SITE INFORMATION

2RP-471

Report Type: Work Plan

General Site Information:						
Site:	Schley Federal Tank Battery					
Company:	COG Operating LLC					
Section, Township and Range	Unit K	Sec 29	T17S	R29E		
Lease Number:	NM-29281					
County:	Eddy County					
GPS:	32.80277			104.09825		
Surface Owner:	Federal					
Mineral Owner:						
Directions:	From intersection of CR 210 (old Loco Road) and Hwy 82, go south on CR 210 for 0.5 miles, turn right (west) and go 0.2 miles, turn left and go 0.1 mile to Tank Battery					

Release Data:	
Date Released:	10/23/2010
Type Release:	Produced Fluid
Source of Contamination:	water tank over flow
Fluid Released:	40 bbls
Fluids Recovered:	35 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) 425-3878
Fax:	(432) 684-7137		
Email:	pellis@conchoresources.com		ike.tavarez@tetratech.com

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

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

TETRA TECH

May 4, 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., Schley Federal Tank Battery, Unit K, Section 29, Township 17 South, Range 29 East, Eddy County, New Mexico.

Mr. Bratcher:

Tetra Tech, Inc. (Tetra Tech) was contacted by COG Operating LLC. (COG) to assess a spill at the Schley Federal Tank Battery, Unit K, Section 29, Township 17 South, Range 29 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.80305°, W 104.09841°. The site location is shown on Figures 1 and 2.

Background

On October 23, 2010, the spill occurred due to an electrical problem with the water transfer pump, which overflowed the water tank releasing approximately forty (40) barrels of produced water. Thirty-five (35) barrels of product were recovered by means of a vacuum truck. The spill originated at the transfer pump, migrating 165' south of the tank battery pad and off the tank battery pad measuring 45' x 100'. The initial C-141 form is enclosed in Appendix A.

Groundwater

According to the *Geology and Groundwater Resources of Eddy County, New Mexico* (Report 3), one well is located in Section 20, with a reported depth to water of 210' below surface. According to the NMOCD groundwater map, the average depth to groundwater in this area is greater than 150' below surface. The Geology and Groundwater Resources of Eddy County, New Mexico (Report 3) well report 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 October 26, 2010, Tetra Tech personnel inspected and sampled the spill area. A total of five (5) auger holes (AH-1 through AH-5) were installed using a stainless steel hand auger to assess the impacted soils. Select samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The sampling results are summarized in Table 1. The 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. A shallow chloride impact was detected at the site. Auger holes (AH-1 and AH-2) showed a shallow impact the soils on the tank battery pad, with chloride concentrations decreasing with depth to 392 mg/kg at 1-1.5' and 354 mg/kg at 3-3.5' below surface, respectively. Auger holes (AH-3, AH-4 and AH-5) were not vertically defined. After review of the aerial photograph, the chloride concentrations found in AH-4 and AH-5 appear to be from a closed reserve pit. The aerial photograph showing the closed reserve pit is attached.

On February 8, 2011, Tetra Tech supervised installation of one (1) soil boring in the area of AH-3 to define the vertical extents. The soil boring results are shown in Table 1. Referring to Table 1, the soil boring samples did not show a significant impact to the soils. The chloride concentrations declined to 201 mg/kg at 7.0' below surface.

TETRA TECH

Work Plan

The goal of the remediation is to establish surface growth and to reduce the environmental liabilities for the protection of the groundwater. COG proposes to removal of impacted material as highlighted (green) in Table 1 and Figure 4. The areas of AH-1, AH-2 and AH-3 will be excavated 1.0' to 5.0' below surface. In the area of AH-3 (SB-1), the area will be excavated down to approximately 4.0' to 5.0' below surface to remove the chloride concentrations exceeding 1,000 mg/kg. All of the excavated soil will be transported the proper disposal. The remaining areas (AH-4 and AH-5) will not be excavated due to the closed reserve pit in the area.

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

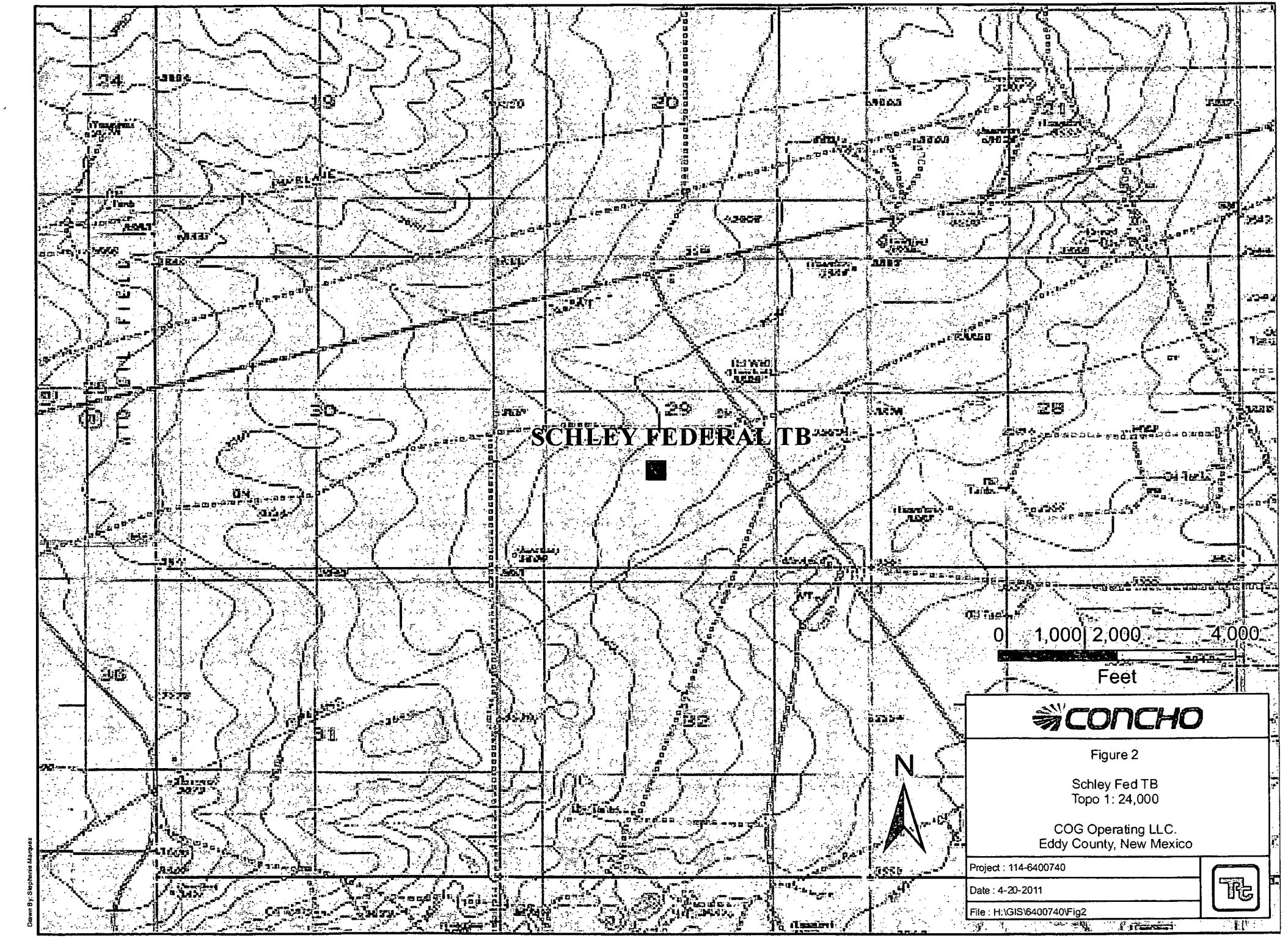
Once excavated to the appropriate depths, the excavations were backfilled with clean soil. Upon completion a final report will be submitted to the NMOCD. If you have any questions or comments concerning the assessment or the proposed remediation activities for this site, please call me at (432) 682-4559.

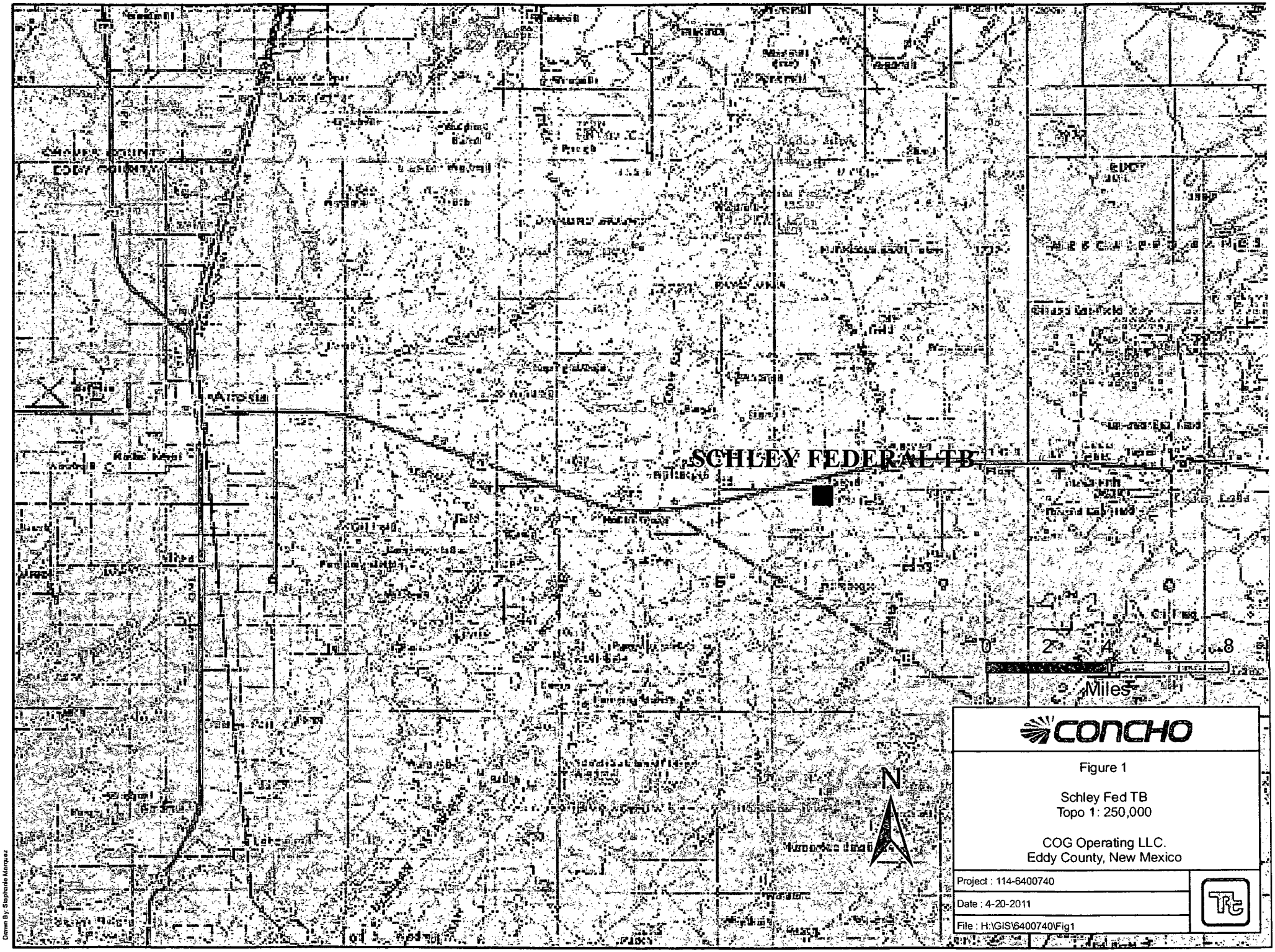
Respectfully submitted,
TETRA TECH

Ike Tavarez
Senior Project Manager

cc: Pat Ellis – COG
Terry Gregston - BLM

Figures


SCHLEY FEDERAL TB
0 1,000 2,000 4,000
Feet
N
CONCHO
Figure 2
Schley Fed TB
Topo 1: 24,000
COG Operating LLC.
Eddy County, New Mexico
Project : 114-6400740
Date : 4-20-2011
File : H:\GIS\6400740\Fig2
Dawn By: Stephanie Marquez



