SITE INFORMATION

Report Type: Work Plan

General Site Information:						
Site:	Tenneco State #3 Well Site					
Company:	COG Operating LLC					
Section, Township and Range	Unit M	Sec. 20	T-17-S	R-29-E		
Lease Number:	API-30-015-31480					
County:	Lea County					
GPS:	32.81316° N			104.10255° W		
Surface Owner:	State					
Mineral Owner:						
Directions:	Intersection of 82 and CR-211 travel west on Hwy 82 for 6.3 mi, turn right 100', turn left 0.3 mi, turn right 0.1 mi, turn right 400' to location. Spill in pasture area south of well pad location					

Release Data:	
Date Released:	1/5/2012
Type Release:	Produced Fluids and oil
Source of Contamination:	Poly line ruptured
Fluid Released:	5 bbls oil and 10 bbls of produced water
Fluids Recovered:	4 bbls oil and 8 bbls of produced water

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

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 January 30, 2012, Tetra Tech personnel inspected and sampled the spill area. A total of five (5) auger holes (AH-1 through AH-5) were installed using a stainless steel hand auger to assess the impacted soils. Selected samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. The sampling results are summarized in Table 1. The auger hole locations are shown on Figure 3. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C.

Referring to Table 1, all of the auger holes had samples exceeding the RRAL for TPH, benzene or total BTEX, with the exception of AH-3. The area of AH-3 did not show an impact to the area. Auger holes (AH-1, AH-2, AH-4 and AH-5) were not vertically defined. In addition, elevated chloride concentrations were detected and not defined in the areas of AH-1, AH-2 and AH-4. The areas of AH-3 and AH-5 did not show a significant chloride impact.

On March 16, 2012, Tetra Tech personnel supervised the installation of boreholes using an air rotary drilling rig. Four (4) boreholes (BH-1 through BH-4) were installed to define extents. Soil samples were collected and submitted for analysis. The sampling results are summarized in Table 1. The borehole locations are shown on Figure 3. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C.

Referring to Table 1, the TPH, benzene and total BTEX impact were vertically defined for the areas of AH-1, AH-2, AH-4, and AH-5, with concentrations below the RRAL at 19-20', 19-20', 4-5' and 4-5', respectively.

TETRA TECH

Work Plan

COG proposes to remove impacted material as highlighted (green) in Table 1 and shown on Figure 4. In the areas of AH-1 (BH-1) and AH-2 (BH-2), the proposed excavation depths will range from 15.0' to 20.0' below surface and 3.0' to 4.0' in the areas of AH-4 (BH-3) and AH-5 (BH-4). Tetra Tech will field screen the soils with an Organic Vapor Meter (OVM) and run field chlorides to confirm the removal of the impacted soils. Once excavated to the appropriate depths, the excavation will be backfilled with clean soil. The excavated soil will be hauled to proper disposal.

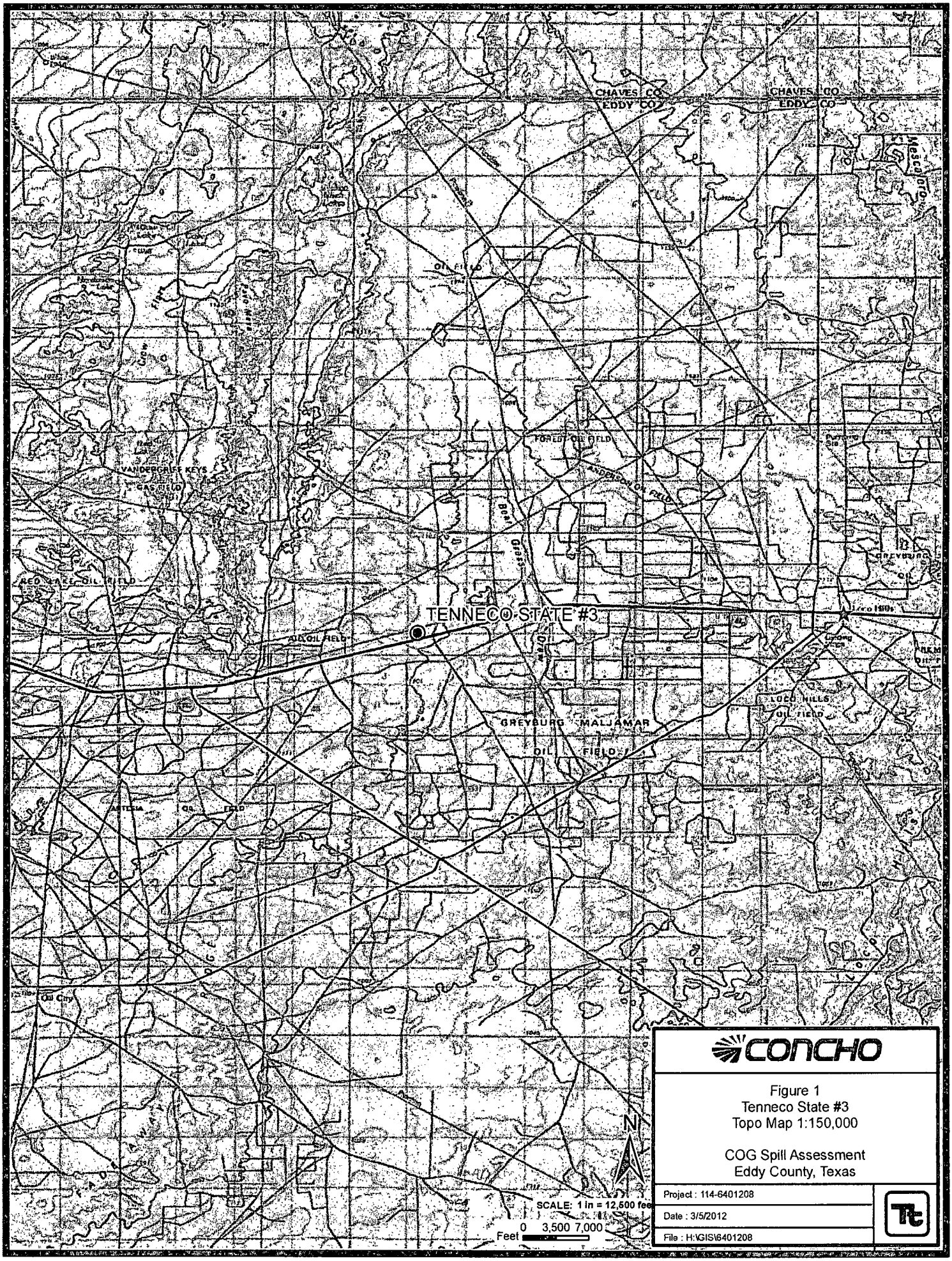
The goal of the remediation is to establish surface growth and to reduce the environmental liabilities for the protection of the groundwater. Based on site formation, the proposed excavation depths may not be reached due to wall cave ins and safety concerns for onsite personnel. In addition, impacted soil around oil and gas equipment, structures or lines may not be feasible or practicable to be removed due to safely concerns. As such, Tetra Tech will excavate the soils to the maximum extent practicable. If excavation depths are not achieved, the excavation bottoms will be capped with a 40 mil liner at 4.0' below surface and backfilled to grade.

Upon completion, a final report will be submitted to the NMOCD. If you have any questions or require any additional information regarding this work plan, please call me at (432) 682-4559.

