SITE INFORMATION

Report Type: Closure Report

General Site Information:		
Site:	ETZ State Tank Battery	
Company:	COG Operating LLC	
Section, Township and Range	Unit F - Sec 16 - T-17S - R-30E	
Lease Number:	B-8095	
County:	Eddy	
GPS:	32.83520° N	103.97830° W
Surface Owner:	State	
Mineral Owner:		
Directions:	From Loco Hills intersection of Hwy 82 and Goat Roper Road, travel North on Goat Roper Rd for 1.2 miles. Location will be on left, 100' feet.	

Release Data:	
Date Released:	10/3/2010
Type Release:	Oil
Source of Contamination:	1" roll line failed beghind oil tank
Fluid Released:	20 bbls
Fluids Recovered:	16 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) 631-0348
Fax:	(432) 684-7137		
Email:	pellis@conchoresources.com		ike.tavarez@tetratech.com

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

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

TETRA TECH

April 14, 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., ETZ State Tank Battery, Unit F, Section 16, Township 17 South, Range 30 East, Eddy County, New Mexico.

Mr. Bratcher:

Tetra Tech, Inc. (Tetra Tech) was contacted by COG Operating LLC. (COG) to assess a spill at the ETZ State Tank Battery, Unit F, Section 16, Township 17 South, Range 30 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.83520°, W 103.97830°. The site location is shown on Figures 1 and 2.

Background

October 3, 2010, the spill occurred when a hole developed in a 1" roll line behind the oil tanks releasing approximately twenty (20) barrels of oil. COG personnel removed the inoperable line and installed bull plugs. Sixteen (16) barrels of product were recovered by means of a vacuum truck. The spill initiated from the battery, impacted the pad area measuring approximately 20' x 300' and then migrated off the pad, impacting the adjacent pasture area measuring approximately 10' x 105'. The initial C-141 form is enclosed in Appendix A.

Groundwater

No water wells were listed within Section 16. According to the NMOCD groundwater map, the average depth to groundwater in this area is greater than 100' below surface. The groundwater data is shown in Appendix B.

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

Regulatory

A risk-based evaluation was performed for the Site in accordance with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and Releases, dated August 13, 1993. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene and xylene (collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) in soil. The proposed RRAL for benzene was determined to be 10 parts per million (ppm) or milligrams per kilogram (mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene, and xylene). Based upon the depth to groundwater, the proposed RRAL for TPH is 5,000 mg/kg.

Soil Assessment and Analytical Results

On October 26, 2010, Tetra Tech personnel inspected and sampled the spill area. A total of eleven (11) auger holes (AH-1 through AH-11) 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 B. 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, with the exception of samples from AH-1 and AH-10. Auger hole (AH-1) 0-1' exceeded the RRAL for Total BTEX. Auger hole AH-10 exceeded the RRAL for TPH and Total BTEX at 0-1' and declined below the RRAL at 1-1.5' below surface.

A shallow chloride impact was detected at the site. Minimal impact was found in the areas of AH-2, AH-3, AH-10 and AH-11. Auger holes (AH-5, AH-6, AH-7 and AH-8) showed a slight chloride impact at the surface soils (0-1') and significantly declined with depth at 1.0' to 2.0' below surface. The impacted soils in these areas do not appear to be an imminent threat to groundwater.

Auger holes (AH-1) was not vertically defined and showed a deeper chloride impact to the area, with concentrations ranging from 1,510 mg/kg at 1-1.5' to 1,720 mg/kg at 5-5.5' below surface. The area of AH-9 had chloride concentrations which increased with depth in the deeper soils at 4-4.5' of

1,340 mg/kg and appears to be impacted from the closed reserve pit area. The aerial photograph showing the closed reserve pit is shown on Figure 4.

On March 3, 2011, Tetra Tech supervised the installation of SB-1 in the vicinity of AH-1, where the chloride impact was not defined. The soil boring results are shown in Table 1. Referring to Table 1, chloride concentrations were detected at depths of 0-1' (1,660 mg/kg) and 3.0' (2,030 mg/kg) and the deeper samples declined with depth.

Remedial Work and Closure Request

On March 10-11, 2011, Tetra Tech personnel supervised the excavation of the site. The soil remediation was performed according to the approved work plan. As proposed, the areas of AH-1, AH-4, AH-6 and AH-10 were excavated to the appropriate depths. The excavation areas are shown on Figure 5. The area near AH-1 (SB-1) was lined with a 40 mil liner at 4.0' below surface. The excavated areas were backfilled with clean material and brought up to surface grade. Approximately 96 yards^3 of soil were removed and hauled to CRI Inc for proper disposal. The excavation depths are highlighted in Table 1 and shown on Figure 5

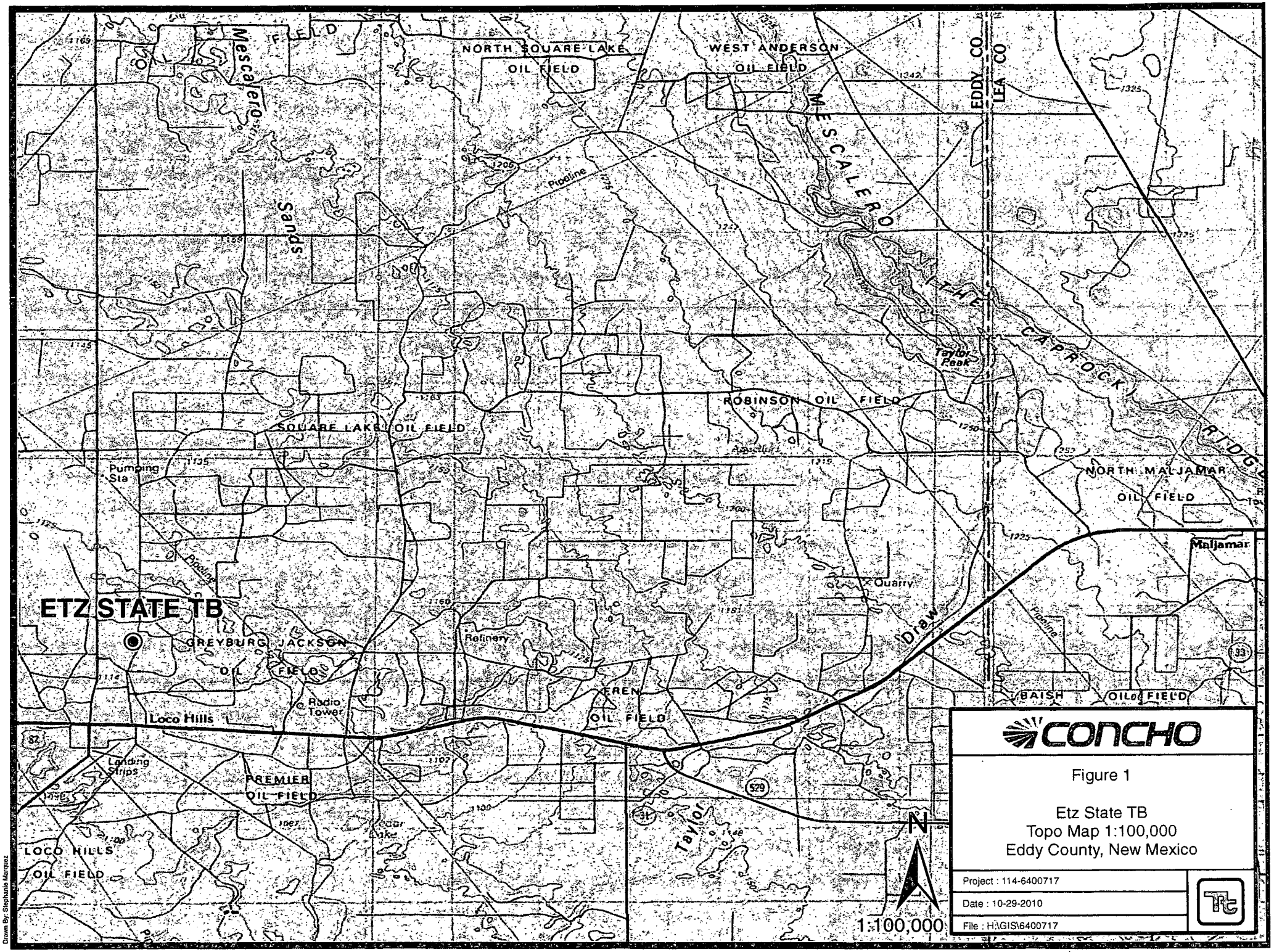
Based on the remedial activities performed, COG requests closure of the site. A copy of the Final C-141 is included in Appendix A. If you have any questions or comments concerning this report, please call me at (432) 682-4559.

