SITE INFORMATION

2RP-519

Report Type: Work Plan

General Site Information:		
Site:	East High Lonesome Penrose Unit Tank Battery	
Company:	COG Operating LLC	
Section, Township and Range	Unit H Sec. 14 T-16S S-29E	
Lease Number:	91-008663	
County:	Eddy County	
GPS:	32.92294	104.0391
Surface Owner:	Federal	
Mineral Owner:		
Directions:	In Loco Hill, New Mexcio, go North 7.2 mles on CR 217 (Hagerman Cuttoff Rd), turn left (west) into lease road and go 2.6 mile to Tank Battery	

Release Data:	
Date Released:	6/21/2010
Type Release:	Produced water
Source of Contamination:	Water tank overflow
Fluid Released:	200 bbls
Fluids Recovered:	195 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	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 11 2011
NMOCD ARTESIA

TETRA TECH

August 5, 2011

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

Re: Work Plan for the COG Operating LLC.
East High Lonesome Penrose Unit Tank Battery
Unit H, Section 14, Township 16 South, Range 29 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 East High Lonesome Penrose Unit Tank Battery, Unit H, Section 14, Township 16 South, Range 29 East, Eddy County, New Mexico. (Site). The spill site coordinates are N 32.92294°, W 104.03910°. The site location is shown on Figures 1 and 2.

Background

According to the State of New Mexico Oil Conservation Division (NMOCD) Form C-141 Initial Report, the leak was discovered on June 21, 2010, and released approximately two hundred (200) barrels of produced water due to a burned relay powering the Murphy tank level switch. One hundred and ninety five (195) barrels of standing fluids were recovered from the spill area. The spill was contained inside the facility berm impacting an area measuring approximately 50' x 100'. The initial Form C-141 is enclosed in Appendix A.

Groundwater

No water wells were listed within Section 14. According to the New Mexico Office of the State Engineer database, one well is located in Section 19, with a reported depth to water of 110' below surface. Due to the limited groundwater data, Mike Bratcher of the OCD requested a temporary monitor well to be installed.

On March 3, 2011, Tetra Tech personnel oversaw the installation of a temporary monitor well located in Sec 14. On March 23, 2011, Tetra Tech personnel gauged the well and recorded the well as dry with a total depth of 220' bgs. Based on the findings, and as discussed and agreed with Mike Bratcher, groundwater is either greater than 220' bgs or suspected absent in the area. The well log and 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 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 August 11, 2010, Tetra Tech personnel inspected and sampled the spill area. A total of six (6) auger holes (AH-1 through AH-6) were installed inside the facility berm using a stainless steel hand auger to assess the impacted soils. Select samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The sampling results are summarized in Table 1. The auger hole locations are shown on Figure 3.

Referring to Table 1, all of the submitted samples were below the RRAL for TPH and BTEX. The area of auger holes (AH-3) did not show a significant chloride impact, with chloride concentrations of 727 mg/kg (0-1') and 758 mg/kg (1-1.5'). The remaining auger holes showed elevated chloride concentrations and were not vertically defined.

Tetra Tech supervised the installation of eight (8) boreholes (BH-1 through BH-8) on October 7, 2010. A BLM site inspection indicated the spill was not contained within the facility and fluids breached underneath the facility berm and migrating southwest across the pad and pooled along the edge of the pad's secondary berm. This spill area was also drilled to assess the soils. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The sampling results are summarized in Table 2. The borehole locations are shown on Figure 4.

Referring to Table 1, boreholes BH-2, BH-4 and BH-5 inside the facility dike were all vertically defined. The chloride concentrations declined with depth and showed bottom hole samples of <200 mg/kg at 70.0', 90.0', and 60.0', respectively.

Borehole (BH-3) was not vertically defined and did show elevated chloride concentrations, which declined from 13,800 mg/kg (40.0') to 6,520 mg/kg (50.0'). This data correlates to the other three boreholes inside the facility berm. Chloride concentrations observed in the 60' and 70' sample were consistent with concentrations observed from above. These samples may have been cross

contaminated from the loose sand sloughing from above. Drilling was halted at 70' due to the flowing sands.

The remaining boreholes (BH-1, BH-6, BH-7 and BH-8) on the facility pad appear to have been vertically defined. The chloride concentrations significantly declined at 40.0' (725 mg/kg), 25.0' (603 mg/kg), 40.0' (623 mg/kg) and 40.0' (720 mg/kg), respectively.

Work Plan

Based on the depth or suspected absent of groundwater, COG proposes to excavate impacted soils outside of the tank berm to a depth of four feet. Since the location is an active tank battery, the soils inside the tank berm will be addressed in the future during the abandonment of the location.

Tetra Tech proposes to supervise the removal of impacted material as shown highlighted in green on attached Table 1 and Table 2. The excavated soil will be transported for proper disposal.

Upon completion a final report will be submitted to the NMOCD. If you have any questions or require any additional information regarding this work plan proposal, please call me at (432) 682-4559.

Respectfully submitted,
TETRA TECH

Aaron M. Hale
Senior Project Manager

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

FIGURES

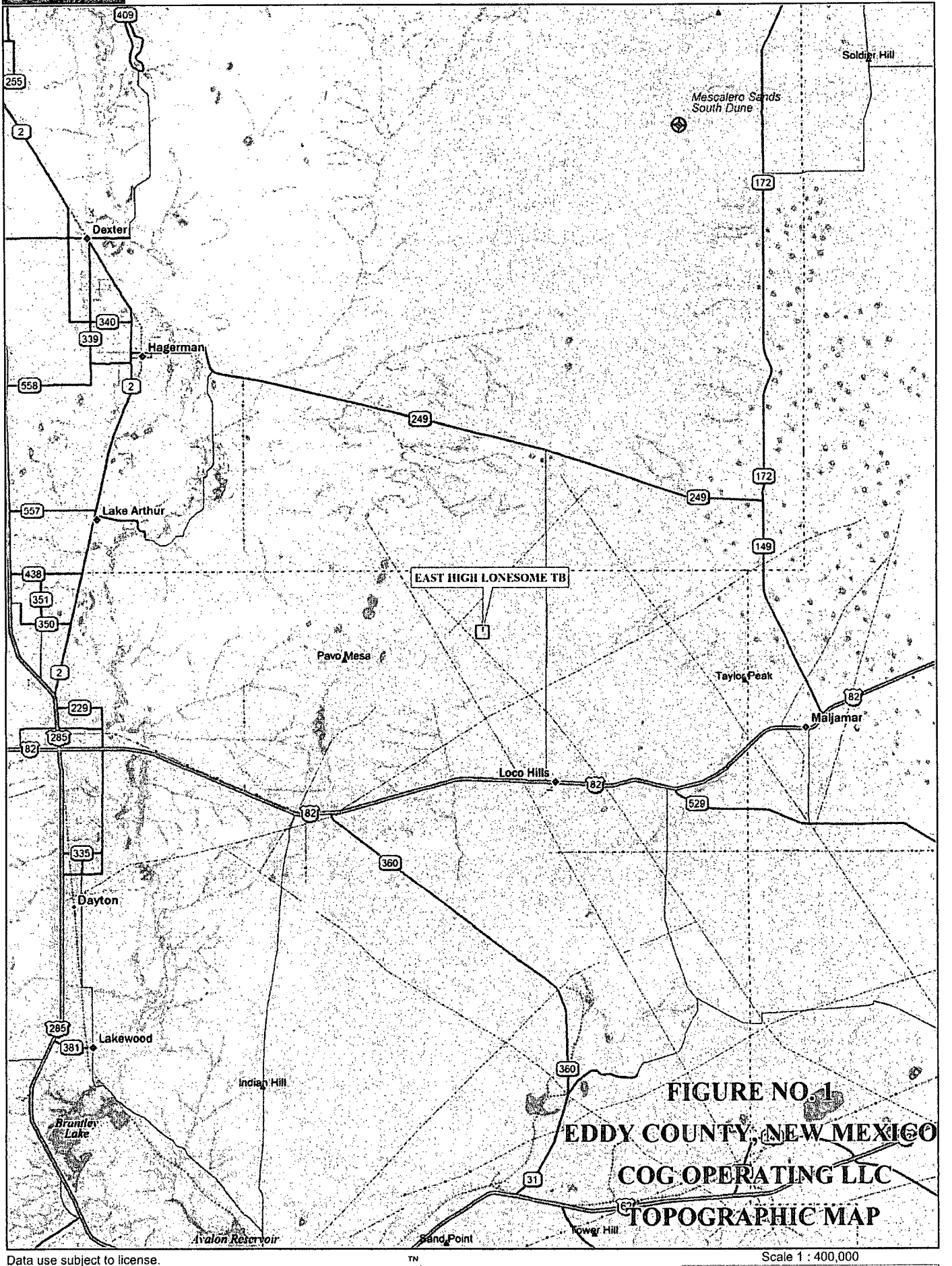


FIGURE NO. 1
EDDY COUNTY, NEW MEXICO
COG OPERATING LLC
TOPOGRAPHIC MAP

TN
MN (7.8°E)

