SITE INFORMATION

Report Type: Closure

General Site Information:						
Site:	Loco Hills SWD 35 #001					
Company:	COG Operating LLC					
Section, Township and Range	Unit P	Sec 36	T17S	R30E		
Lease Number:	API-30-015-31635					
County:	Eddy County					
GPS:	32.78561° N			103.91967° W		
Surface Owner:	State					
Mineral Owner:						
Directions:	From Loco Hills travel 5.75 miles east to CR 222 (Shugart Rd). Turn south on CR 222 and travel 2.36 miles turning right traveling west on the caliche lease road. Stay on the main lease road traveling west for approx. 2.29 miles and turn right traveling north for 0.26 miles to the location.					

Release Data:	
Date Released:	3/14/2014
Type Release:	Produced water
Source of Contamination:	Main Water Line Rupture
Fluid Released:	3050 bbls
Fluids Recovered:	1820 bbls

Official Communication:			
Name:	Robert McNeill		Ike Tavarez
Company:	COG Operating, LLC		Tetra Tech
Address:	One Concho Center		1910 N. Big Spring
	600 W. Illinois Ave.		
City:	Midland Texas, 79701		Midland, Texas
Phone number:	(432) 686-3023		(432) 682-4559
Fax:	(432) 684-7137		(432) 682-3946
Email:	rmcneill@concho.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

NM OIL CONSERVATION
ARTESIA DISTRICT
OCT 06 2014
RECEIVED

TETRA TECH

August 27, 2014

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

Re: Closure Report for the COG Operating LLC., Loco Hills SWD 35 #1, Unit P, Section 36, 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 a spill from the Loco Hills SWD 35 #1 located in Unit P, Section 36, Township 17 South, Range 30 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.78561°, W 103.91967°. The site location is shown on Figures 1 and 2.

Background

According to the State of New Mexico C-141 Initial Report, the leak was discovered on March 14, 2014, and released approximately 3,050 barrels of produced fluid from a failed main line flowing into the facility. A total of 1,820 barrels of produced fluids were recovered. The spill initiated at the western edge of the pad into the pasture affecting an area approximately 70' x 325', 80' x 130' and 96' x 340'. The initial C-141 form is enclosed in Appendix A. This is a second release that has occurred at the site, which encompassed the first spill's footprint. The initial release was assessed, remediated and a closure report was submitted for the site.

Groundwater

No water wells were listed within Section 36. According to the NMOCD groundwater map, the average depth to groundwater in this area is approximately 325' below surface. The groundwater data is shown in Appendix B.

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

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 April 1 through 3, 2014, Tetra Tech supervised the installation of eleven (11) boreholes (BH-1 through BH-11) using an air rotary drilling rig to assess the impacted soils. The boreholes were installed in the spill area in the pasture to define the vertical extents. Selected samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. Copies of the laboratory analysis chain-of-custody documentation are included in Appendix C. The sampling results are summarized in Table 1. The borehole locations are shown on Figure 3.

Referring to Table 1, none of the samples exceeded the RRAL for TPH or BTEX. The boreholes (BH-3, BH-4, BH-7, BH-8 and BH-10) showed a shallow chloride impact to the soils and were vertically defined at approximately at 4.0' to 10.0' below surface. The areas of BH-4 and BH-7 did show a chloride spike of 6-7' of 1,460 mg/kg and 1,800 mg/kg at 14-15', which appears to be cross-contaminated with the upper soils. The areas of boreholes (BH-1, BH-2, BH-5, BH-6, BH-9, and BH-11) did show a deeper impact to the soils and defined at approximately 20.0' to 30.0' below surface. In the area of BH-5, a previous liner was installed at a depth of approximately 3-4' below surface.

Remedial Activities

On July 08, 2014, Tetra Tech supervised the removal of impacted material as highlighted (green) and shown on Figure 4. Due to the soil stability and for the safety of the equipment and operators, the areas of BH-1, BH-2, BH-5, BH-6, BH-8, BH-9, BH-10, and BH-11 were excavated to 4.0' below surface and lined with 40 mil liner to prevent further migration of contaminates left in place. Borehole (BH-7) was excavated to 4.0' below surface, BH-3 and BH-4 were excavated to 2.5' below surface and in areas where a previous liner was installed the impacted material was scraped 3.0' to top of the liner.

TETRA TECH

Approximately 7,660 yards of excavated soil were transported offsite for proper disposal. The excavations were all backfilled with clean soil to grade.

Conclusion

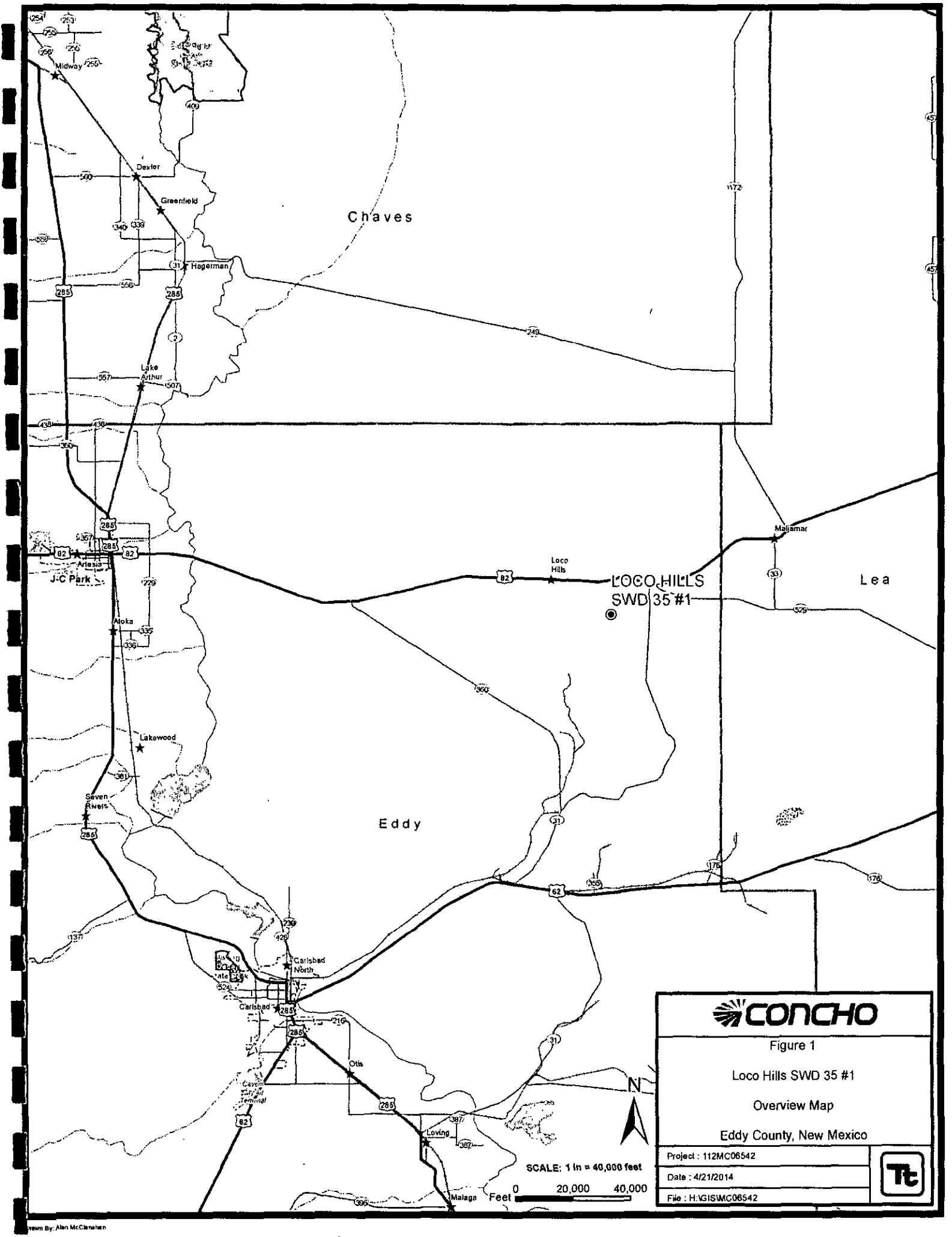
Based on the assessment and work performed, COG requests closure of the site. The Final C-141 is enclosed in Appendix A. If you have any questions or comments concerning the assessment or the remediation activities for this site, please call me at (432) 682-4559.

