TETRA TECH

RECEIVED
MAR 16 2011
NMOCD ARTESIA

March 1, 2011

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

Re: Closure Report for the COG Operating LLC., Willow State Tank Battery #1, Unit O, Section 16, Township 17 South, Range 31 East, Eddy County, New Mexico.

Mr. Bratcher:

Tetra Tech, Inc. (Tetra Tech) was contacted by COG Operating LLC. (COG) to assess a spill from the Willow State Tank Battery #1, Unit O, Section 16, Township 17 South, Range 31 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32 49.709°, W 103 52.416°. The site location is shown on Figures 1 and 2.

Background

According to the State of New Mexico C-141 Initial Report, the leak was discovered on December 12, 2009, and released approximately twenty four (24) barrels of produced water. The spill was caused by an electrical failure which COG personnel repaired. Twenty (20) barrels of standing fluids were recovered. The spill initiated on the pad, impacting an area approximately 110' by 210'. The spill migrated between two tanks and out into the pasture impacting an area approximately 40' x 80', west of the tank battery. The initial and final C-141 forms are enclosed in Appendix A.

Groundwater

The United States Geological Survey (USGS) Well Reports did not list any wells in Section 16. According to the NMOCD groundwater map, the

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

average depth to groundwater in this area is greater than 300' below surface. The well report data is shown in Appendix B.

Regulatory

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

Soil Assessment and Analytical Results

On February 9, 2010, Tetra Tech personnel inspected and sampled the spill area. A total of ten (10) auger holes (AH-1 through AH-10) were installed using a stainless steel hand auger to assess the impacted soils. Select samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The results of the sampling are summarized in Table 1. The auger hole locations are shown on Figure 3.

Referring to Table 1, all of the submitted samples were below the RRAL for TPH and BTEX. Elevated chloride concentrations were detected at each of the auger holes ranging from 10,700 mg/kg to 1,040 mg/kg at surface,e which significantly decreased with depth.

Corrective Action

On August 18, 2010, Tetra Tech personnel supervised the removal of impacted material. Approximately 1.0'-1.5' bgs of impacted material was removed from the entire spill footprint. Utilizing a backhoe, two confirmation samples (CS-1 and CS-2) were collected for laboratory analysis near AH-2 and AH-9, at depths ranging from 6' to 14' bgs. The confirmation sample locations are shown on Figure 3.

Due to safety concerns for onsite personnel and to maintain the integrity of the material beneath active tanks, the impacted soils near AH-7 were removed to a depth of 1.0' to 2.0' below surface. COG installed a liner inside the facility dike at the tank battery and included the area of AH-7.

The excavated area was then backfilled and brought up to surface grade with clean soils. The excavated soils, approximately 2,280 cubic yards, were transported offsite for disposal at Controlled Recovery, Inc, of Carlsbad, New Mexico.

Closure Request

Based upon the remediation performed at this site, COG Operating LLC respectfully requests closure of this site. A form C-141 final is included in Appendix A. If you have any question or comments concerning the activities performed at the Site, please call me at (432) 682-4559.

Respectfully submitted,
TETRA TECH

Ike Tavarez, P.G.
Senior Project Manager

cc: Pat Ellis – COG

FIGURES

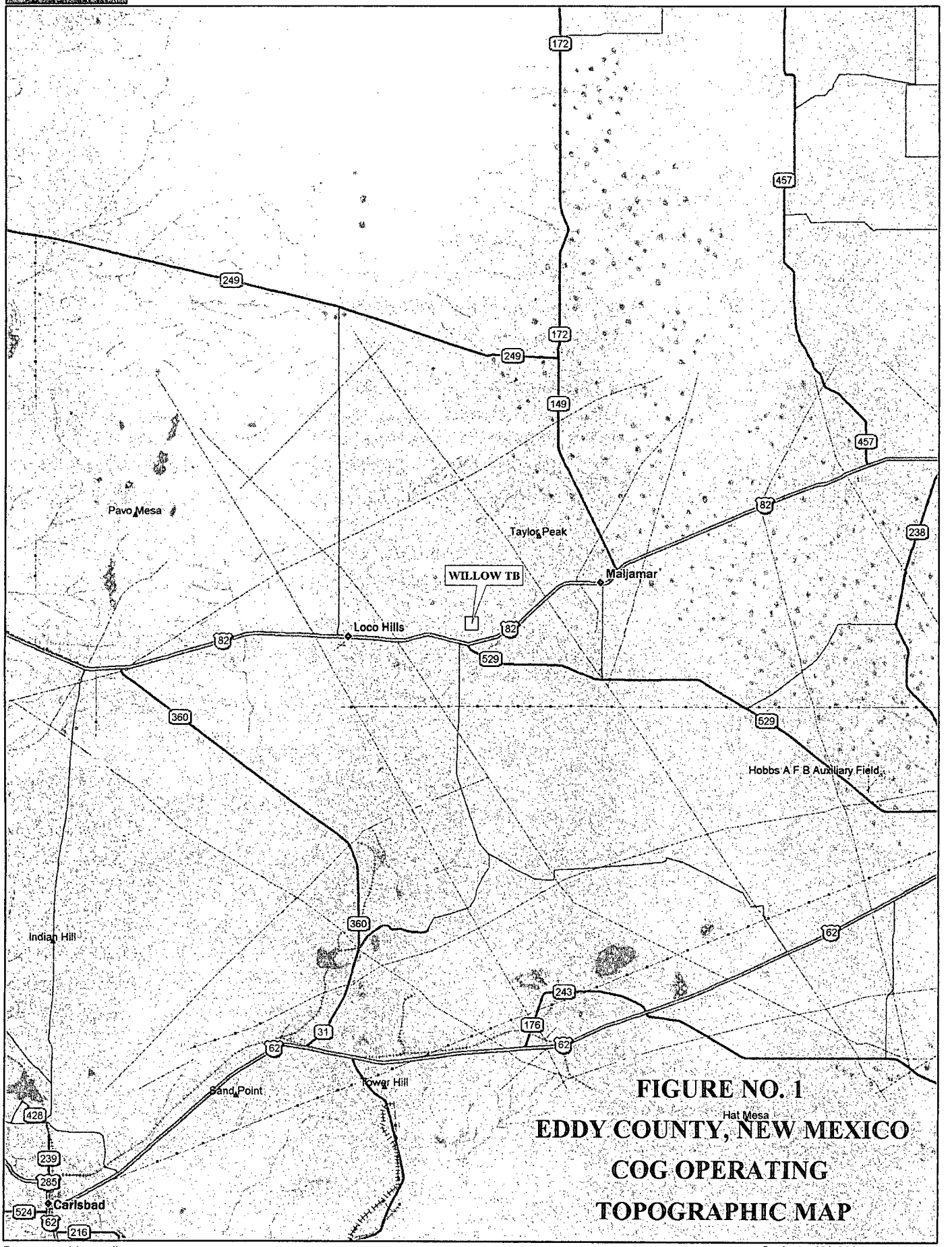

FIGURE NO. 1
EDDY COUNTY, NEW MEXICO
COG OPERATING
TOPOGRAPHIC MAP

Data use subject to license.
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www.delorme.com

TN
MN (7.9°E)

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

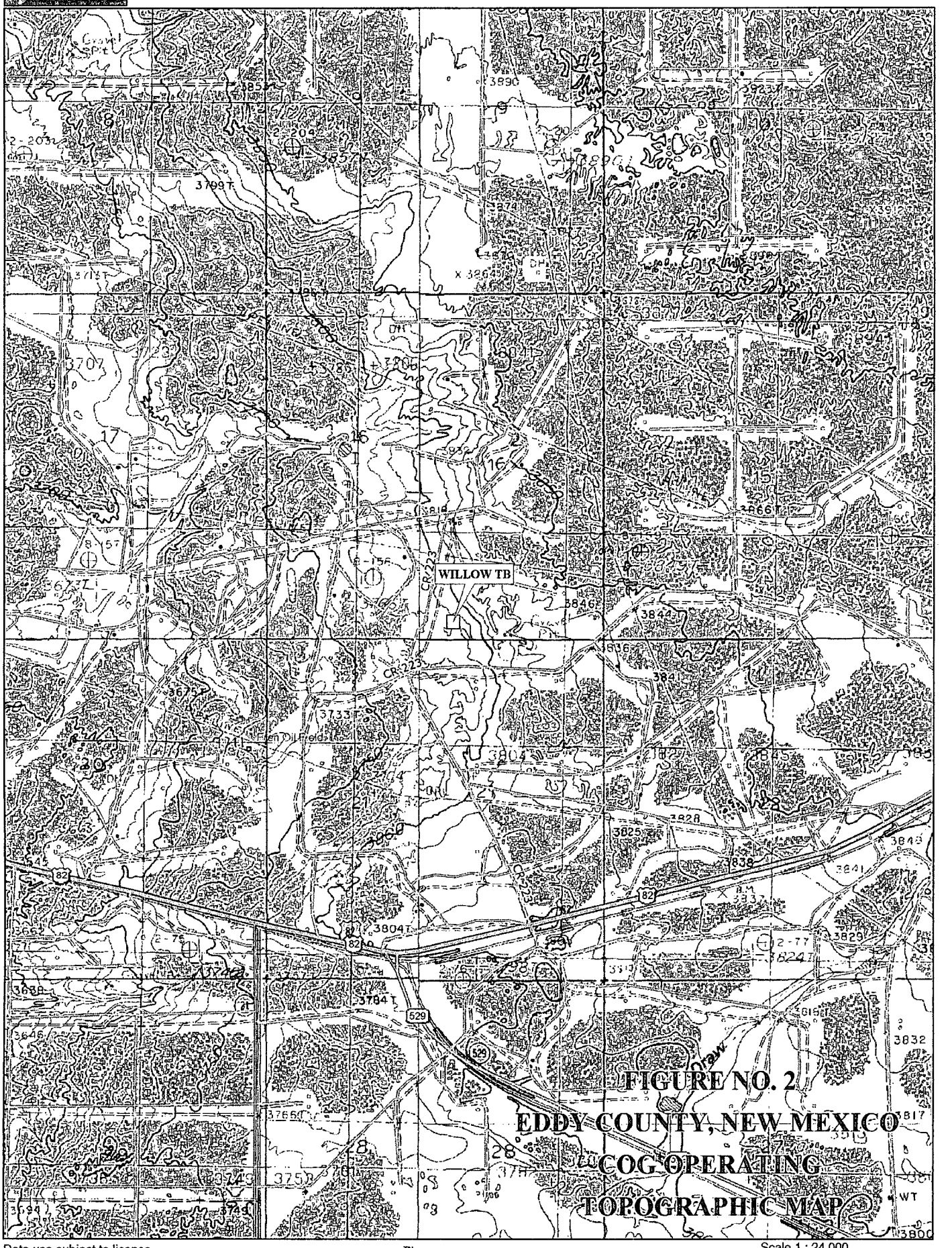

FIGURE NO. 2

EDDY COUNTY, NEW MEXICO

COG OPERATING

TOPOGRAPHIC MAP

Data use subject to license.

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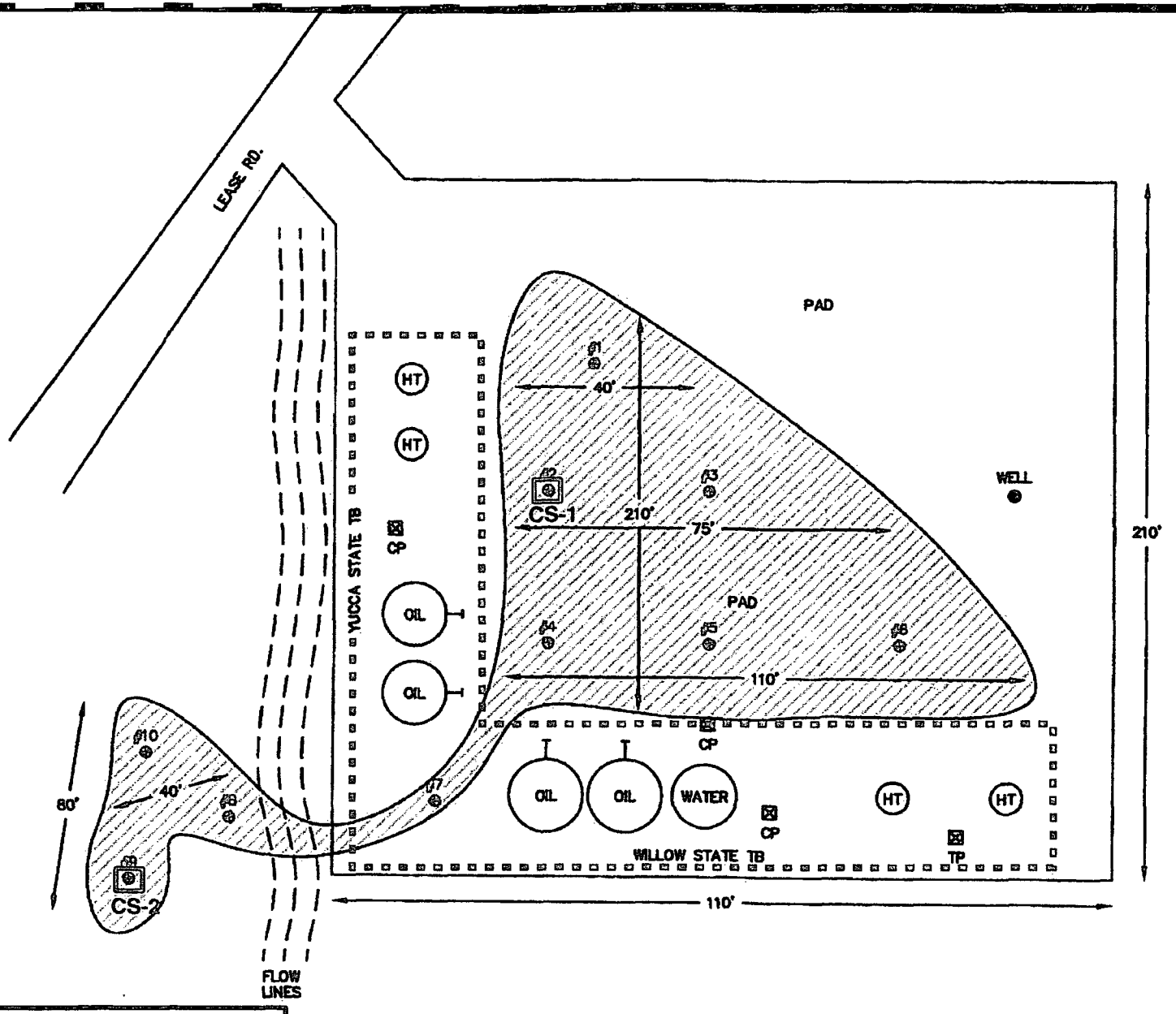
TN

