SITE INFORMATION

Report Type: Work Plan

General Site Information:	
Site:	Biscuit Hill SWD
Company:	COG Operating LLC
Section, Township and Range	Section 29, T17S, R31E Unit Letter - O
Lease Number:	
County:	Eddy County
GPS:	32.800430° N, 103.889770° W
Surface Owner:	Federal
Mineral Owner:	
Directions:	At the intersection of Hwy 82 and Shugart Road go south on Shugart approximatly 1 mile. Turn West on caliche lease road and go approximaly 0.3 miles to the facility access road to the north.

Release Data:	
Date Released:	1/14/2011
Type Release:	Produced Water
Source of Contamination:	Partially open valve
Fluid Released:	15 bbls
Fluids Recovered:	0 bbls

Official Communication:			
Name:	Pat Ellis		Aaron Hale
Company:	COG Operating, LLC		Tetra Tech
Address:	550 W. Texas Ave. Ste. 1300		1910 N. Big Spring
P.O. Box			
City:	Midland Texas, 79701		Midland, Texas
Phone number:	(432) 686-3023		(432) 682-4559
Fax:	(432) 684-7137		
Email:	pellis@conchoresources.com		aaron.hale@tetratech.com

Ranking Criteria

Depth to Groundwater:	*Ranking Score*	*Site Data*
<50 ft	20	
50-99 ft	10	
>100 ft.	0	**0**

WellHead Protection:	*Ranking Score*	*Site Data*
Water Source <1,000 ft., Private <200 ft.	*20*	
Water Source >1,000 ft., Private >200 ft.	***0***	*0*

Surface Body of Water:	*Ranking Score*	*Site Data*
<200 ft.	*20*	
200 ft - 1,000 ft.	10	
>1,000 ft.	**0**	*0*
Total Ranking Score:	0	

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

TETRA TECH

April 12, 2011

RECEIVED
APR 22 2011
NMOCD ARTESIA

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

Re: Work Plan for the COG Operating LLC.
Biscuit Hill SWD
Unit O, Section 29, 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 Biscuit Hills SWD, Unit O, Section 29, Township 17 South, Range 31 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.800430°, W 103.889770°. 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 January 14, 2011, and released approximately fifteen (15) barrels of produced fluids due to partially opened load line valve. The valve was immediately closed. No fluid was recovered. The spill area adjacent to the load line was approximately 3' wide and 100' in length along the eastern side of the tank battery berm. The spill then migrated south in a path 2' wide and 200' in length to finally accumulate in an area approximately 20' x 20' in the adjacent pasture. The initial C-141 form is enclosed in Appendix A.

Groundwater

The United States Geological Survey (USGS) Well Reports and the New Mexico Office of the State Engineer (OSE) did not list any wells in Section 29. The closest well to Section 29 is located in Section 34. Water in this well is reported at 271 feet below ground surface (bgs). According to the NMOCD groundwater map, the average depth to groundwater in this area is greater than 380' below surface. The groundwater data is shown in Appendix B.

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

Regulatory

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

Soil Assessment and Analytical Results

On February 9, 2011, Tetra Tech personnel inspected and sampled the spill area. A total of six (6) auger holes (AH-1 through AH-6) 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 with the exception of samples collected from the surface to 1.5' bgs. Generally, chloride concentrations decreased with depth with some historic chloride concentrations observed in the bottom of AH-2. This chloride encountered at this depth appears to be historic based on the soil chloride profile and will be further addressed as part of the remediation effort. The chloride concentrations observed in AH-1 and 2 at a depth of 4.5' to 5.0' bgs will be further delineated with the use of the backhoe while excavating activities are conducted at the site.

Work Plan

COG proposes to remove impacted material as highlighted (green) in Table 1. Once the areas are excavated to the appropriate depths, the excavation will be backfilled with clean soil. Upon completion, a final report will be submitted to the NMOCD.

The area near AH-1 will be excavated to a depth of approximately 3' bgs and further delineated with a backhoe. The area near AH-3 will be excavated to a depth of approximately 7' below surface and the area around AH-5 and AH-6 will be excavated to a depth of approximately 2' bgs. Confirmation samples will be collected and lab analysis will be provided for closure. In addition, while excavating AH-1, the backhoe will be utilized to collect soil samples in two foot intervals in the vicinity of AH-1 and AH-2 to as deep as the backhoe can safely excavate. These samples will be submitted for laboratory analysis of chlorides.

The aerial photo (Figure 2) for the site and the analytical data indicates that the spill may have migrated onto a closed reserve pit for a well directly south of the site. If it is determined that during the additional assessment activities planned for AH-1 or AH-2 or the excavation activities planned for the site are within a closed reserve pit, the assessment or remediation activities will be stopped. Tetra Tech will immediately notify the OCD and the excavation will be capped with a liner if the excavation is greater than 4 feet in depth.

The area near AH-4 did not have soils samples that exceeded 1,000 mg/kg. No excavation activities are planned for these areas. The proposed excavation areas and proposed depths are shown on Figure 4.

If you have any questions or comments concerning the assessment or the proposed remediation activities for this site, please call me at (432) 682-4559.

Respectfully submitted,
TETRA TECH, INC.

Aaron M. Hale
Senior Project Manager

cc: Pat Ellis – COG
cc: Jim Amos – BLM
cc: Terry Gregston – BLM

FIGURES

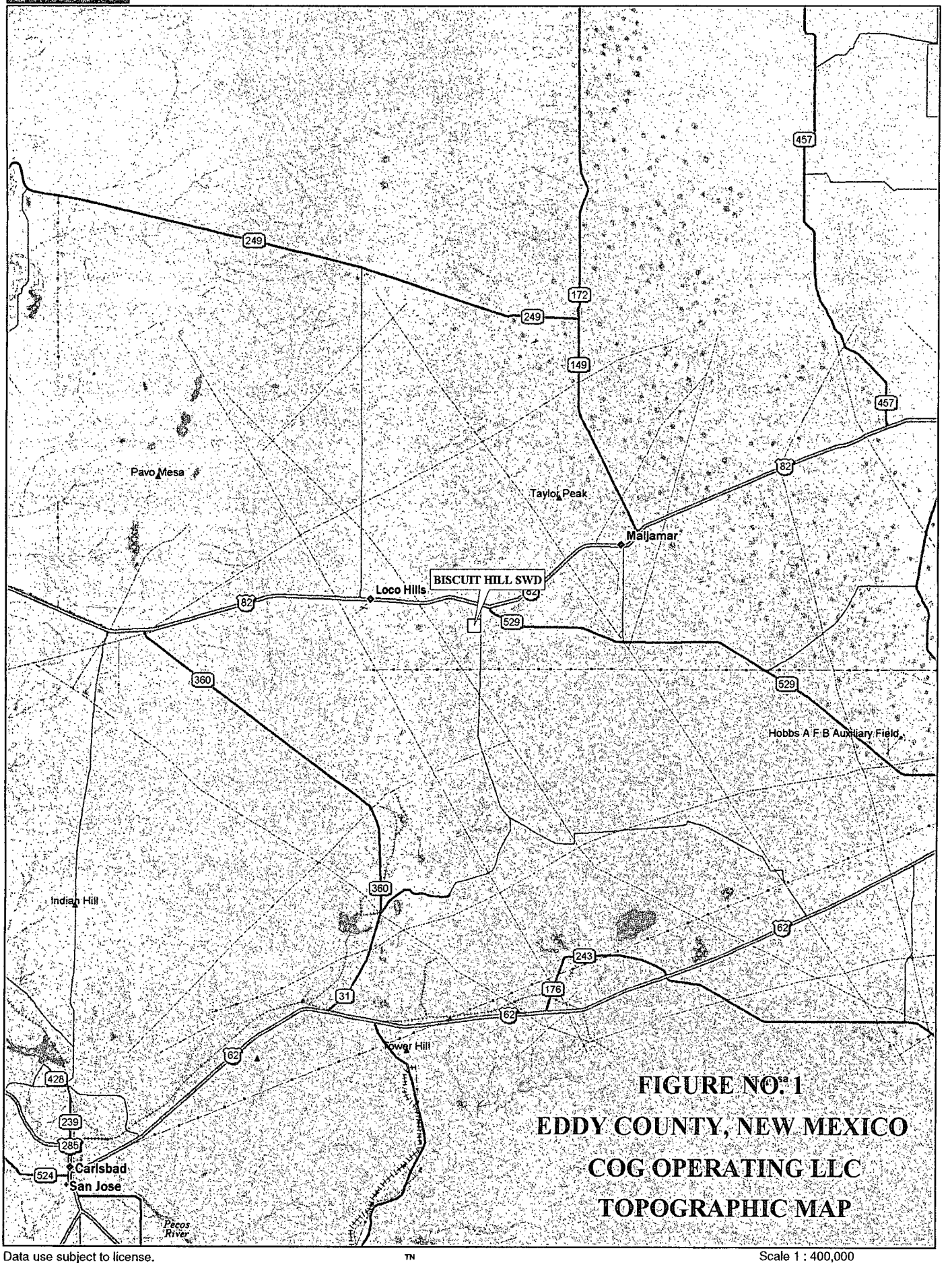
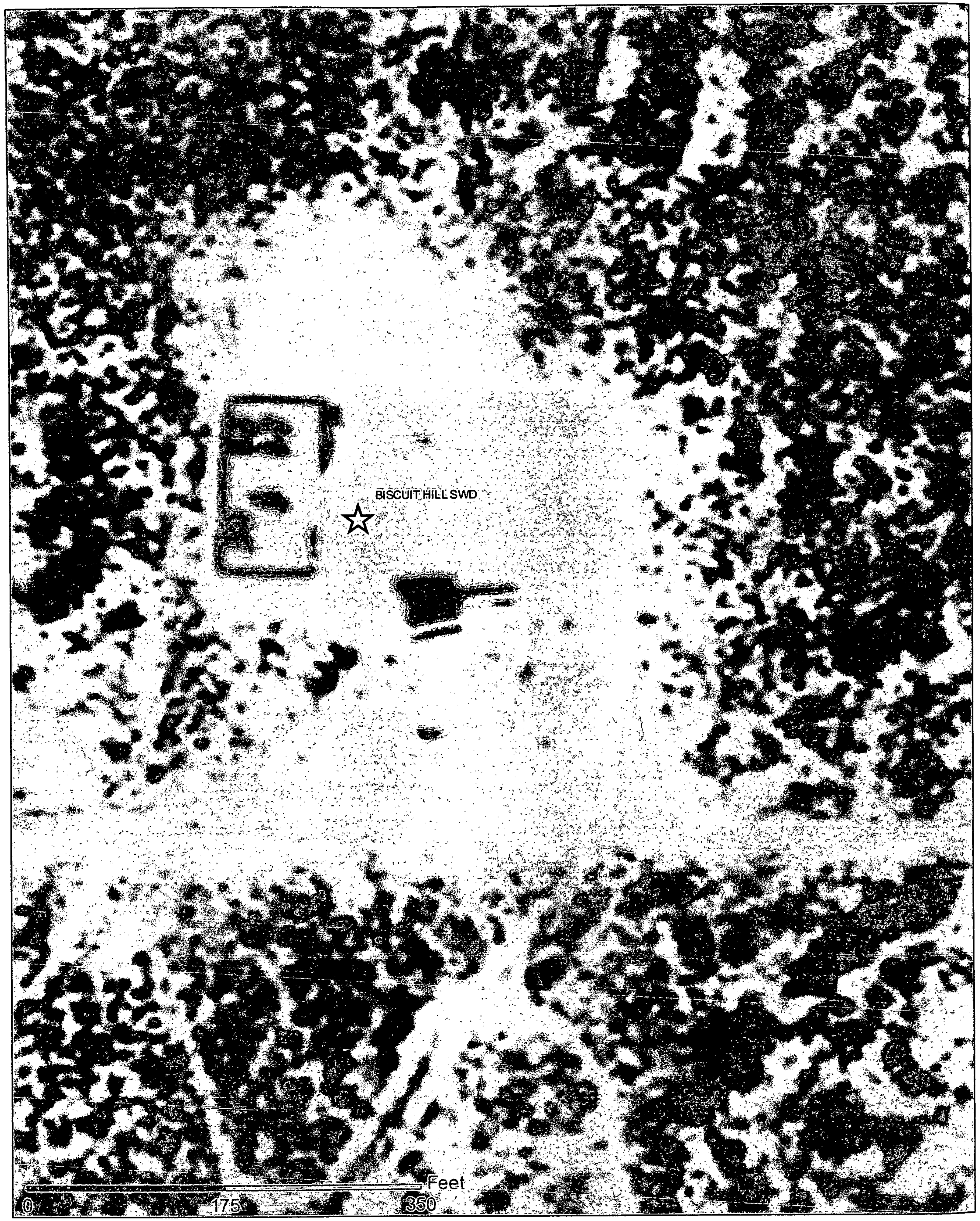
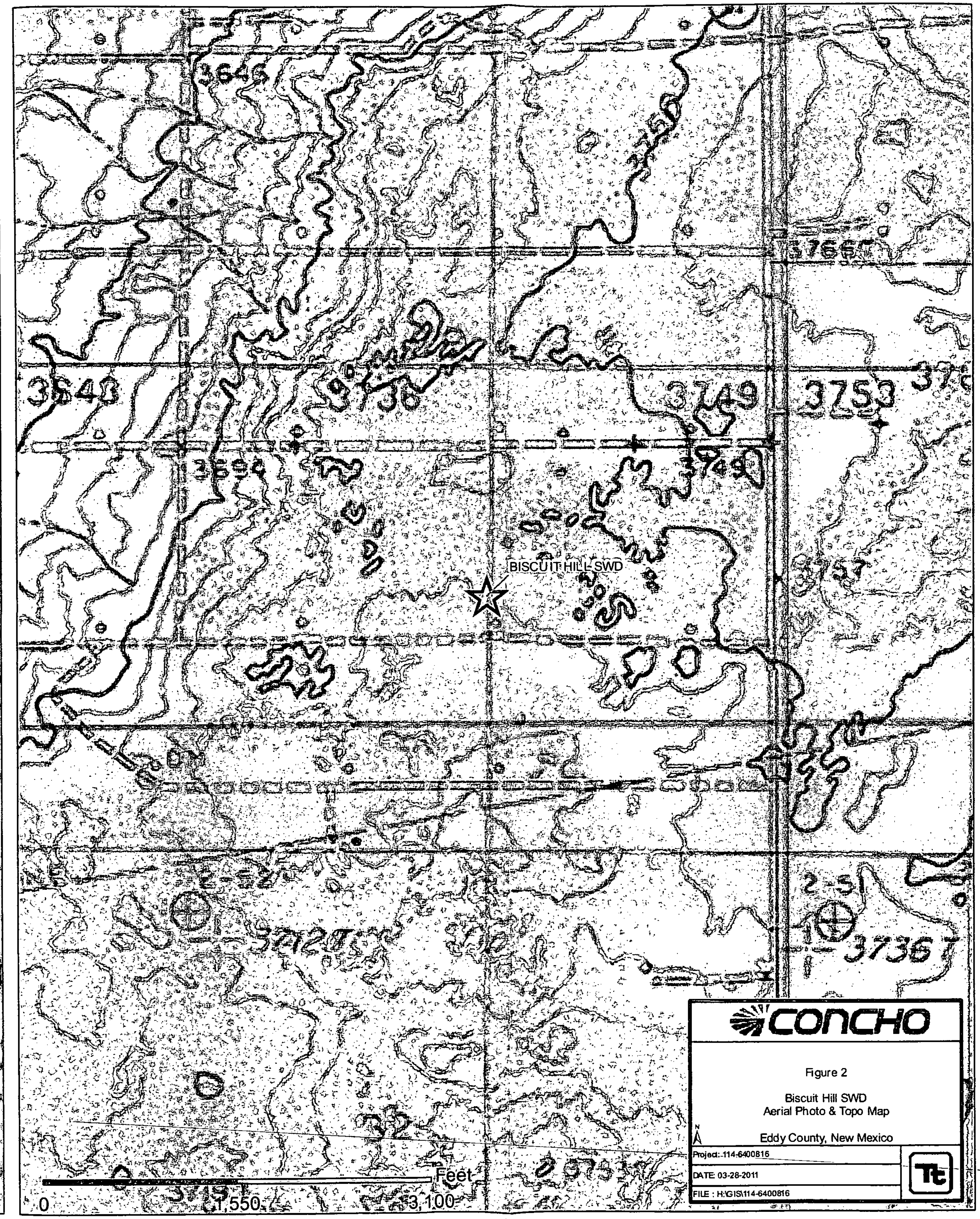