Respectfully submitted,
TETRA TECH

Ike Tavarez, PG
Senior Project Manger

cc: Robert McNeil – COG

Figures



CONCHO

Figure 1

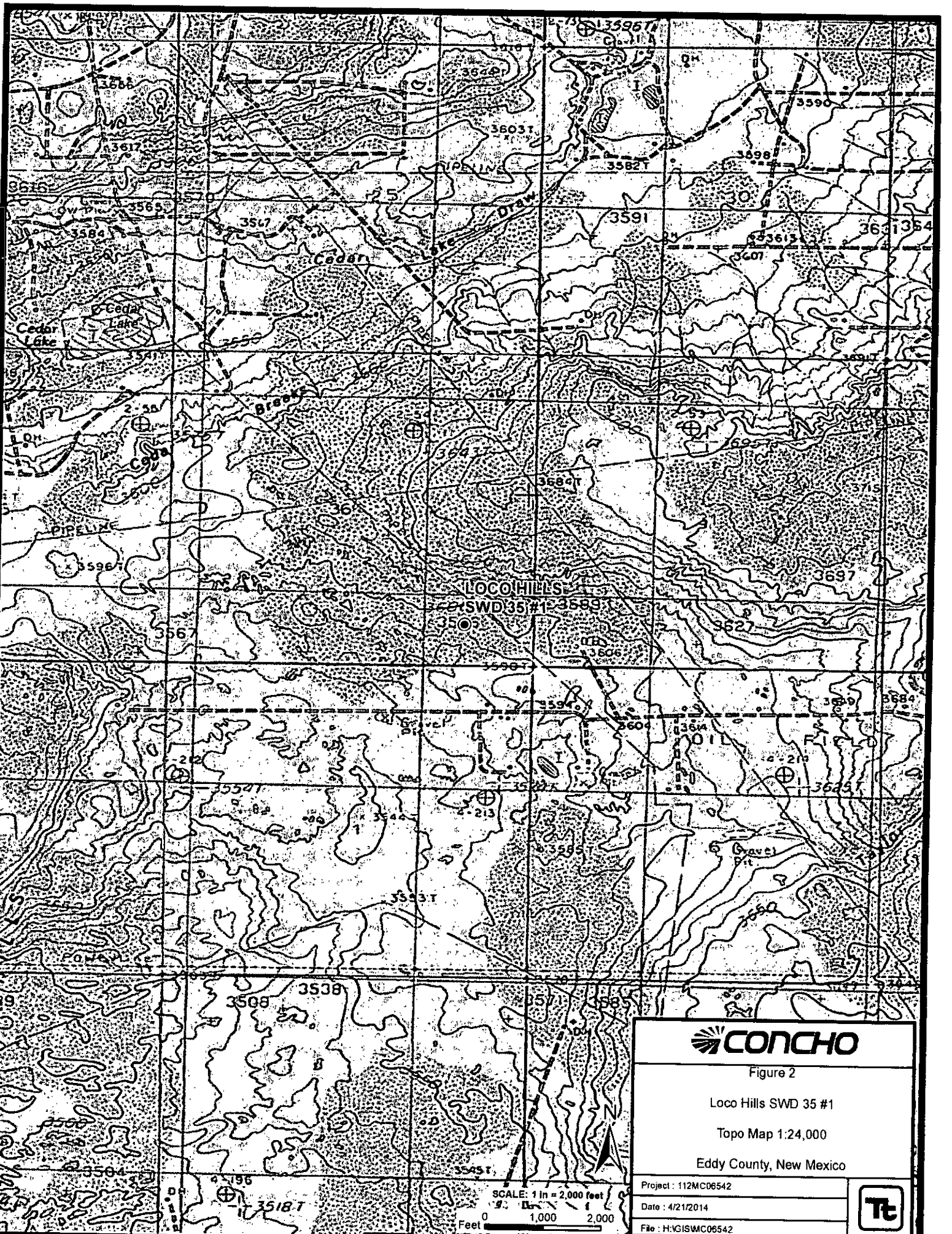
Loco Hills SWD 35 #1

Overview Map

Eddy County, New Mexico

Project : 112MC06542	
Date : 4/21/2014	
File : H:\GIS\MC06542	

Drawn By: Alan McClanahan



CONCHO

Figure 2

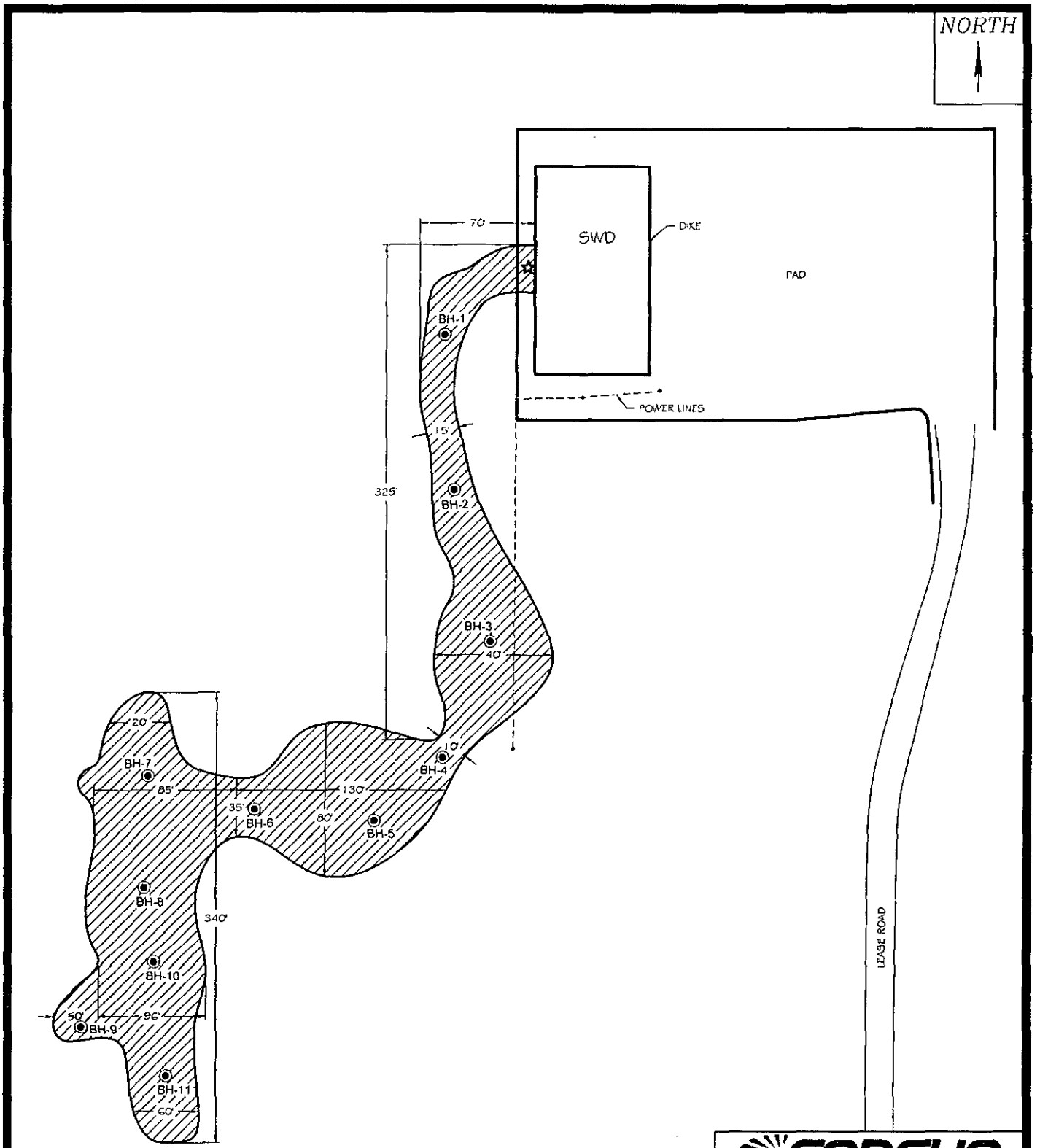
Loco Hills SWD 35 #1

Topo Map 1:24,000

Eddy County, New Mexico

Project : 112MC06542	
Date : 4/21/2014	
File : H:\GIS\MC06542	

Drawn By: Alan McClanahan



LEGEND

- ☆ SPILL SOURCE
- ◉ BORE HOLE SAMPLE LOCATIONS
- ▨ SPILL AREA

0 40 85

SCALE: 1" = 85'-0"