MN (7.9°E)

Scale 1 : 24,000

1" = 2,000.0 ft

Data Zoom 13-0



EXPLANATION

- TB Firewall and Liner
- Spill Area
- Sample Locations
- Confirmation Sample Areas

CONCHO

Figure 3
Willow TB Site Map

Eddy County, New Mexico

Project: 114-6400695	
Date: 10-25-2010	
File: H/GIS/114-6400695/CSMap	

TABLE

Table 1
COG Operating LLC.
Willow 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)	BTEX Total	Chloride (mg/kg)
				In-Situ	Removed	DRO	GRO	Total						
AH-1	2/9/10	0-1'			X	<50.0	4.6	4.6	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	2,080
		1-1.5'		X		–	–	–	–	–	–	–	–	647
		2-2.5'		X		–	–	–	–	–	–	–	–	<200
		3-3.5'		X		–	–	–	–	–	–	–	–	<200
		4-4.5'		X		–	–	–	–	–	–	–	–	<200
AH-2	2/9/10	0-1'			X	<50.0	<1.0	<50.0	–	–	–	–	–	4,000
		1-1.5'			X	–	–	–	–	–	–	–	–	1,770
		2-2.5'		X		–	–	–	–	–	–	–	–	632
		3-3.5'		X		–	–	–	–	–	–	–	–	587
		4-4.5'		X		–	–	–	–	–	–	–	–	713
		5-5.5'		X		–	–	–	–	–	–	–	–	991
		6-6.5'		X		–	–	–	–	–	–	–	–	698
		7-7.5'		X		–	–	–	–	–	–	–	–	688
		8-8.5'		X		–	–	–	–	–	–	–	–	678
		9-9.5'		X		–	–	–	–	–	–	–	–	713
CS-1	8/18/10	10'		X		–	–	–	–	–	–	–	–	<200
		12'		X		–	–	–	–	–	–	–	–	<200
		14'		X		–	–	–	–	–	–	–	–	<200
AH-3	2/9/10	0-1'			X	<50.0	2.8	2.8	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	6,200
		1-1.5'			X	–	–	–	–	–	–	–	–	1,640
		2-2.5'		X		–	–	–	–	–	–	–	–	911
		3-3.5'		X		–	–	–	–	–	–	–	–	<200
		4-4.5'		X		–	–	–	–	–	–	–	–	<200

Table 1
COG Operating LLC.
Willow 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)	BTEX Total	Chloride (mg/kg)
				In-Situ	Removed	DRO	GRO	Total						
AH-4	2/9/10	0-1'			X	<50.0	<1.0	<50.0	–	–	–	–	–	5,980
		1-1.5'		X		–	–	–	–	–	–	–	–	302
		2-2.5'		X		–	–	–	–	–	–	–	–	<200
		3-3.5'		X		–	–	–	–	–	–	–	–	<200
AH-5	2/9/10	0-1'			X	<50.0	<1.0	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	4,840
		1-1.5'		X		–	–	–	–	–	–	–	–	<200
		2-2.5'		X		–	–	–	–	–	–	–	–	<200
AH-6	2/9/10	0-1'			X	<50.0	<1.0	<50.0	–	–	–	–	–	10,700
		1-1.5'		X		–	–	–	–	–	–	–	–	773
		2-2.5'		X		–	–	–	–	–	–	–	–	610
		3-3.5'		X		–	–	–	–	–	–	–	–	<200
		4-4.5'		X		–	–	–	–	–	–	–	–	<200
		5-5.5'		X		–	–	–	–	–	–	–	–	<200
AH-7	2/9/10	0-1'			X	<50.0	<1.0	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	8,200
		1-1.5'			X	–	–	–	–	–	–	–	–	7,150
		2-2.5'		X		–	–	–	–	–	–	–	–	1,460
		3-3.5'		X		–	–	–	–	–	–	–	–	793
		4-4.5'		X		–	–	–	–	–	–	–	–	1,130
		5-5.5'		X		–	–	–	–	–	–	–	–	1,150
		6-6.5'		X		–	–	–	–	–	–	–	–	1,320
		7-7.5'		X		–	–	–	–	–	–	–	–	1,120
		8-8.5'		X		–	–	–	–	–	–	–	–	1,040
		9-9.5'		X		–	–	–	–	–	–	–	–	880

Table 1
COG Operating LLC.
Willow 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)	BTEX Total	Chloride (mg/kg)
				In-Situ	Removed	DRO	GRO	Total						
AH-8	2/9/10	0-1'			X	<50.0	<1.0	<50.0	–	–	–	–	–	895
		1-1.5'			X	–	–	–	–	–	–	–	–	475
		2-2.5'		X		–	–	–	–	–	–	–	–	565
		3-3.5'		X		–	–	–	–	–	–	–	–	460
		4-4.5'		X		–	–	–	–	–	–	–	–	329
		5-5.5'		X		–	–	–	–	–	–	–	–	219
AH-9	2/9/10	0-1'			X	57.4	<1.00	57.4	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	2,470
		1-1.5'			X	–	–	–	–	–	–	–	–	1,150
		2-2.5'		X		–	–	–	–	–	–	–	–	642
		3-3.5'		X		–	–	–	–	–	–	–	–	343
		4-4.5'		X		–	–	–	–	–	–	–	–	637
		5-5.5'		X		–	–	–	–	–	–	–	–	861
CS-2	8/18/10	6'		X		–	–	–	–	–	–	–	–	875
		8'		X		–	–	–	–	–	–	–	–	618
		10'		X		–	–	–	–	–	–	–	–	2,200
		12'		X		–	–	–	–	–	–	–	–	4,730
		14'		X		–	–	–	–	–	–	–	–	445
AH-10	2/9/10	0-1'			X	<50.0	<1.0	<50.0	–	–	–	–	–	1,040
		1-1.5'		X		–	–	–	–	–	–	–	–	<200
		2-2.5'		X		–	–	–	–	–	–	–	–	<200
		3-3.5'		X		–	–	–	–	–	–	–	–	<200
		4-4.5'		X		–	–	–	–	–	–	–	–	<200

BEB Below Excavation Bottom

(--) Not Analyzed

☐ Excavated material

PHOTOGRAPHS

COG Operating LLC
Willow State #1 Tank Battery
Lea County, New Mexico

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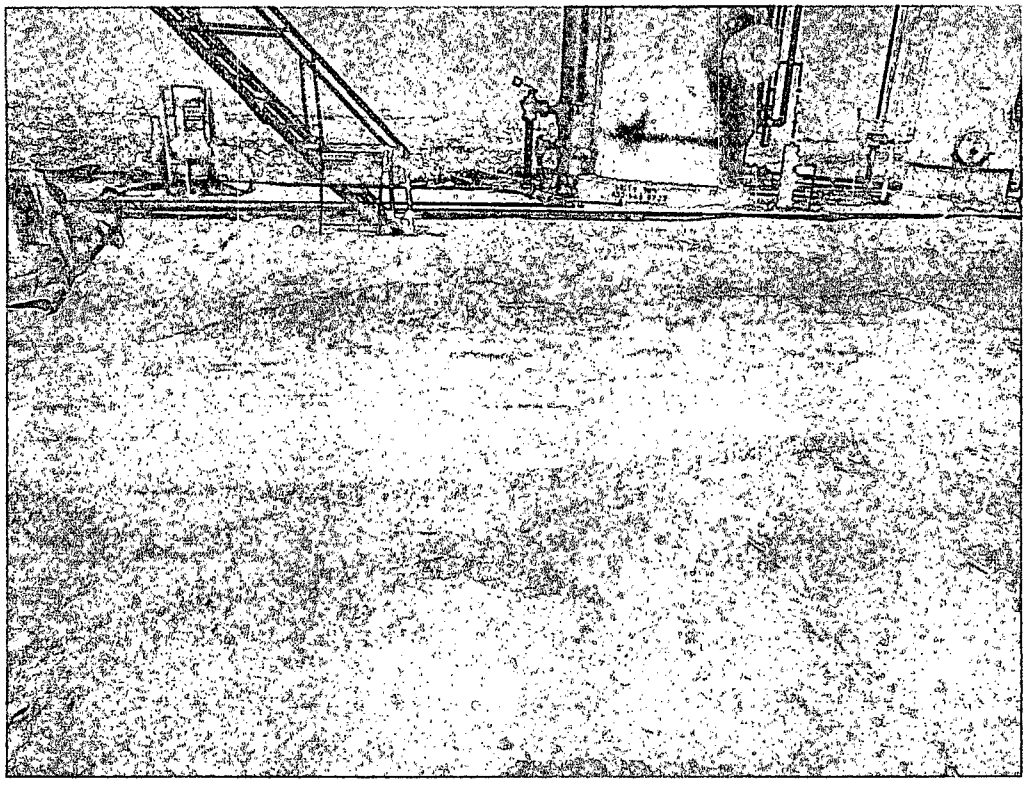
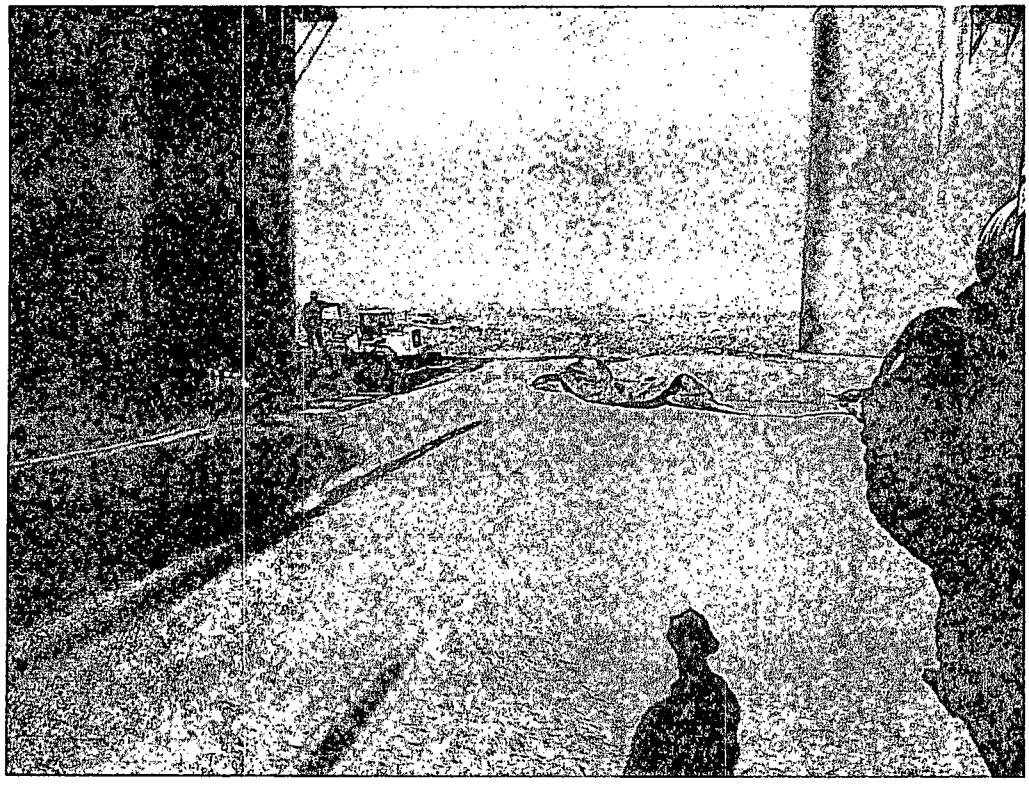