CONCHO

Figure 1

Schley Fed TB
Topo 1: 250,000

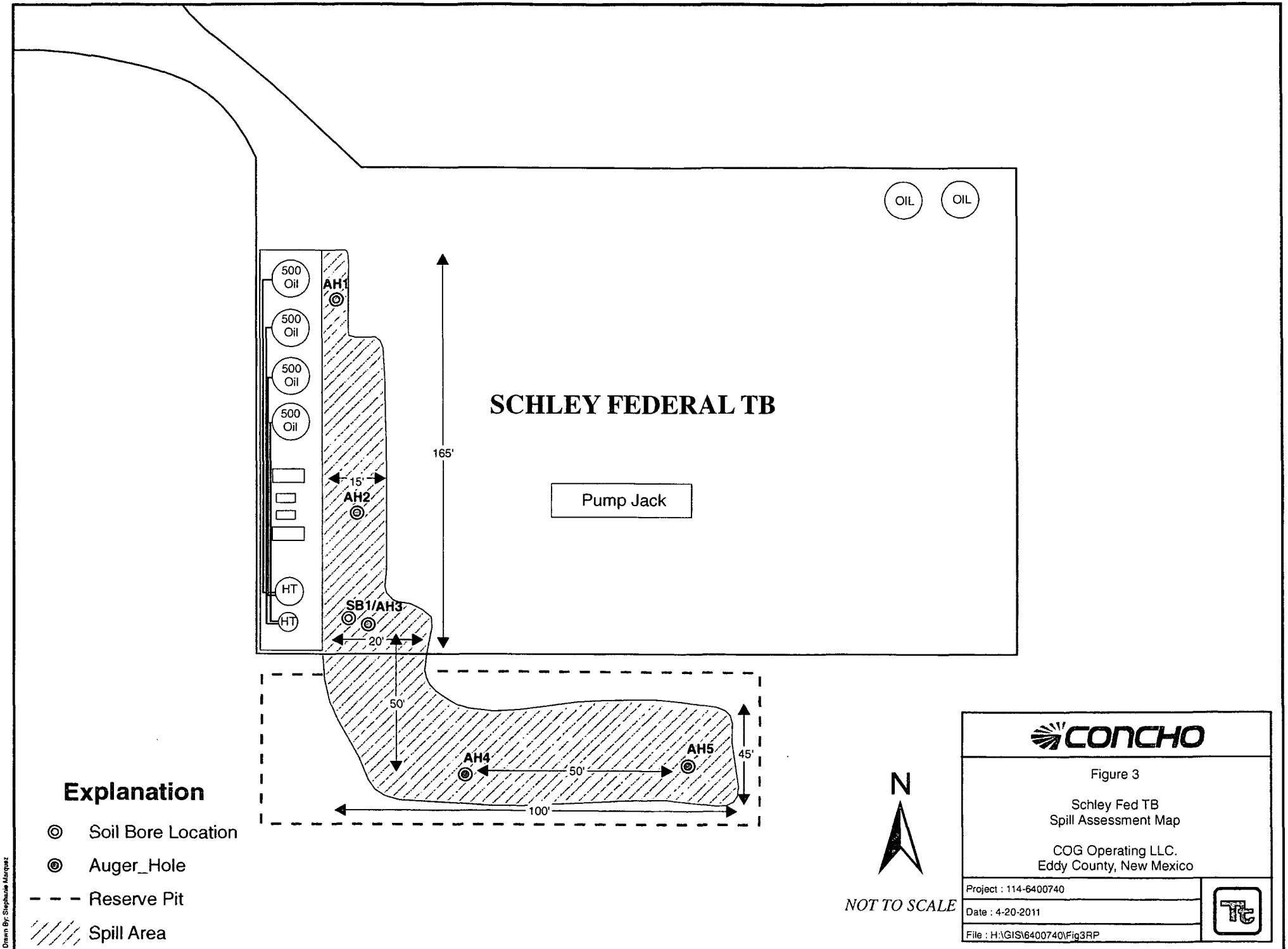
COG Operating LLC.
Eddy County, New Mexico