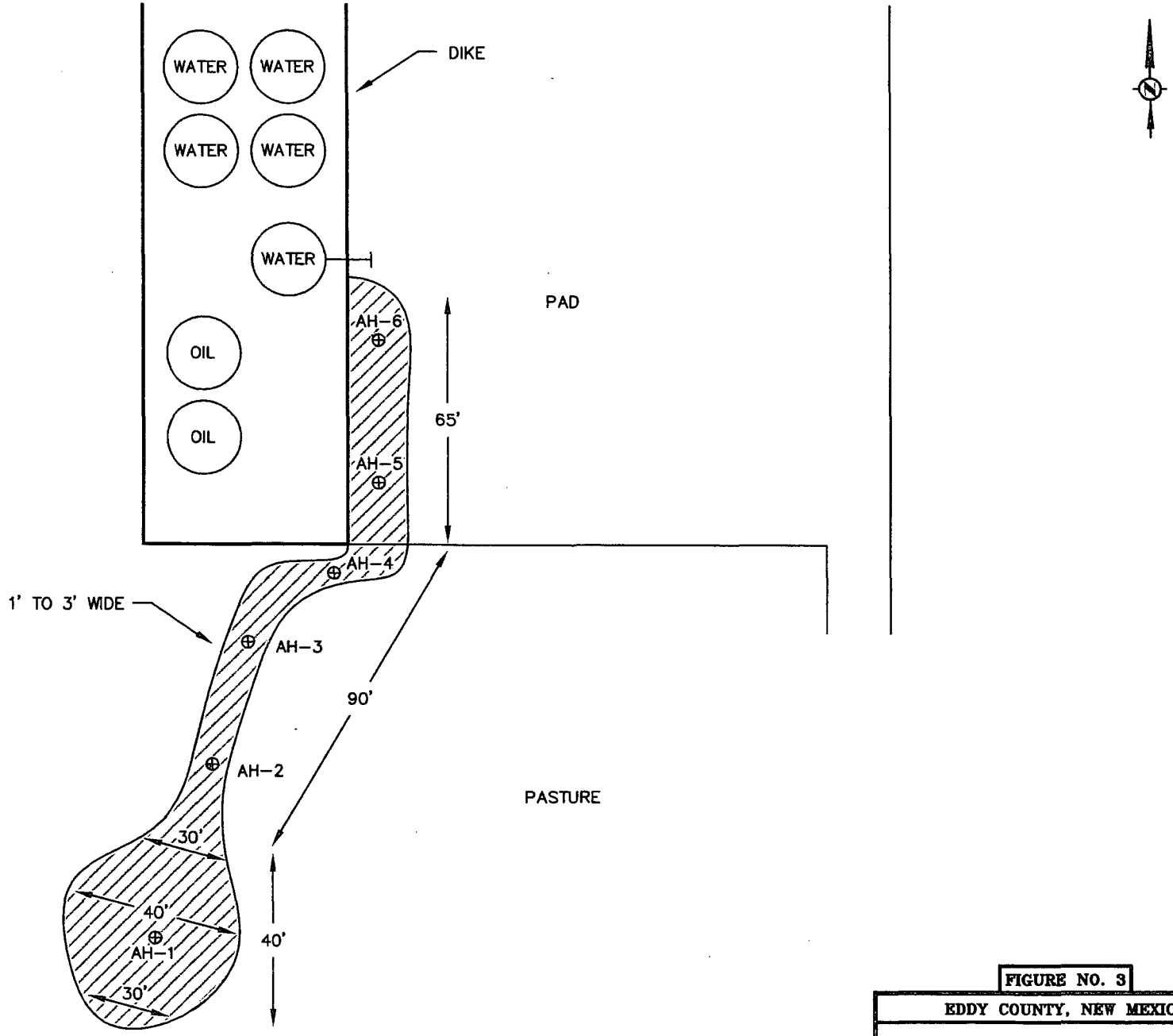
FIGURE NO. 1
EDDY COUNTY, NEW MEXICO
COG OPERATING LLC
TOPOGRAPHIC MAP

TN
MN (7.8°E)

Scale 1 : 400,000
0 2 4 6 8 10 mi
0 3 6 9 12 15 km
1" = 6.31 mi
Data Zoom 9-0


BISCUIT HILL SWD
Feet
0
175
350


3646
3766
3643
3736
3749
3753
3694
3749
BISCUIT HILL SWD
3757
3736
Feet
0
1,550
3,100
CONCHO
Figure 2
Biscuit Hill SWD
Aerial Photo & Topo Map
N
Eddy County, New Mexico
Project: 114-6400816
DATE: 03-28-2011
FILE : H:\GIS\114-6400816