Scale 1 : 400,000
1" = 6.31 mi
Data Zoom 9-0

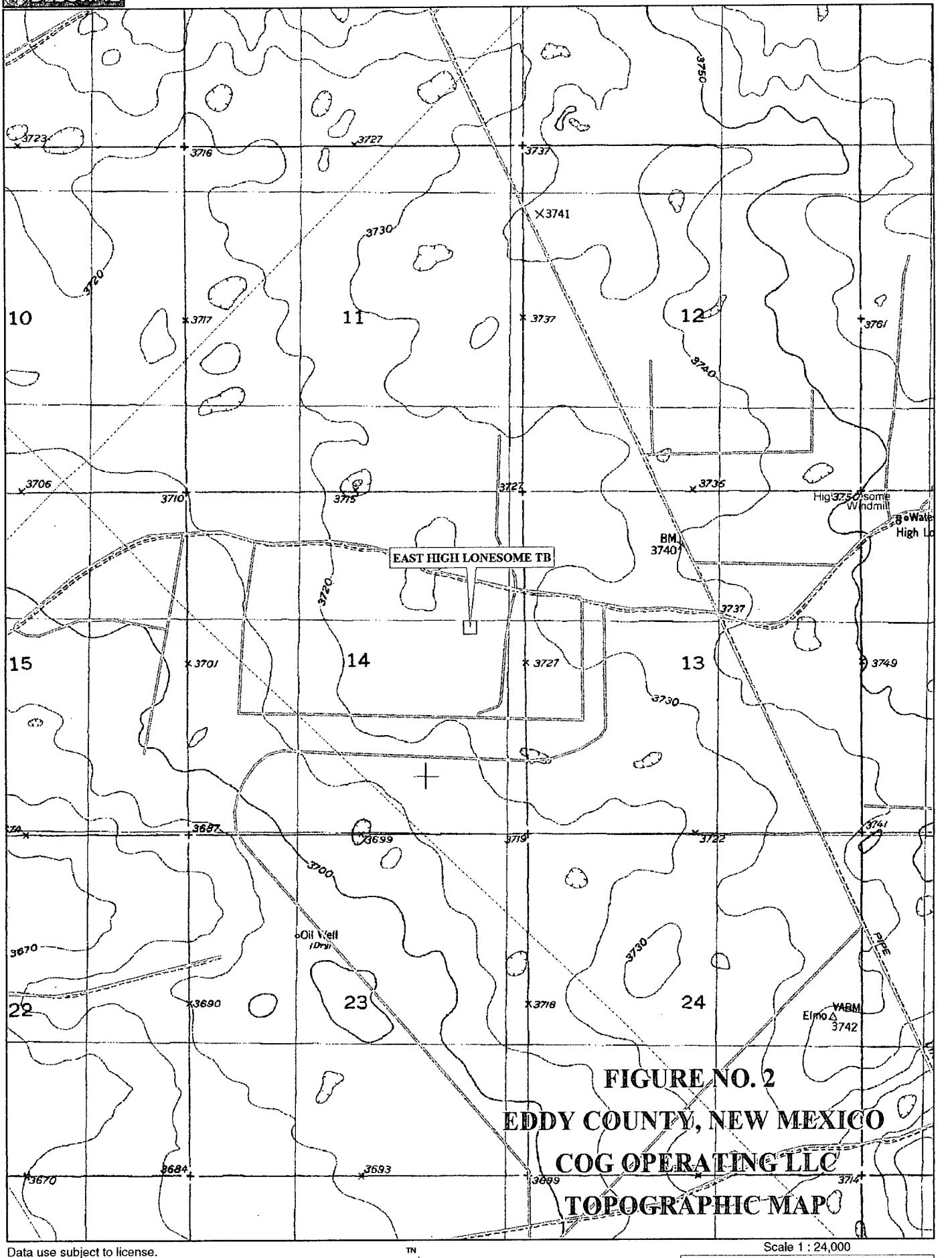
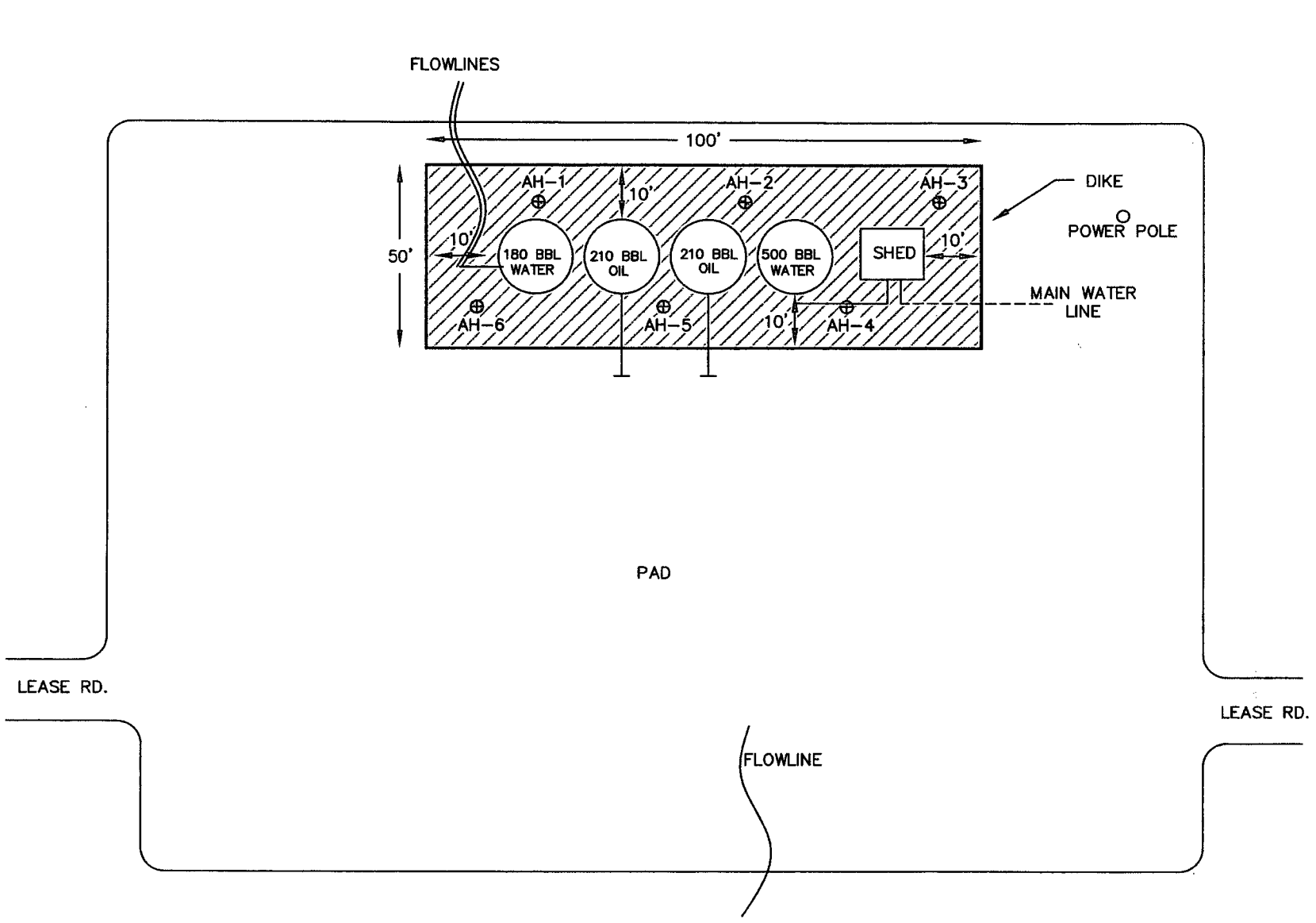


FIGURE NO. 2
EDDY COUNTY, NEW MEXICO
COG OPERATING LLC
TOPOGRAPHIC MAP

TN
MN (7.9°E)

Scale 1 : 24,000
1" = 2,000.0 ft
Data Zoom 13-0



SPILL AREA
AUGER HOLE LOCATIONS

NOT TO SCALE

FIGURE NO. 3

EDDY COUNTY, NEW MEXICO

COG OPERATING LLC

EAST HIGH LONESOME TB

DATE: 10/7/10
DWN. BY: JJ
FILE: I:\COG\8400672 EAST HIGH LONESOME

TETRA TECH, INC.
MIDLAND, TEXAS

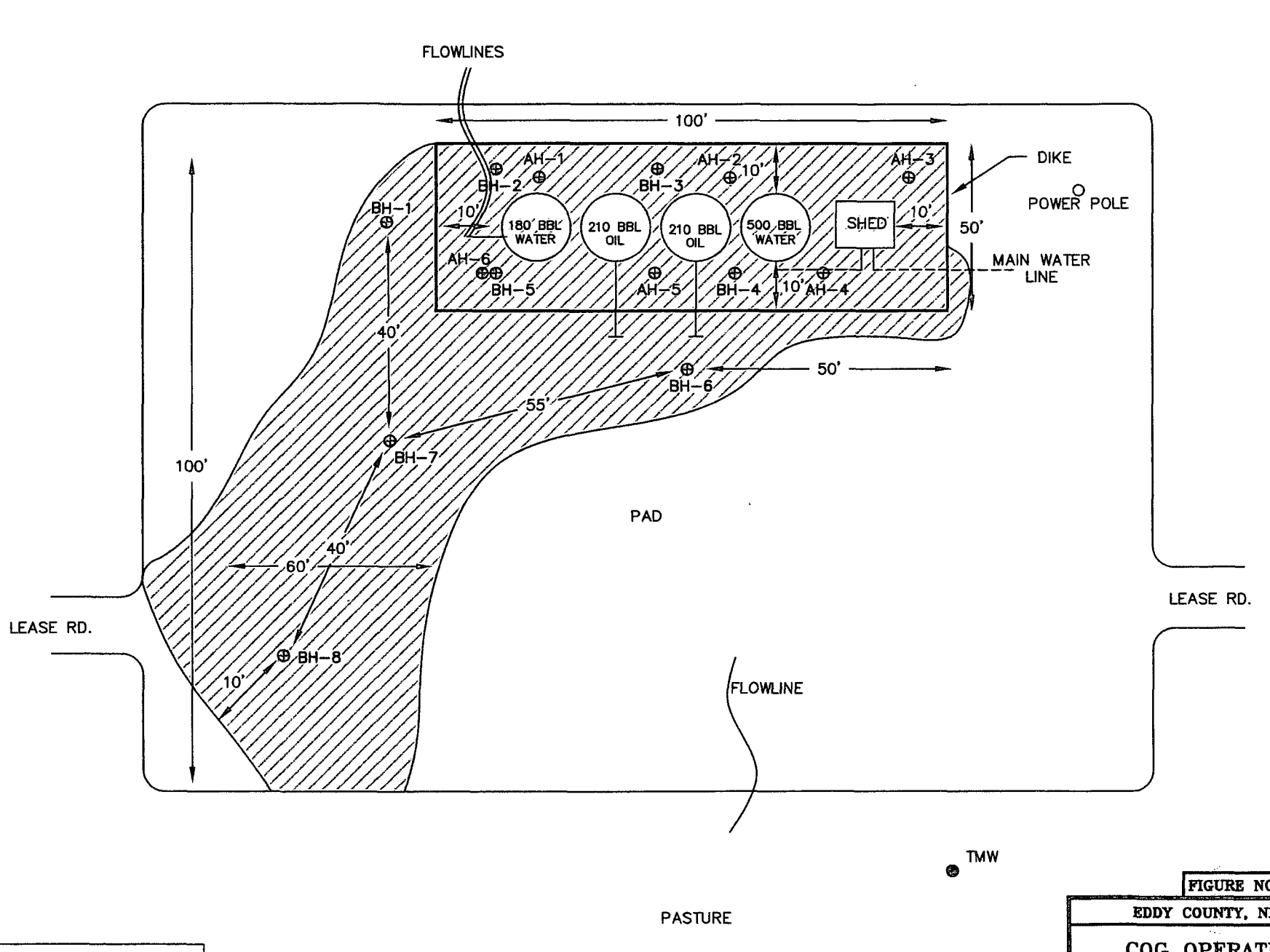


FIGURE NO. 4

EDDY COUNTY, NEW MEXICO

COG OPERATING LLC

EAST HIGH LONESOME TB

DATE: 04/4/11

DWN. BY: JJ

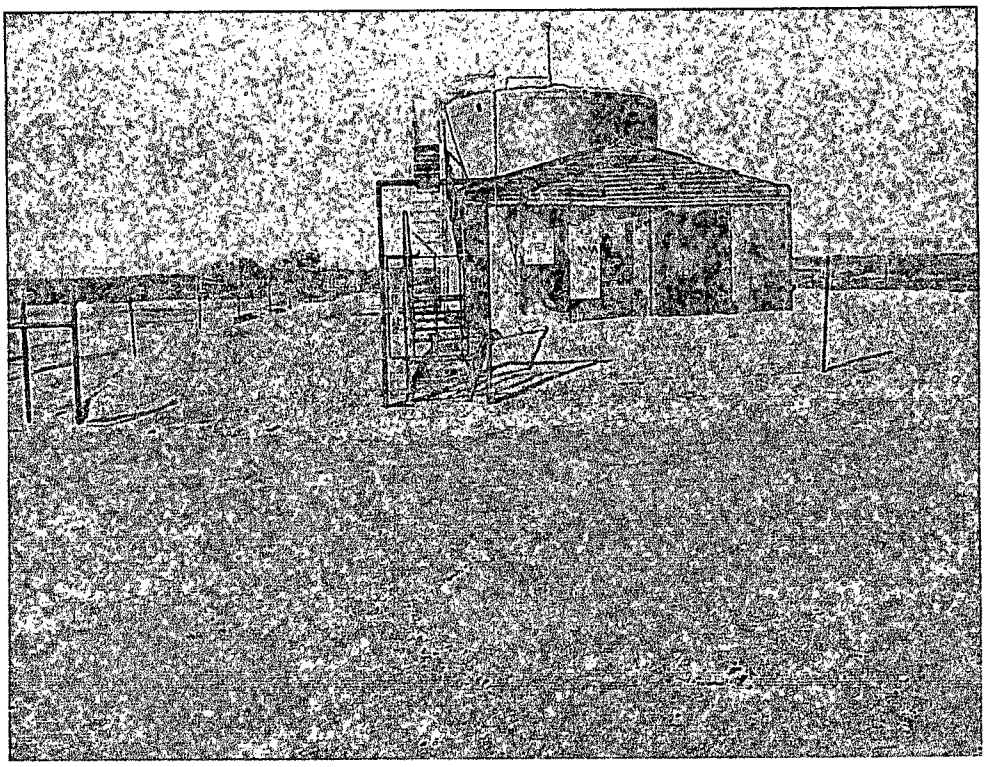
FILE: H:\COG\64000572 EAST HIGH LONESOME