Respectfully submitted,
TETRA TECH

Ike Tavarez
Senior Project Manager

cc: Pat Ellis – COG

FIGURES



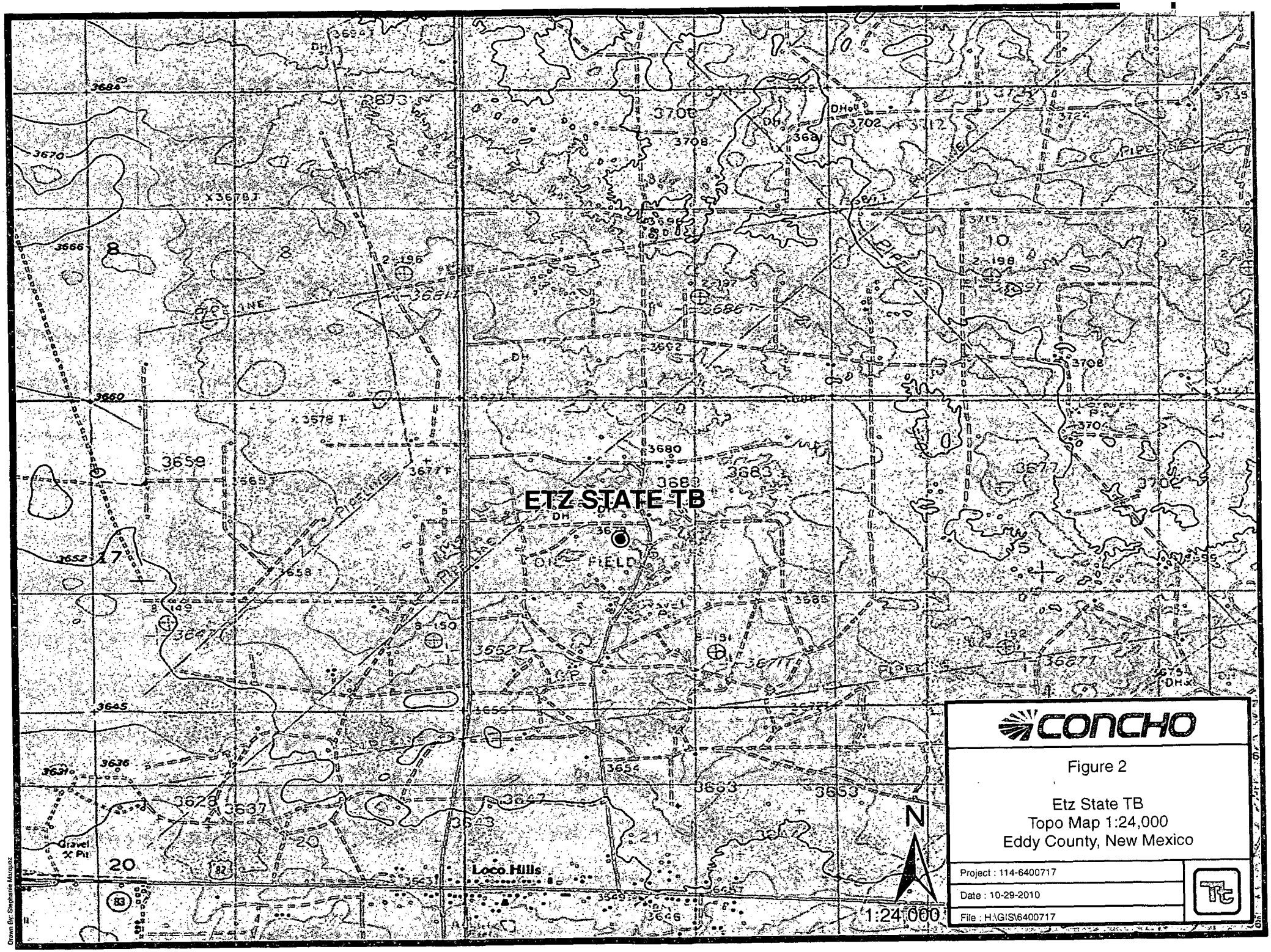
CONCHO

Figure 1

Etz State TB
Topo Map 1:100,000
Eddy County, New Mexico

Project : 114-6400717	
Date : 10-29-2010	
File : H:\GIS\6400717	

Drawn By: Stephanie Marquez



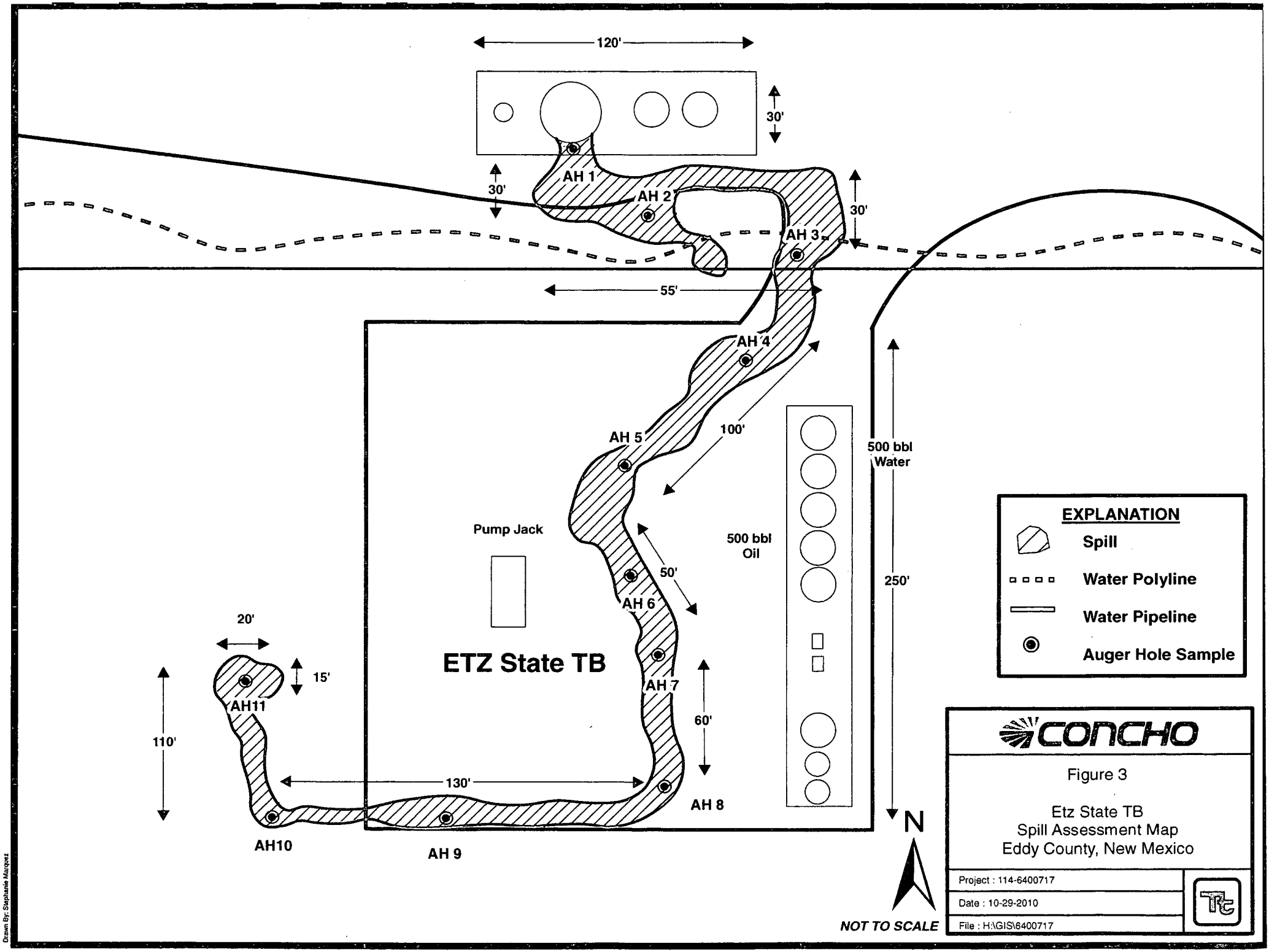
CONCHO

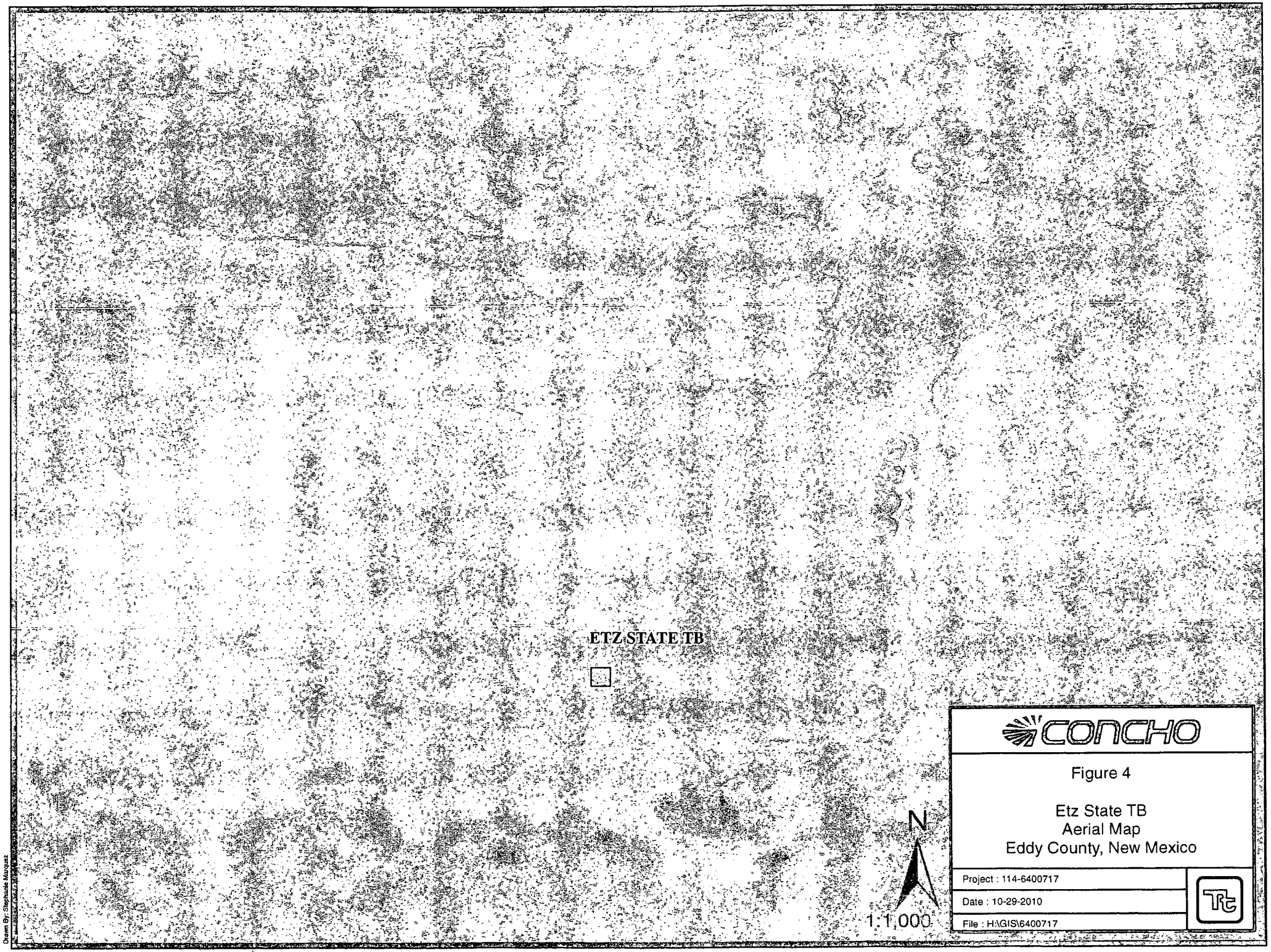
Figure 2

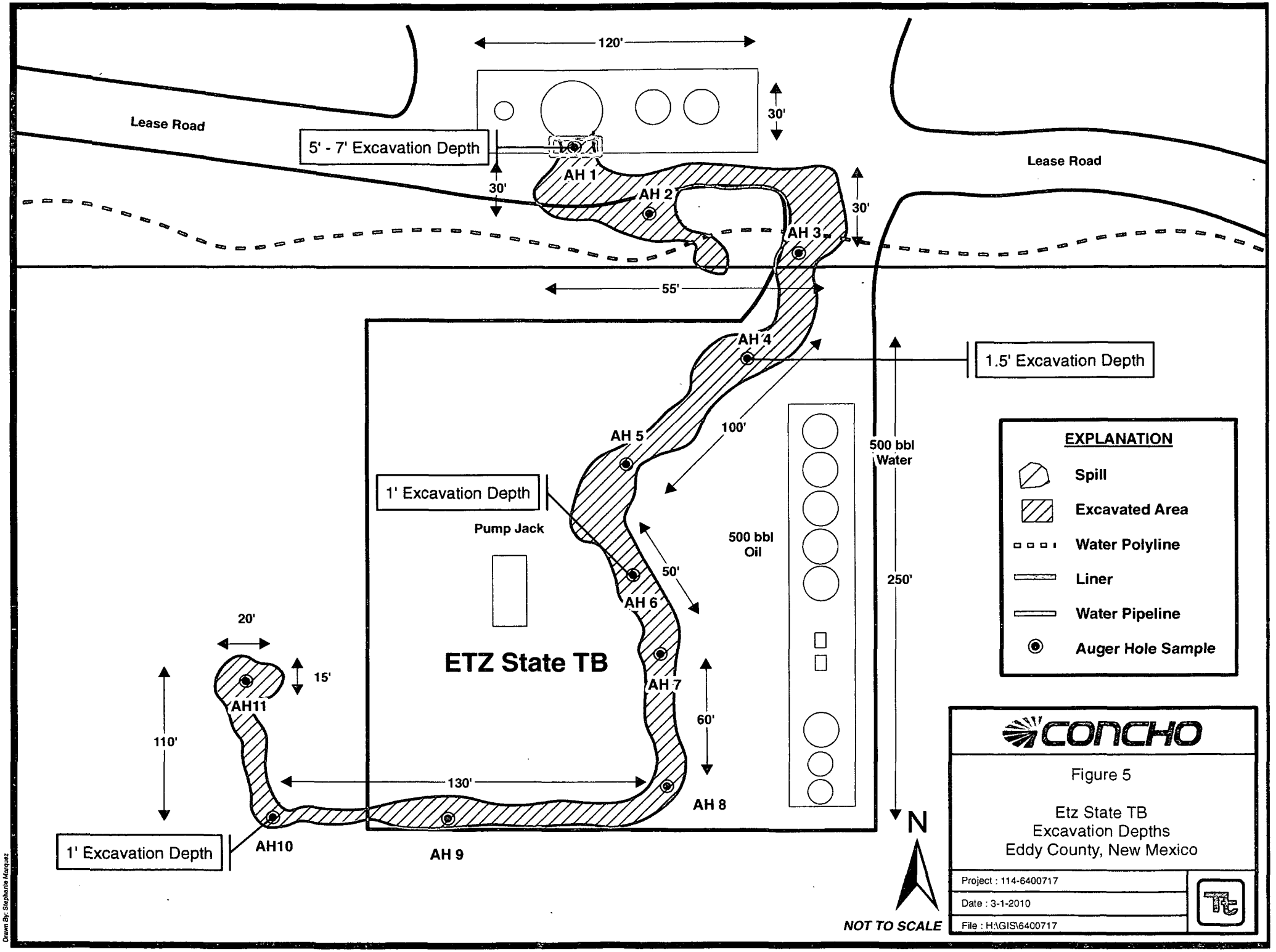
Etz State TB
Topo Map 1:24,000
Eddy County, New Mexico

Project : 114-6400717
Date : 10-29-2010
File : H:\GIS\6400717

Drawn By: Stephanie Marquez


120'
30'
30'
30'
AH 1
AH 2
AH 3
55'
AH 4
AH 5
100'
500 bbl
Water
Pump Jack
500 bbl
Oil
50'
AH 6
250'
20'
15'
AH11
ETZ State TB
AH 7
60'
110'
130'
AH 8
AH10
AH 9
N
NOT TO SCALE
EXPLANATION
Spill
Water Polyline
Water Pipeline
Auger Hole Sample
CONCHO
Figure 3
Etz State TB
Spill Assessment Map
Eddy County, New Mexico
Project : 114-6400717
Date : 10-29-2010
File : H:\GIS\6400717
Drawn By: Stephanie Marquez


ETZ STATE TB
N
1:1,000
CONCHO
Figure 4
Etz State TB
Aerial Map
Eddy County, New Mexico
Project : 114-6400717
Date : 10-29-2010
File : H:\GIS\6400717
Drawn By: Stephanie Marquez


120'
30'
Lease Road
5' - 7' Excavation Depth
AH 1
AH 2
AH 3
30'
30'
Lease Road
55'
AH 4
1.5' Excavation Depth
AH 5
100'
500 bbl
Water
1' Excavation Depth
Pump Jack
500 bbl
Oil
50'
250'
AH 6
ETZ State TB
AH 7
60'
20'
15'
AH11
110'
130'
AH 8
1' Excavation Depth
AH10
AH 9
N
NOT TO SCALE
EXPLANATION
Spill
Excavated Area
Water Polyline
Liner
Water Pipeline
Auger Hole Sample
CONCHO
Figure 5
Etz State TB
Excavation Depths
Eddy County, New Mexico
Project : 114-6400717
Date : 3-1-2010
File : H:\GIS\6400717
Drawn By: Stephanie Marquez

TABLES

Table 1
COG Operating LLC.
ETZ STATE 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	10/26/2010	0-1'			X	913	458	1,371	0.283	12.6	18.6	22.6	2,070
	"	1-1.5'			X	-	-	-	-	-	-	-	1,510
	"	2-2.5'			X	-	-	-	-	-	-	-	1,770
	"	3-3.5'			X	-	-	-	-	-	-	-	2,010
	"	4-4.5'			X	-	-	-	-	-	-	-	1,540
	"	5-5.5'			X	-	-	-	-	-	-	-	1,720
SB-1	3/3/2011	0-1'			X	-	-	-	-	-	-	-	1,660
	"	3'			X	-	-	-	-	-	-	-	2,030
	"	5'			X	-	-	-	-	-	-	-	390
	"	7'		X		-	-	-	-	-	-	-	230
	"	10'		X		-	-	-	-	-	-	-	<200
	"	15'		X		-	-	-	-	-	-	-	<200
	"	20'		X		-	-	-	-	-	-	-	<200
	"	25'		X		-	-	-	-	-	-	-	<200
	"	30'		X		-	-	-	-	-	-	-	<200

Table 1
COG Operating LLC.
ETZ STATE 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-2	10/26/2010	0-1'		X		<2.00	<50.0	<50.0	-	-	-	-	411
	"	1-1.5'		X		-	-	-	-	-	-	-	294
	"	2-2.5'		X		-	-	-	-	-	-	-	284
	"	3-3.5'		X		-	-	-	-	-	-	-	237
	"	4-4.5'		X		-	-	-	-	-	-	-	262
	"	5-5.5'		X		-	-	-	-	-	-	-	649
AH-3	10/26/2010	0-1'		X		23.8	66.7	90.5	-	-	-	-	<200
	"	1-1.5'		X		-	-	-	-	-	-	-	<200
	"	2-2.5'		X		-	-	-	-	-	-	-	<200
	"	3-3.5'		X		-	-	-	-	-	-	-	<200
	"	4-4.5'		X		-	-	-	-	-	-	-	230
	"	5-5.5'		X		-	-	-	-	-	-	-	639
AH-4	10/26/2010	0-1'			X	<2.00	77.8	77.8	-	-	-	-	2,430
	"	1-1.5'			X	-	-	-	-	-	-	-	1,540
	"	2-2.5'		X		-	-	-	-	-	-	-	558
	"	3-3.5'		X		-	-	-	-	-	-	-	<200
	"	4-4.5'		X		-	-	-	-	-	-	-	200
	"	5-5.5'		X		-	-	-	-	-	-	-	205