Near AH-3 – Removed 1.0' of impacted material



AH-7 – Safety concerns with tanks prevented reaching proposed depth

COG Operating LLC
Willow State #1 Tank Battery
Lea County, New Mexico

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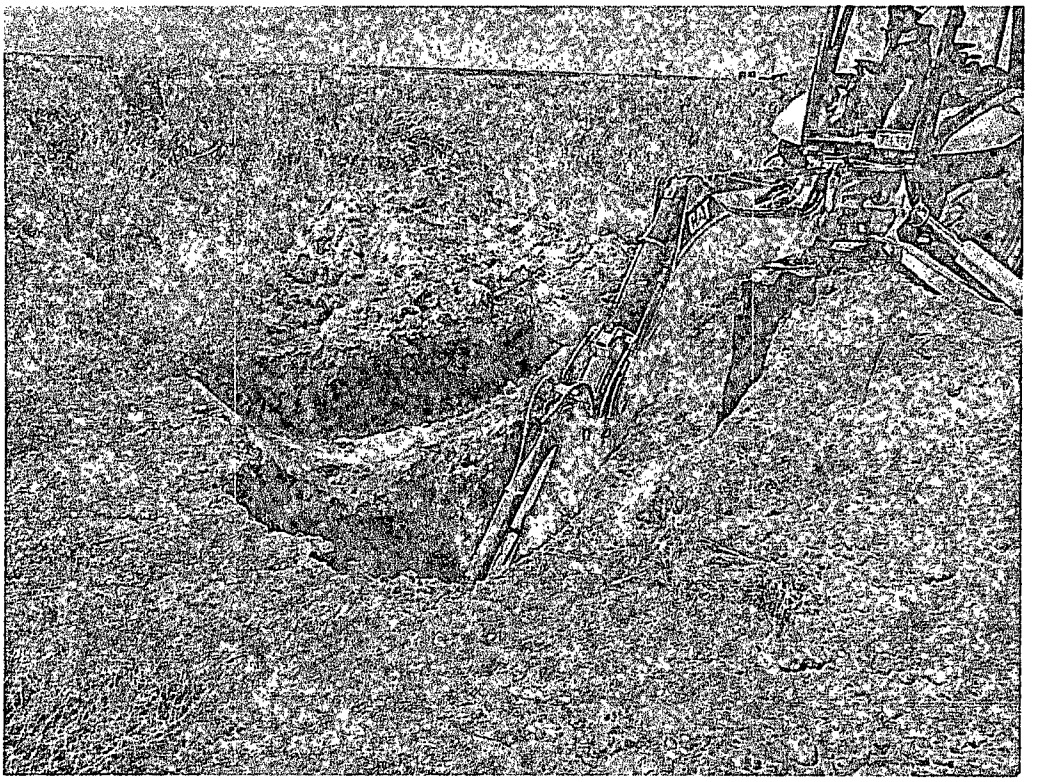
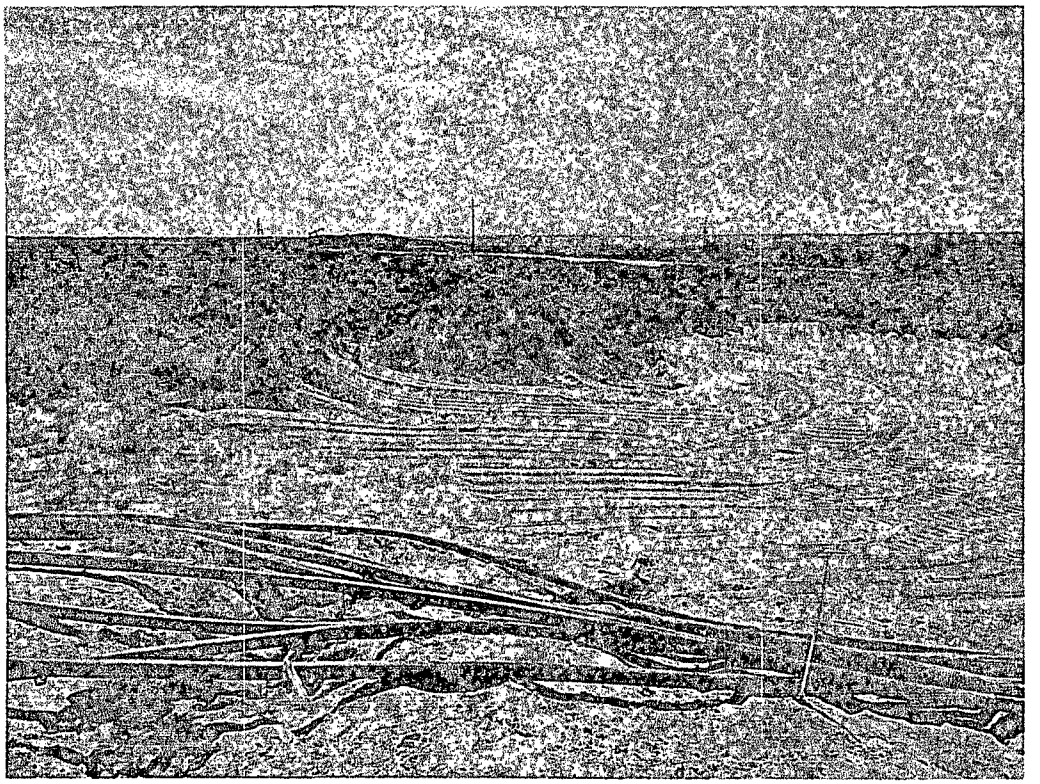


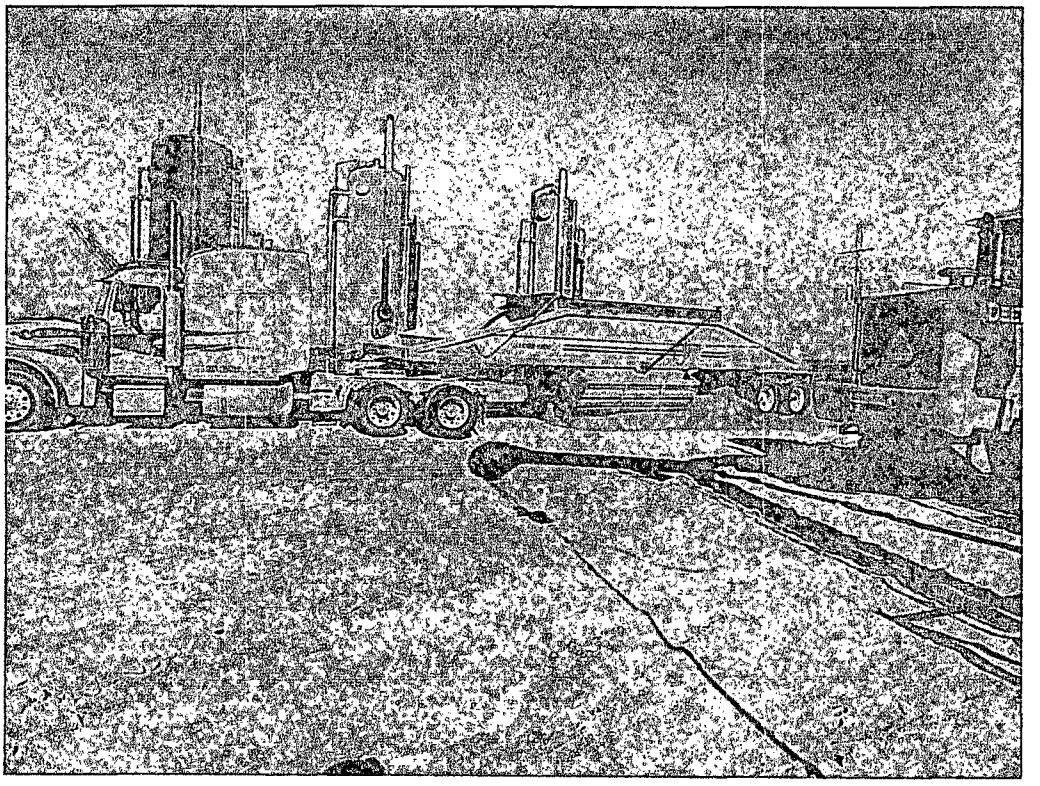
CS-2 - August 18, 2010

CS-2 August 18, 2010

COG Operating LLC
Willow State #1 Tank Battery
Lea County, New Mexico



View west – Pasture area after removing 1-1.5'



View west on location pad – hauling in clean material

TETRA TECH

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

RECEIVED
MAR 16 2011
NMOCD ARTESIA

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 Willow State #1	Facility Type **Tank Battery**

Surface Owner: State	Mineral Owner	Lease No. 30-015-28880

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
O	16	17S	31E	330	South	2280	East	Eddy

Latitude N 32 49.709° **Longitude** W 103 52.416°

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release 24 bbls	Volume Recovered 20 bbls
Source of Release: Water Tank	Date and Hour of Occurrence 12/12/09	Date and Hour of Discovery 12/12/09
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	
By Whom? Josh Russo	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.*

Caused by an electrical problem which was repaired.

Describe Area Affected and Cleanup Action Taken.*

Tetra Tech inspected site and collected samples to define spills extent. Soil that exceeded RRAL was removed and hauled away for proper disposal. Site was then brought up to surface grade with clean backfill 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: 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 Report

Name of Company COG OPERATING LLC	Contact Kanicia Carrillo
Address 550 W. Texas, Suite 100 Midland, TX 79701	Telephone No. 432-685-4332
Facility Name – Willow State #1	Facility Type- Battery

Surface Owner State	Mineral Owner	Lease No. 30-015-28880

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
O	16	17S	31E	330	South	2280	East	Eddy

Latitude N32 49.709' **Longitude** W 103 52.416'

NATURE OF RELEASE

Type of Release- Produced Water	Volume of Release-24 bbls	Volume Recovered- 20 bbls
Source of Release- Water tank	Date and Hour of Occurrence- 12/12/09	Date and Hour of Discovery 12/12/09
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.*
Caused by an electrical problem which was repaired.

Describe Area Affected and Cleanup Action Taken.*
Most of the fluid remained on the pad. About 5 bbls rolled off the pad on the west side of the location into a low spot in the pasture. 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 your 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: Kanicia Carrillo	Approved by District Supervisor:	
Title: Regulatory Analyst	Approval Date:	Expiration Date:
E-mail Address: kcarrillo@conchoresources.com	Conditions of Approval:	Attached ☐
Date: 12/28/09 Phone: 432-685-4332		

* Attach Additional Sheets If Necessary

APPENDIX B

Water Well Data
Average Depth to Groundwater (ft)
COG - Willow State #1 Tank Battery
Eddy County, New Mexico

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

16 South 32 East

6	5	4	3 **65**	2 **265**	1 **265**
7	8	9	10	11	12 **215**
18	17	16 **221**	15	14	13 **215**
19 **220**	20	21 **210**	22	23 **210**	24
30	29	28	27	26 **243**	25
31	32	33	34	35	36 **260**

17 South 30 East

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

17 South 31 East

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

17 South 32 East

6	5	4 **82**	3 **175**	2 **60**	1 **225**
7	8	9	10	11 **70** **88**	12
18	17	16	15	14	13
19	20	21	22	23	24
30 180 dry	29	28	27	26	25
31 Brown	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

18 South 32 East

6	5	4 **65**	3	2	1
7 **460** **82**	8	9	10	11	12
18	17	16 **84**	15	14	13
19	20 **164**	21	22 **429**	23	24
30	29	28	27	26	25
31	32	33	34 **117**	35	36

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

APPENDIX C

Summary Report

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

Report Date: February 22, 2010

Work Order: 10021212

Project Location: Eddy Co., NM
Project Name: COG/Willow TB
Project Number: 114-6400392

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
222289	AH-1 0-1'	soil	2010-02-09	00:00	2010-02-11
222290	AH-1 1-1.5'	soil	2010-02-09	00:00	2010-02-11
222291	AH-1 2-2.5'	soil	2010-02-09	00:00	2010-02-11
222292	AH-1 3-3.5'	soil	2010-02-09	00:00	2010-02-11
222293	AH-1 4-4.5'	soil	2010-02-09	00:00	2010-02-11
222294	AH-2 0-1	soil	2010-02-09	00:00	2010-02-11
222295	AH-2 1-1.5'	soil	2010-02-09	00:00	2010-02-11
222296	AH-2 2-2.5'	soil	2010-02-09	00:00	2010-02-11
222297	AH-2 3-3.5'	soil	2010-02-09	00:00	2010-02-11
222298	AH-2 4-4.5'	soil	2010-02-09	00:00	2010-02-11
222299	AH-2 5-5.5'	soil	2010-02-09	00:00	2010-02-11
222300	AH-2 6-6.5'	soil	2010-02-09	00:00	2010-02-11
222301	AH-2 7-7.5'	soil	2010-02-09	00:00	2010-02-11
222302	AH-2 8-8.5'	soil	2010-02-09	00:00	2010-02-11
222303	AH-2 9-9.5'	soil	2010-02-09	00:00	2010-02-11
222304	AH-3 0-1'	soil	2010-02-09	00:00	2010-02-11
222305	AH-3 1-1.5'	soil	2010-02-09	00:00	2010-02-11
222306	AH-3 2-2.5'	soil	2010-02-09	00:00	2010-02-11
222307	AH-3 3-3.5'	soil	2010-02-09	00:00	2010-02-11
222308	AH-3 4-4.5'	soil	2010-02-09	00:00	2010-02-11
222309	AH-4 0-1'	soil	2010-02-09	00:00	2010-02-11
222310	AH-4 1-1.5'	soil	2010-02-09	00:00	2010-02-11
222311	AH-4 2-2.5'	soil	2010-02-09	00:00	2010-02-11
222312	AH-4 3-3.5'	soil	2010-02-09	00:00	2010-02-11
222313	AH-5 0-1'	soil	2010-02-09	00:00	2010-02-11
222314	AH-5 1-1.5'	soil	2010-02-09	00:00	2010-02-11
222315	AH-5 2-2.5'	soil	2010-02-09	00:00	2010-02-11
222316	AH-6 0-1'	soil	2010-02-09	00:00	2010-02-11
222317	AH-6 1-1.5'	soil	2010-02-09	00:00	2010-02-11
222318	AH-6 2-2.5'	soil	2010-02-09	00:00	2010-02-11