CONCHO

Figure 3

Loco Hills SWD 35 #1

Spill Assessment Map

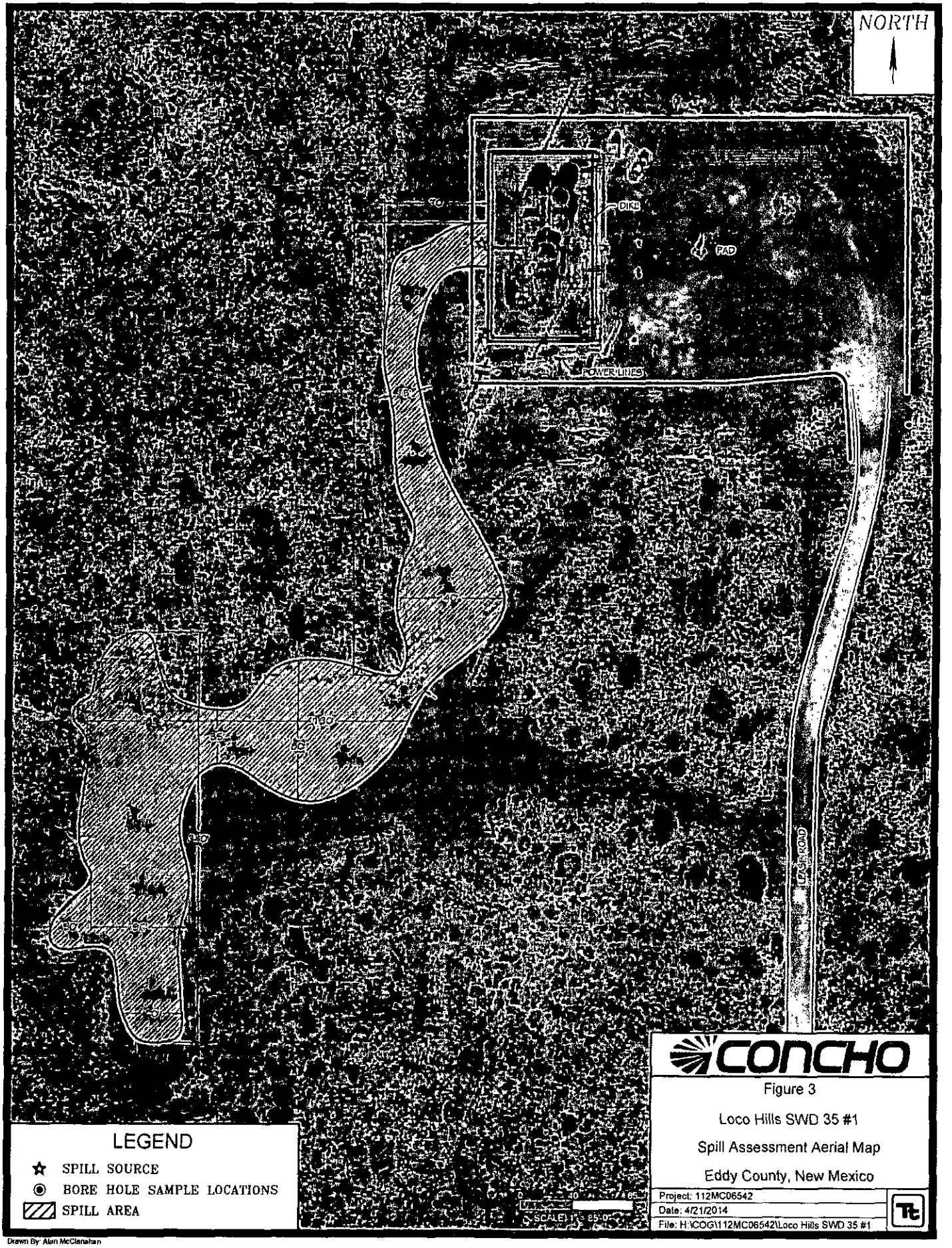
Eddy County, New Mexico

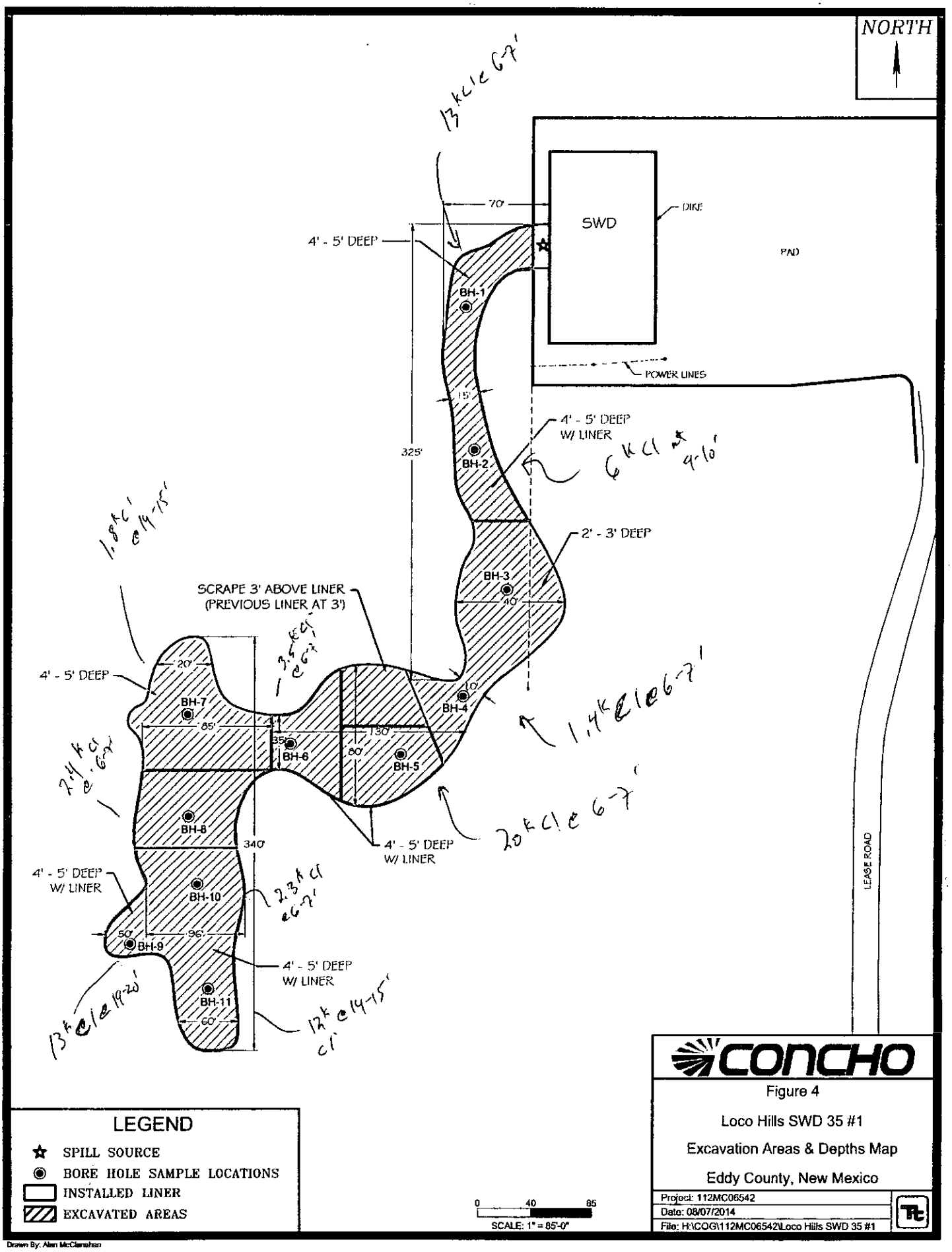
Project: 112MC06542

Date: 4/21/2014

File: H:\COG\112MC06542\Loco Hills SWD 35 #1

Drawn By: Alan McClanahan


NORTH
DIKE
PAD
POWER LINES
180'
LEGEND
SPILL SOURCE
BORE HOLE SAMPLE LOCATIONS
SPILL AREA
SCALE: 1" = 85'-0"
CONCHO
Figure 3
Loco Hills SWD 35 #1
Spill Assessment Aerial Map
Eddy County, New Mexico
Project: 112MC06542
Date: 4/21/2014
File: H:\COG\112MC06542\Loco Hills SWD 35 #1
Drawn By: Alan McClanahan


NORTH
SWD
DIKE
PAD
POWER LINES
LEASE ROAD
4' - 5' DEEP
BH-1
70'
325'
15'
4' - 5' DEEP W/ LINER
BH-2
2' - 3' DEEP
BH-3
40'
SCRAPE 3' ABOVE LINER (PREVIOUS LINER AT 3')
4' - 5' DEEP
BH-7
20'
85'
BH-6
35'
BH-4
10'
130'
80'
BH-5
BH-8
340'
4' - 5' DEEP W/ LINER
4' - 5' DEEP W/ LINER
BH-10
50'
BH-9
96'
4' - 5' DEEP W/ LINER
BH-11
60'
LEGEND
SPILL SOURCE
BORE HOLE SAMPLE LOCATIONS
INSTALLED LINER
EXCAVATED AREAS
0
40
85
SCALE: 1" = 85'-0"
CONCHO
Figure 4
Loco Hills SWD 35 #1
Excavation Areas & Depths Map
Eddy County, New Mexico
Project: 112MC06542
Date: 08/07/2014
File: H:\COG\112MC06542\Loco Hills SWD 35 #1
Drawn By: Alan McClanahan

Tables

Table 1
COG Operating LLC.
Loco Hills SWD 35 #1 Spill 2
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	BEB Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total						
BH-1	4/1/2014	0-1	-		X	<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	**11,400**
	"	2-3	-		X	-	-	-	-	-	-	-	-	**2,540**
	"	4-5	-		X	-	-	-	-	-	-	-	-	**2,700**
	"	6-7	-	X		-	-	-	-	-	-	-	-	**13,800**
	"	9-10	-	X		-	-	-	-	-	-	-	-	**2,120**
	"	14-15	-	X		-	-	-	-	-	-	-	-	847
	"	19-20	-	X		-	-	-	-	-	-	-	-	265
	"	24-25	-	X		-	-	-	-	-	-	-	-	423
	"	29-30	-	X		-	-	-	-	-	-	-	-	317
	"	34-35	-	X		-	-	-	-	-	-	-	-	106
BH-2	4/1/2014	0-1	-		X	<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	**4,970**
	"	2-3	-		X	-	-	-	-	-	-	-	-	**8,110**
	"	4-5	-		X	-	-	-	-	-	-	-	-	**3,190**
	"	6-7	-	X		-	-	-	-	-	-	-	-	**4,700**
	"	9-10	-	X		-	-	-	-	-	-	-	-	**6,380**
	"	14-15	-	X		-	-	-	-	-	-	-	-	**5,030**
	"	19-20	-	X		-	-	-	-	-	-	-	-	541
	"	24-25	-	X		-	-	-	-	-	-	-	-	216
	"	29-30	-	X		-	-	-	-	-	-	-	-	324
	"	34-35	-	X		-	-	-	-	-	-	-	-	108
	"	39-40	-	X		-	-	-	-	-	-	-	-	54.0
	"	44-45	-	X		-	-	-	-	-	-	-	-	<20.0