Table 1
COG Operating LLC.
ETZ STATE 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-5	10/26/2010	0-1'		X		235	531	766	<0.0200	0.0391	0.925	2.09	1,150
	"	1-1.5'		X		-	-	-	-	-	-	-	<200
	"	2-2.5'		X		-	-	-	-	-	-	-	<200
	"	3-3.5'		X		-	-	-	-	-	-	-	<200
	"	4-4.5'		X		-	-	-	-	-	-	-	<200
	"	5-5.5'		X		-	-	-	-	-	-	-	<200
	"	6-6.5'		X		-	-	-	-	-	-	-	<200
AH-6	10/26/2010	0-1'			X	<2.00	<50.0	<50.0	-	-	-	-	2,040
	"	1-1.5'		X		-	-	-	-	-	-	-	<200
	"	2-2.5'		X		-	-	-	-	-	-	-	<200
	"	3-3.5'		X		-	-	-	-	-	-	-	<200
	"	4-4.5'		X		-	-	-	-	-	-	-	<200
	"	5-5.5'		X		-	-	-	-	-	-	-	<200
	"	6-6.5'		X		-	-	-	-	-	-	-	<200
	"	7-7.5'		X		-	-	-	-	-	-	-	<200
AH-7	10/26/2010	0-1'		X		<2.00	<50.0	<50.0	-	-	-	-	938
	"	1-1.5'		X		-	-	-	-	-	-	-	<200
	"	2-2.5'		X		-	-	-	-	-	-	-	<200
	"	3-3.5'		X		-	-	-	-	-	-	-	<200
	"	4-4.5'		X		-	-	-	-	-	-	-	<200
	"	5-5.5'		X		-	-	-	-	-	-	-	<200
	"	6-6.5'		X		-	-	-	-	-	-	-	<200
	"	7-7.5'		X		-	-	-	-	-	-	-	<200

Table 1
COG Operating LLC.
ETZ STATE 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-8	10/26/2010	0-1'		X		41.0	517	558.0	<0.0200	<0.0200	0.0426	0.134	946
	"	1-1.5'		X		-	-	-	-	-	-	-	<200
	"	2-2.5'		X		-	-	-	-	-	-	-	<200
	"	3-3.5'		X		-	-	-	-	-	-	-	<200
	"	4-4.5'		X		-	-	-	-	-	-	-	<200
AH-9	10/26/2010	0-1'		X		218	667	885	<0.200	<0.200	1.22	1.77	397
	"	1-1.5'		X		-	-	-	-	-	-	-	407
	"	2-2.5'		X		-	-	-	-	-	-	-	392
	"	3-3.5'		X		-	-	-	-	-	-	-	366
	"	4-4.5'		X		-	-	-	-	-	-	-	1,340
	"	5-5.5'		X		-	-	-	-	-	-	-	1,610
AH-10	10/26/2010	0-1'			X	3,120	3,440	6,560	<0.400	1.42	14.6	44.1	<200
	"	1-1.5'		X		<2.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	300
	"	2-2.5'		X		-	-	-	-	-	-	-	401
AH-11	10/26/2010	0-1'		X		63.2	3,000	3,063.2	<0.200	<0.200	<0.200	0.594	221
	"	1-1.5'		X		-	-	-	-	-	-	-	334
	"	2-2.5'		X									267

BEB Below Excavation Bottom

(--) Not Analyzed

Excavated Depths

Liner Depth

APPENDIX A

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company **COG Operating LLC**	Contact **Pat Ellis**
Address **550 W. Texas, Suite 1300 Midland, Texas 79701**	Telephone No. **(432) 685-4332**
Facility Name ETZ State Tank Battery	Facility Type **Tank Battery**

Surface Owner: State	Mineral Owner	Lease No. B-8095

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	16	17S	30E	920	South	1024	West	Eddy

Latitude N 32 50.143° **Longitude** W 103 58.672°

NATURE OF RELEASE

Type of Release: Oil	Volume of Release 20 bbls	Volume Recovered 16 bbls
Source of Release: 1 inch roll line corroded	Date and Hour of Occurrence 10/3/10	Date and Hour of Discovery 10/3/10 8:00 a.m.
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*

N/A

Describe Cause of Problem and Remedial Action Taken.*

The 1 inch roll line behind the oil tank was corroded and developed a hole. The inoperable roll line has been removed and 1 inch bull plugs have been installed.

Describe Area Affected and Cleanup Action Taken.*

Tetra Tech inspected site and collected samples to define spills extent. Soil that exceeded the RRAL and/or had high chloride concentrations, were removed and hauled away for proper disposal. Site was then backfilled to 4', a liner was installed (where required), and backfilled to surface grade with clean material. Tetra Tech prepared closure report and submitted to NMOCD for review.

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

Signature:	OIL CONSERVATION DIVISION	
Printed Name: Ike Tavarez	Approved by District Supervisor:	
Title: Project Manager	Approval Date:	Expiration Date:
E-mail Address: Ike.Tavarez@TetraTech.com	Conditions of Approval:	Attached ☐
Date: 4-20-11 Phone: (432) 682-4559		

* Attach Additional Sheets If Necessary

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Repo

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

Surface Owner State	Mineral Owner	Lease No. B-8095

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	16	17S	30E					Eddy

Latitude 32 50.143 **Longitude** 103 58.672

NATURE OF RELEASE

Type of Release oil	Volume of Release 20bbls	Volume Recovered 16bbls
Source of Release 1inch roll line off back of oil tanks	Date and Hour of Occurrence 10/03/2010	Date and Hour of Discovery 10/03/2010 8:00 a.m.
Was Immediate Notice Given? ☐ Yes ☒ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

The 1 inch roll line behind the oil tanks was corroded and developed a hole. The inoperable roll line has been removed and 1 inch bull plugs have been installed.

Describe Area Affected and Cleanup Action Taken.*

Initially 20bbls of oil was released from the roll line and we were able to recover 16bbls with a vacuum truck. The spill area had the dimensions of 20' x 180' south on the Houma State #1 well location, along with an area to the west in the pasture measuring 2' x 60'. All free fluid has been recovered and the pad location has been scraped and contaminated pad material has been disposed of appropriately. (The closest well location is the Houma State #1 and is on the same pad location as the Tank Battery where the release occurred, 2310' FNL 2310' FWL, Sec. 16-T17S-R30E, Eddy County, NM, B-8095, API# 30-015-31491). 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 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: 10/11/2010 Phone: 432-212-2399	

* Attach Additional Sheets If Necessary

APPENDIX B

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

16 South 29 East

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

16 South 30 East

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

16 South 31 East

6	5	4	3	2	1
7	8	9	10	11	12 **288**
18	17	16	15	14	13 **113**
19	20	21	22	23	24
30	29	28	27	26	25
31 **290**	32	33	34	35	36

17 South 29 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22 **80**	23	24
30	29 **210** **208'**	28	27	26	25
31	32	33	34	35 153	36

17 South 30 East

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

17 South 31 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34 **271**	35	36

18 South 29 East

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

18 South 30 East

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

18 South 31 East

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

- New Mexico State Engineers Well Reports
- USGS Well Reports
- Geology and Groundwater Conditions in Southern Eddy, County, NM
- NMOCD - Groundwater Data
- Site Location - ETZ State Tank Battery

APPENDIX C

Summary Report

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

Report Date: November 11, 2010

Work Order: 10102937

Project Location: Eddy County, NM
Project Name: COG/ETZ State TB
Project Number: 114-6400717

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
249223	AH-1 0-1'	soil	2010-10-26	00:00	2010-10-29
249224	AH-1 1-1.5'	soil	2010-10-26	00:00	2010-10-29
249225	AH-1 2-2.5'	soil	2010-10-26	00:00	2010-10-29
249226	AH-1 3-3.5'	soil	2010-10-26	00:00	2010-10-29
249227	AH-1 4-4.5'	soil	2010-10-26	00:00	2010-10-29
249228	AH-1 5-5.5'	soil	2010-10-26	00:00	2010-10-29
249229	AH-2 0-1'	soil	2010-10-26	00:00	2010-10-29
249230	AH-2 1-1.5'	soil	2010-10-26	00:00	2010-10-29
249231	AH-2 2-2.5'	soil	2010-10-26	00:00	2010-10-29
249232	AH-2 3-3.5'	soil	2010-10-26	00:00	2010-10-29
249233	AH-2 4-4.5'	soil	2010-10-26	00:00	2010-10-29
249234	AH-2 5-5.5'	soil	2010-10-26	00:00	2010-10-29
249235	AH-3 0-1'	soil	2010-10-26	00:00	2010-10-29
249236	AH-3 1-1.5'	soil	2010-10-26	00:00	2010-10-29
249237	AH-3 2-2.5'	soil	2010-10-26	00:00	2010-10-29
249238	AH-3 3-3.5'	soil	2010-10-26	00:00	2010-10-29
249239	AH-3 4-4.5'	soil	2010-10-26	00:00	2010-10-29
249240	AH-3 5-5.5'	soil	2010-10-26	00:00	2010-10-29
249241	AH-4 0-1'	soil	2010-10-26	00:00	2010-10-29
249242	AH-4 1-1.5'	soil	2010-10-26	00:00	2010-10-29
249243	AH-4 2-2.5'	soil	2010-10-26	00:00	2010-10-29
249244	AH-4 3-3.5'	soil	2010-10-26	00:00	2010-10-29
249245	AH-4 4-4.5'	soil	2010-10-26	00:00	2010-10-29
249246	AH-4 5-5.5'	soil	2010-10-26	00:00	2010-10-29
249247	AH-5 0-1'	soil	2010-10-26	00:00	2010-10-29
249248	AH-5 1-1.5'	soil	2010-10-26	00:00	2010-10-29
249249	AH-5 2-2.5'	soil	2010-10-26	00:00	2010-10-29
249250	AH-5 3-3.5'	soil	2010-10-26	00:00	2010-10-29
249251	AH-5 4-4.5'	soil	2010-10-26	00:00	2010-10-29
249252	AH-5 5-5.5'	soil	2010-10-26	00:00	2010-10-29

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
249253	AH-5 6-6.5'	soil	2010-10-26	00:00	2010-10-29
249254	AH-6 0-1'	soil	2010-10-26	00:00	2010-10-29
249255	AH-6 1-1.5'	soil	2010-10-26	00:00	2010-10-29
249256	AH-6 2-2.5'	soil	2010-10-26	00:00	2010-10-29
249257	AH-6 3-3.5'	soil	2010-10-26	00:00	2010-10-29
249258	AH-6 4-4.5'	soil	2010-10-26	00:00	2010-10-29
249259	AH-6 5-5.5'	soil	2010-10-26	00:00	2010-10-29
249260	AH-6 6-6.5'	soil	2010-10-26	00:00	2010-10-29
249261	AH-6 7-7.5'	soil	2010-10-26	00:00	2010-10-29
249262	AH-7 0-1'	soil	2010-10-26	00:00	2010-10-29
249263	AH-7 1-1.5'	soil	2010-10-26	00:00	2010-10-29
249264	AH-7 2-2.5'	soil	2010-10-26	00:00	2010-10-29
249265	AH-7 3-3.5'	soil	2010-10-26	00:00	2010-10-29
249266	AH-7 4-4.5'	soil	2010-10-26	00:00	2010-10-29
249267	AH-7 5-5.5'	soil	2010-10-26	00:00	2010-10-29
249268	AH-7 6-6.5'	soil	2010-10-26	00:00	2010-10-29
249269	AH-7 7-7.5'	soil	2010-10-26	00:00	2010-10-29
249270	AH-8 0-1'	soil	2010-10-26	00:00	2010-10-29
249271	AH-8 1-1.5'	soil	2010-10-26	00:00	2010-10-29
249272	AH-8 2-2.5'	soil	2010-10-26	00:00	2010-10-29
249273	AH-8 3-3.5'	soil	2010-10-26	00:00	2010-10-29
249274	AH-8 4-4.5'	soil	2010-10-26	00:00	2010-10-29
249275	AH-9 0-1'	soil	2010-10-26	00:00	2010-10-29
249276	AH-9 1-1.5'	soil	2010-10-26	00:00	2010-10-29
249277	AH-9 2-2.5'	soil	2010-10-26	00:00	2010-10-29
249278	AH-9 3-3.5'	soil	2010-10-26	00:00	2010-10-29
249279	AH-9 4-4.5'	soil	2010-10-26	00:00	2010-10-29
249280	AH-9 5-5.5'	soil	2010-10-26	00:00	2010-10-29
249281	AH-10 0-1'	soil	2010-10-26	00:00	2010-10-29
249282	AH-10 1-1.5'	soil	2010-10-26	00:00	2010-10-29
249283	AH-10 2-2.5'	soil	2010-10-26	00:00	2010-10-29
249286	AH-11 0-1'	soil	2010-10-26	00:00	2010-10-29
249287	AH-11 1-1.5'	soil	2010-10-26	00:00	2010-10-29
249288	AH-11 2-2.5'	soil	2010-10-26	00:00	2010-10-29

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)
249223 - AH-1 0-1'	**0.283**	**12.6**	**18.6**	**22.6**	**458**	**913**
249229 - AH-2 0-1'					<50.0	<2.00
249235 - AH-3 0-1'					**66.7**	**23.8**
249241 - AH-4 0-1'					**77.8**	<2.00
249247 - AH-5 0-1'	<0.0200	**0.0391**	**0.925**	**2.09**	**531**	**235**
249254 - AH-6 0-1'					<50.0	<2.00
249262 - AH-7 0-1'					<50.0	<2.00
249270 - AH-8 0-1'	<0.0200	<0.0200	**0.0426**	**0.134**	**517**	**41.0**
249275 - AH-9 0-1'	<0.200	<0.200	**1.22**	**1.77**	**667**	**218**
249281 - AH-10 0-1'	<0.400	**1.42**	**14.6**	**44.1**	**3440**	**3120**
249282 - AH-10 1-1.5'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00

continued ...