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
222319	AH-6 3-3.5'	soil	2010-02-09	00:00	2010-02-11
222320	AH-6 4-4.5'	soil	2010-02-09	00:00	2010-02-11
222321	AH-6 5-5.5'	soil	2010-02-09	00:00	2010-02-11
222322	AH-7 0-1'	soil	2010-02-09	00:00	2010-02-11
222323	AH-7 1-1.5'	soil	2010-02-09	00:00	2010-02-11
222324	AH-7 2-2.5'	soil	2010-02-09	00:00	2010-02-11
222325	AH-7 3-3.5'	soil	2010-02-09	00:00	2010-02-11
222326	AH-7 4-4.5'	soil	2010-02-09	00:00	2010-02-11
222327	AH-7 5-5.5'	soil	2010-02-09	00:00	2010-02-11
222328	AH-7 6-6.5'	soil	2010-02-09	00:00	2010-02-11
222329	AH-7 7-7.5'	soil	2010-02-09	00:00	2010-02-11
222330	AH-7 8-8.5'	soil	2010-02-09	00:00	2010-02-11
222331	AH-7 9-9.5'	soil	2010-02-09	00:00	2010-02-11
222332	AH-8 0-1'	soil	2010-02-10	00:00	2010-02-11
222333	AH-8 1-1.5'	soil	2010-02-10	00:00	2010-02-11
222334	AH-8 2-2.5'	soil	2010-02-10	00:00	2010-02-11
222335	AH-8 3-3.5'	soil	2010-02-10	00:00	2010-02-11
222336	AH-8 4-4.5'	soil	2010-02-10	00:00	2010-02-11
222337	AH-8 5-5.5'	soil	2010-02-10	00:00	2010-02-11
222338	AH-9 0-1'	soil	2010-02-10	00:00	2010-02-11
222339	AH-9 1-1.5'	soil	2010-02-10	00:00	2010-02-11
222340	AH-9 2-2.5'	soil	2010-02-10	00:00	2010-02-11
222341	AH-9 3-3.5'	soil	2010-02-10	00:00	2010-02-11
222342	AH-9 4-4.5'	soil	2010-02-10	00:00	2010-02-11
222343	AH-9 5-5.5'	soil	2010-02-10	00:00	2010-02-11
222344	AH-10 0-1'	soil	2010-02-10	00:00	2010-02-11
222345	AH-10 1-1.5'	soil	2010-02-10	00:00	2010-02-11
222346	AH-10 2-2.5'	soil	2010-02-10	00:00	2010-02-11
222347	AH-10 3-3.5'	soil	2010-02-10	00:00	2010-02-11
222348	AH-10 4-4.5'	soil	2010-02-10	00:00	2010-02-11

	BTEX				TPH DRO - NEW	TPH GRO
	Benzene	Toluene	Ethylbenzene	Xylene	DRO	GRO
Sample - Field Code	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
222289 - AH-1 0-1'	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	**4.56**
222294 - AH-2 0-1					<50.0	<1.00
222304 - AH-3 0-1'	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	**2.78**
222309 - AH-4 0-1'					<50.0	<1.00
222313 - AH-5 0-1'	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
222316 - AH-6 0-1'					<50.0	<1.00
222322 - AH-7 0-1'	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
222332 - AH-8 0-1'					<50.0	<1.00
222338 - AH-9 0-1'	<0.0100	<0.0100	<0.0100	<0.0100	**57.4**	<1.00
222344 - AH-10 0-1'					<50.0	<1.00

Sample: 222289 - AH-1 0-1'

Param	Flag	Result	Units	RL
Chloride		**2080**	mg/Kg	4.00

Sample: 222290 - AH-1 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**647**	mg/Kg	4.00

Sample: 222291 - AH-1 2-2.5'

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

Sample: 222292 - AH-1 3-3.5'

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

Sample: 222293 - AH-1 4-4.5'

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

Sample: 222294 - AH-2 0-1

Param	Flag	Result	Units	RL
Chloride		**4000**	mg/Kg	4.00

Sample: 222295 - AH-2 1-1.5'

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

Sample: 222296 - AH-2 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**632**	mg/Kg	4.00

Sample: 222297 - AH-2 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**587**	mg/Kg	4.00

Sample: 222298 - AH-2 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**713**	mg/Kg	4.00

Sample: 222299 - AH-2 5-5.5'

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

Sample: 222300 - AH-2 6-6.5'

Param	Flag	Result	Units	RL
Chloride		**698**	mg/Kg	4.00

Sample: 222301 - AH-2 7-7.5'

Param	Flag	Result	Units	RL
Chloride		**688**	mg/Kg	4.00

Sample: 222302 - AH-2 8-8.5'

Param	Flag	Result	Units	RL
Chloride		**678**	mg/Kg	4.00

Sample: 222303 - AH-2 9-9.5'

Param	Flag	Result	Units	RL
Chloride		**713**	mg/Kg	4.00

Sample: 222304 - AH-3 0-1'

Param	Flag	Result	Units	RL
Chloride		**6200**	mg/Kg	4.00

Sample: 222305 - AH-3 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**1640**	mg/Kg	4.00

Sample: 222306 - AH-3 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**911**	mg/Kg	4.00

Sample: 222307 - AH-3 3-3.5'

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

Sample: 222308 - AH-3 4-4.5'

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

Sample: 222309 - AH-4 0-1'

Param	Flag	Result	Units	RL
Chloride		**5980**	mg/Kg	4.00

Sample: 222310 - AH-4 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**302**	mg/Kg	4.00

Sample: 222311 - AH-4 2-2.5'

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

Sample: 222312 - AH-4 3-3.5'

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

Sample: 222313 - AH-5 0-1'

Param	Flag	Result	Units	RL
Chloride		**4840**	mg/Kg	4.00

Sample: 222314 - AH-5 1-1.5'

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

Sample: 222315 - AH-5 2-2.5'

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

Sample: 222316 - AH-6 0-1'

Param	Flag	Result	Units	RL
Chloride		**10700**	mg/Kg	4.00

Sample: 222317 - AH-6 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**773**	mg/Kg	4.00

Sample: 222318 - AH-6 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**610**	mg/Kg	4.00

Sample: 222319 - AH-6 3-3.5'

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

Sample: 222320 - AH-6 4-4.5'

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

Sample: 222321 - AH-6 5-5.5'

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

Sample: 222322 - AH-7 0-1'

Param	Flag	Result	Units	RL
Chloride		**8200**	mg/Kg	4.00

Sample: 222323 - AH-7 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**7150**	mg/Kg	4.00

Sample: 222324 - AH-7 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**1460**	mg/Kg	4.00

Sample: 222325 - AH-7 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**793**	mg/Kg	4.00

Sample: 222326 - AH-7 4-4.5'

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

Sample: 222327 - AH-7 5-5.5'

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

Sample: 222328 - AH-7 6-6.5'

Param	Flag	Result	Units	RL
Chloride		**1320**	mg/Kg	4.00

Sample: 222329 - AH-7 7-7.5'

Param	Flag	Result	Units	RL
Chloride		**1120**	mg/Kg	4.00

Sample: 222330 - AH-7 8-8.5'

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

Sample: 222331 - AH-7 9-9.5'

Param	Flag	Result	Units	RL
Chloride		**880**	mg/Kg	4.00

Sample: 222332 - AH-8 0-1'

Param	Flag	Result	Units	RL
Chloride		**895**	mg/Kg	4.00

Sample: 222333 - AH-8 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**475**	mg/Kg	4.00

Sample: 222334 - AH-8 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**565**	mg/Kg	4.00

Sample: 222335 - AH-8 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**460**	mg/Kg	4.00

Sample: 222336 - AH-8 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**329**	mg/Kg	4.00

Sample: 222337 - AH-8 5-5.5'

Param	Flag	Result	Units	RL
Chloride		**219**	mg/Kg	4.00

Sample: 222338 - AH-9 0-1'

Param	Flag	Result	Units	RL
Chloride		**2470**	mg/Kg	4.00

Sample: 222339 - AH-9 1-1.5'

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

Sample: 222340 - AH-9 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**642**	mg/Kg	4.00

Sample: 222341 - AH-9 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**343**	mg/Kg	4.00

Sample: 222342 - AH-9 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**637**	mg/Kg	4.00

Sample: 222343 - AH-9 5-5.5'

Param	Flag	Result	Units	RL
Chloride		**861**	mg/Kg	4.00

Sample: 222344 - AH-10 0-1'

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

Sample: 222345 - AH-10 1-1.5'

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

Sample: 222346 - AH-10 2-2.5'

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

Sample: 222347 - AH-10 3-3.5'

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

Sample: 222348 - AH-10 4-4.5'

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

TRACEANALYSIS, INC.

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Certifications

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

NELAP Certifications

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

Analytical and Quality Control Report

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

Report Date: February 22, 2010

Work Order: 10021212

Project Location: Eddy Co., NM
Project Name: COG/Willow TB
Project Number: 114-6400392

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
222289	AH-1 0-1'	soil	2010-02-09	00:00	2010-02-11
222290	AH-1 1-1.5'	soil	2010-02-09	00:00	2010-02-11
222291	AH-1 2-2.5'	soil	2010-02-09	00:00	2010-02-11
222292	AH-1 3-3.5'	soil	2010-02-09	00:00	2010-02-11
222293	AH-1 4-4.5'	soil	2010-02-09	00:00	2010-02-11
222294	AH-2 0-1	soil	2010-02-09	00:00	2010-02-11
222295	AH-2 1-1.5'	soil	2010-02-09	00:00	2010-02-11
222296	AH-2 2-2.5'	soil	2010-02-09	00:00	2010-02-11
222297	AH-2 3-3.5'	soil	2010-02-09	00:00	2010-02-11
222298	AH-2 4-4.5'	soil	2010-02-09	00:00	2010-02-11

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
222299	AH-2 5-5.5'	soil	2010-02-09	00:00	2010-02-11
222300	AH-2 6-6.5'	soil	2010-02-09	00:00	2010-02-11
222301	AH-2 7-7.5'	soil	2010-02-09	00:00	2010-02-11
222302	AH-2 8-8.5'	soil	2010-02-09	00:00	2010-02-11
222303	AH-2 9-9.5'	soil	2010-02-09	00:00	2010-02-11
222304	AH-3 0-1'	soil	2010-02-09	00:00	2010-02-11
222305	AH-3 1-1.5'	soil	2010-02-09	00:00	2010-02-11
222306	AH-3 2-2.5'	soil	2010-02-09	00:00	2010-02-11
222307	AH-3 3-3.5'	soil	2010-02-09	00:00	2010-02-11
222308	AH-3 4-4.5'	soil	2010-02-09	00:00	2010-02-11
222309	AH-4 0-1'	soil	2010-02-09	00:00	2010-02-11
222310	AH-4 1-1.5'	soil	2010-02-09	00:00	2010-02-11
222311	AH-4 2-2.5'	soil	2010-02-09	00:00	2010-02-11
222312	AH-4 3-3.5'	soil	2010-02-09	00:00	2010-02-11
222313	AH-5 0-1'	soil	2010-02-09	00:00	2010-02-11
222314	AH-5 1-1.5'	soil	2010-02-09	00:00	2010-02-11
222315	AH-5 2-2.5'	soil	2010-02-09	00:00	2010-02-11
222316	AH-6 0-1'	soil	2010-02-09	00:00	2010-02-11
222317	AH-6 1-1.5'	soil	2010-02-09	00:00	2010-02-11
222318	AH-6 2-2.5'	soil	2010-02-09	00:00	2010-02-11
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222323	AH-7 1-1.5'	soil	2010-02-09	00:00	2010-02-11
222324	AH-7 2-2.5'	soil	2010-02-09	00:00	2010-02-11
222325	AH-7 3-3.5'	soil	2010-02-09	00:00	2010-02-11
222326	AH-7 4-4.5'	soil	2010-02-09	00:00	2010-02-11
222327	AH-7 5-5.5'	soil	2010-02-09	00:00	2010-02-11
222328	AH-7 6-6.5'	soil	2010-02-09	00:00	2010-02-11
222329	AH-7 7-7.5'	soil	2010-02-09	00:00	2010-02-11
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222331	AH-7 9-9.5'	soil	2010-02-09	00:00	2010-02-11
222332	AH-8 0-1'	soil	2010-02-10	00:00	2010-02-11
222333	AH-8 1-1.5'	soil	2010-02-10	00:00	2010-02-11
222334	AH-8 2-2.5'	soil	2010-02-10	00:00	2010-02-11
222335	AH-8 3-3.5'	soil	2010-02-10	00:00	2010-02-11
222336	AH-8 4-4.5'	soil	2010-02-10	00:00	2010-02-11
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222342	AH-9 4-4.5'	soil	2010-02-10	00:00	2010-02-11
222343	AH-9 5-5.5'	soil	2010-02-10	00:00	2010-02-11
222344	AH-10 0-1'	soil	2010-02-10	00:00	2010-02-11

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
222345	AH-10 1-1.5'	soil	2010-02-10	00:00	2010-02-11
222346	AH-10 2-2.5'	soil	2010-02-10	00:00	2010-02-11
222347	AH-10 3-3.5'	soil	2010-02-10	00:00	2010-02-11
222348	AH-10 4-4.5'	soil	2010-02-10	00:00	2010-02-11