Respectfully submitted,
TETRA TECH

Ike Tavarez
Senior Project Manager

cc: Pat Ellis – COG



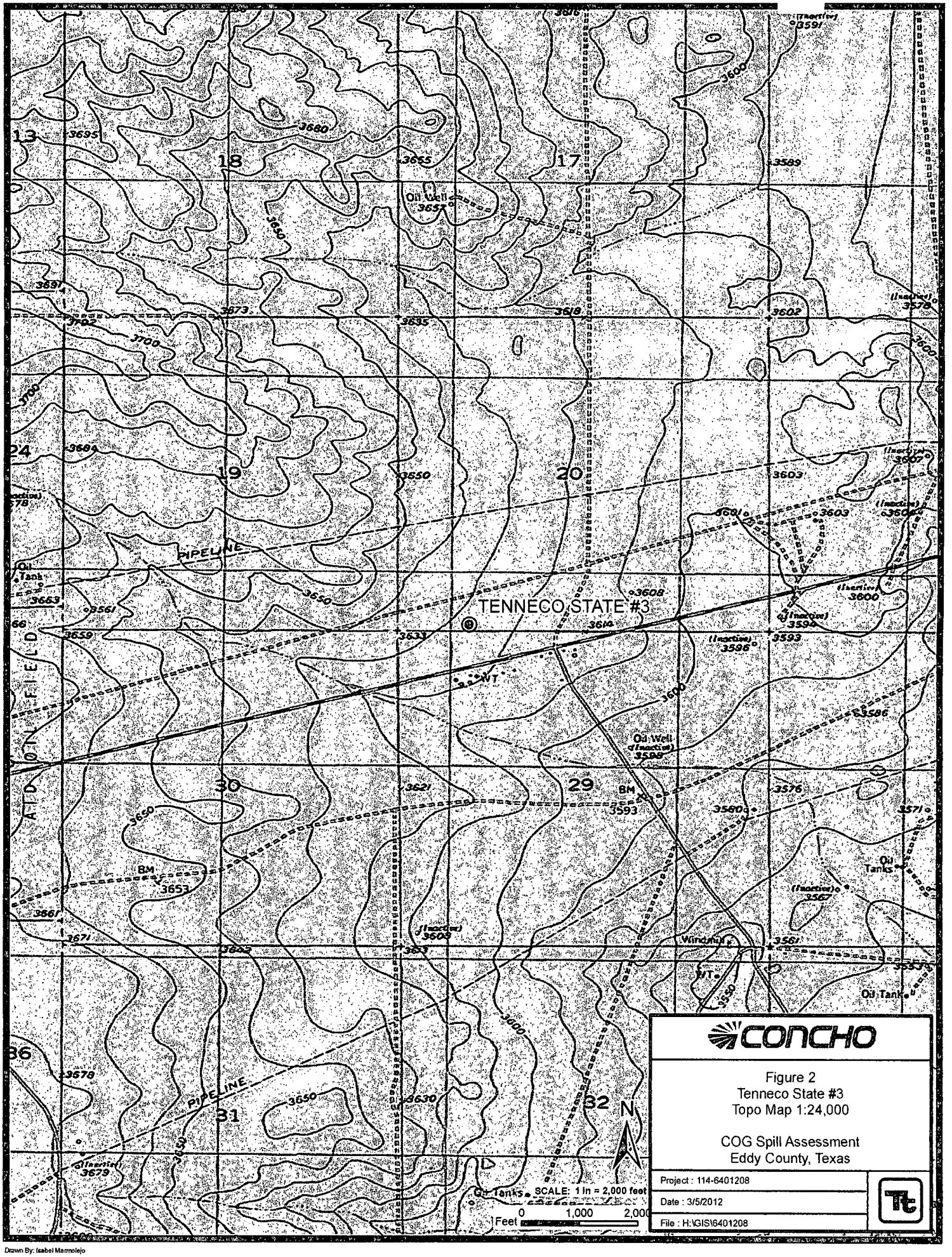
CONCHO

Figure 1
Tenneco State #3
Topo Map 1:150,000

COG Spill Assessment
Eddy County, Texas

Project : 114-6401208	
Date : 3/5/2012	
File : H:\GIS\6401208	

Drawn By: Isabel Marmolejo



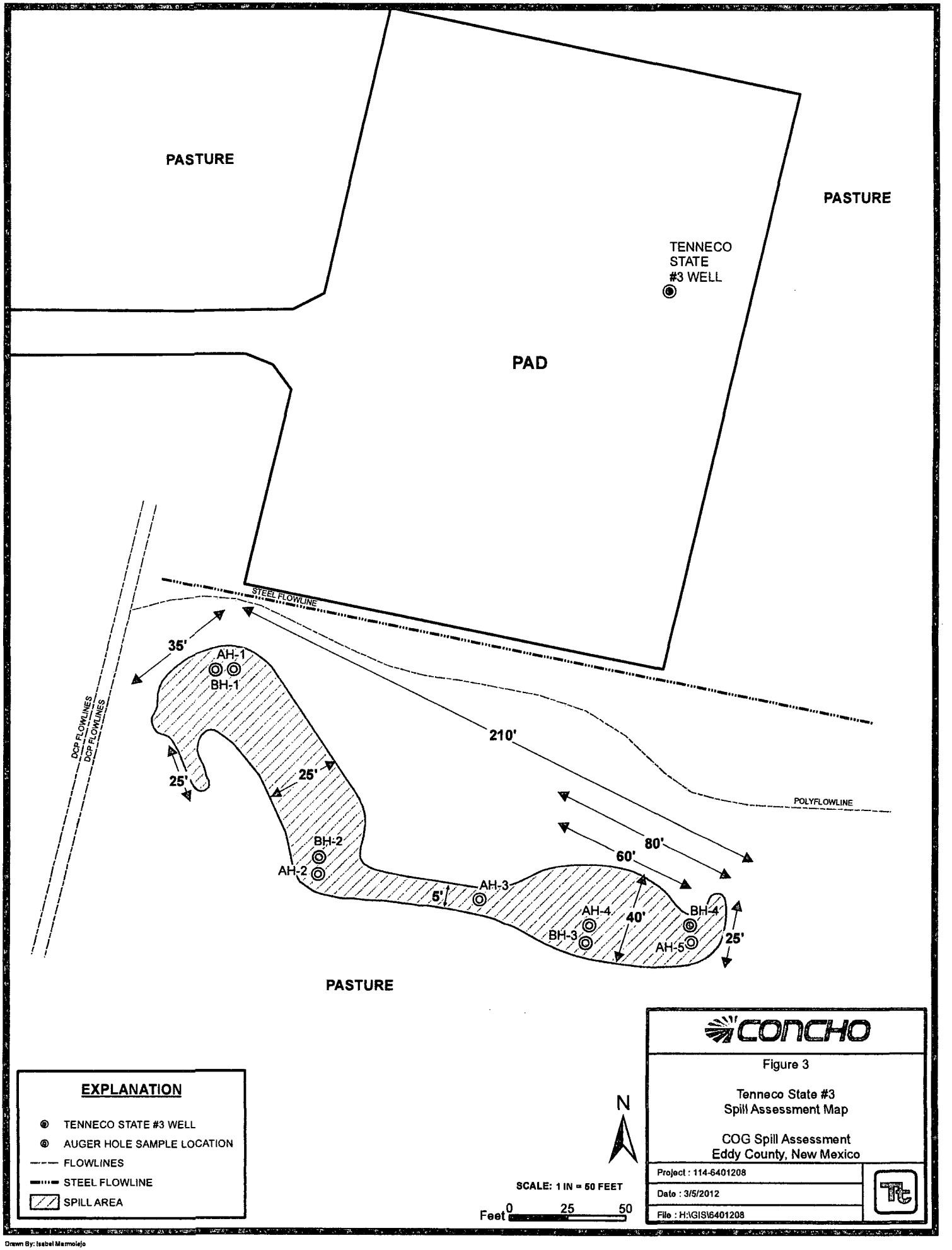
CONCHO

Figure 2
Tenneco State #3
Topo Map 1:24,000

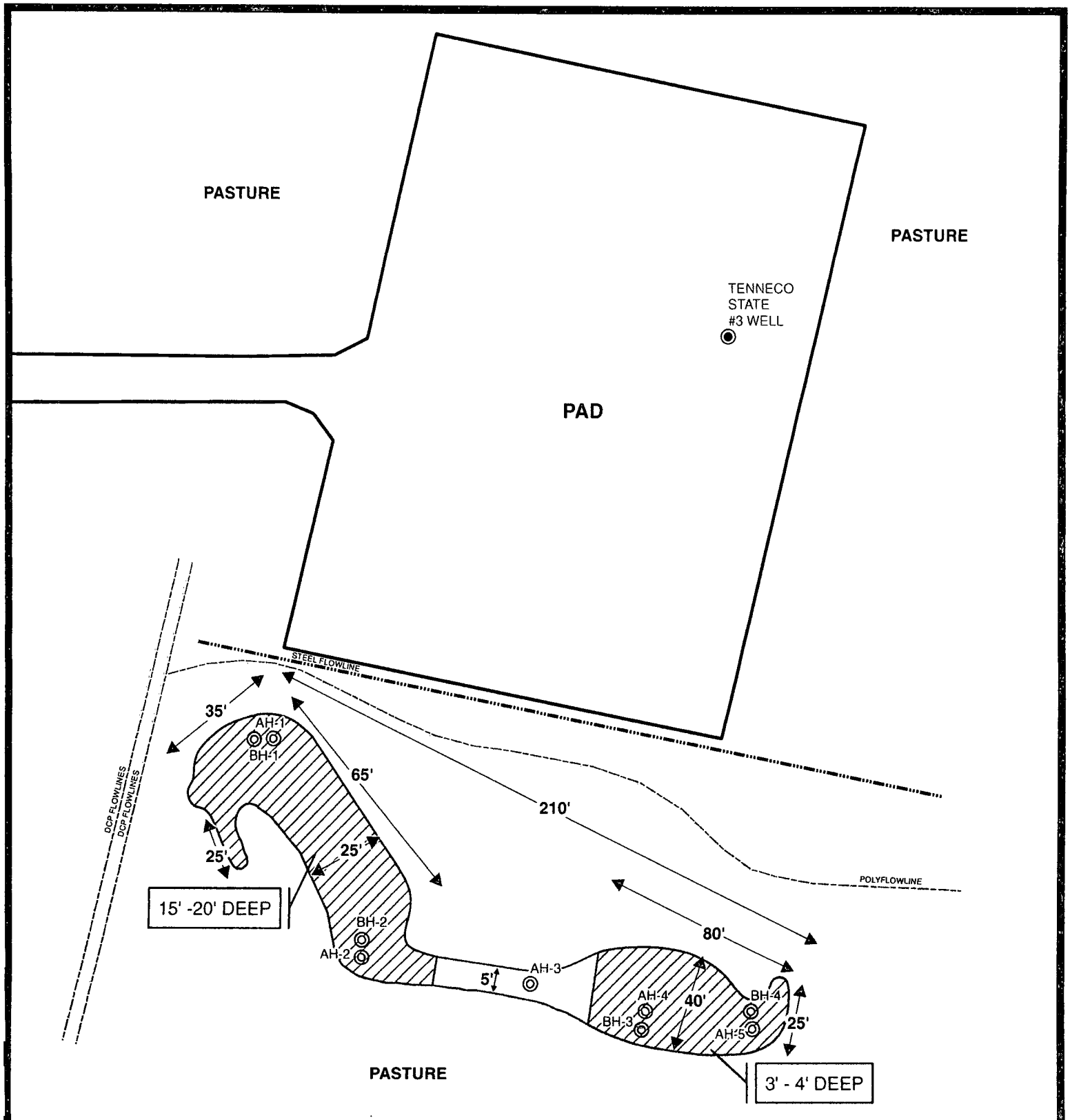
COG Spill Assessment
Eddy County, Texas

Project : 114-6401208	
Date : 3/5/2012	
File : H:\GIS\6401208	

Drawn By: Isabel Marmolejo



Drawn By: Isabel Marmolejo



EXPLANATION

- TENNECO STATE #3 WELL
- AUGER HOLE SAMPLE LOCATION
- FLOWLINES
- STEEL FLOWLINE
- PROPOSED EXCAVATION AREA

N

SCALE: 1 IN = 54 FEET

Feet 0 25 50

CONCHO

Figure 4

Tenneco State #3

Proposed Excavation Areas & Depths Map

Eddy County, New Mexico

Project : 114-6401208

Date : 3/5/2012

File : H:\GIS\6401208

Drawn By: Isabel Marmolejo

Table 1
COG Operating LLC.
Tenneco State #3
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	1/30/2012	0-1	0.5	X		6,590	124,000	130,590	26.6	114	78.1	122	341	6,350
	"	1-1.5	0.5	X		2,200	5,380	7,580	1.38	25.0	26.1	26.3	78.8	12,200
BH-1	3/16/2012	0-1	-	X		-	-	-	-	-	-	-	-	2,490
	"	2-3	-	X		-	-	-	-	-	-	-	-	4,350
	"	4-5	-	X		5,570	11,400	**16,970**	**20.4**	98.8	74.6	108	**302**	11,300
	"	6-7	-	X		5,280	15,700	**20,980**	5.04	65.4	63.1	94.5	**228**	3,340
	"	9-10	-	X		7,120	11,300	**18,420**	8.63	91.5	89.0	134	**323**	2,640
	"	14-15	-	X		6,120	9,130	**15,250**	5.38	67.9	75.7	108	**257**	2,930
	"	19-20	-	X		1,100	2,020	3,120	<1.00	3.91	12.0	22.5	38.41	4,030
	"	24-25	-	X		-	-	-	-	-	-	-	-	2,270
	"	29-30	-	X		-	-	-	-	-	-	-	-	266

Table 1
COG Operating LLC.
Tenneco State #3
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-2	1/30/2012	0-1	0.5	X		5,380	19,400	**24,780**	15.0	67.3	65.3	109	**257**	7,800
	"	1-1.5	0.5	X		3,680	5,610	**9,290**	<2.00	23.4	39.7	72.6	**136**	9,990
	"	2-2.5	0.5	X		4,940	2,140	**7,080**	**16.9**	127	73.6	146	**364**	8,050
	"	3-3.5	0.5	X		4,780	1,810	**6,590**	**15.5**	150	96.4	161	**423**	7,900
	"	4-4.5	0.5	X		6,440	13,600	**20,040**	**24.4**	227	137	191	**579**	7,920
	"	5-5.5	0.5	X		7,700	7,140	**14,840**	**30.9**	247	143	198	**619**	10,500
BH-2	3/16/2012	0-1	-	X		-	-	-	-	-	-	-	-	301
	"	2-3		X		-	-	-	-			-	-	276
	"	4-5	-	X		-	-	-	-	-	-	-	-	3,470
	"	6-7	-	X		5,970	11,900	**17,870**	17.6	155	110	157	**440**	934
	"	9-10	-	X		2,860	5,180	**8,040**	1.38	36.2	41.4	62.2	**141**	552
	"	14-15	-	X		2,490	2,810	**5,300**	5.78	33.7	31.2	51.1	**122**	-
