SITE INFORMATION

Report Type: Closure Report

General Site Information:						
Site:	Foster Eddy #9 (flow line)					
Company:	COG Operating LLC					
Section, Township and Range	Unit J	Sec. 17	T-17-S	R-31-E		
Lease Number:	API-30-015-26273					
County:	Eddy County					
GPS:	32.83314° N			103.88694° W		
Surface Owner:	Federal					
Mineral Owner:						
Directions:	Intersection of NM 82 and 529 travel west on 82 0.9 miles, turn right 0.9 miles, left 0.3 miles, right 0.1 miles to location on left.					

Release Data:	
Date Released:	1/13/2012
Type Release:	Produced Fluids - Skim oil
Source of Contamination:	3" polyline ruptured
Fluid Released:	15 bbls produced water and 1 bbls of oil
Fluids Recovered:	none

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

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

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

TETRA TECH

August 15, 2012

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

Re: Closure Report for the COG Operating LLC., Foster Eddy #9 (Flow line), Section 17, 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 Foster Eddy #9 Flow line, Section 17, Township 17 South, Range 31 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.83314°, W 103.88694°. The site location is shown on Figures 1 and 2.

Background

According to the State of New Mexico Oil Conservation Division (NMOCD) Form C-141 Initial Report, the leak was discovered on January 13, 2012 and released approximately fifteen (15) barrels (bbls) of produced water and one (1) bbls of oil due to a 3" polyline rupture. To alleviate the problem, COG repaired the line and returned it to service.

The spill initiated from the polyline located on high ground near a native dry arroyo/wash. The spill migrated into the bottom of the dry arroyo/wash area and flowed in two directions. The impact of the spill measured an approximate length of 130', with a width of 3' to 5' in both spill paths. The spill areas are shown on Figures 3. The initial Form C-141 is enclosed in Appendix A.

Groundwater

No water wells were reported in Section 17. One well is listed in Section 34 with a reported depth to groundwater of 271' bgs. According to the NMOCD groundwater map, the average depth to groundwater is approximately 325' 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 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

On February 8, 2012, Tetra Tech personnel inspected and sampled the spill area. A total of ten (10) auger holes (AH-1 through AH-10) were installed using a stainless steel hand auger to assess the impacted area. Selected samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The sampling results are summarized in Table 1. The auger hole locations are shown on Figure 3.

Analytical Results

Referring to Table 1, all of the auger holes were below the RRAL for TPH and BTEX, with the exception AH-10. Auger hole (AH-10) showed TPH concentrations of 12,800 mg/kg at 0-1' which declined below the RRAL at 1-1.5' below surface to 4,280 mg/kg. In addition, the benzene and total BTEX concentrations exceeded the RRAL in the surface soils and declined below the RRAL at 2.0' and 3.0', respectively.

A shallow chloride impact was detected at the site with the majority of the auger hole locations vertically defined. Auger holes (AH-1 through AH-6) detected elevated chlorides at 0-1', which significantly declined with depth at 1-1.5' below surface. Auger holes (AH-7 and AH-8) were not vertically defined and showed bottom hole samples of 3,460 mg/kg at 2-2.5' and 11,600 mg/kg at 1-1.5', respectively. AH-9 and AH-10 showed a deeper impact to the soil but were vertically defined.

Site Remediation

In April 2012, Tetra Tech personnel supervised the excavation of the site. The excavation depths proposed were met as stated in the approved work plan. Approximately 380 yards^3 were removed and transported to proper disposal at CRI.

Once excavated to the appropriate depths, confirmation samples were collected from the excavation. Tetra Tech collected confirmation samples (CS-1 through CS-10) from the excavated areas. The confirmation samples collected for

the site included sidewalls and bottom hole samples. The excavation depths and confirmation results are summarized in Table 1 and shown on Figure 4. Referring to Table 1, all of the samples had chloride concentrations ranging from <20.0 mg/kg to 283 mg/kg. Based on the results, the BLM approved backfilling of the site.

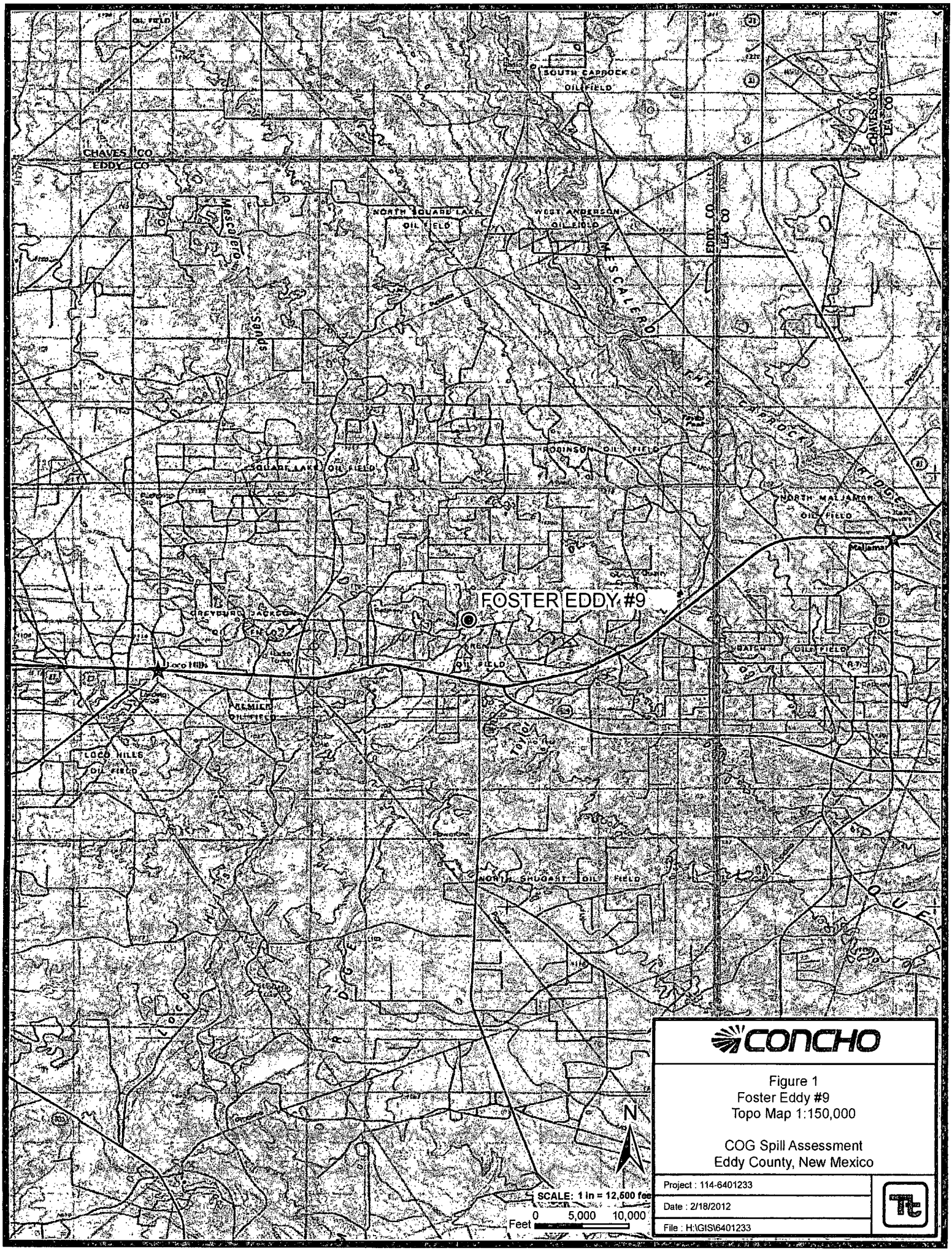
Based on the remediation activities performed at this location, COG request closure for site. The C-141 (Final) is included in Appendix A. If you have any questions or comments concerning the assessment or the remediation activities performed at the site, please call me at (432) 682-4559.

Respectfully submitted,
TETRA TECH

Ike Tavarez
Senior Project Manager

cc: Pat Ellis – COG
cc: Terry Gregston - BLM

Figures



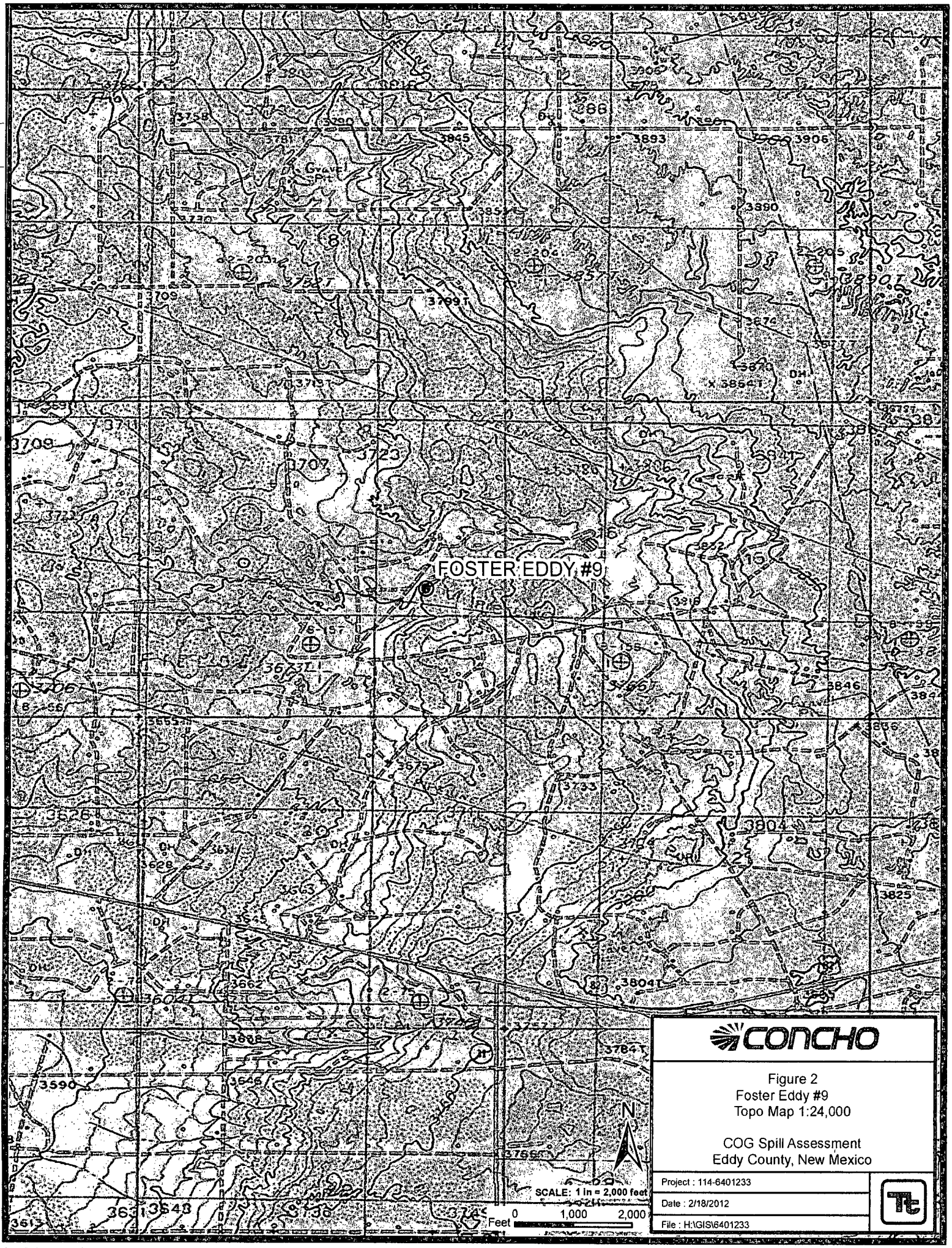
CONCHO

Figure 1
Foster Eddy #9
Topo Map 1:150,000

COG Spill Assessment
Eddy County, New Mexico

Project : 114-6401233	
Date : 2/18/2012	
File : H:\GIS\6401233	

Drawn By: Isabel Marmolejo



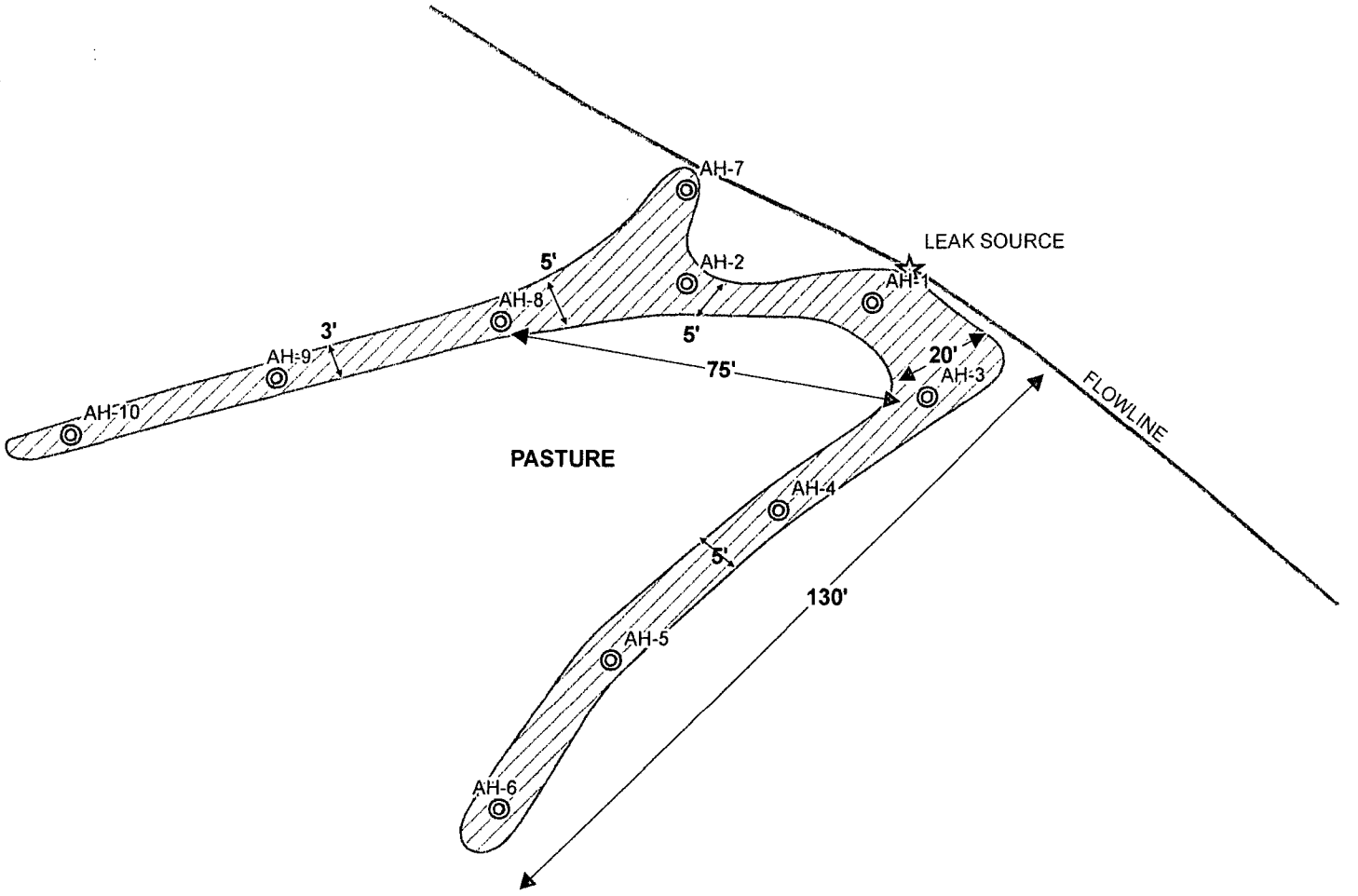
CONCHO

Figure 2
Foster Eddy #9
Topo Map 1:24,000

COG Spill Assessment
Eddy County, New Mexico

Project : 114-6401233	
Date : 2/18/2012	
File : H:\GIS\6401233	

Drawn By: Isabel Hernandez



EXPLANATION

- ☆ LEAK SOURCE
- ◎ AUGER HOLE SAMPLE LOCATIONS
- FLOWLINE
- SPILL AREA

N

SCALE: 1 IN = 35 FEET

Feet 0 20 40

CONCHO

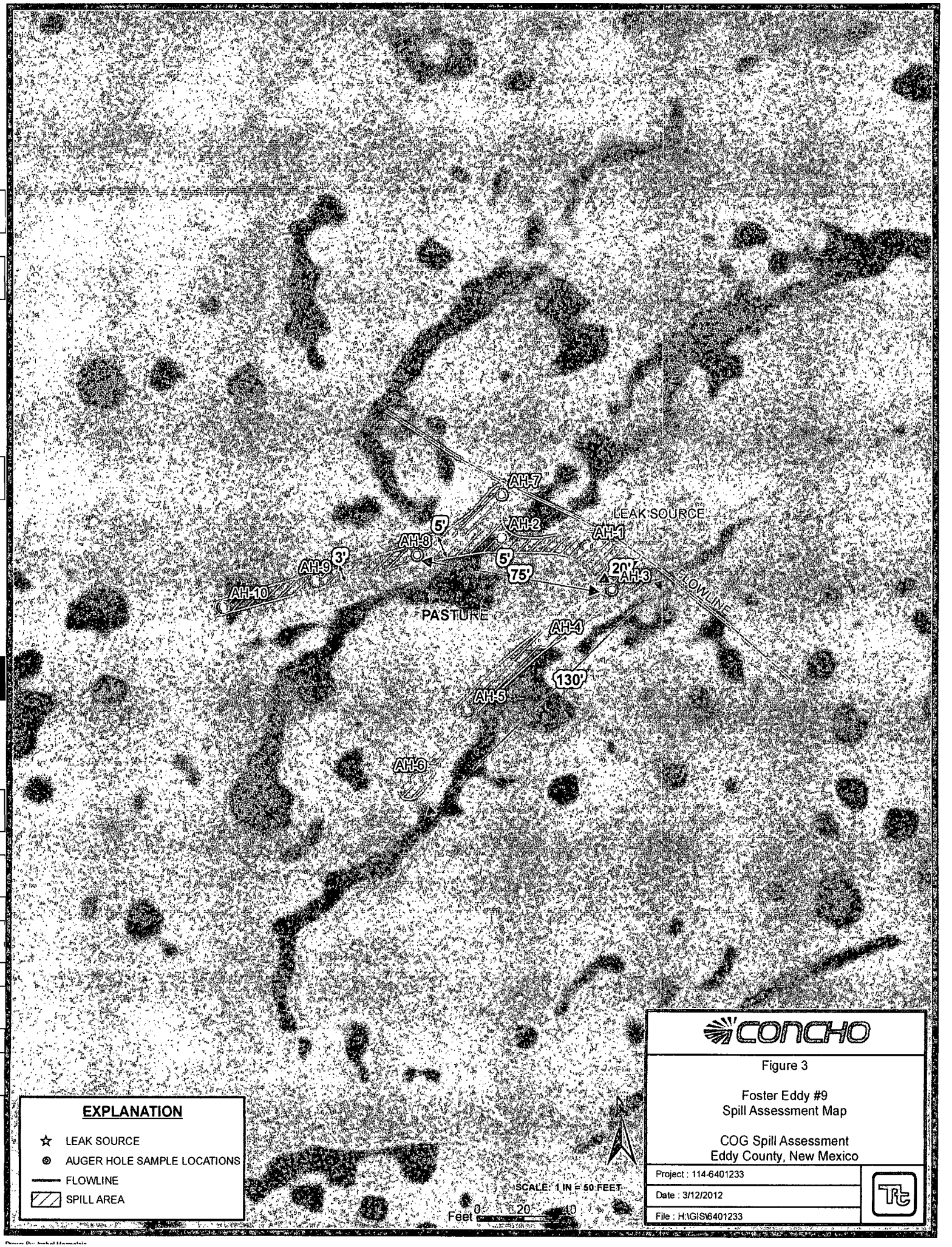
Figure 3

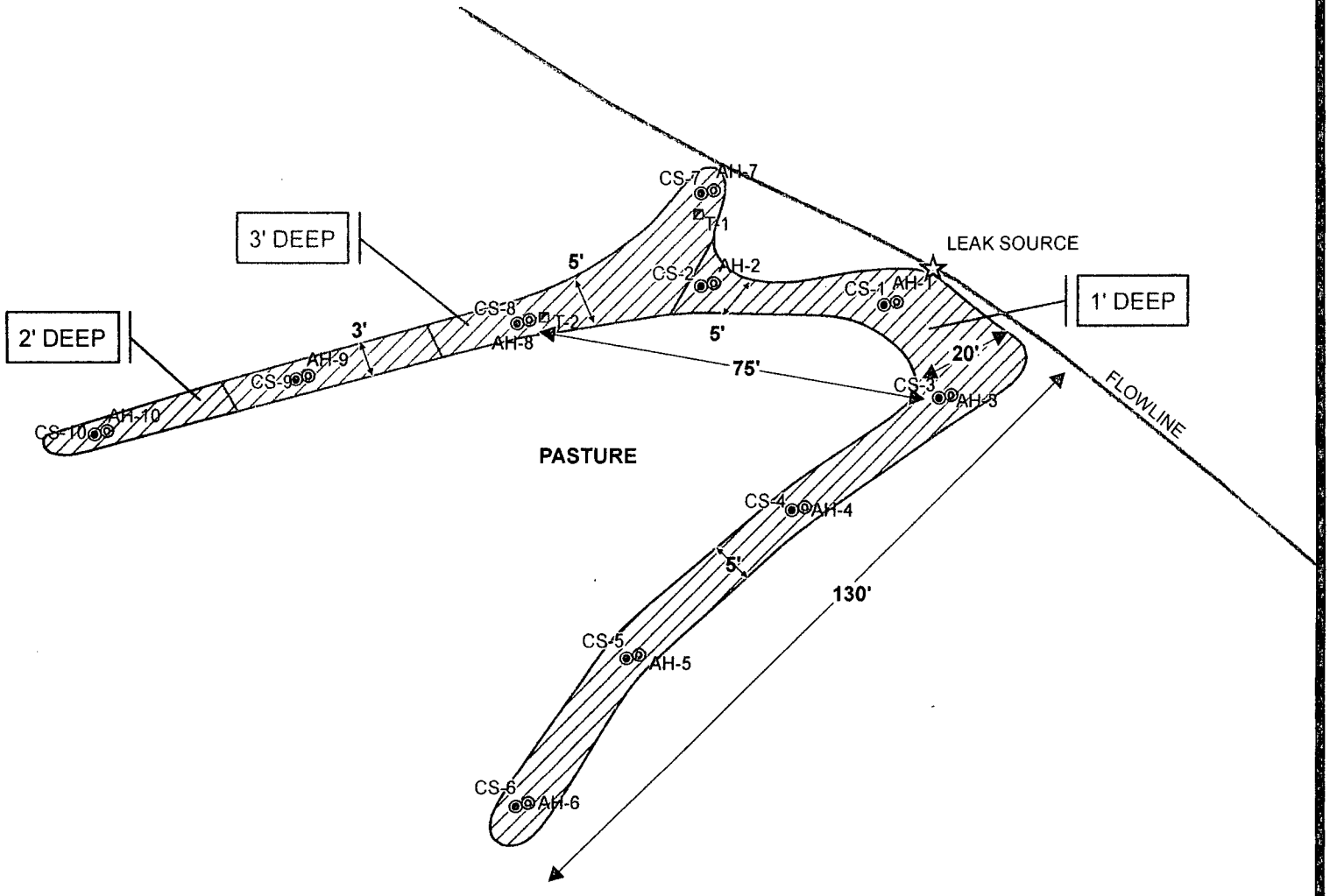
Foster Eddy #9
Spill Assessment Map

COG Spill Assessment
Eddy County, New Mexico

Project : 114-6401233	
Date : 3/12/2012	
File : H:\GIS\6401233	

Drawn By: Isabel Marmolejo


AH-7
LEAK SOURCE
AH-2
AH-1
5'
AH-8
3'
AH-9
5'
75'
20'
AH-3
AH-10
FLOWLINE
PASTURE
AH-4
130'
AH-5
AH-6
EXPLANATION
LEAK SOURCE
AUGER HOLE SAMPLE LOCATIONS
FLOWLINE
SPILL AREA
SCALE: 1 IN = 50 FEET
Feet 0 20 40
CONCHO
Figure 3
Foster Eddy #9
Spill Assessment Map
COG Spill Assessment
Eddy County, New Mexico
Project : 114-6401233
Date : 3/12/2012
File : H:\GIS\6401233