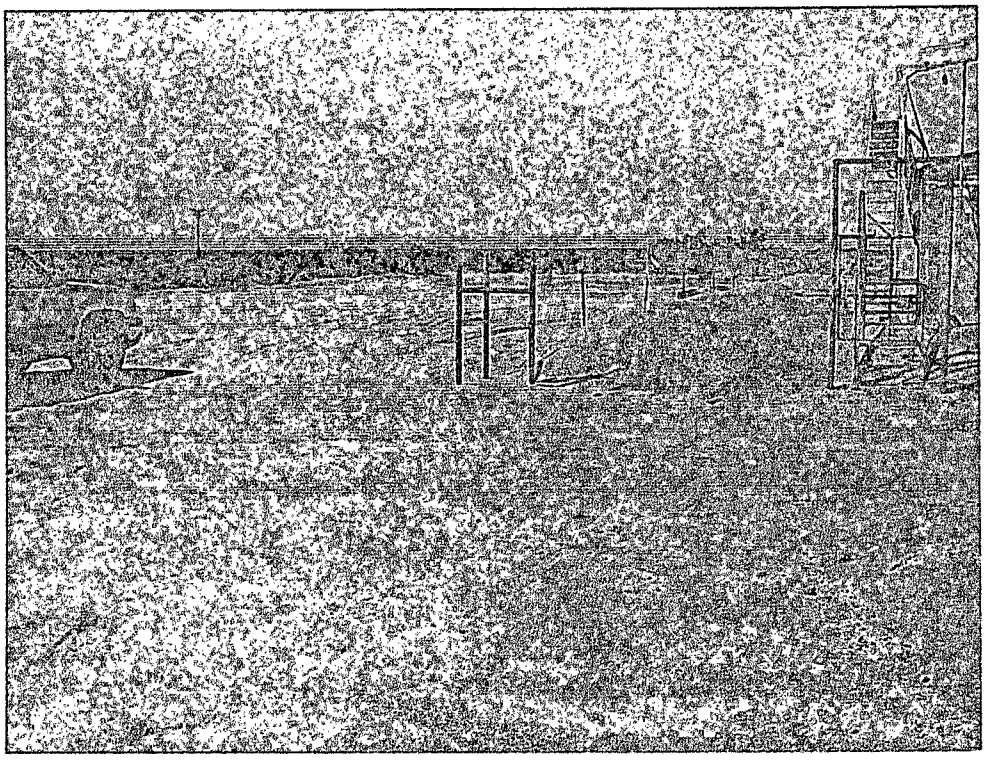
TETRA TECH, INC.
MIDLAND, TEXAS

Photos

COG Operating LLC
East High Lonesome
Eddy County, New Mexico

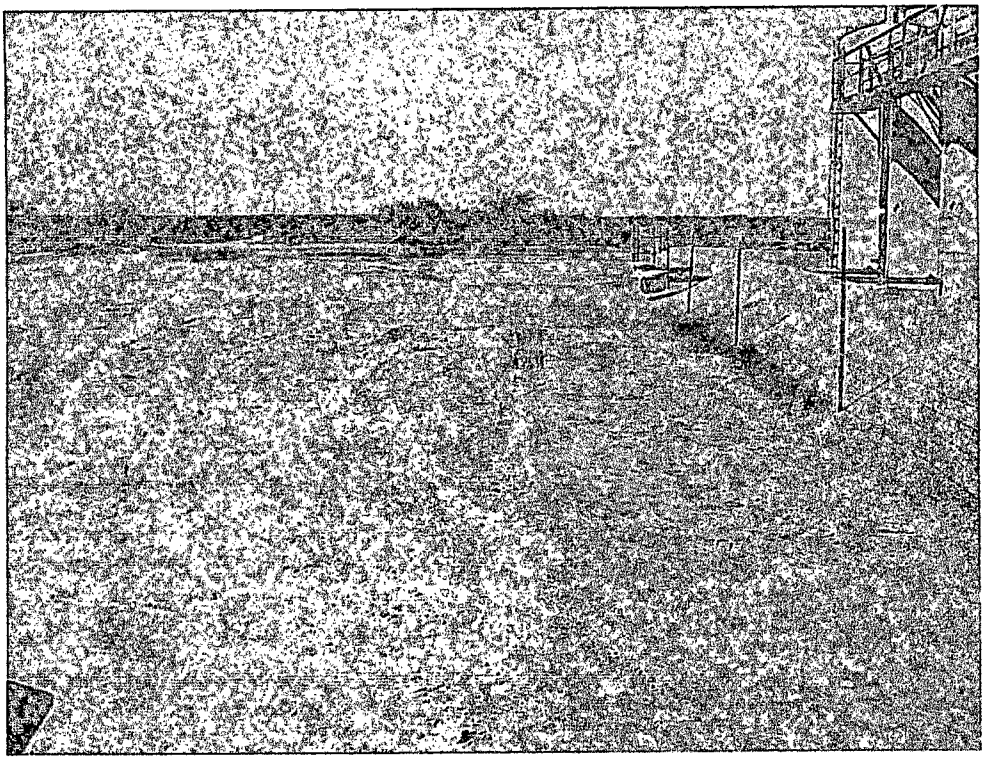
TETRA TECH

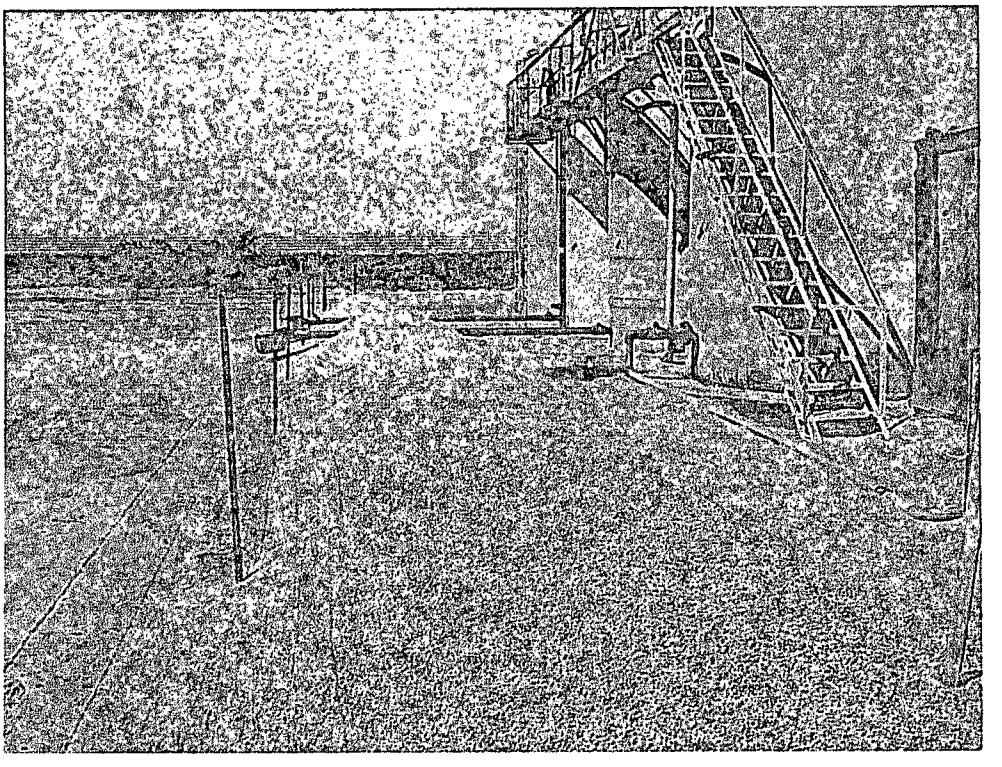




COG Operating LLC
East High Lonesome
Eddy County, New Mexico

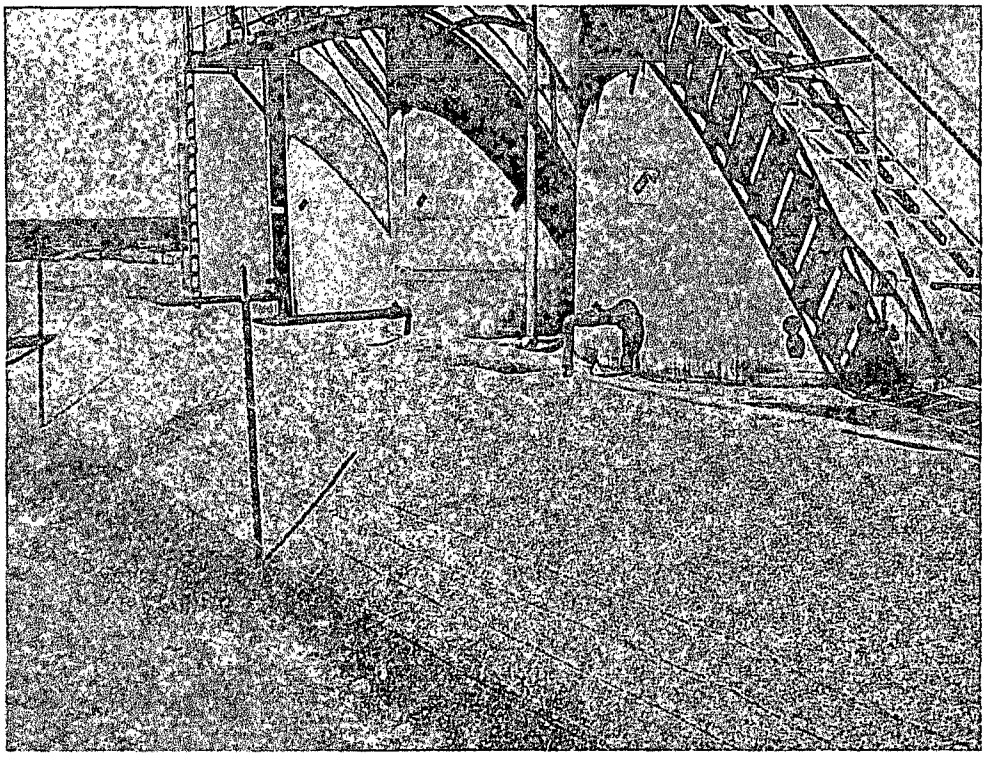
TETRA TECH

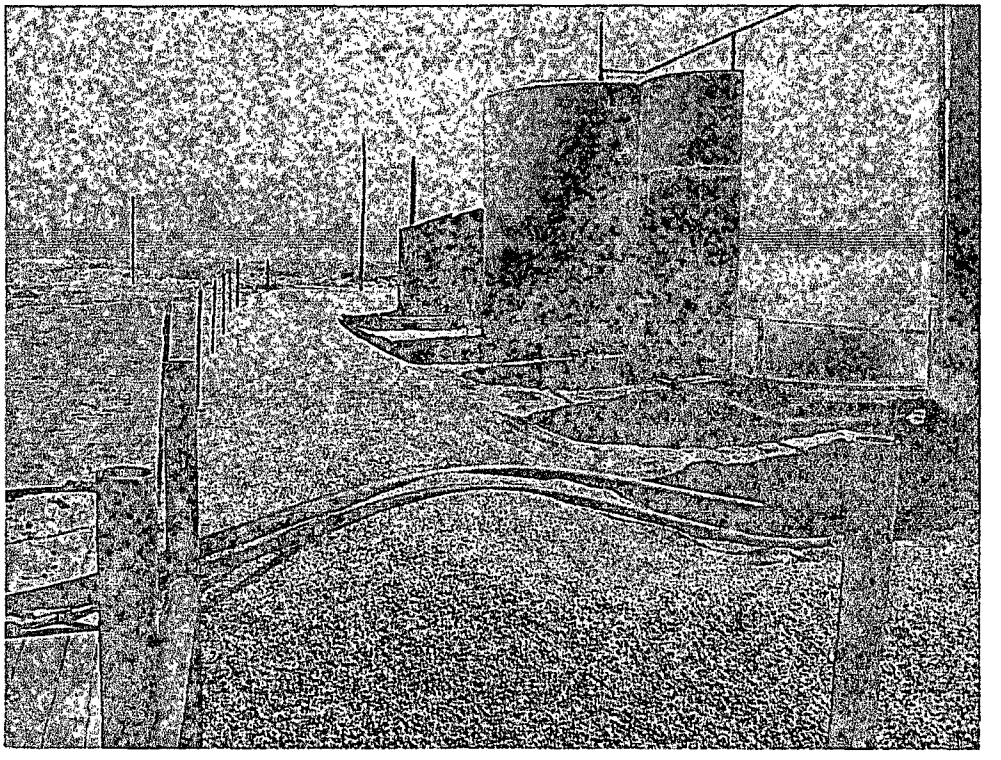




COG Operating LLC
East High Lonesome
Eddy County, New Mexico

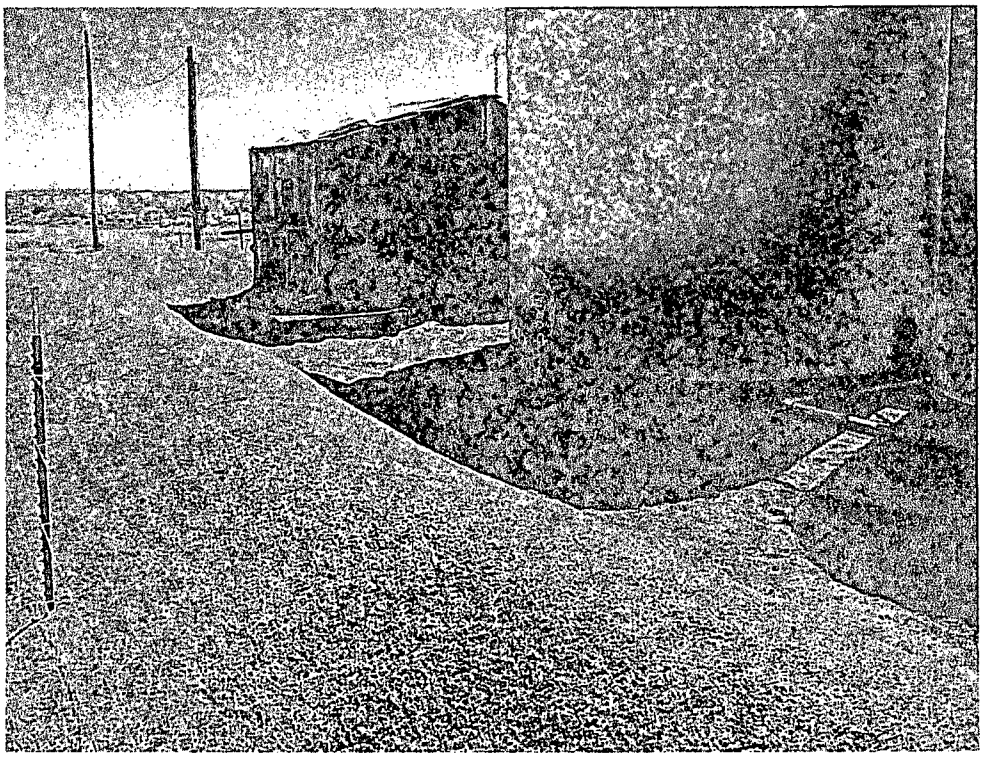
TETRA TECH

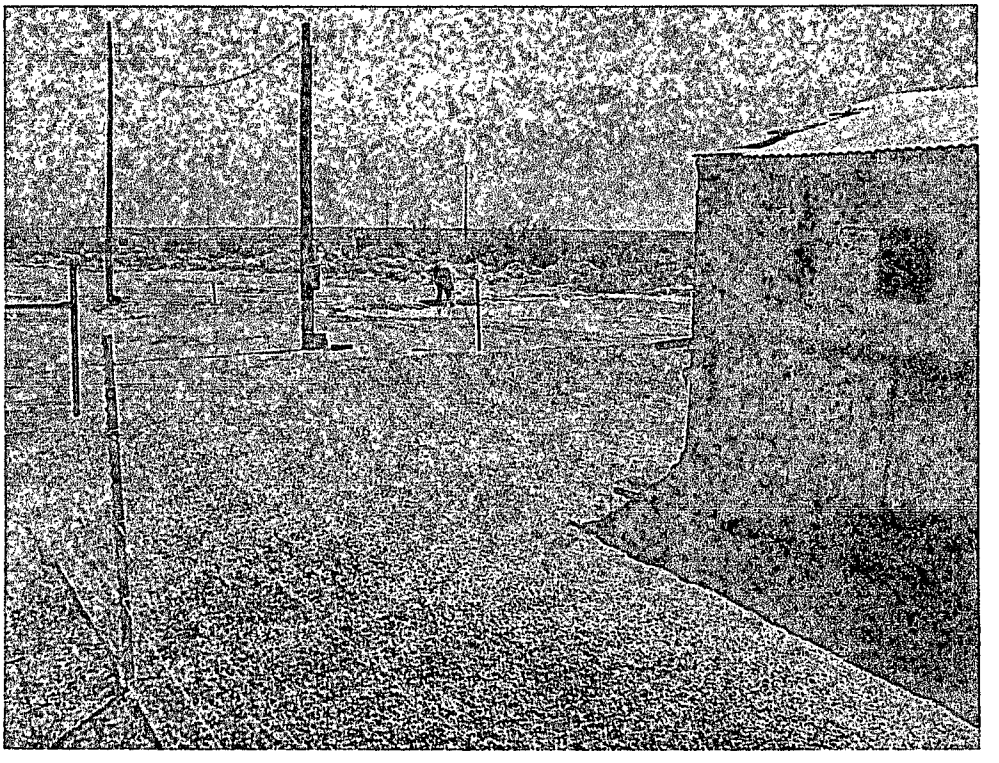




COG Operating LLC
East High Lonesome
Eddy County, New Mexico

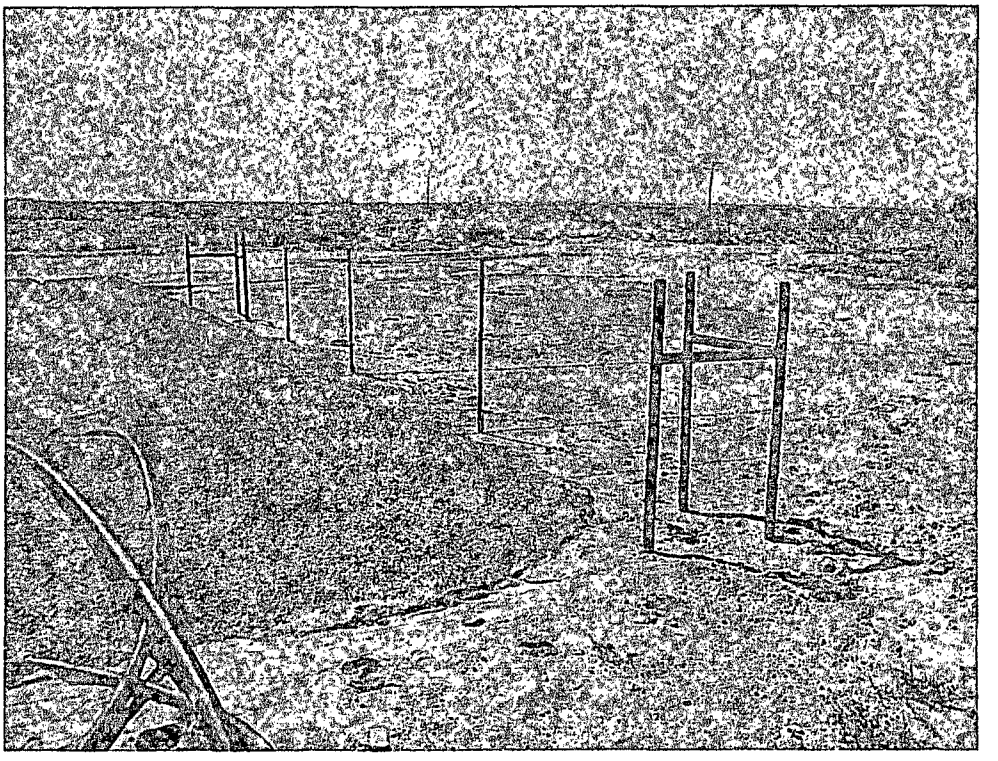
TETRA TECH

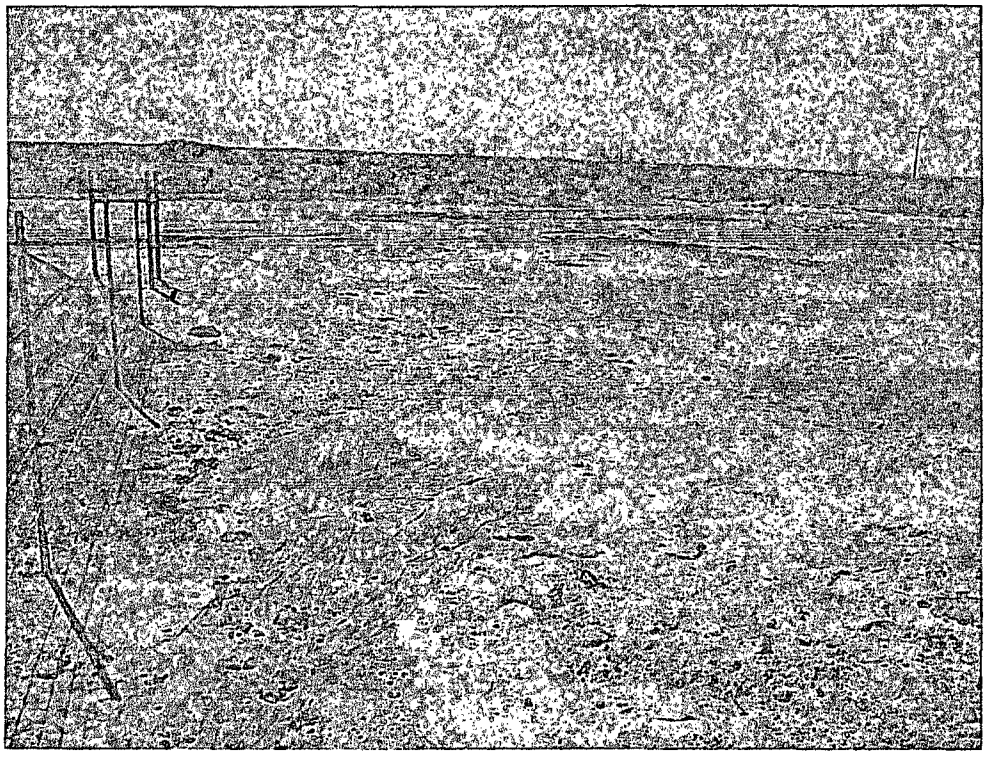




COG Operating LLC
East High Lonesome
Eddy County, New Mexico

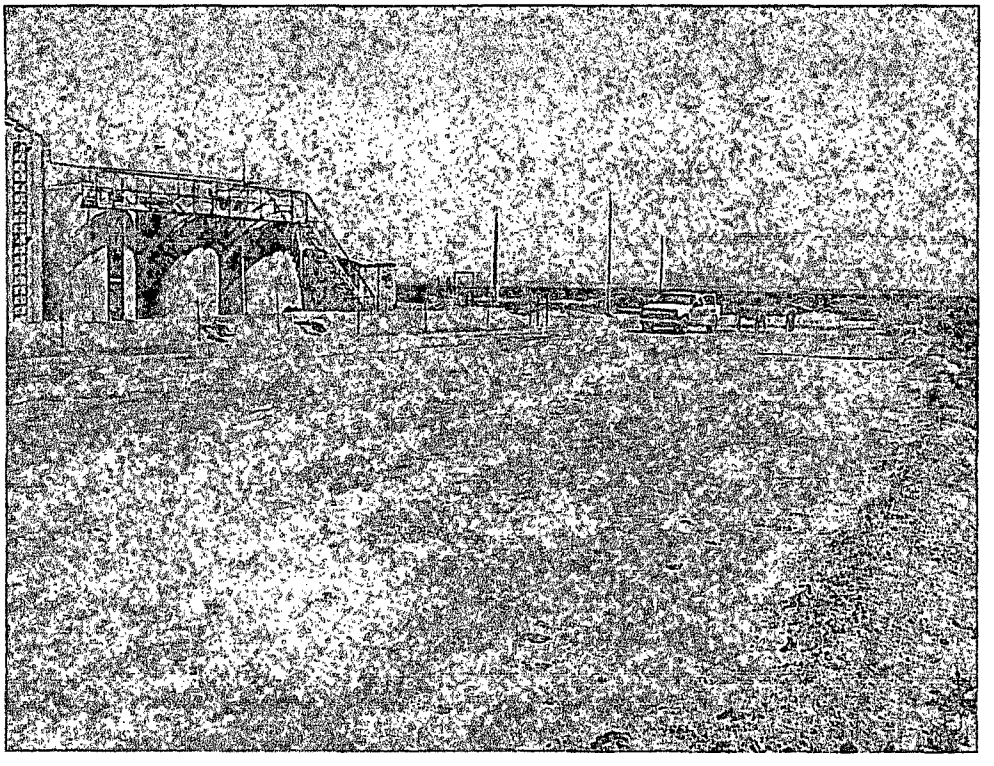
TETRA TECH

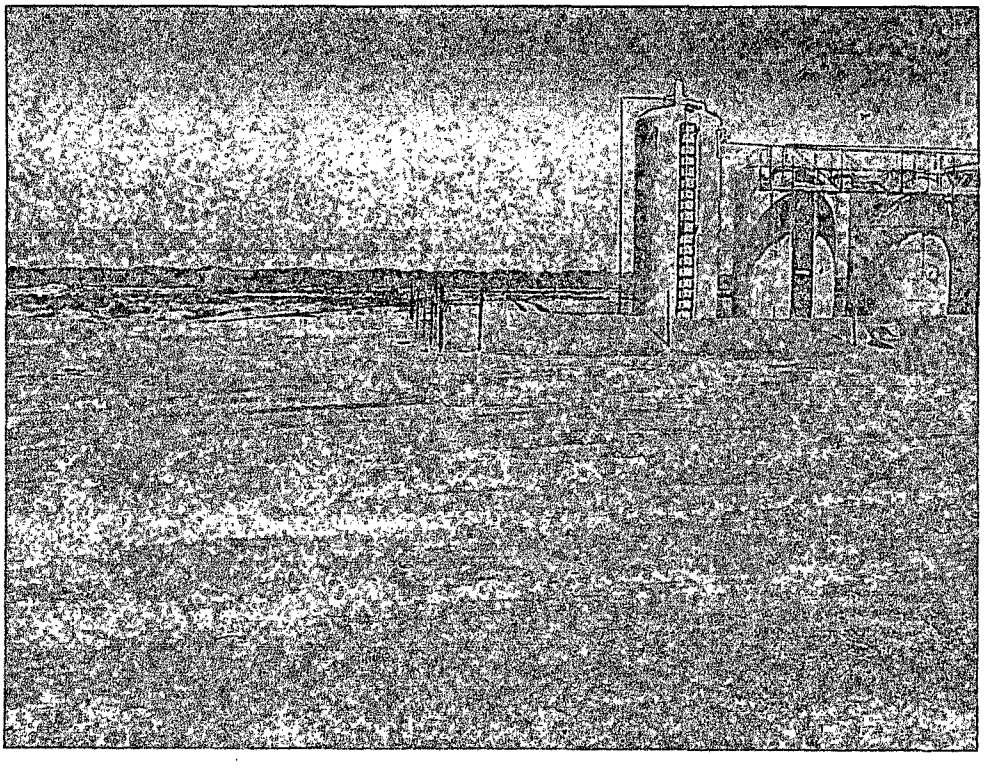




COG Operating LLC
East High Lonesome
Eddy County, New Mexico

TETRA TECH





TABLES

Table 1
COG Operating LLC.
EAST HIGH LONESOME TANK BATTERY
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)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total					
AH-1	8/11/2010	0-0.5'		X		44.8	4,550	4,594.8	<0.200	<0.200	<0.200	<0.200	12,300
AH-2	8/11/2010	0-1'		X		198	1,770	1,968	<0.200	<0.200	<0.200	1.18	13,700
	8/11/2010	1-1.5'		X		-	-	-	-	-	-	-	7,860
AH-3	8/11/2010	0-1'		X		<2.00	<500	<500	-	-	-	-	727
	8/11/2010	1-1.5'		X		-	-	-					758
AH-4	8/11/2010	0-1'		X		<2.00	<50.0	<50.0	-	-	-	-	11,900
	8/11/2010	1-1.5'		X		-	-	-					9,020