	"	19-20	-	X		15.4	71.0	86.4	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	221

Table 1
COG Operating LLC.
Tenneco State #3
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	1/30/2012	0-1	0.5	X		17.3	<50.0	17.3	<0.0200	<0.0200	0.0540	0.112	0.166	<200
	"	1-1.5	0.5	X		-	-	-	-	-	-	-	-	<200
	"	2-2.5	0.5	X		-	-	-	-	-	-	-	-	<200
AH-4	1/30/2012	0-1	0.5	X		4,000	11,000	**15,000**	<2.00	15.4	35.4	71.4	**122**	5,580
	"	1-1.5	0.5	X		3,370	12,400	**15,770**	<2.00	13.6	38.0	71.8	**123**	4,030
	"	2-2.5	0.5	X		2,920	9,900	**12,820**	<2.00	11.3	28.4	53.9	**93.6**	3,730
BH-3	3/19/2012	0-1	-	X		-	-	-	-	-	-	-	-	3,850
	"	2-3	-	X		-	-	-	-	-	-	-	-	4,730
	"	4-5	-	X		62.2	226	288	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	443
	"	6-7	-	X		85.0	372	457	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<200
AH-5	1/30/2012	0-1	0.5	X		2,680	7,980	**10,660**	<2.00	3.62	14.7	21.0	39.3	<200
BH-4	3/19/2012	0-1	-	X		1,260	9,020	**10,280**	-	-	-	-	-	-
	"	2-3	-	X		1,220	7,310	**8,530**	-	-	-	-	-	-
	"	4-5	-	X		3.74	<50.0	3.74	-	-	-	-	-	-

(-) Not Analyzed

(BEB) Below Excavation Bottom

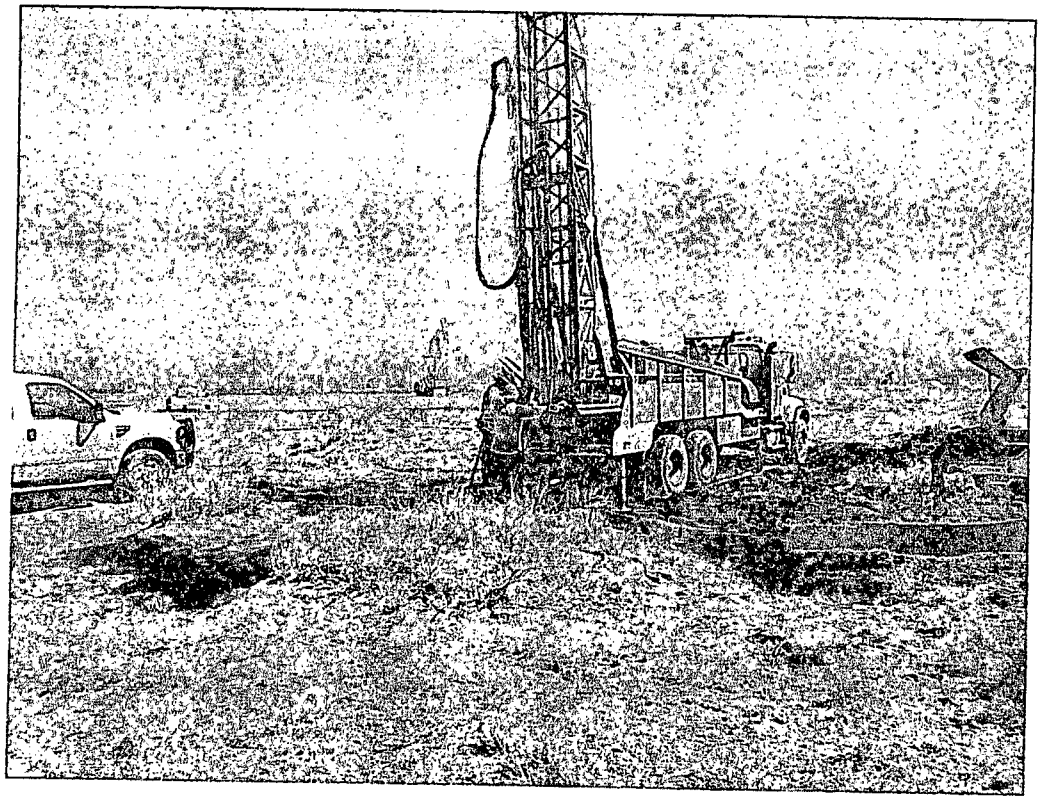
Proposed Excavation Depth

Photos

COG Operating LLC
Tenneco State #3
Eddy County, New Mexico

TETRA TECH

View north east – Impacted area



View north – Installing bore holes and collecting deeper samples

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

GW 125.150

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	Tenneco State #3	Facility Type	Well location

Surface Owner State	Mineral Owner	Lease No. (API#) 30-015-31480

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
M	20	17S	29E					Eddy

Latitude 32 48.809 **Longitude** 104 06.141

NATURE OF RELEASE

Type of Release Produced water, Oil	Volume of Release PW 10bbls Oil 5bbls	Volume Recovered PW 8bbls Oil 4bbls
Source of Release Poly flowline	Date and Hour of Occurrence 01/05/2012	Date and Hour of Discovery 01/05/2012 1:00 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.*

The poly flowline to the Whitestar Federal #11 ruptured in the pasture area just off the Tenneco State #3 well location. The poly flowline has been repaired.

Describe Area Affected and Cleanup Action Taken.*

Initially 15bbls of produced fluids were released from the flowline and we were able to recover 12bbls with a vacuum truck. All standing fluid has been removed and he spill area has been scraped of the surface contaminates. Tetra Tech will sample the spill site area to delineate any possible contamination from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation work.