EXPLANATION

- ☆ LEAK SOURCE
- ◉ AUGER HOLE SAMPLE LOCATIONS
- ◉ CONFIRMATION SAMPLE LOCATIONS
- ◩ TRENCHED LOCATIONS
- FLOWLINE
- EXCAVATED AREAS

N

SCALE: 1 IN = 33 FEET

Feet 0 20 40

CONCHO

Figure 4

Foster Eddy #9
Final Excavation Areas & Depths Map

COG Spill Assessment
Eddy County, New Mexico

Project : 114-6401233	
Date : 5/14/2012	
File : H:\GIS\6401233	

Drawn By: Isabel Marmolejo

Tables

Table 1
COG Operating LLC.
Foster Eddy #9
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	BEB Depth (ft)	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	2/8/2012	0-1	-		X	<2.00	132	132	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	4,450
	"	1-1.5	-	X		-	-	-	-	-	-	-	-	<200
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	328
	"	3-3.5	-	X		-	-	-	-	-	-	-	-	<200
	"	4-4.5	-	X		-	-	-	-	-	-	-	-	671
	"	5-5.5	-	X		-	-	-	-	-	-	-	-	<200
CS-1 North Wall	4/19/2012	-	-	X		-	-	-	-	-	-	-	-	<20.0
CS-1 South Wall	"	-	-	X		-	-	-	-	-	-	-	-	<20.0
CS-1 East Wall	"	-	-	X		-	-	-	-	-	-	-	-	<20.0
CS-1 West Wall	"	-	-	X		-	-	-	-	-	-	-	-	<20.0
CS-1 Bottom Hole	"	1	-	X		-	-	-	-	-	-	-	-	<20.0
AH-2	2/8/2012	0-1	-		X	4.20	98.7	103	-	-	-	-	-	2,060
	"	1-1.5	-	X		-	-	-	-	-	-	-	-	<200
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	<200
	"	3-3.5	-	X		-	-	-	-	-	-	-	-	<200
	"	4-4.5	-	X		-	-	-	-	-	-	-	-	<200
CS-2 East Wall	4/23/2012	-	-	X		-	-	-	-	-	-	-	-	<20.0
CS-2 West Wall	"	-	-	X		-	-	-	-	-	-	-	-	<20.0
CS-2 Bottom Hole	"	1	-	X		-	-	-	-	-	-	-	-	50.1

Table 1
COG Operating LLC.
Foster Eddy #9
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	BEB Depth (ft)	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-3	2/8/2012	0-1	-		X	10.1	104	114	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	9,220
	"	1-1.5	-		X	-	-	-	-	-	-	-	-	1,260
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	413
	"	3-3.5	-	X		-	-	-	-	-	-	-	-	<200
	"	4-4.5	-	X		-	-	-	-	-	-	-	-	<200
	"	5-5.5	-	X		-	-	-	-	-	-	-	-	372
	"	6-6.5	-	X		-	-	-	-	-	-	-	-	815
	"	7-7.5	-	X		-	-	-	-	-	-	-	-	627
	"	8-8.5	-	X		-	-	-	-	-	-	-	-	790
	"	9-9.5	-	X		-	-	-	-	-	-	-	-	926
CS-3 North Wall	4/19/2012	-	-	X		-	-	-	-	-	-	-	-	75.2
CS-3 South Wall	"	-	-	X		-	-	-	-	-	-	-	-	<20.0
CS-3 Bottom Hole	"	1	-	X		-	-	-	-	-	-	-	-	106
CS-3 East Wall	"	-	-	X		-	-	-	-	-	-	-	-	<20.0
AH-4	2/8/2012	0-1	-		X	14.9	407	422	<0.100	<0.100	<0.100	0.251	0.251	4,980
	"	1-1.5	-	X		-	-	-	-	-	-	-	-	<200
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	<200
	"	3-3.5	-	X		-	-	-	-	-	-	-	-	<200
	"	4-4.5	-	X		-	-	-	-	-	-	-	-	<200
CS-4 North Wall	4/19/2012	-	-	X		-	-	-	-	-	-	-	-	283
CS-4 South Wall	"	-	-	X		-	-	-	-	-	-	-	-	<20.0
CS-4 Bottom Hole	"	1	-	X		-	-	-	-	-	-	-	-	<20.0

Table 1
COG Operating LLC.
Foster Eddy #9
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	BEB Depth (ft)	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-5	2/8/2012	0-1	-		X	<2.00	<50.0	<50.0	-	-	-	-	-	2,440
	"	1-1.5	-	X		-	-	-	-	-	-	-	-	350
CS-5 North Wall	4/19/2012	-	-	X		-	-	-	-	-	-	-	-	<20.0
CS-5 South Wall	"	-	-	X		-	-	-	-	-	-	-	-	<20.0
CS-5 Bottom Hole	"	1	-	X		-	-	-	-	-	-	-	-	<20.0
AH-6	2/8/2012	0-1	-		X	<2.00	<50.0	<50.0	-	-	-	-	-	2,890
	"	1-1.5	-	X		-	-	-	-	-	-	-	-	<200
CS-6 North Wall	4/19/2012	-	-	X		-	-	-	-	-	-	-	-	<20.0
CS-6 South Wall	"	-	-	X		-	-	-	-	-	-	-	-	<20.0
CS-6 West Wall	"	-	-	X		-	-	-	-	-	-	-	-	<20.0
CS-6 Bottom Hole	"	1	-	X		-	-	-	-	-	-	-	-	<20.0
AH-7	2/8/2012	0-1	-		X	263	1,720	1,983	<0.200	<0.200	2.04	4.08	6.12	7,060
	"	1-1.5	-		X	-	-	-	-	-	-	-	-	11,300
	"	2-2.5	-		X	-	-	-	-	-	-	-	-	3,460
CS-7 North Wall	4/23/2012	-	-	X		-	-	-	-	-	-	-	-	<20.0
CS-7 South Wall	"	-	-	X		-	-	-	-	-	-	-	-	<20.0
CS-7 East Wall	"	-	-	X		-	-	-	-	-	-	-	-	<20.0
CS-7 Bottom Hole	"	3	-	X		-	-	-	-	-	-	-	-	50.6
Trench-1	4/23/2012	5	-	X		-	-	-	-	-	-	-	-	59.7
	"	7	-	X		-	-	-	-	-	-	-	-	<20.0
	"	9	-	X		-	-	-	-	-	-	-	-	<20.0

Table 1
COG Operating LLC.
Foster Eddy #9
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	BEB Depth (ft)	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-8	2/8/2012	0-1	-		X	<2.00	117	117	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	7,550
	"	1-1.5	-		X	-	-	-	-	-	-	-	-	11,600
CS-8 North Wall	4/23/2012	-	-	X		-	-	-	-	-	-	-	-	<20.0
CS-8 South Wall	"	-	-	X		-	-	-	-	-	-	-	-	<20.0
CS-8 Bottom Hole	"	3	-	X		-	-	-	-	-	-	-	-	<20.0
Trench-2	4/23/2012	5	-	X		-	-	-	-	-	-	-	-	<20.0
	"	7	-	X		-	-	-	-	-	-	-	-	<20.0
AH-9	2/8/2012	0-1	-		X	<2.00	108	108	-	-	-	-	-	5,910
	"	1-1.5	-		X	-	-	-	-	-	-	-	-	6,030
	"	2-2.5	-		X	-	-	-	-	-	-	-	-	3,730
	"	3-3.5	-		X	-	-	-	-	-	-	-	-	1,540
	"	4-4.5	-	X		-	-	-	-	-	-	-	-	2,230
	"	5-5.5	-	X		-	-	-	-	-	-	-	-	2,730
	"	6-6.5	-	X		-	-	-	-	-	-	-	-	1,830
	"	7-7.5	-	X		-	-	-	-	-	-	-	-	<200
	"	8-8.5	-	X		-	-	-	-	-	-	-	-	<200
	"	9-9.5	-	X		-	-	-	-	-	-	-	-	<200
CS-9 North Wall	4/23/2012	-	-	X		-	-	-	-	-	-	-	-	<20.0
CS-9 South Wall	"	-	-	X		-	-	-	-	-	-	-	-	<20.0
CS-9 Bottom Hole	"	3	-	X		-	-	-	-	-	-	-	-	<20.0

Table 1
COG Operating LLC.
Foster Eddy #9
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	BEB Depth (ft)	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-10	2/8/2012	0-1	-		X	4,050	8,750	12,800	23.0	152	115	137	427	4,940
	"	1-1.5	-		X	1,500	2,780	4,280	12.4	66.4	45.8	54.2	179	4,090
	"	2-2.5	-		X	-	-	-	0.642	14.7	20.5	27.0	62.8	1,390
	"	3-3.5	-	X		-	-	-	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<200
	"	4-4.5	-	X		-	-	-	-	-	-	-	-	<200
	"	5-5.5	-	X		-	-	-	-	-	-	-	-	<200
	"	6-6.5	-	X		-	-	-	-	-	-	-	-	<200
	"	7-7.5	-	X		-	-	-	-	-	-	-	-	<200
	"	8-8.5	-	X		-	-	-	-	-	-	-	-	<200
	"	9-9.5	-	X		-	-	-	-	-	-	-	-	<200
CS-10 North Wall	4/20/2012	-	-	X		-	-	-	-	-	-	-	-	<20.0
CS-10 South Wall	"	-	-	X		-	-	-	-	-	-	-	-	39.8
CS-10 West Wall	"	-	-	X		-	-	-	-	-	-	-	-	<20.0
CS-10 Bottom Hole	"	2	-	X		-	-	-	-	-	-	-	-	<20.0

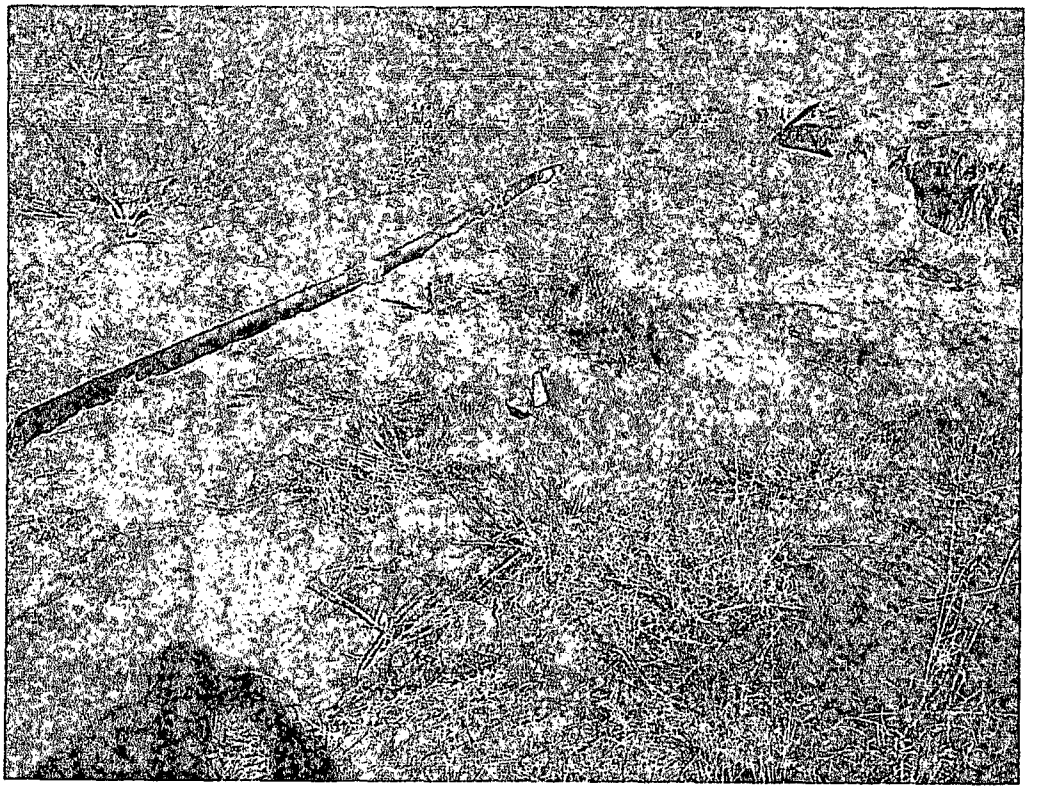
(-) Not Analyzed

BEB Below Excavation Bottom

[ ] Excavation Depth

Photos

COG Operating LLC
Foster Eddy #9
Eddy County, New Mexico

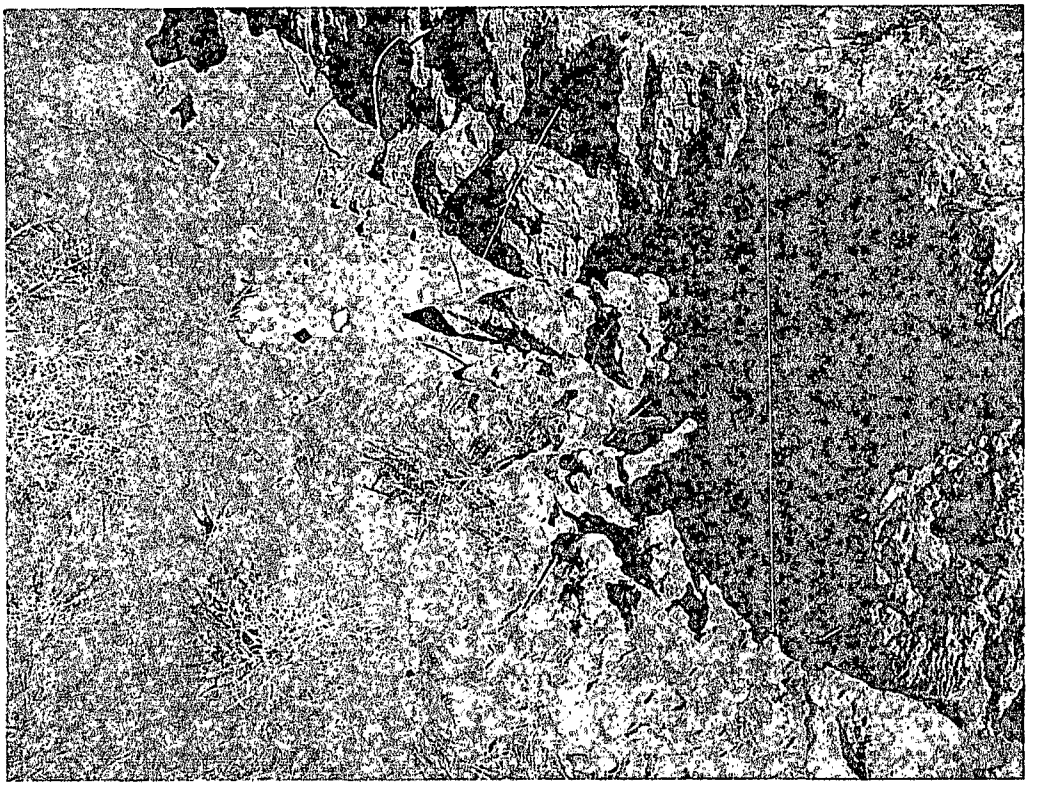


View north east near source and AH-1

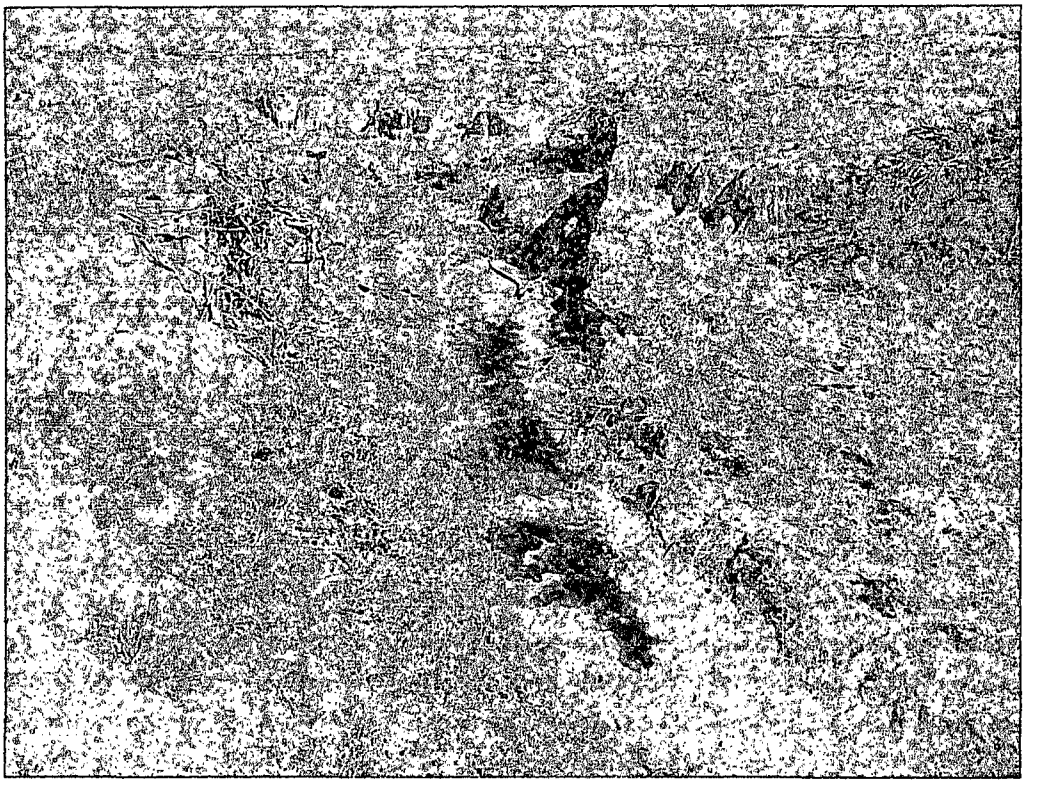
View south west along arroyo/wash near AH-4