SPILL AREA
AUGER HOLE LOCATIONS

NOT TO SCALE

FIGURE NO. 3

EDDY COUNTY, NEW MEXICO

COG OPERATING LLC

BISCUIT HILL SWD

TETRA TECH, INC.
MIDLAND, TEXAS

DATE: 10/7/10
DWN. BY: JJ
FILE: H:\COG\6400616 EAST HIGH LONESOME

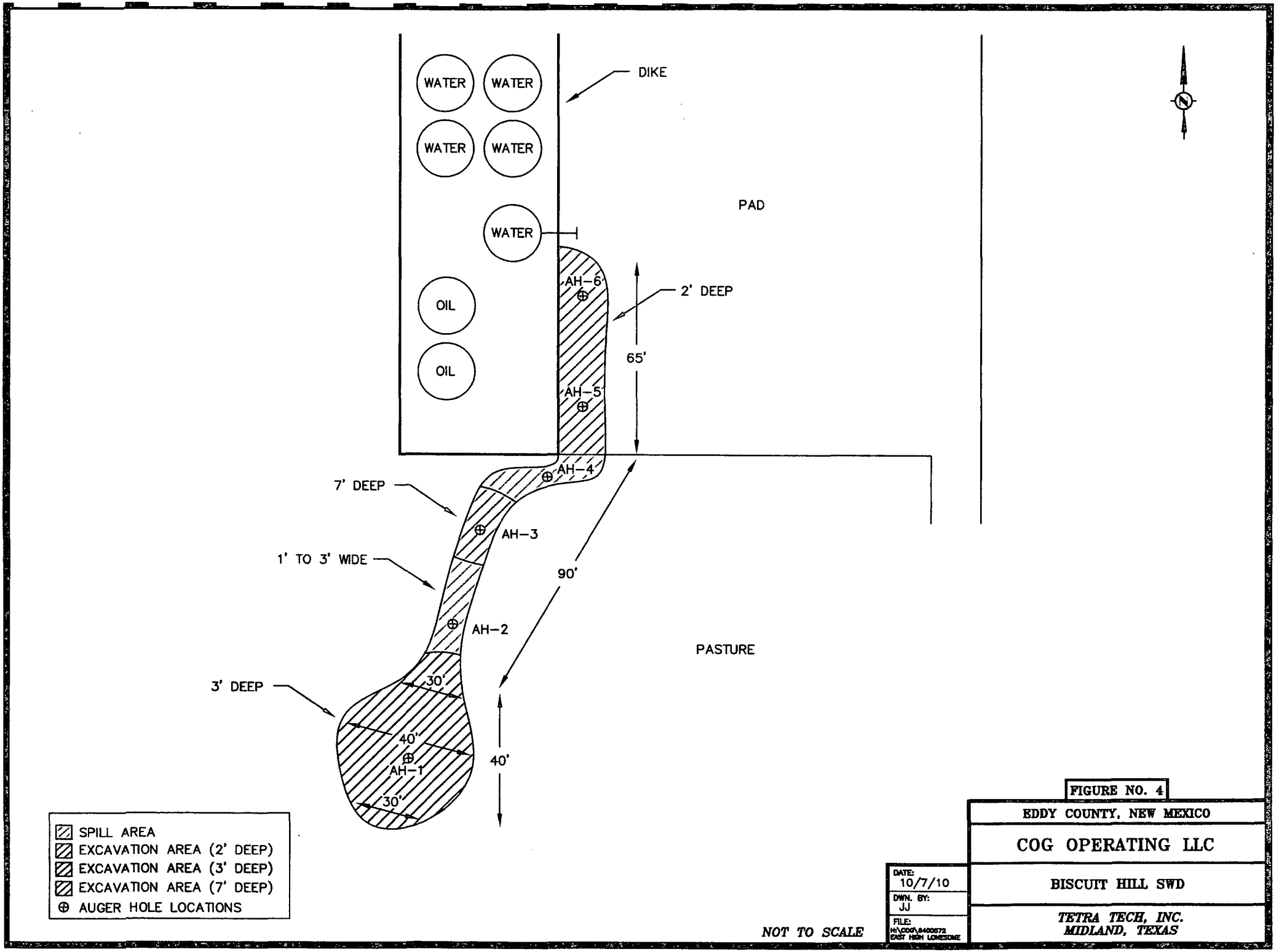


FIGURE NO. 4

EDDY COUNTY, NEW MEXICO

COG OPERATING LLC

BISCUIT HILL SWD

DATE: 10/7/10
DWN. BY: JJ
FILE: M:\COG\84000572 EAST HIGH LONESOME

TETRA TECH, INC.
MIDLAND, TEXAS

TABLES

Table 1
COG Operating LLC.
Biscuit Hills
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)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total						
AH-1	2/9/2011	0-1'		X		9,450	21,500	30,950	202	729	397	406	1,734	<200
	"	1-1.5'		X		6,460	9,910	16,370	90.2	380	188	199	857	291
	"	2-2.5'		X		116	94.9	211	0.165	5.51	8.60	9.96	24.2	1,380
	"	3-3.5'		X		<2.00	<50.0	--	--	--	--	--	--	798
	"	4-4.5'		X		--	--	--	--	--	--	--	--	745
	"	4.5-5'		X		--	--	--	--	--	--	--	--	1,420
AH-2	2/9/2011	0-1'		X		<2.00	<50.0	--	--	--	--	--	--	<200
	"	1-1.5'		X		--	--	--	--	--	--	--	--	<200
	"	2-2.5'		X		--	--	--	--	--	--	--	--	<200
	"	3-3.5'		X		--	--	--	--	--	--	--	--	322
	"	4-4.5'		X		--	--	--	--	--	--	--	--	<200
	"	4.5-5'		X		--	--	--	--	--	--	--	--	1,530
AH-3	2/9/2011	0-1'		X		<2.00	<50.0	--	<0.0200	<0.0200	<0.0200	0.386	0.386	<200
	"	1-1.5'		X		--	--	--	--	--	--	--	--	<200
	"	2-2.5'		X		--	--	--	--	--	--	--	--	<200
	"	3-3.5'		X		--	--	--	--	--	--	--	--	279
	"	4-4.5'		X		--	--	--	--	--	--	--	--	1,100
	"	5-5.5'		X		--	--	--	--	--	--	--	--	5,980
	"	6-6.5'		X		--	--	--	--	--	--	--	--	3,290
	"	7-7.5'		X		--	--	--	--	--	--	--	--	253
	"	8-8.5'		X		--	--	--	--	--	--	--	--	<200
	"	9-9.5'		X		--	--	--	--	--	--	--	--	<200

Table 1
COG Operating LLC.
Biscuit Hills
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)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total						
AH-4	2/9/2011	0-1'		X		<2.00	<50.0	--	<0.0200	<0.0200	<0.0200	0.386	0.383	<200
	"	1-1.5'		X		--	--	--	--	--	--	--	--	<200
	"	2-2.5'		X		--	--	--	--	--	--	--	--	<200
	"	3-3.5'		X		--	--	--	--	--	--	--	--	<200
	"	4-4.5'		X		--	--	--	--	--	--	--	--	<200
	"	5-5.5'		X		--	--	--	--	--	--	--	--	<200
	"	6-6.5'		X		--	--	--	--	--	--	--	--	366
AH-5	2/9/2011	0-1'		X		<2.00	<50.0	--	--	--	--	--	--	1,670
	"	1-1.5'		X		--	--	--	--	--	--	--	--	1,360
	"	2-2.5'		X		--	--	--	--	--	--	--	--	663
	"	3-3.5'		X		--	--	--	--	--	--	--	--	517
	"	4-4.5'		X		--	--	--	--	--	--	--	--	746
	"	5-5.5'		X		--	--	--	--	--	--	--	--	605
	"	6-6.5'		X		--	--	--	--	--	--	--	--	605
	"	7-7.5'		X		--	--	--	--	--	--	--	--	<200
	"	8-8.5'		X		--	--	--	--	--	--	--	--	<200
	"	9-9.5'		X		--	--	--	--	--	--	--	--	<200
AH-6	2/9/2011	0-1'		X		<2.00	<50.0	--	<0.0200	<0.0200	<0.0200	<0.0200	--	2,120
	"	1-1.5'		X		--	--	--	--	--	--	--	--	1,940
	"	2-2.5'		X		--	--	--	--	--	--	--	--	873
	"	3-3.5'		X		--	--	--	--	--	--	--	--	797
	"	4-4.5'		X		--	--	--	--	--	--	--	--	<200
	"	5-5.5'		X		--	--	--	--	--	--	--	--	<200
	"	6-6.5'		X		--	--	--	--	--	--	--	--	227
	"	7-7.5'		X		--	--	--	--	--	--	--	--	<200
	"	7.5-8'		X		--	--	--	--	--	--	--	--	<200

(--) Not Analyzed

☐ Proposed Excavation depths

APPENDIX A

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Repor

Name of Company	COG OPERATING LLC	Contact	Pat Ellis
Address	550 W. Texas, Suite 100, Midland, TX 79701	Telephone No.	432-230-0077
Facility Name	Biscuit Hills	Facility Type	SWD

Surface Owner Federal	Mineral Owner	Lease No. NMLC-029395B (API#) 30-015-28142

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
O	29	17S	31E					Eddy

Latitude 32 47.249 **Longitude** 103 57.567

NATURE OF RELEASE

Type of Release Oil	Volume of Release 15bbls	Volume Recovered 0bbls
Source of Release Check valve on load line	Date and Hour of Occurrence 01/14/2011	Date and Hour of Discovery 01/14/2011 11:00 a.m.
Was Immediate Notice Given? ☐ Yes ☒ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

4inch 300 threaded check valve on load line was left partially open. The valve has been closed.

Describe Area Affected and Cleanup Action Taken.*

Initially 15bbbls was released from the valve at the load line and we were unable to recover any fluid from the release. The spill area measured 3' x 100' in front of the load line on the location; 2' x 200' ran off of the location into the pasture and accumulated into a 20' x 20' area. 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 / BLM for approval prior to any significant remediation work.

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

Signature:	OIL CONSERVATION DIVISION
Printed Name: Josh Russo	Approved by District Supervisor:
Title: HSE Coordinator	Approval Date: / Expiration Date:
E-mail Address: jrusso@conchoresources.com	Conditions of Approval: / Attached ☐
Date: 01/28/2011 Phone: 432-212-2399	

* Attach Additional Sheets If Necessary

APPENDIX B

Water Well Data
Average Depth to Groundwater (ft)
COG - Biscuit Hills
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	15	14	13
19	20	21	22	23	24
30	29 **SITE**	28	27	26	25
31	32	33	34 **271**	35	36

17 South 32 East

6	5	4 **82** Maljamar	3 **75**	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

Tetra Tech temporary monitor well

APPENDIX C

Summary Report

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

Report Date: February 22, 2011

Work Order: 11021116

Project Location: Eddy Co., NM
Project Name: COG/Biscuit Hills
Project Number: 114-6400816

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
257200	AH-1 0-1'	soil	2011-02-09	00:00	2011-02-11
257201	AH-1 1-1.5'	soil	2011-02-09	00:00	2011-02-11
257202	AH-1 2-2.5'	soil	2011-02-09	00:00	2011-02-11
257203	AH-1 3-3.5'	soil	2011-02-09	00:00	2011-02-11
257204	AH-1 4-4.5'	soil	2011-02-09	00:00	2011-02-11
257205	AH-1 4.5-5'	soil	2011-02-09	00:00	2011-02-11
257206	AH-2 0-1'	soil	2011-02-09	00:00	2011-02-11
257207	AH-2 1-1.5'	soil	2011-02-09	00:00	2011-02-11
257208	AH-2 2-2.5'	soil	2011-02-09	00:00	2011-02-11
257209	AH-2 3-3.5'	soil	2011-02-09	00:00	2011-02-11
257210	AH-2 4-4.5'	soil	2011-02-09	00:00	2011-02-11
257211	AH-2 4.5-5'	soil	2011-02-09	00:00	2011-02-11
257212	AH-3 0-1'	soil	2011-02-09	00:00	2011-02-11
257213	AH-3 1-1.5'	soil	2011-02-09	00:00	2011-02-11
257214	AH-3 2-2.5'	soil	2011-02-09	00:00	2011-02-11
257215	AH-3 3-3.5'	soil	2011-02-09	00:00	2011-02-11
257216	AH-3 4-4.5'	soil	2011-02-09	00:00	2011-02-11
257217	AH-3 5-5.5'	soil	2011-02-09	00:00	2011-02-11
257218	AH-3 6-6.5'	soil	2011-02-09	00:00	2011-02-11
257219	AH-3 7-7.5'	soil	2011-02-09	00:00	2011-02-11
257220	AH-3 8-8.5'	soil	2011-02-09	00:00	2011-02-11
257221	AH-3 9-9.5'	soil	2011-02-09	00:00	2011-02-11
257222	AH-4 0-1'	soil	2011-02-09	00:00	2011-02-11
257223	AH-4 1-1.5'	soil	2011-02-09	00:00	2011-02-11
257224	AH-4 2-2.5'	soil	2011-02-09	00:00	2011-02-11
257225	AH-4 3-3.5'	soil	2011-02-09	00:00	2011-02-11
257226	AH-4 4-4.5'	soil	2011-02-09	00:00	2011-02-11
257227	AH-4 5-5.5'	soil	2011-02-09	00:00	2011-02-11
257228	AH-4 6-6.5'	soil	2011-02-09	00:00	2011-02-11
257229	AH-4 6.5-7'	soil	2011-02-09	00:00	2011-02-11

