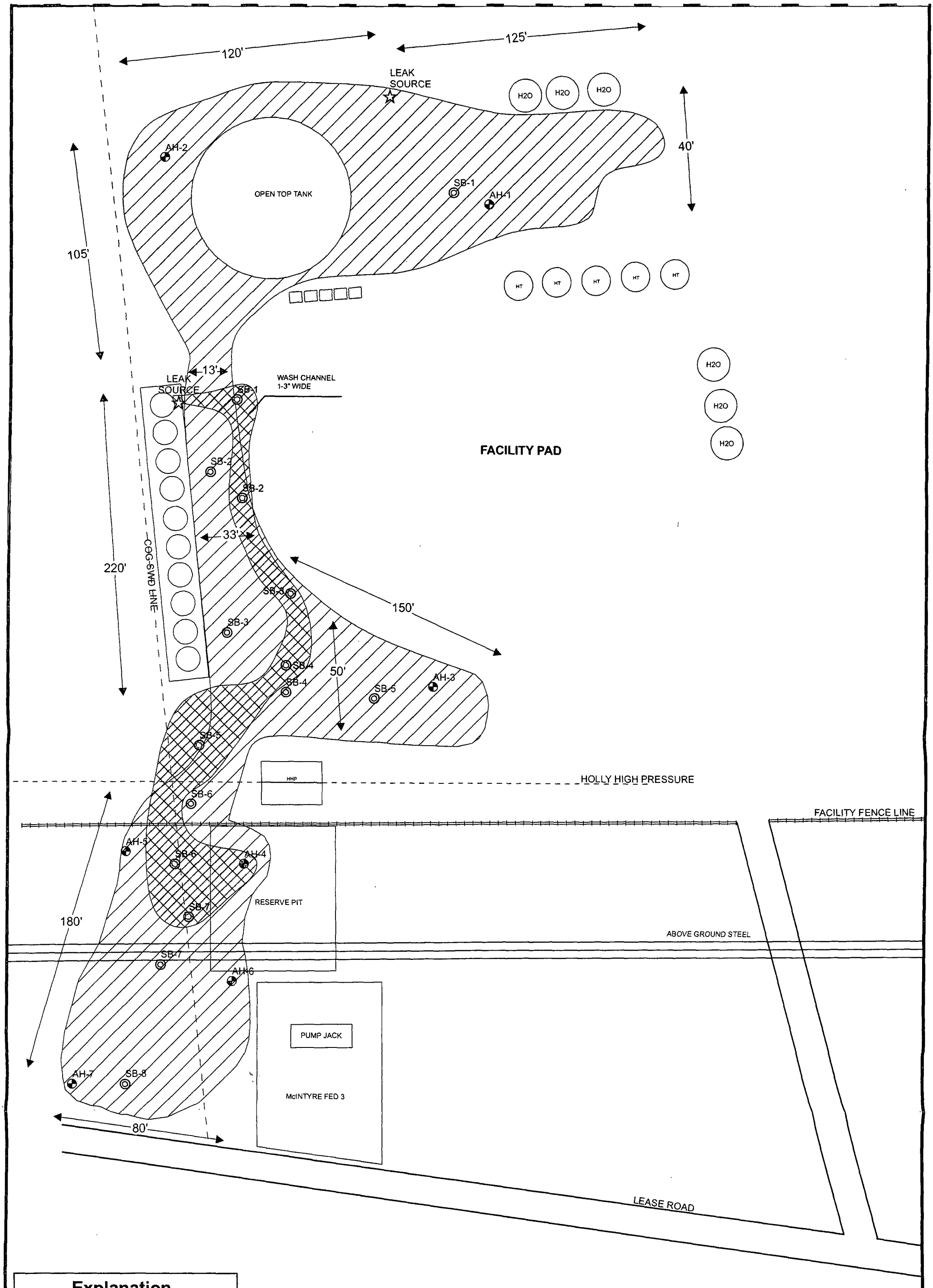
Figure 2
SENM SWD System
Topo Map 1:24,000

COG Spill Assessment
Eddy County, New Mexico

Project : 114-6400547

Date : 8-30-2010

File : H:\GIS\6400547T24



Explanation

- ☆ Spill Source
- Auger Hole Sample
- Spill #1 Soil Borehole
- Spill #2 Soil Borehole
- Spill # 1
- Spill # 2

N

NOT TO SCALE

CONCHO

Figure 3
SENM SWD System
Site Map

COG Spill Assessment
Eddy County, New Mexico

Project : 114-6400547	
Date : 04-05-2011	
File : H:\GIS\6400547	

120'
125'
LEAK SOURCE
H2O
H2O
H2O
40'
AH-2
OPEN TOP TANK
AH-1
SB-1
105'
HT
HT
HT
HT
HT
5' -7' DEEP
13'
LEAK SOURCE EAST
SB-1
WASH CHANNEL 1-3" WIDE
H2O
H2O
H2O
FACILITY PAD
SB-2
SB-2
33'
CoG-SWD LINE
220'
SB-3
150'
1' DEEP
SB-3
SB-4
SB-4
50'
SB-5
AH-3
3' -5' DEEP
5' -7' DEEP
SB-5
HHP
HOLLY HIGH PRESSURE
FACILITY FENCE LINE
SB-6
AH-5
SB-6
AH-4
5' -7' DEEP
SB-7
RESERVE PIT
3' -5' DEEP
180'
ABOVE GROUND STEEL
SB-7
AH-6
PUMP JACK
AH-7
SB-8
McINTYRE FED 3
80'
LEASE ROAD

Explanation

- ☆ Spill Source
- Auger Hole Sample
- ◎ Spill #1 Soil Borehole
- ◎ Spill #2 Soil Borehole
- Proposed Excavation Depths

N

NOT TO SCALE

CONCHO

Figure 4

SENM SWD System

Proposed Excavation Depths

Eddy County, New Mexico

Project : 114-6400547

Date : 04-05-2011

File : H:\GIS\6400547

Tables

Table 1
COG Operating LLC.
SENM SWD System
Spill #1
Eddy COUNTY, NEW MEXICO

Sample ID	Sample Date	Sample Depth (ft)	Depth (BEB)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	BTEX Total	Chloride (mg/kg)
				In-Situ	Removed	DRO	GRO	Total						
AH-1	6/23/10	0-1'		X		<50.0	<2.00	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.02	15800
		1-1.5'		X		-	-	-	-	-	-	-	-	6220
		2-2.5'		X		-	-	-	-	-	-	-	-	7440
SB-1	8/17/10	1'		X		<50.0	<2.00	<50.0	-	-	-	-		1,870
	"	3'		X		-	-	-	-	-	-	-		2,780
	"	5'		X		-	-	-	-	-	-	-		4,380
	"	7'		X		-	-	-	-	-	-	-		504
	"	10'		X		-	-	-	-	-	-	-		248
	"	15'		X		-	-	-	-	-	-	-		<200
	"	20'		X		-	-	-	-	-	-	-		<200
AH-2	6/23/10	0-1'		X		<50.0	<2.00	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.02	4400
		1-1.5'		X		-	-	-	-	-	-	-	-	6410
		2-2.5'		X		-	-	-	-	-	-	-	-	7030
		3-3.5'		X		-	-	-	-	-	-	-	-	5660
		4-4.5'		X		-	-	-	-	-	-	-	-	3140
		5-5.5'		X		-	-	-	-	-	-	-	-	2270
		6-6.5'		X		-	-	-	-	-	-	-	-	1230
		7-7.5'		X		-	-	-	-	-	-	-	-	314
		8-8.5'		X		-	-	-	-	-	-	-	-	<200

Table 1
COG Operating LLC.
SENM SWD System
Spill #1
Eddy COUNTY, NEW MEXICO

Sample ID	Sample Date	Sample Depth (ft)	Depth (BEB)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	BTEX Total	Chloride (mg/kg)
				In-Situ	Removed	DRO	GRO	Total						
SB-2	8/17/10	1'		X		<50.0	<2.00	<50.0	-	-	-	-		19,400
	"	3'		X		-	-	-	-	-	-	-		22,800
	"	5'		X		-	-	-	-	-	-	-		1,350
	"	7'		X		-	-	-	-	-	-	-		300
	"	10'		X		-	-	-	-	-	-	-		230
	"	15'		X		-	-	-	-	-	-	-		<200
	"	20'		X		-	-	-	-	-	-	-		<200
SB-3	8/17/10	1'		X		<50.0	<2.00	<50.0	<0.0200	<0.0200	<0.0200	<0.0200		2,440
	"	3'		X		-	-	-	-	-	-	-		703
	"	5'		X		-	-	-	-	-	-	-		234
	"	7'		X		-	-	-	-	-	-	-		295
	"	10'		X		-	-	-	-	-	-	-		337
	"	15'		X		-	-	-	-	-	-	-		244
SB-4	8/17/10	1'		X		593	83.0	676.0	<0.100	0.481	0.245	1.21		6,330
	"	3'		X		-	-	-	-	-	-	-		8,770
	"	5'		X		-	-	-	-	-	-	-		399
	"	7'		X		-	-	-	-	-	-	-		<200
	"	10'		X		-	-	-	-	-	-	-		422
	"	15'		X		-	-	-	-	-	-	-		413
	"	20'		X		-	-	-	-	-	-	-		554
	"	25'		X		-	-	-	-	-	-	-		404
	"	30'		X		-	-	-	-	-	-	-		291