... continued

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)
249286 - AH-11 0-1'	<0.200	<0.200	<0.200	**0.594**	**3000**	**63.2**

Sample: 249223 - AH-1 0-1'

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

Sample: 249224 - AH-1 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**1510**	mg/Kg	4.00

Sample: 249225 - AH-1 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**1770**	mg/Kg	4.00

Sample: 249226 - AH-1 3-3.5'

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

Sample: 249227 - AH-1 4-4.5'

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

Sample: 249228 - AH-1 5-5.5'

Param	Flag	Result	Units	RL
Chloride		**1720**	mg/Kg	4.00

Sample: 249229 - AH-2 0-1'

continued ...

sample 249229 continued ...

Param	Flag	Result	Units	RL
Chloride		**411**	mg/Kg	4.00

Sample: 249230 - AH-2 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**294**	mg/Kg	4.00

Sample: 249231 - AH-2 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**284**	mg/Kg	4.00

Sample: 249232 - AH-2 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**237**	mg/Kg	4.00

Sample: 249233 - AH-2 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**262**	mg/Kg	4.00

Sample: 249234 - AH-2 5-5.5'

Param	Flag	Result	Units	RL
Chloride		**649**	mg/Kg	4.00

Sample: 249235 - AH-3 0-1'

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

Sample: 249236 - AH-3 1-1.5'

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

Sample: 249237 - AH-3 2-2.5'

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

Sample: 249238 - AH-3 3-3.5'

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

Sample: 249239 - AH-3 4-4.5'

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

Sample: 249240 - AH-3 5-5.5'

Param	Flag	Result	Units	RL
Chloride		**639**	mg/Kg	4.00

Sample: 249241 - AH-4 0-1'

Param	Flag	Result	Units	RL
Chloride		**2430**	mg/Kg	4.00

Sample: 249242 - AH-4 1-1.5'

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

Sample: 249243 - AH-4 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**558**	mg/Kg	4.00

Sample: 249244 - AH-4 3-3.5'

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

Sample: 249245 - AH-4 4-4.5'

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

Sample: 249246 - AH-4 5-5.5'

Param	Flag	Result	Units	RL
Chloride		**205**	mg/Kg	4.00

Sample: 249247 - AH-5 0-1'

Param	Flag	Result	Units	RL
Chloride		**1150**	mg/Kg	4.00

Sample: 249248 - AH-5 1-1.5'

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

Sample: 249249 - AH-5 2-2.5'

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

Sample: 249250 - AH-5 3-3.5'

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

Sample: 249251 - AH-5 4-4.5'

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

Sample: 249252 - AH-5 5-5.5'

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

Sample: 249253 - AH-5 6-6.5'

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

Sample: 249254 - AH-6 0-1'

Param	Flag	Result	Units	RL
Chloride		**2040**	mg/Kg	4.00

Sample: 249255 - AH-6 1-1.5'

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

Sample: 249256 - AH-6 2-2.5'

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

Sample: 249257 - AH-6 3-3.5'

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

Sample: 249258 - AH-6 4-4.5'

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

Sample: 249259 - AH-6 5-5.5'

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

Sample: 249260 - AH-6 6-6.5'

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

Sample: 249261 - AH-6 7-7.5'

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

Sample: 249262 - AH-7 0-1'

Param	Flag	Result	Units	RL
Chloride		**938**	mg/Kg	4.00

Sample: 249263 - AH-7 1-1.5'

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

Sample: 249264 - AH-7 2-2.5'

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

Sample: 249265 - AH-7 3-3.5'

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

Sample: 249266 - AH-7 4-4.5'

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

Sample: 249267 - AH-7 5-5.5'

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

Sample: 249268 - AH-7 6-6.5'

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

Sample: 249269 - AH-7 7-7.5'

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

Sample: 249270 - AH-8 0-1'

Param	Flag	Result	Units	RL
Chloride		**946**	mg/Kg	4.00

Sample: 249271 - AH-8 1-1.5'

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

Sample: 249272 - AH-8 2-2.5'

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

Sample: 249273 - AH-8 3-3.5'

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

Sample: 249274 - AH-8 4-4.5'

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

Sample: 249275 - AH-9 0-1'

Param	Flag	Result	Units	RL
Chloride		**397**	mg/Kg	4.00

Sample: 249276 - AH-9 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**407**	mg/Kg	4.00

Sample: 249277 - AH-9 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**392**	mg/Kg	4.00

Sample: 249278 - AH-9 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**366**	mg/Kg	4.00

Sample: 249279 - AH-9 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**1340**	mg/Kg	4.00

Sample: 249280 - AH-9 5-5.5'

Param	Flag	Result	Units	RL
Chloride		**1610**	mg/Kg	4.00

Sample: 249281 - AH-10 0-1'

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

Sample: 249282 - AH-10 1-1.5'

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

Sample: 249283 - AH-10 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**401**	mg/Kg	4.00

Sample: 249286 - AH-11 0-1'

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

Sample: 249287 - AH-11 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**334**	mg/Kg	4.00

Sample: 249288 - AH-11 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**267**	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: November 11, 2010

Work Order: 10102937

Project Location: Eddy County, NM
Project Name: COG/ETZ State TB
Project Number: 114-6400717

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
249223	AH-1 0-1'	soil	2010-10-26	00:00	2010-10-29
249224	AH-1 1-1.5'	soil	2010-10-26	00:00	2010-10-29
249225	AH-1 2-2.5'	soil	2010-10-26	00:00	2010-10-29
249226	AH-1 3-3.5'	soil	2010-10-26	00:00	2010-10-29
249227	AH-1 4-4.5'	soil	2010-10-26	00:00	2010-10-29
249228	AH-1 5-5.5'	soil	2010-10-26	00:00	2010-10-29
249229	AH-2 0-1'	soil	2010-10-26	00:00	2010-10-29
249230	AH-2 1-1.5'	soil	2010-10-26	00:00	2010-10-29
249231	AH-2 2-2.5'	soil	2010-10-26	00:00	2010-10-29
249232	AH-2 3-3.5'	soil	2010-10-26	00:00	2010-10-29

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
249233	AH-2 4-4.5'	soil	2010-10-26	00:00	2010-10-29
249234	AH-2 5-5.5'	soil	2010-10-26	00:00	2010-10-29
249235	AH-3 0-1'	soil	2010-10-26	00:00	2010-10-29
249236	AH-3 1-1.5'	soil	2010-10-26	00:00	2010-10-29
249237	AH-3 2-2.5'	soil	2010-10-26	00:00	2010-10-29
249238	AH-3 3-3.5'	soil	2010-10-26	00:00	2010-10-29
249239	AH-3 4-4.5'	soil	2010-10-26	00:00	2010-10-29
249240	AH-3 5-5.5'	soil	2010-10-26	00:00	2010-10-29
249241	AH-4 0-1'	soil	2010-10-26	00:00	2010-10-29
249242	AH-4 1-1.5'	soil	2010-10-26	00:00	2010-10-29
249243	AH-4 2-2.5'	soil	2010-10-26	00:00	2010-10-29
249244	AH-4 3-3.5'	soil	2010-10-26	00:00	2010-10-29
249245	AH-4 4-4.5'	soil	2010-10-26	00:00	2010-10-29
249246	AH-4 5-5.5'	soil	2010-10-26	00:00	2010-10-29
249247	AH-5 0-1'	soil	2010-10-26	00:00	2010-10-29
249248	AH-5 1-1.5'	soil	2010-10-26	00:00	2010-10-29
249249	AH-5 2-2.5'	soil	2010-10-26	00:00	2010-10-29
249250	AH-5 3-3.5'	soil	2010-10-26	00:00	2010-10-29
249251	AH-5 4-4.5'	soil	2010-10-26	00:00	2010-10-29
249252	AH-5 5-5.5'	soil	2010-10-26	00:00	2010-10-29
249253	AH-5 6-6.5'	soil	2010-10-26	00:00	2010-10-29
249254	AH-6 0-1'	soil	2010-10-26	00:00	2010-10-29
249255	AH-6 1-1.5'	soil	2010-10-26	00:00	2010-10-29
249256	AH-6 2-2.5'	soil	2010-10-26	00:00	2010-10-29
249257	AH-6 3-3.5'	soil	2010-10-26	00:00	2010-10-29
249258	AH-6 4-4.5'	soil	2010-10-26	00:00	2010-10-29
249259	AH-6 5-5.5'	soil	2010-10-26	00:00	2010-10-29
249260	AH-6 6-6.5'	soil	2010-10-26	00:00	2010-10-29
249261	AH-6 7-7.5'	soil	2010-10-26	00:00	2010-10-29
249262	AH-7 0-1'	soil	2010-10-26	00:00	2010-10-29
249263	AH-7 1-1.5'	soil	2010-10-26	00:00	2010-10-29
249264	AH-7 2-2.5'	soil	2010-10-26	00:00	2010-10-29
249265	AH-7 3-3.5'	soil	2010-10-26	00:00	2010-10-29
249266	AH-7 4-4.5'	soil	2010-10-26	00:00	2010-10-29
249267	AH-7 5-5.5'	soil	2010-10-26	00:00	2010-10-29
249268	AH-7 6-6.5'	soil	2010-10-26	00:00	2010-10-29
249269	AH-7 7-7.5'	soil	2010-10-26	00:00	2010-10-29
249270	AH-8 0-1'	soil	2010-10-26	00:00	2010-10-29
249271	AH-8 1-1.5'	soil	2010-10-26	00:00	2010-10-29
249272	AH-8 2-2.5'	soil	2010-10-26	00:00	2010-10-29
249273	AH-8 3-3.5'	soil	2010-10-26	00:00	2010-10-29
249274	AH-8 4-4.5'	soil	2010-10-26	00:00	2010-10-29
249275	AH-9 0-1'	soil	2010-10-26	00:00	2010-10-29
249276	AH-9 1-1.5'	soil	2010-10-26	00:00	2010-10-29
249277	AH-9 2-2.5'	soil	2010-10-26	00:00	2010-10-29
249278	AH-9 3-3.5'	soil	2010-10-26	00:00	2010-10-29

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
249279	AH-9 4-4.5'	soil	2010-10-26	00:00	2010-10-29
249280	AH-9 5-5.5'	soil	2010-10-26	00:00	2010-10-29
249281	AH-10 0-1'	soil	2010-10-26	00:00	2010-10-29
249282	AH-10 1-1.5'	soil	2010-10-26	00:00	2010-10-29
249283	AH-10 2-2.5'	soil	2010-10-26	00:00	2010-10-29
249286	AH-11 0-1'	soil	2010-10-26	00:00	2010-10-29
249287	AH-11 1-1.5'	soil	2010-10-26	00:00	2010-10-29
249288	AH-11 2-2.5'	soil	2010-10-26	00:00	2010-10-29

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.

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/ETZ State TB were received by TraceAnalysis, Inc. on 2010-10-29 and assigned to work order 10102937. Samples for work order 10102937 were received intact at a temperature of 3.5 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	64310	2010-11-02 at 10:15	74966	2010-11-02 at 10:31
BTEX	S 8021B	64473	2010-11-08 at 11:00	75172	2010-11-08 at 12:01
Chloride (Titration)	SM 4500-Cl B	64338	2010-11-03 at 14:53	75122	2010-11-04 at 08:33
Chloride (Titration)	SM 4500-Cl B	64338	2010-11-03 at 14:53	75123	2010-11-04 at 08:34
Chloride (Titration)	SM 4500-Cl B	64338	2010-11-03 at 14:53	75124	2010-11-04 at 08:35
Chloride (Titration)	SM 4500-Cl B	64338	2010-11-03 at 14:53	75125	2010-11-04 at 08:36
Chloride (Titration)	SM 4500-Cl B	64338	2010-11-03 at 14:53	75126	2010-11-04 at 08:37
Chloride (Titration)	SM 4500-Cl B	64338	2010-11-03 at 14:53	75127	2010-11-05 at 08:38
Chloride (Titration)	SM 4500-Cl B	64338	2010-11-03 at 14:53	75128	2010-11-05 at 08:39
TPH DRO - NEW	S 8015 D	64334	2010-11-01 at 13:25	75008	2010-11-01 at 15:34
TPH DRO - NEW	S 8015 D	64428	2010-11-05 at 10:38	75114	2010-11-05 at 10:38
TPH DRO - NEW	S 8015 D	64533	2010-11-09 at 10:35	75233	2010-11-09 at 10:35
TPH GRO	S 8015 D	64310	2010-11-02 at 10:15	74969	2010-11-02 at 10:57
TPH GRO	S 8015 D	64473	2010-11-08 at 11:00	75168	2010-11-08 at 12:28

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 10102937 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: 249223 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	74966	Date Analyzed:	2010-11-02	Analyzed By:	AG
Prep Batch:	64310	Sample Preparation:		Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		**0.283**	mg/Kg	5	0.0200
Toluene		**12.6**	mg/Kg	5	0.0200
Ethylbenzene		**18.6**	mg/Kg	5	0.0200
Xylene		**22.6**	mg/Kg	5	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5.31	mg/Kg	5	5.00	106	66.5 - 148
4-Bromofluorobenzene (4-BFB)		8.03	mg/Kg	5	5.00	161	50 - 189

Sample: 249223 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75122	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**2070**	mg/Kg	100	4.00

Sample: 249223 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	75008	Date Analyzed:	2010-11-01	Analyzed By:	kg
Prep Batch:	64334	Sample Preparation:	2010-11-01	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		**458**	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	[1]	179	mg/Kg	1	100	179	70 - 130

Sample: 249223 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	74969	Date Analyzed:	2010-11-02	Analyzed By:	AG
Prep Batch:	64310	Sample Preparation:		Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		**913**	mg/Kg	5	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5.28	mg/Kg	5	5.00	106	73.4 - 122
4-Bromofluorobenzene (4-BFB)	[2]	20.2	mg/Kg	5	5.00	404	50 - 138

Sample: 249224 - AH-1 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75122	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**1510**	mg/Kg	100	4.00

Sample: 249225 - AH-1 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75122	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**1770**	mg/Kg	100	4.00

[1] High surrogate recovery due to peak interference.
[2] High surrogate recovery due to peak interference.