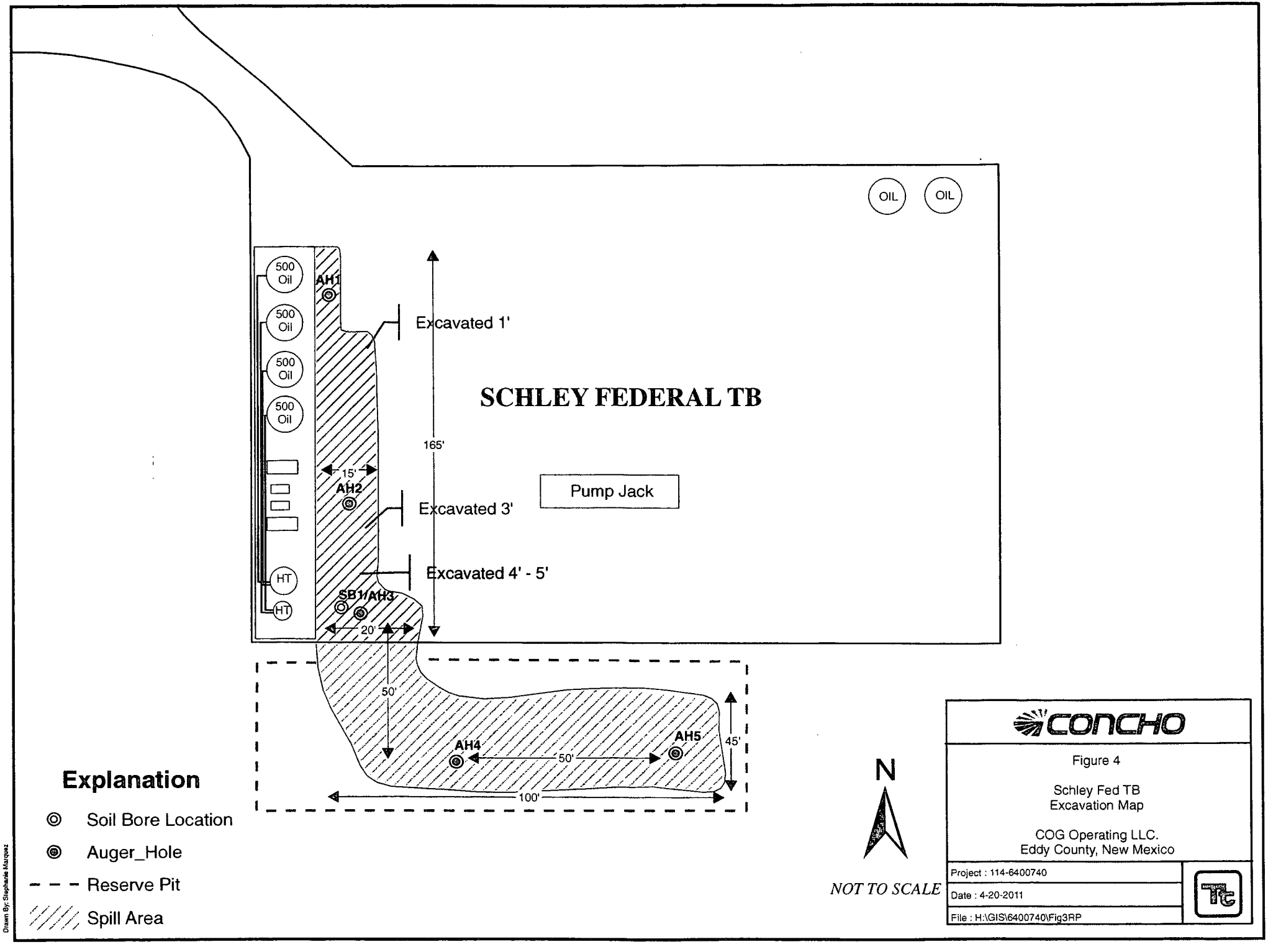
Project : 114-6400740

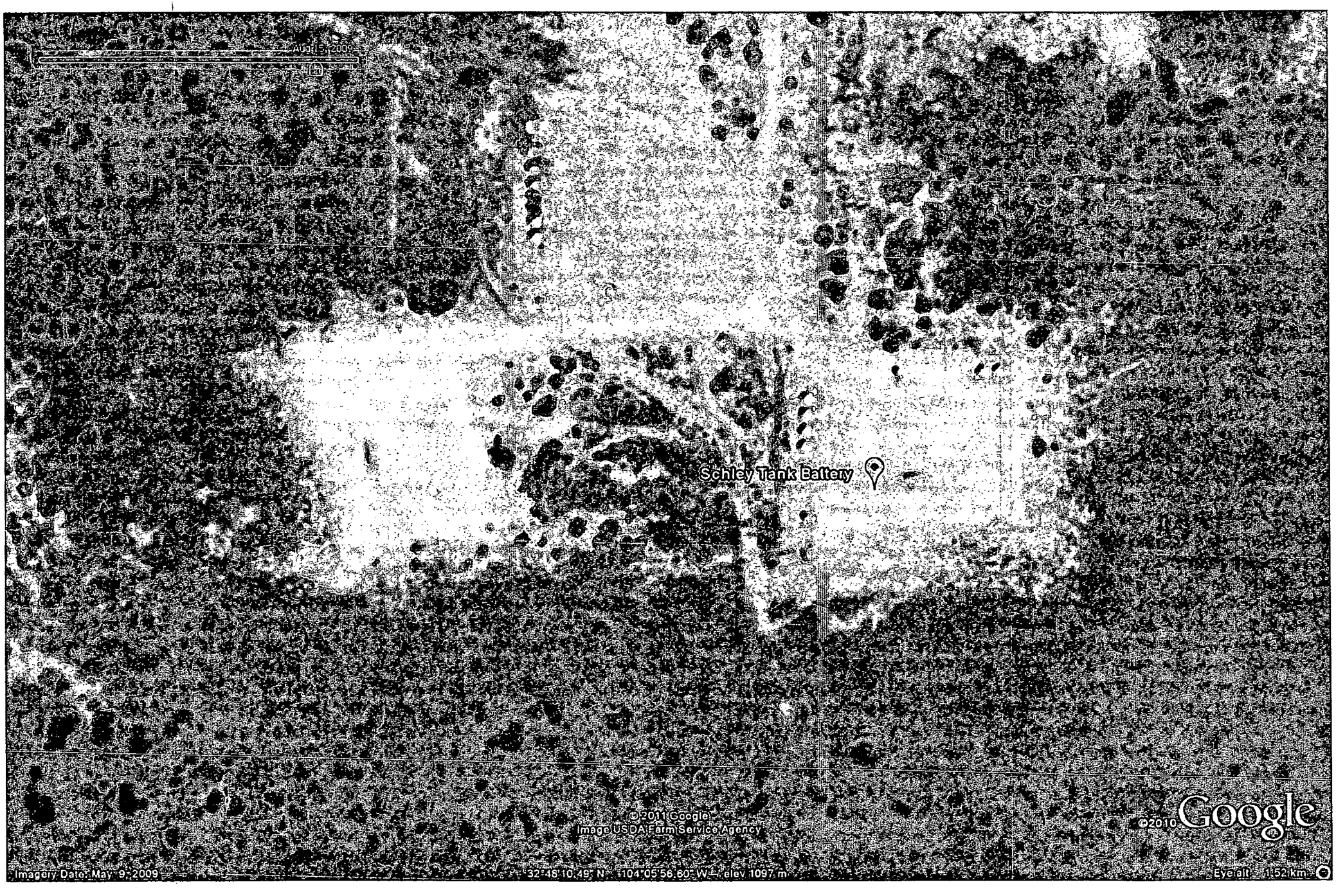
Date : 4-20-2011

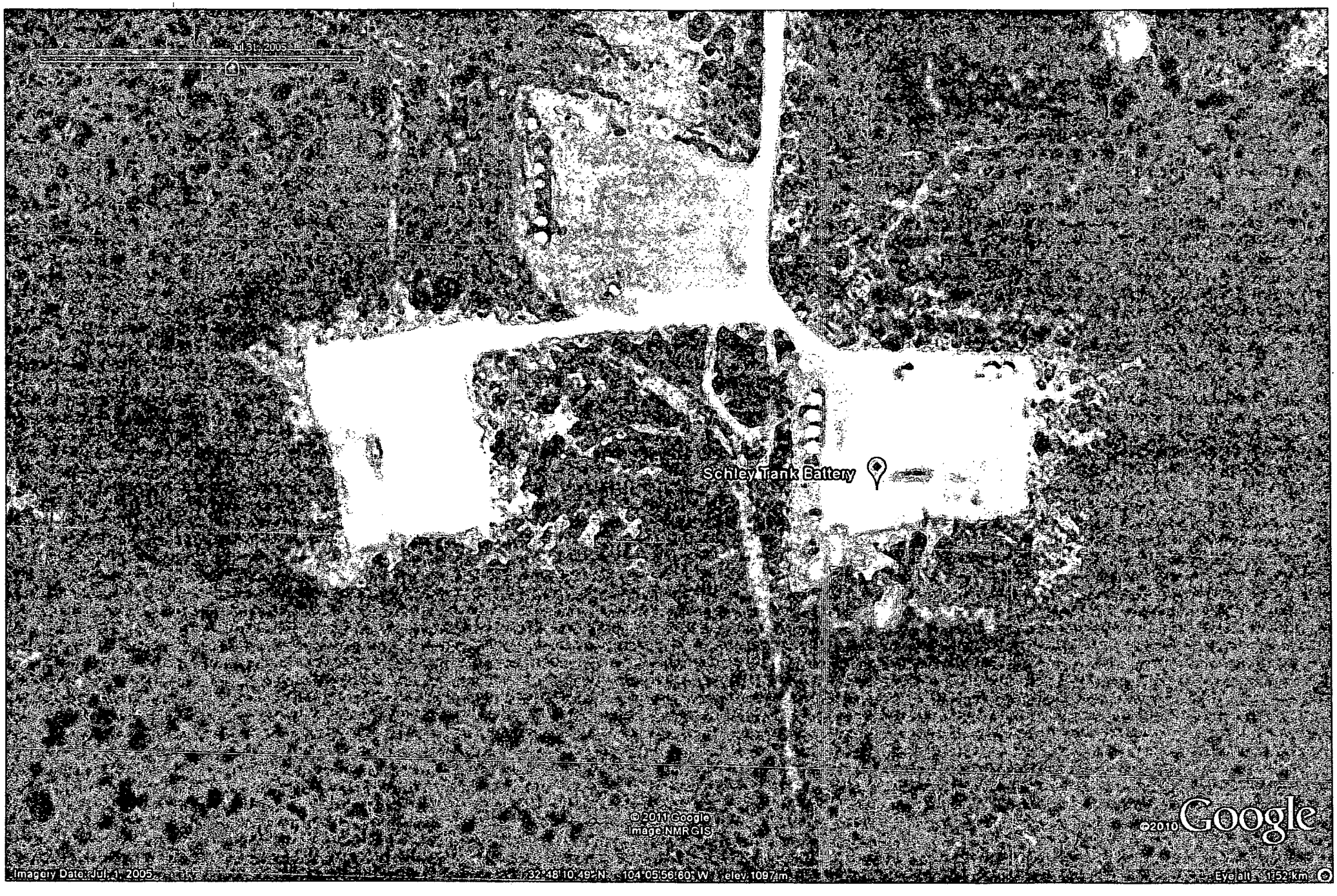
File : H:\GIS\6400740\Fig1

Drawn By: Stephanie Marquez


OIL
OIL
500 Oil
500 Oil
500 Oil
500 Oil
AH1
SCHLEY FEDERAL TB
165'
15'
AH2
Pump Jack
HT
HT
SB1/AH3
20'
50'
AH4
50'
AH5
45'
100'
Explanation
Soil Bore Location
Auger_Hole
Reserve Pit
Spill Area
N
NOT TO SCALE
CONCHO
Figure 3
Schley Fed TB
Spill Assessment Map
COG Operating LLC.
Eddy County, New Mexico
Project : 114-6400740
Date : 4-20-2011
File : H:\GIS\6400740\Fig3RP
Drawn By: Stephanie Marquez


OIL
OIL
500 Oil
500 Oil
500 Oil
500 Oil
AH1
Excavated 1'
SCHLEY FEDERAL TB
165'
15'
AH2
Excavated 3'
Pump Jack
Excavated 4' - 5'
HT
HT
SB1/AH3
20'
50'
AH4
50'
AH5
45'
100'
Explanation
Soil Bore Location
Auger_Hole
Reserve Pit
Spill Area
N
NOT TO SCALE
CONCHO
Figure 4
Schley Fed TB
Excavation Map
COG Operating LLC.
Eddy County, New Mexico
Project : 114-6400740
Date : 4-20-2011
File : H:\GIS\6400740\Fig3RP
Drawn By: Stephanie Marquez


Schley Tank Battery
© 2011 Google
Image USDA Farm Service Agency
©2010 Google
Imagery Date: May 9, 2009
32°48'10.49" N 104°05'56.80" W elev 1097 m
Eye alt 1.52 km


Jul 31, 2005
Schley Tank Battery
© 2011 Google
Image NMRGIS
©2010 Google
Imagery Date: Jul 4, 2005
32°48'10.49" N 104°05'56.60" W elev 1097 m
Eye alt 1.52 km

Tables

Table 1
COG Operating LLC.
Schley Federal TB
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	12/6/2010	0-1'	1'	X		<2.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	6,580
		1-1.5'	1'	X		-	-	-	-	-	-	-	393
		2-2.5'	1'	X		-	-	-	-	-	-	-	<200
		3-3.5'	1'	X		-	-	-	-	-	-	-	216
		4-4.5'	1'	X		-	-	-	-	-	-	-	265
		5-5.5'	1'	X		-	-	-	-	-	-	-	550
AH-2	12/6/2010	0-1'	1'	X		<2.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	7,340
		1-1.5'	1'	X		-	-	-	-	-	-	-	5,660
		2-2.5'	1'	X		-	-	-	-	-	-	-	5,930
		3-3.5'	1'	X		-	-	-	-	-	-	-	354
AH-3	12/6/2010	0-1'	1'	X		<2.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	7,950
		1-1.5'	1'	X		-	-	-	-	-	-	-	2,650
		2-2.5'	1'	X		-	-	-	-	-	-	-	500
		3-3.5'	1'	X		-	-	-	-	-	-	-	2,230
		4-4.5'	1'	X		-	-	-	-	-	-	-	2,270
SB-1	2/18/2011	0-1'	1'	X		-	-	-	-	-	-	-	1,490
	"	3'	1'	X		-	-	-	-	-	-	-	638
	"	5'	1'	X		-	-	-	-	-	-	-	1,190
	"	7'	1'	X		-	-	-	-	-	-	-	201
	"	10'	1'	X		-	-	-	-	-	-	-	<200
	"	15'	1'	X		-	-	-	-	-	-	-	<200
	"	20'	1'	X		-	-	-	-	-	-	-	242

Table 1
COG Operating LLC.
Schley Federal TB
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					
Closed Reserve Pit Area													
AH-4	12/6/2010	0-1'		X		<2.00	137	137	<0.0200	<0.0200	<0.0200	<0.0200	5,080
		1-1.5'		X		-	-	-	-	-	-	-	2,310
		2-2.5'		X		-	-	-	-	-	-	-	846
		3-3.5'		X		-	-	-	-	-	-	-	827
		4-4.5'		X		-	-	-	-	-	-	-	884
		5-5.5'		X		-	-	-	-	-	-	-	1,040
		6-6.5'		X		-	-	-	-	-	-	-	920
		7-7.5'		X		-	-	-	-	-	-	-	1,670
		8-8.5'		X		-	-	-	-	-	-	-	1,350
		9-9.5'		X		-	-	-	-	-	-	-	1,430
AH-5	12/6/2010	0-1'		X		<2.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	5,460
		1-1.5'		X		-	-	-	-	-	-	-	5,320
		2-2.5'		X		-	-	-	-	-	-	-	5,600
		3-3.5'		X		-	-	-	-	-	-	-	7,240
		4-4.5'		X		-	-	-	-	-	-	-	7,480
		5-5.5'		X		-	-	-	-	-	-	-	4,140
		6-6.5'		X		-	-	-	-	-	-	-	1,130

BEB Below Excavation Bottom

(--) Not Analyzed

[ ] Proposed Excavation Depths

Appendix A

2RP-471

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	Schley Federal	Facility Type	Tank Battery

Surface Owner Federal	Mineral Owner	Lease No. NM-29281

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	29	17S	29E	1650	South	2310	West	Eddy

Latitude 32 48.162 **Longitude** 104 05.895

NATURE OF RELEASE

Type of Release Produced water	Volume of Release 40bbls	Volume Recovered 35bbls
Source of Release Water tank	Date and Hour of Occurrence 10/23/2010	Date and Hour of Discovery 10/23/2010 8:00 a.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher—OCD	
By Whom? Josh Russo	Date and Hour 10/25/2010 2:12 p.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

RECEIVED
JUN 09 2011
NMOCD ARTESIA

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

Water tank overflowed due to an electrical problem with the water transfer pump. The electrical problem has been corrected and the water transfer pump is back in service.