Table 1
COG Operating LLC.
SENM SWD System
Spill #1
Eddy COUNTY, NEW MEXICO

Sample ID	Sample Date	Sample Depth (ft)	Depth (BEB)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	BTEX Total	Chloride (mg/kg)
				In-Situ	Removed	DRO	GRO	Total						
AH-3	6/23/10	0-1'		X		<50.0	<2.00	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.02	1850
SB-5	8/18/10	1'		X		3,060	<20.0	3,060	<0.200	<0.200	0.204	0.815		3,460
	"	3'		X		-	-	-	-	-	-	-		2,520
	"	5'		X		-	-	-	-	-	-	-		385
	"	7'		X		-	-	-	-	-	-	-		208
	"	10'		X		-	-	-	-	-	-	-		532
	"	15'		X		-	-	-	-	-	-	-		449
	"	20'		X		-	-	-	-	-	-	-		319
AH-4	6/23/10	0-1'		X		<50.0	<2.00	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.02	6220
		1-1.5'		X		-	-	-	-	-	-	-	-	3140
		2-2.5'		X		-	-	-	-	-	-	-	-	614
		3-3.5'		X		-	-	-	-	-	-	-	-	287

Table 1
COG Operating LLC.
SENM SWD System
Spill #1
Eddy COUNTY, NEW MEXICO

Sample ID	Sample Date	Sample Depth (ft)	Depth (BEB)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	BTEX Total	Chloride (mg/kg)
				In-Situ	Removed	DRO	GRO	Total						
AH-5	6/23/10	0-1'		X		<50.0	<2.00	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.02	1650
		1-1.5'		X		-	-	-	-	-	-	-	-	3240
SB-6	8/18/10	1'		X		<50.0	<2.00	<50.0	<0.0200	<0.0200	<0.0200	<0.0200		<200
	"	3'		X		-	-	-	-	-	-	-		<200
	"	5'		X		-	-	-	-	-	-	-		2,180
	"	7'		X		-	-	-	-	-	-	-		981
	"	10'		X		-	-	-	-	-	-	-		342
	"	15'		X		-	-	-	-	-	-	-		250
	"	20'		X		-	-	-	-	-	-	-		234
AH-6	6/23/10	0-1'		X		<50.0	<2.00	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.02	2420
SB-7	8/18/10	1'		X		<50.0	<2.00	<50.0	-	-	-	-		3,470
	"	3'		X		-	-	-	-	-	-	-		4,150
	"	5'		X		-	-	-	-	-	-	-		614
	"	7'		X		-	-	-	-	-	-	-		594
	"	10'		X		-	-	-	-	-	-	-		468
	"	15'		X		-	-	-	-	-	-	-		253
	"	20'		X		-	-	-	-	-	-	-		287
	"	25'		X		-	-	-	-	-	-	-		<200
	"	30'		X		-	-	-	-	-	-	-		292

Table 1
COG Operating LLC.
SENM SWD System
Spill #1
Eddy COUNTY, NEW MEXICO

Sample ID	Sample Date	Sample Depth (ft)	Depth (BEB)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	BTEX Total	Chloride (mg/kg)
				In-Situ	Removed	DRO	GRO	Total						
AH-7	6/23/10	0-1'		X		<50.0	<2.00	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.02	2800
		1-1.5'		X		-	-	-	-	-	-	-	-	4880
		2-2.5'		X		-	-	-	-	-	-	-	-	6240
SB-8	8/18/10	1'		X		<50.0	<2.00	<50.0	-	-	-	-		863
	"	3'		X		-	-	-	-	-	-	-		1,430
	"	5'		X		-	-	-	-	-	-	-		1,900
	"	7'		X		-	-	-	-	-	-	-		1,260
	"	10'		X		-	-	-	-	-	-	-		456
	"	15'		X		-	-	-	-	-	-	-		739
	"	20'		X		-	-	-	-	-	-	-		481
	"	25'		X		-	-	-	-	-	-	-		496
	"	30'		X		-	-	-	-	-	-	-		337
	"	40'		X		-	-	-	-	-	-	-		<200

BEB Below Excavation Bottom

(--) Not Analyzed

Excavated material

Table 2
COG Operating LLC.
SENM SWD System
Spill #2
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	DRO	GRO	Total					
SB-1	2/25/11	0-1'	X		<50.0	6.69	6.69	<0.0200	<0.0200	0.140	0.391	15,400
	"	3'	X		-	-	-	-	-	-	-	5,170
	"	5'	X		-	-	-	-	-	-	-	4,380
	"	7'	X		-	-	-	-	-	-	-	569
	"	10'	X		-	-	-	-	-	-	-	489
	"	15'	X		-	-	-	-	-	-	-	359
	"	20'	X		-	-	-	-	-	-	-	250
SB-2	2/25/11	0-1'	X		<50.0	<2.00	<50.0	-	-	-	-	6,040
	"	3'	X		-	-	-	-	-	-	-	3,360
	"	5'	X		-	-	-	-	-	-	-	405
	"	7'	X		-	-	-	-	-	-	-	207
	"	10'	X		-	-	-	-	-	-	-	281
	"	15'	X		-	-	-	-	-	-	-	252
	"	20'	X		-	-	-	-	-	-	-	232
SB-3	2/25/11	0-1'	X		<50.0	<2.00	<50.0	-	-	-	-	498
	"	3'	X		-	-	-	-	-	-	-	2,310
	"	5'	X		-	-	-	-	-	-	-	957
	"	7'	X		-	-	-	-	-	-	-	<200
	"	10'	X		-	-	-	-	-	-	-	249
	"	15'	X		-	-	-	-	-	-	-	234
	"	20'	X		-	-	-	-	-	-	-	<200
SB-4	3/1/11	0-1'	X		<50.0	<2.00	<50.0	-	-	-	-	1,210
	"	3'	X		-	-	-	-	-	-	-	1,290
	"	5'	X		-	-	-	-	-	-	-	857
	"	7'	X		-	-	-	-	-	-	-	717
	"	10'	X		-	-	-	-	-	-	-	339
	"	15'	X		-	-	-	-	-	-	-	204
	"	20'	X		-	-	-	-	-	-	-	<200

Table 2
COG Operating LLC.
SENM SWD System
Spill #2
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	DRO	GRO	Total					
SB-5	3/1/11	0-1'	X		3,530	1,730	5,260	2.86	82.8	64.8	86.0	5,300
	"	3'	X		2960	2850	5810	3.60	75.1	69.9	89.6	5,180
	"	5'	X		252	287	539	<0.100	0.602	3.71	6.61	3,680
	"	7'	X		-	-	-	-	-	-	-	1,300
	"	10'	X		-	-	-	-	-	-	-	<200
	"	15'	X		-	-	-	-	-	-	-	<200
	"	20'	X		-	-	-	-	-	-	-	235
SB-6	3/1/11	0-1'	X		3,870	1,530	5,400	<0.200	3.16	17.8	34.7	<200
	"	3'	X		<50.0	<2.00	<50.0	<0.0200	0.159	<0.0200	<0.0200	2,010
	"	5'	X		-	-	-	-	-	-	-	1,000
	"	7'	X		-	-	-	-	-	-	-	418
	"	10'	X		-	-	-	-	-	-	-	354
	"	15'	X		-	-	-	-	-	-	-	251
	"	20'	X		-	-	-	-	-	-	-	<200
	"	25'	X		-	-	-	-	-	-	-	221
	"	30'	X		-	-	-	-	-	-	-	320
SB-7	3/1/11	0-1'	X		10,800	3,640	14,440	5.25	86.5	87.6	120	1,080
	"	3'	X		1560	1240	2800	1.37	46.9	39.5	63.7	4,180
	"	5'	X		<50.0	<2.00	<50.0	<0.0200	<0.0200	0.15	<0.0200	2,500
	"	7'	X		-	-	-	-	-	-	-	419
	"	10'	X		-	-	-	-	-	-	-	792
	"	15'	X		-	-	-	-	-	-	-	324
	"	20'	X		-	-	-	-	-	-	-	<200
	"	25'	X		-	-	-	-	-	-	-	279
	"	30'	X		-	-	-	-	-	-	-	<200

(--) Not Analyzed

Appendix A

0547

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 Repo

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	SENM SWD System (Northwest Central)	Facility Type	Tank Battery

Surface Owner	Mineral Owner	Lease No.
Federal		

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
N	17	17S	30E					Eddy

Latitude 32 49.840 **Longitude** 103 59.763

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: 300bbls	Volume Recovered: 200bbls
Source of Release: 6" produced water transmission line	Date and Hour of Occurrence: 05/12/2010	Date and Hour of Discovery: 05/12/2010 5:00 p.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher – OCD; Terry Gregston – BLM	
By Whom? Josh Russo	Date and Hour: 05/13/2010 4:09 p.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse:	

RECEIVED
OCT 17 2011
NMOCD ARTESIA

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

The cause of the release was due to the failure of a poly weld on a 6" produced water transmission line. The line was immediately repaired and put back into service.