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
257230	AH-5 0-1'	soil	2011-02-09	00:00	2011-02-11
257231	AH-5 1-1.5'	soil	2011-02-09	00:00	2011-02-11
257232	AH-5 2-2.5'	soil	2011-02-09	00:00	2011-02-11
257233	AH-5 3-3.5'	soil	2011-02-09	00:00	2011-02-11
257234	AH-5 4-4.5'	soil	2011-02-09	00:00	2011-02-11
257235	AH-5 5-5.5'	soil	2011-02-09	00:00	2011-02-11
257236	AH-5 6-6.5'	soil	2011-02-09	00:00	2011-02-11
257237	AH-5 7-7.5'	soil	2011-02-09	00:00	2011-02-11
257238	AH-5 8-8.5'	soil	2011-02-09	00:00	2011-02-11
257239	AH-5 9-9.5'	soil	2011-02-09	00:00	2011-02-11
257240	AH-6 0-1'	soil	2011-02-09	00:00	2011-02-11
257241	AH-6 1-1.5'	soil	2011-02-09	00:00	2011-02-11
257242	AH-6 2-2.5'	soil	2011-02-09	00:00	2011-02-11
257243	AH-6 3-3.5'	soil	2011-02-09	00:00	2011-02-11
257244	AH-6 4-4.5'	soil	2011-02-09	00:00	2011-02-11
257245	AH-6 5-5.5'	soil	2011-02-09	00:00	2011-02-11
257246	AH-6 6-6.5'	soil	2011-02-09	00:00	2011-02-11
257247	AH-6 7-7.5'	soil	2011-02-09	00:00	2011-02-11
257248	AH-6 7.5-8'	soil	2011-02-09	00:00	2011-02-11

	BTEX				TPH DRO - NEW	TPH GRO
Sample - Field Code	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
257200 - AH-1 0-1'	**202**	**729**	**397**	**406**	**21500**	**9540**
257201 - AH-1 1-1.5'	**90.2**	**380**	**188**	**199**	**9910**	**6460**
257202 - AH-1 2-2.5'	**0.165**	**5.51**	**8.60**	**9.96**	**94.9**	**116**
257203 - AH-1 3-3.5'					<50.0	<2.00
257206 - AH-2 0-1'					<50.0	<2.00
257212 - AH-3 0-1'	<0.0200	<0.0200	<0.0200	**0.386**	<50.0	<2.00
257222 - AH-4 0-1'	<0.0200	<0.0200	<0.0200	**0.383**	**87.7**	**31.5**
257230 - AH-5 0-1'					<50.0	<2.00
257240 - AH-6 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00

Sample: 257200 - AH-1 0-1'

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

Sample: 257201 - AH-1 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**291**	mg/Kg	4.00

Sample: 257202 - AH-1 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**1380**	mg/Kg	4.00

Sample: 257203 - AH-1 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**798**	mg/Kg	4.00

Sample: 257204 - AH-1 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**745**	mg/Kg	4.00

Sample: 257205 - AH-1 4.5-5'

Param	Flag	Result	Units	RL
Chloride		**1420**	mg/Kg	4.00

Sample: 257206 - AH-2 0-1'

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

Sample: 257207 - AH-2 1-1.5'

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

Sample: 257208 - AH-2 2-2.5'

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

Sample: 257209 - AH-2 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**322**	mg/Kg	4.00

Sample: 257210 - AH-2 4-4.5'

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

Sample: 257211 - AH-2 4.5-5'

Param	Flag	Result	Units	RL
Chloride		**1530**	mg/Kg	4.00

Sample: 257212 - AH-3 0-1'

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

Sample: 257213 - AH-3 1-1.5'

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

Sample: 257214 - AH-3 2-2.5'

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

Sample: 257215 - AH-3 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**279**	mg/Kg	4.00

Sample: 257216 - AH-3 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**1100**	mg/Kg	4.00

Sample: 257217 - AH-3 5-5.5'

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

Sample: 257218 - AH-3 6-6.5'

Param	Flag	Result	Units	RL
Chloride		**3290**	mg/Kg	4.00

Sample: 257219 - AH-3 7-7.5'

Param	Flag	Result	Units	RL
Chloride		**253**	mg/Kg	4.00

Sample: 257220 - AH-3 8-8.5'

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

Sample: 257221 - AH-3 9-9.5'

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

Sample: 257222 - AH-4 0-1'

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

Sample: 257223 - AH-4 1-1.5'

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

Sample: 257224 - AH-4 2-2.5'

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

Sample: 257225 - AH-4 3-3.5'

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

Sample: 257226 - AH-4 4-4.5'

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

Sample: 257227 - AH-4 5-5.5'

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

Sample: 257228 - AH-4 6-6.5'

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

Sample: 257229 - AH-4 6.5-7'

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

Sample: 257230 - AH-5 0-1'

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

Sample: 257231 - AH-5 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**1360**	mg/Kg	4.00

Sample: 257232 - AH-5 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**663**	mg/Kg	4.00

Sample: 257233 - AH-5 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**517**	mg/Kg	4.00

Sample: 257234 - AH-5 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**746**	mg/Kg	4.00

Sample: 257235 - AH-5 5-5.5'

Param	Flag	Result	Units	RL
Chloride		**605**	mg/Kg	4.00

Sample: 257236 - AH-5 6-6.5'

Param	Flag	Result	Units	RL
Chloride		**605**	mg/Kg	4.00

Sample: 257237 - AH-5 7-7.5'

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

Sample: 257238 - AH-5 8-8.5'

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

Sample: 257239 - AH-5 9-9.5'

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

Sample: 257240 - AH-6 0-1'

Param	Flag	Result	Units	RL
Chloride		**2120**	mg/Kg	4.00

Sample: 257241 - AH-6 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**1940**	mg/Kg	4.00

Sample: 257242 - AH-6 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**873**	mg/Kg	4.00

Sample: 257243 - AH-6 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**797**	mg/Kg	4.00

Sample: 257244 - AH-6 4-4.5'

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

Sample: 257245 - AH-6 5-5.5'

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

Sample: 257246 - AH-6 6-6.5'

Param	Flag	Result	Units	RL
Chloride		**227**	mg/Kg	4.00

Sample: 257247 - AH-6 7-7.5'

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

Sample: 257248 - AH-6 7.5-8'

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, 2011

Work Order: 11021116

Project Location: Eddy Co., NM
Project Name: COG/Biscuit Hills
Project Number: 114-6400816

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
257200	AH-1 0-1'	soil	2011-02-09	00:00	2011-02-11
257201	AH-1 1-1.5'	soil	2011-02-09	00:00	2011-02-11
257202	AH-1 2-2.5'	soil	2011-02-09	00:00	2011-02-11
257203	AH-1 3-3.5'	soil	2011-02-09	00:00	2011-02-11
257204	AH-1 4-4.5'	soil	2011-02-09	00:00	2011-02-11
257205	AH-1 4.5-5'	soil	2011-02-09	00:00	2011-02-11
257206	AH-2 0-1'	soil	2011-02-09	00:00	2011-02-11
257207	AH-2 1-1.5'	soil	2011-02-09	00:00	2011-02-11
257208	AH-2 2-2.5'	soil	2011-02-09	00:00	2011-02-11
257209	AH-2 3-3.5'	soil	2011-02-09	00:00	2011-02-11

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
257210	AH-2 4-4.5'	soil	2011-02-09	00:00	2011-02-11
257211	AH-2 4.5-5'	soil	2011-02-09	00:00	2011-02-11
257212	AH-3 0-1'	soil	2011-02-09	00:00	2011-02-11
257213	AH-3 1-1.5'	soil	2011-02-09	00:00	2011-02-11
257214	AH-3 2-2.5'	soil	2011-02-09	00:00	2011-02-11
257215	AH-3 3-3.5'	soil	2011-02-09	00:00	2011-02-11
257216	AH-3 4-4.5'	soil	2011-02-09	00:00	2011-02-11
257217	AH-3 5-5.5'	soil	2011-02-09	00:00	2011-02-11
257218	AH-3 6-6.5'	soil	2011-02-09	00:00	2011-02-11
257219	AH-3 7-7.5'	soil	2011-02-09	00:00	2011-02-11
257220	AH-3 8-8.5'	soil	2011-02-09	00:00	2011-02-11
257221	AH-3 9-9.5'	soil	2011-02-09	00:00	2011-02-11
257222	AH-4 0-1'	soil	2011-02-09	00:00	2011-02-11
257223	AH-4 1-1.5'	soil	2011-02-09	00:00	2011-02-11
257224	AH-4 2-2.5'	soil	2011-02-09	00:00	2011-02-11
257225	AH-4 3-3.5'	soil	2011-02-09	00:00	2011-02-11
257226	AH-4 4-4.5'	soil	2011-02-09	00:00	2011-02-11
257227	AH-4 5-5.5'	soil	2011-02-09	00:00	2011-02-11
257228	AH-4 6-6.5'	soil	2011-02-09	00:00	2011-02-11
257229	AH-4 6.5-7'	soil	2011-02-09	00:00	2011-02-11
257230	AH-5 0-1'	soil	2011-02-09	00:00	2011-02-11
257231	AH-5 1-1.5'	soil	2011-02-09	00:00	2011-02-11
257232	AH-5 2-2.5'	soil	2011-02-09	00:00	2011-02-11
257233	AH-5 3-3.5'	soil	2011-02-09	00:00	2011-02-11
257234	AH-5 4-4.5'	soil	2011-02-09	00:00	2011-02-11
257235	AH-5 5-5.5'	soil	2011-02-09	00:00	2011-02-11
257236	AH-5 6-6.5'	soil	2011-02-09	00:00	2011-02-11
257237	AH-5 7-7.5'	soil	2011-02-09	00:00	2011-02-11
257238	AH-5 8-8.5'	soil	2011-02-09	00:00	2011-02-11
257239	AH-5 9-9.5'	soil	2011-02-09	00:00	2011-02-11
257240	AH-6 0-1'	soil	2011-02-09	00:00	2011-02-11
257241	AH-6 1-1.5'	soil	2011-02-09	00:00	2011-02-11
257242	AH-6 2-2.5'	soil	2011-02-09	00:00	2011-02-11
257243	AH-6 3-3.5'	soil	2011-02-09	00:00	2011-02-11
257244	AH-6 4-4.5'	soil	2011-02-09	00:00	2011-02-11
257245	AH-6 5-5.5'	soil	2011-02-09	00:00	2011-02-11
257246	AH-6 6-6.5'	soil	2011-02-09	00:00	2011-02-11
257247	AH-6 7-7.5'	soil	2011-02-09	00:00	2011-02-11
257248	AH-6 7.5-8'	soil	2011-02-09	00:00	2011-02-11

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.