Sample: 249226 - AH-1 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75122	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**2010**	mg/Kg	100	4.00

Sample: 249227 - AH-1 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75122	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**1540**	mg/Kg	100	4.00

Sample: 249228 - AH-1 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75122	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**1720**	mg/Kg	100	4.00

Sample: 249229 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75122	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**411**	mg/Kg	50	4.00

Sample: 249229 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	75008	Date Analyzed:	2010-11-01	Analyzed By:	kg
Prep Batch:	64334	Sample Preparation:	2010-11-01	Prepared By:	AG

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		107	mg/Kg	1	100	107	70 - 130

Sample: 249229 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	74969	Date Analyzed:	2010-11-02	Analyzed By:	AG
Prep Batch:	64310	Sample Preparation:		Prepared By:	AG

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)	[3]	1.23	mg/Kg	1	2.00	62	73.4 - 122
4-Bromofluorobenzene (4-BFB)		1.29	mg/Kg	1	2.00	64	50 - 138

Sample: 249230 - AH-2 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75122	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**294**		mg/Kg	50	4.00

[3]SPECIAL - TFT is out of control limits due to an unknown anomaly. However, 4-BFB is within control limits and shows the method to be in control. •

Sample: 249231 - AH-2 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75122	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**284**		mg/Kg	50	4.00

Sample: 249232 - AH-2 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75122	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**237**		mg/Kg	50	4.00

Sample: 249233 - AH-2 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75123	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**262**		mg/Kg	50	4.00

Sample: 249234 - AH-2 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75123	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**649**		mg/Kg	50	4.00

Sample: 249235 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75123	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

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

Sample: 249235 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	75008	Date Analyzed:	2010-11-01	Analyzed By:	kg
Prep Batch:	64334	Sample Preparation:	2010-11-01	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
DRO		**66.7**		mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		118	mg/Kg	1	100	118	70 - 130

Sample: 249235 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	74969	Date Analyzed:	2010-11-02	Analyzed By:	AG
Prep Batch:	64310	Sample Preparation:		Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
GRO		**23.8**		mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	[4]	0.822	mg/Kg	1	2.00	41	73.4 - 122
4-Bromofluorobenzene (4-BFB)		1.07	mg/Kg	1	2.00	54	50 - 138

[4]Surrogate out due to peak interference.

Sample: 249236 - AH-3 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75123	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

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

Sample: 249237 - AH-3 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75123	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

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

Sample: 249238 - AH-3 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75123	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

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

Sample: 249239 - AH-3 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75123	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**230**	mg/Kg	50	4.00

Sample: 249240 - AH-3 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75123	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**639**		mg/Kg	50	4.00

Sample: 249241 - AH-4 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75123	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**2430**		mg/Kg	100	4.00

Sample: 249241 - AH-4 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	75008	Date Analyzed:	2010-11-01	Analyzed By:	kg
Prep Batch:	64334	Sample Preparation:	2010-11-01	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
DRO		**77.8**		mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		116	mg/Kg	1	100	116	70 - 130

Sample: 249241 - AH-4 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	74969	Date Analyzed:	2010-11-02	Analyzed By:	AG
Prep Batch:	64310	Sample Preparation:		Prepared By:	AG

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)	[5]	1.19	mg/Kg	1	2.00	60	73.4 - 122
4-Bromofluorobenzene (4-BFB)		1.32	mg/Kg	1	2.00	66	50 - 138

Sample: 249242 - AH-4 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75123	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**1540**	mg/Kg	100	4.00

Sample: 249243 - AH-4 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75124	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**558**	mg/Kg	50	4.00

Sample: 249244 - AH-4 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75124	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

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

[5]SPECIAL - TFT is out of control limits due to an unknown anomaly. However, 4-BFB is within control limits and shows the method to be in control. •

Sample: 249245 - AH-4 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75124	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

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

Sample: 249246 - AH-4 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75124	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**205**		mg/Kg	50	4.00

Sample: 249247 - AH-5 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	74966	Date Analyzed:	2010-11-02	Analyzed By:	AG
Prep Batch:	64310	Sample Preparation:		Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
Benzene		<0.0200		mg/Kg	1	0.0200
Toluene		**0.0391**		mg/Kg	1	0.0200
Ethylbenzene		**0.925**		mg/Kg	1	0.0200
Xylene		**2.09**		mg/Kg	1	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	[6]	1.26	mg/Kg	1	2.00	63	66.5 - 148
4-Bromofluorobenzene (4-BFB)		1.85	mg/Kg	1	2.00	92	50 - 189

[6]Surrogate out due to peak interference.

Sample: 249247 - AH-5 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75124	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**1150**		mg/Kg	100	4.00

Sample: 249247 - AH-5 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	75114	Date Analyzed:	2010-11-05	Analyzed By:	kg
Prep Batch:	64428	Sample Preparation:	2010-11-05	Prepared By:	kg

Parameter	Flag	Result	RL	Units	Dilution	RL
DRO		**531**		mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	[7]	144	mg/Kg	1	100	144	70 - 130

Sample: 249247 - AH-5 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	74969	Date Analyzed:	2010-11-02	Analyzed By:	AG
Prep Batch:	64310	Sample Preparation:		Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
GRO		**235**		mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	[8]	1.29	mg/Kg	1	2.00	64	73.4 - 122
4-Bromofluorobenzene (4-BFB)	[9]	3.89	mg/Kg	1	2.00	194	50 - 138

[7] High surrogate recovery due to peak interference.
[8] Surrogate out due to peak interference.
[9] High surrogate recovery due to peak interference.

Sample: 249248 - AH-5 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75124	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

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

Sample: 249249 - AH-5 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75124	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

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

Sample: 249250 - AH-5 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75124	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

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

Sample: 249251 - AH-5 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75124	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

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

Sample: 249252 - AH-5 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75124	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

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

Sample: 249253 - AH-5 6-6.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75125	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

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

Sample: 249254 - AH-6 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75125	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**2040**	mg/Kg	100	4.00

Sample: 249254 - AH-6 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	75114	Date Analyzed:	2010-11-05	Analyzed By:	kg
Prep Batch:	64428	Sample Preparation:	2010-11-05	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		76.9	mg/Kg	1	100	77	70 - 130

Sample: 249254 - AH-6 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	74969	Date Analyzed:	2010-11-02	Analyzed By:	AG
Prep Batch:	64310	Sample Preparation:		Prepared By:	AG

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)	[10]	1.31	mg/Kg	1	2.00	66	73.4 - 122
4-Bromofluorobenzene (4-BFB)		1.37	mg/Kg	1	2.00	68	50 - 138

Sample: 249255 - AH-6 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75125	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

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

Sample: 249256 - AH-6 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75125	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

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

[10]SPECIAL - TFT is out of control limits due to an unknown anomaly. However, 4-BFB is within control limits and shows the method to be in control. •

Sample: 249257 - AH-6 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75125	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

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

Sample: 249258 - AH-6 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75125	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

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

Sample: 249259 - AH-6 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75125	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

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

Sample: 249260 - AH-6 6-6.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75125	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

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

Sample: 249261 - AH-6 7-7.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75125	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

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

Sample: 249262 - AH-7 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75125	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**938**		mg/Kg	50	4.00

Sample: 249262 - AH-7 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	75114	Date Analyzed:	2010-11-05	Analyzed By:	kg
Prep Batch:	64428	Sample Preparation:	2010-11-05	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		78.4	mg/Kg	1	100	78	70 - 130

Sample: 249262 - AH-7 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	74969	Date Analyzed:	2010-11-02	Analyzed By:	AG
Prep Batch:	64310	Sample Preparation:		Prepared By:	AG

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)	[11]	1.16	mg/Kg	1	2.00	58	73.4 - 122
4-Bromofluorobenzene (4-BFB)		1.22	mg/Kg	1	2.00	61	50 - 138

Sample: 249263 - AH-7 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75126	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

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

Sample: 249264 - AH-7 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75126	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

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

Sample: 249265 - AH-7 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75126	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

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

[11] SPECIAL - TFT is out of control limits due to an unknown anomaly. However, 4-BFB is within control limits and shows the method to be in control. •

Sample: 249266 - AH-7 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75126	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

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

Sample: 249267 - AH-7 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75126	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

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

Sample: 249268 - AH-7 6-6.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75126	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

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

Sample: 249269 - AH-7 7-7.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75126	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

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

Sample: 249270 - AH-8 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	74966	Date Analyzed:	2010-11-02	Analyzed By:	AG
Prep Batch:	64310	Sample Preparation:		Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0200	mg/Kg	1	0.0200
Toluene		<0.0200	mg/Kg	1	0.0200
Ethylbenzene		**0.0426**	mg/Kg	1	0.0200
Xylene		**0.134**	mg/Kg	1	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.35	mg/Kg	1	2.00	68	66.5 - 148
4-Bromofluorobenzene (4-BFB)		1.52	mg/Kg	1	2.00	76	50 - 189

Sample: 249270 - AH-8 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75126	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**946**	mg/Kg	50	4.00

Sample: 249270 - AH-8 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	75114	Date Analyzed:	2010-11-05	Analyzed By:	kg
Prep Batch:	64428	Sample Preparation:	2010-11-05	Prepared By:	kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		**517**	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		122	mg/Kg	1	100	122	70 - 130

Sample: 249270 - AH-8 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	74969	Date Analyzed:	2010-11-02	Analyzed By:	AG
Prep Batch:	64310	Sample Preparation:		Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		**41.0**	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	[12]	1.35	mg/Kg	1	2.00	68	73.4 - 122
4-Bromofluorobenzene (4-BFB)		1.62	mg/Kg	1	2.00	81	50 - 138

Sample: 249271 - AH-8 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75126	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

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

Sample: 249272 - AH-8 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75126	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

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

Sample: 249273 - AH-8 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75127	Date Analyzed:	2010-11-05	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

[12]Surrogate out due to peak interference.

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

Sample: 249274 - AH-8 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75127	Date Analyzed:	2010-11-05	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

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

Sample: 249275 - AH-9 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	74966	Date Analyzed:	2010-11-02	Analyzed By:	AG
Prep Batch:	64310	Sample Preparation:		Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.200	mg/Kg	10	0.0200
Toluene		<0.200	mg/Kg	10	0.0200
Ethylbenzene		**1.22**	mg/Kg	10	0.0200
Xylene		**1.77**	mg/Kg	10	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		9.29	mg/Kg	10	10.0	93	66.5 - 148
4-Bromofluorobenzene (4-BFB)		10.9	mg/Kg	10	10.0	109	50 - 189

Sample: 249275 - AH-9 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75127	Date Analyzed:	2010-11-05	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**397**	mg/Kg	50	4.00

Sample: 249275 - AH-9 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	75114	Date Analyzed:	2010-11-05	Analyzed By:	kg
Prep Batch:	64428	Sample Preparation:	2010-11-05	Prepared By:	kg

Parameter	Flag	Result	RL Result	Units	Dilution	RL
DRO			**667**	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	[13]	177	mg/Kg	1	100	177	70 - 130

Sample: 249275 - AH-9 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	74969	Date Analyzed:	2010-11-02	Analyzed By:	AG
Prep Batch:	64310	Sample Preparation:		Prepared By:	AG

Parameter	Flag	Result	RL Result	Units	Dilution	RL
GRO			**218**	mg/Kg	10	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		9.73	mg/Kg	10	10.0	97	73.4 - 122
4-Bromofluorobenzene (4-BFB)		12.6	mg/Kg	10	10.0	126	50 - 138

Sample: 249276 - AH-9 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75127	Date Analyzed:	2010-11-05	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

Parameter	Flag	Result	RL Result	Units	Dilution	RL
Chloride			**407**	mg/Kg	50	4.00

[13] High surrogate recovery due to peak interference.

Sample: 249277 - AH-9 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75127	Date Analyzed:	2010-11-05	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**392**	mg/Kg	50	4.00

Sample: 249278 - AH-9 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75127	Date Analyzed:	2010-11-05	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**366**	mg/Kg	50	4.00

Sample: 249279 - AH-9 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75127	Date Analyzed:	2010-11-05	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**1340**	mg/Kg	100	4.00

Sample: 249280 - AH-9 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75127	Date Analyzed:	2010-11-05	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**1610**	mg/Kg	100	4.00

Sample: 249281 - AH-10 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	74966	Date Analyzed:	2010-11-02	Analyzed By:	AG
Prep Batch:	64310	Sample Preparation:		Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
Benzene		<0.400		mg/Kg	20	0.0200
Toluene		**1.42**		mg/Kg	20	0.0200
Ethylbenzene		**14.6**		mg/Kg	20	0.0200
Xylene		**44.1**		mg/Kg	20	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		18.6	mg/Kg	20	20.0	93	66.5 - 148
4-Bromofluorobenzene (4-BFB)		26.6	mg/Kg	20	20.0	133	50 - 189

Sample: 249281 - AH-10 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75127	Date Analyzed:	2010-11-05	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

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

Sample: 249281 - AH-10 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	75114	Date Analyzed:	2010-11-05	Analyzed By:	kg
Prep Batch:	64428	Sample Preparation:	2010-11-05	Prepared By:	kg

Parameter	Flag	Result	RL	Units	Dilution	RL
DRO		**3440**		mg/Kg	5	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	[14]	413	mg/Kg	5	100	413	70 - 130

[14] High surrogate recovery due to peak interference.

Sample: 249281 - AH-10 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	74969	Date Analyzed:	2010-11-02	Analyzed By:	AG
Prep Batch:	64310	Sample Preparation:		Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		**3120**	mg/Kg	20	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		19.6	mg/Kg	20	20.0	98	73.4 - 122
4-Bromofluorobenzene (4-BFB)	[15]	59.9	mg/Kg	20	20.0	300	50 - 138

Sample: 249282 - AH-10 1-1.5'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	75172	Date Analyzed:	2010-11-08	Analyzed By:	AG
Prep Batch:	64473	Sample Preparation:	2010-11-08	Prepared By:	AG

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)		1.99	mg/Kg	1	2.00	100	66.5 - 148
4-Bromofluorobenzene (4-BFB)		2.27	mg/Kg	1	2.00	114	50 - 189

Sample: 249282 - AH-10 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75127	Date Analyzed:	2010-11-05	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**300**	mg/Kg	50	4.00

[15] High surrogate recovery due to peak interference.