Describe Area Affected and Cleanup Action Taken.*

Initially 300bbls or produced water was released and we were able to recover 200bbls with a vacuum truck. The main area of the release on the pad location had the dimensions of 150'x130'. A stream then headed south on the pad location with the dimensions of 5'x100' before heading off the south end of the pad and into the pasture. The stream into the pasture went roughly 170'. (The closest well location to the release is the MCINTYRE DK FEDERAL #3, Unit N, 17-17S-30E, 660 FSL 1980 FWL, 32.82917 – 103.99629, API# 30-015-04186) Tetra Tech will sample the spill site area to delineate any possible contamination from the release and we will present a remediation work plan to the BLM / NMOCD for approval before any significant remediation.

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: 05/21/2010 Phone: 432-212-2399		

* Attach Additional Sheets If Necessary

2RP-536

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	McIntyre DK Federal (Northwest Central)	Facility Type	Tank Battery

Surface Owner Federal	Mineral Owner	Lease No. NMNM-86025

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
N	17	17S	30E					Eddy

Latitude 32 49.804 **Longitude** 103 59.782

NATURE OF RELEASE

Type of Release Oil	Volume of Release 23bbls	Volume Recovered 20bbls
Source of Release Oil Tank	Date and Hour of Occurrence 12/15/2010	Date and Hour of Discovery 12/15/2010 8:00a.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.	

RECEIVED
OCT 17 2011
NMOCD ARTESIA

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

The equalizer line was plugged causing the oil tank to overflow. The plugged equalizer line has been cleaned out.

Describe Area Affected and Cleanup Action Taken.*

Initially 23bbls of oil was released from the oil tank and we were able to recover 20bbls with a vacuum truck. The oil traveled south on the pad location 3' x 100', and then off the pad roughly 30' towards a prior spill location. All oil has been picked up with a vacuum truck, pad material has been scraped of contaminates, tanks and lines have been steamed. (Well location on the same pad, McIntyre Federal #6, (API#) 30-015-20972).

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: 12/17/2010 Phone: 432-212-2399		

* Attach Additional Sheets If Necessary

Appendix B

Water Well Data
Average Depth to Groundwater (ft)
North Central Tank Battery
Eddy County, New Mexico

16 South 29 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14 220dry	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 Maljamar	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 31 East

6	5	4	3	2	1
7	8	9	10	11	12 **288**
18	17	16	15	14	13 **113**
19	20	21	22	23	24
30	29	28	27	26	25
31 **290**	32	33	34	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	20	21	22 **80**	23	24
30	29 **210** **208'**	28	27	26	25
31	32	33	34	35 153	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

17 South 31 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 **271**	35	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

18 South 31 East

6	5	4	3	2	1
7	8	9	10	11	12 **400**
18	17	16	15	14 **317**	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35 **261**	36

88 New Mexico State Engineers Well Reports

105 USGS Well Reports

90 Geology and Groundwater Conditions in Southern Lea, County, NM (Report 6)

Geology and Groundwater Resources of Eddy County, NM (Report 3)

34 NMOCD - Groundwater Data

123 Tetra Tech installed temporary wells and field water level

143 NMOCD Groundwater map well location

Appendix C

Summary Report

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

Report Date: July 2, 2010

Work Order: 10062804

Project Location: Eddy County, NM
Project Name: COG/SENM SWD System
Project Number: 114-6400547

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
235925	AH-1 0-1'	soil	2010-06-23	00:00	2010-06-25
235926	AH-1 1-1.5'	soil	2010-06-23	00:00	2010-06-25
235927	AH-1 2-2.5'	soil	2010-06-23	00:00	2010-06-25
235928	AH-2 0-1'	soil	2010-06-23	00:00	2010-06-25
235929	AH-2 1-1.5'	soil	2010-06-23	00:00	2010-06-25
235930	AH-2 2-2.5'	soil	2010-06-23	00:00	2010-06-25
235931	AH-2 3-3.5'	soil	2010-06-23	00:00	2010-06-25
235932	AH-2 4-4.5'	soil	2010-06-23	00:00	2010-06-25
235933	AH-2 5-5.5'	soil	2010-06-23	00:00	2010-06-25
235934	AH-2 6-6.5'	soil	2010-06-23	00:00	2010-06-25
235935	AH-2 7-7.5'	soil	2010-06-23	00:00	2010-06-25
235936	AH-2 8-8.5'	soil	2010-06-23	00:00	2010-06-25
235937	AH-3 0-1'	soil	2010-06-23	00:00	2010-06-25
235938	AH-4 0-1'	soil	2010-06-23	00:00	2010-06-25
235939	AH-4 1-1.5'	soil	2010-06-23	00:00	2010-06-25
235940	AH-4 2-2.5'	soil	2010-06-23	00:00	2010-06-25
235941	AH-4 3-3.5'	soil	2010-06-23	00:00	2010-06-25
235947	AH-5 0-1'	soil	2010-06-23	00:00	2010-06-25
235948	AH-5 1-1.5'	soil	2010-06-23	00:00	2010-06-25
235949	AH-6 0-1'	soil	2010-06-23	00:00	2010-06-25
235950	AH-7 0-1'	soil	2010-06-23	00:00	2010-06-25
235951	AH-7 1-1.5'	soil	2010-06-23	00:00	2010-06-25
235952	AH-7 2-2.5'	soil	2010-06-23	00:00	2010-06-25

	BTEX				TPH DRO - NEW	TPH GRO
Sample - Field Code	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
235925 - AH-1 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00

continued ...

... continued

Sample - Field Code	BTEX Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	TPH DRO - NEW DRO (mg/Kg)	TPH GRO GRO (mg/Kg)
235928 - AH-2 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
235937 - AH-3 0-1'	<0.100	<0.100	<0.100	<0.100	**366**	<10.0
235938 - AH-4 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
235947 - AH-5 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
235949 - AH-6 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
235950 - AH-7 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00

Sample: 235925 - AH-1 0-1'

Param	Flag	Result	Units	RL
Chloride		**15800**	mg/Kg	4.00

Sample: 235926 - AH-1 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**6220**	mg/Kg	4.00

Sample: 235927 - AH-1 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**7440**	mg/Kg	4.00

Sample: 235928 - AH-2 0-1'

Param	Flag	Result	Units	RL
Chloride		**4400**	mg/Kg	4.00

Sample: 235929 - AH-2 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**6410**	mg/Kg	4.00

Sample: 235930 - AH-2 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**7030**	mg/Kg	4.00

Sample: 235931 - AH-2 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**5660**	mg/Kg	4.00

Sample: 235932 - AH-2 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**3140**	mg/Kg	4.00

Sample: 235933 - AH-2 5-5.5'

Param	Flag	Result	Units	RL
Chloride		**2270**	mg/Kg	4.00

Sample: 235934 - AH-2 6-6.5'

Param	Flag	Result	Units	RL
Chloride		**1230**	mg/Kg	4.00

Sample: 235935 - AH-2 7-7.5'

Param	Flag	Result	Units	RL
Chloride		**314**	mg/Kg	4.00

Sample: 235936 - AH-2 8-8.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 235937 - AH-3 0-1'

Param	Flag	Result	Units	RL
Chloride		**1850**	mg/Kg	4.00

Sample: 235938 - AH-4 0-1'

Param	Flag	Result	Units	RL
Chloride		**6220**	mg/Kg	4.00

Sample: 235939 - AH-4 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**3140**	mg/Kg	4.00

Sample: 235940 - AH-4 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**614**	mg/Kg	4.00

Sample: 235941 - AH-4 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**287**	mg/Kg	4.00

Sample: 235947 - AH-5 0-1'

Param	Flag	Result	Units	RL
Chloride		**1650**	mg/Kg	4.00

Sample: 235948 - AH-5 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**3240**	mg/Kg	4.00

Sample: 235949 - AH-6 0-1'

Param	Flag	Result	Units	RL
Chloride		**2420**	mg/Kg	4.00

Sample: 235950 - AH-7 0-1'

Param	Flag	Result	Units	RL
Chloride		**2800**	mg/Kg	4.00

Sample: 235951 - AH-7 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**4880**	mg/Kg	4.00

Order#: 100062804

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 3

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-6400547

PROJECT NAME: COG / SENM SWD System Eddy Co NM

LAB I.D. NUMBER	DATE 2010	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH TX1005 (Ext. to C35)	TPH 8015 MOD.	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/824	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
235925	6/23		S		X	AH-1 0-1'	1				X		X	X	X											X				
926						AH-1 1-1.5'																				X				
927						AH-1 2-2.5'																				X				
928						AH-2 0-1'							X	X	X											X				
929						AH-2 1-1.5'																				X				
930						AH-2 2-2.5'																				X				
931						AH-2 3-3.5'																				X				
932						AH-2 4-4.5'																				X				
933						AH-2 5-5.5'																				X				
934						AH-2 6-6.5'																				X				

RELINQUISHED BY: (Signature) — Date: 6-25-10 Time: 1650 — RECEIVED BY: (Signature) — Date: 6/25/10 Time: 1650

SAMPLED BY: (Print & Initial) TF — Date: 6-23-10 Time:

RELINQUISHED BY: (Signature) — Date: Time: — RECEIVED BY: (Signature) — Date: Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS — AIRBILL #: — OTHER:

RELINQUISHED BY: (Signature) — Date: Time: — RECEIVED BY: (Signature) — Date: Time:

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: Tx ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: TIME:

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 3.2°c intact

REMARKS: If TPH > 5,000 mg/kg Run deeper samples
If BTEX Total >50 or Benzene >10 Run deeper samples

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

Order #: 10062804

Analysis Request of Chain of Custody Record

PAGE: 2 OF: 3

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-6400547

PROJECT NAME: COG / SENM SWD System Eddy Co NM

LAB I.D. NUMBER	DATE 2010	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH TX1005 (Ext. to C35)	TPH 8015 MOD	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
235935	6/23		S		X	AH-2 7-7.5'	1				X															X				
936						AH-2 8-8.5'																				X				
937						AH-3 0-1'																				X				
938						AH-4 0-1'							X	X												X				
939						AH-4 1-1.5'																				X				
940						AH-4 2-2.5'																				X				
941						AH-4 3-3.5'																				X				
942						AH-4 4-4.5'																								
943						AH-4 5-5.5'																								
944						AH-4 6-6.5'																								

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature)	Date: 6-23-10 Time: 1650	RECEIVED BY: (Signature)	Date: 6/24/10 Time: 1650
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:

SAMPLED BY: (Print & Initial) TE Date: 6-22-10 Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS AIRBILL #: OTHER:

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: TX ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: TIME:

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 3.2° & intact

REMARKS: If TPH > 5000 mg/kg Run deeper Samples
If BTEX >50 or Benzene >10 Run deeper Samples

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

Order #: 100 62804

Analysis Request of Chain of Custody Record

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-6400547

PROJECT NAME: COG SENM SWD System Eddy Co NM

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	DATE 2010	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TX1005 (Ext. to C35)	TPH 8015 MOD	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
235945	6/23		S		X	AH-4	7-7.5'	1			X															X				
946						AH-4	8-8.5'																			X				
947						AH-5	0-1'						X	X												X				
948						AH-5	1-1.5'																			X				
949						AH-6	0-1'						X	X												X				
950						AH-7	0-1'						X	X												X				
951						AH-7	1-1.5																			X				
952						AH-7	2-2.5																			X				

RELINQUISHED BY: (Signature) — Date: 6-23-10 Time: 1600
RECEIVED BY: (Signature) — Date: 6/24/10 Time: 10:50

RELINQUISHED BY: (Signature) — Date: Time:
RECEIVED BY: (Signature) — Date: Time:

RELINQUISHED BY: (Signature) — Date: Time:
RECEIVED BY: (Signature) — Date: Time:

SAMPLED BY: (Print & Initial) TF — Date: 6-23-10 Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS — AIRBILL #: OTHER:

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: TX ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: TIME:

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 3.4°C intact

REMARKS: If TPH > 5000 mg/kg Run deeper samples
If BTEX Total > 50 OR Benzene > 10 Run deeper Sample

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

Summary Report

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

Report Date: March 22, 2011

Work Order: 11030728

Project Location: Eddy County, NM
Project Name: COG/North West Central Tank Battery
Project Number: 114-6400547

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
259804	SB-1 0-1'	soil	2011-02-25	00:00	2011-03-04
259805	SB-1 3'	soil	2011-02-25	00:00	2011-03-04
259806	SB-1 5'	soil	2011-02-25	00:00	2011-03-04
259807	SB-1 7'	soil	2011-02-25	00:00	2011-03-04
259808	SB-1 10'	soil	2011-02-25	00:00	2011-03-04
259809	SB-1 15'	soil	2011-02-25	00:00	2011-03-04
259810	SB-1 20'	soil	2011-02-25	00:00	2011-03-04
259811	SB-2 0-1'	soil	2011-02-25	00:00	2011-03-04
259812	SB-2 3'	soil	2011-02-25	00:00	2011-03-04
259813	SB-2 5'	soil	2011-02-25	00:00	2011-03-04
259814	SB-2 7'	soil	2011-02-25	00:00	2011-03-04
259815	SB-2 10'	soil	2011-02-25	00:00	2011-03-04
259816	SB-2 15'	soil	2011-02-25	00:00	2011-03-04
259817	SB-2 20'	soil	2011-02-25	00:00	2011-03-04
259818	SB-3 0-1'	soil	2011-02-25	00:00	2011-03-04
259819	SB-3 3'	soil	2011-02-25	00:00	2011-03-04
259820	SB-3 5'	soil	2011-02-25	00:00	2011-03-04
259821	SB-3 7'	soil	2011-02-25	00:00	2011-03-04
259822	SB-3 10'	soil	2011-02-25	00:00	2011-03-04
259823	SB-3 15'	soil	2011-02-25	00:00	2011-03-04
259824	SB-3 20'	soil	2011-02-25	00:00	2011-03-04
259825	SB-4 0-1'	soil	2011-03-01	00:00	2011-03-04
259826	SB-4 3'	soil	2011-03-01	00:00	2011-03-04
259827	SB-4 5'	soil	2011-03-01	00:00	2011-03-04
259828	SB-4 7'	soil	2011-03-01	00:00	2011-03-04
259829	SB-4 10'	soil	2011-03-01	00:00	2011-03-04
259830	SB-4 15'	soil	2011-03-01	00:00	2011-03-04
259831	SB-4 20'	soil	2011-03-01	00:00	2011-03-04
259832	SB-5 0-1'	soil	2011-03-01	00:00	2011-03-04
259833	SB-5 3'	soil	2011-03-01	00:00	2011-03-04

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
259834	SB-5 5'	soil	2011-03-01	00:00	2011-03-04
259835	SB-5 7'	soil	2011-03-01	00:00	2011-03-04
259836	SB-5 10'	soil	2011-03-01	00:00	2011-03-04
259837	SB-5 15'	soil	2011-03-01	00:00	2011-03-04
259838	SB-5 20'	soil	2011-03-01	00:00	2011-03-04
259839	SB-6 0-1'	soil	2011-03-01	00:00	2011-03-04
259840	SB-6 3'	soil	2011-03-01	00:00	2011-03-04
259841	SB-6 5'	soil	2011-03-01	00:00	2011-03-04
259842	SB-6 7'	soil	2011-03-01	00:00	2011-03-04
259843	SB-6 10'	soil	2011-03-01	00:00	2011-03-04
259844	SB-6 15'	soil	2011-03-01	00:00	2011-03-04
259845	SB-6 20'	soil	2011-03-01	00:00	2011-03-04
259846	SB-6 25'	soil	2011-03-01	00:00	2011-03-04
259847	SB-6 30'	soil	2011-03-01	00:00	2011-03-04
259848	SB-7 0-1'	soil	2011-03-01	00:00	2011-03-04
259849	SB-7 3'	soil	2011-03-01	00:00	2011-03-04
259850	SB-7 5'	soil	2011-03-01	00:00	2011-03-04
259851	SB-7 7'	soil	2011-03-01	00:00	2011-03-04
259852	SB-7 10'	soil	2011-03-01	00:00	2011-03-04
259853	SB-7 15'	soil	2011-03-01	00:00	2011-03-04
259854	SB-7 20'	soil	2011-03-01	00:00	2011-03-04
259855	SB-7 25'	soil	2011-03-01	00:00	2011-03-04
259856	SB-7 30'	soil	2011-03-01	00:00	2011-03-04

	BTEX				TPH DRO - NEW	TPH GRO
Sample - Field Code	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
259804 - SB-1 0-1'	<0.0200	<0.0200	**0.140**	**0.391**	<50.0	**6.69**
259811 - SB-2 0-1'					<50.0	<2.00
259818 - SB-3 0-1'					<50.0	<2.00
259825 - SB-4 0-1'					<50.0	<2.00
259832 - SB-5 0-1'	**2.86**	**82.8**	**64.8**	**86.0**	**3530**	**1730**
259833 - SB-5 3'	**3.60**	**75.1**	**69.9**	**89.6**	**2960**	**2850**
259834 - SB-5 5'	<0.100	**0.602**	**3.71**	**6.61**	**252**	**287**
259839 - SB-6 0-1'	<0.200	**3.16**	**17.8**	**34.7**	**3870**	**1530**
259840 - SB-6 3'	<0.0200	**0.159**	<0.0200	<0.0200	<50.0	<2.00
259848 - SB-7 0-1'	**5.25**	**86.5**	**87.6**	**120**	**10800**	**3640**
259849 - SB-7 3'	**1.37**	**46.9**	**39.5**	**63.7**	**1560**	**1240**
259850 - SB-7 5'	<0.0200	<0.0200	**0.150**	<0.0200	<50.0	<2.00

Sample: 259804 - SB-1 0-1'

Param	Flag	Result	Units	RL
Chloride		**15400**	mg/Kg	4.00

Sample: 259805 - SB-1 3'

Param	Flag	Result	Units	RL
Chloride		**5170**	mg/Kg	4.00

Sample: 259806 - SB-1 5'

Param	Flag	Result	Units	RL
Chloride		**4380**	mg/Kg	4.00

Sample: 259807 - SB-1 7'

Param	Flag	Result	Units	RL
Chloride		**569**	mg/Kg	4.00

Sample: 259808 - SB-1 10'

Param	Flag	Result	Units	RL
Chloride		**489**	mg/Kg	4.00

Sample: 259809 - SB-1 15'