Table 1
COG Operating LLC.
Loco Hills SWD 35 #1 Spill 2
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	BEB Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total						
BH-3	4/1/2014	0-1	-		X	<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	272
	"	2-3	-		X									**2,940**
	"	4-5	-	X		-	-	-	-	-	-	-	-	217
	"	6-7	-	X		-	-	-	-	-	-	-	-	109
	"	9-10	-	X		-	-	-	-	-	-	-	-	163
	"	14-15	-	X		-	-	-	-	-	-	-	-	163
	"	19-20	-	X		-	-	-	-	-	-	-	-	109
	"	24-25	-	X		-	-	-	-	-	-	-	-	54.0
	"	29-30	-	X		-	-	-	-	-	-	-	-	251
	"	34-35	-	X		-	-	-	-	-	-	-	-	201
	"	39-40	-	X		-	-	-	-	-	-	-	-	251
BH-4	4/1/2014	0-1	-		X	<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	**3,120**
	"	2-3	-		X									**3,820**
	"	4-5	-	X		-	-	-	-	-	-	-	-	804
	"	6-7	-	X		-	-	-	-	-	-	-	-	**1,460**
	"	9-10	-	X		-	-	-	-	-	-	-	-	402
	"	14-15	-	X		-	-	-	-	-	-	-	-	251
	"	19-20	-	X		-	-	-	-	-	-	-	-	201
	"	24-25	-	X		-	-	-	-	-	-	-	-	308
	"	29-30	-	X		-	-	-	-	-	-	-	-	205
	"	34-35	-	X		-	-	-	-	-	-	-	-	205
	"	39-40	-	X		-	-	-	-	-	-	-	-	205
	"	44-45	-	X		-	-	-	-	-	-	-	-	154

Table 1
COG Operating LLC.
Loco Hills SWD 35 #1 Spill 2
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	BEB Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total						
BH-5	4/1/2014	0-1	-		X	21.8	58.9	80.7	<0.0200	<0.0200	0.245	0.299	0.544	667
	"	2-3	-		X	-	-	-	-	-	-	-	-	**7,690**
	"	4-5	-		X	-	-	-	-	-	-	-	-	**15,900**
	"	6-7	-	X		-	-	-	-	-	-	-	-	**20,500**
	"	9-10	-	X		-	-	-	-	-	-	-	-	**13,900**
	"	14-15	-	X		-	-	-	-	-	-	-	-	**6,250**
	"	19-20	-	X		-	-	-	-	-	-	-	-	**4,320**
	"	24-25	-	X		-	-	-	-	-	-	-	-	573
	"	29-30	-	X		-	-	-	-	-	-	-	-	313
	"	39-40	-	X		-	-	-	-	-	-	-	-	469
BH-6	4/1/2014	0-1	-		X	<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	**6,200**
	"	2-3	-		X	-	-	-	-	-	-	-	-	**13,900**
	"	4-5	-		X	-	-	-	-	-	-	-	-	**2,340**
	"	6-7	-	X		-	-	-	-	-	-	-	-	**3,590**
	"	9-10	-	X		-	-	-	-	-	-	-	-	**2,550**
	"	14-15	-	X		-	-	-	-	-	-	-	-	525
	"	19-20	-	X		-	-	-	-	-	-	-	-	**1,310**
	"	24-25	-	X		-	-	-	-	-	-	-	-	154
	"	29-30	-	X		-	-	-	-	-	-	-	-	256
	"	39-40	-	X		-	-	-	-	-	-	-	-	103
	"	49-50	-	X		-	-	-	-	-	-	-	-	103

Table 1
COG Operating LLC.
Loco Hills SWD 35 #1 Spill 2
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	BEB Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total						
BH-7	4/1/2014	0-1	-		X	<4.00	50.2	50.2	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	**12,000**
	"	2-3	-		X									**18,300**
	"	4-5	-		X									**2,770**
	"	6-7	-	X		-	-	-	-	-	-	-	-	103
	"	9-10	-	X		-	-	-	-	-	-	-	-	821
	"	14-15	-	X		-	-	-	-	-	-	-	-	**1,800**
	"	19-20	-	X		-	-	-	-	-	-	-	-	154
	"	24-25	-	X		-	-	-	-	-	-	-	-	101
	"	29-30	-	X		-	-	-	-	-	-	-	-	<20.0
	"	39-40	-	X		-	-	-	-	-	-	-	-	<20.0
BH-8	4/1/2014	0-1	-		X	<4.00	50.5	50.5	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	**15,000**
	"	2-3	-		X									**13,700**
	"	4-5	-		X									**4,100**
	"	6-7	-	X		-	-	-	-	-	-	-	-	**2,400**
	"	9-10	-	X		-	-	-	-	-	-	-	-	52.0
	"	14-15	-	X		-	-	-	-	-	-	-	-	103
	"	19-20	-	X		-	-	-	-	-	-	-	-	876
	"	24-25	-	X		-	-	-	-	-	-	-	-	<20.0
	"	29-30	-	X		-	-	-	-	-	-	-	-	<20.0

Table 1
COG Operating LLC.
Loco Hills SWD 35 #1 Spill 2
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	BEB Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total						
BH-9	4/1/2014	0-1	-		X	<4.00	74.4	74.4	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	**5,380**
	"	2-3	-		X	-	-	-	-	-	-	-	-	**16,100**
	"	4-5	-		X	-	-	-	-	-	-	-	-	**17,200**
	"	6-7	-	X		-	-	-	-	-	-	-	-	**9,750**
	"	9-10	-	X		-	-	-	-	-	-	-	-	**12,600**
	"	14-15	-	X		-	-	-	-	-	-	-	-	**8,590**
	"	19-20	-	X		-	-	-	-	-	-	-	-	**13,700**
	"	24-25	-	X		-	-	-	-	-	-	-	-	**2,200**
	"	29-30	-	X		-	-	-	-	-	-	-	-	103
	"	39-40	-	X		-	-	-	-	-	-	-	-	410
	"	49-50	-	X		-	-	-	-	-	-	-	-	51.0
	"	59-60	-	X		-	-	-	-	-	-	-	-	51.0
	"	64-65	-	X		-	-	-	-	-	-	-	-	<20.0
BH-10	4/1/2014	0-1	-		X	<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	**7,230**
	"	2-3	-		X	-	-	-	-	-	-	-	-	**10,300**
	"	4-5	-		X	-	-	-	-	-	-	-	-	**2,050**
	"	6-7	-	X		-	-	-	-	-	-	-	-	**2,360**
	"	9-10	-	X		-	-	-	-	-	-	-	-	350
	"	14-15	-	X		-	-	-	-	-	-	-	-	350
	"	19-20	-	X		-	-	-	-	-	-	-	-	50.0
	"	24-25	-	X		-	-	-	-	-	-	-	-	150

Table 1
COG Operating LLC.
Loco Hills SWD 35 #1 Spill 2
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	BEB Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total						
BH-11	4/1/2014	0-1	-		X	<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	**8,700**
	"	2-3	-		X	-	-	-	-	-	-	-	-	**20,000**
	"	4-5	-		X	-	-	-	-	-	-	-	-	**9,700**
	"	6-7	-	X		-	-	-	-	-	-	-	-	**8,750**
	"	9-10	-	X		-	-	-	-	-	-	-	-	**6,000**
	"	14-15	-	X		-	-	-	-	-	-	-	-	**12,000**
	"	19-20	-	X		-	-	-	-	-	-	-	-	**3,150**
	"	24-25	-	X		-	-	-	-	-	-	-	-	250
	"	29-30	-	X		-	-	-	-	-	-	-	-	250
	"	39-40	-	X		-	-	-	-	-	-	-	-	150
	"	49-50	-	X		-	-	-	-	-	-	-	-	150
	"	59-60	-	X		-	-	-	-	-	-	-	-	100