AH-5	8/11/2010	0-0.5'		X		<2.00	124	124	-	-	-	-	11,700
AH-6	8/11/2010	0-0.5'		X		<2.00	<50.0	<50.0	-	-	-	-	4,490

BEB Below Excavation Bottom

(--) Not Analyzed

Proposed Excavation Depths

Table 2
COG Operating LLC.
EAST HIGH LONESOME TANK BATTERY
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)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total					
BH-1	10/7/2010	0-1'		X		-	-	-	-	-	-	-	16,100
	10/7/2010	3'		X		-	-	-	-	-	-	-	21,300
	10/7/2010	5'		X		-	-	-	-	-	-	-	13,000
	10/7/2010	7'		X		-	-	-	-	-	-	-	16,200
	10/7/2010	10'		X		-	-	-	-	-	-	-	15,200
	10/7/2010	15'		X		-	-	-	-	-	-	-	10,500
	10/7/2010	20'		X		-	-	-	-	-	-	-	5,430
	10/7/2010	25'		X		-	-	-	-	-	-	-	3,350
	10/7/2010	30'		X		-	-	-	-	-	-	-	5,390
	10/7/2010	40'		X		-	-	-	-	-	-	-	2,070
	10/7/2010	50'		X		-	-	-	-	-	-	-	725
	10/7/2010	60'		X		-	-	-	-	-	-	-	<200
	10/7/2010	70'		X		-	-	-	-	-	-	-	301

Table 2
COG Operating LLC.
EAST HIGH LONESOME TANK BATTERY
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)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total					
BH-2	10/7/2010	0-1'		X		-	-	-	-	-	-	-	12,000
	10/7/2010	3'		X		-	-	-	-	-	-	-	11,700
	10/7/2010	5'		X		-	-	-	-	-	-	-	19,800
	10/7/2010	7'		X		-	-	-	-	-	-	-	13,700
	10/7/2010	10'		X		-	-	-	-	-	-	-	8,370
	10/7/2010	15'		X		-	-	-	-	-	-	-	5,320
	10/7/2010	20'		X		-	-	-	-	-	-	-	2,680
	10/7/2010	25'		X		-	-	-	-	-	-	-	1,540
	10/7/2010	30'		X		-	-	-	-	-	-	-	2,070
	10/7/2010	40'		X		-	-	-	-	-	-	-	2,260
	10/7/2010	50'		X		-	-	-	-	-	-	-	1,670
	10/7/2010	60'		X		-	-	-	-	-	-	-	383