Param	Flag	Result	Units	RL
Chloride		**359**	mg/Kg	4.00

Sample: 259810 - SB-1 20'

Param	Flag	Result	Units	RL
Chloride		**250**	mg/Kg	4.00

Sample: 259811 - SB-2 0-1'

Param	Flag	Result	Units	RL
Chloride		**6040**	mg/Kg	4.00

Sample: 259812 - SB-2 3'

Param	Flag	Result	Units	RL
Chloride		**3360**	mg/Kg	4.00

Sample: 259813 - SB-2 5'

Param	Flag	Result	Units	RL
Chloride		**405**	mg/Kg	4.00

Sample: 259814 - SB-2 7'

Param	Flag	Result	Units	RL
Chloride		**207**	mg/Kg	4.00

Sample: 259815 - SB-2 10'

Param	Flag	Result	Units	RL
Chloride		**281**	mg/Kg	4.00

Sample: 259816 - SB-2 15'

Param	Flag	Result	Units	RL
Chloride		**252**	mg/Kg	4.00

Sample: 259817 - SB-2 20'

Param	Flag	Result	Units	RL
Chloride		**232**	mg/Kg	4.00

Sample: 259818 - SB-3 0-1'

Param	Flag	Result	Units	RL
Chloride		**498**	mg/Kg	4.00

Sample: 259819 - SB-3 3'

Param	Flag	Result	Units	RL
Chloride		**2310**	mg/Kg	4.00

Sample: 259820 - SB-3 5'

Param	Flag	Result	Units	RL
Chloride		**957**	mg/Kg	4.00

Sample: 259821 - SB-3 7'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 259822 - SB-3 10'

Param	Flag	Result	Units	RL
Chloride		**249**	mg/Kg	4.00

Sample: 259823 - SB-3 15'

Param	Flag	Result	Units	RL
Chloride		**234**	mg/Kg	4.00

Sample: 259824 - SB-3 20'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 259825 - SB-4 0-1'

Param	Flag	Result	Units	RL
Chloride		**1210**	mg/Kg	4.00

Sample: 259826 - SB-4 3'

Param	Flag	Result	Units	RL
Chloride		**1290**	mg/Kg	4.00

Sample: 259827 - SB-4 5'

Param	Flag	Result	Units	RL
Chloride		**857**	mg/Kg	4.00

Sample: 259828 - SB-4 7'

Param	Flag	Result	Units	RL
Chloride		**717**	mg/Kg	4.00

Sample: 259829 - SB-4 10'

Param	Flag	Result	Units	RL
Chloride		**339**	mg/Kg	4.00

Sample: 259830 - SB-4 15'

Param	Flag	Result	Units	RL
Chloride		**204**	mg/Kg	4.00

Sample: 259831 - SB-4 20'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 259832 - SB-5 0-1'

Param	Flag	Result	Units	RL
Chloride		**5300**	mg/Kg	4.00

Sample: 259833 - SB-5 3'

Param	Flag	Result	Units	RL
Chloride		**5180**	mg/Kg	4.00

Sample: 259834 - SB-5 5'

Param	Flag	Result	Units	RL
Chloride		**3680**	mg/Kg	4.00

Sample: 259835 - SB-5 7'

Param	Flag	Result	Units	RL
Chloride		**1300**	mg/Kg	4.00

Sample: 259836 - SB-5 10'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 259837 - SB-5 15'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 259838 - SB-5 20'

Param	Flag	Result	Units	RL
Chloride		**235**	mg/Kg	4.00

Sample: 259839 - SB-6 0-1'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 259840 - SB-6 3'

Param	Flag	Result	Units	RL
Chloride		**2010**	mg/Kg	4.00

Sample: 259841 - SB-6 5'

Param	Flag	Result	Units	RL
Chloride		**1000**	mg/Kg	4.00

Sample: 259842 - SB-6 7'

Param	Flag	Result	Units	RL
Chloride		**418**	mg/Kg	4.00

Sample: 259843 - SB-6 10'

Param	Flag	Result	Units	RL
Chloride		**354**	mg/Kg	4.00

Sample: 259844 - SB-6 15'

Param	Flag	Result	Units	RL
Chloride		**251**	mg/Kg	4.00

Sample: 259845 - SB-6 20'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 259846 - SB-6 25'

Param	Flag	Result	Units	RL
Chloride		**221**	mg/Kg	4.00

Sample: 259847 - SB-6 30'

Param	Flag	Result	Units	RL
Chloride		**320**	mg/Kg	4.00

Sample: 259848 - SB-7 0-1'

Param	Flag	Result	Units	RL
Chloride		**1080**	mg/Kg	4.00

Sample: 259849 - SB-7 3'

Param	Flag	Result	Units	RL
Chloride		**4180**	mg/Kg	4.00

Sample: 259850 - SB-7 5'

Param	Flag	Result	Units	RL
Chloride		**2500**	mg/Kg	4.00

Sample: 259851 - SB-7 7'

Param	Flag	Result	Units	RL
Chloride		**419**	mg/Kg	4.00

Sample: 259852 - SB-7 10'

Param	Flag	Result	Units	RL
Chloride		**792**	mg/Kg	4.00

Sample: 259853 - SB-7 15'

Param	Flag	Result	Units	RL
Chloride		**324**	mg/Kg	4.00

Sample: 259854 - SB-7 20'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 259855 - SB-7 25'

Param	Flag	Result	Units	RL
Chloride		**279**	mg/Kg	4.00

Sample: 259856 - SB-7 30'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

*WO# 110307 28

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 6

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

ANALYSIS REQUEST (Circle or Specify Method No.)

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-6400547

PROJECT NAME: North West Central Tank Battery

Eddy Co., NM

LAB I.D. NUMBER	DATE 2011	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
259804	2/25		S		X	SB-1 0-1'	1				X	
805						SB-1 3'	1					
806						SB-1 5'	1					
807						SB-1 7'	1					
808						SB-1 10'	1					
809						SB-1 15'	1					
810						SB-1 20'	1					
811						SB-2 0-1'	1					
812						SB-2 3'	1					
813						SB-2 5'	1					

ANALYSIS REQUEST columns: BTEX 8021B; TPH 8015 MOD/TX1005 (Ext. to C35); PAH 8270; RCRA Metals Ag As Ba Cd Cr Pb Hg Se; TCLP Metals Ag As Ba Cd Vr Pd Hg Se; TCLP Volatiles; TCLP Semi Volatiles; RCI; GC.MS Vol. 8240/8260/624; GC.MS Semi. Vol. 8270/625; PCB's 8080/608; Pest. 808/608; Chloride; Gamma Spec.; Alpha Beta (Air); PLM (Asbestos); Major Anions/Cations, pH, TDS

RELINQUISHED BY: (Signature)	Date: 3-4-11 Time: 1615	RECEIVED BY: (Signature)	Date: 3/4/11 Time: 1615
SAMPLED BY: (Print & Initial) Kim	Date: 2/25/11 Time:		
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS	AIRBILL #: OTHER:		
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
TETRA TECH CONTACT PERSON: Ike Tavarez	Results by:		
RECEIVING LABORATORY: TRACE ADDRESS: CITY: MIDLAND STATE: TX ZIP: CONTACT: PHONE:	RECEIVED BY: (Signature) DATE: TIME:		RUSH Charges Authorized: Yes No
SAMPLE CONDITION WHEN RECEIVED: 4, 0°C Intact	REMARKS: If total TPH < 5000 mg/kg run deeper samples Run BTEX on 4 Highest TPH		

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy - Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold c

* WO # 11030728

Analysis Request of Chain of Custody Record

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114640054?

PROJECT NAME: North West Central Tank Battery Eddy Co

LAB I.D. NUMBER	DATE 2011	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
259814	2/25		S		X	SB-2 7'	1				X	
815						SB-2 10'	1					
816						SB-2 15'	1					
817						SB-2 20'	1					
818						SB-3 0-1	1					
819						SB-3 3'	1					
820						SB-3 5'	1					
821						SB-3 7'	1					
822						SB-3 10'	1					
823						SB-3 15'	1					

ANALYSIS REQUEST (Circle or Specify Method No.)

BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
	X											X				

RELINQUISHED BY: (Signature) Date: 3-4-11 Time: 1615
RECEIVED BY: (Signature) Date: 3/4/11 Time: 1615

RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: Time:

RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: Time:

RECEIVING LABORATORY: TRACE
ADDRESS:
CITY: MIDLAND STATE: TX ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: TIME:

SAMPLED BY: (Print & Initial) Kim Date: 2/25/11 Time:

SAMPLE SHIPPED BY: (Circle)
FEDEX BUS
HAND DELIVERED UPS
AIRBILL #:
OTHER:

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4.0°C intact

REMARKS: If total TPH < 5000 mg/kg run deeper samples
Run BTEX on 4 highest TPH

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy - Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold c

*WO# 110307 28

Analysis Request of Chain of Custody Record

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

PAGE: 3 OF: 6

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-6400547

PROJECT NAME: North West Central Tank Battery

LAB I.D. NUMBER	DATE 2011	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD.	TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
259824	2/25		S		X	SB-3 20'	1				X															X				
825	3/1		S		X	SB-4 0-1									X															
826						SB-4 3'																								
827						SB-4 5'																								
828						SB-4 7'																								
829						SB-4 10'																								
830						SB-4 15'																								
831						SB-4 20'																								
832						SB-5 0-1'									X															
833						SB-5 3'																								

ANALYSIS REQUEST
(Circle or Specify Method No.)