TETRA TECH

COG Operating LLC
Foster Eddy #9
Eddy County, New Mexico



View of arroyo/wash

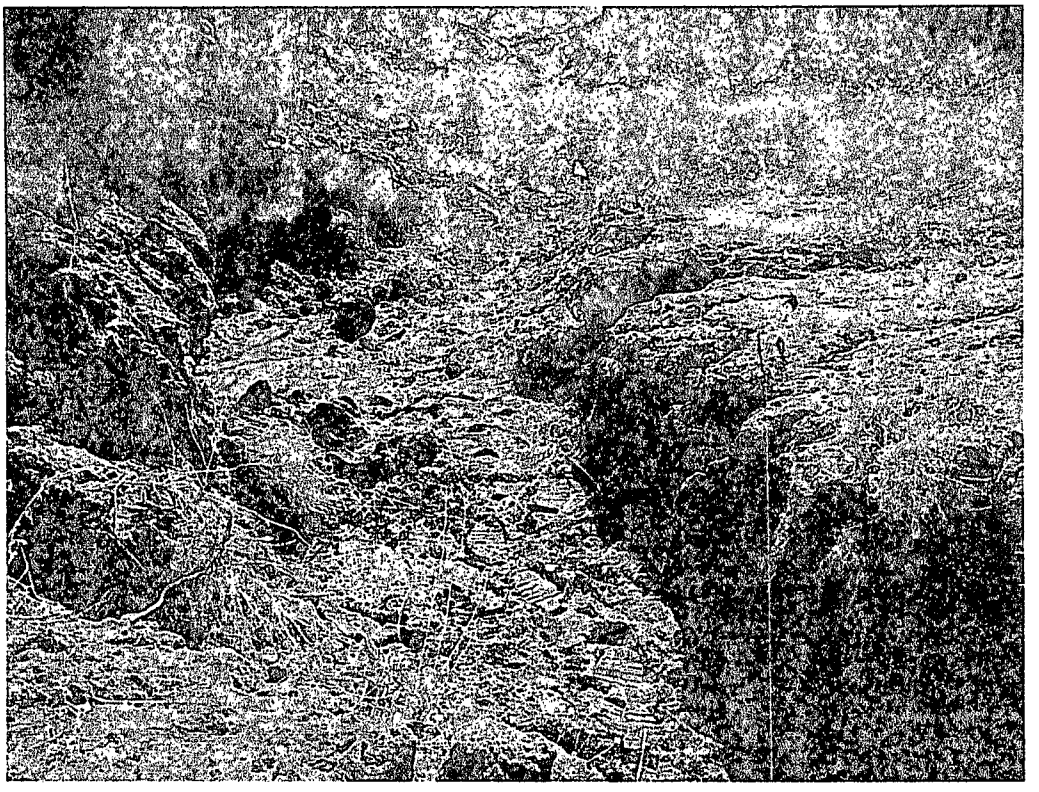


View north east – edge of spill path near AH-10

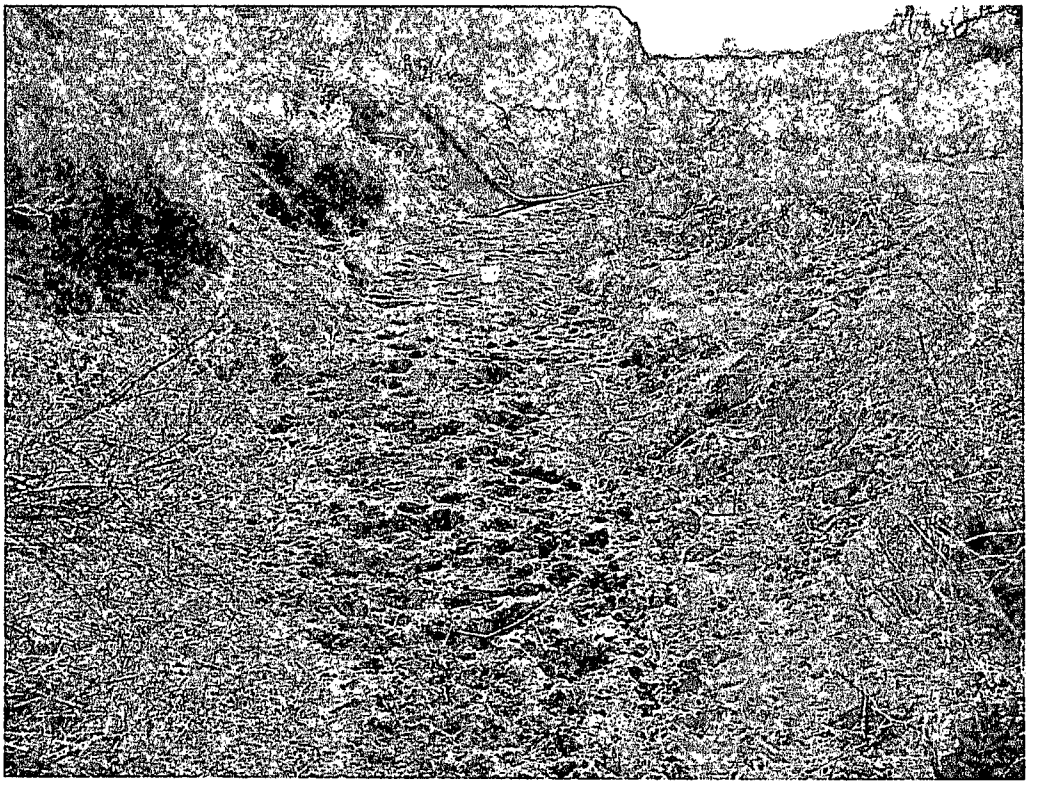
TETRA TECH

COG Operating LLC
Foster Eddy #9
Eddy County, New Mexico

TETRA TECH



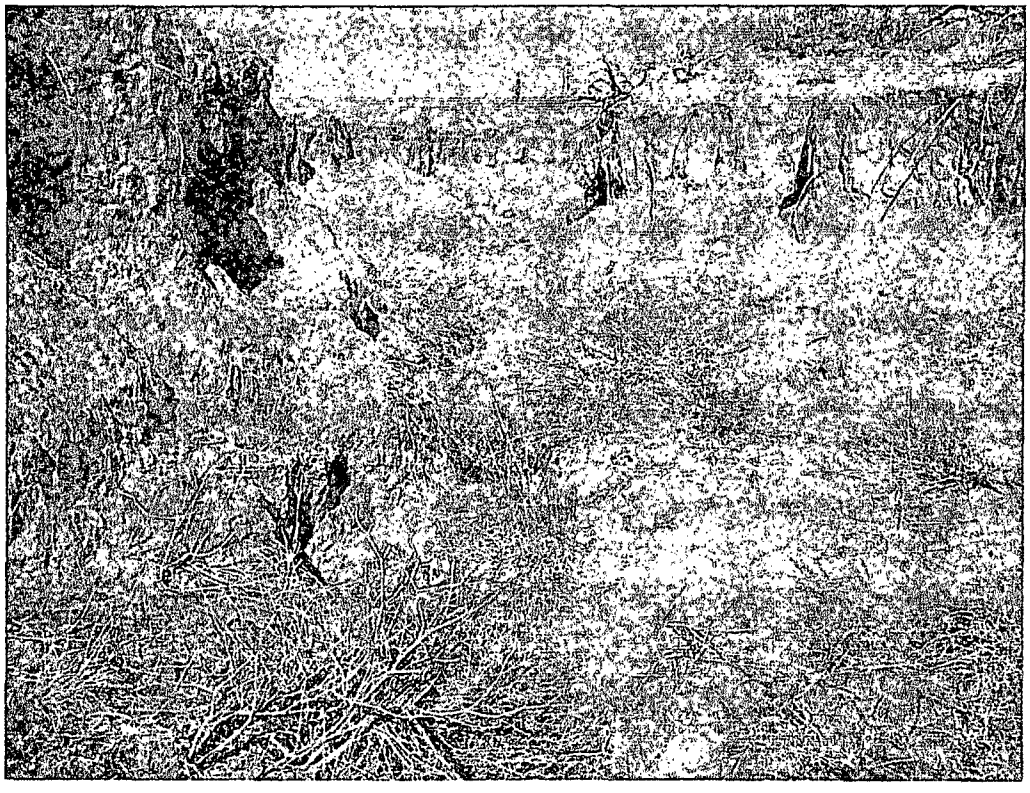
View of arroyo/wash



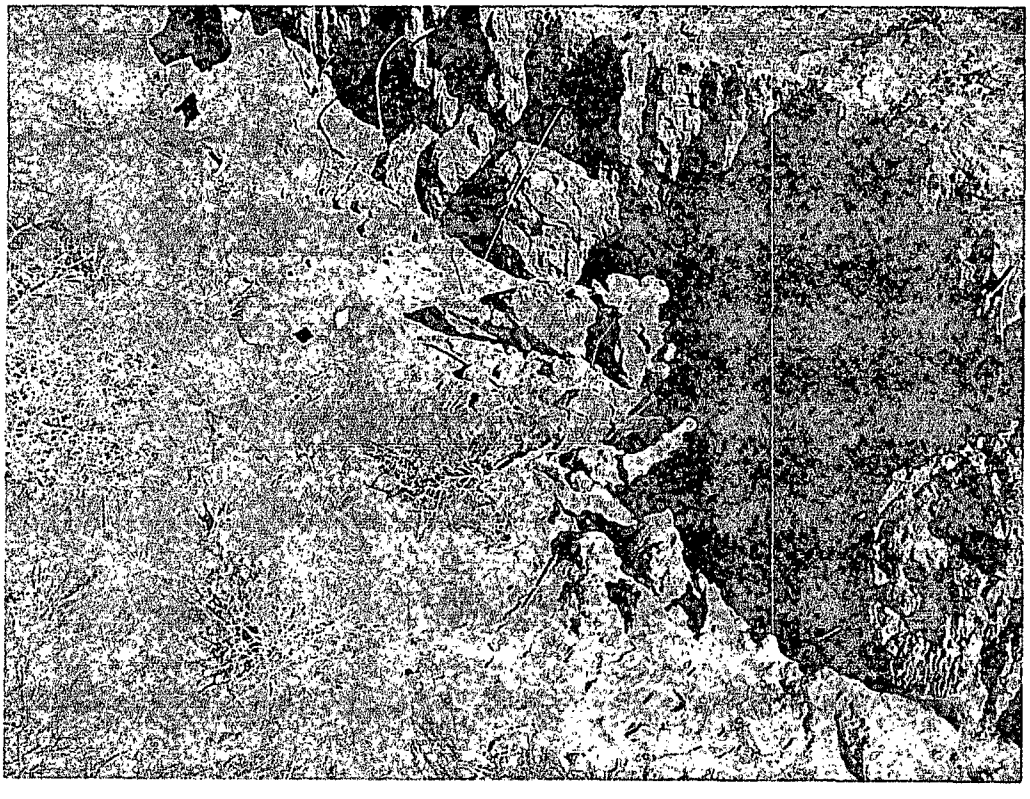
View of arroyo/wash

COG Operating LLC
Foster Eddy #9
Eddy County, New Mexico

TETRA TECH



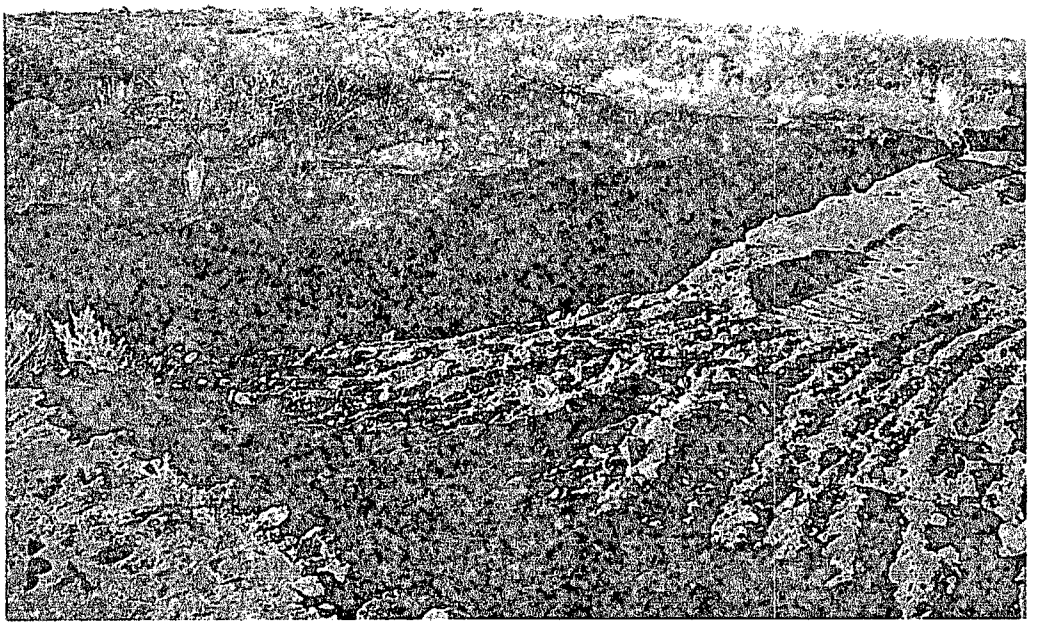
View of arroyo/wash



View of Arroyo/Wash

COG Operating LLC
Foster Eddy #9
Eddy County, New Mexico

TETRA TECH

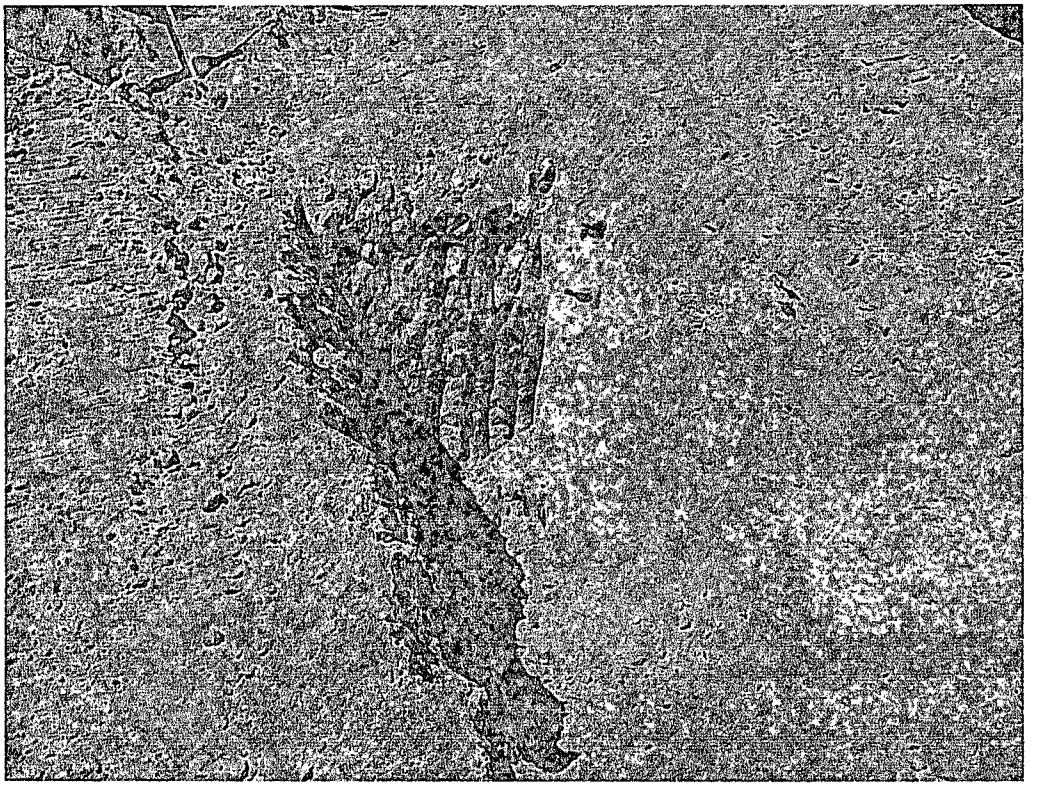


Excavation near AH-1 and AH-3

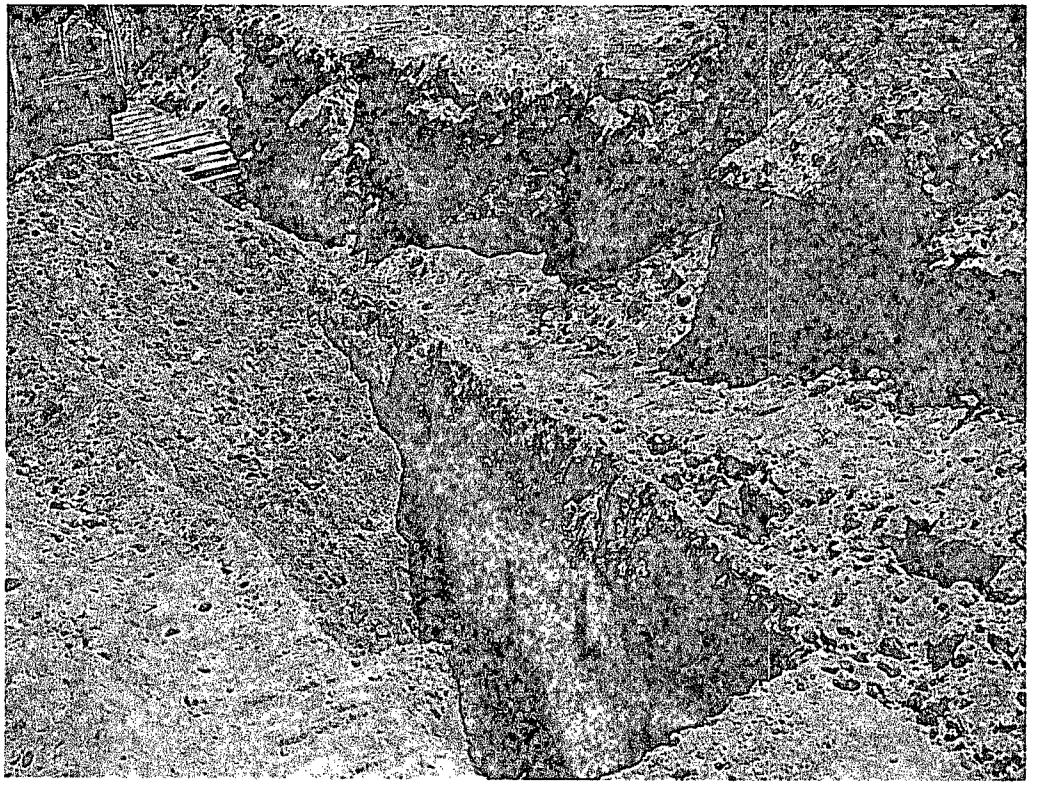
Excavation near AH-5

COG Operating LLC
Foster Eddy #9
Eddy County, New Mexico

TETRA TECH



Trench 1 installed near AH-7



Trench 2 installed near AH-8

Appendix A

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	COG OPERATING LLC	Contact	Pat Ellis
Address	550 W. Texas, Suite 100, Midland, TX 79701	Telephone No.	432-230-0077
Facility Name	Foster Eddy #9	Facility Type	Flowline

Surface Owner Federal	Mineral Owner	Lease No. (API#) 30-015-26273

LOCATION OF RELEASE

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

Latitude 32 49.990 **Longitude** 103 53.261

NATURE OF RELEASE

Type of Release Produced water / Skim oil	Volume of Release 15bbls pw 1bbl oil	Volume Recovered none recovered
Source of Release 3" poly line ruptured	Date and Hour of Occurrence 01/13/2012	Date and Hour of Discovery 01/13/2012 12:00 p.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.*

A 3" poly line ruptured. The line has been repaired and returned to service.

Describe Area Affected and Cleanup Action Taken.*

Initially 16bbls of produced fluid was released from the ruptured poly line and due to the nature of the release we were unable to recover any fluid. The fluid travels along two paths measuring 4' x 60' and 4' x 15'. The fluid took the path of least resistance and streamed into low lying areas and pathways. Tetra Tech will sample the spill areas 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: 01/27/2012 Phone: 432-212-2399		

* Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
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1000 Rio Brazos Road, Aztec, NM 87410
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State of New Mexico
Energy Minerals and Natural Resources

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1220 South St. Francis Dr.
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Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company **COG Operating LLC**	Contact **Pat Ellis**
Address **550 W. Texas, Suite 1300 Midland, Texas 79701**	Telephone No. **(432) 230-0077**
Facility Name **Foster Eddy #9**	Facility Type **Flowline**

Surface Owner Federal	Mineral Owner	Lease No. 30-015-26273

LOCATION OF RELEASE

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

Latitude N 32.83314° **Longitude** W 103.88694°

NATURE OF RELEASE

Type of Release: Produced water / Skim oil	Volume of Release **15 bbls pm 1 bbl oil**	Volume Recovered **none**
Source of Release **3" poly line ruptured**	Date and Hour of Occurrence 1/13/2012	Date and Hour of Discovery **1/13/2012 12:00 pm**
Was Immediate Notice Given? ☐ Yes ☒ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*

N/A

Describe Cause of Problem and Remedial Action Taken.*

A 3" poly line ruptured. The line has been repaired and returned to service

Describe Area Affected and Cleanup Action Taken.*

Tetra Tech inspected and collected samples to define the spill extents. Based on the results, a work plan was submitted to the OCD for approval. The impacted soil above the RRAL and elevated chloride concentrations was removed and transported to CRI for proper disposal. Once excavated to the appropriate depths, the excavations were backfilled with clean soil to grade. Tetra Tech prepared a closure report and submitted to NMOCD for review.