Describe Area Affected and Cleanup Action Taken.*

Initially 40bbls was released from the water tank at the facility and we were able to recover 35bbls with a vacuum truck. The fluid traveled from around the transfer pump, to the well pad location where it then ran west across the location down the dike wall, and onto the old reserve pit west of the pad. The dimensions of the spill area were 15' x 300'. (The closest well to the release is the Schley Federal #1, API#30-015-30031, located on the same pad location as the Tank Battery). 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/OCD 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: 11/01/2010 Phone: 432-212-2399	

* Attach Additional Sheets If Necessary

Appendix B

Water Well Data
Average Depth to Groundwater (ft)
Schley Federal 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 **Maljamar**	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	36

17 South 30 East

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

18 South 28 East

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

18 South 29 East

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

18 South 30 East

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

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

GROUND WATER REPORT 3 PLATE 4

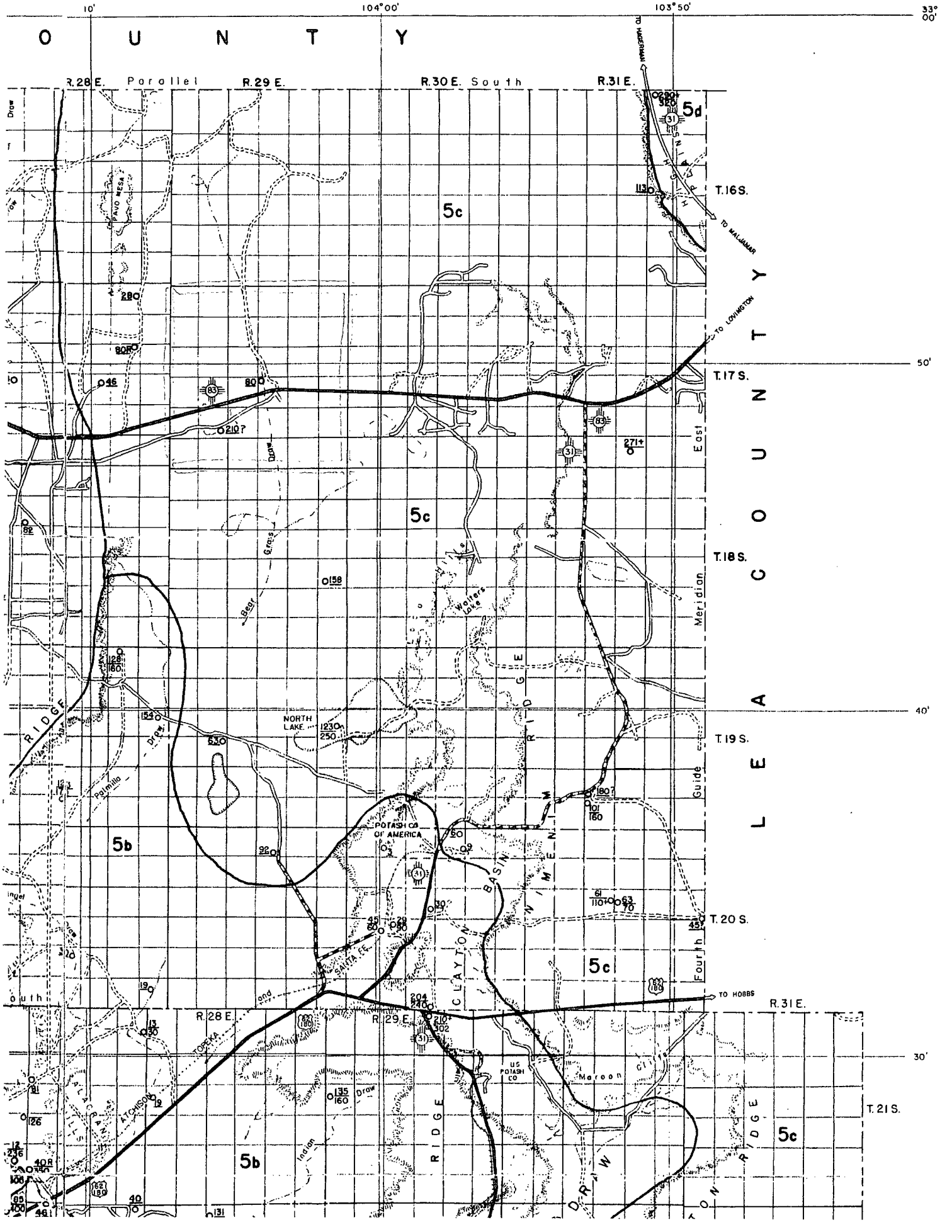


TABLE 1. RECORDS OF WELLS IN EDDY COUNTY, NEW MEXICO. (Continued)

LOCATION NUMBER	OWNER OR NAME	DATE COMPLETED	TOPOGRAPHIC SITUATION	ALTITUDE ABOVE SEA LEVEL (feet)	DEPTH OF WELL (feet)	DIAMETER OF WELL (inches)	PRINCIPAL WATER-BEARING BED	
							CHARACTER OF MATERIAL	GEOLOGIC UNIT
17.28.2.240	Hal Bogle	–	Flat between mesas	–	–	6 (?)	Redbeds (?)	Dockum (?)
14.220	do.	–	Rolling	–	–	7	do.	do.
19.200	do.	–	do.	–	–	8	Redbeds, gypsum (?)	Chalk Bluff or Rustler
22.230	–	–	Flat between mesas	–	–	6	Redbeds (?)	Rustler or Dockum (?)
17.29.22.110	–	–	Bear Grass draw	3,550	–	6	do.	Dockum (?)
29.400	Bishop (?)	–	Flat	–	–	7	do.	do.
17.31.34.000	–	–	Rolling	–	–	6 (?)	Redbeds	Dockum
18.21.13.310	Andy Teel	1915	–	4,100	520	8	Limestone	San Andres
27.440	do.	1947	Broad valley	4,200	667	10	do.	do.
32.430	George Teel	1946	Rolling	4,300	815	6	do.	do.
18.23.6.140	Couhape Bros.	1941	S. of Rio Penasco	4,060	500	10	do.	do.
18.25.23.111	G. M. Phelps	–	Blackdom Terrace	–	–	–	Alluvium (?)	Quaternary (?)

See explanation at beginning of table.

LOCATION NUMBER	WATER LEVEL		YIELD (g.p.m.)	METHOD OF LIFT	USE OF WATER	REMARKS
	BELOW LAND SURFACE (feet)	DATE OF MEASUREMENT				
17.28.2.240	27.6	Dec. 1, 1948	3	W	S	Depth to water measured while pumping.
14.220	80	–	61	W	S & D	Driller: Cy Hinshaw. See analysis, Table 3.
19.200	224.3	Dec. 2, 1948	1.2	W	S	Depth to water measured while pumping.
22.230	45.5	Dec. 1, 1948	–	N	N	Abandoned stock well.
17.29.22.110	79.7	Nov. 29, 1948	3 E.	W	S	Depth to water measured while pumping.
29.400	210	Dec. 3, 1948	1.1	W	S	do.
17.31.34.000	271+	Dec. 6, 1948	3.5	W	S	do.
18.21.13.310	505	–	10 R.	W	S & D	See analysis, Table 3.
27.440	530	–	–	W	S	Formerly C.C.C. well. Cased to 30 ft.
32.430	800 (?)	–	12 R.	W	S & D	Cased to 120 ft.
18.23.6.140	440	Jan. 12, 1950	–	W	S & D	Lowered cylinder 5 ft. in 1948 because water level declined. Cased to 380 ft.
18.25.23.111	117.8	Jan. 1950	–	W	S	

See explanation at beginning of table.
1 Measured Dec. 3, 1948.

Appendix C

Summary Report

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

Report Date: December 17, 2010

Work Order: 10121027

Project Location: Eddy Co., NM
Project Name: COG/Schley Federal TB
Project Number: 114-6400740

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
252933	AH-1 0-1' 1' BEB	soil	2010-12-06	00:00	2010-12-10
252934	AH-1 1-1.5' 1' BEB	soil	2010-12-06	00:00	2010-12-10
252935	AH-1 2-2.5' 1' BEB	soil	2010-12-06	00:00	2010-12-10
252936	AH-1 3-3.5' 1' BEB	soil	2010-12-06	00:00	2010-12-10
252937	AH-1 4-4.5' 1' BEB	soil	2010-12-06	00:00	2010-12-10
252938	AH-1 5-5.5' 1' BEB	soil	2010-12-06	00:00	2010-12-10
252939	AH-2 0-1' 1' BEB	soil	2010-12-06	00:00	2010-12-10
252940	AH-2 1-1.5' 1' BEB	soil	2010-12-06	00:00	2010-12-10
252941	AH-2 2-2.5' 1' BEB	soil	2010-12-06	00:00	2010-12-10
252942	AH-2 3-3.5' 1' BEB	soil	2010-12-06	00:00	2010-12-10
252943	AH-3 0-1' 1' BEB	soil	2010-12-06	00:00	2010-12-10
252944	AH-3 1-1.5' 1' BEB	soil	2010-12-06	00:00	2010-12-10
252945	AH-3 2-2.5' 1' BEB	soil	2010-12-06	00:00	2010-12-10
252946	AH-3 3-3.5' 1' BEB	soil	2010-12-06	00:00	2010-12-10
252947	AH-3 4-4.5' 1' BEB	soil	2010-12-06	00:00	2010-12-10
252948	AH-4 0-1'	soil	2010-12-06	00:00	2010-12-10
252949	AH-4 1-1.5'	soil	2010-12-06	00:00	2010-12-10
252950	AH-4 2-2.5'	soil	2010-12-06	00:00	2010-12-10
252951	AH-4 3-3.5'	soil	2010-12-06	00:00	2010-12-10
252952	AH-4 4-4.5'	soil	2010-12-06	00:00	2010-12-10
252953	AH-4 5-5.5'	soil	2010-12-06	00:00	2010-12-10
252954	AH-4 6-6.5'	soil	2010-12-06	00:00	2010-12-10
252955	AH-4 7-7.5'	soil	2010-12-06	00:00	2010-12-10
252956	AH-4 8-8.5'	soil	2010-12-06	00:00	2010-12-10
252957	AH-4 9-9.5'	soil	2010-12-06	00:00	2010-12-10
252958	AH-5 0-1'	soil	2010-12-06	00:00	2010-12-10
252959	AH-5 1-1.5'	soil	2010-12-06	00:00	2010-12-10
252960	AH-5 2-2.5'	soil	2010-12-06	00:00	2010-12-10
252961	AH-5 3-3.5'	soil	2010-12-06	00:00	2010-12-10
252962	AH-5 4-4.5'	soil	2010-12-06	00:00	2010-12-10

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
252963	AH-5 5-5.5'	soil	2010-12-06	00:00	2010-12-10
252964	AH-5 6-6.5'	soil	2010-12-06	00:00	2010-12-10

Sample - Field Code	BTEX Benzene (mg/Kg)	BTEX Toluene (mg/Kg)	BTEX Ethylbenzene (mg/Kg)	BTEX Xylene (mg/Kg)	TPH DRO - NEW DRO (mg/Kg)	TPH GRO GRO (mg/Kg)
252933 - AH-1 0-1' 1' BEB	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
252939 - AH-2 0-1' 1' BEB	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
252943 - AH-3 0-1' 1' BEB	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
252948 - AH-4 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	**137**	<2.00
252958 - AH-5 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00

Sample: 252933 - AH-1 0-1' 1' BEB

Param	Flag	Result	Units	RL
Chloride		**6580**	mg/Kg	4.00

Sample: 252934 - AH-1 1-1.5' 1' BEB

Param	Flag	Result	Units	RL
Chloride		**393**	mg/Kg	4.00

Sample: 252935 - AH-1 2-2.5' 1' BEB

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

Sample: 252936 - AH-1 3-3.5' 1' BEB

Param	Flag	Result	Units	RL
Chloride		**216**	mg/Kg	4.00

Sample: 252937 - AH-1 4-4.5' 1' BEB

Param	Flag	Result	Units	RL
Chloride		**265**	mg/Kg	4.00

Sample: 252938 - AH-1 5-5.5' 1' BEB

Param	Flag	Result	Units	RL
Chloride		**550**	mg/Kg	4.00

Sample: 252939 - AH-2 0-1' 1' BEB

Param	Flag	Result	Units	RL
Chloride		**7340**	mg/Kg	4.00

Sample: 252940 - AH-2 1-1.5' 1' BEB

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

Sample: 252941 - AH-2 2-2.5' 1' BEB

Param	Flag	Result	Units	RL
Chloride		**5930**	mg/Kg	4.00

Sample: 252942 - AH-2 3-3.5' 1' BEB

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

Sample: 252943 - AH-3 0-1' 1' BEB

Param	Flag	Result	Units	RL
Chloride		**7950**	mg/Kg	4.00

Sample: 252944 - AH-3 1-1.5' 1' BEB

Param	Flag	Result	Units	RL
Chloride		**2650**	mg/Kg	4.00

Sample: 252945 - AH-3 2-2.5' 1' BEB

Param	Flag	Result	Units	RL
Chloride		**500**	mg/Kg	4.00

Sample: 252946 - AH-3 3-3.5' 1' BEB

Param	Flag	Result	Units	RL
Chloride		**2230**	mg/Kg	4.00

Sample: 252947 - AH-3 4-4.5' 1' BEB

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

Sample: 252948 - AH-4 0-1'