RELINQUISHED BY: (Signature) Date: 3-4-11 Time: 1615

RECEIVED BY: (Signature) Date: 3/4/11 Time: 1615

SAMPLED BY: (Print & Initial) Kim Date: 2/25/11 Time:

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

SAMPLE SHIPPED BY: (Circle) FEDEX HAND DELIVERED BUS UPS AIRBILL #: OTHER:

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RECEIVING LABORATORY: TRACE

ADDRESS:

CITY: MIDLAND STATE: TX ZIP:

CONTACT: PHONE: DATE: TIME:

RECEIVED BY: (Signature)

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4.5° cintact

REMARKS:

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy

¥WO#110307 28

Analysis Request of Chain of Custody Record

PAGE: 4 OF: 6

TETRA TECH
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(432) 682-4559 • Fax (432) 682-3946

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-6400547

PROJECT NAME: North west Central Tank Battery

LAB I.D. NUMBER	DATE 2011	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 Mod. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
259834	3/1		S		X	SB-5 5'	1				X													X				
835						SB-5 7'	1																	X				
836						SB-5 10'	1																	X				
837						SB-5 15'	1																	X				
838						SB-5 20'	1																	X				
839						SB-6 0-1'	1							X										X				
840						SB-6 3'	1																	X				
841						SB-6 5'	1																	X				
842						SB-6 7'	1																	X				
843						SB-6 10'	1																	X				

RELINQUISHED BY: (Signature) Date: 3-4-11 Time: 1615
RECEIVED BY: (Signature) Date: 3/4/11 Time: 16:15
SAMPLED BY: (Print & Initial) Kim Date: 3/2/11 Time:

RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS
AIRBILL #:
OTHER:

RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: Time:
TETRA TECH CONTACT PERSON: Ike Tavarez
Results by:

RECEIVING LABORATORY: TRACE
ADDRESS:
CITY: MIDLAND STATE: TX ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: TIME:
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4,0° cintact

REMARKS:

ase fill out all copies - Laboratory retains Yellow copy - Return Orginal copy etra Tech - Project Manager retains Pink copy - Accounting receives Gold c

*WO# 11030728

Analysis Request of Chain of Custody Record

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-6100547

PROJECT NAME: North West Central Tank Battery
Eddy Co., NM

LAB I.D. NUMBER	DATE 2011	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
259844	3/1		S		X	SB-6 15'	1				X	
845						SB-6 20'	1					
846						SB-6 25'	1					
847						SB-6 30'	1					
848						SD-7 0-1	1					
849						SD-7 3'	1					
850						SD-7 5'	1					
851						SD-7 7'	1					
852						SD-7 10'	1					
853						SD-7 15'	1					

	BTEX 8021B	TPH 8015 MOD	TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
259844														X				
845														X				
846														X				
847														X				
848		X												X				
849														X				
850														X				
851														X				
852														X				
853														X				

RELINQUISHED BY: (Signature) — Date: 3-4-11 Time: 1645
RECEIVED BY: (Signature) — Date: 3/4/11 Time: 1615
SAMPLED BY: (Print & Initial) Kim — Date: 3/2/11 Time:

RELINQUISHED BY: (Signature) — Date: Time:
RECEIVED BY: (Signature) — Date: Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS — AIRBILL #: OTHER:

RELINQUISHED BY: (Signature) — Date: Time:
RECEIVED BY: (Signature) — Date: Time:
TETRA TECH CONTACT PERSON: Ike Tavarez — Results by:

RECEIVING LABORATORY: TRACE
ADDRESS:
CITY: MIDLAND STATE: TX ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: TIME:
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4.0°C intact

REMARKS:

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

*WO# 110307Z8

Analysis Request of Chain of Custody Record

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-6400547

PROJECT NAME: North West Central Tank Battery

LAB I.D. NUMBER	DATE 2011	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
259854	3/1		S		X	SB-7 20'	1				X													X				
855	"		"		"	SD-7 25'	1				X													X				
856	"		"		"	SB-7 30'	1				X													X				

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature) — Date: 3-4-11 Time: 1615
RECEIVED BY: (Signature) — Date: 3/4/11 Time: 1615

RELINQUISHED BY: (Signature) — Date: Time:
RECEIVED BY: (Signature) — Date: Time:

RELINQUISHED BY: (Signature) — Date: Time:
RECEIVED BY: (Signature) — Date: Time:

SAMPLED BY: (Print & Initial) Kim — Date: 3/2/11 Time:

SAMPLE SHIPPED BY: (Circle)
FEDEX BUS
HAND DELIVERED UPS
AIRBILL #:
OTHER:

RECEIVING LABORATORY: TRACE
ADDRESS:
CITY: MIDLAND STATE: TX ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: TIME:

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4.0° Intact

REMARKS:

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy

Summary Report

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

Report Date: August 30, 2010

Work Order: 10082003

Project Location: Eddy County, NM
Project Name: COG/SENM SWD System
Project Number: 114-6400547

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
241833	SB-1 1'	soil	2010-08-17	00:00	2010-08-20
241834	SB-1 3'	soil	2010-08-17	00:00	2010-08-20
241835	SB-1 5'	soil	2010-08-17	00:00	2010-08-20
241836	SB-1 7'	soil	2010-08-17	00:00	2010-08-20
241837	SB-1 10'	soil	2010-08-17	00:00	2010-08-20
241838	SB-1 15'	soil	2010-08-17	00:00	2010-08-20
241839	SB-1 20'	soil	2010-08-17	00:00	2010-08-20
241842	SB-2 1'	soil	2010-08-17	00:00	2010-08-20
241843	SB-2 3'	soil	2010-08-17	00:00	2010-08-20
241844	SB-2 5'	soil	2010-08-17	00:00	2010-08-20
241845	SB-2 7'	soil	2010-08-17	00:00	2010-08-20
241846	SB-2 10'	soil	2010-08-17	00:00	2010-08-20
241847	SB-2 15'	soil	2010-08-17	00:00	2010-08-20
241848	SB-2 20'	soil	2010-08-17	00:00	2010-08-20
241849	SB-3 1'	soil	2010-08-17	00:00	2010-08-20
241850	SB-3 3'	soil	2010-08-17	00:00	2010-08-20
241851	SB-3 5'	soil	2010-08-17	00:00	2010-08-20
241852	SB-3 7'	soil	2010-08-17	00:00	2010-08-20
241853	SB-3 10'	soil	2010-08-17	00:00	2010-08-20
241854	SB-3 15'	soil	2010-08-17	00:00	2010-08-20
241857	SB-4 1'	soil	2010-08-17	00:00	2010-08-20
241858	SB-4 3'	soil	2010-08-17	00:00	2010-08-20
241859	SB-4 5'	soil	2010-08-17	00:00	2010-08-20
241860	SB-4 7'	soil	2010-08-17	00:00	2010-08-20
241861	SB-4 10'	soil	2010-08-17	00:00	2010-08-20
241862	SB-4 15'	soil	2010-08-17	00:00	2010-08-20
241863	SB-4 20'	soil	2010-08-17	00:00	2010-08-20
241864	SB-4 25'	soil	2010-08-17	00:00	2010-08-20
241865	SB-4 30'	soil	2010-08-17	00:00	2010-08-20
241867	SB-5 1'	soil	2010-08-18	00:00	2010-08-20

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
241868	SB-5 3'	soil	2010-08-18	00:00	2010-08-20
241869	SB-5 5'	soil	2010-08-18	00:00	2010-08-20
241870	SB-5 7'	soil	2010-08-18	00:00	2010-08-20
241871	SB-5 10'	soil	2010-08-18	00:00	2010-08-20
241872	SB-5 15'	soil	2010-08-18	00:00	2010-08-20
241873	SB-5 20'	soil	2010-08-18	00:00	2010-08-20
241876	SB-6 1'	soil	2010-08-18	00:00	2010-08-20
241877	SB-6 3'	soil	2010-08-18	00:00	2010-08-20
241878	SB-6 5'	soil	2010-08-18	00:00	2010-08-20
241879	SB-6 7'	soil	2010-08-18	00:00	2010-08-20
241880	SB-6 10'	soil	2010-08-18	00:00	2010-08-20
241881	SB-6 15'	soil	2010-08-18	00:00	2010-08-20
241882	SB-6 20'	soil	2010-08-18	00:00	2010-08-20
241883	SB-7 1'	soil	2010-08-18	00:00	2010-08-20
241884	SB-7 3'	soil	2010-08-18	00:00	2010-08-20
241885	SB-7 5'	soil	2010-08-18	00:00	2010-08-20
241886	SB-7 7'	soil	2010-08-18	00:00	2010-08-20
241887	SB-7 10'	soil	2010-08-18	00:00	2010-08-20
241888	SB-7 15'	soil	2010-08-18	00:00	2010-08-20
241889	SB-7 20'	soil	2010-08-18	00:00	2010-08-20
241890	SB-7 25'	soil	2010-08-18	00:00	2010-08-20
241891	SB-7 30'	soil	2010-08-18	00:00	2010-08-20
241892	SB-8 1'	soil	2010-08-18	00:00	2010-08-20
241893	SB-8 3'	soil	2010-08-18	00:00	2010-08-20
241894	SB-8 5'	soil	2010-08-18	00:00	2010-08-20
241895	SB-8 7'	soil	2010-08-18	00:00	2010-08-20
241896	SB-8 10'	soil	2010-08-18	00:00	2010-08-20
241897	SB-8 15'	soil	2010-08-18	00:00	2010-08-20
241898	SB-8 20'	soil	2010-08-18	00:00	2010-08-20
241899	SB-8 25'	soil	2010-08-18	00:00	2010-08-20
241900	SB-8 30'	soil	2010-08-18	00:00	2010-08-20
241901	SB-8 40'	soil	2010-08-18	00:00	2010-08-20