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

Signature:	OIL CONSERVATION DIVISION	
Printed Name: Ike Tavarez (agent for COG)	Approved by District Supervisor:	
Title: Project Manager	Approval Date:	Expiration Date:
E-mail Address: ike.tavarez@tetratech.com	Conditions of Approval:	Attached ☐
Date: 8/16/12 Phone: (432) 682-4559		

* Attach Additional Sheets If Necessary

Appendix B

Water Well Data
Average Depth to Groundwater (ft)
COG - Foster Eddy #9 (Flowline)
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 **SITE**	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34 **271**	35	36

17 South 32 East

6	5	4 **82**	3 **175**	2 **60**	1 **225**
7	8	9	10	11 **70** **88**	12
18	17	16	15	14	13
19	20	21	22	23	24
30 180 dry	29	28	27	26	25
31	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
- Field water level
- New Mexico Water and Infrastructure Data System
- SITE - Foster Eddy #9

Appendix C

Summary Report

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

Report Date: February 22, 2012

Work Order: 12021022

Project Location: Eddy Co., NM
Project Name: COG/Foster Eddy #9
Project Number: 114-6401233

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
288783	AH-1 0-1'	soil	2012-02-08	00:00	2012-02-10
288784	AH-1 1-1.5'	soil	2012-02-08	00:00	2012-02-10
288785	AH-1 2-2.5'	soil	2012-02-08	00:00	2012-02-10
288786	AH-1 3-3.5'	soil	2012-02-08	00:00	2012-02-10
288787	AH-1 4-4.5'	soil	2012-02-08	00:00	2012-02-10
288788	AH-1 5-5.5'	soil	2012-02-08	00:00	2012-02-10
288789	AH-2 0-1'	soil	2012-02-08	00:00	2012-02-10
288790	AH-2 1.-1.5'	soil	2012-02-08	00:00	2012-02-10
288791	AH-2 2-2.5'	soil	2012-02-08	00:00	2012-02-10
288792	AH-2 3-3.5'	soil	2012-02-08	00:00	2012-02-10
288793	AH-2 4-4.5'	soil	2012-02-08	00:00	2012-02-10
288794	AH-3 0-1'	soil	2012-02-08	00:00	2012-02-10
288795	AH-3 1-1.5'	soil	2012-02-08	00:00	2012-02-10
288796	AH-3 2-2.5'	soil	2012-02-08	00:00	2012-02-10
288797	AH-3 3-3.5'	soil	2012-02-08	00:00	2012-02-10
288798	AH-3 4-4.5'	soil	2012-02-08	00:00	2012-02-10
288799	AH-3 5-5.5'	soil	2012-02-08	00:00	2012-02-10
288800	AH-3 6-6.5'	soil	2012-02-08	00:00	2012-02-10
288801	AH-3 7-7.5'	soil	2012-02-08	00:00	2012-02-10
288802	AH-3 8-8.5'	soil	2012-02-08	00:00	2012-02-10
288803	AH-3 9-9.5'	soil	2012-02-08	00:00	2012-02-10
288804	AH-4 0-1'	soil	2012-02-08	00:00	2012-02-10
288805	AH-4 1-1.5'	soil	2012-02-08	00:00	2012-02-10
288806	AH-4 2-2.5'	soil	2012-02-08	00:00	2012-02-10
288807	AH-4 3-3.5'	soil	2012-02-08	00:00	2012-02-10
288808	AH-4 4-4.5'	soil	2012-02-08	00:00	2012-02-10
288809	AH-5 0-1'	soil	2012-02-08	00:00	2012-02-10
288810	AH-5 1-1.5'	soil	2012-02-08	00:00	2012-02-10
288811	AH-6 0-1'	soil	2012-02-08	00:00	2012-02-10
288812	AH-6 1-1.5'	soil	2012-02-08	00:00	2012-02-10

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
288813	AH-7 0-1'	soil	2012-02-08	00:00	2012-02-10
288814	AH-7 1-1.5'	soil	2012-02-08	00:00	2012-02-10
288815	AH-7 2-2.5'	soil	2012-02-08	00:00	2012-02-10
288816	AH-8 0-1'	soil	2012-02-08	00:00	2012-02-10
288817	AH-8 1-1.5'	soil	2012-02-08	00:00	2012-02-10
288818	AH-9 0-1'	soil	2012-02-08	00:00	2012-02-10
288819	AH-9 1-1.5'	soil	2012-02-08	00:00	2012-02-10
288820	AH-9 2-2.5'	soil	2012-02-08	00:00	2012-02-10
288821	AH-9 3-3.5'	soil	2012-02-08	00:00	2012-02-10
288822	AH-9 4-4.5'	soil	2012-02-08	00:00	2012-02-10
288823	AH-9 5-5.5'	soil	2012-02-08	00:00	2012-02-10
288824	AH-9 6-6.5'	soil	2012-02-08	00:00	2012-02-10
288825	AH-9 7-7.5'	soil	2012-02-08	00:00	2012-02-10
288826	AH-9 8-8.5'	soil	2012-02-08	00:00	2012-02-10
288827	AH-9 9-9.5'	soil	2012-02-08	00:00	2012-02-10
288828	AH-10 0-1'	soil	2012-02-08	00:00	2012-02-10
288829	AH-10 1-1.5'	soil	2012-02-08	00:00	2012-02-10
288830	AH-10 2-2.5'	soil	2012-02-08	00:00	2012-02-10
288831	AH-10 3-3.5'	soil	2012-02-08	00:00	2012-02-10
288832	AH-10 4-4.5'	soil	2012-02-08	00:00	2012-02-10
288833	AH-10 5-5.5'	soil	2012-02-08	00:00	2012-02-10
288834	AH-10 6-6.5'	soil	2012-02-08	00:00	2012-02-10
288835	AH-10 7-7.5'	soil	2012-02-08	00:00	2012-02-10
288836	AH-10 8-8.5'	soil	2012-02-08	00:00	2012-02-10
288837	AH-10 9-9.5'	soil	2012-02-08	00:00	2012-02-10
288872	AH-5 2-2.5'	soil	2012-02-08	00:00	2012-02-10

	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)
288783 - AH-1 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	**132**	<2.00
288789 - AH-2 0-1'					**98.7**	**4.20**
288794 - AH-3 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	**104** Qs	**10.1**
288804 - AH-4 0-1'	<0.100	<0.100	<0.100	**0.251**	**407** Qs	**14.9**
288809 - AH-5 0-1'					<50.0	<2.00
288811 - AH-6 0-1'					<50.0	<2.00
288813 - AH-7 0-1'	<0.200	<0.200	**2.04**	**4.08**	**1720**	**263**
288816 - AH-8 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	**117** Qs	<2.00
288818 - AH-9 0-1'					**108** Qs	<2.00
288828 - AH-10 0-1'	**23.0**	**152**	**115**	**137**	**8750**	**4050**
288829 - AH-10 1-1.5'	**12.4**	**66.4** Je	**45.8** Je	**54.2**	**2780** Qs	**1500**
288830 - AH-10 2-2.5'	**0.642**	**14.7**	**20.5**	**27.0**		
288831 - AH-10 3-3.5'	<0.0200	<0.0200	<0.0200	<0.0200		

Sample: 288783 - AH-1 0-1'

Param	Flag	Result	Units	RL
Chloride		**4450**	mg/Kg	4

Sample: 288784 - AH-1 1-1.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 288785 - AH-1 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**328**	mg/Kg	4

Sample: 288786 - AH-1 3-3.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 288787 - AH-1 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**671**	mg/Kg	4

Sample: 288788 - AH-1 5-5.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 288789 - AH-2 0-1'

Param	Flag	Result	Units	RL
Chloride		**2060**	mg/Kg	4

Sample: 288790 - AH-2 1.-1.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 288791 - AH-2 2-2.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 288792 - AH-2 3-3.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 288793 - AH-2 4-4.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 288794 - AH-3 0-1'

Param	Flag	Result	Units	RL
Chloride		**9220**	mg/Kg	4

Sample: 288795 - AH-3 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**1260**	mg/Kg	4

Sample: 288796 - AH-3 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**413**	mg/Kg	4

Sample: 288797 - AH-3 3-3.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 288798 - AH-3 4-4.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 288799 - AH-3 5-5.5'

Param	Flag	Result	Units	RL
Chloride		**372**	mg/Kg	4

Sample: 288800 - AH-3 6-6.5'

Param	Flag	Result	Units	RL
Chloride		**815**	mg/Kg	4

Sample: 288801 - AH-3 7-7.5'

Param	Flag	Result	Units	RL
Chloride		**627**	mg/Kg	4

Sample: 288802 - AH-3 8-8.5'

Param	Flag	Result	Units	RL
Chloride		**790**	mg/Kg	4

Sample: 288803 - AH-3 9-9.5'

Param	Flag	Result	Units	RL
Chloride		**926**	mg/Kg	4

Sample: 288804 - AH-4 0-1'

Param	Flag	Result	Units	RL
Chloride		**4980**	mg/Kg	4

Sample: 288805 - AH-4 1-1.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 288806 - AH-4 2-2.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 288807 - AH-4 3-3.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 288808 - AH-4 4-4.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 288809 - AH-5 0-1'

Param	Flag	Result	Units	RL
Chloride		**2440**	mg/Kg	4

Sample: 288810 - AH-5 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**350**	mg/Kg	4

Sample: 288811 - AH-6 0-1'

Param	Flag	Result	Units	RL
Chloride		**2890**	mg/Kg	4

Sample: 288812 - AH-6 1-1.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 288813 - AH-7 0-1'

Param	Flag	Result	Units	RL
Chloride		**7060**	mg/Kg	4

Sample: 288814 - AH-7 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**11300**	mg/Kg	4

Sample: 288815 - AH-7 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**3460**	mg/Kg	4

Sample: 288816 - AH-8 0-1'

Param	Flag	Result	Units	RL
Chloride		**7550**	mg/Kg	4

Sample: 288817 - AH-8 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**11600**	mg/Kg	4

Sample: 288818 - AH-9 0-1'

Param	Flag	Result	Units	RL
Chloride		**5910**	mg/Kg	4

Sample: 288819 - AH-9 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**6030**	mg/Kg	4

Sample: 288820 - AH-9 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**3730**	mg/Kg	4

Sample: 288821 - AH-9 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**1540**	mg/Kg	4

Sample: 288822 - AH-9 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**2230**	mg/Kg	4

Sample: 288823 - AH-9 5-5.5'

Param	Flag	Result	Units	RL
Chloride		**2730**	mg/Kg	4

Sample: 288824 - AH-9 6-6.5'

Param	Flag	Result	Units	RL
Chloride		**1830**	mg/Kg	4

Sample: 288825 - AH-9 7-7.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 288826 - AH-9 8-8.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 288827 - AH-9 9-9.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 288828 - AH-10 0-1'

Param	Flag	Result	Units	RL
Chloride		**4940**	mg/Kg	4

Sample: 288829 - AH-10 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**4090**	mg/Kg	4

Sample: 288830 - AH-10 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**1390**	mg/Kg	4

Sample: 288831 - AH-10 3-3.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 288832 - AH-10 4-4.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 288833 - AH-10 5-5.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 288834 - AH-10 6-6.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 288835 - AH-10 7-7.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 288836 - AH-10 8-8.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 288837 - AH-10 9-9.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 288872 - AH-5 2-2.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

TRACEANALYSIS, INC.

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Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report
(Corrected Report)

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

Report Date: February 22, 2012

Work Order: 12021022

Project Location: Eddy Co., NM
Project Name: COG/Foster Eddy #9
Project Number: 114-6401233

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
288783	AH-1 0-1'	soil	2012-02-08	00:00	2012-02-10
288784	AH-1 1-1.5'	soil	2012-02-08	00:00	2012-02-10
288785	AH-1 2-2.5'	soil	2012-02-08	00:00	2012-02-10
288786	AH-1 3-3.5'	soil	2012-02-08	00:00	2012-02-10
288787	AH-1 4-4.5'	soil	2012-02-08	00:00	2012-02-10
288788	AH-1 5-5.5'	soil	2012-02-08	00:00	2012-02-10
288789	AH-2 0-1'	soil	2012-02-08	00:00	2012-02-10
288790	AH-2 1.-1.5'	soil	2012-02-08	00:00	2012-02-10
288791	AH-2 2-2.5'	soil	2012-02-08	00:00	2012-02-10
288792	AH-2 3-3.5'	soil	2012-02-08	00:00	2012-02-10
288793	AH-2 4-4.5'	soil	2012-02-08	00:00	2012-02-10
288794	AH-3 0-1'	soil	2012-02-08	00:00	2012-02-10
288795	AH-3 1-1.5'	soil	2012-02-08	00:00	2012-02-10
288796	AH-3 2-2.5'	soil	2012-02-08	00:00	2012-02-10
288797	AH-3 3-3.5'	soil	2012-02-08	00:00	2012-02-10

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
288798	AH-3 4-4.5'	soil	2012-02-08	00:00	2012-02-10
288799	AH-3 5-5.5'	soil	2012-02-08	00:00	2012-02-10
288800	AH-3 6-6.5'	soil	2012-02-08	00:00	2012-02-10
288801	AH-3 7-7.5'	soil	2012-02-08	00:00	2012-02-10
288802	AH-3 8-8.5'	soil	2012-02-08	00:00	2012-02-10
288803	AH-3 9-9.5'	soil	2012-02-08	00:00	2012-02-10
288804	AH-4 0-1'	soil	2012-02-08	00:00	2012-02-10
288805	AH-4 1-1.5'	soil	2012-02-08	00:00	2012-02-10
288806	AH-4 2-2.5'	soil	2012-02-08	00:00	2012-02-10
288807	AH-4 3-3.5'	soil	2012-02-08	00:00	2012-02-10
288808	AH-4 4-4.5'	soil	2012-02-08	00:00	2012-02-10
288809	AH-5 0-1'	soil	2012-02-08	00:00	2012-02-10
288810	AH-5 1-1.5'	soil	2012-02-08	00:00	2012-02-10
288811	AH-6 0-1'	soil	2012-02-08	00:00	2012-02-10
288812	AH-6 1-1.5'	soil	2012-02-08	00:00	2012-02-10
288813	AH-7 0-1'	soil	2012-02-08	00:00	2012-02-10
288814	AH-7 1-1.5'	soil	2012-02-08	00:00	2012-02-10
288815	AH-7 2-2.5'	soil	2012-02-08	00:00	2012-02-10
288816	AH-8 0-1'	soil	2012-02-08	00:00	2012-02-10
288817	AH-8 1-1.5'	soil	2012-02-08	00:00	2012-02-10
288818	AH-9 0-1'	soil	2012-02-08	00:00	2012-02-10
288819	AH-9 1-1.5'	soil	2012-02-08	00:00	2012-02-10
288820	AH-9 2-2.5'	soil	2012-02-08	00:00	2012-02-10
288821	AH-9 3-3.5'	soil	2012-02-08	00:00	2012-02-10
288822	AH-9 4-4.5'	soil	2012-02-08	00:00	2012-02-10
288823	AH-9 5-5.5'	soil	2012-02-08	00:00	2012-02-10
288824	AH-9 6-6.5'	soil	2012-02-08	00:00	2012-02-10
288825	AH-9 7-7.5'	soil	2012-02-08	00:00	2012-02-10
288826	AH-9 8-8.5'	soil	2012-02-08	00:00	2012-02-10
288827	AH-9 9-9.5'	soil	2012-02-08	00:00	2012-02-10
288828	AH-10 0-1'	soil	2012-02-08	00:00	2012-02-10
288829	AH-10 1-1.5'	soil	2012-02-08	00:00	2012-02-10
288830	AH-10 2-2.5'	soil	2012-02-08	00:00	2012-02-10
288831	AH-10 3-3.5'	soil	2012-02-08	00:00	2012-02-10
288832	AH-10 4-4.5'	soil	2012-02-08	00:00	2012-02-10
288833	AH-10 5-5.5'	soil	2012-02-08	00:00	2012-02-10
288834	AH-10 6-6.5'	soil	2012-02-08	00:00	2012-02-10
288835	AH-10 7-7.5'	soil	2012-02-08	00:00	2012-02-10
288836	AH-10 8-8.5'	soil	2012-02-08	00:00	2012-02-10
288837	AH-10 9-9.5'	soil	2012-02-08	00:00	2012-02-10
288872	AH-5 2-2.5'	soil	2012-02-08	00:00	2012-02-10

Report Corrections (Work Order 12021022)

- Added BTEX test for samples 288783, 288794, 288804, 288813, 288816, and 288828, and TPH GRO/DRO tests for sample 288829. 2/17/12

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

This report consists of a total of 71 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

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

Report Contents

Case Narrative

Samples for project COG/Foster Eddy #9 were received by TraceAnalysis, Inc. on 2012-02-10 and assigned to work order 12021022. Samples for work order 12021022 were received intact at a temperature of 5.9 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	75170	2012-02-13 at 08:45	88547	2012-02-13 at 14:52
BTEX	S 8021B	75197	2012-02-14 at 10:40	88583	2012-02-15 at 05:31
BTEX	S 8021B	75272	2012-02-15 at 14:30	88666	2012-02-16 at 00:21
BTEX	S 8021B	75334	2012-02-20 at 11:14	88751	2012-02-20 at 11:30
Chloride (Titration)	SM 4500-Cl B	75143	2012-02-10 at 13:39	88558	2012-02-14 at 13:54
Chloride (Titration)	SM 4500-Cl B	75143	2012-02-10 at 13:39	88560	2012-02-14 at 13:55
Chloride (Titration)	SM 4500-Cl B	75143	2012-02-10 at 13:39	88561	2012-02-14 at 13:56
Chloride (Titration)	SM 4500-Cl B	75143	2012-02-10 at 13:39	88562	2012-02-14 at 13:57
Chloride (Titration)	SM 4500-Cl B	75143	2012-02-10 at 13:39	88563	2012-02-14 at 13:58
Chloride (Titration)	SM 4500-Cl B	75143	2012-02-10 at 13:39	88564	2012-02-14 at 13:59
Chloride (Titration)	SM 4500-Cl B	75143	2012-02-10 at 13:39	88568	2012-02-14 at 14:02
TPH DRO - NEW	S 8015 D	75146	2012-02-13 at 15:03	88517	2012-02-13 at 15:05
TPH DRO - NEW	S 8015 D	75173	2012-02-14 at 11:20	88549	2012-02-14 at 11:22
TPH DRO - NEW	S 8015 D	75355	2012-02-17 at 13:00	88771	2012-02-21 at 14:08
TPH GRO	S 8015 D	75170	2012-02-13 at 08:45	88543	2012-02-13 at 14:52
TPH GRO	S 8015 D	75197	2012-02-14 at 10:40	88584	2012-02-15 at 15:59
TPH GRO	S 8015 D	75272	2012-02-15 at 14:30	88667	2012-02-16 at 00:48

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

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 12021022 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: 288783 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	88583	Date Analyzed:	2012-02-15	Analyzed By:	tc
Prep Batch:	75197	Sample Preparation:	2012-02-14	Prepared By:	tc

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	2	<0.0200	mg/Kg	1	0.0200
Toluene	U	2	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	2	<0.0200	mg/Kg	1	0.0200
Xylene	U	2	<0.0200	mg/Kg	1	0.0200

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr		2.78	mg/Kg	1	2.00	139	75 - 135.4
4-Bromofluorobenzene (4-BFB)				2.34	mg/Kg	1	2.00	117	63.6 - 158.9

Sample: 288783 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88558	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**4450**	mg/Kg	100	4.00

Sample: 288783 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	88517	Date Analyzed:	2012-02-13	Analyzed By:	DA
Prep Batch:	75146	Sample Preparation:	2012-02-13	Prepared By:	DA

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
DRO		2	**132**	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			112	mg/Kg	1	100	112	49.3 - 157.5

Sample: 288783 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	88584	Date Analyzed:	2012-02-15	Analyzed By:	tc
Prep Batch:	75197	Sample Preparation:	2012-02-14	Prepared By:	tc

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
GRO	U	2	<2.00	mg/Kg	1	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.45	mg/Kg	1	2.00	122	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)			2.49	mg/Kg	1	2.00	124	45.1 - 162.2

Sample: 288784 - AH-1 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88558	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

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

Sample: 288785 - AH-1 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88558	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

continued ...

sample 288785 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**328**	mg/Kg	50	4.00

Sample: 288786 - AH-1 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88558	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

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

Sample: 288787 - AH-1 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88558	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**671**	mg/Kg	50	4.00

Sample: 288788 - AH-1 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88558	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

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

Sample: 288789 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88558	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2060**	mg/Kg	100	4.00

Sample: 288789 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	88517	Date Analyzed:	2012-02-13	Analyzed By:	DA
Prep Batch:	75146	Sample Preparation:	2012-02-13	Prepared By:	DA

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		2	**98.7**	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			108	mg/Kg	1	100	108	49.3 - 157.5

Sample: 288789 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	88543	Date Analyzed:	2012-02-13	Analyzed By:	tc
Prep Batch:	75170	Sample Preparation:	2012-02-13	Prepared By:	tc

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		2	**4.20**	mg/Kg	1	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.08	mg/Kg	1	2.00	104	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)			2.22	mg/Kg	1	2.00	111	45.1 - 162.2

Sample: 288790 - AH-2 1.-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88558	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

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

Sample: 288791 - AH-2 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88558	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

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

Sample: 288792 - AH-2 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88558	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

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

Sample: 288793 - AH-2 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88560	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

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

Sample: 288794 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	88547	Date Analyzed:	2012-02-13	Analyzed By:	tc
Prep Batch:	75170	Sample Preparation:	2012-02-13	Prepared By:	tc

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	2	<0.0200	mg/Kg	1	0.0200
Toluene	U	2	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	2	<0.0200	mg/Kg	1	0.0200
Xylene	U	2	<0.0200	mg/Kg	1	0.0200

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr		2.79	mg/Kg	1	2.00	140	75 - 135.4
4-Bromofluorobenzene (4-BFB)				2.40	mg/Kg	1	2.00	120	63.6 - 158.9

Sample: 288794 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88560	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**9220**	mg/Kg	100	4.00

Sample: 288794 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	88549	Date Analyzed:	2012-02-14	Analyzed By:	DA
Prep Batch:	75173	Sample Preparation:	2012-02-14	Prepared By:	DA

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
DRO	Qs	2	**104**	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			102	mg/Kg	1	100	102	49.3 - 157.5

Sample: 288794 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	88543	Date Analyzed:	2012-02-13	Analyzed By:	tc
Prep Batch:	75170	Sample Preparation:	2012-02-13	Prepared By:	tc

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
GRO		2	**10.1**	mg/Kg	1	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.47	mg/Kg	1	2.00	124	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)			2.61	mg/Kg	1	2.00	130	45.1 - 162.2

Sample: 288795 - AH-3 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88560	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**1260**	mg/Kg	100	4.00

Sample: 288796 - AH-3 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88560	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**413**	mg/Kg	50	4.00

Sample: 288797 - AH-3 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88560	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

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

Sample: 288798 - AH-3 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88560	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

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

Sample: 288799 - AH-3 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88560	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**372**	mg/Kg	50	4.00

Sample: 288800 - AH-3 6-6.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88560	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**815**	mg/Kg	50	4.00

Sample: 288801 - AH-3 7-7.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88560	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**627**	mg/Kg	50	4.00

Sample: 288802 - AH-3 8-8.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88560	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**790**	mg/Kg	50	4.00

Sample: 288803 - AH-3 9-9.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88561	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**926**	mg/Kg	50	4.00

Sample: 288804 - AH-4 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	88547	Date Analyzed:	2012-02-13	Analyzed By:	tc
Prep Batch:	75170	Sample Preparation:	2012-02-13	Prepared By:	tc

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	2	<0.100	mg/Kg	5	0.0200
Toluene	U	2	<0.100	mg/Kg	5	0.0200
Ethylbenzene	U	2	<0.100	mg/Kg	5	0.0200
Xylene		2	**0.251**	mg/Kg	5	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			5.59	mg/Kg	5	5.00	112	75 - 135.4
4-Bromofluorobenzene (4-BFB)			4.33	mg/Kg	5	5.00	87	63.6 - 158.9

Sample: 288804 - AH-4 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88561	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**4980**	mg/Kg	100	4.00

Sample: 288804 - AH-4 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	88549	Date Analyzed:	2012-02-14	Analyzed By:	DA
Prep Batch:	75173	Sample Preparation:	2012-02-14	Prepared By:	DA

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
DRO	Qs	2	**407**	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			123	mg/Kg	1	100	123	49.3 - 157.5

Sample: 288804 - AH-4 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	88543	Date Analyzed:	2012-02-13	Analyzed By:	tc
Prep Batch:	75170	Sample Preparation:	2012-02-13	Prepared By:	tc

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
GRO		2	**14.9**	mg/Kg	5	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			4.96	mg/Kg	5	5.00	99	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)			4.68	mg/Kg	5	5.00	94	45.1 - 162.2

Sample: 288805 - AH-4 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88561	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

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

Sample: 288806 - AH-4 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88561	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