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 49 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/Willow TB were received by TraceAnalysis, Inc. on 2010-02-11 and assigned to work order 10021212. Samples for work order 10021212 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
BTEX	S 8021B	57833	2010-02-17 at 15:30	67610	2010-02-17 at 07:22
BTEX	S 8021B	57873	2010-02-18 at 14:30	67652	2010-02-18 at 07:23
Chloride (Titration)	SM 4500-Cl B	57860	2010-02-18 at 09:13	67676	2010-02-19 at 14:49
Chloride (Titration)	SM 4500-Cl B	57861	2010-02-18 at 09:14	67711	2010-02-22 at 11:28
Chloride (Titration)	SM 4500-Cl B	57862	2010-02-18 at 09:15	67712	2010-02-22 at 11:29
Chloride (Titration)	SM 4500-Cl B	57863	2010-02-18 at 09:15	67713	2010-02-22 at 11:30
Chloride (Titration)	SM 4500-Cl B	57864	2010-02-18 at 09:16	67714	2010-02-22 at 11:31
Chloride (Titration)	SM 4500-Cl B	57865	2010-02-18 at 09:16	67715	2010-02-22 at 11:31
Chloride (Titration)	SM 4500-Cl B	57866	2010-02-18 at 09:17	67716	2010-02-22 at 11:32
TPH DRO - NEW	Mod. 8015B	57770	2010-02-15 at 10:19	67533	2010-02-15 at 10:19
TPH DRO - NEW	Mod. 8015B	57807	2010-02-16 at 13:43	67578	2010-02-16 at 13:43
TPH GRO	S 8015B	57833	2010-02-17 at 15:30	67611	2010-02-17 at 07:49
TPH GRO	S 8015B	57873	2010-02-18 at 14:30	67651	2010-02-18 at 07:51

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 10021212 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: 222289 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	67610	Date Analyzed:	2010-02-17	Analyzed By:	AG
Prep Batch:	57833	Sample Preparation:	2010-02-17	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
Benzene		<0.0100		mg/Kg	1	0.0100
Toluene		<0.0100		mg/Kg	1	0.0100
Ethylbenzene		<0.0100		mg/Kg	1	0.0100
Xylene		<0.0100		mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.88	mg/Kg	1	2.00	94	64.4 - 141.2
4-Bromofluorobenzene (4-BFB)		1.90	mg/Kg	1	2.00	95	43.1 - 158.4

Sample: 222289 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67676	Date Analyzed:	2010-02-19	Analyzed By:	AR
Prep Batch:	57860	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**2080**		mg/Kg	100	4.00

Sample: 222289 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	67533	Date Analyzed:	2010-02-15	Analyzed By:	kg
Prep Batch:	57770	Sample Preparation:	2010-02-15	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		124	mg/Kg	1	100	124	70 - 130

Sample: 222289 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	67611	Date Analyzed:	2010-02-17	Analyzed By:	AG
Prep Batch:	57833	Sample Preparation:	2010-02-17	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		**4.56**	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.05	mg/Kg	1	2.00	102	65.3 - 145
4-Bromofluorobenzene (4-BFB)		2.01	mg/Kg	1	2.00	100	61.7 - 131.1

Sample: 222290 - AH-1 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67676	Date Analyzed:	2010-02-19	Analyzed By:	AR
Prep Batch:	57860	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**647**	mg/Kg	50	4.00

Sample: 222291 - AH-1 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67676	Date Analyzed:	2010-02-19	Analyzed By:	AR
Prep Batch:	57860	Sample Preparation:	2010-02-18	Prepared By:	AR

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

Sample: 222292 - AH-1 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67676	Date Analyzed:	2010-02-19	Analyzed By:	AR
Prep Batch:	57860	Sample Preparation:	2010-02-18	Prepared By:	AR

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

Sample: 222293 - AH-1 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67676	Date Analyzed:	2010-02-19	Analyzed By:	AR
Prep Batch:	57860	Sample Preparation:	2010-02-18	Prepared By:	AR

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

Sample: 222294 - AH-2 0-1

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67676	Date Analyzed:	2010-02-19	Analyzed By:	AR
Prep Batch:	57860	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**4000**	mg/Kg	100	4.00

Sample: 222294 - AH-2 0-1

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	67533	Date Analyzed:	2010-02-15	Analyzed By:	kg
Prep Batch:	57770	Sample Preparation:	2010-02-15	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		126	mg/Kg	1	100	126	70 - 130

Sample: 222294 - AH-2 0-1

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	67611	Date Analyzed:	2010-02-17	Analyzed By:	AG
Prep Batch:	57833	Sample Preparation:	2010-02-17	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.55	mg/Kg	1	2.00	128	65.3 - 145
4-Bromofluorobenzene (4-BFB)		2.48	mg/Kg	1	2.00	124	61.7 - 131.1

Sample: 222295 - AH-2 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67676	Date Analyzed:	2010-02-19	Analyzed By:	AR
Prep Batch:	57860	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**1770**	mg/Kg	50	4.00

Sample: 222296 - AH-2 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67711	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57861	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**632**	mg/Kg	50	4.00

Sample: 222297 - AH-2 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67711	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57861	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**587**	mg/Kg	50	4.00

Sample: 222298 - AH-2 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67711	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57861	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**713**	mg/Kg	50	4.00

Sample: 222299 - AH-2 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67711	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57861	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**991**	mg/Kg	50	4.00

Sample: 222300 - AH-2 6-6.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67711	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57861	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**698**	mg/Kg	50	4.00

Sample: 222301 - AH-2 7-7.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67711	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57861	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**688**	mg/Kg	50	4.00

Sample: 222302 - AH-2 8-8.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67711	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57861	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**678**	mg/Kg	50	4.00

Sample: 222303 - AH-2 9-9.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67711	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57861	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**713**	mg/Kg	50	4.00

Sample: 222304 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	67652	Date Analyzed:	2010-02-18	Analyzed By:	AG
Prep Batch:	57873	Sample Preparation:	2010-02-18	Prepared By:	AG

Parameter	Flag	Result	RL Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100

continued ...

sample 222304 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.67	mg/Kg	1	2.00	84	64.4 - 141.2
4-Bromofluorobenzene (4-BFB)		1.73	mg/Kg	1	2.00	86	43.1 - 158.4

Sample: 222304 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67711	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57861	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**6200**	mg/Kg	100	4.00

Sample: 222304 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	67533	Date Analyzed:	2010-02-15	Analyzed By:	kg
Prep Batch:	57770	Sample Preparation:	2010-02-15	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		116	mg/Kg	1	100	116	70 - 130

Sample: 222304 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	67651	Date Analyzed:	2010-02-18	Analyzed By:	AG
Prep Batch:	57873	Sample Preparation:	2010-02-18	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		**2.78**	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.86	mg/Kg	1	2.00	93	65.3 - 145
4-Bromofluorobenzene (4-BFB)		1.86	mg/Kg	1	2.00	93	61.7 - 131.1

Sample: 222305 - AH-3 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67711	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57861	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**1640**	mg/Kg	50	4.00

Sample: 222306 - AH-3 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67712	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57862	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**911**	mg/Kg	50	4.00

Sample: 222307 - AH-3 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67712	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57862	Sample Preparation:	2010-02-18	Prepared By:	AR

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

Sample: 222308 - AH-3 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67712	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57862	Sample Preparation:	2010-02-18	Prepared By:	AR

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

Sample: 222309 - AH-4 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67712	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57862	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**5980**	mg/Kg	100	4.00

Sample: 222309 - AH-4 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	67533	Date Analyzed:	2010-02-15	Analyzed By:	kg
Prep Batch:	57770	Sample Preparation:	2010-02-15	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		115	mg/Kg	1	100	115	70 - 130

Sample: 222309 - AH-4 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	67651	Date Analyzed:	2010-02-18	Analyzed By:	AG
Prep Batch:	57873	Sample Preparation:	2010-02-18	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.95	mg/Kg	1	2.00	98	65.3 - 145
4-Bromofluorobenzene (4-BFB)		1.92	mg/Kg	1	2.00	96	61.7 - 131.1

Sample: 222310 - AH-4 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67712	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57862	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**302**	mg/Kg	50	4.00

Sample: 222311 - AH-4 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67712	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57862	Sample Preparation:	2010-02-18	Prepared By:	AR

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

Sample: 222312 - AH-4 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67712	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57862	Sample Preparation:	2010-02-18	Prepared By:	AR

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

Sample: 222313 - AH-5 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	67652	Date Analyzed:	2010-02-18	Analyzed By:	AG
Prep Batch:	57873	Sample Preparation:	2010-02-18	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
Benzene		<0.0100		mg/Kg	1	0.0100
Toluene		<0.0100		mg/Kg	1	0.0100
Ethylbenzene		<0.0100		mg/Kg	1	0.0100
Xylene		<0.0100		mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.84	mg/Kg	1	2.00	92	64.4 - 141.2
4-Bromofluorobenzene (4-BFB)		1.87	mg/Kg	1	2.00	94	43.1 - 158.4

Sample: 222313 - AH-5 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67712	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57862	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**4840**		mg/Kg	100	4.00

Sample: 222313 - AH-5 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	67533	Date Analyzed:	2010-02-15	Analyzed By:	kg
Prep Batch:	57770	Sample Preparation:	2010-02-15	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		117	mg/Kg	1	100	117	70 - 130

Sample: 222313 - AH-5 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	67651	Date Analyzed:	2010-02-18	Analyzed By:	AG
Prep Batch:	57873	Sample Preparation:	2010-02-18	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.99	mg/Kg	1	2.00	100	65.3 - 145
4-Bromofluorobenzene (4-BFB)		1.96	mg/Kg	1	2.00	98	61.7 - 131.1

Sample: 222314 - AH-5 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67712	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57862	Sample Preparation:	2010-02-18	Prepared By:	AR

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

Sample: 222315 - AH-5 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67712	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57862	Sample Preparation:	2010-02-18	Prepared By:	AR

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

Sample: 222316 - AH-6 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67713	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57863	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**10700**	mg/Kg	100	4.00

Sample: 222316 - AH-6 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	67533	Date Analyzed:	2010-02-15	Analyzed By:	kg
Prep Batch:	57770	Sample Preparation:	2010-02-15	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		115	mg/Kg	1	100	115	70 - 130

Sample: 222316 - AH-6 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	67651	Date Analyzed:	2010-02-18	Analyzed By:	AG
Prep Batch:	57873	Sample Preparation:	2010-02-18	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.95	mg/Kg	1	2.00	98	65.3 - 145
4-Bromofluorobenzene (4-BFB)		1.92	mg/Kg	1	2.00	96	61.7 - 131.1

Sample: 222317 - AH-6 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67713	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57863	Sample Preparation:	2010-02-18	Prepared By:	AR

continued ...

sample 222317 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**773**	mg/Kg	50	4.00

Sample: 222318 - AH-6 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67713	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57863	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**610**	mg/Kg	50	4.00

Sample: 222319 - AH-6 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67713	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57863	Sample Preparation:	2010-02-18	Prepared By:	AR

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

Sample: 222320 - AH-6 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67713	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57863	Sample Preparation:	2010-02-18	Prepared By:	AR

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

Sample: 222321 - AH-6 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67713	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57863	Sample Preparation:	2010-02-18	Prepared By:	AR

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

Sample: 222322 - AH-7 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	67652	Date Analyzed:	2010-02-18	Analyzed By:	AG
Prep Batch:	57873	Sample Preparation:	2010-02-18	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.74	mg/Kg	1	2.00	87	64.4 - 141.2
4-Bromofluorobenzene (4-BFB)		1.78	mg/Kg	1	2.00	89	43.1 - 158.4

Sample: 222322 - AH-7 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67713	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57863	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**8200**	mg/Kg	100	4.00

Sample: 222322 - AH-7 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	67533	Date Analyzed:	2010-02-15	Analyzed By:	kg
Prep Batch:	57770	Sample Preparation:	2010-02-15	Prepared By:	kg

Parameter	Flag	Result	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		114	mg/Kg	1	100	114	70 - 130

Sample: 222322 - AH-7 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	67651	Date Analyzed:	2010-02-18	Analyzed By:	AG
Prep Batch:	57873	Sample Preparation:	2010-02-18	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.90	mg/Kg	1	2.00	95	65.3 - 145
4-Bromofluorobenzene (4-BFB)		1.88	mg/Kg	1	2.00	94	61.7 - 131.1

Sample: 222323 - AH-7 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67713	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57863	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**7150**	mg/Kg	100	4.00

Sample: 222324 - AH-7 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67713	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57863	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**1460**	mg/Kg	50	4.00

Sample: 222325 - AH-7 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67713	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57863	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**793**	mg/Kg	50	4.00

Sample: 222326 - AH-7 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67714	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57864	Sample Preparation:	2010-02-18	Prepared By:	AR

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

Sample: 222327 - AH-7 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67714	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57864	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**1150**	mg/Kg	50	4.00

Sample: 222328 - AH-7 6-6.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67714	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57864	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**1320**	mg/Kg	50	4.00

Sample: 222329 - AH-7 7-7.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67714	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57864	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**1120**	mg/Kg	50	4.00

Sample: 222330 - AH-7 8-8.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67714	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57864	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**1040**	mg/Kg	50	4.00

Sample: 222331 - AH-7 9-9.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67714	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57864	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**880**	mg/Kg	50	4.00

Sample: 222332 - AH-8 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67714	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57864	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**895**		mg/Kg	50	4.00