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

Standard Flags

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

Samples for project COG/Biscuit Hills were received by TraceAnalysis, Inc. on 2011-02-11 and assigned to work order 11021116. Samples for work order 11021116 were received intact at a temperature of 10.4 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	66561	2011-02-14 at 12:44	77767	2011-02-14 at 12:44
BTEX	S 8021B	66683	2011-02-17 at 14:21	77746	2011-02-18 at 14:34
Chloride (Titration)	SM 4500-Cl B	66550	2011-02-14 at 12:32	77617	2011-02-15 at 15:25
Chloride (Titration)	SM 4500-Cl B	66550	2011-02-14 at 12:32	77619	2011-02-15 at 15:26
Chloride (Titration)	SM 4500-Cl B	66550	2011-02-14 at 12:32	77620	2011-02-15 at 15:27
Chloride (Titration)	SM 4500-Cl B	66550	2011-02-14 at 12:32	77622	2011-02-15 at 15:28
Chloride (Titration)	SM 4500-Cl B	66550	2011-02-14 at 12:32	77623	2011-02-15 at 15:29
TPH DRO - NEW	S 8015 D	66583	2011-02-15 at 10:10	77633	2011-02-15 at 10:10
TPH DRO - NEW	S 8015 D	66584	2011-02-15 at 10:10	77634	2011-02-15 at 10:10
TPH DRO - NEW	S 8015 D	66651	2011-02-17 at 10:50	77705	2011-02-17 at 10:50
TPH GRO	S 8015 D	66561	2011-02-14 at 12:44	77597	2011-02-14 at 12:44
TPH GRO	S 8015 D	66683	2011-02-17 at 14:21	77748	2011-02-18 at 14:34

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 11021116 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: 257200 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	77767	Date Analyzed:	2011-02-14	Analyzed By:	ME
Prep Batch:	66561	Sample Preparation:	2011-02-14	Prepared By:	ME

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		**202**	mg/Kg	50	0.0200
Toluene		**729**	mg/Kg	50	0.0200
Ethylbenzene		**397**	mg/Kg	50	0.0200
Xylene		**406**	mg/Kg	50	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		57.7	mg/Kg	50	50.0	115	51.6 - 149.2
4-Bromofluorobenzene (4-BFB)	[1]	126	mg/Kg	50	50.0	252	35.7 - 159.6

Sample: 257200 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77617	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

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

Sample: 257200 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	77633	Date Analyzed:	2011-02-15	Analyzed By:	kg
Prep Batch:	66583	Sample Preparation:	2011-02-15	Prepared By:	kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		**21500**	mg/Kg	10	50.0

[1] High surrogate recovery due to peak interference.

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	[2]	1350	mg/Kg	10	100	1350	70 - 130

Sample: 257200 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	77597	Date Analyzed:	2011-02-14	Analyzed By:	ME
Prep Batch:	66561	Sample Preparation:	2011-02-14	Prepared By:	ME

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		**9540**	mg/Kg	50	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		55.8	mg/Kg	50	50.0	112	36.3 - 158.9
4-Bromofluorobenzene (4-BFB)		76.6	mg/Kg	50	50.0	153	22.2 - 160.2

Sample: 257201 - AH-1 1-1.5'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	77746	Date Analyzed:	2011-02-18	Analyzed By:	ME
Prep Batch:	66683	Sample Preparation:	2011-02-17	Prepared By:	ME

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		**90.2**	mg/Kg	20	0.0200
Toluene	[3]	**380**	mg/Kg	20	0.0200
Ethylbenzene	[4]	**188**	mg/Kg	20	0.0200
Xylene		**199**	mg/Kg	20	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		22.7	mg/Kg	20	20.0	114	51.6 - 149.2
4-Bromofluorobenzene (4-BFB)	[5]	59.1	mg/Kg	20	20.0	296	35.7 - 159.6

Sample: 257201 - AH-1 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77617	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

[2]High surrogate recovery due to peak interference.
[3]Estimated concentration value greater than standard range.
[4]Estimated concentration value greater than standard range.
[5]High surrogate recovery due to peak interference.

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**291**	mg/Kg	50	4.00

Sample: 257201 - AH-1 1-1.5'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	77634	Date Analyzed:	2011-02-15	Analyzed By:	kg
Prep Batch:	66584	Sample Preparation:	2011-02-15	Prepared By:	kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		**9910**	mg/Kg	10	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	[6]	1190	mg/Kg	10	100	1190	70 - 130

Sample: 257201 - AH-1 1-1.5'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	77748	Date Analyzed:	2011-02-18	Analyzed By:	ME
Prep Batch:	66683	Sample Preparation:	2011-02-17	Prepared By:	ME

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		**6460**	mg/Kg	20	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		22.2	mg/Kg	20	20.0	111	36.3 - 158.9
4-Bromofluorobenzene (4-BFB)	[7]	86.9	mg/Kg	20	20.0	434	22.2 - 160.2

Sample: 257202 - AH-1 2-2.5'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	77746	Date Analyzed:	2011-02-18	Analyzed By:	ME
Prep Batch:	66683	Sample Preparation:	2011-02-17	Prepared By:	ME

[6] High surrogate recovery due to peak interference.
[7] High surrogate recovery due to peak interference.

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		**0.165**	mg/Kg	1	0.0200
Toluene		**5.51**	mg/Kg	1	0.0200
Ethylbenzene		**8.60**	mg/Kg	1	0.0200
Xylene		**9.96**	mg/Kg	1	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.52	mg/Kg	1	2.00	126	51.6 - 149.2
4-Bromofluorobenzene (4-BFB)	[8]	3.61	mg/Kg	1	2.00	180	35.7 - 159.6

Sample: 257202 - AH-1 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77617	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**1380**	mg/Kg	100	4.00

Sample: 257202 - AH-1 2-2.5'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	77705	Date Analyzed:	2011-02-17	Analyzed By:	kg
Prep Batch:	66651	Sample Preparation:	2011-02-17	Prepared By:	kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		**94.9**	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	[9]	137	mg/Kg	1	100	137	70 - 130

Sample: 257202 - AH-1 2-2.5'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	77748	Date Analyzed:	2011-02-18	Analyzed By:	ME
Prep Batch:	66683	Sample Preparation:	2011-02-17	Prepared By:	ME

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

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		**116**	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.49	mg/Kg	1	2.00	124	36.3 - 158.9
4-Bromofluorobenzene (4-BFB)	[10]	5.35	mg/Kg	1	2.00	268	22.2 - 160.2

Sample: 257203 - AH-1 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77617	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**798**	mg/Kg	50	4.00

Sample: 257203 - AH-1 3-3.5'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	77705	Date Analyzed:	2011-02-17	Analyzed By:	kg
Prep Batch:	66651	Sample Preparation:	2011-02-17	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		93.0	mg/Kg	1	100	93	70 - 130

Sample: 257203 - AH-1 3-3.5'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	77748	Date Analyzed:	2011-02-18	Analyzed By:	ME
Prep Batch:	66683	Sample Preparation:	2011-02-17	Prepared By:	ME

continued ...

[10] High surrogate recovery due to peak interference.

sample 257203 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.50	mg/Kg	1	2.00	125	36.3 - 158.9
4-Bromofluorobenzene (4-BFB)		2.11	mg/Kg	1	2.00	106	22.2 - 160.2

Sample: 257204 - AH-1 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77617	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**745**	mg/Kg	50	4.00

Sample: 257205 - AH-1 4.5-5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77617	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**1420**	mg/Kg	100	4.00

Sample: 257206 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77617	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

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

Sample: 257206 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	77633	Date Analyzed:	2011-02-15	Analyzed By:	kg
Prep Batch:	66583	Sample Preparation:	2011-02-15	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		84.7	mg/Kg	1	100	85	70 - 130

Sample: 257206 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	77597	Date Analyzed:	2011-02-14	Analyzed By:	ME
Prep Batch:	66561	Sample Preparation:	2011-02-14	Prepared By:	ME

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.46	mg/Kg	1	2.00	123	36.3 - 158.9
4-Bromofluorobenzene (4-BFB)		2.28	mg/Kg	1	2.00	114	22.2 - 160.2

Sample: 257207 - AH-2 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77617	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

continued ...

sample 257207 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL

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

Sample: 257208 - AH-2 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77617	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

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

Sample: 257209 - AH-2 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77617	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**322**	mg/Kg	50	4.00

Sample: 257210 - AH-2 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77619	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

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

Sample: 257211 - AH-2 4.5-5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77619	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**1530**	mg/Kg	100	4.00

Sample: 257212 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	77767	Date Analyzed:	2011-02-14	Analyzed By:	ME
Prep Batch:	66561	Sample Preparation:	2011-02-14	Prepared By:	ME

Parameter	Flag	Result	RL Units	Dilution	RL
Benzene		<0.0200	mg/Kg	1	0.0200
Toluene		<0.0200	mg/Kg	1	0.0200
Ethylbenzene		<0.0200	mg/Kg	1	0.0200
Xylene		**0.386**	mg/Kg	1	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.68	mg/Kg	1	2.00	134	51.6 - 149.2
4-Bromofluorobenzene (4-BFB)		2.80	mg/Kg	1	2.00	140	35.7 - 159.6

Sample: 257212 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77619	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

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

Sample: 257212 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	77633	Date Analyzed:	2011-02-15	Analyzed By:	kg
Prep Batch:	66583	Sample Preparation:	2011-02-15	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		85.3	mg/Kg	1	100	85	70 - 130

Sample: 257212 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	77597	Date Analyzed:	2011-02-14	Analyzed By:	ME
Prep Batch:	66561	Sample Preparation:	2011-02-14	Prepared By:	ME

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.55	mg/Kg	1	2.00	128	36.3 - 158.9
4-Bromofluorobenzene (4-BFB)		2.42	mg/Kg	1	2.00	121	22.2 - 160.2

Sample: 257213 - AH-3 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77619	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

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

Sample: 257214 - AH-3 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77619	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

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

Sample: 257215 - AH-3 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77619	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**279**	mg/Kg	50	4.00

Sample: 257216 - AH-3 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77619	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**1100**	mg/Kg	100	4.00

Sample: 257217 - AH-3 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77619	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

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

Sample: 257218 - AH-3 6-6.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77619	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**3290**	mg/Kg	100	4.00

Sample: 257219 - AH-3 7-7.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77619	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**253**	mg/Kg	50	4.00

Sample: 257220 - AH-3 8-8.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77620	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