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

Sample: 288807 - AH-4 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88561	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

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

Sample: 288808 - AH-4 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88561	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

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

Sample: 288809 - AH-5 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88561	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2440**	mg/Kg	100	4.00

Sample: 288809 - AH-5 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	88517	Date Analyzed:	2012-02-13	Analyzed By:	DA
Prep Batch:	75146	Sample Preparation:	2012-02-13	Prepared By:	DA

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		2	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			103	mg/Kg	1	100	103	49.3 - 157.5

Sample: 288809 - AH-5 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	88543	Date Analyzed:	2012-02-13	Analyzed By:	tc
Prep Batch:	75170	Sample Preparation:	2012-02-13	Prepared By:	tc

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	2	<2.00	mg/Kg	1	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.34	mg/Kg	1	2.00	117	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)			2.34	mg/Kg	1	2.00	117	45.1 - 162.2

Sample: 288810 - AH-5 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88561	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**350**	mg/Kg	50	4.00

Sample: 288811 - AH-6 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88561	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2890**	mg/Kg	100	4.00

Sample: 288811 - AH-6 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	88517	Date Analyzed:	2012-02-13	Analyzed By:	DA
Prep Batch:	75146	Sample Preparation:	2012-02-13	Prepared By:	DA

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		2	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			101	mg/Kg	1	100	101	49.3 - 157.5

Sample: 288811 - AH-6 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	88543	Date Analyzed:	2012-02-13	Analyzed By:	tc
Prep Batch:	75170	Sample Preparation:	2012-02-13	Prepared By:	tc

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	2	<2.00	mg/Kg	1	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.12	mg/Kg	1	2.00	106	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)			2.06	mg/Kg	1	2.00	103	45.1 - 162.2

Sample: 288812 - AH-6 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88561	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

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

Sample: 288813 - AH-7 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	88547	Date Analyzed:	2012-02-13	Analyzed By:	tc
Prep Batch:	75170	Sample Preparation:	2012-02-13	Prepared By:	tc

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	2	<0.200	mg/Kg	10	0.0200
Toluene	U	2	<0.200	mg/Kg	10	0.0200
Ethylbenzene		2	**2.04**	mg/Kg	10	0.0200
Xylene		2	**4.08**	mg/Kg	10	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			12.1	mg/Kg	10	10.0	121	75 - 135.4
4-Bromofluorobenzene (4-BFB)			11.3	mg/Kg	10	10.0	113	63.6 - 158.9

Sample: 288813 - AH-7 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88562	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**7060**	mg/Kg	100	4.00

Sample: 288813 - AH-7 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	88517	Date Analyzed:	2012-02-13	Analyzed By:	DA
Prep Batch:	75146	Sample Preparation:	2012-02-13	Prepared By:	DA

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
DRO		2	**1720**	mg/Kg	5	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			287	mg/Kg	5	500	57	49.3 - 157.5

Sample: 288813 - AH-7 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	88543	Date Analyzed:	2012-02-13	Analyzed By:	tc
Prep Batch:	75170	Sample Preparation:	2012-02-13	Prepared By:	tc

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
GRO		2	**263**	mg/Kg	10	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			10.7	mg/Kg	10	10.0	107	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)			13.3	mg/Kg	10	10.0	133	45.1 - 162.2

Sample: 288814 - AH-7 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88562	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**11300**	mg/Kg	100	4.00

Sample: 288815 - AH-7 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88562	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**3460**	mg/Kg	100	4.00

Sample: 288816 - AH-8 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	88547	Date Analyzed:	2012-02-13	Analyzed By:	tc
Prep Batch:	75170	Sample Preparation:	2012-02-13	Prepared By:	tc

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	2	<0.0200	mg/Kg	1	0.0200
Toluene	U	2	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	2	<0.0200	mg/Kg	1	0.0200
Xylene	U	2	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.58	mg/Kg	1	2.00	79	75 - 135.4
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	1.23	mg/Kg	1	2.00	62	63.6 - 158.9

Sample: 288816 - AH-8 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88562	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**7550**	mg/Kg	100	4.00

Sample: 288816 - AH-8 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	88549	Date Analyzed:	2012-02-14	Analyzed By:	DA
Prep Batch:	75173	Sample Preparation:	2012-02-14	Prepared By:	DA

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qs	2	**117**	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			113	mg/Kg	1	100	113	49.3 - 157.5

Sample: 288816 - AH-8 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	88543	Date Analyzed:	2012-02-13	Analyzed By:	tc
Prep Batch:	75170	Sample Preparation:	2012-02-13	Prepared By:	tc

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		2	<2.00	mg/Kg	1	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.37	mg/Kg	1	2.00	68	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)			1.32	mg/Kg	1	2.00	66	45.1 - 162.2

Sample: 288817 - AH-8 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88562	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**11600**	mg/Kg	100	4.00

Sample: 288818 - AH-9 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88562	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**5910**	mg/Kg	100	4.00

Sample: 288818 - AH-9 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	88549	Date Analyzed:	2012-02-14	Analyzed By:	DA
Prep Batch:	75173	Sample Preparation:	2012-02-14	Prepared By:	DA

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qs	2	**108**	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			114	mg/Kg	1	100	114	49.3 - 157.5

Sample: 288818 - AH-9 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	88543	Date Analyzed:	2012-02-13	Analyzed By:	tc
Prep Batch:	75170	Sample Preparation:	2012-02-13	Prepared By:	tc

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		2	<2.00	mg/Kg	1	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.39	mg/Kg	1	2.00	120	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)			2.32	mg/Kg	1	2.00	116	45.1 - 162.2

Sample: 288819 - AH-9 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88562	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Chloride			**6030**		mg/Kg	100	4.00

Sample: 288820 - AH-9 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88562	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Chloride			**3730**		mg/Kg	100	4.00

Sample: 288821 - AH-9 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88562	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

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

Sample: 288822 - AH-9 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88562	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

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

Sample: 288823 - AH-9 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88563	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2730**	mg/Kg	100	4.00

Sample: 288824 - AH-9 6-6.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88563	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1830**	mg/Kg	100	4.00

Sample: 288825 - AH-9 7-7.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88563	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

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

Sample: 288826 - AH-9 8-8.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88563	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

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

Sample: 288827 - AH-9 9-9.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88563	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

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

Sample: 288828 - AH-10 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	88547	Date Analyzed:	2012-02-13	Analyzed By:	tc
Prep Batch:	75170	Sample Preparation:	2012-02-13	Prepared By:	tc

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		2	**23.0**	mg/Kg	50	0.0200
Toluene		2	**152**	mg/Kg	50	0.0200
Ethylbenzene		2	**115**	mg/Kg	50	0.0200

continued ...

sample 288828 continued ...

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Xylene		2	**137**		mg/Kg	50	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			55.7	mg/Kg	50	50.0	111	75 - 135.4
4-Bromofluorobenzene (4-BFB)			64.9	mg/Kg	50	50.0	130	63.6 - 158.9

Sample: 288828 - AH-10 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88563	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Chloride			**4940**		mg/Kg	100	4.00

Sample: 288828 - AH-10 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	88517	Date Analyzed:	2012-02-13	Analyzed By:	DA
Prep Batch:	75146	Sample Preparation:	2012-02-13	Prepared By:	DA

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
DRO		2	**8750**		mg/Kg	5	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			612	mg/Kg	5	500	122	49.3 - 157.5

Sample: 288828 - AH-10 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	88543	Date Analyzed:	2012-02-13	Analyzed By:	tc
Prep Batch:	75170	Sample Preparation:	2012-02-13	Prepared By:	tc

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		2	**4050**	mg/Kg	50	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			50.9	mg/Kg	50	50.0	102	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	83.8	mg/Kg	50	50.0	168	45.1 - 162.2

Sample: 288829 - AH-10 1-1.5'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	88666	Date Analyzed:	2012-02-16	Analyzed By:	tc
Prep Batch:	75272	Sample Preparation:	2012-02-15	Prepared By:	tc

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		2	**12.4**	mg/Kg	10	0.0200
Toluene	Je	2	**66.4**	mg/Kg	10	0.0200
Ethylbenzene	Je	2	**45.8**	mg/Kg	10	0.0200
Xylene		2	**54.2**	mg/Kg	10	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			11.4	mg/Kg	10	10.0	114	75 - 135.4
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	16.8	mg/Kg	10	10.0	168	63.6 - 158.9

Sample: 288829 - AH-10 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88563	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**4090**	mg/Kg	100	4.00

Sample: 288829 - AH-10 1-1.5'

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	88771	Date Analyzed:	2012-02-21	Analyzed By:	CM
Prep Batch:	75355	Sample Preparation:	2012-02-17	Prepared By:	CM

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
DRO	Qs	1	**2780**	mg/Kg	5	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		216	mg/Kg	5	100	216	75.4 - 130

Sample: 288829 - AH-10 1-1.5'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	88667	Date Analyzed:	2012-02-16	Analyzed By:	tc
Prep Batch:	75272	Sample Preparation:	2012-02-15	Prepared By:	tc

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
GRO		2	**1500**	mg/Kg	10	2.00

Surrogate	Flag		Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)				10.0	mg/Kg	10	10.0	100	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr		27.8	mg/Kg	10	10.0	278	45.1 - 162.2

Sample: 288830 - AH-10 2-2.5'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	88751	Date Analyzed:	2012-02-20	Analyzed By:	tc
Prep Batch:	75334	Sample Preparation:	2012-02-20	Prepared By:	tc

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene		2	**0.642**	mg/Kg	5	0.0200
Toluene		2	**14.7**	mg/Kg	5	0.0200
Ethylbenzene		2	**20.5**	mg/Kg	5	0.0200
Xylene		2	**27.0**	mg/Kg	5	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			6.34	mg/Kg	5	5.00	127	75 - 135.4
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	9.80	mg/Kg	5	5.00	196	63.6 - 158.9

Sample: 288830 - AH-10 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88563	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1390**	mg/Kg	100	4.00

Sample: 288831 - AH-10 3-3.5'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	88751	Date Analyzed:	2012-02-20	Analyzed By:	tc
Prep Batch:	75334	Sample Preparation:	2012-02-20	Prepared By:	tc

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	2	<0.0200	mg/Kg	1	0.0200
Toluene	U	2	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	2	<0.0200	mg/Kg	1	0.0200
Xylene	U	2	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr	2.96	mg/Kg	1	2.00	148	75 - 135.4
4-Bromofluorobenzene (4-BFB)			2.40	mg/Kg	1	2.00	120	63.6 - 158.9

Sample: 288831 - AH-10 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88563	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

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

Sample: 288832 - AH-10 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88563	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

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

Sample: 288833 - AH-10 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88564	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

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

Sample: 288834 - AH-10 6-6.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88564	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

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

Sample: 288835 - AH-10 7-7.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88564	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

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

Sample: 288836 - AH-10 8-8.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88564	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

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

Sample: 288837 - AH-10 9-9.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88564	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

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

Sample: 288872 - AH-5 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88568	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	Sample Preparation:	2012-02-10	Prepared By:	AR

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

Method Blanks

Method Blank (1) QC Batch: 88517

QC Batch: 88517 | Date Analyzed: 2012-02-13 | Analyzed By: DA
Prep Batch: 75146 | QC Preparation: 2012-02-13 | Prepared By: DA

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		2	39.1	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			100	mg/Kg	1	100	100	52 - 140.8

Method Blank (1) QC Batch: 88543

QC Batch: 88543 | Date Analyzed: 2012-02-13 | Analyzed By: tc
Prep Batch: 75170 | QC Preparation: 2012-02-13 | Prepared By: tc

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		2	<1.22	mg/Kg	2

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.08	mg/Kg	1	2.00	104	78.6 - 109
4-Bromofluorobenzene (4-BFB)			1.91	mg/Kg	1	2.00	96	58 - 100

Method Blank (1) QC Batch: 88547

QC Batch: 88547 | Date Analyzed: 2012-02-13 | Analyzed By: tc
Prep Batch: 75170 | QC Preparation: 2012-02-13 | Prepared By: tc

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		2	<0.00470	mg/Kg	0.02
Toluene		2	<0.00980	mg/Kg	0.02

continued ...

method blank continued ...

Parameter	Flag	Cert	MDL Result	Units	RL
Ethylbenzene		2	<0.00500	mg/Kg	0.02
Xylene		2	<0.0170	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.35	mg/Kg	1	2.00	118	78 - 123.6
4-Bromofluorobenzene (4-BFB)			1.77	mg/Kg	1	2.00	88	55.9 - 112.4

Method Blank (1) QC Batch: 88549

QC Batch:	88549	Date Analyzed:	2012-02-14	Analyzed By:	DA
Prep Batch:	75173	QC Preparation:	2012-02-14	Prepared By:	DA

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		2	<14.5	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			96.3	mg/Kg	1	100	96	52 - 140.8

Method Blank (1) QC Batch: 88558

QC Batch:	88558	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	QC Preparation:	2012-02-10	Prepared By:	AR

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

Method Blank (1) QC Batch: 88560

QC Batch:	88560	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	QC Preparation:	2012-02-10	Prepared By:	AR

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

Method Blank (1) QC Batch: 88561

QC Batch:	88561	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	QC Preparation:	2012-02-10	Prepared By:	AR

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

Method Blank (1) QC Batch: 88562

QC Batch:	88562	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	QC Preparation:	2012-02-10	Prepared By:	AR

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

Method Blank (1) QC Batch: 88563

QC Batch:	88563	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	QC Preparation:	2012-02-10	Prepared By:	AR

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

Method Blank (1) QC Batch: 88564

QC Batch:	88564	Date Analyzed:	2012-02-14	Analyzed By:	AR
Prep Batch:	75143	QC Preparation:	2012-02-10	Prepared By:	AR

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

Method Blank (1) QC Batch: 88568

QC Batch: 88568 Date Analyzed: 2012-02-14 Analyzed By: AR
Prep Batch: 75143 QC Preparation: 2012-02-10 Prepared By: AR

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

Method Blank (1) QC Batch: 88583

QC Batch: 88583 Date Analyzed: 2012-02-15 Analyzed By: tc
Prep Batch: 75197 QC Preparation: 2012-02-14 Prepared By: tc

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		2	<0.00470	mg/Kg	0.02
Toluene		2	<0.00980	mg/Kg	0.02
Ethylbenzene		2	<0.00500	mg/Kg	0.02
Xylene		2	<0.0170	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.41	mg/Kg	1	2.00	120	78 - 123.6
4-Bromofluorobenzene (4-BFB)			1.82	mg/Kg	1	2.00	91	55.9 - 112.4

Method Blank (1) QC Batch: 88584

QC Batch: 88584 Date Analyzed: 2012-02-15 Analyzed By: tc
Prep Batch: 75197 QC Preparation: 2012-02-14 Prepared By: tc

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		2	<1.22	mg/Kg	2

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.11	mg/Kg	1	2.00	106	78.6 - 109
4-Bromofluorobenzene (4-BFB)			1.93	mg/Kg	1	2.00	96	58 - 100

Method Blank (1) QC Batch: 88666

QC Batch: 88666 Date Analyzed: 2012-02-16 Analyzed By: tc
Prep Batch: 75272 QC Preparation: 2012-02-15 Prepared By: tc

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		2	<0.00470	mg/Kg	0.02
Toluene		2	<0.00980	mg/Kg	0.02
Ethylbenzene		2	<0.00500	mg/Kg	0.02
Xylene		2	<0.0170	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.16	mg/Kg	1	2.00	108	78 - 123.6
4-Bromofluorobenzene (4-BFB)			1.29	mg/Kg	1	2.00	64	55.9 - 112.4

Method Blank (1) QC Batch: 88667

QC Batch: 88667 Date Analyzed: 2012-02-16 Analyzed By: tc
Prep Batch: 75272 QC Preparation: 2012-02-15 Prepared By: tc

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		2	<1.22	mg/Kg	2

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.84	mg/Kg	1	2.00	92	78.6 - 109
4-Bromofluorobenzene (4-BFB)			1.39	mg/Kg	1	2.00	70	58 - 100

Method Blank (1) QC Batch: 88751

QC Batch: 88751 | Date Analyzed: 2012-02-20 | Analyzed By: tc
Prep Batch: 75334 | QC Preparation: 2012-02-20 | Prepared By: tc

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		2	<0.00470	mg/Kg	0.02
Toluene		2	<0.00980	mg/Kg	0.02
Ethylbenzene		2	<0.00500	mg/Kg	0.02
Xylene		2	<0.0170	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.14	mg/Kg	1	2.00	107	78 - 123.6
4-Bromofluorobenzene (4-BFB)			1.38	mg/Kg	1	2.00	69	55.9 - 112.4

Method Blank (1) QC Batch: 88771

QC Batch: 88771 | Date Analyzed: 2012-02-21 | Analyzed By: CM
Prep Batch: 75355 | QC Preparation: 2012-02-17 | Prepared By: CM

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	12.2	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			104	mg/Kg	1	100	104	75.4 - 130

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 88517 | Date Analyzed: 2012-02-13 | Analyzed By: DA
Prep Batch: 75146 | QC Preparation: 2012-02-13 | Prepared By: DA

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		2	244	mg/Kg	1	250	<14.5	98	62 - 128.3

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		2	236	mg/Kg	1	250	<14.5	94	62 - 128.3	3	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	104	104	mg/Kg	1	100	104	104	58.6 - 149.6

Laboratory Control Spike (LCS-1)

QC Batch: 88543 | Date Analyzed: 2012-02-13 | Analyzed By: tc
Prep Batch: 75170 | QC Preparation: 2012-02-13 | Prepared By: tc

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		2	18.7	mg/Kg	1	20.0	<1.22	94	68.3 - 105.7

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		2	18.6	mg/Kg	1	20.0	<1.22	93	68.3 - 105.7	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)	2.12	2.01	mg/Kg	1	2.00	106	100	80 - 111.2
4-Bromofluorobenzene (4-BFB)	2.10	1.96	mg/Kg	1	2.00	105	98	66.4 - 106.6

Laboratory Control Spike (LCS-1)

QC Batch: 88547 | Date Analyzed: 2012-02-13 | Analyzed By: tc
Prep Batch: 75170 | QC Preparation: 2012-02-13 | Prepared By: tc

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		2	1.98	mg/Kg	1	2.00	<0.00470	99	86.5 - 124.9
Toluene		2	1.99	mg/Kg	1	2.00	<0.00980	100	84.7 - 122.5
Ethylbenzene		2	1.98	mg/Kg	1	2.00	<0.00500	99	79.4 - 118.9
Xylene		2	5.80	mg/Kg	1	6.00	<0.0170	97	79.5 - 118.9

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		2	2.17	mg/Kg	1	2.00	<0.00470	108	86.5 - 124.9	9	20
Toluene		2	2.20	mg/Kg	1	2.00	<0.00980	110	84.7 - 122.5	10	20
Ethylbenzene		2	2.15	mg/Kg	1	2.00	<0.00500	108	79.4 - 118.9	8	20
Xylene		2	6.37	mg/Kg	1	6.00	<0.0170	106	79.5 - 118.9	9	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.32	2.38	mg/Kg	1	2.00	116	119	73.9 - 127
4-Bromofluorobenzene (4-BFB)	2.05	2.08	mg/Kg	1	2.00	102	104	70.4 - 119

Laboratory Control Spike (LCS-1)

QC Batch: 88549 | Date Analyzed: 2012-02-14 | Analyzed By: DA
Prep Batch: 75173 | QC Preparation: 2012-02-14 | Prepared By: DA

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		2	256	mg/Kg	1	250	<14.5	102	62 - 128.3

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		2	233	mg/Kg	1	250	<14.5	93	62 - 128.3	9	20

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

continued ...

control spikes continued ...