Sample: 222332 - AH-8 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	67533	Date Analyzed:	2010-02-15	Analyzed By:	kg
Prep Batch:	57770	Sample Preparation:	2010-02-15	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		126	mg/Kg	1	100	126	70 - 130

Sample: 222332 - AH-8 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	67651	Date Analyzed:	2010-02-18	Analyzed By:	AG
Prep Batch:	57873	Sample Preparation:	2010-02-18	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
GRO		<1.00		mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.00	mg/Kg	1	2.00	100	65.3 - 145
4-Bromofluorobenzene (4-BFB)		1.96	mg/Kg	1	2.00	98	61.7 - 131.1

Sample: 222333 - AH-8 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67714	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57864	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**475**	mg/Kg	50	4.00

Sample: 222334 - AH-8 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67714	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57864	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**565**	mg/Kg	50	4.00

Sample: 222335 - AH-8 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67714	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57864	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**460**	mg/Kg	50	4.00

Sample: 222336 - AH-8 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67715	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57865	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**329**	mg/Kg	50	4.00

Sample: 222337 - AH-8 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67715	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57865	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**219**	mg/Kg	50	4.00

Sample: 222338 - AH-9 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	67652	Date Analyzed:	2010-02-18	Analyzed By:	AG
Prep Batch:	57873	Sample Preparation:	2010-02-18	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.59	mg/Kg	1	2.00	80	64.4 - 141.2
4-Bromofluorobenzene (4-BFB)		1.61	mg/Kg	1	2.00	80	43.1 - 158.4

Sample: 222338 - AH-9 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67715	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57865	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**2470**	mg/Kg	100	4.00

Sample: 222338 - AH-9 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	67533	Date Analyzed:	2010-02-15	Analyzed By:	kg
Prep Batch:	57770	Sample Preparation:	2010-02-15	Prepared By:	kg

Parameter	Flag	Result	RL	Units	Dilution	RL
DRO		**57.4**		mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	[1]	138	mg/Kg	1	100	138	70 - 130

Sample: 222338 - AH-9 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	67651	Date Analyzed:	2010-02-18	Analyzed By:	AG
Prep Batch:	57873	Sample Preparation:	2010-02-18	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
GRO		<1.00		mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.75	mg/Kg	1	2.00	88	65.3 - 145
4-Bromofluorobenzene (4-BFB)		1.71	mg/Kg	1	2.00	86	61.7 - 131.1

Sample: 222339 - AH-9 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67715	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57865	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**1150**		mg/Kg	50	4.00

[1] High surrogate recovery due to peak interference.

Sample: 222340 - AH-9 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67715	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57865	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**642**	mg/Kg	50	4.00

Sample: 222341 - AH-9 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67715	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57865	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**343**	mg/Kg	50	4.00

Sample: 222342 - AH-9 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67715	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57865	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**637**	mg/Kg	50	4.00

Sample: 222343 - AH-9 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67715	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57865	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**861**	mg/Kg	50	4.00

Sample: 222344 - AH-10 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67715	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57865	Sample Preparation:	2010-02-18	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**1040**		mg/Kg	50	4.00

Sample: 222344 - AH-10 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	67578	Date Analyzed:	2010-02-16	Analyzed By:	kg
Prep Batch:	57807	Sample Preparation:	2010-02-16	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	[2]	145	mg/Kg	1	100	145	70 - 130

Sample: 222344 - AH-10 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	67651	Date Analyzed:	2010-02-18	Analyzed By:	AG
Prep Batch:	57873	Sample Preparation:	2010-02-18	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
GRO			<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.32	mg/Kg	1	2.00	116	65.3 - 145
4-Bromofluorobenzene (4-BFB)		2.22	mg/Kg	1	2.00	111	61.7 - 131.1

[2]High surrogate recovery. Sample non-detect, result bias high.

Sample: 222345 - AH-10 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67715	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57865	Sample Preparation:	2010-02-18	Prepared By:	AR

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

Sample: 222346 - AH-10 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67716	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57866	Sample Preparation:	2010-02-18	Prepared By:	AR

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

Sample: 222347 - AH-10 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67716	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57866	Sample Preparation:	2010-02-18	Prepared By:	AR

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

Sample: 222348 - AH-10 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	67716	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57866	Sample Preparation:	2010-02-18	Prepared By:	AR

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

Method Blank (1) QC Batch: 67533

QC Batch:	67533	Date Analyzed:	2010-02-15	Analyzed By:	kg
Prep Batch:	57770	QC Preparation:	2010-02-15	Prepared By:	kg

Parameter	Flag	MDL Result	Units	RL
DRO		<5.86	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		110	mg/Kg	1	100	110	70 - 130

Method Blank (1) QC Batch: 67578

QC Batch:	67578	Date Analyzed:	2010-02-16	Analyzed By:	kg
Prep Batch:	57807	QC Preparation:	2010-02-16	Prepared By:	kg

Parameter	Flag	MDL Result	Units	RL
DRO		<5.86	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		109	mg/Kg	1	100	109	70 - 130

Method Blank (1) QC Batch: 67610

QC Batch:	67610	Date Analyzed:	2010-02-17	Analyzed By:	AG
Prep Batch:	57833	QC Preparation:	2010-02-17	Prepared By:	AG

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.00410	mg/Kg	0.01
Toluene		<0.00310	mg/Kg	0.01
Ethylbenzene		<0.00240	mg/Kg	0.01
Xylene		<0.00650	mg/Kg	0.01

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.00	mg/Kg	1	2.00	100	64.9 - 142.7
4-Bromofluorobenzene (4-BFB)		1.84	mg/Kg	1	2.00	92	43.9 - 141.9

Method Blank (1) QC Batch: 67611

QC Batch: 67611 | Date Analyzed: 2010-02-17 | Analyzed By: AG
Prep Batch: 57833 | QC Preparation: 2010-02-17 | Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
GRO		<0.396	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.19	mg/Kg	1	2.00	110	66.2 - 145
4-Bromofluorobenzene (4-BFB)		1.95	mg/Kg	1	2.00	98	62 - 120.5

Method Blank (1) QC Batch: 67651

QC Batch: 67651 | Date Analyzed: 2010-02-18 | Analyzed By: AG
Prep Batch: 57873 | QC Preparation: 2010-02-18 | Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
GRO		<0.396	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.22	mg/Kg	1	2.00	111	66.2 - 145
4-Bromofluorobenzene (4-BFB)		2.12	mg/Kg	1	2.00	106	62 - 120.5

Method Blank (1) QC Batch: 67652

QC Batch: 67652 | Date Analyzed: 2010-02-18 | Analyzed By: AG
Prep Batch: 57873 | QC Preparation: 2010-02-18 | Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.00410	mg/Kg	0.01
Toluene		<0.00310	mg/Kg	0.01
Ethylbenzene		<0.00240	mg/Kg	0.01
Xylene		<0.00650	mg/Kg	0.01

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.00	mg/Kg	1	2.00	100	64.9 - 142.7
4-Bromofluorobenzene (4-BFB)		1.94	mg/Kg	1	2.00	97	43.9 - 141.9

Method Blank (1) QC Batch: 67676

QC Batch:	67676	Date Analyzed:	2010-02-19	Analyzed By:	AR
Prep Batch:	57860	QC Preparation:	2010-02-18	Prepared By:	AR

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

Method Blank (1) QC Batch: 67711

QC Batch:	67711	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57861	QC Preparation:	2010-02-18	Prepared By:	AR

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

Method Blank (1) QC Batch: 67712

QC Batch:	67712	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57862	QC Preparation:	2010-02-18	Prepared By:	AR

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

Method Blank (1) QC Batch: 67713

QC Batch:	67713	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57863	QC Preparation:	2010-02-18	Prepared By:	AR

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

Method Blank (1) QC Batch: 67714

QC Batch:	67714	Date Analyzed:	2010-02-22	Analyzed By:	AR
Prep Batch:	57864	QC Preparation:	2010-02-18	Prepared By:	AR

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

Method Blank (1) QC Batch: 67715

QC Batch: 67715 Date Analyzed: 2010-02-22 Analyzed By: AR
Prep Batch: 57865 QC Preparation: 2010-02-18 Prepared By: AR

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

Method Blank (1) QC Batch: 67716

QC Batch: 67716 Date Analyzed: 2010-02-22 Analyzed By: AR
Prep Batch: 57866 QC Preparation: 2010-02-18 Prepared By: AR

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

Laboratory Control Spike (LCS-1)

QC Batch: 67533 Date Analyzed: 2010-02-15 Analyzed By: kg
Prep Batch: 57770 QC Preparation: 2010-02-15 Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	287	mg/Kg	1	250	<5.86	115	57.4 - 133.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	297	mg/Kg	1	250	<5.86	119	57.4 - 133.4	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	123	126	mg/Kg	1	100	123	126	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 67578 | Date Analyzed: 2010-02-16 | Analyzed By: kg
Prep Batch: 57807 | QC Preparation: 2010-02-16 | Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	273	mg/Kg	1	250	<5.86	109	57.4 - 133.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	276	mg/Kg	1	250	<5.86	110	57.4 - 133.4	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
n-Tricosane	122	121	mg/Kg	1	100	122	121	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 67610 | Date Analyzed: 2010-02-17 | Analyzed By: AG
Prep Batch: 57833 | QC Preparation: 2010-02-17 | Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.95	mg/Kg	1	2.00	<0.00410	98	75.4 - 115.7
Toluene	1.93	mg/Kg	1	2.00	<0.00310	96	78.4 - 113.6
Ethylbenzene	1.90	mg/Kg	1	2.00	<0.00240	95	76 - 114.2
Xylene	5.70	mg/Kg	1	6.00	<0.00650	95	76.9 - 113.6

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	1.89	mg/Kg	1	2.00	<0.00410	94	75.4 - 115.7	3	20
Toluene	1.86	mg/Kg	1	2.00	<0.00310	93	78.4 - 113.6	4	20
Ethylbenzene	1.87	mg/Kg	1	2.00	<0.00240	94	76 - 114.2	2	20
Xylene	5.57	mg/Kg	1	6.00	<0.00650	93	76.9 - 113.6	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)	2.03	1.85	mg/Kg	1	2.00	102	92	65 - 142.9
4-Bromofluorobenzene (4-BFB)	2.09	1.94	mg/Kg	1	2.00	104	97	43.8 - 144.9

Laboratory Control Spike (LCS-1)

QC Batch: 67611 | Date Analyzed: 2010-02-17 | Analyzed By: AG
Prep Batch: 57833 | QC Preparation: 2010-02-17 | Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	15.9	mg/Kg	1	20.0	<0.396	80	52.5 - 114.3

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	15.6	mg/Kg	1	20.0	<0.396	78	52.5 - 114.3	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)	2.15	2.02	mg/Kg	1	2.00	108	101	66.2 - 148.7
4-Bromofluorobenzene (4-BFB)	2.08	1.96	mg/Kg	1	2.00	104	98	64.1 - 127.4

Laboratory Control Spike (LCS-1)

QC Batch: 67651 | Date Analyzed: 2010-02-18 | Analyzed By: AG
Prep Batch: 57873 | QC Preparation: 2010-02-18 | Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	16.1	mg/Kg	1	20.0	<0.396	80	52.5 - 114.3

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	16.7	mg/Kg	1	20.0	<0.396	84	52.5 - 114.3	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)	1.64	2.10	mg/Kg	1	2.00	82	105	66.2 - 148.7
4-Bromofluorobenzene (4-BFB)	1.65	2.08	mg/Kg	1	2.00	82	104	64.1 - 127.4

Laboratory Control Spike (LCS-1)

QC Batch: 67652 | Date Analyzed: 2010-02-18 | Analyzed By: AG
Prep Batch: 57873 | QC Preparation: 2010-02-18 | Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.95	mg/Kg	1	2.00	<0.00410	98	75.4 - 115.7
Toluene	1.95	mg/Kg	1	2.00	<0.00310	98	78.4 - 113.6
Ethylbenzene	1.94	mg/Kg	1	2.00	<0.00240	97	76 - 114.2
Xylene	5.76	mg/Kg	1	6.00	<0.00650	96	76.9 - 113.6

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	1.98	mg/Kg	1	2.00	<0.00410	99	75.4 - 115.7	2	20
Toluene	1.96	mg/Kg	1	2.00	<0.00310	98	78.4 - 113.6	0	20
Ethylbenzene	1.95	mg/Kg	1	2.00	<0.00240	98	76 - 114.2	0	20
Xylene	5.81	mg/Kg	1	6.00	<0.00650	97	76.9 - 113.6	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)	1.76	1.81	mg/Kg	1	2.00	88	90	65 - 142.9
4-Bromofluorobenzene (4-BFB)	1.86	1.91	mg/Kg	1	2.00	93	96	43.8 - 144.9

Laboratory Control Spike (LCS-1)

QC Batch: 67676 | Date Analyzed: 2010-02-19 | Analyzed By: AR
Prep Batch: 57860 | QC Preparation: 2010-02-18 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.5	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	99.6	mg/Kg	1	100	<2.18	100	85 - 115	1	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 67711 | Date Analyzed: 2010-02-22 | Analyzed By: AR
Prep Batch: 57861 | QC Preparation: 2010-02-18 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.6	mg/Kg	1	100	<2.18	99	85 - 115

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

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

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

Laboratory Control Spike (LCS-1)

QC Batch: 67712 | Date Analyzed: 2010-02-22 | Analyzed By: AR
Prep Batch: 57862 | QC Preparation: 2010-02-18 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	101	mg/Kg	1	100	<2.18	101	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	1	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 67713 | Date Analyzed: 2010-02-22 | Analyzed By: AR
Prep Batch: 57863 | QC Preparation: 2010-02-18 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	99.6	mg/Kg	1	100	<2.18	100	85 - 115