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

Signature:	**OIL CONSERVATION DIVISION**
Printed Name: Josh Russo	Approved by District Supervisor:
Title: HSE Coordinator	Approval Date: / Expiration Date:
E-mail Address: jrusso@conchoresources.com	Conditions of Approval: / Attached ☐
Date: 01/19/2012 Phone: 432-212-2399	

* Attach Additional Sheets If Necessary

Appendix B

Water Well Data
Average Depth to Groundwater (ft)
COG - Tenneco State #3
Eddy County, New Mexico

16 South 28 East

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

16 South 29 East

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

16 South 30 East

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

17 South 28 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22 **79**	23	24
30	29	28	27	26	25
31	32	33	34 **53**	35	36

17 South 29 East

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

17 South 30 East

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

18 South 28 East

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

18 South 29 East

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

18 South 30 East

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

- 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 Location

Appendix C

Summary Report

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

Report Date: February 15, 2012

Work Order: 12013117

Project Location: Eddy Co., NM
Project Name: COG/Tenneco State #3
Project Number: 114-6401208

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
287889	AH-1 0-1' 0.5' BEB	soil	2012-01-30	00:00	2012-01-31
287890	AH-1 1-1.5' 0.5' BEB	soil	2012-01-30	00:00	2012-01-31
287891	AH-2 0-1' 0.5' BEB	soil	2012-01-30	00:00	2012-01-31
287892	AH-2 1-1.5' 0.5' BEB	soil	2012-01-30	00:00	2012-01-31
287893	AH-2 2-2.5' 0.5' BEB	soil	2012-01-30	00:00	2012-01-31
287894	AH-2 3-3.5' 0.5' BEB	soil	2012-01-30	00:00	2012-01-31
287895	AH-2 4-4.5' 0.5' BEB	soil	2012-01-30	00:00	2012-01-31
287896	AH-2 5-5.5' 0.5' BEB	soil	2012-01-30	00:00	2012-01-31
287897	AH-3 0-1' 0.5' BEB	soil	2012-01-30	00:00	2012-01-31
287898	AH-3 1-1.5' 0.5' BEB	soil	2012-01-30	00:00	2012-01-31
287899	AH-3 2-2.5' 0.5' BEB	soil	2012-01-30	00:00	2012-01-31
287900	AH-4 0-1' 0.5' BEB	soil	2012-01-30	00:00	2012-01-31
287901	AH-4 1-1.5' 0.5' BEB	soil	2012-01-30	00:00	2012-01-31
287902	AH-4 2-2.5' 0.5' BEB	soil	2012-01-30	00:00	2012-01-31
287903	AH-5 0-1' 0.5' BEB	soil	2012-01-30	00:00	2012-01-31

Sample - Field Code	BTEX				TPH DRO - NEW	TPH GRO
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
287889 - AH-1 0-1' 0.5' BEB	**26.6**	**114**	**78.1**	**122**	**124000**	**6590** Qs
287890 - AH-1 1-1.5' 0.5' BEB	**1.38**	**25.0**	**26.1**	**26.3**	**5380**	**2200**
287891 - AH-2 0-1' 0.5' BEB	**15.0**	**67.3**	**65.3**	**109**	**19400**	**5380** Qs
287892 - AH-2 1-1.5' 0.5' BEB	<2.00	**23.4**	**39.7**	**72.6**	**5610**	**3680**
287893 - AH-2 2-2.5' 0.5' BEB	**16.9**	**127**	**73.6**	**146**	**2140**	**4940**
287894 - AH-2 3-3.5' 0.5' BEB	**15.5**	**150**	**96.4**	**161**	**1810**	**4780**
287895 - AH-2 4-4.5' 0.5' BEB	**24.4**	**227**	**137**	**191**	**13600**	**6440**
287896 - AH-2 5-5.5' 0.5' BEB	**30.9**	**247**	**143**	**198**	**7140**	**7700**
287897 - AH-3 0-1' 0.5' BEB	<0.0200	<0.0200	**0.0540**	**0.112**	<50.0	**17.3** Qs
287900 - AH-4 0-1' 0.5' BEB	<2.00	**15.4**	**35.4**	**71.4**	**11000**	**4000** Qs

continued ...

... continued

Sample - Field Code	BTEX Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	TPH DRO - NEW DRO (mg/Kg)	TPH GRO GRO (mg/Kg)
287901 - AH-4 1-1.5' 0.5' BEB	<2.00	**13.6**	**38.0**	**71.8**	**12400**	**3370**
287902 - AH-4 2-2.5' 0.5' BEB	<2.00	**11.3**	**28.4**	**53.9**	**9900**	**2920**
287903 - AH-5 0-1' 0.5' BEB	<2.00	**3.62**	**14.7**	**21.0**	**7980**	**2680** Qs

Sample: 287889 - AH-1 0-1' 0.5' BEB

Param	Flag	Result	Units	RL
Chloride		**6350**	mg/Kg	4

Sample: 287890 - AH-1 1-1.5' 0.5' BEB

Param	Flag	Result	Units	RL
Chloride		**12200**	mg/Kg	4

Sample: 287891 - AH-2 0-1' 0.5' BEB

Param	Flag	Result	Units	RL
Chloride		**7800**	mg/Kg	4

Sample: 287892 - AH-2 1-1.5' 0.5' BEB

Param	Flag	Result	Units	RL
Chloride		**9990**	mg/Kg	4

Sample: 287893 - AH-2 2-2.5' 0.5' BEB

Param	Flag	Result	Units	RL
Chloride		**8050**	mg/Kg	4

Sample: 287894 - AH-2 3-3.5' 0.5' BEB

Param	Flag	Result	Units	RL
Chloride		**7900**	mg/Kg	4

Sample: 287895 - AH-2 4-4.5' 0.5' BEB

Param	Flag	Result	Units	RL
Chloride		**7920**	mg/Kg	4

Sample: 287896 - AH-2 5-5.5' 0.5' BEB

Param	Flag	Result	Units	RL
Chloride		**10500**	mg/Kg	4

Sample: 287897 - AH-3 0-1' 0.5' BEB

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

Sample: 287898 - AH-3 1-1.5' 0.5' BEB

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

Sample: 287899 - AH-3 2-2.5' 0.5' BEB

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

Sample: 287900 - AH-4 0-1' 0.5' BEB

Param	Flag	Result	Units	RL
Chloride		**5580**	mg/Kg	4

Sample: 287901 - AH-4 1-1.5' 0.5' BEB

Param	Flag	Result	Units	RL
Chloride		**4030**	mg/Kg	4

Sample: 287902 - AH-4 2-2.5' 0.5' BEB

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

Sample: 287903 - AH-5 0-1' 0.5' BEB

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

Summary Report

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

Report Date: April 27, 2012

Work Order: 12032206

Project Location: Eddy Co., NM
Project Name: COG/Tenneco State #3
Project Number: 114-6401208

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
291964	BH-1 @ AH-1 0-1'	soil	2012-03-16	00:00	2012-03-22
291965	BH-1 @ AH-1 2-3'	soil	2012-03-16	00:00	2012-03-22
291966	BH-1 @ AH-1 4-5'	soil	2012-03-16	00:00	2012-03-22
291967	BH-1 @ AH-1 6-7'	soil	2012-03-16	00:00	2012-03-22
291968	BH-1 @ AH-1 9-10'	soil	2012-03-16	00:00	2012-03-22
291969	BH-1 @ AH-1 14-15'	soil	2012-03-16	00:00	2012-03-22
291970	BH-1 @ AH-1 19-20'	soil	2012-03-16	00:00	2012-03-22
291971	BH-1 @ AH-1 24-25'	soil	2012-03-16	00:00	2012-03-22
291972	BH-1 @ AH-1 29-30'	soil	2012-03-16	00:00	2012-03-22
291974	BH-2 @ AH-2 0-1'	soil	2012-03-16	00:00	2012-03-22
291975	BH-2 @ AH-2 2-.3'	soil	2012-03-16	00:00	2012-03-22
291976	BH-2 @ AH-2 4-5'	soil	2012-03-16	00:00	2012-03-22
291977	BH-2 @ AH-2 6-7'	soil	2012-03-16	00:00	2012-03-22
291978	BH-2 @ AH-2 9-10'	soil	2012-03-16	00:00	2012-03-22
291979	BH-2 @ AH-2 19-20'	soil	2012-03-16	00:00	2012-03-22
291980	BH-2 @ AH-2 14-15'	soil	2012-03-16	00:00	2012-03-22
291981	BH-3 @ AH-4 0-1'	soil	2012-03-19	00:00	2012-03-22
291982	BH-3 @ AH-4 2-3'	soil	2012-03-19	00:00	2012-03-22
291983	BH-3 @ AH-4 4-5'	soil	2012-03-19	00:00	2012-03-22
291984	BH-3 @ AH-4 6-7'	soil	2012-03-19	00:00	2012-03-22
291987	BH-4 @ AH-5 0-1'	soil	2012-03-19	00:00	2012-03-22
291988	BH-4 @ AH-5 2-3'	soil	2012-03-19	00:00	2012-03-22
291989	BH-4 @ AH-5 4-5'	soil	2012-03-19	00:00	2012-03-22

	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)
291966 - BH-1 @ AH-1 4-5'	**20.4** Qr	**98.8** Qr	**74.6** Qr	**108** Qr	**11400**	**5570**

continued ...