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	98.3	106	mg/Kg	1	100	98	106	58.6 - 149.6

Laboratory Control Spike (LCS-1)

QC Batch: 88558 | Date Analyzed: 2012-02-14 | Analyzed By: AR
Prep Batch: 75143 | QC Preparation: 2012-02-10 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			98.9	mg/Kg	1	100	<3.85	99	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			106	mg/Kg	1	100	<3.85	106	85 - 115	7	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 88560 | Date Analyzed: 2012-02-14 | Analyzed By: AR
Prep Batch: 75143 | QC Preparation: 2012-02-10 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			95.2	mg/Kg	1	100	<3.85	95	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			107	mg/Kg	1	100	<3.85	107	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: 88561 | Date Analyzed: 2012-02-14 | Analyzed By: AR
Prep Batch: 75143 | QC Preparation: 2012-02-10 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			95.9	mg/Kg	1	100	<3.85	96	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			106	mg/Kg	1	100	<3.85	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: 88562 | Date Analyzed: 2012-02-14 | Analyzed By: AR
Prep Batch: 75143 | QC Preparation: 2012-02-10 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			94.9	mg/Kg	1	100	<3.85	95	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			104	mg/Kg	1	100	<3.85	104	85 - 115	9	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: 88563 | Date Analyzed: 2012-02-14 | Analyzed By: AR
Prep Batch: 75143 | QC Preparation: 2012-02-10 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			94.2	mg/Kg	1	100	<3.85	94	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			102	mg/Kg	1	100	<3.85	102	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: 88564 | Date Analyzed: 2012-02-14 | Analyzed By: AR
Prep Batch: 75143 | QC Preparation: 2012-02-10 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			97.0	mg/Kg	1	100	<3.85	97	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			106	mg/Kg	1	100	<3.85	106	85 - 115	9	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: 88568 | Date Analyzed: 2012-02-14 | Analyzed By: AR
Prep Batch: 75143 | QC Preparation: 2012-02-10 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			93.3	mg/Kg	1	100	<3.85	93	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			105	mg/Kg	1	100	<3.85	105	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: 88583 | Date Analyzed: 2012-02-15 | Analyzed By: tc
Prep Batch: 75197 | QC Preparation: 2012-02-14 | Prepared By: tc

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		2	2.39	mg/Kg	1	2.00	<0.00470	120	86.5 - 124.9
Toluene		2	2.31	mg/Kg	1	2.00	<0.00980	116	84.7 - 122.5
Ethylbenzene		2	2.24	mg/Kg	1	2.00	<0.00500	112	79.4 - 118.9
Xylene		2	6.60	mg/Kg	1	6.00	<0.0170	110	79.5 - 118.9

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		2	2.30	mg/Kg	1	2.00	<0.00470	115	86.5 - 124.9	4	20
Toluene		2	2.23	mg/Kg	1	2.00	<0.00980	112	84.7 - 122.5	4	20
Ethylbenzene		2	2.12	mg/Kg	1	2.00	<0.00500	106	79.4 - 118.9	6	20
Xylene		2	6.31	mg/Kg	1	6.00	<0.0170	105	79.5 - 118.9	4	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.48	2.13	mg/Kg	1	2.00	124	106	73.9 - 127
4-Bromofluorobenzene (4-BFB)	2.18	1.85	mg/Kg	1	2.00	109	92	70.4 - 119

Laboratory Control Spike (LCS-1)

QC Batch: 88584 | Date Analyzed: 2012-02-15 | Analyzed By: tc
Prep Batch: 75197 | QC Preparation: 2012-02-14 | Prepared By: tc

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		2	18.0	mg/Kg	1	20.0	<1.22	90	68.3 - 105.7

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		2	18.8	mg/Kg	1	20.0	<1.22	94	68.3 - 105.7	4	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.95	2.04	mg/Kg	1	2.00	98	102	80 - 111.2
4-Bromofluorobenzene (4-BFB)	1.96	2.05	mg/Kg	1	2.00	98	102	66.4 - 106.6

Laboratory Control Spike (LCS-1)

QC Batch: 88666 | Date Analyzed: 2012-02-16 | Analyzed By: tc
Prep Batch: 75272 | QC Preparation: 2012-02-15 | Prepared By: tc

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		2	2.12	mg/Kg	1	2.00	<0.00470	106	86.5 - 124.9
Toluene		2	2.04	mg/Kg	1	2.00	<0.00980	102	84.7 - 122.5
Ethylbenzene		2	1.94	mg/Kg	1	2.00	<0.00500	97	79.4 - 118.9
Xylene		2	5.58	mg/Kg	1	6.00	<0.0170	93	79.5 - 118.9

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		2	1.91	mg/Kg	1	2.00	<0.00470	96	86.5 - 124.9	10	20
Toluene		2	1.84	mg/Kg	1	2.00	<0.00980	92	84.7 - 122.5	10	20
Ethylbenzene		2	1.76	mg/Kg	1	2.00	<0.00500	88	79.4 - 118.9	10	20
Xylene		2	5.06	mg/Kg	1	6.00	<0.0170	84	79.5 - 118.9	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
Trifluorotoluene (TFT)	2.25	2.29	mg/Kg	1	2.00	112	114	73.9 - 127
4-Bromofluorobenzene (4-BFB)	1.66	1.74	mg/Kg	1	2.00	83	87	70.4 - 119

Laboratory Control Spike (LCS-1)

QC Batch: 88667 | Date Analyzed: 2012-02-16 | Analyzed By: tc
Prep Batch: 75272 | QC Preparation: 2012-02-15 | Prepared By: tc

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		2	14.4	mg/Kg	1	20.0	<1.22	72	68.3 - 105.7

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		2	15.8	mg/Kg	1	20.0	<1.22	79	68.3 - 105.7	9	20

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

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control spikes continued ...

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.83	1.89	mg/Kg	1	2.00	92	94	80 - 111.2
4-Bromofluorobenzene (4-BFB)	1.61	1.76	mg/Kg	1	2.00	80	88	66.4 - 106.6

Laboratory Control Spike (LCS-1)

QC Batch: 88751 | Date Analyzed: 2012-02-20 | Analyzed By: tc
Prep Batch: 75334 | QC Preparation: 2012-02-20 | Prepared By: tc

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		2	1.82	mg/Kg	1	2.00	<0.00470	91	86.5 - 124.9
Toluene		2	1.86	mg/Kg	1	2.00	<0.00980	93	84.7 - 122.5
Ethylbenzene		2	1.86	mg/Kg	1	2.00	<0.00500	93	79.4 - 118.9
Xylene		2	5.44	mg/Kg	1	6.00	<0.0170	91	79.5 - 118.9

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		2	1.86	mg/Kg	1	2.00	<0.00470	93	86.5 - 124.9	2	20
Toluene		2	1.90	mg/Kg	1	2.00	<0.00980	95	84.7 - 122.5	2	20
Ethylbenzene		2	1.91	mg/Kg	1	2.00	<0.00500	96	79.4 - 118.9	3	20
Xylene		2	5.60	mg/Kg	1	6.00	<0.0170	93	79.5 - 118.9	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)	2.33	2.36	mg/Kg	1	2.00	116	118	73.9 - 127
4-Bromofluorobenzene (4-BFB)	1.77	1.88	mg/Kg	1	2.00	88	94	70.4 - 119

Laboratory Control Spike (LCS-1)

QC Batch: 88771 | Date Analyzed: 2012-02-21 | Analyzed By: CM
Prep Batch: 75355 | QC Preparation: 2012-02-17 | Prepared By: CM

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	233	mg/Kg	1	250	12.2	88	73.2 - 118

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	234	mg/Kg	1	250	12.2	89	73.2 - 118	0	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	100	100	mg/Kg	1	100	100	100	75.4 - 130

Matrix Spike (MS-1) Spiked Sample: 288885

QC Batch: 88517 | Date Analyzed: 2012-02-13 | Analyzed By: DA
Prep Batch: 75146 | QC Preparation: 2012-02-13 | Prepared By: DA

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		2	254	mg/Kg	1	250	<14.5	102	45.5 - 127

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		2	232	mg/Kg	1	250	<14.5	93	45.5 - 127	9	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	104	92.1	mg/Kg	1	100	104	92	45.4 - 145.8

Matrix Spike (MS-1) Spiked Sample: 288885

QC Batch: 88543 | Date Analyzed: 2012-02-13 | Analyzed By: tc
Prep Batch: 75170 | QC Preparation: 2012-02-13 | Prepared By: tc

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		2	14.2	mg/Kg	1	20.0	<1.22	68	28.2 - 157.2

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		2	16.1	mg/Kg	1	20.0	<1.22	77	28.2 - 157.2	12	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)	2.36	2.60	mg/Kg	1	2	118	130	75.5 - 122.3
4-Bromofluorobenzene (4-BFB)	2.28	2.51	mg/Kg	1	2	114	126	77.9 - 122.4

Matrix Spike (MS-1) Spiked Sample: 288887

QC Batch: 88547 | Date Analyzed: 2012-02-13 | Analyzed By: tc
Prep Batch: 75170 | QC Preparation: 2012-02-13 | Prepared By: tc

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		2	1.93	mg/Kg	1	2.00	<0.00470	96	69.3 - 159.2
Toluene		2	2.04	mg/Kg	1	2.00	<0.00980	102	68.7 - 157
Ethylbenzene		2	2.13	mg/Kg	1	2.00	<0.00500	106	71.6 - 158.2
Xylene		2	6.25	mg/Kg	1	6.00	<0.0170	104	70.8 - 159.8

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		2	1.87	mg/Kg	1	2.00	<0.00470	94	69.3 - 159.2	3	20
Toluene		2	1.97	mg/Kg	1	2.00	<0.00980	98	68.7 - 157	4	20
Ethylbenzene		2	2.10	mg/Kg	1	2.00	<0.00500	105	71.6 - 158.2	1	20
Xylene		2	6.12	mg/Kg	1	6.00	<0.0170	102	70.8 - 159.8	2	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)	2.51	2.56	mg/Kg	1	2	126	128	71.4 - 133.9
4-Bromofluorobenzene (4-BFB)	2.10	2.08	mg/Kg	1	2	105	104	72.6 - 144.1

Matrix Spike (MS-1) Spiked Sample: 288804

QC Batch: 88549 | Date Analyzed: 2012-02-14 | Analyzed By: DA
Prep Batch: 75173 | QC Preparation: 2012-02-14 | Prepared By: DA

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	Qs	Qs	2	422	mg/Kg	1	250	408	6	45.5 - 127

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		2	481	mg/Kg	1	250	408	29	45.5 - 127	13	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	110	104	mg/Kg	1	100	110	104	45.4 - 145.8

Matrix Spike (MS-1) Spiked Sample: 288792

QC Batch: 88558 | Date Analyzed: 2012-02-14 | Analyzed By: AR
Prep Batch: 75143 | QC Preparation: 2012-02-10 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			10700	mg/Kg	100	10000	<385	107	79.4 - 120.6

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			11400	mg/Kg	100	10000	<385	114	79.4 - 120.6	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: 288802

QC Batch: 88560 | Date Analyzed: 2012-02-14 | Analyzed By: AR
Prep Batch: 75143 | QC Preparation: 2012-02-10 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			10900	mg/Kg	100	10000	790	101	79.4 - 120.6

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			11800	mg/Kg	100	10000	790	110	79.4 - 120.6	8	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: 288812

QC Batch: 88561 | Date Analyzed: 2012-02-14 | Analyzed By: AR
Prep Batch: 75143 | QC Preparation: 2012-02-10 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			9980	mg/Kg	100	10000	<385	100	79.4 - 120.6

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			10600	mg/Kg	100	10000	<385	106	79.4 - 120.6	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: 288822

QC Batch: 88562 | Date Analyzed: 2012-02-14 | Analyzed By: AR
Prep Batch: 75143 | QC Preparation: 2012-02-10 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			11900	mg/Kg	100	10000	2230	97	79.4 - 120.6

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			12600	mg/Kg	100	10000	2230	104	79.4 - 120.6	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: 288832

QC Batch: 88563 | Date Analyzed: 2012-02-14 | Analyzed By: AR
Prep Batch: 75143 | QC Preparation: 2012-02-10 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			10000	mg/Kg	100	10000	<385	100	79.4 - 120.6

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			10600	mg/Kg	100	10000	<385	106	79.4 - 120.6	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: 288846

QC Batch: 88564 | Date Analyzed: 2012-02-14 | Analyzed By: AR
Prep Batch: 75143 | QC Preparation: 2012-02-10 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			12800	mg/Kg	100	10000	2520	103	79.4 - 120.6

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			13500	mg/Kg	100	10000	2520	110	79.4 - 120.6	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: 288876

QC Batch: 88568 | Date Analyzed: 2012-02-14 | Analyzed By: AR
Prep Batch: 75143 | QC Preparation: 2012-02-10 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			9890	mg/Kg	100	10000	<385	99	79.4 - 120.6

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			10600	mg/Kg	100	10000	<385	106	79.4 - 120.6	7	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: 288988

QC Batch: 88583 | Date Analyzed: 2012-02-15 | Analyzed By: tc
Prep Batch: 75197 | QC Preparation: 2012-02-14 | Prepared By: tc

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		2	1.86	mg/Kg	1	2.00	<0.00470	93	69.3 - 159.2
Toluene		2	1.88	mg/Kg	1	2.00	<0.00980	94	68.7 - 157
Ethylbenzene		2	1.98	mg/Kg	1	2.00	<0.00500	99	71.6 - 158.2
Xylene		2	5.82	mg/Kg	1	6.00	<0.0170	97	70.8 - 159.8

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		2	2.19	mg/Kg	1	2.00	<0.00470	110	69.3 - 159.2	16	20
Toluene		2	2.22	mg/Kg	1	2.00	<0.00980	111	68.7 - 157	17	20
Ethylbenzene		2	2.33	mg/Kg	1	2.00	<0.00500	116	71.6 - 158.2	16	20
Xylene		2	6.86	mg/Kg	1	6.00	<0.0170	114	70.8 - 159.8	16	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)	2.43	2.56	mg/Kg	1	2	122	128	71.4 - 133.9
4-Bromofluorobenzene (4-BFB)	2.34	2.44	mg/Kg	1	2	117	122	72.6 - 144.1

Matrix Spike (MS-1) Spiked Sample: 288783

QC Batch: 88584 | Date Analyzed: 2012-02-15 | Analyzed By: tc
Prep Batch: 75197 | QC Preparation: 2012-02-14 | Prepared By: tc

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		2	21.1	mg/Kg	1	20.0	<1.22	100	28.2 - 157.2

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		2	21.4	mg/Kg	1	20.0	<1.22	101	28.2 - 157.2	1	20

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

continued ...

matrix spikes continued ...

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.33	2.46	mg/Kg	1	2	116	123	75.5 - 122.3
4-Bromofluorobenzene (4-BFB) Qsr Qsr	2.56	2.69	mg/Kg	1	2	128	134	77.9 - 122.4

Matrix Spike (MS-1) Spiked Sample: 288596

QC Batch: 88666 | Date Analyzed: 2012-02-16 | Analyzed By: tc
Prep Batch: 75272 | QC Preparation: 2012-02-15 | Prepared By: tc

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		2	6.44	mg/Kg	5	5.00	<0.0235	129	69.3 - 159.2
Toluene		2	6.34	mg/Kg	5	5.00	0.3117	120	68.7 - 157
Ethylbenzene		2	6.72	mg/Kg	5	5.00	1.051	113	71.6 - 158.2
Xylene		2	21.8	mg/Kg	5	15.0	5.5134	108	70.8 - 159.8

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		2	5.84	mg/Kg	5	5.00	<0.0235	117	69.3 - 159.2	10	20
Toluene		2	5.94	mg/Kg	5	5.00	0.3117	112	68.7 - 157	6	20
Ethylbenzene		2	6.65	mg/Kg	5	5.00	1.051	112	71.6 - 158.2	1	20
Xylene		2	22.7	mg/Kg	5	15.0	5.5134	114	70.8 - 159.8	4	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	5.72	5.90	mg/Kg	5	5	114	118	71.4 - 133.9
4-Bromofluorobenzene (4-BFB)	5.29	5.80	mg/Kg	5	5	106	116	72.6 - 144.1

Matrix Spike (MS-1) Spiked Sample: 288846

QC Batch: 88667 | Date Analyzed: 2012-02-16 | Analyzed By: tc
Prep Batch: 75272 | QC Preparation: 2012-02-15 | Prepared By: tc

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		2	87.9	mg/Kg	5	50.0	47.0977	82	28.2 - 157.2

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		2	104	mg/Kg	5	50.0	47.0977	114	28.2 - 157.2	17	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	5.56	5.14	mg/Kg	5	5	111	103	75.5 - 122.3
4-Bromofluorobenzene (4-BFB)	5.66	5.67	mg/Kg	5	5	113	113	77.9 - 122.4

Matrix Spike (MS-1) Spiked Sample: 288831

QC Batch: 88751 | Date Analyzed: 2012-02-20 | Analyzed By: tc
Prep Batch: 75334 | QC Preparation: 2012-02-20 | Prepared By: tc

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		2	2.15	mg/Kg	1	2.00	<0.00470	108	69.3 - 159.2
Toluene		2	2.33	mg/Kg	1	2.00	<0.00980	116	68.7 - 157
Ethylbenzene		2	2.57	mg/Kg	1	2.00	<0.00500	128	71.6 - 158.2
Xylene		2	7.54	mg/Kg	1	6.00	<0.0170	126	70.8 - 159.8

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		2	2.03	mg/Kg	1	2.00	<0.00470	102	69.3 - 159.2	6	20
Toluene		2	2.22	mg/Kg	1	2.00	<0.00980	111	68.7 - 157	5	20
Ethylbenzene		2	2.46	mg/Kg	1	2.00	<0.00500	123	71.6 - 158.2	4	20
Xylene		2	7.26	mg/Kg	1	6.00	<0.0170	121	70.8 - 159.8	4	20

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

Surrogate			MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	Qsr	Qsr	2.70	2.54	mg/Kg	1	2	135	127	71.4 - 133.9
4-Bromofluorobenzene (4-BFB)			2.26	2.17	mg/Kg	1	2	113	108	72.6 - 144.1

Matrix Spike (MS-1) Spiked Sample: 288829

QC Batch: 88771 | Date Analyzed: 2012-02-21 | Analyzed By: CM
Prep Batch: 75355 | QC Preparation: 2012-02-17 | Prepared By: CM

Param		F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	Qs	Qs	1	3320	mg/Kg	5	250	2780	216	75.4 - 130

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

Param		F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	Qs	Qs	1	3360	mg/Kg	5	250	2780	232	75.4 - 130	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	Qsr	Qsr	237	240	mg/Kg	5	100	237	240	38.4 - 143

Calibration Standards

Standard (CCV-1)

QC Batch: 88517 | Date Analyzed: 2012-02-13 | Analyzed By: DA

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		2	mg/Kg	250	245	98	80 - 120	2012-02-13

Standard (CCV-2)

QC Batch: 88517 | Date Analyzed: 2012-02-13 | Analyzed By: DA

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		2	mg/Kg	250	242	97	80 - 120	2012-02-13

Standard (CCV-3)

QC Batch: 88517 | Date Analyzed: 2012-02-13 | Analyzed By: DA

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		2	mg/Kg	250	260	104	80 - 120	2012-02-13

Standard (CCV-4)

QC Batch: 88517 | Date Analyzed: 2012-02-13 | Analyzed By: DA

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		2	mg/Kg	250	272	109	80 - 120	2012-02-13

Standard (CCV-1)

QC Batch: 88543 | Date Analyzed: 2012-02-13 | Analyzed By: tc

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		2	mg/Kg	1.00	1.09	109	80 - 120	2012-02-13

Standard (CCV-2)

QC Batch: 88543 | Date Analyzed: 2012-02-13 | Analyzed By: tc

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		2	mg/Kg	1.00	1.07	107	80 - 120	2012-02-13

Standard (CCV-3)

QC Batch: 88543 | Date Analyzed: 2012-02-13 | Analyzed By: tc

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		2	mg/Kg	1.00	1.14	114	80 - 120	2012-02-13

Standard (CCV-1)

QC Batch: 88547 | Date Analyzed: 2012-02-13 | Analyzed By: tc

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		2	mg/kg	0.100	0.102	102	80 - 120	2012-02-13
Toluene		2	mg/kg	0.100	0.103	103	80 - 120	2012-02-13
Ethylbenzene		2	mg/kg	0.100	0.101	101	80 - 120	2012-02-13
Xylene		2	mg/kg	0.300	0.299	100	80 - 120	2012-02-13

Standard (CCV-2)

QC Batch: 88547 | Date Analyzed: 2012-02-13 | Analyzed By: tc

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		2	mg/kg	0.100	0.102	102	80 - 120	2012-02-13
Toluene		2	mg/kg	0.100	0.103	103	80 - 120	2012-02-13
Ethylbenzene		2	mg/kg	0.100	0.0991	99	80 - 120	2012-02-13
Xylene		2	mg/kg	0.300	0.289	96	80 - 120	2012-02-13

Standard (CCV-3)

QC Batch: 88547 | Date Analyzed: 2012-02-13 | Analyzed By: tc

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		2	mg/kg	0.100	0.110	110	80 - 120	2012-02-13
Toluene		2	mg/kg	0.100	0.106	106	80 - 120	2012-02-13
Ethylbenzene		2	mg/kg	0.100	0.102	102	80 - 120	2012-02-13
Xylene		2	mg/kg	0.300	0.304	101	80 - 120	2012-02-13

Standard (CCV-1)

QC Batch: 88549 | Date Analyzed: 2012-02-14 | Analyzed By: DA

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		2	mg/Kg	250	236	94	80 - 120	2012-02-14

Standard (CCV-2)

QC Batch: 88549 | Date Analyzed: 2012-02-14 | Analyzed By: DA

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		2	mg/Kg	250	238	95	80 - 120	2012-02-14

Standard (ICV-1)

QC Batch: 88558 | Date Analyzed: 2012-02-14 | Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	103	103	85 - 115	2012-02-14

Standard (CCV-1)

QC Batch: 88558 | Date Analyzed: 2012-02-14 | Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	96.7	97	85 - 115	2012-02-14

Standard (ICV-1)

QC Batch: 88560 | Date Analyzed: 2012-02-14 | Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	94.8	95	85 - 115	2012-02-14

Standard (CCV-1)

QC Batch: 88560 | Date Analyzed: 2012-02-14 | Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	105	105	85 - 115	2012-02-14

Standard (ICV-1)

QC Batch: 88561 | Date Analyzed: 2012-02-14 | Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	102	102	85 - 115	2012-02-14

Standard (CCV-1)

QC Batch: 88561 Date Analyzed: 2012-02-14 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	98.3	98	85 - 115	2012-02-14

Standard (ICV-1)

QC Batch: 88562 Date Analyzed: 2012-02-14 Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.8	100	85 - 115	2012-02-14

Standard (CCV-1)

QC Batch: 88562 Date Analyzed: 2012-02-14 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2012-02-14

Standard (ICV-1)

QC Batch: 88563 Date Analyzed: 2012-02-14 Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2012-02-14

Standard (CCV-1)

QC Batch: 88563 Date Analyzed: 2012-02-14 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.5	100	85 - 115	2012-02-14

Standard (ICV-1)

QC Batch: 88564 Date Analyzed: 2012-02-14 Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.8	100	85 - 115	2012-02-14

Standard (CCV-1)

QC Batch: 88564 Date Analyzed: 2012-02-14 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2012-02-14

Standard (ICV-1)

QC Batch: 88568 Date Analyzed: 2012-02-14 Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2012-02-14

Standard (CCV-1)

QC Batch: 88568 Date Analyzed: 2012-02-14 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.7	100	85 - 115	2012-02-14

Standard (CCV-2)

QC Batch: 88583 Date Analyzed: 2012-02-15 Analyzed By: tc

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		2	mg/kg	0.100	0.110	110	80 - 120	2012-02-15
Toluene		2	mg/kg	0.100	0.107	107	80 - 120	2012-02-15
Ethylbenzene		2	mg/kg	0.100	0.103	103	80 - 120	2012-02-15
Xylene		2	mg/kg	0.300	0.300	100	80 - 120	2012-02-15

Standard (CCV-3)

QC Batch: 88583 Date Analyzed: 2012-02-15 Analyzed By: tc

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		2	mg/kg	0.100	0.110	110	80 - 120	2012-02-15
Toluene		2	mg/kg	0.100	0.107	107	80 - 120	2012-02-15
Ethylbenzene		2	mg/kg	0.100	0.104	104	80 - 120	2012-02-15
Xylene		2	mg/kg	0.300	0.303	101	80 - 120	2012-02-15

Standard (CCV-2)

QC Batch: 88584 Date Analyzed: 2012-02-15 Analyzed By: tc

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		2	mg/Kg	1.00	1.07	107	80 - 120	2012-02-15

Standard (CCV-3)

QC Batch: 88584 Date Analyzed: 2012-02-15 Analyzed By: tc

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		2	mg/Kg	1.00	1.10	110	80 - 120	2012-02-15

Standard (CCV-1)

QC Batch: 88666 Date Analyzed: 2012-02-16 Analyzed By: tc

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		2	mg/kg	0.100	0.109	109	80 - 120	2012-02-16
Toluene		2	mg/kg	0.100	0.105	105	80 - 120	2012-02-16
Ethylbenzene		2	mg/kg	0.100	0.102	102	80 - 120	2012-02-16
Xylene		2	mg/kg	0.300	0.292	97	80 - 120	2012-02-16

Standard (CCV-2)

QC Batch: 88666 Date Analyzed: 2012-02-16 Analyzed By: tc

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		2	mg/kg	0.100	0.113	113	80 - 120	2012-02-16
Toluene		2	mg/kg	0.100	0.110	110	80 - 120	2012-02-16
Ethylbenzene		2	mg/kg	0.100	0.106	106	80 - 120	2012-02-16
Xylene		2	mg/kg	0.300	0.317	106	80 - 120	2012-02-16

Standard (CCV-1)

QC Batch: 88667 Date Analyzed: 2012-02-16 Analyzed By: tc

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		2	mg/Kg	1.00	1.00	100	80 - 120	2012-02-16

Standard (CCV-2)

QC Batch: 88667 Date Analyzed: 2012-02-16 Analyzed By: tc

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		2	mg/Kg	1.00	1.16	116	80 - 120	2012-02-16

Standard (CCV-1)

QC Batch: 88751 Date Analyzed: 2012-02-20 Analyzed By: tc

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		2	mg/kg	0.100	0.116	116	80 - 120	2012-02-20
Toluene		2	mg/kg	0.100	0.118	118	80 - 120	2012-02-20
Ethylbenzene		2	mg/kg	0.100	0.118	118	80 - 120	2012-02-20
Xylene		2	mg/kg	0.300	0.347	116	80 - 120	2012-02-20

Standard (CCV-2)

QC Batch: 88751 Date Analyzed: 2012-02-20 Analyzed By: tc

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		2	mg/kg	0.100	0.0969	97	80 - 120	2012-02-20
Toluene		2	mg/kg	0.100	0.0999	100	80 - 120	2012-02-20
Ethylbenzene		2	mg/kg	0.100	0.0986	99	80 - 120	2012-02-20
Xylene		2	mg/kg	0.300	0.289	96	80 - 120	2012-02-20

Standard (CCV-1)

QC Batch: 88771 | Date Analyzed: 2012-02-21 | Analyzed By: CM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	229	92	80 - 120	2012-02-21

Standard (CCV-2)

QC Batch: 88771 | Date Analyzed: 2012-02-21 | Analyzed By: CM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	226	90	80 - 120	2012-02-21

Appendix

Report Definitions

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704219-11-5	Lubbock
2	NELAP	T104704392-11-3	Midland

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

The scanned attachments will follow this page.
Please note, each attachment may consist of more than one page.