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

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

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

Laboratory Control Spike (LCS-1)

QC Batch: 67714 | Date Analyzed: 2010-02-22 | Analyzed By: AR
Prep Batch: 57864 | QC Preparation: 2010-02-18 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.6	mg/Kg	1	100	<2.18	99	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	99.7	mg/Kg	1	100	<2.18	100	85 - 115	1	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 67715 Date Analyzed: 2010-02-22 Analyzed By: AR
Prep Batch: 57865 QC Preparation: 2010-02-18 Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.7	mg/Kg	1	100	<2.18	99	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	101	mg/Kg	1	100	<2.18	101	85 - 115	2	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 67716 Date Analyzed: 2010-02-22 Analyzed By: AR
Prep Batch: 57866 QC Preparation: 2010-02-18 Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.6	mg/Kg	1	100	<2.18	99	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	99.9	mg/Kg	1	100	<2.18	100	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: 222231

QC Batch: 67533 Date Analyzed: 2010-02-15 Analyzed By: kg
Prep Batch: 57770 QC Preparation: 2010-02-15 Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	221	mg/Kg	1	250	<5.86	88	35.2 - 167.1

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	228	mg/Kg	1	250	<5.86	91	35.2 - 167.1	3	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	102	108	mg/Kg	1	100	102	108	70 - 130

Matrix Spike (MS-1) Spiked Sample: 222536

QC Batch: 67578 | Date Analyzed: 2010-02-16 | Analyzed By: kg
Prep Batch: 57807 | QC Preparation: 2010-02-16 | Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	254	mg/Kg	1	250	<5.86	102	35.2 - 167.1

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	254	mg/Kg	1	250	<5.86	102	35.2 - 167.1	0	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	117	mg/Kg	1	100	117	117	70 - 130

Matrix Spike (MS-1) Spiked Sample: 222769

QC Batch: 67610 | Date Analyzed: 2010-02-17 | Analyzed By: AG
Prep Batch: 57833 | QC Preparation: 2010-02-17 | Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.95	mg/Kg	1	2.00	<0.00410	98	57.7 - 140.7
Toluene	2.06	mg/Kg	1	2.00	0.1044	98	53.4 - 146.6
Ethylbenzene	2.52	mg/Kg	1	2.00	0.4605	103	62.1 - 141.6
Xylene	8.56	mg/Kg	1	6.00	2.3881	103	61.2 - 142.7

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	1.94	mg/Kg	1	2.00	<0.00410	97	57.7 - 140.7	0	20
Toluene	2.10	mg/Kg	1	2.00	0.1044	100	53.4 - 146.6	2	20
Ethylbenzene	2.71	mg/Kg	1	2.00	0.4605	112	62.1 - 141.6	7	20
Xylene	9.46	mg/Kg	1	6.00	2.3881	118	61.2 - 142.7	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
Trifluorotoluene (TFT)	1.60	1.74	mg/Kg	1	2	80	87	62.7 - 139.6
4-Bromofluorobenzene (4-BFB)	2.13	2.39	mg/Kg	1	2	106	120	49.6 - 146.7

Matrix Spike (MS-1) Spiked Sample: 222240

QC Batch: 67611 | Date Analyzed: 2010-02-17 | Analyzed By: AG
Prep Batch: 57833 | QC Preparation: 2010-02-17 | Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	13.9	mg/Kg	1	20.0	<0.396	70	10 - 198.3

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
GRO [3]	17.0	mg/Kg	1	20.0	<0.396	85	10 - 198.3	20	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.45	2.68	mg/Kg	1	2	122	134	65.5 - 143
4-Bromofluorobenzene (4-BFB)	2.46	2.69	mg/Kg	1	2	123	134	58.6 - 140

Matrix Spike (MS-1) Spiked Sample: 222316

QC Batch: 67651 | Date Analyzed: 2010-02-18 | Analyzed By: AG
Prep Batch: 57873 | QC Preparation: 2010-02-18 | Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	17.6	mg/Kg	1	20.0	<0.396	88	10 - 198.3

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

[3] MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	15.9	mg/Kg	1	20.0	<0.396	80	10 - 198.3	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
Trifluorotoluene (TFT)	[4]	1.59	0.978	mg/Kg	1	2	80	49	65.5 - 143
4-Bromofluorobenzene (4-BFB)	[5]	1.73	1.09	mg/Kg	1	2	86	54	58.6 - 140

Matrix Spike (MS-1) Spiked Sample: 222371

QC Batch: 67652 | Date Analyzed: 2010-02-18 | Analyzed By: AG
Prep Batch: 57873 | QC Preparation: 2010-02-18 | Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	2.13	mg/Kg	1	2.00	<0.00410	106	57.7 - 140.7
Toluene	2.16	mg/Kg	1	2.00	<0.00310	108	53.4 - 146.6
Ethylbenzene	2.22	mg/Kg	1	2.00	<0.00240	111	62.1 - 141.6
Xylene	6.62	mg/Kg	1	6.00	<0.00650	110	61.2 - 142.7

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	1.96	mg/Kg	1	2.00	<0.00410	98	57.7 - 140.7	8	20
Toluene	1.97	mg/Kg	1	2.00	<0.00310	98	53.4 - 146.6	9	20
Ethylbenzene	2.02	mg/Kg	1	2.00	<0.00240	101	62.1 - 141.6	9	20
Xylene	6.05	mg/Kg	1	6.00	<0.00650	101	61.2 - 142.7	9	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)	1.62	1.27	mg/Kg	1	2	81	64	62.7 - 139.6
4-Bromofluorobenzene (4-BFB)	1.70	1.35	mg/Kg	1	2	85	68	49.6 - 146.7

Matrix Spike (MS-1) Spiked Sample: 222295

QC Batch: 67676 | Date Analyzed: 2010-02-19 | Analyzed By: AR
Prep Batch: 57860 | QC Preparation: 2010-02-18 | Prepared By: AR

[4]Surrogate out due to peak interference.
[5]Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	11700	mg/Kg	100	10000	1770	99	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	11800	mg/Kg	100	10000	1770	100	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: 222305

QC Batch: 67711 | Date Analyzed: 2010-02-22 | Analyzed By: AR
Prep Batch: 57861 | QC Preparation: 2010-02-18 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	11100	mg/Kg	100	10000	1640	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	11300	mg/Kg	100	10000	1640	97	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: 222315

QC Batch: 67712 | Date Analyzed: 2010-02-22 | Analyzed By: AR
Prep Batch: 57862 | QC Preparation: 2010-02-18 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10600	mg/Kg	100	10000	<218	106	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	10600	mg/Kg	100	10000	<218	106	85 - 115	0	20

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

Matrix Spike (MS-1) Spiked Sample: 222325

QC Batch: 67713 | Date Analyzed: 2010-02-22 | Analyzed By: AR
Prep Batch: 57863 | QC Preparation: 2010-02-18 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	11100	mg/Kg	100	10000	793	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	11200	mg/Kg	100	10000	793	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: 222335

QC Batch: 67714 | Date Analyzed: 2010-02-22 | Analyzed By: AR
Prep Batch: 57864 | QC Preparation: 2010-02-18 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10600	mg/Kg	100	10000	460	101	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	10700	mg/Kg	100	10000	460	102	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: 222345

QC Batch: 67715 | Date Analyzed: 2010-02-22 | Analyzed By: AR
Prep Batch: 57865 | QC Preparation: 2010-02-18 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10100	mg/Kg	100	10000	<218	101	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	10200	mg/Kg	100	10000	<218	102	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: 222348

QC Batch: 67716 | Date Analyzed: 2010-02-22 | Analyzed By: AR
Prep Batch: 57866 | QC Preparation: 2010-02-18 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10300	mg/Kg	100	10000	<218	101	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	10400	mg/Kg	100	10000	<218	102	85 - 115	1	20

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

Standard (CCV-2)

QC Batch: 67533 Date Analyzed: 2010-02-15 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	281	112	80 - 120	2010-02-15

Standard (CCV-3)

QC Batch: 67533 Date Analyzed: 2010-02-15 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	285	114	80 - 120	2010-02-15

Standard (CCV-4)

QC Batch: 67533 Date Analyzed: 2010-02-15 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	281	112	80 - 120	2010-02-15

Standard (CCV-1)

QC Batch: 67578 Date Analyzed: 2010-02-16 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	257	103	80 - 120	2010-02-16

Standard (CCV-2)

QC Batch: 67578 Date Analyzed: 2010-02-16 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	295	118	80 - 120	2010-02-16

Standard (CCV-2)

QC Batch: 67610 Date Analyzed: 2010-02-17 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	0.100	100	80 - 120	2010-02-17
Toluene		mg/Kg	0.100	0.0990	99	80 - 120	2010-02-17
Ethylbenzene		mg/Kg	0.100	0.0996	100	80 - 120	2010-02-17
Xylene		mg/Kg	0.300	0.298	99	80 - 120	2010-02-17

Standard (CCV-3)

QC Batch: 67610 Date Analyzed: 2010-02-17 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	0.0941	94	80 - 120	2010-02-17
Toluene		mg/Kg	0.100	0.0932	93	80 - 120	2010-02-17
Ethylbenzene		mg/Kg	0.100	0.0923	92	80 - 120	2010-02-17
Xylene		mg/Kg	0.300	0.275	92	80 - 120	2010-02-17

Standard (CCV-2)

QC Batch: 67611 Date Analyzed: 2010-02-17 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	2010-02-17

Standard (CCV-3)

QC Batch: 67611 Date Analyzed: 2010-02-17 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	1.09	109	80 - 120	2010-02-17

Standard (CCV-1)

QC Batch: 67651 Date Analyzed: 2010-02-18 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	1.19	119	80 - 120	2010-02-18

Standard (CCV-2)

QC Batch: 67651 Date Analyzed: 2010-02-18 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	1.01	101	80 - 120	2010-02-18

Standard (CCV-1)

QC Batch: 67652 Date Analyzed: 2010-02-18 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	0.0979	98	80 - 120	2010-02-18
Toluene		mg/Kg	0.100	0.0970	97	80 - 120	2010-02-18
Ethylbenzene		mg/Kg	0.100	0.0964	96	80 - 120	2010-02-18
Xylene		mg/Kg	0.300	0.287	96	80 - 120	2010-02-18

Standard (CCV-2)

QC Batch: 67652 Date Analyzed: 2010-02-18 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	2010-02-18
Toluene		mg/Kg	0.100	0.0903	90	80 - 120	2010-02-18
Ethylbenzene		mg/Kg	0.100	0.0898	90	80 - 120	2010-02-18

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	0.268	89	80 - 120	2010-02-18

Standard (ICV-1)

QC Batch: 67676 Date Analyzed: 2010-02-19 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.4	99	85 - 115	2010-02-19

Standard (CCV-1)

QC Batch: 67676 Date Analyzed: 2010-02-19 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2010-02-19

Standard (ICV-1)

QC Batch: 67711 Date Analyzed: 2010-02-22 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	104	104	85 - 115	2010-02-22

Standard (CCV-1)

QC Batch: 67711 Date Analyzed: 2010-02-22 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	96.2	96	85 - 115	2010-02-22

Standard (ICV-1)

QC Batch: 67712 Date Analyzed: 2010-02-22 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.0	99	85 - 115	2010-02-22

Standard (CCV-1)

QC Batch: 67712 Date Analyzed: 2010-02-22 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2010-02-22

Standard (ICV-1)

QC Batch: 67713 Date Analyzed: 2010-02-22 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	2010-02-22

Standard (CCV-1)

QC Batch: 67713 Date Analyzed: 2010-02-22 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2010-02-22

Standard (ICV-1)

QC Batch: 67714 Date Analyzed: 2010-02-22 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.5	100	85 - 115	2010-02-22

Standard (CCV-1)

QC Batch: 67714 Date Analyzed: 2010-02-22 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2010-02-22

Standard (ICV-1)

QC Batch: 67715 Date Analyzed: 2010-02-22 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	2010-02-22

Standard (CCV-1)

QC Batch: 67715 Date Analyzed: 2010-02-22 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	2010-02-22

Standard (ICV-1)

QC Batch: 67716 Date Analyzed: 2010-02-22 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.8	100	85 - 115	2010-02-22

Standard (CCV-1)

QC Batch: 67716 Date Analyzed: 2010-02-22 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	2010-02-22

Order #: 1002121a

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 6

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME:	SITE MANAGER:
COG	Ike Tavarez

PROJECT NO.:	PROJECT NAME:
164-6400392	COG/Willow IB Eddy Co, NM

LAB I.D. NUMBER	DATE 2010	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH TX1005 (Ext. to C35)	TPH 8015 MOD	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chlorides	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
222289	2-9		S		X	AH-1 0-1'	X				X			X											X				
290						AH-1 1-1.5'																								
291						AH-1 2-2.5'																								
292						AH-1 3-3.5'																								
293						AH-1 4-4.5'																								
294						AH-2 0-1'									X															
295						AH-2 1-1.5'																								
296						AH-2 2-2.5'																								
297						AH-2 3-3.5'																								
298	V		V		V	AH-2 4-4.5'	V				V																			

RELINQUISHED BY: (Signature)	Date: 2-11-10 Time: 1600	RECEIVED BY: (Signature)	Date: 2/11/10 Time: 16:00	SAMPLED BY: (Print & Initial) Robert Loubbs Jr	Date: 2-11-10 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: Monte PHONE: DATE: TIME:
RECEIVED BY: (Signature)

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4.0°c iMact

REMARKS: If total TPH exceeds 5,000 mg/kg run deeper samples Run 5' BTEX on Highest TPH

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

Order #: 100 21212

Analysis Request of Chain of Custody Record

PAGE: 2 OF: 6

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME:	SITE MANAGER:
COG	Ike Tavarez

PROJECT NO.:	PROJECT NAME:
114-6400392	COG / Willow 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
222299	2-5		S		X	AH-2 5'-5.5'	1				X	
300						AH-2 6'-6.5'						
301						AH-2 7'-7.5'						
302						AH-2 8'-8.5'						
303						AH-2 9'-9.5'						
304						AH-3 0-1						
305						AH-3 1'-1.5'						
306						AH-3 2'-2.5'						
307						AH-3 3'-3.5'						
308	"		"		"	AH-3 4'-4.5'	"				"	

BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 8081/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
												X				
	X															

RELINQUISHED BY: (Signature) Robert Rubbs Jr	Date: 2-11-10 Time: 1600	RECEIVED BY: (Signature)	Date: 2/11/10 Time: 16:00
SAMPLED BY: (Print & Initial) Robert Rubbs Jr	Date: 2-11-10 Time: 1004		
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: Trace PHONE:	RECEIVED BY: (Signature) DATE: TIME:		RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4.0°C intact

REMARKS: If total TPH exceeds 5,000 mg/kg run deeper samples Run 5 BTEX on highest TPH

Order #: 10021212

Analysis Request of Chain of Custody Record

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

PAGE: 3 OF: 6

ANALYSIS REQUEST (Circle or Specify Method No.)