... continued

Sample - Field Code	BTEX Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	TPH DRO - NEW DRO (mg/Kg)	TPH GRO GRO (mg/Kg)
291967 - BH-1 @ AH-1 6-7'	5.04 Qr	65.4 Qr	63.1 Qr	94.5 Qr	15700	5280
291968 - BH-1 @ AH-1 9-10'	8.63	91.5	89.0	134	11300 Qs	7120
291969 - BH-1 @ AH-1 14-15'	5.38	67.9	75.7	108	9130 Qs	6120
291970 - BH-1 @ AH-1 19-20'	<1.00	3.91	12.0	22.5	2020	1100
291977 - BH-2 @ AH-2 6-7'	17.6 Qr	155 Qr	110 Qr	157 Qr	11900	5970
291978 - BH-2 @ AH-2 9-10'	1.38 Qr	36.2 Qr	41.4 Qr	62.2 Qr	5180	2860
291979 - BH-2 @ AH-2 19-20'	<0.0200	<0.0200	<0.0200	<0.0200	71.0 Qs	15.4
291980 - BH-2 @ AH-2 14-15'	5.78	33.7	31.2	51.1	2810	2490
291983 - BH-3 @ AH-4 4-5'	<0.0200	<0.0200	<0.0200	<0.0200	226	62.2
291984 - BH-3 @ AH-4 6-7'	<0.0200	<0.0200	<0.0200	<0.0200	372	85.0
291987 - BH-4 @ AH-5 0-1'					9020 Qs	1260
291988 - BH-4 @ AH-5 2-3'					7310 Qs	1220
291989 - BH-4 @ AH-5 4-5'	<0.0200	0.201	0.102	0.407	<50.0	3.74

Sample: 291964 - BH-1 @ AH-1 0-1'

Param	Flag	Result	Units	RL
Chloride		2490	mg/Kg	4

Sample: 291965 - BH-1 @ AH-1 2-3'

Param	Flag	Result	Units	RL
Chloride		4350	mg/Kg	4

Sample: 291966 - BH-1 @ AH-1 4-5'

Param	Flag	Result	Units	RL
Chloride		11300	mg/Kg	4

Sample: 291967 - BH-1 @ AH-1 6-7'

Param	Flag	Result	Units	RL
Chloride		3340	mg/Kg	4

Sample: 291968 - BH-1 @ AH-1 9-10'

Param	Flag	Result	Units	RL
Chloride		2640	mg/Kg	4

Sample: 291969 - BH-1 @ AH-1 14-15'

Param	Flag	Result	Units	RL
Chloride		**2930**	mg/Kg	4

Sample: 291970 - BH-1 @ AH-1 19-20'

Param	Flag	Result	Units	RL
Chloride		**4030**	mg/Kg	4

Sample: 291971 - BH-1 @ AH-1 24-25'

Param	Flag	Result	Units	RL
Chloride		**2270**	mg/Kg	4

Sample: 291972 - BH-1 @ AH-1 29-30'

Param	Flag	Result	Units	RL
Chloride		**266**	mg/Kg	4

Sample: 291974 - BH-2 @ AH-2 0-1'

Param	Flag	Result	Units	RL
Chloride		**301**	mg/Kg	4

Sample: 291975 - BH-2 @ AH-2 2-.3'

Param	Flag	Result	Units	RL
Chloride		**276**	mg/Kg	4

Sample: 291976 - BH-2 @ AH-2 4-5'

Param	Flag	Result	Units	RL
Chloride		**3470**	mg/Kg	4

Sample: 291977 - BH-2 @ AH-2 6-7'

Param	Flag	Result	Units	RL
Chloride		**934**	mg/Kg	4

Sample: 291978 - BH-2 @ AH-2 9-10'

Param	Flag	Result	Units	RL
Chloride		**552**	mg/Kg	4

Sample: 291979 - BH-2 @ AH-2 19-20'

Param	Flag	Result	Units	RL
Chloride		**221**	mg/Kg	4

Sample: 291981 - BH-3 @ AH-4 0-1'

Param	Flag	Result	Units	RL
Chloride		**3850**	mg/Kg	4

Sample: 291982 - BH-3 @ AH-4 2-3'

Param	Flag	Result	Units	RL
Chloride		**4730**	mg/Kg	4

Sample: 291983 - BH-3 @ AH-4 4-5'

Param	Flag	Result	Units	RL
Chloride		**443**	mg/Kg	4

Sample: 291984 - BH-3 @ AH-4 6-7'

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

Sample: 291987 - BH-4 @ AH-5 0-1'

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

Sample: 291988 - BH-4 @ AH-5 2-3'

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

Sample: 291989 - BH-4 @ AH-5 4-5'

Param	Flag	Result	Units	RL
Chloride		<200	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 888•588•3443 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260
E-Mail: lab@traceanalysis.com

Certifications

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: February 15, 2012

Work Order: 12013117

Project Location: Eddy Co., NM
Project Name: COG/Tenneco State #3
Project Number: 114-6401208

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
287889	AH-1 0-1' 0.5' BEB	soil	2012-01-30	00:00	2012-01-31
287890	AH-1 1-1.5' 0.5' BEB	soil	2012-01-30	00:00	2012-01-31
287891	AH-2 0-1' 0.5' BEB	soil	2012-01-30	00:00	2012-01-31
287892	AH-2 1-1.5' 0.5' BEB	soil	2012-01-30	00:00	2012-01-31
287893	AH-2 2-2.5' 0.5' BEB	soil	2012-01-30	00:00	2012-01-31
287894	AH-2 3-3.5' 0.5' BEB	soil	2012-01-30	00:00	2012-01-31
287895	AH-2 4-4.5' 0.5' BEB	soil	2012-01-30	00:00	2012-01-31
287896	AH-2 5-5.5' 0.5' BEB	soil	2012-01-30	00:00	2012-01-31
287897	AH-3 0-1' 0.5' BEB	soil	2012-01-30	00:00	2012-01-31
287898	AH-3 1-1.5' 0.5' BEB	soil	2012-01-30	00:00	2012-01-31
287899	AH-3 2-2.5' 0.5' BEB	soil	2012-01-30	00:00	2012-01-31
287900	AH-4 0-1' 0.5' BEB	soil	2012-01-30	00:00	2012-01-31
287901	AH-4 1-1.5' 0.5' BEB	soil	2012-01-30	00:00	2012-01-31
287902	AH-4 2-2.5' 0.5' BEB	soil	2012-01-30	00:00	2012-01-31
287903	AH-5 0-1' 0.5' BEB	soil	2012-01-30	00:00	2012-01-31

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 56 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/Tenneco State #3 were received by TraceAnalysis, Inc. on 2012-01-31 and assigned to work order 12013117. Samples for work order 12013117 were received intact at a temperature of 6.0 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	74935	2012-02-02 at 14:14	88263	2012-02-02 at 14:20
BTEX	S 8021B	75024	2012-02-07 at 13:33	88373	2012-02-07 at 13:35
BTEX	S 8021B	75042	2012-02-08 at 11:44	88406	2012-02-08 at 11:20
BTEX	S 8021B	75170	2012-02-13 at 08:45	88547	2012-02-13 at 14:52
Chloride (Titration)	SM 4500-Cl B	75016	2012-02-06 at 09:29	88376	2012-02-07 at 13:56
Chloride (Titration)	SM 4500-Cl B	75016	2012-02-06 at 09:29	88377	2012-02-07 at 13:57
TPH DRO - NEW	S 8015 D	74990	2012-02-03 at 15:00	88324	2012-02-06 at 10:04
TPH DRO - NEW	S 8015 D	75013	2012-02-06 at 12:30	88356	2012-02-07 at 08:47
TPH DRO - NEW	S 8015 D	75033	2012-02-07 at 13:00	88390	2012-02-08 at 07:55
TPH DRO - NEW	S 8015 D	75093	2012-02-09 at 16:15	88452	2012-02-09 at 16:17
TPH GRO	S 8015 D	74935	2012-02-02 at 14:14	88262	2012-02-02 at 14:16
TPH GRO	S 8015 D	75024	2012-02-07 at 13:33	88374	2012-02-07 at 13:41
TPH GRO	S 8015 D	75042	2012-02-08 at 11:44	88407	2012-02-08 at 12:59
TPH GRO	S 8015 D	75170	2012-02-13 at 08:45	88543	2012-02-13 at 14:52

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 12013117 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: 287889 - AH-1 0-1' 0.5' BEB

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	88263	Date Analyzed:	2012-02-02	Analyzed By:	tc
Prep Batch:	74935	Sample Preparation:	2012-02-02	Prepared By:	tc

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		2	**26.6**	mg/Kg	100	0.0200
Toluene		2	**114**	mg/Kg	100	0.0200
Ethylbenzene		2	**78.1**	mg/Kg	100	0.0200
Xylene		2	**122**	mg/Kg	100	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			98.1	mg/Kg	100	100	98	82.8 - 143.1
4-Bromofluorobenzene (4-BFB)			108	mg/Kg	100	100	108	70.6 - 179

Sample: 287889 - AH-1 0-1' 0.5' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88376	Date Analyzed:	2012-02-07	Analyzed By:	AR
Prep Batch:	75016	Sample Preparation:	2012-02-07	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**6350**	mg/Kg	100	4.00

Sample: 287889 - AH-1 0-1' 0.5' BEB

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	88324	Date Analyzed:	2012-02-06	Analyzed By:	CM
Prep Batch:	74990	Sample Preparation:	2012-02-03	Prepared By:	CM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	**124000**	mg/Kg	100	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		1240	mg/Kg	100	100	1240	61.5 - 159

Sample: 287889 - AH-1 0-1' 0.5' BEB

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	88262	Date Analyzed:	2012-02-02	Analyzed By:	tc
Prep Batch:	74935	Sample Preparation:	2012-02-02	Prepared By:	tc