	BTEX				TPH DRO - NEW	TPH GRO
Sample - Field Code	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
241833 - SB-1 1'					<50.0	<2.00
241842 - SB-2 1'					<50.0	<2.00
241849 - SB-3 1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
241857 - SB-4 1'	<0.100	**0.481**	**0.245**	**1.21**	**593**	**83.0**
241867 - SB-5 1'	<0.200	<0.200	**0.204**	**0.815**	**3060**	<20.0
241876 - SB-6 1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
241883 - SB-7 1'					<50.0	<2.00
241892 - SB-8 1'					<50.0	<2.00

Sample: 241833 - SB-1 1'

Param	Flag	Result	Units	RL
Chloride		**1870**	mg/Kg	4.00

Sample: 241834 - SB-1 3'

Param	Flag	Result	Units	RL
Chloride		**2780**	mg/Kg	4.00

Sample: 241835 - SB-1 5'

Param	Flag	Result	Units	RL
Chloride		**4380**	mg/Kg	4.00

Sample: 241836 - SB-1 7'

Param	Flag	Result	Units	RL
Chloride		**504**	mg/Kg	4.00

Sample: 241837 - SB-1 10'

Param	Flag	Result	Units	RL
Chloride		**248**	mg/Kg	4.00

Sample: 241838 - SB-1 15'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 241839 - SB-1 20'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 241842 - SB-2 1'

Param	Flag	Result	Units	RL
Chloride		**19400**	mg/Kg	4.00

Sample: 241843 - SB-2 3'

Param	Flag	Result	Units	RL
Chloride		**22800**	mg/Kg	4.00

Sample: 241844 - SB-2 5'

Param	Flag	Result	Units	RL
Chloride		**1350**	mg/Kg	4.00

Sample: 241845 - SB-2 7'

Param	Flag	Result	Units	RL
Chloride		**300**	mg/Kg	4.00

Sample: 241846 - SB-2 10'

Param	Flag	Result	Units	RL
Chloride		**230**	mg/Kg	4.00

Sample: 241847 - SB-2 15'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 241848 - SB-2 20'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 241849 - SB-3 1'

Param	Flag	Result	Units	RL
Chloride		**2440**	mg/Kg	4.00

Sample: 241850 - SB-3 3'

Param	Flag	Result	Units	RL
Chloride		**703**	mg/Kg	4.00

Sample: 241851 - SB-3 5'

Param	Flag	Result	Units	RL
Chloride		**234**	mg/Kg	4.00

Sample: 241852 - SB-3 7'

Param	Flag	Result	Units	RL
Chloride		**295**	mg/Kg	4.00

Sample: 241853 - SB-3 10'

Param	Flag	Result	Units	RL
Chloride		**337**	mg/Kg	4.00

Sample: 241854 - SB-3 15'

Param	Flag	Result	Units	RL
Chloride		**244**	mg/Kg	4.00

Sample: 241857 - SB-4 1'

Param	Flag	Result	Units	RL
Chloride		**6630**	mg/Kg	4.00

Sample: 241858 - SB-4 3'

Param	Flag	Result	Units	RL
Chloride		**8770**	mg/Kg	4.00

Sample: 241859 - SB-4 5'

Param	Flag	Result	Units	RL
Chloride		**399**	mg/Kg	4.00

Sample: 241860 - SB-4 7'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 241861 - SB-4 10'

Param	Flag	Result	Units	RL
Chloride		**422**	mg/Kg	4.00

Sample: 241862 - SB-4 15'

Param	Flag	Result	Units	RL
Chloride		**413**	mg/Kg	4.00

Sample: 241863 - SB-4 20'

Param	Flag	Result	Units	RL
Chloride		**554**	mg/Kg	4.00

Sample: 241864 - SB-4 25'

Param	Flag	Result	Units	RL
Chloride		**404**	mg/Kg	4.00

Sample: 241865 - SB-4 30'

Param	Flag	Result	Units	RL
Chloride		**291**	mg/Kg	4.00

Sample: 241867 - SB-5 1'

Param	Flag	Result	Units	RL
Chloride		**3460**	mg/Kg	4.00

Sample: 241868 - SB-5 3'

Param	Flag	Result	Units	RL
Chloride		**2520**	mg/Kg	4.00

Sample: 241869 - SB-5 5'

Param	Flag	Result	Units	RL
Chloride		**385**	mg/Kg	4.00

Sample: 241870 - SB-5 7'

Param	Flag	Result	Units	RL
Chloride		**208**	mg/Kg	4.00

Sample: 241871 - SB-5 10'

Param	Flag	Result	Units	RL
Chloride		**532**	mg/Kg	4.00

Sample: 241872 - SB-5 15'

Param	Flag	Result	Units	RL
Chloride		**449**	mg/Kg	4.00

Sample: 241873 - SB-5 20'

Param	Flag	Result	Units	RL
Chloride		**319**	mg/Kg	4.00

Sample: 241876 - SB-6 1'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 241877 - SB-6 3'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 241878 - SB-6 5'

Param	Flag	Result	Units	RL
Chloride		**2180**	mg/Kg	4.00

Sample: 241879 - SB-6 7'

Param	Flag	Result	Units	RL
Chloride		**981**	mg/Kg	4.00

Sample: 241880 - SB-6 10'

Param	Flag	Result	Units	RL
Chloride		**342**	mg/Kg	4.00

Sample: 241881 - SB-6 15'

Param	Flag	Result	Units	RL
Chloride		**250**	mg/Kg	4.00

Sample: 241882 - SB-6 20'

Param	Flag	Result	Units	RL
Chloride		**234**	mg/Kg	4.00

Sample: 241883 - SB-7 1'

Param	Flag	Result	Units	RL
Chloride		**3470**	mg/Kg	4.00

Sample: 241884 - SB-7 3'

Param	Flag	Result	Units	RL
Chloride		**4150**	mg/Kg	4.00

Sample: 241885 - SB-7 5'

Param	Flag	Result	Units	RL
Chloride		**614**	mg/Kg	4.00

Sample: 241886 - SB-7 7'

Param	Flag	Result	Units	RL
Chloride		**594**	mg/Kg	4.00

Sample: 241887 - SB-7 10'

Param	Flag	Result	Units	RL
Chloride		**468**	mg/Kg	4.00

Sample: 241888 - SB-7 15'

Param	Flag	Result	Units	RL
Chloride		**253**	mg/Kg	4.00

Sample: 241889 - SB-7 20'

Param	Flag	Result	Units	RL
Chloride		**287**	mg/Kg	4.00

Sample: 241890 - SB-7 25'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

Sample: 241891 - SB-7 30'

Param	Flag	Result	Units	RL
Chloride		**292**	mg/Kg	4.00

Sample: 241892 - SB-8 1'

Param	Flag	Result	Units	RL
Chloride		**863**	mg/Kg	4.00

Sample: 241893 - SB-8 3'

Param	Flag	Result	Units	RL
Chloride		**1430**	mg/Kg	4.00

Sample: 241894 - SB-8 5'

Param	Flag	Result	Units	RL
Chloride		**1900**	mg/Kg	4.00

Sample: 241895 - SB-8 7'

Param	Flag	Result	Units	RL
Chloride		**1260**	mg/Kg	4.00

Sample: 241896 - SB-8 10'

Param	Flag	Result	Units	RL
Chloride		**456**	mg/Kg	4.00

Sample: 241897 - SB-8 15'

Param	Flag	Result	Units	RL
Chloride		**739**	mg/Kg	4.00

Sample: 241898 - SB-8 20'

Param	Flag	Result	Units	RL
Chloride		**481**	mg/Kg	4.00

Sample: 241899 - SB-8 25'

Param	Flag	Result	Units	RL
Chloride		**496**	mg/Kg	4.00

Sample: 241900 - SB-8 30'

Param	Flag	Result	Units	RL
Chloride		**337**	mg/Kg	4.00

Sample: 241901 - SB-8 40'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4.00

WO #: 10082003

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 7

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME:	SITE MANAGER:
COG	Ike Tavarez

PROJECT NO.:	PROJECT NAME:
114-10400547	SENM SWD Eddy Co NM

LAB I.D. NUMBER	DATE 2010	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
241833	8/17		S		X	SB-1 1'	1				X	
834						SB-1 3'						
835						SB-1 5'						
836						SB-1 7'						
837						SB-1 10'						
838						SB-1 15'						
839						SB-1 20'						
840						SB-1 25'						
841						SB-1 30'						
842						SB-2 1'						