Sample: 249282 - AH-10 1-1.5'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	75233	Date Analyzed:	2010-11-09	Analyzed By:	kg
Prep Batch:	64533	Sample Preparation:	2010-11-09	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		89.6	mg/Kg	1	100	90	70 - 130

Sample: 249282 - AH-10 1-1.5'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	75168	Date Analyzed:	2010-11-08	Analyzed By:	AG
Prep Batch:	64473	Sample Preparation:	2010-11-08	Prepared By:	AG

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)		1.96	mg/Kg	1	2.00	98	73.4 - 122
4-Bromofluorobenzene (4-BFB)		2.04	mg/Kg	1	2.00	102	50 - 138

Sample: 249283 - AH-10 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75128	Date Analyzed:	2010-11-05	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		401		mg/Kg	50	4.00

Sample: 249286 - AH-11 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	74966	Date Analyzed:	2010-11-02	Analyzed By:	AG
Prep Batch:	64310	Sample Preparation:		Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.200	mg/Kg	10	0.0200
Toluene		<0.200	mg/Kg	10	0.0200
Ethylbenzene		<0.200	mg/Kg	10	0.0200
Xylene		**0.594**	mg/Kg	10	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		9.13	mg/Kg	10	10.0	91	66.5 - 148
4-Bromofluorobenzene (4-BFB)		10.6	mg/Kg	10	10.0	106	50 - 189

Sample: 249286 - AH-11 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75128	Date Analyzed:	2010-11-05	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**221**	mg/Kg	50	4.00

Sample: 249286 - AH-11 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	75114	Date Analyzed:	2010-11-05	Analyzed By:	kg
Prep Batch:	64428	Sample Preparation:	2010-11-05	Prepared By:	kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		**3000**	mg/Kg	5	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	[16]	538	mg/Kg	5	100	538	70 - 130

[16] High surrogate recovery due to peak interference.

Sample: 249286 - AH-11 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	74969	Date Analyzed:	2010-11-02	Analyzed By:	AG
Prep Batch:	64310	Sample Preparation:		Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		**63.2**	mg/Kg	10	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		9.58	mg/Kg	10	10.0	96	73.4 - 122
4-Bromofluorobenzene (4-BFB)		9.83	mg/Kg	10	10.0	98	50 - 138

Sample: 249287 - AH-11 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75128	Date Analyzed:	2010-11-05	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**334**	mg/Kg	50	4.00

Sample: 249288 - AH-11 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	75128	Date Analyzed:	2010-11-05	Analyzed By:	AR
Prep Batch:	64338	Sample Preparation:	2010-11-03	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**267**	mg/Kg	50	4.00

Method Blank (1) QC Batch: 74966

QC Batch:	74966	Date Analyzed:	2010-11-02	Analyzed By:	AG
Prep Batch:	64310	QC Preparation:	2010-11-02	Prepared By:	AG

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.00750	mg/Kg	0.02
Toluene		<0.0109	mg/Kg	0.02
Ethylbenzene		<0.00630	mg/Kg	0.02
Xylene		<0.0144	mg/Kg	0.02

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.98	mg/Kg	1	2.00	99	75.6 - 110
4-Bromofluorobenzene (4-BFB)		2.20	mg/Kg	1	2.00	110	41.5 - 139

Method Blank (1) QC Batch: 74969

QC Batch: 74969 Date Analyzed: 2010-11-02 Analyzed By: AG
Prep Batch: 64310 QC Preparation: 2010-11-02 Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
GRO		<0.747	mg/Kg	2

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.04	mg/Kg	1	2.00	102	76.9 - 115
4-Bromofluorobenzene (4-BFB)		2.02	mg/Kg	1	2.00	101	45.8 - 147

Method Blank (1) QC Batch: 75008

QC Batch: 75008 Date Analyzed: 2010-11-01 Analyzed By: kg
Prep Batch: 64334 QC Preparation: 2010-11-01 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		130	mg/Kg	1	100	130	70 - 130

Method Blank (1) QC Batch: 75114

QC Batch: 75114 Date Analyzed: 2010-11-05 Analyzed By: kg
Prep Batch: 64428 QC Preparation: 2010-11-05 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		78.4	mg/Kg	1	100	78	70 - 130

Method Blank (1) QC Batch: 75122

QC Batch: 75122 Date Analyzed: 2010-11-04 Analyzed By: AR
Prep Batch: 64338 QC Preparation: 2010-11-03 Prepared By: AR

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

Method Blank (1) QC Batch: 75123

QC Batch: 75123 Date Analyzed: 2010-11-04 Analyzed By: AR
Prep Batch: 64338 QC Preparation: 2010-11-03 Prepared By: AR

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

Method Blank (1) QC Batch: 75124

QC Batch: 75124 Date Analyzed: 2010-11-04 Analyzed By: AR
Prep Batch: 64338 QC Preparation: 2010-11-03 Prepared By: AR

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

Method Blank (1) QC Batch: 75125

QC Batch: 75125 Date Analyzed: 2010-11-04 Analyzed By: AR
Prep Batch: 64338 QC Preparation: 2010-11-03 Prepared By: AR

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

Method Blank (1) QC Batch: 75126

QC Batch:	75126	Date Analyzed:	2010-11-04	Analyzed By:	AR
Prep Batch:	64338	QC Preparation:	2010-11-03	Prepared By:	AR

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

Method Blank (1) QC Batch: 75127

QC Batch:	75127	Date Analyzed:	2010-11-05	Analyzed By:	AR
Prep Batch:	64338	QC Preparation:	2010-11-03	Prepared By:	AR

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

Method Blank (1) QC Batch: 75128

QC Batch:	75128	Date Analyzed:	2010-11-05	Analyzed By:	AR
Prep Batch:	64338	QC Preparation:	2010-11-03	Prepared By:	AR

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

Method Blank (1) QC Batch: 75168

QC Batch:	75168	Date Analyzed:	2010-11-08	Analyzed By:	AG
Prep Batch:	64473	QC Preparation:	2010-11-08	Prepared By:	AG

Parameter	Flag	MDL Result	Units	RL
GRO		<0.747	mg/Kg	2

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.99	mg/Kg	1	2.00	100	76.9 - 115
4-Bromofluorobenzene (4-BFB)		2.08	mg/Kg	1	2.00	104	45.8 - 147

Method Blank (1) QC Batch: 75172

QC Batch: 75172 | Date Analyzed: 2010-11-08 | Analyzed By: AG
Prep Batch: 64473 | QC Preparation: 2010-11-08 | Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.00750	mg/Kg	0.02
Toluene		<0.0109	mg/Kg	0.02
Ethylbenzene		<0.00630	mg/Kg	0.02
Xylene		<0.0144	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	75.6 - 110
4-Bromofluorobenzene (4-BFB)		2.24	mg/Kg	1	2.00	112	41.5 - 139

Method Blank (1) QC Batch: 75233

QC Batch: 75233 | Date Analyzed: 2010-11-09 | Analyzed By: kg
Prep Batch: 64533 | QC Preparation: 2010-11-09 | 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		87.2	mg/Kg	1	100	87	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 74966 | Date Analyzed: 2010-11-02 | Analyzed By: AG
Prep Batch: 64310 | QC Preparation: 2010-11-02 | Prepared By: AG

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Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.98	mg/Kg	1	2.00	<0.00750	99	81.7 - 120
Toluene	1.94	mg/Kg	1	2.00	<0.0109	97	81.8 - 120
Ethylbenzene	1.97	mg/Kg	1	2.00	<0.00630	98	79.8 - 120
Xylene	6.02	mg/Kg	1	6.00	<0.0144	100	74 - 123

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	2.02	mg/Kg	1	2.00	<0.00750	101	81.7 - 120	2	20
Toluene	1.99	mg/Kg	1	2.00	<0.0109	100	81.8 - 120	2	20
Ethylbenzene	2.02	mg/Kg	1	2.00	<0.00630	101	79.8 - 120	2	20
Xylene	6.18	mg/Kg	1	6.00	<0.0144	103	74 - 123	3	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)	1.69	1.91	mg/Kg	1	2.00	84	96	77.4 - 110
4-Bromofluorobenzene (4-BFB)	1.89	2.17	mg/Kg	1	2.00	94	108	46 - 140

Laboratory Control Spike (LCS-1)

QC Batch: 74969 | Date Analyzed: 2010-11-02 | Analyzed By: AG
Prep Batch: 64310 | QC Preparation: 2010-11-02 | Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	18.9	mg/Kg	1	20.0	<0.747	94	56.5 - 98.2

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	19.2	mg/Kg	1	20.0	<0.747	96	56.5 - 98.2	2	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)	2.02	2.03	mg/Kg	1	2.00	101	102	76.5 - 118
4-Bromofluorobenzene (4-BFB)	2.10	2.08	mg/Kg	1	2.00	105	104	51.1 - 150

Laboratory Control Spike (LCS-1)

QC Batch: 75008 | Date Analyzed: 2010-11-01 | Analyzed By: kg
Prep Batch: 64334 | QC Preparation: 2010-11-01 | Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	230	mg/Kg	1	250	<14.6	92	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	224	mg/Kg	1	250	<14.6	90	47.5 - 144.1	3	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	121	119	mg/Kg	1	100	121	119	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 75114 | Date Analyzed: 2010-11-05 | Analyzed By: kg
Prep Batch: 64428 | QC Preparation: 2010-11-05 | Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	213	mg/Kg	1	250	<14.6	85	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	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	106	97.5	mg/Kg	1	100	106	98	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 75122 | Date Analyzed: 2010-11-04 | Analyzed By: AR
Prep Batch: 64338 | QC Preparation: 2010-11-03 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	97.1	mg/Kg	1	100	<2.18	97	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	6	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: 75123 | Date Analyzed: 2010-11-04 | Analyzed By: AR
Prep Batch: 64338 | QC Preparation: 2010-11-03 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	97.1	mg/Kg	1	100	<2.18	97	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	102	mg/Kg	1	100	<2.18	102	85 - 115	5	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: 75124 | Date Analyzed: 2010-11-04 | Analyzed By: AR
Prep Batch: 64338 | QC Preparation: 2010-11-03 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	97.5	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	6	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: 75125 | Date Analyzed: 2010-11-04 | Analyzed By: AR
Prep Batch: 64338 | QC Preparation: 2010-11-03 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	97.8	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.

Laboratory Control Spike (LCS-1)

QC Batch: 75126 | Date Analyzed: 2010-11-04 | Analyzed By: AR
Prep Batch: 64338 | QC Preparation: 2010-11-03 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	96.8	mg/Kg	1	100	<2.18	97	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	7	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: 75127 | Date Analyzed: 2010-11-05 | Analyzed By: AR
Prep Batch: 64338 | QC Preparation: 2010-11-03 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	97.7	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.

Laboratory Control Spike (LCS-1)

QC Batch: 75128 | Date Analyzed: 2010-11-05 | Analyzed By: AR
Prep Batch: 64338 | QC Preparation: 2010-11-03 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	97.2	mg/Kg	1	100	<2.18	97	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	7	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: 75168 | Date Analyzed: 2010-11-08 | Analyzed By: AG
Prep Batch: 64473 | QC Preparation: 2010-11-08 | Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	17.3	mg/Kg	1	20.0	<0.747	86	56.5 - 98.2

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	18.1	mg/Kg	1	20.0	<0.747	90	56.5 - 98.2	4	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)	1.86	1.66	mg/Kg	1	2.00	93	83	76.5 - 118
4-Bromofluorobenzene (4-BFB)	1.97	1.80	mg/Kg	1	2.00	98	90	51.1 - 150

Laboratory Control Spike (LCS-1)

QC Batch: 75172 | Date Analyzed: 2010-11-08 | Analyzed By: AG
Prep Batch: 64473 | QC Preparation: 2010-11-08 | Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.92	mg/Kg	1	2.00	<0.00750	96	81.7 - 120
Toluene	1.87	mg/Kg	1	2.00	<0.0109	94	81.8 - 120
Ethylbenzene	1.87	mg/Kg	1	2.00	<0.00630	94	79.8 - 120
Xylene	5.71	mg/Kg	1	6.00	<0.0144	95	74 - 123

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	1.88	mg/Kg	1	2.00	<0.00750	94	81.7 - 120	2	20
Toluene	1.84	mg/Kg	1	2.00	<0.0109	92	81.8 - 120	2	20
Ethylbenzene	1.86	mg/Kg	1	2.00	<0.00630	93	79.8 - 120	0	20
Xylene	5.67	mg/Kg	1	6.00	<0.0144	94	74 - 123	1	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)	1.88	1.81	mg/Kg	1	2.00	94	90	77.4 - 110
4-Bromofluorobenzene (4-BFB)	2.17	2.10	mg/Kg	1	2.00	108	105	46 - 140

Laboratory Control Spike (LCS-1)

QC Batch: 75233 | Date Analyzed: 2010-11-09 | Analyzed By: kg
Prep Batch: 64533 | QC Preparation: 2010-11-09 | Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	294	mg/Kg	1	250	<14.6	118	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	283	mg/Kg	1	250	<14.6	113	47.5 - 144.1	4	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	107	109	mg/Kg	1	100	107	109	70 - 130

Matrix Spike (MS-1) Spiked Sample: 249293

QC Batch: 74966 | Date Analyzed: 2010-11-02 | Analyzed By: AG
Prep Batch: 64310 | QC Preparation: 2010-11-02 | Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	2.39	mg/Kg	1	2.00	<0.00750	120	75.7 - 125
Toluene	2.36	mg/Kg	1	2.00	<0.0109	118	74.4 - 125
Ethylbenzene	2.45	mg/Kg	1	2.00	<0.00630	122	72.2 - 128
Xylene	7.48	mg/Kg	1	6.00	<0.0144	125	63 - 131

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	1.99	mg/Kg	1	2.00	<0.00750	100	75.7 - 125	18	20
Toluene	1.97	mg/Kg	1	2.00	<0.0109	98	74.4 - 125	18	20
Ethylbenzene	2.06	mg/Kg	1	2.00	<0.00630	103	72.2 - 128	17	20
Xylene	6.31	mg/Kg	1	6.00	<0.0144	105	63 - 131	17	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)	[17] [18]	0.884	1.46	mg/Kg	1	2	44	73	78.8 - 109
4-Bromofluorobenzene (4-BFB)		1.02	1.65	mg/Kg	1	2	51	82	50 - 136

Matrix Spike (MS-1) Spiked Sample: 249241

QC Batch: 74969 | Date Analyzed: 2010-11-02 | Analyzed By: AG
Prep Batch: 64310 | QC Preparation: 2010-11-02 | Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	18.7	mg/Kg	1	20.0	<0.747	94	50 - 150

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	19.4	mg/Kg	1	20.0	<0.747	97	50 - 150	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)	[19] [20]	1.36	0.759	mg/Kg	1	2	68	38	71.6 - 117
4-Bromofluorobenzene (4-BFB)	[21]	1.56	0.911	mg/Kg	1	2	78	46	50 - 170

Matrix Spike (MS-1) Spiked Sample: 249214

QC Batch: 75008 | Date Analyzed: 2010-11-01 | Analyzed By: kg
Prep Batch: 64334 | QC Preparation: 2010-11-01 | Prepared By: kg

[17] Surrogate out due to peak interference. •
[18] Surrogate out due to peak interference.
[19] Surrogate out due to peak interference.
[20] Surrogate out due to peak interference.
[21] Surrogate out due to peak interference.