	10/7/2010	70'		X		-	-	-	-	-	-	-	<200

Table 2
COG Operating LLC.
EAST HIGH LONESOME TANK BATTERY
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)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total					
BH-3	10/7/2010	0-1'		X		-	-	-	-	-	-	-	5,280
	10/7/2010	3'		X		-	-	-	-	-	-	-	4,260
	10/7/2010	5'		X		-	-	-	-	-	-	-	3,280
	10/7/2010	7'		X		-	-	-	-	-	-	-	3,900
	10/7/2010	10'		X		-	-	-	-	-	-	-	8,000
	10/7/2010	15'		X		-	-	-	-	-	-	-	13,000
	10/7/2010	20'		X		-	-	-	-	-	-	-	11,300
	10/7/2010	25'		X		-	-	-	-	-	-	-	11,600
	10/7/2010	30'		X		-	-	-	-	-	-	-	12,100
	10/7/2010	40'		X		-	-	-	-	-	-	-	13,800
	10/7/2010	50'		X		-	-	-	-	-	-	-	6,520
	10/7/2010	60'		X		-	-	-	-	-	-	-	11,900
	10/7/2010	70'		X		-	-	-	-	-	-	-	12,500

Table 2
COG Operating LLC.
EAST HIGH LONESOME TANK BATTERY
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)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total					
BH-4	10/8/2010	0-1'		X		-	-	-	-	-	-	-	9,010
	10/8/2010	3'		X		-	-	-	-	-	-	-	18,700
	10/8/2010	5'		X		-	-	-	-	-	-	-	11,300
	10/8/2010	7'		X		-	-	-	-	-	-	-	9,530
	10/8/2010	10'		X		-	-	-	-	-	-	-	7,670
	10/8/2010	15'		X		-	-	-	-	-	-	-	5,530
	10/8/2010	20'		X		-	-	-	-	-	-	-	6,640
	10/8/2010	25'		X		-	-	-	-	-	-	-	6,650
	10/8/2010	30'		X		-	-	-	-	-	-	-	10,900
	10/8/2010	40'		X		-	-	-	-	-	-	-	9,270
	10/8/2010	50'		X		-	-	-	-	-	-	-	5,970
	10/8/2010	60'		X		-	-	-	-	-	-	-	4,080
	10/8/2010	70'		X		-	-	-	-	-	-	-	4,550
	10/8/2010	80'		X		-	-	-	-	-	-	-	2,380
	10/8/2010	90'		X		-	-	-	-	-	-	-	<200