(-) Not Analyzed

(BEB) Below Excavation Bottom

Liner

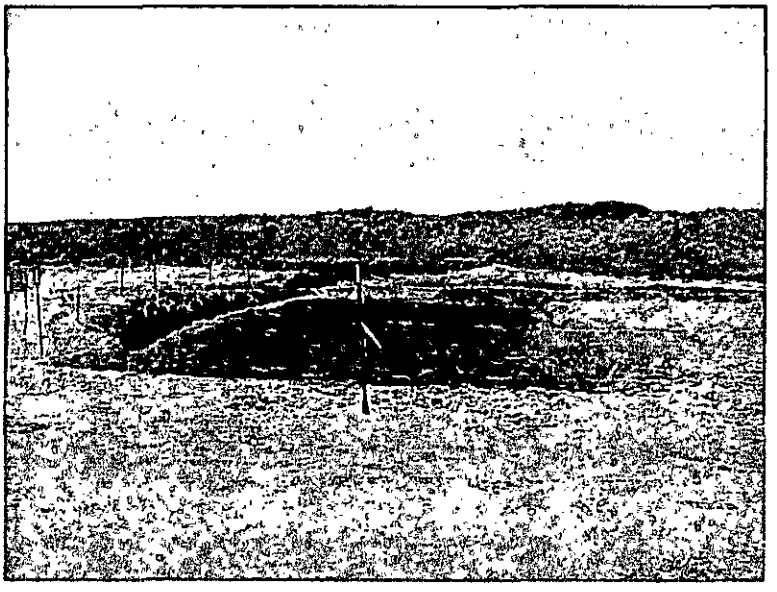
Excavation Depth

Photos

COG Operating LLC
Loco Hills SWD 35 #1
Eddy County, New Mexico

TETRA TECH

View North of Areas BH-8, BH-10 and BH-11

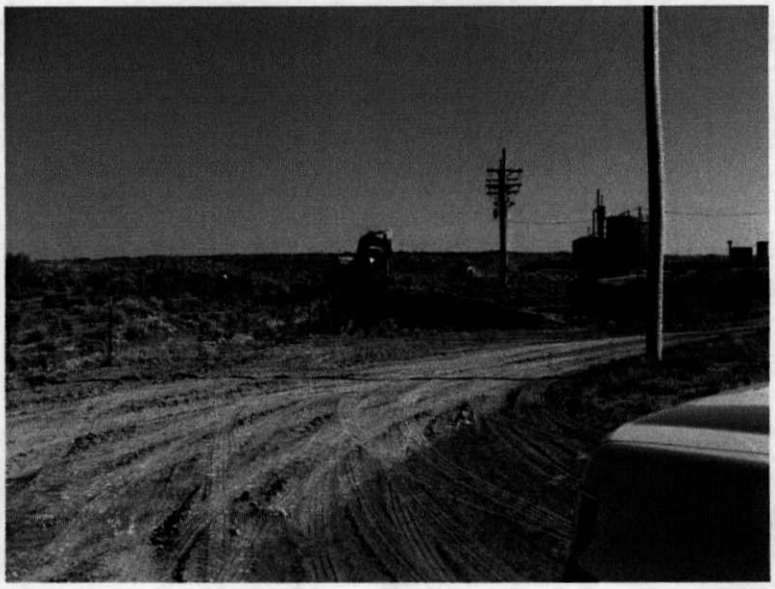


View West of Areas of BH-5, BH-6 and BH-7

COG Operating LLC
Loco Hills SWD 35 #1
Eddy County, New Mexico

TETRA TECH

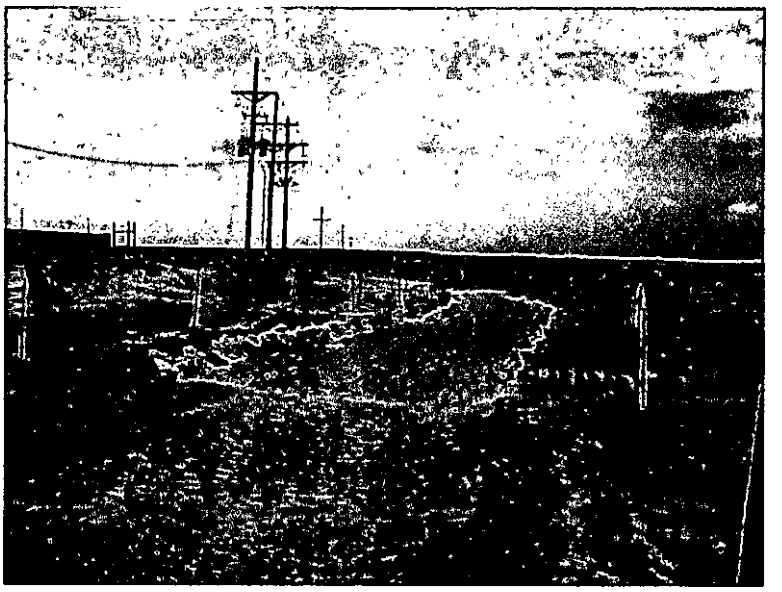
View North of Excavation of BH-1, BH-2 and BH-3



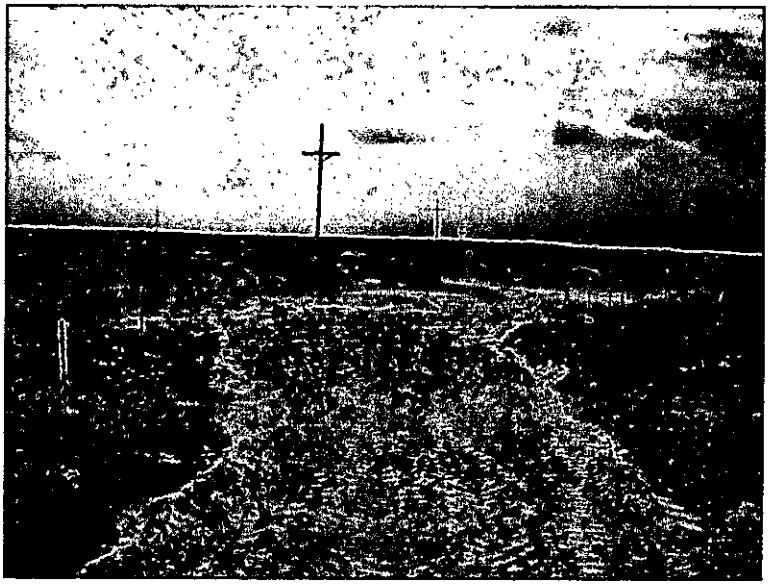
View North of Excavation of BH-1, BH-2 and BH-3

COG Operating LLC
Loco Hills SWD 35 #1
Eddy County, New Mexico

TETRA TECH



View South – Area of BH-1



View South – Area of BH-2

COG Operating LLC
Loco Hills SWD 35 #1
Eddy County, New Mexico

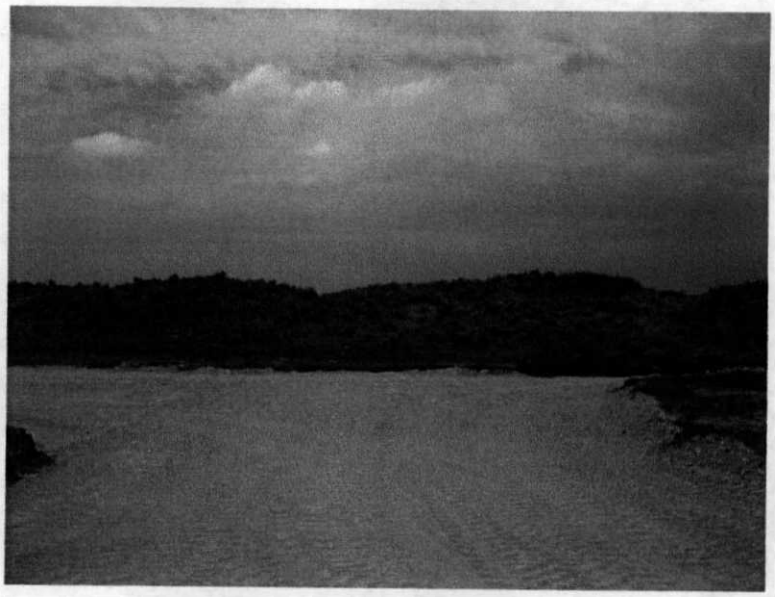
TETRA TECH

View South – Area of BH-3

View West – Areas of BH-4 and BH-5

COG Operating LLC
Loco Hills SWD 35 #1
Eddy County, New Mexico

TETRA TECH

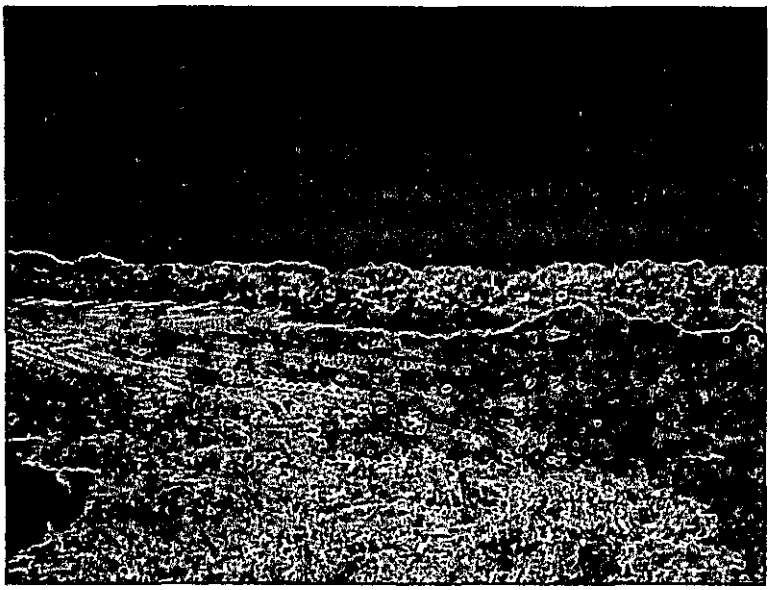


View East – Areas of BH -6 and BH-7

View South – Areas of BH-8 – BH11

COG Operating LLC
Loco Hills SWD 35 #1
Eddy County, New Mexico

TETRA TECH



View Southwest –Area of BH-9

View South – Area of BH-10

COG Operating LLC
Loco Hills SWD 35 #1
Eddy County, New Mexico

TETRA TECH

View North – Area of BH-11

View North – Area of BH-10

Appendix A

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company **COG Operating LLC**	Contact **Robert McNeill**
Address **600 W. Illinois Ave, Midland, Texas 79701**	Telephone No. **(432) 685-4332**
Facility Name **Loco Hills SWD 35 #001**	Facility Type **Tank Battery**

Surface Owner: State	Mineral Owner	Lease No. (API#) 30-015-~~1535789~~ 31635

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
P	36	17S	30E					Eddy

Latitude 32.78561° N **Longitude** 103.91967° W

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release 3050bbls	Volume Recovered 1820bbls
Source of Release: Main Water Line Rupture	Date and Hour of Occurrence 3/14/2014	Date and Hour of Discovery 3/14/2014 9:00 am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? **Mike Bratcher - NMOCD**	
By Whom? Michelle Mullins	Date and Hour 7/11/2013 8:40 am	
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.*

A fused 90 failed going into the lined facility. Repaired and replaced the failed 90

Describe Area Affected and Cleanup Action Taken.*

Initially 3050 bbls of produced water were released. We were able to recover 1820 bbls with vacuum trucks. All free fluids have been recovered by Concho. Tetra Tech evaluated spill area and submitted work plan to the NMOCD for review and approval. The impacted soils were excavated and hauled to proper disposal. Once completed, the areas were backfilled with clean soil to grade. Closure Report was prepared and submitted to review and approval.