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qs	2	**6590**	mg/Kg	100	2.00

Surrogate	Flag		Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)				98.9	mg/Kg	100	100	99	30 - 134.6
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr		158	mg/Kg	100	100	158	22.4 - 149

Sample: 287890 - AH-1 1-1.5' 0.5' BEB

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	88373	Date Analyzed:	2012-02-07	Analyzed By:	DA
Prep Batch:	75024	Sample Preparation:	2012-02-07	Prepared By:	tc

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		2	**1.38**	mg/Kg	50	0.0200
Toluene		2	**25.0**	mg/Kg	50	0.0200
Ethylbenzene		2	**26.1**	mg/Kg	50	0.0200
Xylene		2	**26.3**	mg/Kg	50	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			54.5	mg/Kg	50	50.0	109	75 - 135.4
4-Bromofluorobenzene (4-BFB)			52.6	mg/Kg	50	50.0	105	63.6 - 158.9

Sample: 287890 - AH-1 1-1.5' 0.5' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88376	Date Analyzed:	2012-02-07	Analyzed By:	AR
Prep Batch:	75016	Sample Preparation:	2012-02-07	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**12200**	mg/Kg	100	4.00

Sample: 287890 - AH-1 1-1.5' 0.5' BEB

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	88356	Date Analyzed:	2012-02-07	Analyzed By:	CM
Prep Batch:	75013	Sample Preparation:	2012-02-06	Prepared By:	CM

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
DRO		1	**5380**	mg/Kg	5	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		320	mg/Kg	5	100	320	61.5 - 159

Sample: 287890 - AH-1 1-1.5' 0.5' BEB

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	88374	Date Analyzed:	2012-02-07	Analyzed By:	DA
Prep Batch:	75024	Sample Preparation:	2012-02-07	Prepared By:	tc

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
GRO		2	**2200**	mg/Kg	50	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			47.1	mg/Kg	50	50.0	94	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)			67.1	mg/Kg	50	50.0	134	45.1 - 162.2

Sample: 287891 - AH-2 0-1' 0.5' BEB

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	88263	Date Analyzed:	2012-02-02	Analyzed By:	tc
Prep Batch:	74935	Sample Preparation:	2012-02-02	Prepared By:	tc

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		2	**15.0**	mg/Kg	100	0.0200
Toluene		2	**67.3**	mg/Kg	100	0.0200
Ethylbenzene		2	**65.3**	mg/Kg	100	0.0200
Xylene		2	**109**	mg/Kg	100	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			97.1	mg/Kg	100	100	97	82.8 - 143.1
4-Bromofluorobenzene (4-BFB)			111	mg/Kg	100	100	111	70.6 - 179

Sample: 287891 - AH-2 0-1' 0.5' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88376	Date Analyzed:	2012-02-07	Analyzed By:	AR
Prep Batch:	75016	Sample Preparation:	2012-02-07	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**7800**	mg/Kg	100	4.00

Sample: 287891 - AH-2 0-1' 0.5' BEB

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	88324	Date Analyzed:	2012-02-06	Analyzed By:	CM
Prep Batch:	74990	Sample Preparation:	2012-02-03	Prepared By:	CM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	**19400**	mg/Kg	20	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	824	mg/Kg	20	100	824	61.5 - 159

Sample: 287891 - AH-2 0-1' 0.5' BEB

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	88262	Date Analyzed:	2012-02-02	Analyzed By:	tc
Prep Batch:	74935	Sample Preparation:	2012-02-02	Prepared By:	tc

Parameter	Flag	Cert	Result	RL Result	Units	Dilution	RL
GRO	Qs	2		**5380**	mg/Kg	100	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			98.5	mg/Kg	100	100	98	30 - 134.6
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	154	mg/Kg	100	100	154	22.4 - 149

Sample: 287892 - AH-2 1-1.5' 0.5' BEB

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	88373	Date Analyzed:	2012-02-07	Analyzed By:	DA
Prep Batch:	75024	Sample Preparation:	2012-02-07	Prepared By:	tc

Parameter	Flag	Cert	Result	RL Result	Units	Dilution	RL
Benzene	U	2		<2.00	mg/Kg	100	0.0200
Toluene		2		**23.4**	mg/Kg	100	0.0200
Ethylbenzene		2		**39.7**	mg/Kg	100	0.0200
Xylene		2		**72.6**	mg/Kg	100	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			109	mg/Kg	100	100	109	75 - 135.4
4-Bromofluorobenzene (4-BFB)			106	mg/Kg	100	100	106	63.6 - 158.9

Sample: 287892 - AH-2 1-1.5' 0.5' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88376	Date Analyzed:	2012-02-07	Analyzed By:	AR
Prep Batch:	75016	Sample Preparation:	2012-02-07	Prepared By:	AR

continued ...

sample 287892 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**9990**	mg/Kg	100	4.00

Sample: 287892 - AH-2 1-1.5' 0.5' BEB

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	88356	Date Analyzed:	2012-02-07	Analyzed By:	CM
Prep Batch:	75013	Sample Preparation:	2012-02-06	Prepared By:	CM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	**5610**	mg/Kg	5	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		324	mg/Kg	5	100	324	61.5 - 159

Sample: 287892 - AH-2 1-1.5' 0.5' BEB

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	88374	Date Analyzed:	2012-02-07	Analyzed By:	DA
Prep Batch:	75024	Sample Preparation:	2012-02-07	Prepared By:	tc

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		2	**3680**	mg/Kg	100	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			94.0	mg/Kg	100	100	94	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)			130	mg/Kg	100	100	130	45.1 - 162.2

Sample: 287893 - AH-2 2-2.5' 0.5' BEB

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	88406	Date Analyzed:	2012-02-08	Analyzed By:	DA
Prep Batch:	75042	Sample Preparation:	2012-02-08	Prepared By:	DA

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		2	**16.9**	mg/Kg	100	0.0200
Toluene		2	**127**	mg/Kg	100	0.0200
Ethylbenzene		2	**73.6**	mg/Kg	100	0.0200
Xylene		2	**146**	mg/Kg	100	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			95.9	mg/Kg	100	100	96	75 - 135.4
4-Bromofluorobenzene (4-BFB)			106	mg/Kg	100	100	106	63.6 - 158.9

Sample: 287893 - AH-2 2-2.5' 0.5' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88376	Date Analyzed:	2012-02-07	Analyzed By:	AR
Prep Batch:	75016	Sample Preparation:	2012-02-07	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**8050**	mg/Kg	100	4.00

Sample: 287893 - AH-2 2-2.5' 0.5' BEB

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	88452	Date Analyzed:	2012-02-09	Analyzed By:	DA
Prep Batch:	75093	Sample Preparation:	2012-02-09	Prepared By:	DA

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		2	**2140**	mg/Kg	5	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			423	mg/Kg	5	500	85	49.3 - 157.5

Sample: 287893 - AH-2 2-2.5' 0.5' BEB

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	88407	Date Analyzed:	2012-02-08	Analyzed By:	DA
Prep Batch:	75042	Sample Preparation:	2012-02-08	Prepared By:	DA

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		2	**4940**	mg/Kg	100	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			83.4	mg/Kg	100	100	83	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)			134	mg/Kg	100	100	134	45.1 - 162.2

Sample: 287894 - AH-2 3-3.5' 0.5' BEB

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	88406	Date Analyzed:	2012-02-08	Analyzed By:	DA
Prep Batch:	75042	Sample Preparation:	2012-02-08	Prepared By:	DA

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		2	**15.5**	mg/Kg	100	0.0200
Toluene		2	**150**	mg/Kg	100	0.0200
Ethylbenzene		2	**96.4**	mg/Kg	100	0.0200
Xylene		2	**161**	mg/Kg	100	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			92.9	mg/Kg	100	100	93	75 - 135.4
4-Bromofluorobenzene (4-BFB)			105	mg/Kg	100	100	105	63.6 - 158.9

Sample: 287894 - AH-2 3-3.5' 0.5' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88376	Date Analyzed:	2012-02-07	Analyzed By:	AR
Prep Batch:	75016	Sample Preparation:	2012-02-07	Prepared By:	AR

continued ...

sample 287894 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**7900**	mg/Kg	100	4.00

Sample: 287894 - AH-2 3-3.5' 0.5' BEB

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	88452	Date Analyzed:	2012-02-09	Analyzed By:	DA
Prep Batch:	75093	Sample Preparation:	2012-02-09	Prepared By:	DA

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		2	**1810**	mg/Kg	5	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			460	mg/Kg	5	500	92	49.3 - 157.5

Sample: 287894 - AH-2 3-3.5' 0.5' BEB

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	88407	Date Analyzed:	2012-02-08	Analyzed By:	DA
Prep Batch:	75042	Sample Preparation:	2012-02-08	Prepared By:	DA

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		2	**4780**	mg/Kg	100	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			81.8	mg/Kg	100	100	82	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)			126	mg/Kg	100	100	126	45.1 - 162.2

Sample: 287895 - AH-2 4-4.5' 0.5' BEB

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	**24.4**	mg/Kg	50	0.0200
Toluene		2	**227**	mg/Kg	50	0.0200
Ethylbenzene		2	**137**	mg/Kg	50	0.0200
Xylene		2	**191**	mg/Kg	50	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			56.3	mg/Kg	50	50.0	113	75 - 135.4
4-Bromofluorobenzene (4-BFB)			72.8	mg/Kg	50	50.0	146	63.6 - 158.9