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	194	mg/Kg	1	250	<14.6	78	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	192	mg/Kg	1	250	<14.6	77	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	117	114	mg/Kg	1	100	117	114	70 - 130

Matrix Spike (MS-1) Spiked Sample: 249286

QC Batch: 75114 | Date Analyzed: 2010-11-05 | Analyzed By: kg
Prep Batch: 64428 | QC Preparation: 2010-11-05 | Prepared By: kg

Param		MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	[22]	2910	mg/Kg	5	250	2910	0	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	[23]	2870	mg/Kg	5	250	2910	0	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	[24] [25]	467	504	mg/Kg	5	100	467	504	70 - 130

Matrix Spike (MS-1) Spiked Sample: 249232

QC Batch: 75122 | Date Analyzed: 2010-11-04 | Analyzed By: AR
Prep Batch: 64338 | QC Preparation: 2010-11-03 | Prepared By: AR

continued ...

[22] Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.
[23] Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.
[24] High surrogate recovery due to peak interference.
[25] High surrogate recovery due to peak interference.

matrix spikes continued ...

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10200	mg/Kg	100	10000	237	100	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	10500	mg/Kg	100	10000	237	103	85 - 115	3	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: 249242

QC Batch: 75123 | Date Analyzed: 2010-11-04 | Analyzed By: AR
Prep Batch: 64338 | QC Preparation: 2010-11-03 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	11200	mg/Kg	100	10000	1540	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	11500	mg/Kg	100	10000	1540	100	85 - 115	3	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: 249252

QC Batch: 75124 | Date Analyzed: 2010-11-04 | Analyzed By: AR
Prep Batch: 64338 | QC Preparation: 2010-11-03 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	9770	mg/Kg	100	10000	<218	98	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	9990	mg/Kg	100	10000	<218	100	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: 249262

QC Batch: 75125 | Date Analyzed: 2010-11-04 | Analyzed By: AR
Prep Batch: 64338 | QC Preparation: 2010-11-03 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10700	mg/Kg	100	10000	938	98	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	11100	mg/Kg	100	10000	938	102	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: 249272

QC Batch: 75126 | Date Analyzed: 2010-11-04 | Analyzed By: AR
Prep Batch: 64338 | QC Preparation: 2010-11-03 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10500	mg/Kg	100	10000	<218	103	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	10600	mg/Kg	100	10000	<218	104	85 - 115	1	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: 249282

QC Batch: 75127 | Date Analyzed: 2010-11-05 | Analyzed By: AR
Prep Batch: 64338 | QC Preparation: 2010-11-03 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	9830	mg/Kg	100	10000	300	95	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	10200	mg/Kg	100	10000	300	99	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: 249288

QC Batch: 75128 | Date Analyzed: 2010-11-05 | Analyzed By: AR
Prep Batch: 64338 | QC Preparation: 2010-11-03 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10500	mg/Kg	100	10000	267	102	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	10800	mg/Kg	100	10000	267	105	85 - 115	3	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: 249282

QC Batch: 75168 | Date Analyzed: 2010-11-08 | Analyzed By: AG
Prep Batch: 64473 | QC Preparation: 2010-11-08 | Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	17.2	mg/Kg	1	20.0	<0.747	86	50 - 150

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	20.5	mg/Kg	1	20.0	<0.747	102	50 - 150	18	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)	1.98	1.87	mg/Kg	1	2	99	94	71.6 - 117
4-Bromofluorobenzene (4-BFB)	2.18	2.04	mg/Kg	1	2	109	102	50 - 170

Matrix Spike (MS-1) Spiked Sample: 249282

QC Batch: 75233 | Date Analyzed: 2010-11-09 | Analyzed By: kg
Prep Batch: 64533 | QC Preparation: 2010-11-09 | Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	275	mg/Kg	1	250	<14.6	110	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	303	mg/Kg	1	250	<14.6	121	11.7 - 152.3	10	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	103	105	mg/Kg	1	100	103	105	70 - 130

Standard (CCV-2)

QC Batch: 74966 Date Analyzed: 2010-11-02 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0967	97	80 - 120	2010-11-02
Toluene		mg/Kg	0.100	0.0937	94	80 - 120	2010-11-02
Ethylbenzene		mg/Kg	0.100	0.0944	94	80 - 120	2010-11-02
Xylene		mg/Kg	0.300	0.289	96	80 - 120	2010-11-02

Standard (CCV-3)

QC Batch: 74966 Date Analyzed: 2010-11-02 Analyzed By: AG

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	2010-11-02
Toluene		mg/Kg	0.100	0.0926	93	80 - 120	2010-11-02
Ethylbenzene		mg/Kg	0.100	0.0926	93	80 - 120	2010-11-02
Xylene		mg/Kg	0.300	0.282	94	80 - 120	2010-11-02

Standard (CCV-1)

QC Batch: 74969 Date Analyzed: 2010-11-02 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.12	112	80 - 120	2010-11-02

Standard (CCV-2)

QC Batch: 74969 Date Analyzed: 2010-11-02 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.13	113	80 - 120	2010-11-02

Standard (CCV-3)

QC Batch: 74969 Date Analyzed: 2010-11-02 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.14	114	80 - 120	2010-11-02

Standard (CCV-3)

QC Batch: 75008 Date Analyzed: 2010-11-01 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	213	85	80 - 120	2010-11-01

Standard (CCV-4)

QC Batch: 75008 Date Analyzed: 2010-11-01 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	214	86	80 - 120	2010-11-01

Standard (CCV-1)

QC Batch: 75114 Date Analyzed: 2010-11-05 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	222	89	80 - 120	2010-11-05

Standard (CCV-2)

QC Batch: 75114 Date Analyzed: 2010-11-05 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	274	110	80 - 120	2010-11-05

Standard (CCV-3)

QC Batch: 75114 Date Analyzed: 2010-11-05 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	272	109	80 - 120	2010-11-05

Standard (ICV-1)

QC Batch: 75122 Date Analyzed: 2010-11-04 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	102	102	85 - 115	2010-11-04

Standard (CCV-1)

QC Batch: 75122 Date Analyzed: 2010-11-04 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	98.3	98	85 - 115	2010-11-04

Standard (ICV-1)

QC Batch: 75123 Date Analyzed: 2010-11-04 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	97.9	98	85 - 115	2010-11-04

Standard (CCV-1)

QC Batch: 75123 Date Analyzed: 2010-11-04 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	102	102	85 - 115	2010-11-04

Standard (ICV-1)

QC Batch: 75124 Date Analyzed: 2010-11-04 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.9	100	85 - 115	2010-11-04

Standard (CCV-1)

QC Batch: 75124 Date Analyzed: 2010-11-04 Analyzed By: AR

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	2010-11-04

Standard (ICV-1)

QC Batch: 75125 Date Analyzed: 2010-11-04 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.6	100	85 - 115	2010-11-04

Standard (CCV-1)

QC Batch: 75125 Date Analyzed: 2010-11-04 Analyzed By: AR

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	2010-11-04

Standard (ICV-1)

QC Batch: 75126 Date Analyzed: 2010-11-04 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	102	102	85 - 115	2010-11-04

Standard (CCV-1)

QC Batch: 75126 Date Analyzed: 2010-11-04 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	97.7	98	85 - 115	2010-11-04

Standard (ICV-1)

QC Batch: 75127 Date Analyzed: 2010-11-05 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	100	100	85 - 115	2010-11-05

Standard (CCV-1)

QC Batch: 75127 Date Analyzed: 2010-11-05 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.8	100	85 - 115	2010-11-05

Standard (ICV-1)

QC Batch: 75128 Date Analyzed: 2010-11-05 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2010-11-05

Standard (CCV-1)

QC Batch: 75128 Date Analyzed: 2010-11-05 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	98.8	99	85 - 115	2010-11-05

Standard (CCV-1)

QC Batch: 75168 Date Analyzed: 2010-11-08 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.13	113	80 - 120	2010-11-08

Standard (CCV-2)

QC Batch: 75168 Date Analyzed: 2010-11-08 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.08	108	80 - 120	2010-11-08

Standard (CCV-1)

QC Batch: 75172 Date Analyzed: 2010-11-08 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0966	97	80 - 120	2010-11-08
Toluene		mg/Kg	0.100	0.0944	94	80 - 120	2010-11-08
Ethylbenzene		mg/Kg	0.100	0.0952	95	80 - 120	2010-11-08
Xylene		mg/Kg	0.300	0.292	97	80 - 120	2010-11-08

Standard (CCV-2)

QC Batch: 75172 Date Analyzed: 2010-11-08 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0919	92	80 - 120	2010-11-08
Toluene		mg/Kg	0.100	0.0890	89	80 - 120	2010-11-08
Ethylbenzene		mg/Kg	0.100	0.0888	89	80 - 120	2010-11-08

continued ...

standard continued ...

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Xylene		mg/Kg	0.300	0.271	90	80 - 120	2010-11-08

Standard (CCV-1)

QC Batch: 75233 Date Analyzed: 2010-11-09 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	250	100	80 - 120	2010-11-09

Standard (CCV-2)

QC Batch: 75233 Date Analyzed: 2010-11-09 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	263	105	80 - 120	2010-11-09

WO#: 10162937

Analysis Request of Chain of Custody Record

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME:	SITE MANAGER:
COG	Ike Tavarez

PROJECT NO.:	PROJECT NAME:
114-4202717	COG / ETZ State TB Eddy Co. NM

LAB I.D. NUMBER	DATE 2016	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 Antons/Cations, pH, TDS
249223	10/12		S		X	AH-1 0-1'	1				X			X												X				
224						AH-1 1'-1.5'																									
225						AH-1 2'-2.5'																									
226						AH-1 3-3.5'																									
227						AH-1 4'-4.5'																									
228						AH-1 5'-5.5'																									
229						AH-2 0-1'									X																
230						AH-2 1'-1.5'																									
231						AH-2 2'-2.5'																									
232						AH-2 3-3.5'																									

RELINQUISHED BY: (Signature)	Date: 10/12/16 Time: 1100	RECEIVED BY: (Signature)	Date: 10/12/16 Time: 11:00
SAMPLED BY: (Print & Initial) JT / TF	Date: 10/12/16 Time:		
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS	AIRBILL #: OTHER:		
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
TETRA TECH CONTACT PERSON: Ike Tavarez	Results by:		
RECEIVING LABORATORY: Trace ADDRESS: CITY: Midland STATE: TX ZIP: CONTACT: PHONE:	RECEIVED BY: (Signature) DATE: TIME:		RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 35c intact

REMARKS: If total TPH exceeds 5,000 mg/kg run deeper samples / Run BTEX on 6 highest TPH. If total BTEX exceeds 50 mg/kg or Benzene exceeds 10 mg/kg run deeper samples

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

Hold additional Samples x All tests - Midland

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-C400717
PROJECT NAME: COG / ETZ State 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	ANALYSIS REQUEST: BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chlorides	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
219233	10/20		S		X	AH-2 4'-4.5'	1				X													X				
234						AH-2 5'-5.5'																							
235						AH-3 0-1'								X															
236						AH-3 1'-1.5'																							
237						AH-3 2'-2.5'																							
238						AH-3 3'-3.5'																							
239						AH-3 4'-4.5'																							
240						AH-3 5'-5.5'																							
241						AH-4 0-1'								X															
242						AH-4 1'-1.5'																							

RELINQUISHED BY: (Signature) Date: 10/25/10 Time: 1100
RECEIVED BY: (Signature) Date: 10/26/10 Time: 11:30
SAMPLED BY: (Print & Initial) JT / TF Date: 10/20/10 Time:

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

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

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

SAMPLE CONDITION WHEN RECEIVED: 3.5° & Intact

REMARKS: If total TPH exceeds 5,000 mg/kg run deeper samples | Run BTEX on 6 highest TPH If total BTEX exceeds 50 mg/kg or Benzene exceeds 10 mg/kg run deeper samples

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

Hold additional Samples

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-G4007.7
PROJECT NAME: COG / ETE State 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
249243	10/22		S		X	AH-4 2'-2.5'	1				X	
244						AH-4 3'-3.5'						
245						AH-4 4'-4.5'						
246						AH-4 5'-5.5'						
247						AH-5 0-1'						
248						AH-5 1'-1.5'						
249						AH-5 2'-2.5'						
250						AH-5 3'-3.5'						
251						AH-5 4'-4.5'						
252						AH-5 5'-5.5'						

ANALYSIS REQUEST (Circle or Specify Method No.)