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

Sample: 252949 - AH-4 1-1.5'

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

Sample: 252950 - AH-4 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**846**	mg/Kg	4.00

Sample: 252951 - AH-4 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**827**	mg/Kg	4.00

Sample: 252952 - AH-4 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**884**	mg/Kg	4.00

Sample: 252953 - AH-4 5-5.5'

Param	Flag	Result	Units	RL
Chloride		**1040**	mg/Kg	4.00

Sample: 252954 - AH-4 6-6.5'

Param	Flag	Result	Units	RL
Chloride		**920**	mg/Kg	4.00

Sample: 252955 - AH-4 7-7.5'

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

Sample: 252956 - AH-4 8-8.5'

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

Sample: 252957 - AH-4 9-9.5'

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

Sample: 252958 - AH-5 0-1'

Param	Flag	Result	Units	RL
Chloride		**5460**	mg/Kg	4.00

Sample: 252959 - AH-5 1-1.5'

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

Sample: 252960 - AH-5 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**5600**	mg/Kg	4.00

Sample: 252961 - AH-5 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**7240**	mg/Kg	4.00

Sample: 252962 - AH-5 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**7480**	mg/Kg	4.00

Sample: 252963 - AH-5 5-5.5'

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

Sample: 252964 - AH-5 6-6.5'

Param	Flag	Result	Units	RL
Chloride		**1130**	mg/Kg	4.00

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260
E-Mail: lab@traceanalysis.com

Certifications

WBENC: 237019 **HUB:** 1752439743100-86536 **DBE:** VN 20657
NCTRCA WFWB38444Y0909

NELAP Certifications

Lubbock: T104704219-08-TX LELAP-02003 Kansas E-10317 **El Paso:** T104704221-08-TX LELAP-02002 **Midland:** T104704392-08-TX

Analytical and Quality Control Report

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

Report Date: December 17, 2010

Work Order: 10121027

Project Location: Eddy Co., NM
Project Name: COG/Schley Federal TB
Project Number: 114-6400740

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
252933	AH-1 0-1' 1' BEB	soil	2010-12-06	00:00	2010-12-10
252934	AH-1 1-1.5' 1' BEB	soil	2010-12-06	00:00	2010-12-10
252935	AH-1 2-2.5' 1' BEB	soil	2010-12-06	00:00	2010-12-10
252936	AH-1 3-3.5' 1' BEB	soil	2010-12-06	00:00	2010-12-10
252937	AH-1 4-4.5' 1' BEB	soil	2010-12-06	00:00	2010-12-10
252938	AH-1 5-5.5' 1' BEB	soil	2010-12-06	00:00	2010-12-10
252939	AH-2 0-1' 1' BEB	soil	2010-12-06	00:00	2010-12-10
252940	AH-2 1-1.5' 1' BEB	soil	2010-12-06	00:00	2010-12-10
252941	AH-2 2-2.5' 1' BEB	soil	2010-12-06	00:00	2010-12-10
252942	AH-2 3-3.5' 1' BEB	soil	2010-12-06	00:00	2010-12-10

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
252943	AH-3 0-1' 1' BEB	soil	2010-12-06	00:00	2010-12-10
252944	AH-3 1-1.5' 1' BEB	soil	2010-12-06	00:00	2010-12-10
252945	AH-3 2-2.5' 1' BEB	soil	2010-12-06	00:00	2010-12-10
252946	AH-3 3-3.5' 1' BEB	soil	2010-12-06	00:00	2010-12-10
252947	AH-3 4-4.5' 1' BEB	soil	2010-12-06	00:00	2010-12-10
252948	AH-4 0-1'	soil	2010-12-06	00:00	2010-12-10
252949	AH-4 1-1.5'	soil	2010-12-06	00:00	2010-12-10
252950	AH-4 2-2.5'	soil	2010-12-06	00:00	2010-12-10
252951	AH-4 3-3.5'	soil	2010-12-06	00:00	2010-12-10
252952	AH-4 4-4.5'	soil	2010-12-06	00:00	2010-12-10
252953	AH-4 5-5.5'	soil	2010-12-06	00:00	2010-12-10
252954	AH-4 6-6.5'	soil	2010-12-06	00:00	2010-12-10
252955	AH-4 7-7.5'	soil	2010-12-06	00:00	2010-12-10
252956	AH-4 8-8.5'	soil	2010-12-06	00:00	2010-12-10
252957	AH-4 9-9.5'	soil	2010-12-06	00:00	2010-12-10
252958	AH-5 0-1'	soil	2010-12-06	00:00	2010-12-10
252959	AH-5 1-1.5'	soil	2010-12-06	00:00	2010-12-10
252960	AH-5 2-2.5'	soil	2010-12-06	00:00	2010-12-10
252961	AH-5 3-3.5'	soil	2010-12-06	00:00	2010-12-10
252962	AH-5 4-4.5'	soil	2010-12-06	00:00	2010-12-10
252963	AH-5 5-5.5'	soil	2010-12-06	00:00	2010-12-10
252964	AH-5 6-6.5'	soil	2010-12-06	00:00	2010-12-10

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Michael Abel

Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project COG/Schley Federal TB were received by TraceAnalysis, Inc. on 2010-12-10 and assigned to work order 10121027. Samples for work order 10121027 were received intact at a temperature of 3.6 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	65313	2010-12-14 at 10:54	76151	2010-12-14 at 12:48
Chloride (Titration)	SM 4500-Cl B	65250	2010-12-13 at 10:17	76127	2010-12-14 at 12:59
Chloride (Titration)	SM 4500-Cl B	65377	2010-12-16 at 10:00	76228	2010-12-16 at 14:00
Chloride (Titration)	SM 4500-Cl B	65377	2010-12-16 at 10:00	76231	2010-12-16 at 15:00
Chloride (Titration)	SM 4500-Cl B	65377	2010-12-16 at 10:00	76236	2010-12-16 at 16:00
Chloride (Titration)	SM 4500-Cl B	65377	2010-12-16 at 10:00	76260	2010-12-17 at 09:00
TPH DRO - NEW	S 8015 D	65320	2010-12-14 at 09:15	76161	2010-12-14 at 09:15
TPH DRO - NEW	S 8015 D	65321	2010-12-14 at 09:15	76162	2010-12-14 at 09:15
TPH GRO	S 8015 D	65313	2010-12-14 at 10:54	76152	2010-12-14 at 12:48

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 10121027 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Analytical Report

Sample: 252933 - AH-1 0-1' 1' BEB

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	76151	Date Analyzed:	2010-12-14	Analyzed By:	ME
Prep Batch:	65313	Sample Preparation:	2010-12-14	Prepared By:	ME

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0200	mg/Kg	1	0.0200
Toluene		<0.0200	mg/Kg	1	0.0200
Ethylbenzene		<0.0200	mg/Kg	1	0.0200
Xylene		<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.29	mg/Kg	1	2.00	114	52.8 - 137
4-Bromofluorobenzene (4-BFB)		2.39	mg/Kg	1	2.00	120	38.4 - 157

Sample: 252933 - AH-1 0-1' 1' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	76127	Date Analyzed:	2010-12-14	Analyzed By:	AR
Prep Batch:	65250	Sample Preparation:	2010-12-13	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**6580**	mg/Kg	100	4.00

Sample: 252933 - AH-1 0-1' 1' BEB

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	76162	Date Analyzed:	2010-12-14	Analyzed By:	kg
Prep Batch:	65321	Sample Preparation:	2010-12-14	Prepared By:	kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		104	mg/Kg	1	100	104	70 - 130

Sample: 252933 - AH-1 0-1' 1' BEB

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	76152	Date Analyzed:	2010-12-14	Analyzed By:	ME
Prep Batch:	65313	Sample Preparation:	2010-12-14	Prepared By:	ME

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.51	mg/Kg	1	2.00	126	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.38	mg/Kg	1	2.00	119	42 - 159

Sample: 252934 - AH-1 1-1.5' 1' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	76228	Date Analyzed:	2010-12-16	Analyzed By:	AG
Prep Batch:	65377	Sample Preparation:	2010-12-16	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**393**	mg/Kg	50	4.00

Sample: 252935 - AH-1 2-2.5' 1' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	76228	Date Analyzed:	2010-12-16	Analyzed By:	AG
Prep Batch:	65377	Sample Preparation:	2010-12-16	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 252936 - AH-1 3-3.5' 1' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	76228	Date Analyzed:	2010-12-16	Analyzed By:	AG
Prep Batch:	65377	Sample Preparation:	2010-12-16	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**216**	mg/Kg	50	4.00

Sample: 252937 - AH-1 4-4.5' 1' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	76228	Date Analyzed:	2010-12-16	Analyzed By:	AG
Prep Batch:	65377	Sample Preparation:	2010-12-16	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**265**	mg/Kg	50	4.00

Sample: 252938 - AH-1 5-5.5' 1' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	76228	Date Analyzed:	2010-12-16	Analyzed By:	AG
Prep Batch:	65377	Sample Preparation:	2010-12-16	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**550**	mg/Kg	50	4.00

Sample: 252939 - AH-2 0-1' 1' BEB

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	76151	Date Analyzed:	2010-12-14	Analyzed By:	ME
Prep Batch:	65313	Sample Preparation:	2010-12-14	Prepared By:	ME

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0200	mg/Kg	1	0.0200
Toluene		<0.0200	mg/Kg	1	0.0200

continued ...

sample 252939 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Ethylbenzene		<0.0200	mg/Kg	1	0.0200
Xylene		<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.20	mg/Kg	1	2.00	110	52.8 - 137
4-Bromofluorobenzene (4-BFB)		2.33	mg/Kg	1	2.00	116	38.4 - 157

Sample: 252939 - AH-2 0-1' 1' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	76228	Date Analyzed:	2010-12-16	Analyzed By:	AG
Prep Batch:	65377	Sample Preparation:	2010-12-16	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**7340**	mg/Kg	100	4.00

Sample: 252939 - AH-2 0-1' 1' BEB

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	76161	Date Analyzed:	2010-12-14	Analyzed By:	kg
Prep Batch:	65320	Sample Preparation:	2010-12-14	Prepared By:	kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		111	mg/Kg	1	100	111	70 - 130

Sample: 252939 - AH-2 0-1' 1' BEB

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	76152	Date Analyzed:	2010-12-14	Analyzed By:	ME
Prep Batch:	65313	Sample Preparation:	2010-12-14	Prepared By:	ME

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.41	mg/Kg	1	2.00	120	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.35	mg/Kg	1	2.00	118	42 - 159

Sample: 252940 - AH-2 1-1.5' 1' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	76228	Date Analyzed:	2010-12-16	Analyzed By:	AG
Prep Batch:	65377	Sample Preparation:	2010-12-16	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**5660**	mg/Kg	100	4.00

Sample: 252941 - AH-2 2-2.5' 1' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	76228	Date Analyzed:	2010-12-16	Analyzed By:	AG
Prep Batch:	65377	Sample Preparation:	2010-12-16	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**5930**	mg/Kg	100	4.00

Sample: 252942 - AH-2 3-3.5' 1' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	76228	Date Analyzed:	2010-12-16	Analyzed By:	AG
Prep Batch:	65377	Sample Preparation:	2010-12-16	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**354**	mg/Kg	50	4.00

Sample: 252943 - AH-3 0-1' 1' BEB

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	76151	Date Analyzed:	2010-12-14	Analyzed By:	ME
Prep Batch:	65313	Sample Preparation:	2010-12-14	Prepared By:	ME

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0200	mg/Kg	1	0.0200
Toluene		<0.0200	mg/Kg	1	0.0200
Ethylbenzene		<0.0200	mg/Kg	1	0.0200
Xylene		<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.90	mg/Kg	1	2.00	95	52.8 - 137
4-Bromofluorobenzene (4-BFB)		2.00	mg/Kg	1	2.00	100	38.4 - 157