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

Sample: 257221 - AH-3 9-9.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77620	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

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

Sample: 257222 - AH-4 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	77767	Date Analyzed:	2011-02-14	Analyzed By:	ME
Prep Batch:	66561	Sample Preparation:	2011-02-14	Prepared By:	ME

Parameter	Flag	Result	RL	Units	Dilution	RL
Benzene		<0.0200		mg/Kg	1	0.0200
Toluene		<0.0200		mg/Kg	1	0.0200
Ethylbenzene		<0.0200		mg/Kg	1	0.0200
Xylene		**0.383**		mg/Kg	1	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.81	mg/Kg	1	2.00	140	51.6 - 149.2
4-Bromofluorobenzene (4-BFB)		3.01	mg/Kg	1	2.00	150	35.7 - 159.6

Sample: 257222 - AH-4 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77620	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

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

Sample: 257222 - AH-4 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	77633	Date Analyzed:	2011-02-15	Analyzed By:	kg
Prep Batch:	66583	Sample Preparation:	2011-02-15	Prepared By:	kg

Parameter	Flag	Result	RL	Units	Dilution	RL
DRO		**87.7**		mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		89.1	mg/Kg	1	100	89	70 - 130

Sample: 257222 - AH-4 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	77597	Date Analyzed:	2011-02-14	Analyzed By:	ME
Prep Batch:	66561	Sample Preparation:	2011-02-14	Prepared By:	ME

Parameter	Flag	Result	RL	Units	Dilution	RL
GRO		**31.5**		mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.67	mg/Kg	1	2.00	134	36.3 - 158.9
4-Bromofluorobenzene (4-BFB)		2.73	mg/Kg	1	2.00	136	22.2 - 160.2

Sample: 257223 - AH-4 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77620	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

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

Sample: 257224 - AH-4 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77620	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

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

Sample: 257225 - AH-4 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77620	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

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

Sample: 257226 - AH-4 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77620	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

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

Sample: 257227 - AH-4 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77620	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

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

Sample: 257228 - AH-4 6-6.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77620	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

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

Sample: 257229 - AH-4 6.5-7'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77620	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

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

Sample: 257230 - AH-5 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77622	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**1670**	mg/Kg	100	4.00

Sample: 257230 - AH-5 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	77633	Date Analyzed:	2011-02-15	Analyzed By:	kg
Prep Batch:	66583	Sample Preparation:	2011-02-15	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		82.8	mg/Kg	1	100	83	70 - 130

Sample: 257230 - AH-5 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	77597	Date Analyzed:	2011-02-14	Analyzed By:	ME
Prep Batch:	66561	Sample Preparation:	2011-02-14	Prepared By:	ME

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.65	mg/Kg	1	2.00	132	36.3 - 158.9

continued ...

sample continued ...

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)		2.56	mg/Kg	1	2.00	128	22.2 - 160.2

Sample: 257231 - AH-5 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77622	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**1360**		mg/Kg	100	4.00

Sample: 257232 - AH-5 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77622	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**663**		mg/Kg	50	4.00

Sample: 257233 - AH-5 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77622	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**517**		mg/Kg	50	4.00

Sample: 257234 - AH-5 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77622	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**746**	mg/Kg	50	4.00

Sample: 257235 - AH-5 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77622	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**605**	mg/Kg	50	4.00

Sample: 257236 - AH-5 6-6.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77622	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**605**	mg/Kg	50	4.00

Sample: 257237 - AH-5 7-7.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77622	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

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

Sample: 257238 - AH-5 8-8.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77622	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

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

Sample: 257239 - AH-5 9-9.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77622	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

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

Sample: 257240 - AH-6 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	77767	Date Analyzed:	2011-02-14	Analyzed By:	ME
Prep Batch:	66561	Sample Preparation:	2011-02-14	Prepared By:	ME

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.59	mg/Kg	1	2.00	130	51.6 - 149.2
4-Bromofluorobenzene (4-BFB)		2.76	mg/Kg	1	2.00	138	35.7 - 159.6

Sample: 257240 - AH-6 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77623	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**2120**		mg/Kg	100	4.00

Sample: 257240 - AH-6 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	77633	Date Analyzed:	2011-02-15	Analyzed By:	kg
Prep Batch:	66583	Sample Preparation:	2011-02-15	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		82.0	mg/Kg	1	100	82	70 - 130

Sample: 257240 - AH-6 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	77597	Date Analyzed:	2011-02-14	Analyzed By:	ME
Prep Batch:	66561	Sample Preparation:	2011-02-14	Prepared By:	ME

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.47	mg/Kg	1	2.00	124	36.3 - 158.9
4-Bromofluorobenzene (4-BFB)		2.37	mg/Kg	1	2.00	118	22.2 - 160.2

Sample: 257241 - AH-6 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77623	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**1940**	mg/Kg	100	4.00

Sample: 257242 - AH-6 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77623	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**873**	mg/Kg	50	4.00

Sample: 257243 - AH-6 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77623	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**797**	mg/Kg	50	4.00

Sample: 257244 - AH-6 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77623	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

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

Sample: 257245 - AH-6 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77623	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

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

Sample: 257246 - AH-6 6-6.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77623	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**227**	mg/Kg	50	4.00

Sample: 257247 - AH-6 7-7.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77623	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

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

Sample: 257248 - AH-6 7.5-8'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	77623	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	Sample Preparation:	2011-02-14	Prepared By:	AR

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

Method Blank (1) QC Batch: 77597

QC Batch:	77597	Date Analyzed:	2011-02-14	Analyzed By:	ME
Prep Batch:	66561	QC Preparation:	2011-02-14	Prepared By:	ME

Parameter	Flag	MDL Result	Units	RL
GRO		<0.753	mg/Kg	2

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.08	mg/Kg	1	2.00	104	74.6 - 127.8
4-Bromofluorobenzene (4-BFB)		1.89	mg/Kg	1	2.00	94	32.9 - 129.8

Method Blank (1) QC Batch: 77617

QC Batch:	77617	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	QC Preparation:	2011-02-14	Prepared By:	AR

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

Method Blank (1) QC Batch: 77619

QC Batch:	77619	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	QC Preparation:	2011-02-14	Prepared By:	AR

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

Method Blank (1) QC Batch: 77620

QC Batch:	77620	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	QC Preparation:	2011-02-14	Prepared By:	AR

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

Method Blank (1) QC Batch: 77622

QC Batch:	77622	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	QC Preparation:	2011-02-14	Prepared By:	AR

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

Method Blank (1) QC Batch: 77623

QC Batch:	77623	Date Analyzed:	2011-02-15	Analyzed By:	AR
Prep Batch:	66550	QC Preparation:	2011-02-14	Prepared By:	AR

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

Method Blank (1) QC Batch: 77633

QC Batch:	77633	Date Analyzed:	2011-02-15	Analyzed By:	kg
Prep Batch:	66583	QC Preparation:	2011-02-15	Prepared By:	kg

Parameter	Flag	MDL Result	Units	RL
DRO		<15.7	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		86.4	mg/Kg	1	100	86	70 - 130

Method Blank (1) QC Batch: 77634

QC Batch:	77634	Date Analyzed:	2011-02-15	Analyzed By:	kg
Prep Batch:	66584	QC Preparation:	2011-02-15	Prepared By:	kg

Parameter	Flag	MDL Result	Units	RL
DRO		<15.7	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		84.0	mg/Kg	1	100	84	70 - 130

Method Blank (1) QC Batch: 77705

QC Batch: 77705 | Date Analyzed: 2011-02-17 | Analyzed By: kg
Prep Batch: 66651 | QC Preparation: 2011-02-17 | Prepared By: kg

Parameter	Flag	MDL Result	Units	RL
DRO		<15.7	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		85.8	mg/Kg	1	100	86	70 - 130

Method Blank (1) QC Batch: 77746

QC Batch: 77746 | Date Analyzed: 2011-02-18 | Analyzed By: ME
Prep Batch: 66683 | QC Preparation: 2011-02-17 | Prepared By: ME

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.0118	mg/Kg	0.02
Toluene		<0.00600	mg/Kg	0.02
Ethylbenzene		<0.00850	mg/Kg	0.02
Xylene		<0.00613	mg/Kg	0.02

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.76	mg/Kg	1	2.00	88	70.8 - 123.5
4-Bromofluorobenzene (4-BFB)		1.56	mg/Kg	1	2.00	78	48.8 - 134

Method Blank (1) QC Batch: 77748

QC Batch: 77748 | Date Analyzed: 2011-02-18 | Analyzed By: ME
Prep Batch: 66683 | QC Preparation: 2011-02-17 | Prepared By: ME

Parameter	Flag	MDL Result	Units	RL
GRO		<0.753	mg/Kg	2

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.80	mg/Kg	1	2.00	90	74.6 - 127.8
4-Bromofluorobenzene (4-BFB)		1.45	mg/Kg	1	2.00	72	32.9 - 129.8

Method Blank (1) QC Batch: 77767

QC Batch: 77767 | Date Analyzed: 2011-02-14 | Analyzed By: ME
Prep Batch: 66561 | QC Preparation: 2011-02-14 | Prepared By: ME

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.0118	mg/Kg	0.02
Toluene		<0.00600	mg/Kg	0.02
Ethylbenzene		<0.00850	mg/Kg	0.02
Xylene		<0.00613	mg/Kg	0.02

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.15	mg/Kg	1	2.00	108	70.8 - 123.5
4-Bromofluorobenzene (4-BFB)		2.18	mg/Kg	1	2.00	109	48.8 - 134

Laboratory Control Spike (LCS-1)

QC Batch: 77597 | Date Analyzed: 2011-02-14 | Analyzed By: ME
Prep Batch: 66561 | QC Preparation: 2011-02-14 | Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	16.7	mg/Kg	1	20.0	<0.753	84	61.8 - 97

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	16.4	mg/Kg	1	20.0	<0.753	82	61.8 - 97	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)	1.99	2.02	mg/Kg	1	2.00	100	101	74.6 - 124
4-Bromofluorobenzene (4-BFB)	1.94	1.97	mg/Kg	1	2.00	97	98	53.9 - 121.1

Laboratory Control Spike (LCS-1)

QC Batch: 77617 | Date Analyzed: 2011-02-15 | Analyzed By: AR
Prep Batch: 66550 | QC Preparation: 2011-02-14 | Prepared By: AR

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control spikes continued ...