BTEX 8021B	TPH 8015 MOD (Ext. to C35)	TX1005	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. 608/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
	X												X				

RELINQUISHED BY: (Signature) — Date: 10/27/10 Time: 1100
RECEIVED BY: (Signature) — Date: 10/29/10 Time: 11:00
SAMPLED BY: (Print & Initial) JT/TF — Date: 10/22/10 Time:
RELINQUISHED BY: (Signature) — Date: Time:
RECEIVED BY: (Signature) — Date: Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS — AIRBILL #: OTHER:
RELINQUISHED BY: (Signature) — Date: Time:
RECEIVED BY: (Signature) — Date: Time:
TETRA TECH CONTACT PERSON: Ike Tavarez — Results by:
RECEIVING LABORATORY: ADDRESS: CITY: STATE: ZIP: CONTACT: PHONE:
RECEIVED BY: (Signature) DATE: TIME:
RUSH Charges Authorized: Yes No
SAMPLE CONDITION WHEN RECEIVED: 3.5° C Intact
REMARKS: If total TPH exceeds 5,000 mg/kg run deeper horizons / Run BTEX on highest TPH. If total BTEX exceeds 50 mg/kg or Benzene exceeds 10 mg/kg run deeper samples

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

Hold additional samples

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.: 114-4100717
PROJECT NAME: COG / Etz State 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 8082/608	Pest. 608/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
249253	10/12		S		X	AH-5 C-C.5'	1				X														X			
254						AH-6 0-1'								X														
255						AH-6 1-1.5'																						
256						AH-6 2'-2.5'																						
257						AH-6 3-3.5'																						
258						AH-6 4'-4.5'																						
259						AH-6 5'-5.5'																						
260						AH-6 6'-6.5'																						
261						AH-6 7'-7.5'																						
262						AH-7 0-1'								X														

RELINQUISHED BY: (Signature) Date: 10/21/10 Time: 1:00
RECEIVED BY: (Signature) Date: 10/21/10 Time: 11:00
SAMPLED BY: (Print & Initial) JT | TF Date: 10/20/10 Time:

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

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

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

SAMPLE CONDITION WHEN RECEIVED: 3.5 c intact

REMARKS: If tot TPH exceeds 5,000 mg/kg run deeper samples | Run BTEX on 6 highest TPH. If total BTEX exceeds 50 mg/kg or Benzene exceeds 10 mg/kg run deeper samples

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

Hold additional samples

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-C406717

PROJECT NAME: COG / ETZ State 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
249263	10/20		S		X	AH-7 1'-1.5'	1				X													X				
264						AH-7 2'-2.5'																							
265						AH-7 3'-3.5'																							
266						AH-7 4'-4.5'																							
267						AH-7 5'-5.5'																							
268						AH-7 6'-6.5'																							
269						AH-7 7'-7.5'																							
270						AH-8 0-1'								X															
271						AH-8 1'-1.5'																							
272						AH-8 2'-2.5'																							

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature)	Date: 10/20/10 Time: 1100	RECEIVED BY: (Signature)	Date: 10/20/10 Time: 11:20	SAMPLED BY: (Print & Initial) JT / TF	Date: 10/20/10 Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:	SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS	AIRBILL #: OTHER:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:		

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

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 3.5 C intact

REMARKS: If total TPH exceeds 5,000 mg/kg run deeper samples / Run BTEX on 6 highest TPH. If total BTEX exceeds 50 mg/kg or Benzene exceeds 10 mg/kg run deeper samples

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

Hold additional Samples

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.: 114-6400717

PROJECT NAME: COG / ETZ Slate 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
249273	10/26		S	X		AH-8 3'-3.5'	1				X	
274						AH-8 4'-4.5'						
275						AH-9 0-1'						
276						AH-9 1'-1.5'						
277						AH-9 2'-2.5'						
278						AH-9 3'-3.5'						
279						AH-9 4'-4.5'						
280	↓		↓		↓	AH-9 5'-5.5'	↓				↓	
281	10/26		S		X	AH-10 0-1'						
282	↓		↓		↓	AH-10 1'-1.5'	↓				↓	

ANALYSIS REQUEST (Circle or Specify Method No.)

BTEX 8021B / TPH 8015 MOD. TX1006 (Ext. to C36) / PAH 8270 / RCRA Metals Ag As Ba Cd Cr Pb Hg Se / TCLP Metals Ag As Ba Cd Cr Pb 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 X / Gamma Spec. / Alpha Beta (Air) / PLM (Asbestos) / Major Anions/Cations, pH, TDS

RELINQUISHED BY: (Signature)	Date: 10/29/10 Time: 1100	RECEIVED BY: (Signature)	Date: 10/29/10 Time: 11:00
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:

SAMPLED BY: (Print & Initial) JT / TF — Date: 10/26/10 Time:

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

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

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

SAMPLE CONDITION WHEN RECEIVED: 3.5° cintact

REMARKS: If total TPH exceeds 5,000 mg/kg run deeper samples / Run BTEX on 6 highest TPH. If total BTEX exceeds 50 mg/kg or Benzene exceeds 10 mg/kg run deeper samples

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

Hold additional samples

Analysis Request of Chain of Custody Record

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME:	SITE MANAGER:
COG	Ike Tavarez

PROJECT NO.:	PROJECT NAME:
114-4006.17	COG / ET7 State TB Eddy Co, NM

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD (Ext. to C35)	TX1005	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	Chlorides	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
249283	10/26		S		X	AH-10 2'-2.5'	1		-		X															X				
284						AH-10 3'-3.5'																									
285						AH-10 4'-4.5'																									
286						AH-11 0-1'									X											X				
287						AH-11 1'-1.5'																				X				
288						AH-11 2'-2.5'																				X				
289						AH-11 3'-3.5'																									
290						AH-11 4'-4.5'																									
291						AH-11 5'-5.5'																									

RELINQUISHED BY: (Signature)	Date: 10/29/10 Time: 1100	RECEIVED BY: (Signature)	Date: 10/29/10 Time: 11:00
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:

SAMPLED BY: (Print & Initial) ST / TF — Date: 10/26/10 Time:

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

TETRA TECH CONTACT PERSON: Ike Tavarez — Results by:

RUSH Charges Authorized: Yes No

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

SAMPLE CONDITION WHEN RECEIVED: 3.5°C intact

REMARKS: If total TPH exceeds 5000 mg/kg run deeper samples / Run BTEX on 2 highest TPH If total BTEX exceeds 50 mg/kg or benzene exceeds 10 mg/kg run deeper samples

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

Hold additional Samples

Summary Report

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

Report Date: March 22, 2011

Work Order: 11030727

Project Location: Eddy County, NM
Project Name: COG/ETZ State Tank Battery
Project Number: 114-6400717

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
259795	SB-1 0-1'	soil	2011-03-03	00:00	2011-03-04
259796	SB-1 3'	soil	2011-03-03	00:00	2011-03-04
259797	SB-1 5'	soil	2011-03-03	00:00	2011-03-04
259798	SB-1 7'	soil	2011-03-03	00:00	2011-03-04
259799	SB-1 10'	soil	2011-03-03	00:00	2011-03-04
259800	SB-1 15'	soil	2011-03-03	00:00	2011-03-04
259801	SB-1 20'	soil	2011-03-03	00:00	2011-03-04
259802	SB-1 25'	soil	2011-03-03	00:00	2011-03-04
259803	SB-1 30'	soil	2011-03-03	00:00	2011-03-04

Sample: 259795 - SB-1 0-1'

Param	Flag	Result	Units	RL
Chloride		**1660**	mg/Kg	4.00

Sample: 259796 - SB-1 3'

Param	Flag	Result	Units	RL
Chloride		**2030**	mg/Kg	4.00

Sample: 259797 - SB-1 5'

continued ...

sample 259797 continued ...

Param	Flag	Result	Units	RL

Param	Flag	Result	Units	RL
Chloride		**390**	mg/Kg	4.00

Sample: 259798 - SB-1 7'

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

Sample: 259799 - SB-1 10'

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

Sample: 259800 - SB-1 15'

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

Sample: 259801 - SB-1 20'

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

Sample: 259802 - SB-1 25'

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

Sample: 259803 - SB-1 30'

Param	Flag	Result	Units	RL
Chloride		<200	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

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

Report Date: March 22, 2011

Work Order: 11030727

Project Location: Eddy County, NM
Project Name: COG/ETZ State Tank Battery
Project Number: 114-6400717

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
259795	SB-1 0-1'	soil	2011-03-03	00:00	2011-03-04
259796	SB-1 3'	soil	2011-03-03	00:00	2011-03-04
259797	SB-1 5'	soil	2011-03-03	00:00	2011-03-04
259798	SB-1 7'	soil	2011-03-03	00:00	2011-03-04
259799	SB-1 10'	soil	2011-03-03	00:00	2011-03-04
259800	SB-1 15'	soil	2011-03-03	00:00	2011-03-04
259801	SB-1 20'	soil	2011-03-03	00:00	2011-03-04
259802	SB-1 25'	soil	2011-03-03	00:00	2011-03-04
259803	SB-1 30'	soil	2011-03-03	00:00	2011-03-04

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 9 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.

Case Narrative

Samples for project COG/ETZ State Tank Battery were received by TraceAnalysis, Inc. on 2011-03-04 and assigned to work order 11030727. Samples for work order 11030727 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	67261	2011-03-09 at 09:27	79409	2011-03-09 at 09:38
Chloride (Titration)	SM 4500-Cl B	67381	2011-03-16 at 10:49	79593	2011-03-17 at 14:33

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 11030727 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: 259795 - SB-1 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	79409	Date Analyzed:	2011-03-09	Analyzed By:	AR
Prep Batch:	67261	Sample Preparation:	2011-03-09	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**1660**	mg/Kg	100	4.00

Sample: 259796 - SB-1 3'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	79409	Date Analyzed:	2011-03-09	Analyzed By:	AR
Prep Batch:	67261	Sample Preparation:	2011-03-09	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**2030**	mg/Kg	100	4.00

Sample: 259797 - SB-1 5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	79409	Date Analyzed:	2011-03-09	Analyzed By:	AR
Prep Batch:	67261	Sample Preparation:	2011-03-09	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**390**	mg/Kg	50	4.00

Sample: 259798 - SB-1 7'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	79409	Date Analyzed:	2011-03-09	Analyzed By:	AR
Prep Batch:	67261	Sample Preparation:	2011-03-09	Prepared By:	AR

continued ...

sample 259798 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**230**	mg/Kg	50	4.00

Sample: 259799 - SB-1 10'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	79409	Date Analyzed:	2011-03-09	Analyzed By:	AR
Prep Batch:	67261	Sample Preparation:	2011-03-09	Prepared By:	AR

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

Sample: 259800 - SB-1 15'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	79409	Date Analyzed:	2011-03-09	Analyzed By:	AR
Prep Batch:	67261	Sample Preparation:	2011-03-09	Prepared By:	AR

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

Sample: 259801 - SB-1 20'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	79409	Date Analyzed:	2011-03-09	Analyzed By:	AR
Prep Batch:	67261	Sample Preparation:	2011-03-09	Prepared By:	AR

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

Sample: 259802 - SB-1 25'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	79593	Date Analyzed:	2011-03-17	Analyzed By:	AR
Prep Batch:	67381	Sample Preparation:	2011-03-16	Prepared By:	AR

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

Sample: 259803 - SB-1 30'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	79593	Date Analyzed:	2011-03-17	Analyzed By:	AR
Prep Batch:	67381	Sample Preparation:	2011-03-16	Prepared By:	AR

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

Method Blank (1) QC Batch: 79409

QC Batch:	79409	Date Analyzed:	2011-03-09	Analyzed By:	AR
Prep Batch:	67261	QC Preparation:	2011-03-09	Prepared By:	AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<3.85	mg/Kg	4

Method Blank (1) QC Batch: 79593

QC Batch:	79593	Date Analyzed:	2011-03-17	Analyzed By:	AR
Prep Batch:	67381	QC Preparation:	2011-03-16	Prepared By:	AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<3.85	mg/Kg	4

Laboratory Control Spike (LCS-1)

QC Batch: 79409 | Date Analyzed: 2011-03-09 | Analyzed By: AR
Prep Batch: 67261 | QC Preparation: 2011-03-09 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	96.8	mg/Kg	1	100	<3.85	97	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	<3.85	103	85 - 115	6	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: 79593 | Date Analyzed: 2011-03-17 | Analyzed By: AR
Prep Batch: 67381 | QC Preparation: 2011-03-16 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	97.2	mg/Kg	1	100	<3.85	97	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	<3.85	103	85 - 115	6	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: 259801

QC Batch: 79409 | Date Analyzed: 2011-03-09 | Analyzed By: AR
Prep Batch: 67261 | QC Preparation: 2011-03-09 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10100	mg/Kg	100	10000	<385	99	80 - 120

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	10600	mg/Kg	100	10000	<385	104	80 - 120	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: 260533

QC Batch: 79593 | Date Analyzed: 2011-03-17 | Analyzed By: AR
Prep Batch: 67381 | QC Preparation: 2011-03-16 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	12300	mg/Kg	100	10000	2560	97	80 - 120

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	12600	mg/Kg	100	10000	2560	100	80 - 120	2	20

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

Standard (ICV-1)

QC Batch: 79409 | Date Analyzed: 2011-03-09 | Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	98.8	99	85 - 115	2011-03-09

Standard (CCV-1)

QC Batch: 79409 | Date Analyzed: 2011-03-09 | 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	2011-03-09

Standard (ICV-1)

QC Batch: 79593 | Date Analyzed: 2011-03-17 | Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	102	102	85 - 115	2011-03-17

Standard (CCV-1)

QC Batch: 79593 | Date Analyzed: 2011-03-17 | Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	98.0	98	85 - 115	2011-03-17

* WO# 11030727

Analysis Request of Chain of Custody Record

PAGE: OF:

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.: 114-6400717

PROJECT NAME: ETZ State Tank Battery
Eddy Co., NM

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB I.D. NUMBER	DATE 2011	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC:MS Vol. 8240/8260/624	GC:MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
259795	3/3		S		X	SB-1 0-1'	1				X													X				
796						SB-1 3'	1				X													X				
797						SB-1 5'	1				X													X				
798						SB-1 7'	1				X													X				
799						SB-1 10'	1				X													X				
259800						SB-1 15'	1				X													X				
801						SB-1 20'	1				X													X				
802						SB-1 25'	1				X													X				
803						SB-1 30'	1				X													X				

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

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

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

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

SAMPLE CONDITION WHEN RECEIVED: 4.0°C 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.