#12021032

Analysis Request of Chain of Custody Record

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

PAGE: 1 OF: 6

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-6401233

PROJECT NAME: COG / Foster Eddy #9
Eddy Co. NM

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
288783	2/9		S		X	AH-1 0-1'	1				X			X											X				
784						1'-1.5'																							
785						2'-2.5'																							
786						3'-3.5'																							
787						4'-4.5'																							
788						5'-5.5'																							
789						AH-2 0-1'								X															
790						1'-1.5'																							
791						2'-2.5'																							
792						3'-3.5'																							

RELINQUISHED BY: (Signature) Date: 2/10/12 Time: 1400 RECEIVED BY: (Signature) Date: Time:

SAMPLED BY: (Print & Initial) JT / B Date: 2/8/12 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: 2-10-12 TIME: 14:00

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 5.9°C intact

REMARKS: If total TPH exceeds 5,000 mg/kg run dry wt samples / If BTEX exceeds 50 mg/kg run BTEX on 6 highest TPH / If BTEX exceeds 10 mg/kg run dry wt 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.

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-C401733
PROJECT NAME: COG / Foster Eddy #9
Eddy Co. NM

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH TX1005 (Ext. to C35)	TPH 8015 MOD.	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
793	2/8		S		X	AH-2 4'-4.5'	1				X															X				
794						AH-3 0-1'								X																
795						1'-1.5'																								
796						2'-2.5'																								
797						3'-3.5'																								
798						4'-4.5'																								
799						5'-5.5'																								
800						6'-6.5'																								
801						7'-7.5'																								
802						8'-8.5'																								

RELINQUISHED BY: (Signature) Date: 2/10/12 Time: 1400
RECEIVED BY: (Signature) Date: Time:
SAMPLED BY: (Print & Initial) IT / TCS Date: 2/8/12 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: Ike Tavarez
ADDRESS:
CITY: Midland STATE: TX ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: 2-10-12 TIME: 14:00
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 5.9°C intact
REMARKS:

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

#120210

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.: 1M-U401233

PROJECT NAME: COG / Foster Eddy #9
Eddy Co, NM

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
803	2/8		S		X	AH-3 9'-9.5'	1				X													X				
804						AH-4 0-1'								X														
805						1'-1.5'																						
806						2'-2.5'																						
807						3'-3.5'																						
808						4'-4.5'																						
809						AH-5 0-1'								X														
810						1'-1.5'																						
811						AH-6 0-1'								X														
812						1'-1.5'																						

RELINQUISHED BY: (Signature) Date: 2/10/12 Time: 1400 — RECEIVED BY: (Signature) Date: Time:

SAMPLED BY: (Print & Initial) JT/RS Date: 2/8/12 Time:

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

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

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

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: TX ZIP:
CONTACT: PHONE:

RECEIVED BY: (Signature)
DATE: 2-10-12 TIME: 14:00

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 5.9° C

REMARKS:

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

II Equalized

Analysis Request of Chain of Custody Record

PAGE: 4 OF: 6

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-C4101233

PROJECT NAME: COG / Foster Eddy #9
Eddy Co., NM

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
813	2/8		S		X	AH-7 0-1'	1				X	
814						1'-1.5'						
815						2'-2.5'						
816						AH-8 0-1'						
817						1'-1.5'						
818						AH-9 0-1'						
819						1'-1.5'						
820						2'-2.5'						
821						3'-3.5'						
822						4'-4.5'						

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. 8081/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
X	X											X				
	X															
	X															

RELINQUISHED BY: (Signature) — Date: 2/10/12 Time: 1400

RECEIVED BY: (Signature) — Date: Time:

SAMPLED BY: (Print & Initial) IKE — Date: 2/8/12 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: 2-10-12 TIME: 14:00

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 5.9°C intact

REMARKS:

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

#1201022

Analysis Request of Chain of Custody Record

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

PAGE: 5 OF: 6

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-640-1733

PROJECT NAME: COG / Foster Eddy #9 Eddy Co. NM

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd 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
823	2/8		S		X	AH-9 5'-5.5'	1				X													X				
824						6'-6.5'																						
825						7'-7.5'																						
826						8'-8.5'																						
827						9'-9.5'																						
828						AH-10 0-1'								X														
829						1'-1.5'																						
830						2'-2.5'																						
831						3'-3.5'																						
832						4'-4.5'																						

RELINQUISHED BY: (Signature) Date: 2/10/12 Time: 1400

RECEIVED BY: (Signature) Date: Time:

SAMPLED BY: (Print & Initial) JT/RS Date: 2/8/12 Time:

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

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

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

RECEIVING LABORATORY: Trace

ADDRESS:

CITY: Midland STATE: TX ZIP:

CONTACT: PHONE:

RECEIVED BY: (Signature)

DATE: 2-10-12 TIME: 14:00

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 5.9°C Intact

REMARKS:

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

#1001160a

Analysis Request of Chain of Custody Record

PAGE: 6 OF: 6

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

CLIENT NAME: COG
SITE MANAGER: Ike Tavarez
PROJECT NO.: 114-6401233
PROJECT NAME: COG / Foster Eddy # 9 Eddy Co, NM

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
833	2/8		S		X	AH-10 5'-5.5'	1				X														X				
834	↓		↓		↓	6'-6.5'	↓				↓														↓				
835	↓		↓		↓	7'-7.5'	↓				↓														↓				
836	↓		↓		↓	8'-8.5'	↓				↓														↓				
837	↓		↓		↓	9'-9.5'	↓				↓														↓				
872	2/8		S		X	AH-5 2'-2.5'	1				X														X				

RELINQUISHED BY: (Signature) [signature] Date: 2/10/12 Time: 1400
RECEIVED BY: (Signature) Date: Time:
SAMPLED BY: (Print & Initial) IT/BS Date: 2/8/12 Time:

RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS AIRBILL #: HAND DELIVERED UPS 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) [signature]
DATE: 2-10-12 TIME: 14:00
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 5.9°C intact
REMARKS:

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

.. lc - lc - 2

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 6

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG
SITE MANAGER: Ike Tavarez
PROJECT NO.: 114-6401233
PROJECT NAME: COG/ Foster Eddy #9 Eddy Co. NM

Note by BTEX column: per Ikanne 2/13/12

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	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	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
288783	2/8		S		X	AH-1 0-1'	1				X		X	X											X				
784	↓		↓		↓	1'-1.5'	↓				↓		No	No											•				
785						2'-2.5'																			•				
786						3'-3.5'																			•				
787						4'-4.5'																			•				
788						5'-5.5'																			•				
789						AH-2 0-1'								X											•				
790						1'-1.5'								No											•				
791						2'-2.5'																			•				
792	↓		↓		↓	3'-3.5'	↓				↓														↓				

RELINQUISHED BY: (Signature) [signature] Date: 2/10/12 Time: 1400
RECEIVED BY: (Signature) Date: Time:
SAMPLED BY: (Print & Initial) JT / B Date: 2/8/12 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) [signature]
DATE: 2-10-12 TIME: 14:00
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 5.9°C intact
REMARKS: [redacted]

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

FEB 16 2012 Ø All Tetra Tech Midland

Ana ysis Request of Chain of Custody Record

PAGE: 2 OF: 6

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

CLIENT NAME: COG
SITE MANAGER: Ike Tavarez
PROJECT NO.: 114-6401233
PROJECT NAME: COG / Foster Eddy #9 Eddy Co. NM

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chlorides	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
793	2/8		S		X	AH-2 4'-4.5'	1				X														X				
794	↓		↓		↓	AH-3 0-1'	↓				↓		X	X											↓				
795	↓		↓		↓	1'-1.5'	↓				↓		No	No											↓				
796	↓		↓		↓	2'-2.5'	↓				↓														↓				
797	↓		↓		↓	3'-3.5'	↓				↓														↓				
798	↓		↓		↓	4'-4.5'	↓				↓														↓				
799	↓		↓		↓	5'-5.5'	↓				↓														↓				
800	↓		↓		↓	6'-6.5'	↓				↓														↓				
801	↓		↓		↓	7'-7.5'	↓				↓														↓				
802	↓		↓		↓	8'-8.5'	↓				↓														↓				

Per: Jeanne 2/17/12

RELINQUISHED BY: (Signature) [signature] Date: 2/10/12 Time: 14:00
RECEIVED BY: (Signature) Date: Time:
SAMPLED BY: (Print & Initial) IT / RS Date: 2/8/12 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:
RUSH Charges Authorized: Yes No

RECEIVING LABORATORY: Xenco Trace
ADDRESS:
CITY: Midland STATE: TX ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature) [signature]
DATE: 2-10-12 TIME: 14:00

SAMPLE CONDITION WHEN RECEIVED: 5.9°C intact
REMARKS:

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

#1321110

Analysis Request of Chain of Custody Record

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME:	SITE MANAGER:
COG	Ike Tavarez

PROJECT NO.:	PROJECT NAME:
1H-0401233	COG / Foster Eddy #9 Eddy Co, NM

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
803	2/8		S		X	AH-3 9'-9.5'	1				X													X				
804						AH-4 0-1'								X	X													
805						1'-1.5'																						
806						2'-2.5'																						
807						3'-3.5'																						
808						4'-4.5'																						
809						AH-5 0-1'								X														
810						1'-1.5'																						
811						AH-6 0-1'								X														
812						1'-1.5'																						

Per: Jeanne 2/17/12

RELINQUISHED BY: (Signature)	Date: 2/10/12 Time: 1400	RECEIVED BY: (Signature)	Date: Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:

SAMPLED BY: (Print & Initial) JT/RS Date: 2/9/12 Time:

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

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: TX ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: 2-10-12 TIME: 14:40

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 5.9° C

REMARKS:

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

Analysis Request of Chain of Custody Record

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

PAGE: 4 OF: 16

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-4101233

PROJECT NAME: COG / Foster Eddy #9 Eddy Co., NM

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B per Isaac 2/17/12	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 8081/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
813	2/8		S		X	AH-7 0-1'	1				X		X	X	X										X				
814						1'-1.5'							No	No															
815						2'-2.5'																							
816						AH-8 0-1'							X	X															
817						1'-1.5'							No	No															
818						AH-9 0-1'							X	X															
819						1'-1.5'							No																
820						2'-2.5'																							
821						3'-3.5'																							
822	▼		▼		▼	4'-4.5'	▼				▼																		

RELINQUISHED BY: (Signature)	Date: 2/10/12 Time: 1400	RECEIVED BY: (Signature)	Date: Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:

SAMPLED BY: (Print & Initial) JRS Date: 2/8/12 Time:

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

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

RECEIVING LABORATORY: Trace

ADDRESS:

CITY: Midland STATE: TX ZIP:

CONTACT: PHONE:

RECEIVED BY: (Signature)

DATE: 2-10-12 TIME: 14:00

SAMPLE CONDITION WHEN RECEIVED: 5.9°C intact

REMARKS:

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

Analysis Request of Chain of Custody Record

PAGE: 5 OF: 6

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-GW-1233
PROJECT NAME: COG / Foster Eddy #9 Eddy Co, NM

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B per Jeanne 2/10/12	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
823	2/8		S		G	AH-9 5'-5.5'	1				X													X				
824						6'-6.5'																						
825						7'-7.5'																						
826						8'-8.5'																						
827						9'-9.5'																						
828						AH-10 0-1'							X	X														
829						1'-1.5'							X	X														
830						2'-2.5'								X														
831						3'-3.5'								X														
832						4'-4.5'																						

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature) — Date: 2/10/12 Time: 1400
RECEIVED BY: (Signature) — Date: Time:
SAMPLED BY: (Print & Initial) JT/RS — Date: 2/8/12 Time:

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

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

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: TX ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: 2-10-12 TIME: 14:00

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 5.9°C intact
REMARKS:

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

Analysis Request of Chain of Custody Record

PAGE: 6 OF: 6

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

CLIENT NAME: COG
SITE MANAGER: Ike Tavarez
PROJECT NO.: 114-6401233
PROJECT NAME: COG / Foster Eddy #9
Eddy Co, NM

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
833	2/8		S		X	AH-10 5'-5.5'	1				X													X				
834						6'-6.5'																						
835						7'-7.5'																						
836						8'-8.5'																						
837	↓		↓		↓	9'-9.5'	↓				↓													↓				
872	2/8		S		X	AH-5 2'-2.5'	1				X													X				

RELINQUISHED BY: (Signature) — Date: 2/10/12 Time: 1460 — RECEIVED BY: (Signature) — Date: — Time:
SAMPLED BY: (Print & Initial) JT/BS — Date: 2/8/12 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: 2-10-12 TIME: 14:50
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 5.9°C intact
REMARKS:

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

Summary Report

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

Report Date: May 10, 2012

Work Order: 12050222

Project Location: Eddy Co., NM
Project Name: COG/Foster Eddy #9
Project Number: 114-6401233

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
296057	CS-1 North Wall (AH-1)	soil	2012-04-19	00:00	2012-05-02
296058	CS-1 South Wall (AH-1)	soil	2012-04-19	00:00	2012-05-02
296059	CS-1 East Wall (AH-1)	soil	2012-04-19	00:00	2012-05-02
296060	CS-1 West Wall (AH-1)	soil	2012-04-19	00:00	2012-05-02
296061	CS-1 Bottom Hole 1' (AH-1)	soil	2012-04-19	00:00	2012-05-02
296062	CS-2 East Wall (AH-2)	soil	2012-04-23	00:00	2012-05-02
296063	CS-2 West Wall (AH-2)	soil	2012-04-23	00:00	2012-05-02
296064	CS-2 Bottom Hole 1' (AH-2)	soil	2012-04-23	00:00	2012-05-02
296065	CS-3 North Wall (AH-3)	soil	2012-04-19	00:00	2012-05-02
296066	CS-3 South Wall (AH-3)	soil	2012-04-19	00:00	2012-05-02
296067	CS-3 Bottom Hole (AH-3)	soil	2012-04-19	00:00	2012-05-02
296068	CS-4 North Wall (AH-4)	soil	2012-04-19	00:00	2012-05-02
296069	CS-4 South Wall (AH-4)	soil	2012-04-19	00:00	2012-05-02
296070	CS-4 Bottom Hole 1' (AH-4)	soil	2012-04-19	00:00	2012-05-02
296071	CS-5 North Wall (AH-5)	soil	2012-04-19	00:00	2012-05-02
296072	CS-5 South Wall (AH-5)	soil	2012-04-19	00:00	2012-05-02
296073	CS-5 Bottom Hole 1' (AH-5)	soil	2012-04-19	00:00	2012-05-02
296074	CS-6 North Wall (AH-6)	soil	2012-04-19	00:00	2012-05-02
296075	CS-6 South Wall (AH-6)	soil	2012-04-19	00:00	2012-05-02
296076	CS-6 West Wall (AH-6)	soil	2012-04-19	00:00	2012-05-02
296077	CS-6 Bottom Hole 1' (AH-6)	soil	2012-04-19	00:00	2012-05-02
296078	CS-7 North Wall (AH-7)	soil	2012-04-23	00:00	2012-05-02
296079	CS-7 South Wall (AH-7)	soil	2012-04-23	00:00	2012-05-02
296080	CS-7 East Wall (AH-7)	soil	2012-04-23	00:00	2012-05-02
296081	CS-7 Bottom Hole 3' (AH-7)	soil	2012-04-23	00:00	2012-05-02
296082	CS-8 North Wall (AH-8)	soil	2012-04-23	00:00	2012-05-02
296083	CS-8 South Wall (AH-8)	soil	2012-04-23	00:00	2012-05-02
296084	CS-8 Bottom Hole 3' (AH-8)	soil	2012-04-23	00:00	2012-05-02
296085	CS-9 North Wall (AH-9)	soil	2012-04-23	00:00	2012-05-02
296086	CS-9 South Wall (AH-9)	soil	2012-04-23	00:00	2012-05-02

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
296087	CS-9 Bottom Hole 3' (AH-9)	soil	2012-04-23	00:00	2012-05-02
296088	CS-10 North Wall (AH-10)	soil	2012-04-20	00:00	2012-05-02
296089	CS-10 South Wall (AH-10)	soil	2012-04-20	00:00	2012-05-02
296090	CS-10 West Wall (AH-10)	soil	2012-04-20	00:00	2012-05-02
296091	CS-10 Bottom Hole 2' (AH-10)	soil	2012-04-20	00:00	2012-05-02
296092	Trench-1 5' (AH-7)	soil	2012-04-23	00:00	2012-05-02
296093	Trench-1 7'(AH-7)	soil	2012-04-23	00:00	2012-05-02
296094	Trench-1 9' (AH-7)	soil	2012-04-23	00:00	2012-05-02
296095	Trench-2 5' (AH-8)	soil	2012-04-23	00:00	2012-05-02
296096	Trench-2 7' (AH-8)	soil	2012-04-23	00:00	2012-05-02
296097	CS-3 East (AH-3)	soil	2012-04-19	00:00	2012-05-02

Sample: 296057 - CS-1 North Wall (AH-1)

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 296058 - CS-1 South Wall (AH-1)

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 296059 - CS-1 East Wall (AH-1)

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 296060 - CS-1 West Wall (AH-1)

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 296061 - CS-1 Bottom Hole 1' (AH-1)

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 296062 - CS-2 East Wall (AH-2)

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 296063 - CS-2 West Wall (AH-2)

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 296064 - CS-2 Bottom Hole 1' (AH-2)

Param	Flag	Result	Units	RL
Chloride		**50.1**	mg/Kg	4

Sample: 296065 - CS-3 North Wall (AH-3)

Param	Flag	Result	Units	RL
Chloride		**75.2**	mg/Kg	4

Sample: 296066 - CS-3 South Wall (AH-3)

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 296067 - CS-3 Bottom Hole (AH-3)

Param	Flag	Result	Units	RL
Chloride		**106**	mg/Kg	4

Sample: 296068 - CS-4 North Wall (AH-4)

Param	Flag	Result	Units	RL
Chloride		**283**	mg/Kg	4

Sample: 296069 - CS-4 South Wall (AH-4)

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 296070 - CS-4 Bottom Hole 1' (AH-4)

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 296071 - CS-5 North Wall (AH-5)

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 296072 - CS-5 South Wall (AH-5)

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 296073 - CS-5 Bottom Hole 1' (AH-5)

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 296074 - CS-6 North Wall (AH-6)

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 296075 - CS-6 South Wall (AH-6)

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 296076 - CS-6 West Wall (AH-6)

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 296077 - CS-6 Bottom Hole 1' (AH-6)

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 296078 - CS-7 North Wall (AH-7)

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 296079 - CS-7 South Wall (AH-7)

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 296080 - CS-7 East Wall (AH-7)

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 296081 - CS-7 Bottom Hole 3' (AH-7)

Param	Flag	Result	Units	RL
Chloride		**50.6**	mg/Kg	4

Sample: 296082 - CS-8 North Wall (AH-8)

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 296083 - CS-8 South Wall (AH-8)

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 296084 - CS-8 Bottom Hole 3' (AH-8)

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 296085 - CS-9 North Wall (AH-9)

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 296086 - CS-9 South Wall (AH-9)

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 296087 - CS-9 Bottom Hole 3' (AH-9)

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 296088 - CS-10 North Wall (AH-10)

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 296089 - CS-10 South Wall (AH-10)

Param	Flag	Result	Units	RL
Chloride		**39.8**	mg/Kg	4

Sample: 296090 - CS-10 West Wall (AH-10)