Sample: 252943 - AH-3 0-1' 1' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	76228	Date Analyzed:	2010-12-16	Analyzed By:	AG
Prep Batch:	65377	Sample Preparation:	2010-12-16	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**7950**	mg/Kg	100	4.00

Sample: 252943 - AH-3 0-1' 1' BEB

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	76162	Date Analyzed:	2010-12-14	Analyzed By:	kg
Prep Batch:	65321	Sample Preparation:	2010-12-14	Prepared By:	kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		103	mg/Kg	1	100	103	70 - 130

Sample: 252943 - AH-3 0-1' 1' BEB

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	76152	Date Analyzed:	2010-12-14	Analyzed By:	ME
Prep Batch:	65313	Sample Preparation:	2010-12-14	Prepared By:	ME

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.08	mg/Kg	1	2.00	104	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.02	mg/Kg	1	2.00	101	42 - 159

Sample: 252944 - AH-3 1-1.5' 1' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	76231	Date Analyzed:	2010-12-16	Analyzed By:	AG
Prep Batch:	65377	Sample Preparation:	2010-12-16	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**2650**	mg/Kg	100	4.00

Sample: 252945 - AH-3 2-2.5' 1' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	76231	Date Analyzed:	2010-12-16	Analyzed By:	AG
Prep Batch:	65377	Sample Preparation:	2010-12-16	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**500**	mg/Kg	50	4.00

Sample: 252946 - AH-3 3-3.5' 1' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	76231	Date Analyzed:	2010-12-16	Analyzed By:	AG
Prep Batch:	65377	Sample Preparation:	2010-12-16	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**2230**	mg/Kg	100	4.00

Sample: 252947 - AH-3 4-4.5' 1' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	76231	Date Analyzed:	2010-12-16	Analyzed By:	AG
Prep Batch:	65377	Sample Preparation:	2010-12-16	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**2270**	mg/Kg	100	4.00

Sample: 252948 - AH-4 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	76151	Date Analyzed:	2010-12-14	Analyzed By:	ME
Prep Batch:	65313	Sample Preparation:	2010-12-14	Prepared By:	ME

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0200	mg/Kg	1	0.0200
Toluene		<0.0200	mg/Kg	1	0.0200
Ethylbenzene		<0.0200	mg/Kg	1	0.0200
Xylene		<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.19	mg/Kg	1	2.00	110	52.8 - 137
4-Bromofluorobenzene (4-BFB)		2.32	mg/Kg	1	2.00	116	38.4 - 157

Sample: 252948 - AH-4 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	76231	Date Analyzed:	2010-12-16	Analyzed By:	AG
Prep Batch:	65377	Sample Preparation:	2010-12-16	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**5080**	mg/Kg	100	4.00

Sample: 252948 - AH-4 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	76162	Date Analyzed:	2010-12-14	Analyzed By:	kg
Prep Batch:	65321	Sample Preparation:	2010-12-14	Prepared By:	kg

Parameter	Flag	Result	RL	Units	Dilution	RL
DRO		**137**		mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	[1]	136	mg/Kg	1	100	136	70 - 130

Sample: 252948 - AH-4 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	76152	Date Analyzed:	2010-12-14	Analyzed By:	ME
Prep Batch:	65313	Sample Preparation:	2010-12-14	Prepared By:	ME

Parameter	Flag	Result	RL	Units	Dilution	RL
GRO		<2.00		mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.40	mg/Kg	1	2.00	120	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.33	mg/Kg	1	2.00	116	42 - 159

Sample: 252949 - AH-4 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	76231	Date Analyzed:	2010-12-16	Analyzed By:	AG
Prep Batch:	65377	Sample Preparation:	2010-12-16	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**2310**		mg/Kg	100	4.00

[1] High surrogate recovery due to peak interference.

Sample: 252950 - AH-4 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	76231	Date Analyzed:	2010-12-16	Analyzed By:	AG
Prep Batch:	65377	Sample Preparation:	2010-12-16	Prepared By:	AG

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**846**	mg/Kg	100	4.00

Sample: 252951 - AH-4 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	76231	Date Analyzed:	2010-12-16	Analyzed By:	AG
Prep Batch:	65377	Sample Preparation:	2010-12-16	Prepared By:	AG

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**827**	mg/Kg	50	4.00

Sample: 252952 - AH-4 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	76231	Date Analyzed:	2010-12-16	Analyzed By:	AG
Prep Batch:	65377	Sample Preparation:	2010-12-16	Prepared By:	AG

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**884**	mg/Kg	100	4.00

Sample: 252953 - AH-4 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	76231	Date Analyzed:	2010-12-16	Analyzed By:	AG
Prep Batch:	65377	Sample Preparation:	2010-12-16	Prepared By:	AG

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**1040**	mg/Kg	100	4.00

Sample: 252954 - AH-4 6-6.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	76236	Date Analyzed:	2010-12-16	Analyzed By:	AG
Prep Batch:	65377	Sample Preparation:	2010-12-16	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**920**		mg/Kg	50	4.00

Sample: 252955 - AH-4 7-7.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	76236	Date Analyzed:	2010-12-16	Analyzed By:	AG
Prep Batch:	65377	Sample Preparation:	2010-12-16	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**1670**		mg/Kg	50	4.00

Sample: 252956 - AH-4 8-8.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	76236	Date Analyzed:	2010-12-16	Analyzed By:	AG
Prep Batch:	65377	Sample Preparation:	2010-12-16	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**1350**		mg/Kg	50	4.00

Sample: 252957 - AH-4 9-9.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	76236	Date Analyzed:	2010-12-16	Analyzed By:	AG
Prep Batch:	65377	Sample Preparation:	2010-12-16	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**1430**		mg/Kg	50	4.00

Sample: 252958 - AH-5 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	76151	Date Analyzed:	2010-12-14	Analyzed By:	ME
Prep Batch:	65313	Sample Preparation:	2010-12-14	Prepared By:	ME

Parameter	Flag	Result	RL	Units	Dilution	RL
Benzene		<0.0200		mg/Kg	1	0.0200
Toluene		<0.0200		mg/Kg	1	0.0200
Ethylbenzene		<0.0200		mg/Kg	1	0.0200
Xylene		<0.0200		mg/Kg	1	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.19	mg/Kg	1	2.00	110	52.8 - 137
4-Bromofluorobenzene (4-BFB)		2.26	mg/Kg	1	2.00	113	38.4 - 157

Sample: 252958 - AH-5 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	76236	Date Analyzed:	2010-12-16	Analyzed By:	AG
Prep Batch:	65377	Sample Preparation:	2010-12-16	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**5460**		mg/Kg	100	4.00

Sample: 252958 - AH-5 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	76162	Date Analyzed:	2010-12-14	Analyzed By:	kg
Prep Batch:	65321	Sample Preparation:	2010-12-14	Prepared By:	kg

Parameter	Flag	Result	RL	Units	Dilution	RL
DRO		<50.0		mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		114	mg/Kg	1	100	114	70 - 130

Sample: 252958 - AH-5 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	76152	Date Analyzed:	2010-12-14	Analyzed By:	ME
Prep Batch:	65313	Sample Preparation:	2010-12-14	Prepared By:	ME

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.42	mg/Kg	1	2.00	121	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.27	mg/Kg	1	2.00	114	42 - 159

Sample: 252959 - AH-5 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	76236	Date Analyzed:	2010-12-16	Analyzed By:	AG
Prep Batch:	65377	Sample Preparation:	2010-12-16	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**5320**	mg/Kg	100	4.00

Sample: 252960 - AH-5 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	76236	Date Analyzed:	2010-12-16	Analyzed By:	AG
Prep Batch:	65377	Sample Preparation:	2010-12-16	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**5600**	mg/Kg	100	4.00

Sample: 252961 - AH-5 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	76236	Date Analyzed:	2010-12-16	Analyzed By:	AG
Prep Batch:	65377	Sample Preparation:	2010-12-16	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**7240**	mg/Kg	100	4.00

Sample: 252962 - AH-5 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	76236	Date Analyzed:	2010-12-16	Analyzed By:	AG
Prep Batch:	65377	Sample Preparation:	2010-12-16	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**7480**	mg/Kg	100	4.00

Sample: 252963 - AH-5 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	76236	Date Analyzed:	2010-12-16	Analyzed By:	AG
Prep Batch:	65377	Sample Preparation:	2010-12-16	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**4140**	mg/Kg	100	4.00

Sample: 252964 - AH-5 6-6.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	76260	Date Analyzed:	2010-12-17	Analyzed By:	AG
Prep Batch:	65377	Sample Preparation:	2010-12-16	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**1130**	mg/Kg	50	4.00

Method Blank (1) QC Batch: 76127

QC Batch:	76127	Date Analyzed:	2010-12-14	Analyzed By:	AR
Prep Batch:	65250	QC Preparation:	2010-12-13	Prepared By:	AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.18	mg/Kg	4

Method Blank (1) QC Batch: 76151

QC Batch: 76151 Date Analyzed: 2010-12-14 Analyzed By: ME
Prep Batch: 65313 QC Preparation: 2010-12-14 Prepared By: ME

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.0150	mg/Kg	0.02
Toluene		<0.00950	mg/Kg	0.02
Ethylbenzene		<0.0106	mg/Kg	0.02
Xylene		<0.00930	mg/Kg	0.02

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.94	mg/Kg	1	2.00	97	66.6 - 122
4-Bromofluorobenzene (4-BFB)		2.02	mg/Kg	1	2.00	101	55.4 - 132

Method Blank (1) QC Batch: 76152

QC Batch: 76152 Date Analyzed: 2010-12-14 Analyzed By: ME
Prep Batch: 65313 QC Preparation: 2010-12-14 Prepared By: ME

Parameter	Flag	MDL Result	Units	RL
GRO		<1.65	mg/Kg	2

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.12	mg/Kg	1	2.00	106	67.6 - 150
4-Bromofluorobenzene (4-BFB)		2.03	mg/Kg	1	2.00	102	52.4 - 130

Method Blank (1) QC Batch: 76161

QC Batch: 76161 Date Analyzed: 2010-12-14 Analyzed By: kg
Prep Batch: 65320 QC Preparation: 2010-12-14 Prepared By: kg

Parameter	Flag	MDL Result	Units	RL
DRO		<14.6	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		91.6	mg/Kg	1	100	92	70 - 130

Method Blank (1) QC Batch: 76162

QC Batch: 76162 Date Analyzed: 2010-12-14 Analyzed By: kg
Prep Batch: 65321 QC Preparation: 2010-12-14 Prepared By: kg

Parameter	Flag	MDL Result	Units	RL
DRO		<14.6	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		112	mg/Kg	1	100	112	70 - 130

Method Blank (1) QC Batch: 76228

QC Batch: 76228 Date Analyzed: 2010-12-16 Analyzed By: AG
Prep Batch: 65377 QC Preparation: 2010-12-16 Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.18	mg/Kg	4

Method Blank (1) QC Batch: 76231

QC Batch: 76231 Date Analyzed: 2010-12-16 Analyzed By: AG
Prep Batch: 65377 QC Preparation: 2010-12-16 Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.18	mg/Kg	4

Method Blank (1) QC Batch: 76236

QC Batch: 76236 Date Analyzed: 2010-12-16 Analyzed By: AG
Prep Batch: 65377 QC Preparation: 2010-12-16 Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.18	mg/Kg	4

Method Blank (1) QC Batch: 76260

QC Batch: 76260 Date Analyzed: 2010-12-17 Analyzed By: AG
Prep Batch: 65377 QC Preparation: 2010-12-16 Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.18	mg/Kg	4

Laboratory Control Spike (LCS-1)