Sample: 287895 - AH-2 4-4.5' 0.5' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88376	Date Analyzed:	2012-02-07	Analyzed By:	AR
Prep Batch:	75016	Sample Preparation:	2012-02-07	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**7920**	mg/Kg	100	4.00

Sample: 287895 - AH-2 4-4.5' 0.5' BEB

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	88452	Date Analyzed:	2012-02-09	Analyzed By:	DA
Prep Batch:	75093	Sample Preparation:	2012-02-09	Prepared By:	DA

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		2	**13600**	mg/Kg	5	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			749	mg/Kg	5	500	150	49.3 - 157.5

Sample: 287895 - AH-2 4-4.5' 0.5' BEB

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 Result	Units	Dilution	RL
GRO		2		**6440**	mg/Kg	50	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			52.2	mg/Kg	50	50.0	104	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	97.5	mg/Kg	50	50.0	195	45.1 - 162.2

Sample: 287896 - AH-2 5-5.5' 0.5' BEB

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 Result	Units	Dilution	RL
Benzene		2		**30.9**	mg/Kg	50	0.0200
Toluene		2		**247**	mg/Kg	50	0.0200
Ethylbenzene		2		**143**	mg/Kg	50	0.0200
Xylene		2		**198**	mg/Kg	50	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			57.1	mg/Kg	50	50.0	114	75 - 135.4
4-Bromofluorobenzene (4-BFB)			73.7	mg/Kg	50	50.0	147	63.6 - 158.9

Sample: 287896 - AH-2 5-5.5' 0.5' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88377	Date Analyzed:	2012-02-07	Analyzed By:	AR
Prep Batch:	75016	Sample Preparation:	2012-02-07	Prepared By:	AR

continued ...

sample 287896 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**10500**	mg/Kg	100	4.00

Sample: 287896 - AH-2 5-5.5' 0.5' BEB

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	88452	Date Analyzed:	2012-02-09	Analyzed By:	DA
Prep Batch:	75093	Sample Preparation:	2012-02-09	Prepared By:	DA

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		2	**7140**	mg/Kg	5	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			512	mg/Kg	5	500	102	49.3 - 157.5

Sample: 287896 - AH-2 5-5.5' 0.5' BEB

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	**7700**	mg/Kg	50	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			51.9	mg/Kg	50	50.0	104	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)	QBF	QBF	97.4	mg/Kg	50	50.0	195	45.1 - 162.2

Sample: 287897 - AH-3 0-1' 0.5' BEB

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	88263	Date Analyzed:	2012-02-02	Analyzed By:	tc
Prep Batch:	74935	Sample Preparation:	2012-02-02	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		2	**0.0540**	mg/Kg	1	0.0200
Xylene		2	**0.112**	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.10	mg/Kg	1	2.00	105	82.8 - 143.1
4-Bromofluorobenzene (4-BFB)			2.06	mg/Kg	1	2.00	103	70.6 - 179

Sample: 287897 - AH-3 0-1' 0.5' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88377	Date Analyzed:	2012-02-07	Analyzed By:	AR
Prep Batch:	75016	Sample Preparation:	2012-02-07	Prepared By:	AR

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

Sample: 287897 - AH-3 0-1' 0.5' BEB

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	88324	Date Analyzed:	2012-02-06	Analyzed By:	CM
Prep Batch:	74990	Sample Preparation:	2012-02-03	Prepared By:	CM

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			104	mg/Kg	1	100	104	61.5 - 159

Sample: 287897 - AH-3 0-1' 0.5' BEB

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	88262	Date Analyzed:	2012-02-02	Analyzed By:	tc
Prep Batch:	74935	Sample Preparation:	2012-02-02	Prepared By:	tc

Parameter	Flag	Cert	Result	RL Result	Units	Dilution	RL
GRO	Qs	2	**17.3**		mg/Kg	1	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.05	mg/Kg	1	2.00	102	30 - 134.6
4-Bromofluorobenzene (4-BFB)			2.93	mg/Kg	1	2.00	146	22.4 - 149

Sample: 287898 - AH-3 1-1.5' 0.5' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88377	Date Analyzed:	2012-02-07	Analyzed By:	AR
Prep Batch:	75016	Sample Preparation:	2012-02-07	Prepared By:	AR

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

Sample: 287899 - AH-3 2-2.5' 0.5' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88377	Date Analyzed:	2012-02-07	Analyzed By:	AR
Prep Batch:	75016	Sample Preparation:	2012-02-07	Prepared By:	AR

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

Sample: 287900 - AH-4 0-1' 0.5' BEB

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	88263	Date Analyzed:	2012-02-02	Analyzed By:	tc
Prep Batch:	74935	Sample Preparation:	2012-02-02	Prepared By:	tc

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	2	<2.00	mg/Kg	100	0.0200
Toluene		2	**15.4**	mg/Kg	100	0.0200
Ethylbenzene		2	**35.4**	mg/Kg	100	0.0200
Xylene		2	**71.4**	mg/Kg	100	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			102	mg/Kg	100	100	102	82.8 - 143.1
4-Bromofluorobenzene (4-BFB)			109	mg/Kg	100	100	109	70.6 - 179

Sample: 287900 - AH-4 0-1' 0.5' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88377	Date Analyzed:	2012-02-07	Analyzed By:	AR
Prep Batch:	75016	Sample Preparation:	2012-02-07	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**5580**	mg/Kg	100	4.00

Sample: 287900 - AH-4 0-1' 0.5' BEB

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	88324	Date Analyzed:	2012-02-06	Analyzed By:	CM
Prep Batch:	74990	Sample Preparation:	2012-02-03	Prepared By:	CM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	**11000**	mg/Kg	20	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	490	mg/Kg	20	100	490	61.5 - 159

Sample: 287900 - AH-4 0-1' 0.5' BEB

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	88262	Date Analyzed:	2012-02-02	Analyzed By:	tc
Prep Batch:	74935	Sample Preparation:	2012-02-02	Prepared By:	tc

Parameter	Flag	Cert	Result	RL Result	Units	Dilution	RL
GRO	Qs	2		**4000**	mg/Kg	100	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			99.9	mg/Kg	100	100	100	30 - 134.6
4-Bromofluorobenzene (4-BFB)			144	mg/Kg	100	100	144	22.4 - 149

Sample: 287901 - AH-4 1-1.5' 0.5' BEB

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	88373	Date Analyzed:	2012-02-07	Analyzed By:	DA
Prep Batch:	75024	Sample Preparation:	2012-02-07	Prepared By:	tc

Parameter	Flag	Cert	Result	RL Result	Units	Dilution	RL
Benzene	U	2		<2.00	mg/Kg	100	0.0200
Toluene		2		**13.6**	mg/Kg	100	0.0200
Ethylbenzene		2		**38.0**	mg/Kg	100	0.0200
Xylene		2		**71.8**	mg/Kg	100	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			105	mg/Kg	100	100	105	75 - 135.4
4-Bromofluorobenzene (4-BFB)			102	mg/Kg	100	100	102	63.6 - 158.9

Sample: 287901 - AH-4 1-1.5' 0.5' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88377	Date Analyzed:	2012-02-07	Analyzed By:	AR
Prep Batch:	75016	Sample Preparation:	2012-02-07	Prepared By:	AR

continued ...

sample 287901 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**4030**	mg/Kg	100	4.00

Sample: 287901 - AH-4 1-1.5' 0.5' BEB

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	88390	Date Analyzed:	2012-02-08	Analyzed By:	CM
Prep Batch:	75033	Sample Preparation:	2012-02-07	Prepared By:	CM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	**12400**	mg/Kg	10	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		584	mg/Kg	10	100	584	61.5 - 159

Sample: 287901 - AH-4 1-1.5' 0.5' BEB

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	88374	Date Analyzed:	2012-02-07	Analyzed By:	DA
Prep Batch:	75024	Sample Preparation:	2012-02-07	Prepared By:	tc

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		2	**3370**	mg/Kg	100	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			91.9	mg/Kg	100	100	92	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)			128	mg/Kg	100	100	128	45.1 - 162.2

Sample: 287902 - AH-4 2-2.5' 0.5' BEB

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	88406	Date Analyzed:	2012-02-08	Analyzed By:	DA
Prep Batch:	75042	Sample Preparation:	2012-02-08	Prepared By:	DA

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	2	<2.00	mg/Kg	100	0.0200
Toluene		2	**11.3**	mg/Kg	100	0.0200
Ethylbenzene		2	**28.4**	mg/Kg	100	0.0200
Xylene		2	**53.9**	mg/Kg	100	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			101	mg/Kg	100	100	101	75 - 135.4
4-Bromofluorobenzene (4-BFB)			96.7	mg/Kg	100	100	97	63.6 - 158.9

Sample: 287902 - AH-4 2-2.5' 0.5' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88377	Date Analyzed:	2012-02-07	Analyzed By:	AR
Prep Batch:	75016	Sample Preparation:	2012-02-07	Prepared By:	AR

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

Sample: 287902 - AH-4 2-2.5' 0.5' BEB

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	88452	Date Analyzed:	2012-02-09	Analyzed By:	DA
Prep Batch:	75093	Sample Preparation:	2012-02-09	Prepared By:	DA

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		2	**9900**	mg/Kg	5	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			614	mg/Kg	5	500	123	49.3 - 157.5

Sample: 287902 - AH-4 2-2.5' 0.5' BEB

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	88407	Date Analyzed:	2012-02-08	Analyzed By:	DA
Prep Batch:	75042	Sample Preparation:	2012-02-08	Prepared By:	DA