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	Approved by District Supervisor:
Title: Project Manager	Approval Date: / Expiration Date:
E-mail Address: Ike.Tavarez@TetraTech.com	Conditions of Approval: / Attached ☐
Date: 8/18/2014 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
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

GW-375

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	Robert McNeill
Address	600 West Illinois Avenue, Midland, TX 79701	Telephone No.	432-230-0077
Facility Name	Loco Hills SWD 35 #001	Facility Type	Tank Battery

Surface Owner State	Mineral Owner	Lease No. (API#) 30-015-31635

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
P	36	17S	30E					Eddy

Latitude 32.78561 Longitude 103.91967

NATURE OF RELEASE

Type of Release Produced water	Volume of Release 3050bbls	Volume Recovered 1820bbls
Source of Release Main produced water line	Date and Hour of Occurrence 03-14-2014	Date and Hour of Discovery 03-14-2014 11:40am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher - NMOCD	
By Whom? Michelle Mullins	Date and Hour 03-15-2014 10:58am	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

A fused 90 failed going into the lined facility. Repaired and replaced the failed 90.

Describe Area Affected and Cleanup Action Taken.*

Initially 3050bbls of produced water were released. We were able to recover 1820bbls with vacuum trucks. All free fluids have been recovered Concho will have the spill site sampled to delineate any possible contamination from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation work.

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

Signature:	OIL CONSERVATION DIVISION	
Printed Name: Robert Grubbs Jr.	Approved by District Supervisor:	
Title: Senior Environmental Coordinator	Approval Date:	Expiration Date:
E-mail Address: rgrubbs@concho.com	Conditions of Approval:	Attached ☐
Date: 03-27-2014 Phone: 432-661-6601		

* Attach Additional Sheets If Necessary

D0542

Appendix B

Water Well Data
Average Depth to Groundwater (ft)
COG - Loco Hills SWD #1
Eddy County, New Mexico

16 South 29 East

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

16 South 31 East

6	5	4	3	2 290	1
7	8	9	10	11	12 288
18	17	16	15	14 113 314	13 299
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 76 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 80	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36 81

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 95	11	12
18	17	16	15	14	13
19	20	21	22	23	24 168
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

- 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

Appendix C

Summary Report

Ike Tavarez
Tetra Tech
1901 N. Big Spring St.
Midland, TX 79705

Report Date: April 10, 2014

Work Order: 14040353

Project Location: Eddy Co, NM
Project Name: COG/Loco Hills SWD 35 #1 Spill 2
Project Number: 112MC06542

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
359582	BH-1 0-1'	soil	2014-04-01	00:00	2014-04-03
359583	BH-1 2-3'	soil	2014-04-01	00:00	2014-04-03
359584	BH-1 4-5'	soil	2014-04-01	00:00	2014-04-03
359585	BH-1 6-7'	soil	2014-04-01	00:00	2014-04-03
359586	BH-1 9-10'	soil	2014-04-01	00:00	2014-04-03
359587	BH-1 14-15'	soil	2014-04-01	00:00	2014-04-03
359588	BH-1 19-20'	soil	2014-04-01	00:00	2014-04-03
359589	BH-1 24-25'	soil	2014-04-01	00:00	2014-04-03
359590	BH-1 29-30'	soil	2014-04-01	00:00	2014-04-03
359591	BH-1 34-35'	soil	2014-04-01	00:00	2014-04-03
359592	BH-2 0-1'	soil	2014-04-01	00:00	2014-04-03
359593	BH-2 2-3'	soil	2014-04-01	00:00	2014-04-03
359594	BH-2 4-5'	soil	2014-04-01	00:00	2014-04-03
359595	BH-2 6-7'	soil	2014-04-01	00:00	2014-04-03
359596	BH-2 9-10'	soil	2014-04-01	00:00	2014-04-03
359597	BH-2 14-15'	soil	2014-04-01	00:00	2014-04-03
359598	BH-2 19-20'	soil	2014-04-01	00:00	2014-04-03
359599	BH-2 24-25'	soil	2014-04-01	00:00	2014-04-03
359600	BH-2 29-30'	soil	2014-04-01	00:00	2014-04-03
359601	BH-2 34-35'	soil	2014-04-01	00:00	2014-04-03
359602	BH-2 39-40'	soil	2014-04-01	00:00	2014-04-03
359603	BH-2 44-45'	soil	2014-04-01	00:00	2014-04-03
359604	BH-3 0-1'	soil	2014-04-01	00:00	2014-04-03
359605	BH-3 2-3'	soil	2014-04-01	00:00	2014-04-03
359606	BH-3 4-5'	soil	2014-04-01	00:00	2014-04-03
359607	BH-3 6-7'	soil	2014-04-01	00:00	2014-04-03
359608	BH-3 9-10'	soil	2014-04-01	00:00	2014-04-03
359609	BH-3 14-15'	soil	2014-04-01	00:00	2014-04-03
359610	BH-3 19-20'	soil	2014-04-01	00:00	2014-04-03
359611	BH-3 24-25'	soil	2014-04-01	00:00	2014-04-03

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
359612	BH-3 29-30'	soil	2014-04-01	00:00	2014-04-03
359613	BH-3 34-35'	soil	2014-04-01	00:00	2014-04-03
359614	BH-3 39-40'	soil	2014-04-01	00:00	2014-04-03
359615	BH-4 0-1'	soil	2014-04-01	00:00	2014-04-03
359616	BH-4 2-3'	soil	2014-04-01	00:00	2014-04-03
359617	BH-4 4-5'	soil	2014-04-01	00:00	2014-04-03
359618	BH-4 6-7'	soil	2014-04-01	00:00	2014-04-03
359619	BH-4 9-10'	soil	2014-04-01	00:00	2014-04-03
359620	BH-4 14-15'	soil	2014-04-01	00:00	2014-04-03
359621	BH-4 19-20'	soil	2014-04-01	00:00	2014-04-03
359622	BH-4 24-25'	soil	2014-04-01	00:00	2014-04-03
359623	BH-4 29-30'	soil	2014-04-01	00:00	2014-04-03
359624	BH-4 34-35'	soil	2014-04-01	00:00	2014-04-03
359625	BH-4 39-40'	soil	2014-04-01	00:00	2014-04-03
359626	BH-4 44-45'	soil	2014-04-01	00:00	2014-04-03
359627	BH-5 0-1'	soil	2014-04-02	00:00	2014-04-03
359628	BH-5 2-3'	soil	2014-04-02	00:00	2014-04-03
359629	BH-5 4-5'	soil	2014-04-01	00:00	2014-04-03
359630	BH-5 6-7'	soil	2014-04-02	00:00	2014-04-03
359631	BH-5 9-10'	soil	2014-04-02	00:00	2014-04-03
359632	BH-5 14-15'	soil	2014-04-02	00:00	2014-04-03
359633	BH-5 19-20'	soil	2014-04-02	00:00	2014-04-03
359634	BH-5 24-25'	soil	2014-04-02	00:00	2014-04-03
359635	BH-5 29-30'	soil	2014-04-02	00:00	2014-04-03
359636	BH-5 39-40'	soil	2014-04-02	00:00	2014-04-03
359637	BH-6 0-1'	soil	2014-04-02	00:00	2014-04-03
359638	BH-6 2-3'	soil	2014-04-02	00:00	2014-04-03
359639	BH-6 4-5'	soil	2014-04-02	00:00	2014-04-03
359640	BH-6 6-7'	soil	2014-04-02	00:00	2014-04-03
359641	BH-6 9-10'	soil	2014-04-02	00:00	2014-04-03
359642	BH-6 14-15'	soil	2014-04-02	00:00	2014-04-03
359643	BH-6 19-20'	soil	2014-04-02	00:00	2014-04-03
359644	BH-6 24-25'	soil	2014-04-02	00:00	2014-04-03
359645	BH-6 29-30'	soil	2014-04-02	00:00	2014-04-03
359646	BH-6 39-40'	soil	2014-04-02	00:00	2014-04-03
359647	BH-6 49-50'	soil	2014-04-02	00:00	2014-04-03
359648	BH-7 0-1'	soil	2014-04-02	00:00	2014-04-03
359649	BH-7 2-3'	soil	2014-04-02	00:00	2014-04-03
359650	BH-7 4-5'	soil	2014-04-02	00:00	2014-04-03
359651	BH-7 9-10'	soil	2014-04-02	00:00	2014-04-03
359652	BH-7 14-15'	soil	2014-04-02	00:00	2014-04-03
359653	BH-7 19-20'	soil	2014-04-02	00:00	2014-04-03
359654	BH-7 24-25'	soil	2014-04-02	00:00	2014-04-03
359655	BH-7 29-30'	soil	2014-04-02	00:00	2014-04-03
359656	BH-7 39-40'	soil	2014-04-02	00:00	2014-04-03
359657	BH-9 0-1'	soil	2014-04-02	00:00	2014-04-03
359658	BH-9 2-3'	soil	2014-04-02	00:00	2014-04-03
359659	BH-9 4-5'	soil	2014-04-02	00:00	2014-04-03
359660	BH-9 6-7'	soil	2014-04-02	00:00	2014-04-03