ANALYSIS REQUEST	BTEX 8021B	TPH 8015 MOD	TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
241833		X												X				
834														X				
835														X				
836														X				
837														X				
838														X				
839														X				
840																		
841																		
842			X											X				

RELINQUISHED BY: (Signature) Ike Tavarez	Date: August 19, 2010 Time: 940	RECEIVED BY: (Signature)	Date: Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
RECEIVING LABORATORY: Trace		RECEIVED BY: (Signature)	
ADDRESS:			
CITY: Midland STATE: TX ZIP:			
CONTACT: PHONE:		DATE: 8-19-10 TIME: 9:40	

SAMPLED BY: (Print & Initial) KD — Date: 8-17-10 Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS — AIRBILL #: OTHER:

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 3.8°C intact

REMARKS: If TPH exceeds 5000 mg/kg run deeper sample

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

Run BTEX on 4 highest TPH

WO #: 100820003

Analysis Request of Chain of Custody Record

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-6400547

PROJECT NAME: DENM SWD

Eddy Co NM

LAB I.D. NUMBER	DATE 2010	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 8081/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
241843	8/17		S		X	SB-2 3'	1				X													X				
844						SB-2 5'																		X				
845						SB-2 7'																		X				
846						SB-2 10'																		X				
847						SB-2 15'																		X				
848						SB-2 20'																		X				
849						SB-3 1'								X										X				
850						SB-3 3'																		X				
851						SB-3 5'																		X				
852						SB-3 7'																		X				

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature)	Date: August 19, 2010	RECEIVED BY: (Signature)	Date:
	Time: 9:40		Time:
RELINQUISHED BY: (Signature)	Date:	RECEIVED BY: (Signature)	Date:
	Time:		Time:
RELINQUISHED BY: (Signature)	Date:	RECEIVED BY: (Signature)	Date:
	Time:		Time:
RECEIVING LABORATORY: Trace		RECEIVED BY: (Signature)	
ADDRESS:			
CITY: Midland STATE: Tx ZIP:			
CONTACT: PHONE:		DATE: 8.19.10	TIME: 9:40

SAMPLED BY: (Print & Initial) KD — Date: 8-17-10 Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS — AIRBILL #: OTHER:

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 3.8°C intact

REMARKS: If TPH exceeds 5000 mg/kg run deeper sample

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

Run BTEX on 4 lowest TPH

WO #: 10082003

Analysis Request of Chain of Custody Record

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-6400547

PROJECT NAME: JENM Swd

LAB I.D. NUMBER	DATE 2010	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD	TPH TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
241853	8/17		S		X	SB-3 10'	1				X															X				
854						SB-3 15'																				X				
855						SB-3 20'																								
856						SB-3 25'																								
857						SB-4 1'									X											X				
858						SB-4 3'																				X				
859						SB-4 5'																				X				
860						SB-4 7'																				X				
861						SB-4 10'																				X				
862						SB-4 15'																				X				

RELINQUISHED BY: (Signature) Kelly Kindley	Date: August 19, 2010 Time: 940	RECEIVED BY: (Signature)	Date: Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:

SAMPLED BY: (Print & Initial) KD — Date: 8-19-10 Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS — AIRBILL #: — OTHER:

RECEIVING LABORATORY: Xenco
ADDRESS:
CITY: Midland STATE: Tx ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: 8-19-10 TIME: 9:40

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 3.8°C ice pack

REMARKS: If TPH exceeds 5000 mg/kg run deeper sample

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

O. BTEX -- 4 Lvl -- TPH

WO #: WO82003

Analysis Request of Chain of Custody Record

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME:	SITE MANAGER:
COG	Ike Tavarez

PROJECT NO.:	PROJECT NAME:
114-6400547	SENM SWD Eddy Co NM

LAB I.D. NUMBER	DATE 2010	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH TX1005 (Ext. to C35)	TPH 8015 MOD.	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
241863	8/17		S		X	SB-4 20'	1				X															X				
864						SB-4 25'																				X				
865						SB-4 30'																				X				
866						SB-4 40'																								
867	8/18					SB-5 1'								X												X				
868						SB-5 3'																				X				
869						SB-5 5'																				X				
870						SB-5 7'																				X				
871						SB-5 10'																				X				
872						SB-5 15'																				X				

RELINQUISHED BY: (Signature)	Date: August 19, 2010 Time: 940	RECEIVED BY: (Signature)	Date: Time:	SAMPLED BY: (Print & Initial) KD	Date: 8-18-10 Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:	SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS	AIRBILL #: OTHER:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:	TETRA TECH CONTACT PERSON: Ike Tavarez	Results by:
RECEIVING LABORATORY: Trace ADDRESS: CITY: Midland STATE: Tx ZIP: CONTACT: PHONE:		RECEIVED BY: (Signature) DATE: 8.19.10 TIME: 9:40			RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 7.8°C

REMARKS: If TPH exceeds 5000 mg/kg run deeper

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

Run BTEX on 4 highest. TPH

WO #: 10082003

Analysis Request of Chain of Custody Record

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME:	SITE MANAGER:
COG	Ike Tavarez

PROJECT NO.:	PROJECT NAME:
114-6410547	SENM SWD Eddy Co NM

LAB I.D. NUMBER	DATE 2010	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
241873	8/18		S		X	SB-5 20'	1				X													X				
874						SB-5 25'																						
875						SB-5 30'																						
876						SB-6 1'								X														
877						SB-6 3'																		X				
878						SB-6 5'																		X				
879						SB-6 7'																		X				
880						SB-6 10'																		X				
881						SB-6 15'																		X				
882						SB-6 20'																		X				

RELINQUISHED BY: (Signature)	Date: August 19 2010 Time: 940	RECEIVED BY: (Signature)	Date: Time:	SAMPLED BY: (Print & Initial) KD	Date: 8-19-10 Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:	SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS	AIRBILL #: OTHER:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:	TETRA TECH CONTACT PERSON: Ike Tavarez	Results by:
RECEIVING LABORATORY: Xenco ADDRESS: CITY: Midland STATE: TX ZIP: CONTACT: PHONE:		RECEIVED BY: (Signature) DATE: 8.19.10 TIME: 9:40			RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED:	REMARKS:
3-B'c Wet	If TPH exceeds 5000 mg/kg run deeper sample

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

Run BTEX on 4 highest TPH

WO#: 10082003

Analysis Request of Chain of Custody Record

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME:	SITE MANAGER:
COG	Ile Tavarez

PROJECT NO.:	PROJECT NAME:
114-6400547	SENM SWD

LAB I.D. NUMBER	DATE 2010	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION		NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chlorides	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
241883	8/18		S		X	SB-7	1'	1				X			X										X				
884						SB-7	3'																		X				
885						SB-7	5'																		X				
886						SB-7	7'																		X				
887						SB-7	10'																		X				
888						SB-7	15'																		X				
889						SB-7	20'																		X				
890						SB-7	25'																		X				
891						SB-7	30'																		X				
892						SB-8	1'								X										X				

RELINQUISHED BY: (Signature)	Date: August 19, 2010 Time: 940	RECEIVED BY: (Signature)	Date: Time:	SAMPLED BY: (Print & Initial) KD	Date: 8-18-10 Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:	SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS	AIRBILL #: OTHER:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:	TETRA TECH CONTACT PERSON: Ile Tavarez	Results by:
RECEIVING LABORATORY: Trace ADDRESS: CITY: Midland STATE: Tx ZIP: CONTACT: PHONE:		RECEIVED BY: (Signature) DATE: 8.19.10 TIME: 9:40			RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED:	REMARKS:
3.8°C intact	If TPH exceeds 5000 mg/kg run deeper sample

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

Run BTEX on 4 highest TPH

WO #: 160802003

Analysis Request of Chain of Custody Record

PAGE: 7 OF: 7

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-6400547

PROJECT NAME: DENM SWD

Eddy Co NM

LAB I.D. NUMBER	DATE 2010	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION		NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
241893	8/18		S		X	SB-8	3'	1				X													X				
894						SB-8	5'																		X				
895						SB-8	7'																		X				
896						SB-8	10'																		X				
897						SB-8	15'																		X				
898						SB-8	20'																		X				
899						SB-8	25'																		X				
900						SB-8	30'																		X				
901						SB-8	40'																		X				
902						SB-8	50'																						

RELINQUISHED BY: (Signature) John Kindle — Date: August 19, 2010 — Time: 940

RECEIVED BY: (Signature) — Date: — Time:

SAMPLED BY: (Print & Initial) RD — Date: 8-18-10 — Time:

RELINQUISHED BY: (Signature) — Date: — Time:

RECEIVED BY: (Signature) — Date: — Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS — AIRBILL #: — OTHER:

RELINQUISHED BY: (Signature) — Date: — Time:

RECEIVED BY: (Signature) — Date: — Time:

RECEIVING LABORATORY: Trace

ADDRESS:

CITY: Midland STATE: Tx ZIP:

CONTACT: PHONE:

RECEIVED BY: (Signature)

DATE: 8.19.10 TIME: 9:40

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 3..B.C

REMARKS: If TPH exceeds 5000 mg/kg run deeper sample

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

Run BTEX on 4 highest TPH