CLIENT NAME:	SITE MANAGER:
COG	Ike Tavarez

PROJECT NO.:	PROJECT NAME:
114-6400352	COG / Williams 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. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Hr 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
222309	2-5-10		S		X	AH-4 0-1'	1				X			X											X				
310						AH-4 1-1.5'																							
311						AH-4 2'-2.5'																							
312						AH-4 3'-3.5'																							
313						AH-5 0-1'									X														
314						AH-5 1-1.5'																							
315						AH-5 2'-2.5'																							
316						AH-6 0-1'									X														
317						AH-6 1-1.5'																							
318	↓		↓		↓	AH-6 2-2.5	↓				↓																		

RELINQUISHED BY: (Signature) Robert Love Jr	Date: 2-11-10 Time: 1600	RECEIVED BY: (Signature)	Date: 2/11/10 Time: 16:00
SAMPLED BY: (Print & Initial) Robert Love Jr	Date: 2-11-10 Time: 1010		
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS	AIRBILL #: OTHER:		
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
TETRA TECH CONTACT PERSON: Ike Tavarez	Results by:		
RECEIVING LABORATORY: Xenco ADDRESS: CITY: Midland STATE: TX ZIP: CONTACT: Xenco PHONE:	RECEIVED BY: (Signature) DATE: TIME:		RUSH Charges Authorized: Yes No
SAMPLE CONDITION WHEN RECEIVED: 4.0°C Intact	REMARKS: If sol TPH exceeds 5,000 mg/kg run deeper samples		Run 5 BTEX on highest TPH

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

Order #: 1002121Z

Analysis Request of Chain of Custody Record

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

PAGE: 4 OF: 6

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-6400357

PROJECT NAME: COG / Willow 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
222319	Z-9		S		X	AH-6 3'-3.5'	1				X	
320						AH-6 4'-4.5'						
321						AH-6 5'-5.5'						
322						AH-7 0-1'						
323						AH-7 1'-1.5'						
324						AH-7 2'-2.5'						
325						AH-7 3'-3.5'						
326						AH-7 4'-4.5'						
327						AH-7 5'-5.5'						
328	↓		Y		↓	AH-7 6'-6.5'	↓				Y	

ANALYSIS REQUEST (Circle or Specify Method No.)

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

RELINQUISHED BY: (Signature) Robert Lewis Jr. Date: 2-11-10 Time: 1600

RECEIVED BY: (Signature) Date: 2/11/10 Time: 16:00

SAMPLED BY: (Print & Initial) Robert Lewis Jr. Date: 2-11-10 Time: 1617

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: RECEIVED BY: (Signature)

ADDRESS: CITY: STATE: ZIP:

CONTACT: PHONE: DATE: TIME:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4.0°C intact

REMARKS: If total TPH exceeds 5,000 mg/kg run duplicate samples. Run 5 BTEX on highest TPH

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

Order #: 1002121Z

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.: 114-6406352

PROJECT NAME: COG / Willow TB Eddy Co, NM

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	DATE 2010	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 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
222329	2-9		S		X	AH-7 7'-7.5'	1				X													X				
330						AH-7 8'-8.5'																						
331						AH-7 9'-9.5'																						
332	2/10					AH-8 0-1								X														
333						AH-8 1'-1.5'																						
334						AH-8 2'-2.5'																						
335						AH-8 3'-3.5'																						
336						AH-8 4'-4.5'																						
337						AH-8 5'-5.5'																						
338	↓		↓		↓	AH-9 0-1	↓				↓			X														

RELINQUISHED BY: (Signature) — Date: 2-11-10 Time: 1600 — RECEIVED BY: (Signature) — Date: 2/11/10 Time: 16:00 — SAMPLED BY: (Print & Initial) Robert Stubbs Jr — Date: 2-11-10 Time: 1022

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

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

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

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4.0°c intact

REMARKS: If total TPH exceeds 5,000 mg/kg run dup per samples — Run 5 BTEX on highest TPH

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

Order #: 100 21212

Analysis Request of Chain of Custody Record

PAGE: 6 OF: 6

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME:	SITE MANAGER:
COG	Ike Tavarez

PROJECT NO.:	PROJECT NAME:
114-6400397	COG / Willow 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. TX1005 (Ext. to C35)	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	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
222339	2-10 2016		S		X	AH-9 1-1.5	1				X													X				
340						AH-9 2'-2.5'																							
341						AH-9 3'-3.5'																							
342						AH-9 4'-4.5'																							
343						AH-9 5'-5.5'																							
344						AH-10 0-1								X															
345						AH-10 1'-1.5'																							
346						AH-10 2'-2.5'																							
347						AH-10 3'-3.5'																							
348	↓		↓		↓	AH-10 4'-4.5'	1				↓																		

RELINQUISHED BY: (Signature)	Date: 2-11-16 Time: 1600	RECEIVED BY: (Signature)	Date: 2-11-16 Time: 1600	SAMPLED BY: (Print & Initial) Robert Lubbers	Date: 2-11-16 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: Xenco ADDRESS: CITY: Midland STATE: TX ZIP: CONTACT: Jacoba PHONE:		RECEIVED BY: (Signature) DATE: TIME:			RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4.0°C Intact

REMARKS: If total TPH exceeds 5000 mg/kg run deeper samples. Run 5 BTEX on highest TPH

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

Summary Report

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

Report Date: August 30, 2010

Work Order: 10082022

Project Location: Eddy Co., NM
Project Name: COG/Willow TB
Project Number: 114-6400392

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
242018	CS-1 10'	soil	2010-08-18	00:00	2010-08-20
242019	CS-1 12'	soil	2010-08-18	00:00	2010-08-20
242020	CS-1 14'	soil	2010-08-18	00:00	2010-08-20
242021	CS-2 6'	soil	2010-08-18	00:00	2010-08-20
242022	CS-2 8'	soil	2010-08-18	00:00	2010-08-20
242023	CS-2 10'	soil	2010-08-18	00:00	2010-08-20
242024	CS-2 12'	soil	2010-08-18	00:00	2010-08-20
242025	CS-2 14'	soil	2010-08-18	00:00	2010-08-20

Sample: 242018 - CS-1 10'

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

Sample: 242019 - CS-1 12'

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

Sample: 242020 - CS-1 14'

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

Sample: 242021 - CS-2 6'

Param	Flag	Result	Units	RL
Chloride		**875**	mg/Kg	4.00

Sample: 242022 - CS-2 8'

Param	Flag	Result	Units	RL
Chloride		**618**	mg/Kg	4.00

Sample: 242023 - CS-2 10'

Param	Flag	Result	Units	RL
Chloride		**2200**	mg/Kg	4.00

Sample: 242024 - CS-2 12'

Param	Flag	Result	Units	RL
Chloride		**4730**	mg/Kg	4.00

Sample: 242025 - CS-2 14'

Param	Flag	Result	Units	RL
Chloride		**445**	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: August 30, 2010

Work Order: 10082022

Project Location: Eddy Co., NM
Project Name: COG/Willow TB
Project Number: 114-6400392

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
242018	CS-1 10'	soil	2010-08-18	00:00	2010-08-20
242019	CS-1 12'	soil	2010-08-18	00:00	2010-08-20
242020	CS-1 14'	soil	2010-08-18	00:00	2010-08-20
242021	CS-2 6'	soil	2010-08-18	00:00	2010-08-20
242022	CS-2 8'	soil	2010-08-18	00:00	2010-08-20
242023	CS-2 10'	soil	2010-08-18	00:00	2010-08-20
242024	CS-2 12'	soil	2010-08-18	00:00	2010-08-20
242025	CS-2 14'	soil	2010-08-18	00:00	2010-08-20

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch

basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

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

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

Standard Flags

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

Case Narrative

Samples for project COG/Willow TB were received by TraceAnalysis, Inc. on 2010-08-20 and assigned to work order 10082022. Samples for work order 10082022 were received intact at a temperature of 3.2 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	62584	2010-08-26 at 09:38	73007	2010-08-27 at 15:05

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 10082022 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: 242018 - CS-1 10'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73007	Date Analyzed:	2010-08-27	Analyzed By:	AR
Prep Batch:	62584	Sample Preparation:	2010-08-26	Prepared By:	AR

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

Sample: 242019 - CS-1 12'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73007	Date Analyzed:	2010-08-27	Analyzed By:	AR
Prep Batch:	62584	Sample Preparation:	2010-08-26	Prepared By:	AR

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

Sample: 242020 - CS-1 14'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73007	Date Analyzed:	2010-08-27	Analyzed By:	AR
Prep Batch:	62584	Sample Preparation:	2010-08-26	Prepared By:	AR

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

Sample: 242021 - CS-2 6'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73007	Date Analyzed:	2010-08-27	Analyzed By:	AR
Prep Batch:	62584	Sample Preparation:	2010-08-26	Prepared By:	AR

continued ...

sample 242021 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**875**	mg/Kg	50	4.00

Sample: 242022 - CS-2 8'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73007	Date Analyzed:	2010-08-27	Analyzed By:	AR
Prep Batch:	62584	Sample Preparation:	2010-08-26	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**618**	mg/Kg	50	4.00

Sample: 242023 - CS-2 10'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73007	Date Analyzed:	2010-08-27	Analyzed By:	AR
Prep Batch:	62584	Sample Preparation:	2010-08-26	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**2200**	mg/Kg	100	4.00

Sample: 242024 - CS-2 12'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73007	Date Analyzed:	2010-08-27	Analyzed By:	AR
Prep Batch:	62584	Sample Preparation:	2010-08-26	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**4730**	mg/Kg	100	4.00

Sample: 242025 - CS-2 14'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73007	Date Analyzed:	2010-08-27	Analyzed By:	AR
Prep Batch:	62584	Sample Preparation:	2010-08-26	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**445**	mg/Kg	50	4.00

Method Blank (1) QC Batch: 73007

QC Batch:	73007	Date Analyzed:	2010-08-27	Analyzed By:	AR
Prep Batch:	62584	QC Preparation:	2010-08-26	Prepared By:	AR

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

Laboratory Control Spike (LCS-1)

QC Batch:	73007	Date Analyzed:	2010-08-27	Analyzed By:	AR
Prep Batch:	62584	QC Preparation:	2010-08-26	Prepared By:	AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	97.4	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.

Matrix Spike (MS-1) Spiked Sample: 242028

QC Batch:	73007	Date Analyzed:	2010-08-27	Analyzed By:	AR
Prep Batch:	62584	QC Preparation:	2010-08-26	Prepared By:	AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	9730	mg/Kg	100	10000	<218	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	9960	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.

Standard (ICV-1)

QC Batch: 73007 Date Analyzed: 2010-08-27 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	98.6	99	85 - 115	2010-08-27

Standard (CCV-1)

QC Batch: 73007 Date Analyzed: 2010-08-27 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2010-08-27

WO #: 100202

Analysis Request of Chain of Custody Record

PAGE: 1 Of 1

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

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.:

PROJECT NAME: COG/W. Haw FB 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
242018	8/18		S		X	CS-1 10'	1				X													X				
019						CS-1 12'																						
020						CS-1 14'																						
021						CS-2 6'																						
022						CS-2 8'																						
023						CS-2 10'																						
024						CS-2 12'																						
025	↓		↓		↓	CS-2 14'	↓				↓													↓				

RELINQUISHED BY: (Signature) Robert Munoz Date: 8-20-10 Time: 1522

RECEIVED BY: (Signature) Date: 8-20-10 Time: 15:22

SAMPLED BY: (Print & Initial) Robert Grubbs Jr Date: 8-19-10 Time: 1000

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

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

AIRBILL #:

OTHER:

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RECEIVING LABORATORY: Trace

RECEIVED BY: (Signature)

ADDRESS:

CITY: Midland STATE: TX ZIP:

CONTACT: Rosela PHONE: DATE: TIME:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 3.2°c intact

REMARKS: Call 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.