Table 2
COG Operating LLC.
EAST HIGH LONESOME TANK BATTERY
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)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total					
BH-5	10/8/2010	0-1'		X		-	-	-	-	-	-	-	396
	10/8/2010	3'		X		-	-	-	-	-	-	-	1,010
	10/8/2010	5'		X		-	-	-	-	-	-	-	9,350
	10/8/2010	7'		X		-	-	-	-	-	-	-	8,460
	10/8/2010	10'		X		-	-	-	-	-	-	-	12,400
	10/8/2010	15'		X		-	-	-	-	-	-	-	6,930
	10/8/2010	20'		X		-	-	-	-	-	-	-	3,940
	10/8/2010	25'		X		-	-	-	-	-	-	-	3,920
	10/8/2010	30'		X		-	-	-	-	-	-	-	2,640
	10/8/2010	40'		X		-	-	-	-	-	-	-	2,240
	10/8/2010	50'		X		-	-	-	-	-	-	-	232
	10/8/2010	60'		X		-	-	-	-	-	-	-	<200

Table 2
COG Operating LLC.
EAST HIGH LONESOME TANK BATTERY
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)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total					
BH-6	10/8/2010	0-1'		X		-	-	-	-	-	-	-	2,810
	10/8/2010	3'		X		-	-	-	-	-	-	-	5,080
	10/11/2010	5'		X		-	-	-	-	-	-	-	5,950
	10/11/2010	7'		X		-	-	-	-	-	-	-	4,870
	10/11/2010	10'		X		-	-	-	-	-	-	-	4,970
	10/11/2010	15'		X		-	-	-	-	-	-	-	5,240
	10/11/2010	20'		X		-	-	-	-	-	-	-	4,140
	10/11/2010	25'		X		-	-	-	-	-	-	-	603
	10/11/2010	30'		X		-	-	-	-	-	-	-	<200
	10/11/2010	40'		X		-	-	-	-	-	-	-	991
	10/11/2010	50'		X		-	-	-	-	-	-	-	215

Table 2
COG Operating LLC.
EAST HIGH LONESOME TANK BATTERY
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)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total					
BH-7	10/11/2010	0-1'		X		-	-	-	-	-	-	-	25,600
	10/11/2010	3'		X		-	-	-	-	-	-	-	22,900
	10/11/2010	5'		X		-	-	-	-	-	-	-	10,600
	10/11/2010	7'		X		-	-	-	-	-	-	-	6,150
	10/11/2010	10'		X		-	-	-	-	-	-	-	6,760
	10/11/2010	15'		X		-	-	-	-	-	-	-	5,690
	10/11/2010	20'		X		-	-	-	-	-	-	-	3,700
	10/11/2010	25'		X		-	-	-	-	-	-	-	2,370
	10/11/2010	30'		X		-	-	-	-	-	-	-	2,550
	10/11/2010	40'		X		-	-	-	-	-	-	-	623
	10/11/2010	50'		X		-	-	-	-	-	-	-	<200

Table 2
COG Operating LLC.
EAST HIGH LONESOME TANK BATTERY
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)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total					
BH-8	10/11/2010	0-1'		X		-	-	-	-	-	-	-	801
	10/11/2010	3'		X		-	-	-	-	-	-	-	1,830
	10/11/2010	5'		X		-	-	-	-	-	-	-	3,390
	10/11/2010	7'		X		-	-	-	-	-	-	-	13,400
	10/11/2010	10'		X		-	-	-	-	-	-	-	11,500
	10/11/2010	15'		X		-	-	-	-	-	-	-	6,350
	10/11/2010	20'		X		-	-	-	-	-	-	-	5,370
	10/11/2010	25'		X		-	-	-	-	-	-	-	4,680
	10/11/2010	30'		X		-	-	-	-	-	-	-	4,580
	10/11/2010	40'		X		-	-	-	-	-	-	-	720
	10/11/2010	50'		X		-	-	-	-	-	-	-	<200
	10/11/2010	60'		X		-	-	-	-	-	-	-	<200

BEB Below Excavation Bottom

(--) Not Analyzed

[ ] Proposed Excavation Depths

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 Repor

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	East High Lonesome Tank Battery	Facility Type	Tank Battery

Surface Owner Federal	Mineral Owner	Lease No. 91-008663-A

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
H	14	16S	~~29~~E 29E					Eddy

Latitude 32 55.377 **Longitude** 104 02.391

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 200bbls	Volume Recovered 195bbls
Source of Release Water Tank	Date and Hour of Occurrence 06/21/2010	Date and Hour of Discovery 06/21/2010 12:00 p.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher—OCD	
By Whom? Josh Russo	Date and Hour 06/22/2010 5:23 p.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

RECEIVED
OCT 11 2011
NMOCD ARTESIA

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

The release was caused by a burned relay powering the Murphy tank level switch gauge. The problem was immediately corrected.

Describe Area Affected and Cleanup Action Taken.*

Initially we released 200bbls of produced water from the water tank, inside the unlined dike of the tank battery. All of the fluid from the released was contained within the firewalls. We were able to recover 195bbls with a vacuum truck. (The closest well location to the release is the High Lonesome Federal 26 Com. #1, Unit. A, Sec. 26-T16S-R29E, 660 FNL 1150 FEL, Eddy County, NM, NMNM-118710, API#30-015-31899) 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 prior to any significant remediation work.

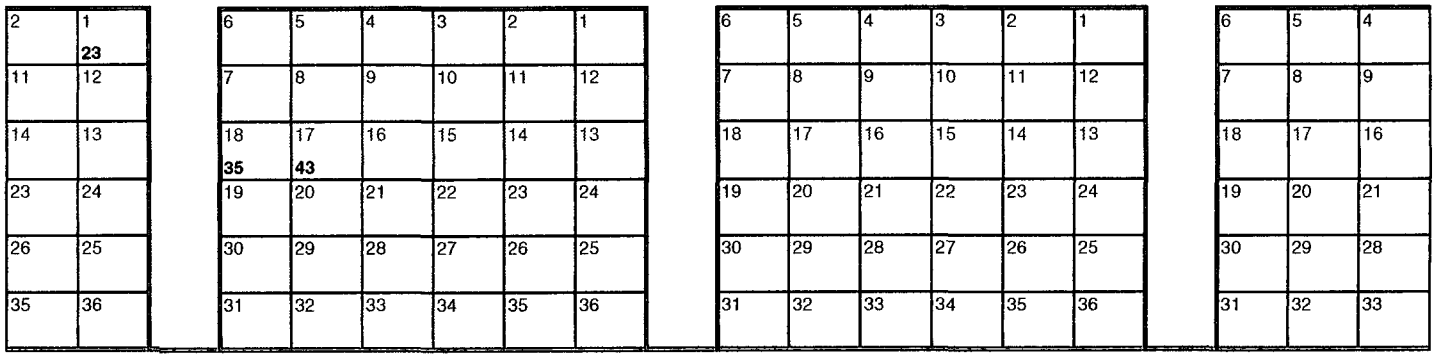
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger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

Signature:	OIL CONSERVATION DIVISION
Printed Name: Josh Russo	Approved by District Supervisor:
Title: HSE Coordinator	Approval Date: / Expiration Date:
E-mail Address: jrusso@conchoresources.com	Conditions of Approval: / Attached ☐
Date: 06/23/2010 Phone: 432-212-2399	

* Attach Additional Sheets If Necessary

APPENDIX B

Water Well Data
Average Depth to Groundwater (ft)
COG - High Lonesome Tank Battery
Eddy County, New Mexico



16 South 28 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21 **61**	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

16 South 29 East

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

16 South 30 East

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

17 South 28 East

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

17 South 29 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	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

- New Mexico State Engineers Well Reports
- USGS Well Reports
- Geology and Groundwater Conditions in Southern Eddy, County, NM
- NMOCD - Groundwater Data
- Field water level
- East High Lonesome Penrose Unit Tank Battery Site

Tempory monitor well installed by Tetra Tech 3/15/11 - 220' Dry

SAMPLE LOG

Boring/Well: TMW-1
Project Number: 114-6400561
Client: COG
Site Location: East High Lonesome
Location: Eddy Co., NM
Legals: Township 16-S Range 29-E Sec 14 Unit H
Total Depth 220
Date Installed: 03/15/11

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
5	--	Loose brown sand
10	--	soft sandy clay
15	--	Medium stiff clay with some sand
20	--	Medium stiff clay very little sand
25	--	Dense silty sand
30	--	Medium dense silty sand
35	--	Medium dense silty sand
40	--	Medium dense silty sand
45	--	Medium dense silty sand
50	--	Medium stiff silty clay
55	--	Medium stiff silty clay
60	--	Medium stiff silty clay
65	--	Medium stiff silty clay
70	--	Medium stiff silty clay
75	--	Medium stiff silty clay - slightly damp
80	--	Medium stiff silty clay - slightly damp
85	--	Medium dense silty sand
90	--	Medium dense silty sand
95	--	Medium dense silty sand
100	--	Medium dense silty sand
105	--	Medium dense silty sand ~5% 0.5mm gravel
110	--	Medium dense silty sand ~5% 0.5mm gravel
115	--	Medium dense silty sand - gravel layer 0.5-2.5mm gravel
120	--	Medium dense silty sand some gravel
125	--	Loose silty sand
130	--	Loose silty sand
135	--	Loose silty sand
140	--	Loose silty sand
145	--	Stiff silty clay
150	--	Stiff clay
155	--	Stiff clay
160	--	Stiff clay
165	--	Stiff sandy clay
170	--	Coarse sand and gravel mix
175	--	Large gravel and sand 15mm
180	--	Coarse sand and gravel mix with silty clay
185	--	gravel 10 mm and sandy clay
190	--	Lots of gravel and coarse sand mix
195	--	Gravel and sand
200	--	Gravel and sand mix (tapering off)
205	--	Mostly stiff clay with some sand and 0.5mm gravel
210	--	Stiff red clay
215	--	Stiff red clay
220	--	Stiff red clay

Total Depth 220' **Groundwater was not encountered**

APPENDIX C

Summary Report

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

Report Date: October 13, 2010

Work Order: 10081607

Project Location: Eddy County, NM
Project Name: COG/East High Lonesome TB
Project Number: 114-6400572

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
241024	AH-1 0-0.5'	soil	2010-08-11	00:00	2010-08-13
241025	AH-2 0-1'	soil	2010-08-11	00:00	2010-08-13
241026	AH-2 1-1.5'	soil	2010-08-11	00:00	2010-08-13
241027	AH-3 0-1'	soil	2010-08-11	00:00	2010-08-13
241028	AH-3 1-1.5'	soil	2010-08-11	00:00	2010-08-13
241029	AH-4 0-1'	soil	2010-08-11	00:00	2010-08-13
241030	AH-4 1-1.5'	soil	2010-08-11	00:00	2010-08-13
241031	AH-5 0-0.5'	soil	2010-08-11	00:00	2010-08-13
241032	AH-6 0-0.5'	soil	2010-08-11	00:00	2010-08-13

	BTEX				TPH DRO - NEW	TPH GRO
	Benzene	Toluene	Ethylbenzene	Xylene	DRO	GRO
Sample - Field Code	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
241024 - AH-1 0-0.5'	<0.200	<0.200	<0.200	<0.200	**4550**	**44.8**
241025 - AH-2 0-1'	<0.200	<0.200	<0.200	**1.18**	**1770**	**198**
241027 - AH-3 0-1'					<500	<2.00
241029 - AH-4 0-1'					<50.0	<2.00
241031 - AH-5 0-0.5'					**124**	<2.00
241032 - AH-6 0-0.5'					<50.0	<2.00