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 296091 - CS-10 Bottom Hole 2' (AH-10)

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 296092 - Trench-1 5' (AH-7)

Param	Flag	Result	Units	RL
Chloride		**59.7**	mg/Kg	4

Sample: 296093 - Trench-1 7'(AH-7)

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 296094 - Trench-1 9' (AH-7)

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 296095 - Trench-2 5' (AH-8)

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 296096 - Trench-2 7' (AH-8)

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 296097 - CS-3 East (AH-3)

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800-378-1296 806-794-1296 FAX 806-794-1298
200 East Sunset Road, Suite E El Paso, Texas 79922 915-585-3443 FAX 915-585-4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432-689-6301 FAX 432-689-6313
(BioAquatic) 2501 Mayes Rd., Suite 100 Carrollton, Texas 75006 972-242-7750
E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

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

Report Date: May 10, 2012

Work Order: 12050222

Project Location: Eddy Co., NM
Project Name: COG/Foster Eddy #9
Project Number: 114-6401233

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
296057	CS-1 North Wall (AH-1)	soil	2012-04-19	00:00	2012-05-02
296058	CS-1 South Wall (AH-1)	soil	2012-04-19	00:00	2012-05-02
296059	CS-1 East Wall (AH-1)	soil	2012-04-19	00:00	2012-05-02
296060	CS-1 West Wall (AH-1)	soil	2012-04-19	00:00	2012-05-02
296061	CS-1 Bottom Hole 1' (AH-1)	soil	2012-04-19	00:00	2012-05-02
296062	CS-2 East Wall (AH-2)	soil	2012-04-23	00:00	2012-05-02
296063	CS-2 West Wall (AH-2)	soil	2012-04-23	00:00	2012-05-02
296064	CS-2 Bottom Hole 1' (AH-2)	soil	2012-04-23	00:00	2012-05-02
296065	CS-3 North Wall (AH-3)	soil	2012-04-19	00:00	2012-05-02
296066	CS-3 South Wall (AH-3)	soil	2012-04-19	00:00	2012-05-02
296067	CS-3 Bottom Hole (AH-3)	soil	2012-04-19	00:00	2012-05-02
296068	CS-4 North Wall (AH-4)	soil	2012-04-19	00:00	2012-05-02
296069	CS-4 South Wall (AH-4)	soil	2012-04-19	00:00	2012-05-02
296070	CS-4 Bottom Hole 1' (AH-4)	soil	2012-04-19	00:00	2012-05-02
296071	CS-5 North Wall (AH-5)	soil	2012-04-19	00:00	2012-05-02
296072	CS-5 South Wall (AH-5)	soil	2012-04-19	00:00	2012-05-02
296073	CS-5 Bottom Hole 1' (AH-5)	soil	2012-04-19	00:00	2012-05-02
296074	CS-6 North Wall (AH-6)	soil	2012-04-19	00:00	2012-05-02

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
296075	CS-6 South Wall (AH-6)	soil	2012-04-19	00:00	2012-05-02
296076	CS-6 West Wall (AH-6)	soil	2012-04-19	00:00	2012-05-02
296077	CS-6 Bottom Hole 1' (AH-6)	soil	2012-04-19	00:00	2012-05-02
296078	CS-7 North Wall (AH-7)	soil	2012-04-23	00:00	2012-05-02
296079	CS-7 South Wall (AH-7)	soil	2012-04-23	00:00	2012-05-02
296080	CS-7 East Wall (AH-7)	soil	2012-04-23	00:00	2012-05-02
296081	CS-7 Bottom Hole 3' (AH-7)	soil	2012-04-23	00:00	2012-05-02
296082	CS-8 North Wall (AH-8)	soil	2012-04-23	00:00	2012-05-02
296083	CS-8 South Wall (AH-8)	soil	2012-04-23	00:00	2012-05-02
296084	CS-8 Bottom Hole 3' (AH-8)	soil	2012-04-23	00:00	2012-05-02
296085	CS-9 North Wall (AH-9)	soil	2012-04-23	00:00	2012-05-02
296086	CS-9 South Wall (AH-9)	soil	2012-04-23	00:00	2012-05-02
296087	CS-9 Bottom Hole 3' (AH-9)	soil	2012-04-23	00:00	2012-05-02
296088	CS-10 North Wall (AH-10)	soil	2012-04-20	00:00	2012-05-02
296089	CS-10 South Wall (AH-10)	soil	2012-04-20	00:00	2012-05-02
296090	CS-10 West Wall (AH-10)	soil	2012-04-20	00:00	2012-05-02
296091	CS-10 Bottom Hole 2' (AH-10)	soil	2012-04-20	00:00	2012-05-02
296092	Trench-1 5' (AH-7)	soil	2012-04-23	00:00	2012-05-02
296093	Trench-1 7'(AH-7)	soil	2012-04-23	00:00	2012-05-02
296094	Trench-1 9' (AH-7)	soil	2012-04-23	00:00	2012-05-02
296095	Trench-2 5' (AH-8)	soil	2012-04-23	00:00	2012-05-02
296096	Trench-2 7' (AH-8)	soil	2012-04-23	00:00	2012-05-02
296097	CS-3 East (AH-3)	soil	2012-04-19	00:00	2012-05-02

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

Report Contents

Case Narrative

Samples for project COG/Foster Eddy #9 were received by TraceAnalysis, Inc. on 2012-05-02 and assigned to work order 12050222. Samples for work order 12050222 were received intact at a temperature of 4.5 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
Chloride (Titration)	SM 4500-Cl B	77254	2012-05-09 at 10:32	91094	2012-05-10 at 15:24
Chloride (Titration)	SM 4500-Cl B	77254	2012-05-09 at 10:32	91095	2012-05-10 at 15:26
Chloride (Titration)	SM 4500-Cl B	77254	2012-05-09 at 10:32	91096	2012-05-10 at 15:27
Chloride (Titration)	SM 4500-Cl B	77254	2012-05-09 at 10:32	91097	2012-05-10 at 15:28
Chloride (Titration)	SM 4500-Cl B	77254	2012-05-09 at 10:32	91098	2012-05-10 at 15:30

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 12050222 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: 296057 - CS-1 North Wall (AH-1)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91094	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 296058 - CS-1 South Wall (AH-1)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91094	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 296059 - CS-1 East Wall (AH-1)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91094	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 296060 - CS-1 West Wall (AH-1)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91094	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 296061 - CS-1 Bottom Hole 1' (AH-1)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91094	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 296062 - CS-2 East Wall (AH-2)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91094	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 296063 - CS-2 West Wall (AH-2)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91094	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 296064 - CS-2 Bottom Hole 1' (AH-2)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91094	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**50.1**	mg/Kg	5	4.00

Sample: 296065 - CS-3 North Wall (AH-3)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91094	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**75.2**	mg/Kg	5	4.00

Sample: 296066 - CS-3 South Wall (AH-3)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91094	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 296067 - CS-3 Bottom Hole (AH-3)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91095	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**106**	mg/Kg	5	4.00

Sample: 296068 - CS-4 North Wall (AH-4)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91095	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**283**	mg/Kg	5	4.00

Sample: 296069 - CS-4 South Wall (AH-4)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91095	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 296070 - CS-4 Bottom Hole 1' (AH-4)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91095	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 296071 - CS-5 North Wall (AH-5)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91095	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 296072 - CS-5 South Wall (AH-5)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91095	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 296073 - CS-5 Bottom Hole 1' (AH-5)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91095	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 296074 - CS-6 North Wall (AH-6)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91095	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 296075 - CS-6 South Wall (AH-6)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91095	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 296076 - CS-6 West Wall (AH-6)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91095	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 296077 - CS-6 Bottom Hole 1' (AH-6)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91096	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 296078 - CS-7 North Wall (AH-7)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91096	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 296079 - CS-7 South Wall (AH-7)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91096	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 296080 - CS-7 East Wall (AH-7)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91096	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 296081 - CS-7 Bottom Hole 3' (AH-7)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91096	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**50.6**	mg/Kg	5	4.00

Sample: 296082 - CS-8 North Wall (AH-8)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91096	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 296083 - CS-8 South Wall (AH-8)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91096	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 296084 - CS-8 Bottom Hole 3' (AH-8)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91096	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 296085 - CS-9 North Wall (AH-9)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91096	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 296086 - CS-9 South Wall (AH-9)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91096	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 296087 - CS-9 Bottom Hole 3' (AH-9)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91097	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 296088 - CS-10 North Wall (AH-10)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91097	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 296089 - CS-10 South Wall (AH-10)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91097	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**39.8**	mg/Kg	5	4.00

Sample: 296090 - CS-10 West Wall (AH-10)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91097	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 296091 - CS-10 Bottom Hole 2' (AH-10)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91097	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 296092 - Trench-1 5' (AH-7)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91097	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**59.7**	mg/Kg	5	4.00

Sample: 296093 - Trench-1 7'(AH-7)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91097	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 296094 - Trench-1 9' (AH-7)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91097	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 296095 - Trench-2 5' (AH-8)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91097	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 296096 - Trench-2 7' (AH-8)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91097	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 296097 - CS-3 East (AH-3)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	91098	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	Sample Preparation:	2012-05-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Method Blanks

Method Blank (1) QC Batch: 91094

QC Batch:	91094	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	QC Preparation:	2012-05-09	Prepared By:	AR

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

Method Blank (1) QC Batch: 91095

QC Batch:	91095	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	QC Preparation:	2012-05-09	Prepared By:	AR

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

Method Blank (1) QC Batch: 91096

QC Batch:	91096	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	QC Preparation:	2012-05-09	Prepared By:	AR

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

Method Blank (1) QC Batch: 91097

QC Batch:	91097	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	QC Preparation:	2012-05-09	Prepared By:	AR

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

Method Blank (1) QC Batch: 91098

QC Batch:	91098	Date Analyzed:	2012-05-10	Analyzed By:	AR
Prep Batch:	77254	QC Preparation:	2012-05-09	Prepared By:	AR

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

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 91094 | Date Analyzed: 2012-05-10 | Analyzed By: AR
Prep Batch: 77254 | QC Preparation: 2012-05-09 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2610	mg/Kg	1	2500	<3.85	104	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2490	mg/Kg	1	2500	<3.85	100	85 - 115	5	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 91095 | Date Analyzed: 2012-05-10 | Analyzed By: AR
Prep Batch: 77254 | QC Preparation: 2012-05-09 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2620	mg/Kg	1	2500	<3.85	105	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2690	mg/Kg	1	2500	<3.85	108	85 - 115	3	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: 91096 | Date Analyzed: 2012-05-10 | Analyzed By: AR
Prep Batch: 77254 | QC Preparation: 2012-05-09 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2700	mg/Kg	1	2500	<3.85	108	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2590	mg/Kg	1	2500	<3.85	104	85 - 115	4	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 91097 | Date Analyzed: 2012-05-10 | Analyzed By: AR
Prep Batch: 77254 | QC Preparation: 2012-05-09 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2610	mg/Kg	1	2500	<3.85	104	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2540	mg/Kg	1	2500	<3.85	102	85 - 115	3	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: 91098 | Date Analyzed: 2012-05-10 | Analyzed By: AR
Prep Batch: 77254 | QC Preparation: 2012-05-09 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2550	mg/Kg	1	2500	<3.85	102	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2640	mg/Kg	1	2500	<3.85	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: 296066

QC Batch: 91094 | Date Analyzed: 2012-05-10 | Analyzed By: AR
Prep Batch: 77254 | QC Preparation: 2012-05-09 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2470	mg/Kg	5	2500	<19.2	99	79.4 - 120.6

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2580	mg/Kg	5	2500	<19.2	103	79.4 - 120.6	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: 296076

QC Batch: 91095 | Date Analyzed: 2012-05-10 | Analyzed By: AR
Prep Batch: 77254 | QC Preparation: 2012-05-09 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2440	mg/Kg	5	2500	<19.2	98	79.4 - 120.6

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2580	mg/Kg	5	2500	<19.2	103	79.4 - 120.6	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: 296086

QC Batch: 91096 | Date Analyzed: 2012-05-10 | Analyzed By: AR
Prep Batch: 77254 | QC Preparation: 2012-05-09 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2520	mg/Kg	5	2500	<19.2	101	79.4 - 120.6

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2680	mg/Kg	5	2500	<19.2	107	79.4 - 120.6	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: 296096

QC Batch: 91097 | Date Analyzed: 2012-05-10 | Analyzed By: AR
Prep Batch: 77254 | QC Preparation: 2012-05-09 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2440	mg/Kg	5	2500	<19.2	98	79.4 - 120.6

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2550	mg/Kg	5	2500	<19.2	102	79.4 - 120.6	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: 296097

QC Batch: 91098 | Date Analyzed: 2012-05-10 | Analyzed By: AR
Prep Batch: 77254 | QC Preparation: 2012-05-09 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2420	mg/Kg	5	2500	<19.2	97	79.4 - 120.6

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2460	mg/Kg	5	2500	<19.2	98	79.4 - 120.6	2	20

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

Calibration Standards

Standard (CCV-1)

QC Batch: 91094 | Date Analyzed: 2012-05-10 | Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2012-05-10

Standard (CCV-2)

QC Batch: 91094 | Date Analyzed: 2012-05-10 | Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	98.7	99	85 - 115	2012-05-10

Standard (CCV-1)

QC Batch: 91095 | Date Analyzed: 2012-05-10 | Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.6	100	85 - 115	2012-05-10

Standard (CCV-2)

QC Batch: 91095 | Date Analyzed: 2012-05-10 | Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2012-05-10

Standard (CCV-1)

QC Batch: 91096 | Date Analyzed: 2012-05-10 | Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2012-05-10

Standard (CCV-2)

QC Batch: 91096 | Date Analyzed: 2012-05-10 | Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.4	99	85 - 115	2012-05-10

Standard (CCV-1)

QC Batch: 91097 | Date Analyzed: 2012-05-10 | Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	97.8	98	85 - 115	2012-05-10

Standard (CCV-2)

QC Batch: 91097 | Date Analyzed: 2012-05-10 | Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	102	102	85 - 115	2012-05-10

Standard (CCV-1)

QC Batch: 91098 | Date Analyzed: 2012-05-10 | Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2012-05-10

Standard (CCV-2)

QC Batch: 91098 | Date Analyzed: 2012-05-10 | Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	98.8	99	85 - 115	2012-05-10

Appendix

Report Definitions

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

The scanned attachments will follow this page.
Please note, each attachment may consist of more than one page.

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 5

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.: 114-6440-1233

PROJECT NAME: COG / Foster Eddy #9 Flowline Eddy Co, NM

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
296057	4-19		S		X	CS-1 Northwall (AH-1)	1				X													X				
058	4-19					CS-1 South wall (AH-1)																						
059	4-19					CS-1 East wall (AH-1)																						
060	4-19					CS-1 West wall (AH-1)																						
061	4-19					CS-1 Bottom Hole 1' (AH-1)																						
062	4-23					CS-2 ~~South~~ EAST wall (AH-2)																						
063	4-23					CS-2 ~~South~~ WEST wall (AH-2)																						
064	4-23					CS-2 Bottom Hole 1' (AH-2)																						
065	4-19					CS-3 North wall (AH-3)																						
066	4-19		V		V	CS-3 South wall (AH-3)	V				V													V				

RELINQUISHED BY: (Signature) Date: 5/2/12 Time: 9:00 am
RECEIVED BY: (Signature) Date: 5/2/12 Time: 9:00

SAMPLED BY: (Print & Initial) J Edgar Gubbs Jr Date: 4/28/12 Time: 1030

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: Monica PHONE: DATE: TIME:
RECEIVED BY: (Signature)

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: Cool Intact

REMARKS: All to Midland

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

Analysis Request of Chain of Custody Record

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME:	SITE MANAGER:
COG	Ike Tavarez

PROJECT NO.:	PROJECT NAME:
114-6401233	COG / Foster Eddy #9 Flowline Eddy Co, N.M.

LAB I.D. NUMBER	DATE 2013	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
067	4-19		S		X	CS-3 Bottom Hole (AH-3)	1				X	
068	4-19					CS-4 North wall (AH-4)						
069	4-19					CS-4 South wall (AH-4)						
070	4-19					CS-4 Bottom Hole 1' (AH-4)						
071	4-19					CS-5 North wall (AH-5)						
072	4-19					CS-5 South wall (AH-5)						
073	4-19					CS-5 Bottom Hole 1' (AH-5)						
074	4-19					CS-6 North wall (AH-6)						
075	4-19					CS-6 South wall (AH-6)						
076	4-19					CS-6 East wall (AH-6)						

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

RELINQUISHED BY: (Signature) Robert Gubbs Jr	Date: 5/2/13 Time: 9:00 AM	RECEIVED BY: (Signature)	Date: Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:

SAMPLED BY: (Print & Initial) Robert Gubbs Jr — Date: 4-29-13 Time: 1100

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

AIRBILL #:

OTHER:

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

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

SAMPLE CONDITION WHEN RECEIVED: 4°

REMARKS: All to be Midland

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

10 16 10

Analysis Request of Chain of Custody Record

PAGE: 3 OF: 9

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

CLIENT NAME: COG

SITE MANAGER: Tike Tavarez

PROJECT NO.: 114-6401233

PROJECT NAME: COG / Loster Eddy 49 Flowline Eddy Co, NM

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
077	4-14		X		X	CS-6 Bottom Hole 1 (AH-6)	1				X													X				
078	4-23					CS-7 North Wall (AH-7)																						
079	4-23					CS-7 South Wall (AH-7)																						
080	4-23					CS-7 East Wall (AH-7)																						
081	4-23					CS-7 Bottom Hole 3' (AH-7)																						
082	4-23					CS-8 North Wall (AH-8)																						
083	4-23					CS-8 South Wall (AH-8)																						
084	4-23					CS-8 Bottom Hole 3' (AH-8)																						
085	4-23					CS-9 North Wall (AH-9)																						
086	4-23					CS-9 South Wall (AH-9)																						

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature)	Date: 5/2/12	RECEIVED BY: (Signature)	Date: 5/2/12
	Time: 9:00 am		Time: 9:00
RELINQUISHED BY: (Signature)	Date:	RECEIVED BY: (Signature)	Date:
	Time:		Time:
RELINQUISHED BY: (Signature)	Date:	RECEIVED BY: (Signature)	Date:
	Time:		Time:

SAMPLED BY: (Print & Initial) Robert Gobbs Jr. Date: 4-24-12 Time: 1110

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

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

RECEIVING LABORATORY: Trace

ADDRESS:

CITY: Midland STATE: TX ZIP:

CONTACT: Monica PHONE: DATE: TIME:

RECEIVED BY: (Signature)

SAMPLE CONDITION WHEN RECEIVED: Intact

REMARKS: All to Midland

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

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.: 114-6410233

PROJECT NAME: COG / Foster Eddy #9 Flowline Eddy Co, NM

LAB I.D. NUMBER	DATE 2012	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chlorides	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
087	4-23		X		X	CS-9 Bottom Hole 3' (CS-9)	1				X													X				
088	4-20					CS-10 North wall (AH-10)																						
089	4-20					CS-10 South wall (AH-10)																						
090	4-20					CS-10 West wall (AH-10)																						
091	4-20					CS-10 Bottom Hole 2' (AH-10)																						
092	4-23					Trench-1 5' (AH-7)																						
093	4-23					Trench-1 7' (AH-7)																						
094	4-23					Trench-1 9' (AH-7)																						
095	4-23					Trench-2 5' (AH-8)																						
096	4-23					Trench-2 7' (AH-8)																						

RELINQUISHED BY: (Signature) — Date: 5/2/12 Time: 9:00 am — RECEIVED BY: (Signature) — Date: 5/2/12 Time: 9:00

SAMPLED BY: (Print & Initial) Robert Gubbels Jr. — Date: 4-24-12 Time: 1120

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

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

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

TETRA TECH CONTACT PERSON: Ike Tavarez — Results by:

RECEIVING LABORATORY: Trace — RECEIVED BY: (Signature)

ADDRESS:

CITY: Midland STATE: TX ZIP:

CONTACT: Mendez PHONE: DATE: TIME:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4.5° intact

REMARKS: all tests Midland

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

Lab Order ID #: ...30... Page ___ of ___

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

5002 Basin Street, Suite A1
Midland, Texas 79703
Tel (432) 689-6301
Fax (432) 689-6313

200 East Sunset Rd., Suite E
El Paso, Texas 79922
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

BioAquatic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 242-7750

Company Name: Tetra Tech **Phone #:**

Address: (Street, City, Zip) **Fax #:**

Contact Person: Ike Tavarez **E-mail:**

Invoice to: (If different from above)

Project #: 114-6401233 **Project Name:**

Project Location (including state): **Sampler Signature:**

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE		PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE		SAMPLING: DATE	TIME
097	CS-3 EAST (AH3)	1	4oz		X								X			4/19	

ANALYSIS REQUEST (Circle or Specify Method No.)

- MTBE 8021 / 602 / 8260 / 624
- BTEX 8021 / 602 / 8260 / 624
- TPH 418.1 / TX1005 / TX1005 Ext(C35)
- TPH 8015 GRO / DRO / TVHC
- PAH 8270 / 625
- Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7
- TCLP Metals Ag As Ba Cd Cr Pb Se Hg
- TCLP Volatiles
- TCLP Semi Volatiles
- TCLP Pesticides
- RCI
- GC/MS Vol. 8260 / 624
- GC/MS Semi. Vol. 8270 / 625
- PCB's 8082 / 608
- Pesticides 8081 / 608
- BOD, TSS, pH
- Moisture Content
- Cl (circled), F, SO_4, NO_3-N, NO_2-N, PO_4-P, Alkalinity — X (sample 097)
- Na, Ca, Mg, K, TDS, EC
- Turn Around Time if different from standard
- Hold

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
[signature]	TetraTech	5/2/12	9:00am	[signature]	TA	5/2/12	9:02	INST R1 OBS 1.5 °C COR ___ °C
								INST ___ OBS ___ °C COR ___ °C
								INST ___ OBS ___ °C COR ___ °C

LAB USE ONLY
Intact (Y) / N
Headspace (Y / N / NA)
Log-in-Review ___

REMARKS: All tests Midland

- ☐ Dry Weight Basis Required
- ☐ TRRP Report Required
- ☐ Check If Special Reporting Limits Are Needed

Carrier # Carry in

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

ORIGINAL COPY