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
359661	BH-9 9-10'	soil	2014-04-02	00:00	2014-04-03
359662	BH-9 14-15'	soil	2014-04-02	00:00	2014-04-03
359663	BH-9 19-20'	soil	2014-04-02	00:00	2014-04-03
359664	BH-9 24-25'	soil	2014-04-02	00:00	2014-04-03
359665	BH-9 29-30'	soil	2014-04-02	00:00	2014-04-03
359666	BH-9 39-40'	soil	2014-04-02	00:00	2014-04-03
359667	BH-9 49-50'	soil	2014-04-02	00:00	2014-04-03
359668	BH-9 59-60'	soil	2014-04-02	00:00	2014-04-03
359669	BH-9 64-65'	soil	2014-04-02	00:00	2014-04-03
359670	BH-10 0-1'	soil	2014-04-02	00:00	2014-04-03
359671	BH-10 2-3'	soil	2014-04-02	00:00	2014-04-03
359672	BH-10 4-5'	soil	2014-04-02	00:00	2014-04-03
359673	BH-10 6-7'	soil	2014-04-02	00:00	2014-04-03
359674	BH-10 9-10'	soil	2014-04-02	00:00	2014-04-03
359675	BH-10 14-15'	soil	2014-04-02	00:00	2014-04-03
359676	BH-10 19-20'	soil	2014-04-02	00:00	2014-04-03
359677	BH-10 24-25'	soil	2014-04-02	00:00	2014-04-03
359678	BH-11 0-1'	soil	2014-04-02	00:00	2014-04-03
359679	BH-11 2-3'	soil	2014-04-02	00:00	2014-04-03
359680	BH-11 4-5'	soil	2014-04-02	00:00	2014-04-03
359681	BH-11 6-7'	soil	2014-04-02	00:00	2014-04-03
359682	BH-11 9-10'	soil	2014-04-02	00:00	2014-04-03
359683	BH-11 14-15'	soil	2014-04-02	00:00	2014-04-03
359684	BH-11 19-20'	soil	2014-04-02	00:00	2014-04-03
359685	BH-11 24-25'	soil	2014-04-02	00:00	2014-04-03
359686	BH-11 29-30'	soil	2014-04-02	00:00	2014-04-03
359687	BH-11 39-40'	soil	2014-04-02	00:00	2014-04-03
359688	BH-11 49-50'	soil	2014-04-02	00:00	2014-04-03
359689	BH-11 59-60'	soil	2014-04-02	00:00	2014-04-03
359690	BH-8 0-1'	soil	2014-04-03	00:00	2014-04-03
359691	BH-8 2-3'	soil	2014-04-03	00:00	2014-04-03
359692	BH-8 4-5'	soil	2014-04-03	00:00	2014-04-03
359693	BH-8 6-7'	soil	2014-04-03	00:00	2014-04-03
359694	BH-8 9-10'	soil	2014-04-03	00:00	2014-04-03
359695	BH-8 14-15'	soil	2014-04-03	00:00	2014-04-03
359696	BH-8 19-20'	soil	2014-04-03	00:00	2014-04-03
359697	BH-8 24-25'	soil	2014-04-03	00:00	2014-04-03
359698	BH-8 29-30'	soil	2014-04-03	00:00	2014-04-03
359699	BH-7 6-7'	soil	2014-04-03	00:00	2014-04-03

	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)
359582 - BH-1 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
359592 - BH-2 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
359604 - BH-3 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
359615 - BH-4 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
359627 - BH-5 0-1'	<0.0200	<0.0200	**0.245**	**0.299**	**58.9**	**21.8**

continued ...

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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)
359637 - BH-6 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
359648 - BH-7 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	**50.2**	<4.00
359657 - BH-9 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	**74.4**	<4.00
359670 - BH-10 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
359678 - BH-11 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
359690 - BH-8 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	**50.5**	<4.00

Sample: 359582 - BH-1 0-1'

Param	Flag	Result	Units	RL
Chloride		**11400**	mg/Kg	4

Sample: 359583 - BH-1 2-3'

Param	Flag	Result	Units	RL
Chloride		**2540**	mg/Kg	4

Sample: 359584 - BH-1 4-5'

Param	Flag	Result	Units	RL
Chloride		**2700**	mg/Kg	4

Sample: 359585 - BH-1 6-7'

Param	Flag	Result	Units	RL
Chloride		**13800**	mg/Kg	4

Sample: 359586 - BH-1 9-10'

Param	Flag	Result	Units	RL
Chloride		**2120**	mg/Kg	4

Sample: 359587 - BH-1 14-15'

Param	Flag	Result	Units	RL
Chloride		**847**	mg/Kg	4

Sample: 359588 - BH-1 19-20'

Param	Flag	Result	Units	RL
Chloride		**265**	mg/Kg	4

Sample: 359589 - BH-1 24-25'

Param	Flag	Result	Units	RL
Chloride		**423**	mg/Kg	4

Sample: 359590 - BH-1 29-30'

Param	Flag	Result	Units	RL
Chloride		**317**	mg/Kg	4

Sample: 359591 - BH-1 34-35'

Param	Flag	Result	Units	RL
Chloride		**106**	mg/Kg	4

Sample: 359592 - BH-2 0-1'

Param	Flag	Result	Units	RL
Chloride		**4970**	mg/Kg	4

Sample: 359593 - BH-2 2-3'

Param	Flag	Result	Units	RL
Chloride		**8110**	mg/Kg	4

Sample: 359594 - BH-2 4-5'

Param	Flag	Result	Units	RL
Chloride		**3190**	mg/Kg	4

Sample: 359595 - BH-2 6-7'

Param	Flag	Result	Units	RL
Chloride		**4700**	mg/Kg	4

Sample: 359596 - BH-2 9-10'

Param	Flag	Result	Units	RL
Chloride		**6380**	mg/Kg	4

Sample: 359597 - BH-2 14-15'

Param	Flag	Result	Units	RL
Chloride		**5030**	mg/Kg	4

Sample: 359598 - BH-2 19-20'

Param	Flag	Result	Units	RL
Chloride		**541**	mg/Kg	4

Sample: 359599 - BH-2 24-25'

Param	Flag	Result	Units	RL
Chloride		**216**	mg/Kg	4

Sample: 359600 - BH-2 29-30'

Param	Flag	Result	Units	RL
Chloride		**324**	mg/Kg	4

Sample: 359601 - BH-2 34-35'

Param	Flag	Result	Units	RL
Chloride		**108**	mg/Kg	4

Sample: 359602 - BH-2 39-40'

Param	Flag	Result	Units	RL
Chloride		**54.0**	mg/Kg	4

Sample: 359603 - BH-2 44-45'

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

Sample: 359604 - BH-3 0-1'

Param	Flag	Result	Units	RL
Chloride		**272**	mg/Kg	4

Sample: 359605 - BH-3 2-3'

Param	Flag	Result	Units	RL
Chloride		**2940**	mg/Kg	4

Sample: 359606 - BH-3 4-5'

Param	Flag	Result	Units	RL
Chloride		**217**	mg/Kg	4

Sample: 359607 - BH-3 6-7'

Param	Flag	Result	Units	RL
Chloride		**109**	mg/Kg	4

Sample: 359608 - BH-3 9-10'

Param	Flag	Result	Units	RL
Chloride		**163**	mg/Kg	4

Sample: 359609 - BH-3 14-15'

Param	Flag	Result	Units	RL
Chloride		**163**	mg/Kg	4

Sample: 359610 - BH-3 19-20'

Param	Flag	Result	Units	RL
Chloride		**109**	mg/Kg	4

Sample: 359611 - BH-3 24-25'

Param	Flag	Result	Units	RL
Chloride		**54.0**	mg/Kg	4

Sample: 359612 - BH-3 29-30'

Param	Flag	Result	Units	RL
Chloride		**251**	mg/Kg	4

Sample: 359613 - BH-3 34-35'

Param	Flag	Result	Units	RL
Chloride		**201**	mg/Kg	4

Sample: 359614 - BH-3 39-40'

Param	Flag	Result	Units	RL
Chloride		**251**	mg/Kg	4

Sample: 359615 - BH-4 0-1'

Param	Flag	Result	Units	RL
Chloride		**3120**	mg/Kg	4

Sample: 359616 - BH-4 2-3'

Param	Flag	Result	Units	RL
Chloride		**3820**	mg/Kg	4

Sample: 359617 - BH-4 4-5'

Param	Flag	Result	Units	RL
Chloride		**804**	mg/Kg	4

Sample: 359618 - BH-4 6-7'

Param	Flag	Result	Units	RL
Chloride		**1460**	mg/Kg	4

Sample: 359619 - BH-4 9-10'

Param	Flag	Result	Units	RL
Chloride		**402**	mg/Kg	4

Sample: 359620 - BH-4 14-15'

Param	Flag	Result	Units	RL
Chloride		251	mg/Kg	4

Sample: 359621 - BH-4 19-20'

Param	Flag	Result	Units	RL
Chloride		201	mg/Kg	4

Sample: 359622 - BH-4 24-25'

Param	Flag	Result	Units	RL
Chloride		308	mg/Kg	4

Sample: 359623 - BH-4 29-30'