QC Batch: 76127 Date Analyzed: 2010-12-14 Analyzed By: AR
Prep Batch: 65250 QC Preparation: 2010-12-13 Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	96.2	mg/Kg	1	100	<2.18	96	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	104	mg/Kg	1	100	<2.18	104	85 - 115	8	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 76151 Date Analyzed: 2010-12-14 Analyzed By: ME
Prep Batch: 65313 QC Preparation: 2010-12-14 Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.82	mg/Kg	1	2.00	<0.0150	91	81.9 - 108
Toluene	1.80	mg/Kg	1	2.00	<0.00950	90	81.9 - 107
Ethylbenzene	1.82	mg/Kg	1	2.00	<0.0106	91	78.4 - 107
Xylene	5.50	mg/Kg	1	6.00	<0.00930	92	79.1 - 107

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	1.98	mg/Kg	1	2.00	<0.0150	99	81.9 - 108	8	20
Toluene	1.96	mg/Kg	1	2.00	<0.00950	98	81.9 - 107	8	20
Ethylbenzene	2.00	mg/Kg	1	2.00	<0.0106	100	78.4 - 107	9	20
Xylene	6.03	mg/Kg	1	6.00	<0.00930	100	79.1 - 107	9	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.76	1.76	mg/Kg	1	2.00	88	88	70.2 - 114
4-Bromofluorobenzene (4-BFB)	1.94	1.89	mg/Kg	1	2.00	97	94	69.8 - 121

Laboratory Control Spike (LCS-1)

QC Batch: 76152 | Date Analyzed: 2010-12-14 | Analyzed By: ME
Prep Batch: 65313 | QC Preparation: 2010-12-14 | Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	16.7	mg/Kg	1	20.0	<1.65	84	69.9 - 95.4

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	16.7	mg/Kg	1	20.0	<1.65	84	69.9 - 95.4	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.03	2.04	mg/Kg	1	2.00	102	102	61.9 - 142
4-Bromofluorobenzene (4-BFB)	2.02	2.00	mg/Kg	1	2.00	101	100	65.2 - 132

Laboratory Control Spike (LCS-1)

QC Batch: 76161 | Date Analyzed: 2010-12-14 | Analyzed By: kg
Prep Batch: 65320 | QC Preparation: 2010-12-14 | Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	192	mg/Kg	1	250	<14.6	77	47.5 - 144.1

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	214	mg/Kg	1	250	<14.6	86	47.5 - 144.1	11	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	110	124	mg/Kg	1	100	110	124	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 76162 | Date Analyzed: 2010-12-14 | Analyzed By: kg
Prep Batch: 65321 | QC Preparation: 2010-12-14 | Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	247	mg/Kg	1	250	<14.6	99	47.5 - 144.1

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	246	mg/Kg	1	250	<14.6	98	47.5 - 144.1	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	122	122	mg/Kg	1	100	122	122	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 76228 | Date Analyzed: 2010-12-16 | Analyzed By: AG
Prep Batch: 65377 | QC Preparation: 2010-12-16 | Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	95.4	mg/Kg	1	100	<2.18	95	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	91.9	mg/Kg	1	100	<2.18	92	85 - 115	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 76231 | Date Analyzed: 2010-12-16 | Analyzed By: AG
Prep Batch: 65377 | QC Preparation: 2010-12-16 | Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	94.1	mg/Kg	1	100	<2.18	94	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	95.7	mg/Kg	1	100	<2.18	96	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 76236 | Date Analyzed: 2010-12-16 | Analyzed By: AG
Prep Batch: 65377 | QC Preparation: 2010-12-16 | Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	100	mg/Kg	1	100	<2.18	100	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	101	mg/Kg	1	100	<2.18	101	85 - 115	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 76260 | Date Analyzed: 2010-12-17 | Analyzed By: AG
Prep Batch: 65377 | QC Preparation: 2010-12-16 | Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	99.9	mg/Kg	1	100	<2.18	100	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	100	mg/Kg	1	100	<2.18	100	85 - 115	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 252933

QC Batch: 76127 | Date Analyzed: 2010-12-14 | Analyzed By: AR
Prep Batch: 65250 | QC Preparation: 2010-12-13 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	16300	mg/Kg	100	10000	6580	97	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	16900	mg/Kg	100	10000	6580	103	85 - 115	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 252958

QC Batch: 76151 | Date Analyzed: 2010-12-14 | Analyzed By: ME
Prep Batch: 65313 | QC Preparation: 2010-12-14 | Prepared By: ME

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.93	mg/Kg	1	2.00	<0.0150	96	80.5 - 112
Toluene	1.94	mg/Kg	1	2.00	<0.00950	97	82.4 - 113
Ethylbenzene	2.02	mg/Kg	1	2.00	<0.0106	101	83.9 - 114
Xylene	6.13	mg/Kg	1	6.00	<0.00930	102	84 - 114

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	2.00	mg/Kg	1	2.00	<0.0150	100	80.5 - 112	4	20
Toluene	2.03	mg/Kg	1	2.00	<0.00950	102	82.4 - 113	4	20
Ethylbenzene	2.10	mg/Kg	1	2.00	<0.0106	105	83.9 - 114	4	20
Xylene	6.38	mg/Kg	1	6.00	<0.00930	106	84 - 114	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.17	2.15	mg/Kg	1	2	108	108	41.3 - 117
4-Bromofluorobenzene (4-BFB)	2.31	2.29	mg/Kg	1	2	116	114	35.5 - 129

Matrix Spike (MS-1) Spiked Sample: 253025

QC Batch: 76152 | Date Analyzed: 2010-12-14 | Analyzed By: ME
Prep Batch: 65313 | QC Preparation: 2010-12-14 | Prepared By: ME

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	17.6	mg/Kg	1	20.0	<1.65	88	61.8 - 114

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	18.5	mg/Kg	1	20.0	<1.65	92	61.8 - 114	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.40	2.40	mg/Kg	1	2	120	120	50 - 162
4-Bromofluorobenzene (4-BFB)	2.43	2.44	mg/Kg	1	2	122	122	50 - 162

Matrix Spike (MS-1) Spiked Sample: 252939

QC Batch: 76161 | Date Analyzed: 2010-12-14 | Analyzed By: kg
Prep Batch: 65320 | QC Preparation: 2010-12-14 | Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	231	mg/Kg	1	250	<14.6	92	11.7 - 152.3

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	224	mg/Kg	1	250	<14.6	90	11.7 - 152.3	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	124	125	mg/Kg	1	100	124	125	70 - 130

Matrix Spike (MS-1) Spiked Sample: 253106

QC Batch: 76162 | Date Analyzed: 2010-12-14 | Analyzed By: kg
Prep Batch: 65321 | QC Preparation: 2010-12-14 | Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	210	mg/Kg	1	250	<14.6	84	11.7 - 152.3

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	213	mg/Kg	1	250	<14.6	85	11.7 - 152.3	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	120	124	mg/Kg	1	100	120	124	70 - 130

Matrix Spike (MS-1) Spiked Sample: 252943

QC Batch: 76228 | Date Analyzed: 2010-12-16 | Analyzed By: AG
Prep Batch: 65377 | QC Preparation: 2010-12-16 | Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	19400	mg/Kg	100	10000	7950	114	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride [2]	19500	mg/Kg	100	10000	7950	116	85 - 115	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 252953

QC Batch: 76231 | Date Analyzed: 2010-12-16 | Analyzed By: AG
Prep Batch: 65377 | QC Preparation: 2010-12-16 | Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	11100	mg/Kg	100	10000	1040	101	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	10900	mg/Kg	100	10000	1040	99	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 252954

QC Batch: 76236 | Date Analyzed: 2010-12-16 | Analyzed By: AG
Prep Batch: 65377 | QC Preparation: 2010-12-16 | Prepared By: AG

[2]MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	6650	mg/Kg	50	5000	920	115	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	6540	mg/Kg	50	5000	920	112	85 - 115	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 253107

QC Batch: 76260 | Date Analyzed: 2010-12-17 | Analyzed By: AG
Prep Batch: 65377 | QC Preparation: 2010-12-16 | Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	5690	mg/Kg	50	5000	387	106	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	5630	mg/Kg	50	5000	387	105	85 - 115	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Standard (ICV-1)

QC Batch: 76127 | Date Analyzed: 2010-12-14 | Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.1	99	85 - 115	2010-12-14

Standard (CCV-1)

QC Batch: 76127 | Date Analyzed: 2010-12-14 | Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2010-12-14

Standard (CCV-1)

QC Batch: 76151 | Date Analyzed: 2010-12-14 | Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0965	96	80 - 120	2010-12-14
Toluene		mg/Kg	0.100	0.0970	97	80 - 120	2010-12-14
Ethylbenzene		mg/Kg	0.100	0.0967	97	80 - 120	2010-12-14
Xylene		mg/Kg	0.300	0.295	98	80 - 120	2010-12-14

Standard (CCV-2)

QC Batch: 76151 | Date Analyzed: 2010-12-14 | Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0941	94	80 - 120	2010-12-14
Toluene		mg/Kg	0.100	0.0923	92	80 - 120	2010-12-14
Ethylbenzene		mg/Kg	0.100	0.0889	89	80 - 120	2010-12-14
Xylene		mg/Kg	0.300	0.274	91	80 - 120	2010-12-14

Standard (CCV-3)

QC Batch: 76151 | Date Analyzed: 2010-12-14 | Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0960	96	80 - 120	2010-12-14
Toluene		mg/Kg	0.100	0.0951	95	80 - 120	2010-12-14
Ethylbenzene		mg/Kg	0.100	0.0933	93	80 - 120	2010-12-14
Xylene		mg/Kg	0.300	0.282	94	80 - 120	2010-12-14

Standard (CCV-1)

QC Batch: 76152 | Date Analyzed: 2010-12-14 | Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.07	107	80 - 120	2010-12-14

Standard (CCV-2)

QC Batch: 76152 | Date Analyzed: 2010-12-14 | Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.02	102	80 - 120	2010-12-14

Standard (CCV-3)

QC Batch: 76152 | Date Analyzed: 2010-12-14 | Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.969	97	80 - 120	2010-12-14

Standard (CCV-3)

QC Batch: 76161 | Date Analyzed: 2010-12-14 | Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	253	101	80 - 120	2010-12-14

Standard (CCV-4)

QC Batch: 76161 | Date Analyzed: 2010-12-14 | Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	257	103	80 - 120	2010-12-14

Standard (CCV-1)

QC Batch: 76162 | Date Analyzed: 2010-12-14 | Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	255	102	80 - 120	2010-12-14

Standard (CCV-2)

QC Batch: 76162 | Date Analyzed: 2010-12-14 | Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	240	96	80 - 120	2010-12-14

Standard (ICV-1)

QC Batch: 76228 | Date Analyzed: 2010-12-16 | Analyzed By: AG

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.8	100	85 - 115	2010-12-16

Standard (CCV-1)

QC Batch: 76228 | Date Analyzed: 2010-12-16 | Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	100	100	85 - 115	2010-12-16

Standard (ICV-1)

QC Batch: 76231 | Date Analyzed: 2010-12-16 | Analyzed By: AG

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.1	99	85 - 115	2010-12-16

Standard (CCV-1)

QC Batch: 76231 | Date Analyzed: 2010-12-16 | Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2010-12-16

Standard (ICV-1)

QC Batch: 76236 | Date Analyzed: 2010-12-16 | Analyzed By: AG

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.0	99	85 - 115	2010-12-16

Standard (CCV-1)

QC Batch: 76236 | Date Analyzed: 2010-12-16 | Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2010-12-16

Standard (ICV-1)

QC Batch: 76260 | Date Analyzed: 2010-12-17 | Analyzed By: AG

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	98.9	99	85 - 115	2010-12-17

Standard (CCV-1)

QC Batch: 76260 | Date Analyzed: 2010-12-17 | Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2010-12-17

AWO #: 10121627

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: 1 OF: 4

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-6400740

PROJECT NAME: COG / Schlaf Federal TB 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
252933	12/6		S		X	AH-1 0-1' 1' BEB	1				X	
934						AH-1 1-1.5' 1' BEB						
935						AH-1 2-2.5' 1' BEB						
936						AH-1 3-3.5' 1' BEB						
937						AH-1 4-4.5' 1' BEB						
938						AH-1 5-5.5' 1' BEB						
939						AH-2 0-1' 1' BEB						
940						AH-2 1-1.5' 1' BEB						
941						AH-2 2-2.5' 1' BEB						
942	↓		↓		↓	AH-2 3-3.5' 1' BEB	Y				Y	

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											X				
												X				
												X				
												X				
												X				
												X				
												X				
X	X											X				
												X				
												X				
												X				

RELINQUISHED BY: (Signature) — Date: 12/10/10 Time: 1030 — RECEIVED BY: (Signature) — Date: 12/10/10 Time: 10:30 — SAMPLED BY: (Print & Initial) Robert Gubbs Jr — Date: 12/6/10 Time: 2100

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 — RECEIVED BY: (Signature)
ADDRESS:
CITY: Midland STATE: TX ZIP:
CONTACT: Florida PHONE: DATE: TIME:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 3.6°C intact

REMARKS: NOTE: Run deeper depths if TPH exceeds 1,000mg/kg.