Sample: 241024 - AH-1 0-0.5'

Param	Flag	Result	Units	RL
Chloride		**12300**	mg/Kg	4.00

Sample: 241025 - AH-2 0-1'

Param	Flag	Result	Units	RL
Chloride		**13700**	mg/Kg	4.00

Sample: 241026 - AH-2 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**7860**	mg/Kg	4.00

Sample: 241027 - AH-3 0-1'

Param	Flag	Result	Units	RL
Chloride		**727**	mg/Kg	4.00

Sample: 241028 - AH-3 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**758**	mg/Kg	4.00

Sample: 241029 - AH-4 0-1'

Param	Flag	Result	Units	RL
Chloride		**11900**	mg/Kg	4.00

Sample: 241030 - AH-4 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**9020**	mg/Kg	4.00

Sample: 241031 - AH-5 0-0.5'

Param	Flag	Result	Units	RL
Chloride		**11700**	mg/Kg	4.00

Sample: 241032 - AH-6 0-0.5'

Param	Flag	Result	Units	RL
Chloride		**4490**	mg/Kg	4.00

Summary Report

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

Report Date: October 20, 2010

Work Order: 10101308

Project Location: Eddy County, NM
Project Name: COG/East High Lonesome TB
Project Number: 114-6400572

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
247345	BH-1 0-1'	soil	2010-10-07	00:00	2010-10-13
247346	BH-1 3'	soil	2010-10-07	00:00	2010-10-13
247347	BH-1 5'	soil	2010-10-07	00:00	2010-10-13
247348	BH-1 7'	soil	2010-10-07	00:00	2010-10-13
247349	BH-1 10'	soil	2010-10-07	00:00	2010-10-13
247350	BH-1 15'	soil	2010-10-07	00:00	2010-10-13
247351	BH-1 20'	soil	2010-10-07	00:00	2010-10-13
247352	BH-1 25'	soil	2010-10-07	00:00	2010-10-13
247353	BH-1 30'	soil	2010-10-07	00:00	2010-10-13
247354	BH-1 40'	soil	2010-10-07	00:00	2010-10-13
247355	BH-1 50'	soil	2010-10-07	00:00	2010-10-13
247356	BH-1 60'	soil	2010-10-07	00:00	2010-10-13
247357	BH-1 70'	soil	2010-10-07	00:00	2010-10-13
247358	BH-2 0-1'	soil	2010-10-07	00:00	2010-10-13
247359	BH-2 3'	soil	2010-10-07	00:00	2010-10-13
247360	BH-2 5'	soil	2010-10-07	00:00	2010-10-13
247361	BH-2 7'	soil	2010-10-07	00:00	2010-10-13
247362	BH-2 10'	soil	2010-10-07	00:00	2010-10-13
247363	BH-2 15'	soil	2010-10-07	00:00	2010-10-13
247364	BH-2 20'	soil	2010-10-07	00:00	2010-10-13
247365	BH-2 30'	soil	2010-10-07	00:00	2010-10-13
247366	BH-2 40'	soil	2010-10-07	00:00	2010-10-13
247367	BH-2 50'	soil	2010-10-07	00:00	2010-10-13
247368	BH-2 60'	soil	2010-10-07	00:00	2010-10-13
247369	BH-2 70'	soil	2010-10-07	00:00	2010-10-13
247370	BH-3 0-1'	soil	2010-10-07	00:00	2010-10-13
247371	BH-3 3'	soil	2010-10-07	00:00	2010-10-13
247372	BH-3 5'	soil	2010-10-07	00:00	2010-10-13
247373	BH-3 7'	soil	2010-10-07	00:00	2010-10-13
247374	BH-3 10'	soil	2010-10-07	00:00	2010-10-13

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
247375	BH-3 15'	soil	2010-10-07	00:00	2010-10-13
247376	BH-3 20'	soil	2010-10-07	00:00	2010-10-13
247377	BH-3 25'	soil	2010-10-07	00:00	2010-10-13
247378	BH-3 30'	soil	2010-10-07	00:00	2010-10-13
247379	BH-3 40'	soil	2010-10-07	00:00	2010-10-13
247380	BH-3 50'	soil	2010-10-07	00:00	2010-10-13
247381	BH-3 60'	soil	2010-10-07	00:00	2010-10-13
247382	BH-3 70'	soil	2010-10-07	00:00	2010-10-13
247385	BH-4 0-1'	soil	2010-10-08	00:00	2010-10-13
247386	BH-4 3'	soil	2010-10-08	00:00	2010-10-13
247387	BH-4 5'	soil	2010-10-08	00:00	2010-10-13
247388	BH-4 7'	soil	2010-10-08	00:00	2010-10-13
247389	BH-4 10'	soil	2010-10-08	00:00	2010-10-13
247390	BH-4 15'	soil	2010-10-08	00:00	2010-10-13
247391	BH-4 20'	soil	2010-10-08	00:00	2010-10-13
247392	BH-4 25'	soil	2010-10-08	00:00	2010-10-13
247393	BH-4 30'	soil	2010-10-08	00:00	2010-10-13
247394	BH-4 40'	soil	2010-10-08	00:00	2010-10-13
247395	BH-4 50'	soil	2010-10-08	00:00	2010-10-13
247396	BH-4 60'	soil	2010-10-08	00:00	2010-10-13
247397	BH-4 70'	soil	2010-10-08	00:00	2010-10-13
247398	BH-4 80'	soil	2010-10-08	00:00	2010-10-13
247399	BH-4 90'	soil	2010-10-08	00:00	2010-10-13
247400	BH-5 0-1'	soil	2010-10-08	00:00	2010-10-13
247401	BH-5 3'	soil	2010-10-08	00:00	2010-10-13
247402	BH-5 5'	soil	2010-10-08	00:00	2010-10-13
247403	BH-5 7'	soil	2010-10-08	00:00	2010-10-13
247404	BH-5 10'	soil	2010-10-08	00:00	2010-10-13
247405	BH-5 15'	soil	2010-10-08	00:00	2010-10-13
247406	BH-5 20'	soil	2010-10-08	00:00	2010-10-13
247407	BH-5 25'	soil	2010-10-08	00:00	2010-10-13
247408	BH-5 30'	soil	2010-10-08	00:00	2010-10-13
247409	BH-5 40'	soil	2010-10-08	00:00	2010-10-13
247410	BH-5 50'	soil	2010-10-08	00:00	2010-10-13
247411	BH-5 60'	soil	2010-10-08	00:00	2010-10-13
247412	BH-6 0-1'	soil	2010-10-11	00:00	2010-10-13
247413	BH-6 3'	soil	2010-10-11	00:00	2010-10-13
247414	BH-6 5'	soil	2010-10-11	00:00	2010-10-13
247415	BH-6 7'	soil	2010-10-11	00:00	2010-10-13
247416	BH-6 10'	soil	2010-10-11	00:00	2010-10-13
247417	BH-6 15'	soil	2010-10-11	00:00	2010-10-13
247418	BH-6 20'	soil	2010-10-11	00:00	2010-10-13
247419	BH-6 25'	soil	2010-10-11	00:00	2010-10-13
247420	BH-6 30'	soil	2010-10-11	00:00	2010-10-13
247421	BH-6 40'	soil	2010-10-11	00:00	2010-10-13
247422	BH-6 50'	soil	2010-10-11	00:00	2010-10-13
247424	BH-7 0-1'	soil	2010-10-11	00:00	2010-10-13
247425	BH-7 3'	soil	2010-10-11	00:00	2010-10-13
247426	BH-7 5'	soil	2010-10-11	00:00	2010-10-13

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
247427	BH-7 7'	soil	2010-10-11	00:00	2010-10-13
247428	BH-7 10'	soil	2010-10-11	00:00	2010-10-13
247429	BH-7 15'	soil	2010-10-11	00:00	2010-10-13
247430	BH-7 20'	soil	2010-10-11	00:00	2010-10-13
247431	BH-7 25'	soil	2010-10-11	00:00	2010-10-13
247432	BH-7 30'	soil	2010-10-11	00:00	2010-10-13
247433	BH-7 40'	soil	2010-10-11	00:00	2010-10-13
247434	BH-7 50'	soil	2010-10-11	00:00	2010-10-13
247436	BH-8 0-1'	soil	2010-10-11	00:00	2010-10-13
247437	BH-8 3'	soil	2010-10-11	00:00	2010-10-13
247438	BH-8 5'	soil	2010-10-11	00:00	2010-10-13
247439	BH-8 7'	soil	2010-10-11	00:00	2010-10-13
247440	BH-8 10'	soil	2010-10-11	00:00	2010-10-13
247441	BH-8 15'	soil	2010-10-11	00:00	2010-10-13
247442	BH-8 20'	soil	2010-10-11	00:00	2010-10-13
247443	BH-8 25'	soil	2010-10-11	00:00	2010-10-13
247444	BH-8 30'	soil	2010-10-11	00:00	2010-10-13
247445	BH-8 40'	soil	2010-10-11	00:00	2010-10-13
247446	BH-8 50'	soil	2010-10-11	00:00	2010-10-13
247447	BH-8 60'	soil	2010-10-11	00:00	2010-10-13
247474	BH-2 25'	soil	2010-10-07	00:00	2010-10-13

Sample: 247345 - BH-1 0-1'

Param	Flag	Result	Units	RL
Chloride		**16100**	mg/Kg	4.00

Sample: 247346 - BH-1 3'

Param	Flag	Result	Units	RL
Chloride		**21300**	mg/Kg	4.00

Sample: 247347 - BH-1 5'

Param	Flag	Result	Units	RL
Chloride		**13000**	mg/Kg	4.00

Sample: 247348 - BH-1 7'

Param	Flag	Result	Units	RL
Chloride		**16200**	mg/Kg	4.00

Sample: 247349 - BH-1 10'

Param	Flag	Result	Units	RL
Chloride		**15200**	mg/Kg	4.00

Sample: 247350 - BH-1 15'

Param	Flag	Result	Units	RL
Chloride		**10500**	mg/Kg	4.00

Sample: 247351 - BH-1 20'

Param	Flag	Result	Units	RL
Chloride		**5430**	mg/Kg	4.00

Sample: 247352 - BH-1 25'

Param	Flag	Result	Units	RL
Chloride		**3350**	mg/Kg	4.00

Sample: 247353 - BH-1 30'

Param	Flag	Result	Units	RL
Chloride		**5390**	mg/Kg	4.00

Sample: 247354 - BH-1 40'

Param	Flag	Result	Units	RL
Chloride		**2070**	mg/Kg	4.00

Sample: 247355 - BH-1 50'

Param	Flag	Result	Units	RL
Chloride		**725**	mg/Kg	4.00

Sample: 247356 - BH-1 60'

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

Sample: 247357 - BH-1 70'

Param	Flag	Result	Units	RL
Chloride		**301**	mg/Kg	4.00

Sample: 247358 - BH-2 0-1'

Param	Flag	Result	Units	RL
Chloride		**12000**	mg/Kg	4.00

Sample: 247359 - BH-2 3'

Param	Flag	Result	Units	RL
Chloride		**11700**	mg/Kg	4.00

Sample: 247360 - BH-2 5'

Param	Flag	Result	Units	RL
Chloride		**19800**	mg/Kg	4.00

Sample: 247361 - BH-2 7'

Param	Flag	Result	Units	RL
Chloride		**13700**	mg/Kg	4.00

Sample: 247362 - BH-2 10'

Param	Flag	Result	Units	RL
Chloride		**8370**	mg/Kg	4.00

Sample: 247363 - BH-2 15'