Param	Flag	Result	Units	RL
Chloride		205	mg/Kg	4

Sample: 359624 - BH-4 34-35'

Param	Flag	Result	Units	RL
Chloride		205	mg/Kg	4

Sample: 359625 - BH-4 39-40'

Param	Flag	Result	Units	RL
Chloride		205	mg/Kg	4

Sample: 359626 - BH-4 44-45'

Param	Flag	Result	Units	RL
Chloride		154	mg/Kg	4

Sample: 359627 - BH-5 0-1'

Param	Flag	Result	Units	RL
Chloride		667	mg/Kg	4

Sample: 359628 - BH-5 2-3'

Param	Flag	Result	Units	RL
Chloride		7690	mg/Kg	4

Sample: 359629 - BH-5 4-5'

Param	Flag	Result	Units	RL
Chloride		15900	mg/Kg	4

Sample: 359630 - BH-5 6-7'

Param	Flag	Result	Units	RL
Chloride		20500	mg/Kg	4

Sample: 359631 - BH-5 9-10'

Param	Flag	Result	Units	RL
Chloride		13900	mg/Kg	4

Sample: 359632 - BH-5 14-15'

Param	Flag	Result	Units	RL
Chloride		6250	mg/Kg	4

Sample: 359633 - BH-5 19-20'

Param	Flag	Result	Units	RL
Chloride		4320	mg/Kg	4

Sample: 359634 - BH-5 24-25'

Param	Flag	Result	Units	RL
Chloride		573	mg/Kg	4

Sample: 359635 - BH-5 29-30'

Param	Flag	Result	Units	RL
Chloride		313	mg/Kg	4

Sample: 359636 - BH-5 39-40'

Param	Flag	Result	Units	RL
Chloride		**469**	mg/Kg	4

Sample: 359637 - BH-6 0-1'

Param	Flag	Result	Units	RL
Chloride		**6200**	mg/Kg	4

Sample: 359638 - BH-6 2-3'

Param	Flag	Result	Units	RL
Chloride		**13900**	mg/Kg	4

Sample: 359639 - BH-6 4-5'

Param	Flag	Result	Units	RL
Chloride		**2340**	mg/Kg	4

Sample: 359640 - BH-6 6-7'

Param	Flag	Result	Units	RL
Chloride		**3590**	mg/Kg	4

Sample: 359641 - BH-6 9-10'

Param	Flag	Result	Units	RL
Chloride		**2550**	mg/Kg	4

Sample: 359642 - BH-6 14-15'

Param	Flag	Result	Units	RL
Chloride		**525**	mg/Kg	4

Sample: 359643 - BH-6 19-20'

Param	Flag	Result	Units	RL
Chloride		**1310**	mg/Kg	4

Sample: 359644 - BH-6 24-25'

Param	Flag	Result	Units	RL
Chloride		**154**	mg/Kg	4

Sample: 359645 - BH-6 29-30'

Param	Flag	Result	Units	RL
Chloride		**256**	mg/Kg	4

Sample: 359646 - BH-6 39-40'

Param	Flag	Result	Units	RL
Chloride		**103**	mg/Kg	4

Sample: 359647 - BH-6 49-50'

Param	Flag	Result	Units	RL
Chloride		**103**	mg/Kg	4

Sample: 359648 - BH-7 0-1'

Param	Flag	Result	Units	RL
Chloride		**12000**	mg/Kg	4

Sample: 359649 - BH-7 2-3'

Param	Flag	Result	Units	RL
Chloride		**18300**	mg/Kg	4

Sample: 359650 - BH-7 4-5'

Param	Flag	Result	Units	RL
Chloride		**2770**	mg/Kg	4

Sample: 359651 - BH-7 9-10'

Param	Flag	Result	Units	RL
Chloride		**821**	mg/Kg	4

Sample: 359652 - BH-7 14-15'

Param	Flag	Result	Units	RL
Chloride		**1800**	mg/Kg	4

Sample: 359653 - BH-7 19-20'

Param	Flag	Result	Units	RL
Chloride		**154**	mg/Kg	4

Sample: 359654 - BH-7 24-25'

Param	Flag	Result	Units	RL
Chloride		**101**	mg/Kg	4

Sample: 359655 - BH-7 29-30'

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

Sample: 359656 - BH-7 39-40'

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

Sample: 359657 - BH-9 0-1'

Param	Flag	Result	Units	RL
Chloride		**5380**	mg/Kg	4

Sample: 359658 - BH-9 2-3'

Param	Flag	Result	Units	RL
Chloride		**16100**	mg/Kg	4

Sample: 359659 - BH-9 4-5'

Param	Flag	Result	Units	RL
Chloride		**17200**	mg/Kg	4

Sample: 359660 - BH-9 6-7'

Param	Flag	Result	Units	RL
Chloride		9750	mg/Kg	4

Sample: 359661 - BH-9 9-10'

Param	Flag	Result	Units	RL
Chloride		12600	mg/Kg	4

Sample: 359662 - BH-9 14-15'

Param	Flag	Result	Units	RL
Chloride		8590	mg/Kg	4

Sample: 359663 - BH-9 19-20'

Param	Flag	Result	Units	RL
Chloride		13700	mg/Kg	4

Sample: 359664 - BH-9 24-25'

Param	Flag	Result	Units	RL
Chloride		2200	mg/Kg	4

Sample: 359665 - BH-9 29-30'

Param	Flag	Result	Units	RL
Chloride		103	mg/Kg	4

Sample: 359666 - BH-9 39-40'

Param	Flag	Result	Units	RL
Chloride		410	mg/Kg	4

Sample: 359667 - BH-9 49-50'

Param	Flag	Result	Units	RL
Chloride		51.0	mg/Kg	4

Sample: 359668 - BH-9 59-60'

Param	Flag	Result	Units	RL
Chloride		**51.0**	mg/Kg	4

Sample: 359669 - BH-9 64-65'

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

Sample: 359670 - BH-10 0-1'

Param	Flag	Result	Units	RL
Chloride		**7230**	mg/Kg	4

Sample: 359671 - BH-10 2-3'

Param	Flag	Result	Units	RL
Chloride		**10300**	mg/Kg	4

Sample: 359672 - BH-10 4-5'

Param	Flag	Result	Units	RL
Chloride		**2050**	mg/Kg	4

Sample: 359673 - BH-10 6-7'

Param	Flag	Result	Units	RL
Chloride		**2360**	mg/Kg	4

Sample: 359674 - BH-10 9-10'

Param	Flag	Result	Units	RL
Chloride		**350**	mg/Kg	4

Sample: 359675 - BH-10 14-15'

Param	Flag	Result	Units	RL
Chloride		**350**	mg/Kg	4

Sample: 359676 - BH-10 19-20'

Param	Flag	Result	Units	RL
Chloride		50.0	mg/Kg	4

Sample: 359677 - BH-10 24-25'

Param	Flag	Result	Units	RL
Chloride		150	mg/Kg	4

Sample: 359678 - BH-11 0-1'

Param	Flag	Result	Units	RL
Chloride		8700	mg/Kg	4

Sample: 359679 - BH-11 2-3'

Param	Flag	Result	Units	RL
Chloride		20000	mg/Kg	4

Sample: 359680 - BH-11 4-5'

Param	Flag	Result	Units	RL
Chloride		9700	mg/Kg	4

Sample: 359681 - BH-11 6-7'

Param	Flag	Result	Units	RL
Chloride		8750	mg/Kg	4

Sample: 359682 - BH-11 9-10'

Param	Flag	Result	Units	RL
Chloride		6000	mg/Kg	4

Sample: 359683 - BH-11 14-15'

Param	Flag	Result	Units	RL
Chloride		12000	mg/Kg	4

Sample: 359684 - BH-11 19-20'

Param	Flag	Result	Units	RL
Chloride		3150	mg/Kg	4

Sample: 359685 - BH-11 24-25'

Param	Flag	Result	Units	RL
Chloride		250	mg/Kg	4

Sample: 359686 - BH-11 29-30'

Param	Flag	Result	Units	RL
Chloride		250	mg/Kg	4

Sample: 359687 - BH-11 39-40'

Param	Flag	Result	Units	RL
Chloride		150	mg/Kg	4

Sample: 359688 - BH-11 49-50'

Param	Flag	Result	Units	RL
Chloride		150	mg/Kg	4

Sample: 359689 - BH-11 59-60'

Param	Flag	Result	Units	RL
Chloride		100	mg/Kg	4

Sample: 359690 - BH-8 0-1'

Param	Flag	Result	Units	RL
Chloride		15000	mg/Kg	4

Sample: 359691 - BH-8 2-3'

Param	Flag	Result	Units	RL
Chloride		13700	mg/Kg	4

Sample: 359692 - BH-8 4-5'

Param	Flag	Result	Units	RL
Chloride		**4100**	mg/Kg	4

Sample: 359693 - BH-8 6-7'

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

Sample: 359694 - BH-8 9-10'

Param	Flag	Result	Units	RL
Chloride		**52.0**	mg/Kg	4

Sample: 359695 - BH-8 14-15'

Param	Flag	Result	Units	RL
Chloride		**103**	mg/Kg	4

Sample: 359696 - BH-8 19-20'

Param	Flag	Result	Units	RL
Chloride		**876**	mg/Kg	4

Sample: 359697 - BH-8 24-25'

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

Sample: 359698 - BH-8 29-30'

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

Sample: 359699 - BH-7 6-7'

Param	Flag	Result	Units	RL
Chloride		**103**	mg/Kg	4