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 deeper depth if Benzene exceed 10 mg/kg or total BTEX exceed 50 mg/kg

Xwo #: 10121027

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.: 114-12400 7440

PROJECT NAME: COG / Schley Federal TB 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
252943	12/6		S		X	AH-3	0-1'	1' BEB	1				X		X	X											X				
944						AH-3	1-1.5'	1' BEB																			X				
945						AH-3	2-2.5'	1' BEB																			X				
946						AH-3	3-3.5'	1' BEB																			X				
947						AH-3	4-4.5'	1' BEB																			X				
948						AH-4	0-1'								X	X											X				
949						AH-4	1-1.5'																				X				
950						AH-4	2-2.5'																				X				
951						AH-4	3-3.5'																				X				
952						AH-4	4-4.5'																				X				

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature)	Date: 12/10/10 Time: 1030	RECEIVED BY: (Signature)	Date: 12/10/10 Time: 10:30
SAMPLED BY: (Print & Initial) Robert Grubbs Jr	Date: 12/6/10 Time: 2115		
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: Trace PHONE:	RECEIVED BY: (Signature) DATE: TIME:		RUSH Charges Authorized: Yes No
SAMPLE CONDITION WHEN RECEIVED: 3.6°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.

XWO #: 10121027

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.: 114-6400 740

PROJECT NAME: COG/Schley Federal TB 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	TPH TX1005 (Ext. to C35) / 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 8082/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
252953	12/6		S		X	AH-4 5'-5.5'	1				X													X				
954						AH-4 6'-6.5'																		X				
955						AH-4 7'-7.5'																		X				
956						AH-4 8'-8.5'																		X				
957						AH-4 9'-9.5'																		X				
958						AH-5 0-1'							XX											X				
959						AH-5 1'-1.5'																		X				
960						AH-5 2'-2.5'																		X				
961						AH-5 3'-3.5'																		X				
962	↓		↓		↓	AH-5 4'-4.5'	↓				↓													X				

RELINQUISHED BY: (Signature) — Date: 12/10/10 Time: 1036 — RECEIVED BY: (Signature) — Date: 12/10/10 Time: 10:30 — SAMPLED BY: (Print & Initial) Robert Cobb, T — Date: 12/6/10 Time: 2125

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 — RECEIVED BY: (Signature)

ADDRESS: — CITY: Midland STATE: TX ZIP: — CONTACT: Mando PHONE: — DATE: — TIME: — RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 3.6°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.

dkwo #: 1012027

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: 4 OF: 4

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-6400 749

PROJECT NAME: COG / Shirley Federal TB 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
252963	12/6		S		X	AH-5	5'-5.5'	1			X														X				
964	12/6		S		X	AH-5	6'-6.5'	1			X														X				

RELINQUISHED BY: (Signature) — Date: 12/10/10 Time: 1036

RECEIVED BY: (Signature) — Date: 12/10/10 Time: 0130

SAMPLED BY: (Print & Initial) Robert Cowles JR — Date: 12/6/10 Time: 2140

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: Maeda PHONE:

RECEIVED BY: (Signature)

DATE: TIME:

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 3.6°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.

Summary Report

Megan Beard
Tetra Tech
1910 N. Big Spring Street
Midland, TX 79705

Report Date: February 28, 2011

Work Order: 11022217

Project Location: Eddy Co., NM
Project Name: COG/Schley Federal TB
Project Number: 114-6400740

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
258342	SB-1 (0-1') 1' BEB	soil	2011-02-18	00:00	2011-02-22
258343	SB-1 (3') 1' BEB	soil	2011-02-18	00:00	2011-02-22
258344	SB-1 (5') 1' BEB	soil	2011-02-18	00:00	2011-02-22
258345	SB-1 (7') 1' BEB	soil	2011-02-18	00:00	2011-02-22
258346	SB-1 (10') 1' BEB	soil	2011-02-18	00:00	2011-02-22
258347	SB-1 (15') 1' BEB	soil	2011-02-18	00:00	2011-02-22
258348	SB-1 (20') 1' BEB	soil	2011-02-18	00:00	2011-02-22

Sample: 258342 - SB-1 (0-1') 1' BEB

Param	Flag	Result	Units	RL
Chloride		**1490**	mg/Kg	4.00

Sample: 258343 - SB-1 (3') 1' BEB

Param	Flag	Result	Units	RL
Chloride		**638**	mg/Kg	4.00

Sample: 258344 - SB-1 (5') 1' BEB

Param	Flag	Result	Units	RL
Chloride		**1190**	mg/Kg	4.00

Sample: 258345 - SB-1 (7') 1' BEB

Param	Flag	Result	Units	RL
Chloride		**201**	mg/Kg	4.00

Sample: 258346 - SB-1 (10') 1' BEB

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

Sample: 258347 - SB-1 (15') 1' BEB

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

Sample: 258348 - SB-1 (20') 1' BEB

Param	Flag	Result	Units	RL
Chloride		**242**	mg/Kg	4.00

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260
E-Mail: lab@traceanalysis.com

Certifications

WBENC: 237019 **HUB:** 1752439743100-86536 **DBE:** VN 20657
NCTRCA WFWB38444Y0909

NELAP Certifications

Lubbock: T104704219-08-TX LELAP-02003 Kansas E-10317 **El Paso:** T104704221-08-TX LELAP-02002 **Midland:** T104704392-08-TX

Analytical and Quality Control Report

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

Report Date: February 28, 2011

Work Order: 11022217

Project Location: Eddy Co., NM
Project Name: COG/Schley Federal TB
Project Number: 114-6400740

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
258342	SB-1 (0-1') 1' BEB	soil	2011-02-18	00:00	2011-02-22
258343	SB-1 (3') 1' BEB	soil	2011-02-18	00:00	2011-02-22
258344	SB-1 (5') 1' BEB	soil	2011-02-18	00:00	2011-02-22
258345	SB-1 (7') 1' BEB	soil	2011-02-18	00:00	2011-02-22
258346	SB-1 (10') 1' BEB	soil	2011-02-18	00:00	2011-02-22
258347	SB-1 (15') 1' BEB	soil	2011-02-18	00:00	2011-02-22
258348	SB-1 (20') 1' BEB	soil	2011-02-18	00:00	2011-02-22

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 7 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Samples for project COG/Schley Federal TB were received by TraceAnalysis, Inc. on 2011-02-22 and assigned to work order 11022217. Samples for work order 11022217 were received intact at a temperature of 4.0 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
Chloride (Titration)	SM 4500-Cl B	66849	2011-02-28 at 08:41	77937	2011-02-28 at 11:43

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 11022217 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Analytical Report

Sample: 258342 - SB-1 (0-1') 1' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77937	Date Analyzed:	2011-02-28	Analyzed By:	AR
Prep Batch:	66849	Sample Preparation:	2011-02-28	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**1490**	mg/Kg	100	4.00

Sample: 258343 - SB-1 (3') 1' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77937	Date Analyzed:	2011-02-28	Analyzed By:	AR
Prep Batch:	66849	Sample Preparation:	2011-02-28	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**638**	mg/Kg	50	4.00

Sample: 258344 - SB-1 (5') 1' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77937	Date Analyzed:	2011-02-28	Analyzed By:	AR
Prep Batch:	66849	Sample Preparation:	2011-02-28	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**1190**	mg/Kg	100	4.00

Sample: 258345 - SB-1 (7') 1' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77937	Date Analyzed:	2011-02-28	Analyzed By:	AR
Prep Batch:	66849	Sample Preparation:	2011-02-28	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**201**	mg/Kg	50	4.00

Sample: 258346 - SB-1 (10') 1' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77937	Date Analyzed:	2011-02-28	Analyzed By:	AR
Prep Batch:	66849	Sample Preparation:	2011-02-28	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 258347 - SB-1 (15') 1' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77937	Date Analyzed:	2011-02-28	Analyzed By:	AR
Prep Batch:	66849	Sample Preparation:	2011-02-28	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 258348 - SB-1 (20') 1' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77937	Date Analyzed:	2011-02-28	Analyzed By:	AR
Prep Batch:	66849	Sample Preparation:	2011-02-28	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**242**	mg/Kg	50	4.00

Method Blank (1) QC Batch: 77937

QC Batch:	77937	Date Analyzed:	2011-02-28	Analyzed By:	AR
Prep Batch:	66849	QC Preparation:	2011-02-28	Prepared By:	AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.18	mg/Kg	4

Laboratory Control Spike (LCS-1)

QC Batch: 77937 Date Analyzed: 2011-02-28 Analyzed By: AR
Prep Batch: 66849 QC Preparation: 2011-02-28 Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	97.9	mg/Kg	1	100	<2.18	98	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	103	mg/Kg	1	100	<2.18	103	85 - 115	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 258581

QC Batch: 77937 Date Analyzed: 2011-02-28 Analyzed By: AR
Prep Batch: 66849 QC Preparation: 2011-02-28 Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	12800	mg/Kg	100	10000	4160	86	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	13800	mg/Kg	100	10000	4160	96	85 - 115	8	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Standard (ICV-1)

QC Batch: 77937 Date Analyzed: 2011-02-28 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	108	108	85 - 115	2011-02-28

Standard (CCV-1)

QC Batch: 77937 | Date Analyzed: 2011-02-28 | Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	92.1	92	85 - 115	2011-02-28

*WO #: 1102217

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 1

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.: 114-6400740

PROJECT NAME: Schley Federal

LAB I.D. NUMBER	DATE 2-18-11	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	Chloride
358342	2-18-11		S		X	SB-1 (0-1') 1' BEB	1				X		X
343	2-18-11		S		X	SB-1 (3') 1' BEB	1				X		X
344	2-18-11		S		X	SB-1 (5') 1' BEB	1				X		X
345	2-18-11		S		X	SB-1 (7') 1' BEB	1				X		X
346	2-18-11		S		X	SB-1 (10') 1' BEB	1				X		X
347	2-18-11		S		X	SB-1 (15') 1' BEB	1				X		X
348	2-18-11		S		X	SB-1 (20') 1' BEB	1				X		X

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

RELINQUISHED BY: (Signature) Date: 2-22-11 Time: 1115
RECEIVED BY: (Signature) Date: 2/22/11 Time: 1115
SAMPLED BY: (Print & Initial) Kim Date: 2-18-11 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:

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

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4.0c intact

REMARKS: All tests - Midland

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