Param	Flag	Result	Units	RL
Chloride		**5320**	mg/Kg	4.00

Sample: 247364 - BH-2 20'

Param	Flag	Result	Units	RL
Chloride		**2680**	mg/Kg	4.00

Sample: 247365 - BH-2 30'

Param	Flag	Result	Units	RL
Chloride		**2070**	mg/Kg	4.00

Sample: 247366 - BH-2 40'

Param	Flag	Result	Units	RL
Chloride		**2260**	mg/Kg	4.00

Sample: 247367 - BH-2 50'

Param	Flag	Result	Units	RL
Chloride		**1670**	mg/Kg	4.00

Sample: 247368 - BH-2 60'

Param	Flag	Result	Units	RL
Chloride		**383**	mg/Kg	4.00

Sample: 247369 - BH-2 70'

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

Sample: 247370 - BH-3 0-1'

Param	Flag	Result	Units	RL
Chloride		**5280**	mg/Kg	4.00

Sample: 247371 - BH-3 3'

Param	Flag	Result	Units	RL
Chloride		**4260**	mg/Kg	4.00

Sample: 247372 - BH-3 5'

Param	Flag	Result	Units	RL
Chloride		**3280**	mg/Kg	4.00

Sample: 247373 - BH-3 7'

Param	Flag	Result	Units	RL
Chloride		**3900**	mg/Kg	4.00

Sample: 247374 - BH-3 10'

Param	Flag	Result	Units	RL
Chloride		**8000**	mg/Kg	4.00

Sample: 247375 - BH-3 15'

Param	Flag	Result	Units	RL
Chloride		**13000**	mg/Kg	4.00

Sample: 247376 - BH-3 20'

Param	Flag	Result	Units	RL
Chloride		**11300**	mg/Kg	4.00

Sample: 247377 - BH-3 25'

Param	Flag	Result	Units	RL
Chloride		**11600**	mg/Kg	4.00

Sample: 247378 - BH-3 30'

Param	Flag	Result	Units	RL
Chloride		**12100**	mg/Kg	4.00

Sample: 247379 - BH-3 40'

Param	Flag	Result	Units	RL
Chloride		**13800**	mg/Kg	4.00

Sample: 247380 - BH-3 50'

Param	Flag	Result	Units	RL
Chloride		**6520**	mg/Kg	4.00

Sample: 247381 - BH-3 60'

Param	Flag	Result	Units	RL
Chloride		**11900**	mg/Kg	4.00

Sample: 247382 - BH-3 70'

Param	Flag	Result	Units	RL
Chloride		**12500**	mg/Kg	4.00

Sample: 247385 - BH-4 0-1'

Param	Flag	Result	Units	RL
Chloride		**9010**	mg/Kg	4.00

Sample: 247386 - BH-4 3'

Param	Flag	Result	Units	RL
Chloride		**18700**	mg/Kg	4.00

Sample: 247387 - BH-4 5'

Param	Flag	Result	Units	RL
Chloride		**11300**	mg/Kg	4.00

Sample: 247388 - BH-4 7'

Param	Flag	Result	Units	RL
Chloride		**9530**	mg/Kg	4.00

Sample: 247389 - BH-4 10'

Param	Flag	Result	Units	RL
Chloride		**7670**	mg/Kg	4.00

Sample: 247390 - BH-4 15'

Param	Flag	Result	Units	RL
Chloride		**5530**	mg/Kg	4.00

Sample: 247391 - BH-4 20'

Param	Flag	Result	Units	RL
Chloride		**6640**	mg/Kg	4.00

Sample: 247392 - BH-4 25'

Param	Flag	Result	Units	RL
Chloride		**6650**	mg/Kg	4.00

Sample: 247393 - BH-4 30'

Param	Flag	Result	Units	RL
Chloride		**10900**	mg/Kg	4.00

Sample: 247394 - BH-4 40'

Param	Flag	Result	Units	RL
Chloride		**9270**	mg/Kg	4.00

Sample: 247395 - BH-4 50'

Param	Flag	Result	Units	RL
Chloride		**5970**	mg/Kg	4.00

Sample: 247396 - BH-4 60'

Param	Flag	Result	Units	RL
Chloride		**4080**	mg/Kg	4.00

Sample: 247397 - BH-4 70'

Param	Flag	Result	Units	RL
Chloride		**4550**	mg/Kg	4.00

Sample: 247398 - BH-4 80'

Param	Flag	Result	Units	RL
Chloride		**2380**	mg/Kg	4.00

Sample: 247399 - BH-4 90'

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

Sample: 247400 - BH-5 0-1'

Param	Flag	Result	Units	RL
Chloride		**396**	mg/Kg	4.00

Sample: 247401 - BH-5 3'

Param	Flag	Result	Units	RL
Chloride		**1010**	mg/Kg	4.00

Sample: 247402 - BH-5 5'

Param	Flag	Result	Units	RL
Chloride		**9350**	mg/Kg	4.00

Sample: 247403 - BH-5 7'

Param	Flag	Result	Units	RL
Chloride		**8460**	mg/Kg	4.00

Sample: 247404 - BH-5 10'

Param	Flag	Result	Units	RL
Chloride		**12400**	mg/Kg	4.00

Sample: 247405 - BH-5 15'

Param	Flag	Result	Units	RL
Chloride		**6930**	mg/Kg	4.00

Sample: 247406 - BH-5 20'

Param	Flag	Result	Units	RL
Chloride		**3940**	mg/Kg	4.00

Sample: 247407 - BH-5 25'

Param	Flag	Result	Units	RL
Chloride		**3920**	mg/Kg	4.00

Sample: 247408 - BH-5 30'

Param	Flag	Result	Units	RL
Chloride		**2640**	mg/Kg	4.00

Sample: 247409 - BH-5 40'

Param	Flag	Result	Units	RL
Chloride		**2240**	mg/Kg	4.00

Sample: 247410 - BH-5 50'

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

Sample: 247411 - BH-5 60'

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

Sample: 247412 - BH-6 0-1'

Param	Flag	Result	Units	RL
Chloride		**2810**	mg/Kg	4.00

Sample: 247413 - BH-6 3'

Param	Flag	Result	Units	RL
Chloride		**5080**	mg/Kg	4.00

Sample: 247414 - BH-6 5'

Param	Flag	Result	Units	RL
Chloride		**5950**	mg/Kg	4.00

Sample: 247415 - BH-6 7'

Param	Flag	Result	Units	RL
Chloride		**4870**	mg/Kg	4.00

Sample: 247416 - BH-6 10'

Param	Flag	Result	Units	RL
Chloride		**4970**	mg/Kg	4.00

Sample: 247417 - BH-6 15'

Param	Flag	Result	Units	RL
Chloride		**5240**	mg/Kg	4.00

Sample: 247418 - BH-6 20'

Param	Flag	Result	Units	RL
Chloride		**4140**	mg/Kg	4.00

Sample: 247419 - BH-6 25'

Param	Flag	Result	Units	RL
Chloride		**603**	mg/Kg	4.00

Sample: 247420 - BH-6 30'

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

Sample: 247421 - BH-6 40'

Param	Flag	Result	Units	RL
Chloride		**991**	mg/Kg	4.00

Sample: 247422 - BH-6 50'

Param	Flag	Result	Units	RL
Chloride		**215**	mg/Kg	4.00

Sample: 247424 - BH-7 0-1'

Param	Flag	Result	Units	RL
Chloride		**25600**	mg/Kg	4.00

Sample: 247425 - BH-7 3'

Param	Flag	Result	Units	RL
Chloride		**22900**	mg/Kg	4.00

Sample: 247426 - BH-7 5'

Param	Flag	Result	Units	RL
Chloride		**10600**	mg/Kg	4.00

Sample: 247427 - BH-7 7'

Param	Flag	Result	Units	RL
Chloride		**6150**	mg/Kg	4.00

Sample: 247428 - BH-7 10'

Param	Flag	Result	Units	RL
Chloride		**6760**	mg/Kg	4.00

Sample: 247429 - BH-7 15'

Param	Flag	Result	Units	RL
Chloride		**5690**	mg/Kg	4.00

Sample: 247430 - BH-7 20'

Param	Flag	Result	Units	RL
Chloride		**3700**	mg/Kg	4.00

Sample: 247431 - BH-7 25'

Param	Flag	Result	Units	RL
Chloride		**2370**	mg/Kg	4.00

Sample: 247432 - BH-7 30'

Param	Flag	Result	Units	RL
Chloride		**2550**	mg/Kg	4.00

Sample: 247433 - BH-7 40'

Param	Flag	Result	Units	RL
Chloride		**623**	mg/Kg	4.00

Sample: 247434 - BH-7 50'

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

Sample: 247436 - BH-8 0-1'

Param	Flag	Result	Units	RL
Chloride		**801**	mg/Kg	4.00

Sample: 247437 - BH-8 3'

Param	Flag	Result	Units	RL
Chloride		**1830**	mg/Kg	4.00

Sample: 247438 - BH-8 5'

Param	Flag	Result	Units	RL
Chloride		**3390**	mg/Kg	4.00

Sample: 247439 - BH-8 7'

Param	Flag	Result	Units	RL
Chloride		**13400**	mg/Kg	4.00

Sample: 247440 - BH-8 10'

Param	Flag	Result	Units	RL
Chloride		**11500**	mg/Kg	4.00

Sample: 247441 - BH-8 15'

Param	Flag	Result	Units	RL
Chloride		**6350**	mg/Kg	4.00

Sample: 247442 - BH-8 20'

Param	Flag	Result	Units	RL
Chloride		**5370**	mg/Kg	4.00

Sample: 247443 - BH-8 25'

Param	Flag	Result	Units	RL
Chloride		**4680**	mg/Kg	4.00

Sample: 247444 - BH-8 30'

Param	Flag	Result	Units	RL
Chloride		**4580**	mg/Kg	4.00

Sample: 247445 - BH-8 40'

Param	Flag	Result	Units	RL
Chloride		**720**	mg/Kg	4.00

Sample: 247446 - BH-8 50'

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

Sample: 247447 - BH-8 60'

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

Sample: 247474 - BH-2 25'

Param	Flag	Result	Units	RL
Chloride		**1540**	mg/Kg	4.00

Bratcher, Mike, EMNRD

From: Tavarez, Ike [Ike.Tavarez@tetratech.com]
Sent: Friday, August 19, 2011 9:47 AM
To: Bratcher, Mike, EMNRD; Terry Gregston (terry_gregston@nm.blm.gov)
Cc: Pat Ellis; Joshua Russo; James_Amos@blm.gov; Grubbs, Robert
Subject: COG - East High Lonesome Tank Battery- Work Plan Approval Request
Attachments: COG - East High Lonesome TB - Work Plan .pdf

Mike and Terry,

Please find the enclosed Work Plan for the COG - East High Lonesome Tank Battery located in Eddy County, New Mexico. The work plan includes the soil assessment and recommendations for the remediation for the site. Due to the limited groundwater data in the area, Tetra Tech installed a temporary well to establish depth to groundwater for the area. The temporary well was installed at the facility. The well was installed to a total depth of 220' below surface and found no measureable groundwater (dry) in the well. The groundwater information is included in the attached work plan. I will mail you a hard copy of the work plan for your files. Once approved, Tetra Tech will schedule the soil remediation and notify you before we start. Please let me know if you need additional information or call me if you have any questions, thanks

Ike Tavarez, PG | Senior Project Manager

Main: 432.682.4559 | Fax: 432.682.3946 | Cell: 432.425.3878

Ike.Tavarez@tetratech.com

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