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

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	106	mg/Kg	1	100	<2.18	106	85 - 115	10	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: 77619 | Date Analyzed: 2011-02-15 | Analyzed By: AR
Prep Batch: 66550 | QC Preparation: 2011-02-14 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	94.2	mg/Kg	1	100	<2.18	94	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	106	mg/Kg	1	100	<2.18	106	85 - 115	12	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: 77620 | Date Analyzed: 2011-02-15 | Analyzed By: AR
Prep Batch: 66550 | QC Preparation: 2011-02-14 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	94.2	mg/Kg	1	100	<2.18	94	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	106	mg/Kg	1	100	<2.18	106	85 - 115	12	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: 77622 | Date Analyzed: 2011-02-15 | Analyzed By: AR
Prep Batch: 66550 | QC Preparation: 2011-02-14 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	94.2	mg/Kg	1	100	<2.18	94	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	106	mg/Kg	1	100	<2.18	106	85 - 115	12	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: 77623 | Date Analyzed: 2011-02-15 | Analyzed By: AR
Prep Batch: 66550 | QC Preparation: 2011-02-14 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	96.1	mg/Kg	1	100	<2.18	96	85 - 115

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

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

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

Laboratory Control Spike (LCS-1)

QC Batch: 77633 | Date Analyzed: 2011-02-15 | Analyzed By: kg
Prep Batch: 66583 | QC Preparation: 2011-02-15 | Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	249	mg/Kg	1	250	<15.7	100	47.5 - 144.1

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	225	mg/Kg	1	250	<15.7	90	47.5 - 144.1	10	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	112	109	mg/Kg	1	100	112	109	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 77634 | Date Analyzed: 2011-02-15 | Analyzed By: kg
Prep Batch: 66584 | QC Preparation: 2011-02-15 | Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	234	mg/Kg	1	250	<15.7	94	47.5 - 144.1

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	263	mg/Kg	1	250	<15.7	105	47.5 - 144.1	12	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	106	127	mg/Kg	1	100	106	127	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 77705 | Date Analyzed: 2011-02-17 | Analyzed By: kg
Prep Batch: 66651 | QC Preparation: 2011-02-17 | Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	234	mg/Kg	1	250	<15.7	94	47.5 - 144.1

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	229	mg/Kg	1	250	<15.7	92	47.5 - 144.1	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
n-Tricosane	113	110	mg/Kg	1	100	113	110	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 77746 | Date Analyzed: 2011-02-18 | Analyzed By: ME
Prep Batch: 66683 | QC Preparation: 2011-02-17 | Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.86	mg/Kg	1	2.00	<0.0118	93	76.4 - 118.4
Toluene	1.85	mg/Kg	1	2.00	<0.00600	92	81.8 - 111.9
Ethylbenzene	1.83	mg/Kg	1	2.00	<0.00850	92	81.1 - 112.2
Xylene	5.44	mg/Kg	1	6.00	<0.00613	91	81.7 - 111.5

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	1.86	mg/Kg	1	2.00	<0.0118	93	76.4 - 118.4	0	20
Toluene	1.88	mg/Kg	1	2.00	<0.00600	94	81.8 - 111.9	2	20
Ethylbenzene	1.89	mg/Kg	1	2.00	<0.00850	94	81.1 - 112.2	3	20
Xylene	5.62	mg/Kg	1	6.00	<0.00613	94	81.7 - 111.5	3	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.84	1.70	mg/Kg	1	2.00	92	85	69 - 123.3
4-Bromofluorobenzene (4-BFB)	2.20	2.07	mg/Kg	1	2.00	110	104	64.9 - 131.9

Laboratory Control Spike (LCS-1)

QC Batch: 77748 | Date Analyzed: 2011-02-18 | Analyzed By: ME
Prep Batch: 66683 | QC Preparation: 2011-02-17 | Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	14.1	mg/Kg	1	20.0	<0.753	70	61.8 - 97

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	13.9	mg/Kg	1	20.0	<0.753	70	61.8 - 97	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)	2.03	1.91	mg/Kg	1	2.00	102	96	74.6 - 124
4-Bromofluorobenzene (4-BFB)	1.74	1.64	mg/Kg	1	2.00	87	82	53.9 - 121.1

Laboratory Control Spike (LCS-1)

QC Batch: 77767 | Date Analyzed: 2011-02-14 | Analyzed By: ME
Prep Batch: 66561 | QC Preparation: 2011-02-14 | Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	2.05	mg/Kg	1	2.00	<0.0118	102	76.4 - 118.4
Toluene	2.05	mg/Kg	1	2.00	<0.00600	102	81.8 - 111.9
Ethylbenzene	2.06	mg/Kg	1	2.00	<0.00850	103	81.1 - 112.2
Xylene	6.19	mg/Kg	1	6.00	<0.00613	103	81.7 - 111.5

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	2.02	mg/Kg	1	2.00	<0.0118	101	76.4 - 118.4	2	20
Toluene	2.01	mg/Kg	1	2.00	<0.00600	100	81.8 - 111.9	2	20
Ethylbenzene	2.05	mg/Kg	1	2.00	<0.00850	102	81.1 - 112.2	0	20
Xylene	6.18	mg/Kg	1	6.00	<0.00613	103	81.7 - 111.5	0	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.20	2.12	mg/Kg	1	2.00	110	106	69 - 123.3
4-Bromofluorobenzene (4-BFB)	2.38	2.26	mg/Kg	1	2.00	119	113	64.9 - 131.9

Matrix Spike (MS-1) Spiked Sample: 257206

QC Batch: 77597 | Date Analyzed: 2011-02-14 | Analyzed By: ME
Prep Batch: 66561 | QC Preparation: 2011-02-14 | Prepared By: ME

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	22.3	mg/Kg	1	20.0	1.8232	102	63 - 108.5

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	20.2	mg/Kg	1	20.0	1.8232	92	63 - 108.5	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)	2.58	2.56	mg/Kg	1	2	129	128	54.1 - 154.3
4-Bromofluorobenzene (4-BFB)	2.56	2.59	mg/Kg	1	2	128	130	41.9 - 162.8

Matrix Spike (MS-1) Spiked Sample: 257209

QC Batch: 77617 | Date Analyzed: 2011-02-15 | Analyzed By: AR
Prep Batch: 66550 | QC Preparation: 2011-02-14 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10500	mg/Kg	100	10000	322	102	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	10900	mg/Kg	100	10000	322	106	85 - 115	4	20

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

Matrix Spike (MS-1) Spiked Sample: 257219

QC Batch: 77619 | Date Analyzed: 2011-02-15 | Analyzed By: AR
Prep Batch: 66550 | QC Preparation: 2011-02-14 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	9990	mg/Kg	100	10000	253	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	10600	mg/Kg	100	10000	253	103	85 - 115	6	20

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

Matrix Spike (MS-1) Spiked Sample: 257229

QC Batch: 77620 | Date Analyzed: 2011-02-15 | Analyzed By: AR
Prep Batch: 66550 | QC Preparation: 2011-02-14 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10400	mg/Kg	100	10000	366	100	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	11000	mg/Kg	100	10000	366	106	85 - 115	6	20

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

Matrix Spike (MS-1) Spiked Sample: 257239

QC Batch: 77622 | Date Analyzed: 2011-02-15 | Analyzed By: AR
Prep Batch: 66550 | QC Preparation: 2011-02-14 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	9930	mg/Kg	100	10000	<218	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	10400	mg/Kg	100	10000	<218	104	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: 257249

QC Batch: 77623 | Date Analyzed: 2011-02-15 | Analyzed By: AR
Prep Batch: 66550 | QC Preparation: 2011-02-14 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	24800	mg/Kg	100	10000	15400	94	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	25900	mg/Kg	100	10000	15400	105	85 - 115	4	20

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

Matrix Spike (MS-1) Spiked Sample: 257259

QC Batch: 77633 | Date Analyzed: 2011-02-15 | Analyzed By: kg
Prep Batch: 66583 | QC Preparation: 2011-02-15 | Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	223	mg/Kg	1	250	<15.7	89	11.7 - 152.3

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	216	mg/Kg	1	250	<15.7	86	11.7 - 152.3	3	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	97.8	97.0	mg/Kg	1	100	98	97	70 - 130

Matrix Spike (MS-1) Spiked Sample: 257280

QC Batch: 77634 | Date Analyzed: 2011-02-15 | Analyzed By: kg
Prep Batch: 66584 | QC Preparation: 2011-02-15 | Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	223	mg/Kg	1	250	<15.7	89	11.7 - 152.3

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	208	mg/Kg	1	250	<15.7	83	11.7 - 152.3	7	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	101	94.3	mg/Kg	1	100	101	94	70 - 130

Matrix Spike (MS-1) Spiked Sample: 257203

QC Batch: 77705 | Date Analyzed: 2011-02-17 | Analyzed By: kg
Prep Batch: 66651 | QC Preparation: 2011-02-17 | Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	225	mg/Kg	1	250	20.8	82	11.7 - 152.3

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	223	mg/Kg	1	250	20.8	81	11.7 - 152.3	1	20

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

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

Matrix Spike (MS-1) Spiked Sample: 257470

QC Batch: 77746 | Date Analyzed: 2011-02-18 | Analyzed By: ME
Prep Batch: 66683 | QC Preparation: 2011-02-17 | Prepared By: ME

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.85	mg/Kg	1	2.00	<0.0118	92	65.5 - 139.8
Toluene	1.89	mg/Kg	1	2.00	<0.00600	94	70.5 - 137.3
Ethylbenzene	1.84	mg/Kg	1	2.00	<0.00850	92	66.7 - 151
Xylene	5.88	mg/Kg	1	6.00	0.6462	87	68.7 - 149.5

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	1.83	mg/Kg	1	2.00	<0.0118	92	65.5 - 139.8	1	20
Toluene	1.85	mg/Kg	1	2.00	<0.00600	92	70.5 - 137.3	2	20
Ethylbenzene	1.84	mg/Kg	1	2.00	<0.00850	92	66.7 - 151	0	20
Xylene	5.80	mg/Kg	1	6.00	0.6462	86	68.7 - 149.5	1	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.24	2.28	mg/Kg	1	2	112	114	50.9 - 152.9
4-Bromofluorobenzene (4-BFB)	2.02	2.12	mg/Kg	1	2	101	106	48.5 - 165.8

Matrix Spike (MS-1) Spiked Sample: 257294

QC Batch: 77748 | Date Analyzed: 2011-02-18 | Analyzed By: ME
Prep Batch: 66683 | QC Preparation: 2011-02-17 | Prepared By: ME

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO [11]	417	mg/Kg	1	20.0	302.188	574	63 - 108.5

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 [12]	408	mg/Kg	1	20.0	302.188	529	63 - 108.5	2	20

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

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

Surrogate		MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)		2.48	2.47	mg/Kg	1	2	124	124	54.1 - 154.3
4-Bromofluorobenzene (4-BFB)	[13] [14]	5.20	5.20	mg/Kg	1	2	260	260	41.9 - 162.8

Standard (CCV-1)

QC Batch: 77597 Date Analyzed: 2011-02-14 Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.988	99	80 - 120	2011-02-14

Standard (CCV-2)

QC Batch: 77597 Date Analyzed: 2011-02-14 Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.912	91	80 - 120	2011-02-14

Standard (CCV-3)

QC Batch: 77597 Date Analyzed: 2011-02-14 Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.10	110	80 - 120	2011-02-14

Standard (ICV-1)

QC Batch: 77617 Date Analyzed: 2011-02-15 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	102	102	85 - 115	2011-02-15

[13] High surrogate recovery due to peak interference.
[14] High surrogate recovery due to peak interference.

Standard (CCV-1)

QC Batch: 77617 | Date Analyzed: 2011-02-15 | Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	98.2	98	85 - 115	2011-02-15

Standard (ICV-1)

QC Batch: 77619 | Date Analyzed: 2011-02-15 | Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	96.1	96	85 - 115	2011-02-15

Standard (CCV-1)

QC Batch: 77619 | Date Analyzed: 2011-02-15 | Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	104	104	85 - 115	2011-02-15

Standard (ICV-1)

QC Batch: 77620 | Date Analyzed: 2011-02-15 | 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	2011-02-15

Standard (CCV-1)

QC Batch: 77620 | Date Analyzed: 2011-02-15 | Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	96.3	96	85 - 115	2011-02-15

Standard (ICV-1)

QC Batch: 77622 | Date Analyzed: 2011-02-15 | Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	97.5	98	85 - 115	2011-02-15

Standard (CCV-1)

QC Batch: 77622 | Date Analyzed: 2011-02-15 | Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	103	103	85 - 115	2011-02-15

Standard (ICV-1)

QC Batch: 77623 | Date Analyzed: 2011-02-15 | Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.1	99	85 - 115	2011-02-15

Standard (CCV-1)

QC Batch: 77623 | Date Analyzed: 2011-02-15 | Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2011-02-15

Standard (CCV-1)

QC Batch: 77633 | Date Analyzed: 2011-02-15 | Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	222	89	80 - 120	2011-02-15

Standard (CCV-2)

QC Batch: 77633 Date Analyzed: 2011-02-15 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	224	90	80 - 120	2011-02-15

Standard (CCV-3)

QC Batch: 77633 Date Analyzed: 2011-02-15 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	228	91	80 - 120	2011-02-15

Standard (CCV-1)

QC Batch: 77634 Date Analyzed: 2011-02-15 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	243	97	80 - 120	2011-02-15

Standard (CCV-2)

QC Batch: 77634 Date Analyzed: 2011-02-15 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	240	96	80 - 120	2011-02-15

Standard (CCV-1)

QC Batch: 77705 Date Analyzed: 2011-02-17 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	222	89	80 - 120	2011-02-17

Standard (CCV-2)

QC Batch: 77705 Date Analyzed: 2011-02-17 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	232	93	80 - 120	2011-02-17

Standard (CCV-1)

QC Batch: 77746 Date Analyzed: 2011-02-18 Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0918	92	80 - 120	2011-02-18
Toluene		mg/Kg	0.100	0.0926	93	80 - 120	2011-02-18
Ethylbenzene		mg/Kg	0.100	0.0908	91	80 - 120	2011-02-18
Xylene		mg/Kg	0.300	0.274	91	80 - 120	2011-02-18

Standard (CCV-2)

QC Batch: 77746 Date Analyzed: 2011-02-18 Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0969	97	80 - 120	2011-02-18
Toluene		mg/Kg	0.100	0.0949	95	80 - 120	2011-02-18
Ethylbenzene		mg/Kg	0.100	0.0927	93	80 - 120	2011-02-18
Xylene		mg/Kg	0.300	0.278	93	80 - 120	2011-02-18

Standard (CCV-3)

QC Batch: 77746 Date Analyzed: 2011-02-18 Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0911	91	80 - 120	2011-02-18
Toluene		mg/Kg	0.100	0.0913	91	80 - 120	2011-02-18
Ethylbenzene		mg/Kg	0.100	0.0876	88	80 - 120	2011-02-18
Xylene		mg/Kg	0.300	0.264	88	80 - 120	2011-02-18

Standard (CCV-1)

QC Batch: 77748 | Date Analyzed: 2011-02-18 | Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.846	85	80 - 120	2011-02-18

Standard (CCV-2)

QC Batch: 77748 | Date Analyzed: 2011-02-18 | Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.04	104	80 - 120	2011-02-18

Standard (CCV-3)

QC Batch: 77748 | Date Analyzed: 2011-02-18 | Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.998	100	80 - 120	2011-02-18

Standard (CCV-1)

QC Batch: 77767 | Date Analyzed: 2011-02-14 | Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.103	103	80 - 120	2011-02-14
Toluene		mg/Kg	0.100	0.0998	100	80 - 120	2011-02-14
Ethylbenzene		mg/Kg	0.100	0.0958	96	80 - 120	2011-02-14
Xylene		mg/Kg	0.300	0.291	97	80 - 120	2011-02-14

Standard (CCV-2)

QC Batch: 77767 | Date Analyzed: 2011-02-14 | Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.101	101	80 - 120	2011-02-14
Toluene		mg/Kg	0.100	0.101	101	80 - 120	2011-02-14
Ethylbenzene		mg/Kg	0.100	0.101	101	80 - 120	2011-02-14
Xylene		mg/Kg	0.300	0.305	102	80 - 120	2011-02-14

Standard (CCV-3)

QC Batch: 77767 Date Analyzed: 2011-02-14 Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.100	100	80 - 120	2011-02-14
Toluene		mg/Kg	0.100	0.0993	99	80 - 120	2011-02-14
Ethylbenzene		mg/Kg	0.100	0.102	102	80 - 120	2011-02-14
Xylene		mg/Kg	0.300	0.330	110	80 - 120	2011-02-14

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Analysis Request of Chain of Custody Record

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SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-6400816

PROJECT NAME: COG / Biscuit Hills Eddy Co, NM

LAB I.D. NUMBER	DATE 2011	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
257200	2/9		S		X	AH-1 0-1'	1				X	
201						1'-1.5'						
202						2'-2.5'						
203						3'-3.5'						
204						4'-4.5'						
205						4.5'-5'						
206						AH-2 0-1'						
207						1'-1.5'						
208						2'-2.5'						
209						3'-3.5'						

ANALYSIS REQUEST (Circle or Specify Method No.)

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

RELINQUISHED BY: (Signature) — Date: 2/11/11 Time: 1400 — RECEIVED BY: (Signature) — Date: 2/11/11 Time: 1413

SAMPLED BY: (Print & Initial) JT/TP — Date: 2/9/11 Time:

RELINQUISHED BY: (Signature) — Date: Time: — RECEIVED BY: (Signature) — Date: Time:

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

RELINQUISHED BY: (Signature) — Date: Time: — RECEIVED BY: (Signature) — Date: Time:

TETRA TECH CONTACT PERSON: Ike Tavarez — Results by:

RECEIVING LABORATORY: Trey — RECEIVED BY: (Signature)

ADDRESS: CITY: Midland STATE: TX ZIP:

CONTACT: PHONE: DATE: TIME:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 10.4°C intact

REMARKS: If total TPH exceeds 5,000 mg/kg run deeper samples / Run BTEX on 4 highest TPH. If Benzene exceeds 10 mg/kg or BTEX exceeds 50 mg/kg run deeper samples

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

XAll tests-Midland

*wo#: 11021116

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-C406816

PROJECT NAME: COG / Biscuit Hills Eddy Co, NM

LAB I.D. NUMBER	DATE 2011	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
257210	2/9		S		X	AH-2 4'-4.5'	1				X	
211						4.5'-5'						
212						AH-3 0-1'						
213						1'-1.5'						
214						2'-2.5'						
215						3'-3.5'						
216						4'-4.5'						
217						5'-5.5'						
218						6'-6.5'						
219						7'-7.5'						

ANALYSIS REQUEST (Circle or Specify Method No.)

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

RELINQUISHED BY: (Signature)	Date: 2/11/11 Time: 1410	RECEIVED BY: (Signature)	Date: 2/11/11 Time: 1413
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
RECEIVING LABORATORY: Trace		RECEIVED BY: (Signature)	
ADDRESS: CITY: Midland STATE: TX ZIP:			
CONTACT: PHONE:		DATE: TIME:	

SAMPLED BY: (Print & Initial) JT/TF Date: 2/9/11 Time:

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

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 10.4°C intact

REMARKS: If total TPH exceeds 5,000 mg/kg run deeper samples / Run BTEX on 4 highest TPH. If BTEX exceeds 10 mg/kg or BTEX exceeds 50 mg/kg run deeper samples

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

Xwo #: 110211116

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-G00816

PROJECT NAME: COG | Biscuit Hills | Eddy Co, NM

LAB I.D. NUMBER	DATE 2011	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
257220	2/9		S		X	AH-3 8'-8.5'	1				X	
221						9'-9.5'						
222						AH-4 0-1'						
223						1'-1.5'						
224						2'-2.5'						
225						3'-3.5'						
226						4'-4.5'						
227						5'-5.5'						
228						6'-6.5'						
229						6.5'-7'						

ANALYSIS REQUEST (Circle or Specify Method No.)

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

RELINQUISHED BY: (Signature) Date: 2/11/11 Time: 1410
RECEIVED BY: (Signature) Date: 2/11/11 Time: 1410
SAMPLED BY: (Print & Initial) JT/TF Date: 2/9/11 Time:

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

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

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

SAMPLE CONDITION WHEN RECEIVED: 10.4°C intact

REMARKS: If total TPH exceeds 5,000 mg/kg run deeper samples / Run BTEX on 4 highest TPH. If Benzene exceeds 10 mg/kg or BTEX exceeds 50 mg/kg run deeper samples

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

All tests Midland

xwo#: 11021116

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.: 114-6400816

PROJECT NAME: COG / Biscuit Hills
Eddy Co, NM

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	DATE 2011	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/824	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
257230	2/4		S		X	AH-5 0-1'	1				X			X											X				
231						1'-1.5'																							
232						2'-2.5'																							
233						3'-3.5'																							
234						4'-4.5'																							
235						5'-5.5'																							
236						6'-6.5'																							
237						7'-7.5'																							
238						8'-8.5'																							
239						9'-9.5'																							

RELINQUISHED BY: (Signature)	Date: 2/11/11 Time: 1410	RECEIVED BY: (Signature)	Date: 2/11/11 Time: 1410
SAMPLED BY: (Print & Initial) JT/TF	Date: 2/9/11 Time:		
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS	AIRBILL #: OTHER:		
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
TETRA TECH CONTACT PERSON: Ike Tavarez	Results by:		
RECEIVING LABORATORY: Trace ADDRESS: CITY: Midland STATE: TX ZIP: CONTACT: PHONE:	RECEIVED BY: (Signature) DATE: TIME:		RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 10.4°C intact

REMARKS: If total TPH exceeds 5000 mg/kg run deeper samples / Run BTEX on 4 highest TPH. If Benzene exceeds 10 mg/kg or BTEX exceeds 50 mg/kg run deeper samples

XTO #: 11021116

Analysis Request of Chain of Custody Record

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG
SITE MANAGER: Ike Tavarez
PROJECT NO.: 114-H00816
PROJECT NAME: COG / Biscuit Hills
Eddy Co., NM

LAB I.D. NUMBER	DATE 2011	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
257240	2/9		S		X	AH-6 0-1'	1				X	
241						1'-1.5'						
242						2'-2.5'						
243						3'-3.5'						
244						4'-4.5'						
245						5'-5.5'						
246						6'-6.5'						
247						7'-7.5'						
248	↓		↓			7.5'-8'	↓				↓	

	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. 808/808	Chlorides	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
257240		X												X				

RELINQUISHED BY: (Signature) — Date: 2/11/11 Time: 1410
RECEIVED BY: (Signature) — Date: 2/11/11 Time: 1410
SAMPLED BY: (Print & Initial) JT/TF — Date: 2/9/11 Time:

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

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

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

SAMPLE CONDITION WHEN RECEIVED: 10.4°C intact

REMARKS: If total TPH exceeds 5,000 mg/kg run deeper samples / Run BTEX on 4 highest TPH. If Benzene exceeds 10 mg/kg or BTEX exceeds 50 mg/kg run deeper samples

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