Parameter	Flag	Cert	Result	RL Result	Units	Dilution	RL
GRO		2		**2920**	mg/Kg	100	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			87.9	mg/Kg	100	100	88	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)			117	mg/Kg	100	100	117	45.1 - 162.2

Sample: 287903 - AH-5 0-1' 0.5' BEB

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	88263	Date Analyzed:	2012-02-02	Analyzed By:	tc
Prep Batch:	74935	Sample Preparation:	2012-02-02	Prepared By:	tc

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	2	<2.00	mg/Kg	100	0.0200
Toluene		2	**3.62**	mg/Kg	100	0.0200
Ethylbenzene		2	**14.7**	mg/Kg	100	0.0200
Xylene		2	**21.0**	mg/Kg	100	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			95.7	mg/Kg	100	100	96	82.8 - 143.1
4-Bromofluorobenzene (4-BFB)			88.9	mg/Kg	100	100	89	70.6 - 179

Sample: 287903 - AH-5 0-1' 0.5' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	88377	Date Analyzed:	2012-02-07	Analyzed By:	AR
Prep Batch:	75016	Sample Preparation:	2012-02-07	Prepared By:	AR

continued ...

sample 287903 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL

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

Sample: 287903 - AH-5 0-1' 0.5' BEB

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	88324	Date Analyzed:	2012-02-06	Analyzed By:	CM
Prep Batch:	74990	Sample Preparation:	2012-02-03	Prepared By:	CM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	**7980**	mg/Kg	10	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	QSF	QSF		379	mg/Kg	10	100	379	61.5 - 159

Sample: 287903 - AH-5 0-1' 0.5' BEB

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	88262	Date Analyzed:	2012-02-02	Analyzed By:	tc
Prep Batch:	74935	Sample Preparation:	2012-02-02	Prepared By:	tc

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	QS	2	**2680**	mg/Kg	100	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			95.2	mg/Kg	100	100	95	30 - 134.6
4-Bromofluorobenzene (4-BFB)			126	mg/Kg	100	100	126	22.4 - 149

Method Blanks

Method Blank (1) QC Batch: 88262

QC Batch: 88262 | Date Analyzed: 2012-02-02 | Analyzed By: tc
Prep Batch: 74935 | QC Preparation: 2012-02-02 | Prepared By: tc

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.99	mg/Kg	1	2.00	100	67.6 - 150
4-Bromofluorobenzene (4-BFB)			2.04	mg/Kg	1	2.00	102	52.4 - 130

Method Blank (1) QC Batch: 88263

QC Batch: 88263 | Date Analyzed: 2012-02-02 | Analyzed By: tc
Prep Batch: 74935 | QC Preparation: 2012-02-02 | Prepared By: tc

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		2	<0.0118	mg/Kg	0.02
Toluene		2	<0.00600	mg/Kg	0.02
Ethylbenzene		2	<0.00850	mg/Kg	0.02
Xylene		2	<0.00613	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.98	mg/Kg	1	2.00	99	65.9 - 111.8
4-Bromofluorobenzene (4-BFB)			1.72	mg/Kg	1	2.00	86	48.4 - 123.1

Method Blank (1) QC Batch: 88324

QC Batch: 88324 | Date Analyzed: 2012-02-06 | Analyzed By: CM
Prep Batch: 74990 | QC Preparation: 2012-02-03 | Prepared By: CM

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	<17.1	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			109	mg/Kg	1	100	109	61.5 - 159

Method Blank (1) QC Batch: 88356

QC Batch: 88356 | Date Analyzed: 2012-02-07 | Analyzed By: CM
Prep Batch: 75013 | QC Preparation: 2012-02-06 | Prepared By: CM

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	<17.1	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			101	mg/Kg	1	100	101	61.5 - 159

Method Blank (1) QC Batch: 88373

QC Batch: 88373 | Date Analyzed: 2012-02-07 | Analyzed By: DA
Prep Batch: 75024 | QC Preparation: 2012-02-07 | Prepared By: DA

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)			2.11	mg/Kg	1	2.00	106	78 - 123.6
4-Bromofluorobenzene (4-BFB)			1.67	mg/Kg	1	2.00	84	55.9 - 112.4

Method Blank (1) QC Batch: 88374

QC Batch:	88374	Date Analyzed:	2012-02-07	Analyzed By:	DA
Prep Batch:	75024	QC Preparation:	2012-02-07	Prepared By:	DA

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)			1.86	mg/Kg	1	2.00	93	78.6 - 109
4-Bromofluorobenzene (4-BFB)			1.82	mg/Kg	1	2.00	91	58 - 100

Method Blank (1) QC Batch: 88376

QC Batch:	88376	Date Analyzed:	2012-02-07	Analyzed By:	AR
Prep Batch:	75016	QC Preparation:	2012-02-06	Prepared By:	AR

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

Method Blank (1) QC Batch: 88377

QC Batch:	88377	Date Analyzed:	2012-02-07	Analyzed By:	AR
Prep Batch:	75016	QC Preparation:	2012-02-06	Prepared By:	AR

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

Method Blank (1) QC Batch: 88390

QC Batch:	88390	Date Analyzed:	2012-02-08	Analyzed By:	CM
Prep Batch:	75033	QC Preparation:	2012-02-07	Prepared By:	CM

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	<17.1	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			102	mg/Kg	1	100	102	61.5 - 159

Method Blank (1) QC Batch: 88406

QC Batch: 88406 | Date Analyzed: 2012-02-08 | Analyzed By: DA
Prep Batch: 75042 | QC Preparation: 2012-02-08 | Prepared By: DA

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)			2.06	mg/Kg	1	2.00	103	78 - 123.6
4-Bromofluorobenzene (4-BFB)			1.58	mg/Kg	1	2.00	79	55.9 - 112.4

Method Blank (1) QC Batch: 88407

QC Batch: 88407 | Date Analyzed: 2012-02-08 | Analyzed By: DA
Prep Batch: 75042 | QC Preparation: 2012-02-08 | Prepared By: DA

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)			1.79	mg/Kg	1	2.00	90	78.6 - 109
4-Bromofluorobenzene (4-BFB)			1.70	mg/Kg	1	2.00	85	58 - 100

Method Blank (1) QC Batch: 88452

QC Batch: 88452 | Date Analyzed: 2012-02-09 | Analyzed By: DA
Prep Batch: 75093 | QC Preparation: 2012-02-09 | 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			101	mg/Kg	1	100	101	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
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

continued ...

method blank continued ...

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

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 88262 | Date Analyzed: 2012-02-02 | Analyzed By: tc
Prep Batch: 74935 | QC Preparation: 2012-02-02 | Prepared By: tc

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		2	18.5	mg/Kg	1	20.0	<0.753	92	60.9 - 105.4

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	18.2	mg/Kg	1	20.0	<0.753	91	60.9 - 105.4	2	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.94	1.86	mg/Kg	1	2.00	97	93	61.9 - 142
4-Bromofluorobenzene (4-BFB)	2.14	2.08	mg/Kg	1	2.00	107	104	56.2 - 132

Laboratory Control Spike (LCS-1)

QC Batch: 88263 | Date Analyzed: 2012-02-02 | Analyzed By: tc
Prep Batch: 74935 | QC Preparation: 2012-02-02 | Prepared By: tc

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		2	1.92	mg/Kg	1	2.00	<0.0118	96	77.4 - 121.7
Toluene		2	1.83	mg/Kg	1	2.00	<0.00600	92	88.6 - 121.6
Ethylbenzene		2	1.69	mg/Kg	1	2.00	<0.00850	84	74.3 - 117.9
Xylene		2	5.00	mg/Kg	1	6.00	<0.00613	83	73.4 - 118.8

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	1.83	mg/Kg	1	2.00	<0.0118	92	77.4 - 121.7	5	20
Toluene		2	1.81	mg/Kg	1	2.00	<0.00600	90	88.6 - 121.6	1	20
Ethylbenzene		2	1.76	mg/Kg	1	2.00	<0.00850	88	74.3 - 117.9	4	20

continued ...

control spikes continued ...

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Xylene		2	5.26	mg/Kg	1	6.00	<0.00613	88	73.4 - 118.8	5	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)	2.24	1.83	mg/Kg	1	2.00	112	92	65.5 - 116.7
4-Bromofluorobenzene (4-BFB)	1.79	1.76	mg/Kg	1	2.00	90	88	56.2 - 132.1

Laboratory Control Spike (LCS-1)

QC Batch: 88324 | Date Analyzed: 2012-02-06 | Analyzed By: CM
Prep Batch: 74990 | QC Preparation: 2012-02-03 | Prepared By: CM

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	211	mg/Kg	1	250	<17.1	84	75.6 - 120

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	217	mg/Kg	1	250	<17.1	87	75.6 - 120	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	99.7	102	mg/Kg	1	100	100	102	61.5 - 159

Laboratory Control Spike (LCS-1)

QC Batch: 88356 | Date Analyzed: 2012-02-07 | Analyzed By: CM
Prep Batch: 75013 | QC Preparation: 2012-02-06 | Prepared By: CM

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	212	mg/Kg	1	250	<17.1	85	75.6 - 120

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	214	mg/Kg	1	250	<17.1	86	75.6 - 120	1	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	102	101	mg/Kg	1	100	102	101	61.5 - 159

Laboratory Control Spike (LCS-1)

QC Batch: 88373 | Date Analyzed: 2012-02-07 | Analyzed By: DA
Prep Batch: 75024 | QC Preparation: 2012-02-07 | Prepared By: DA

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		2	2.24	mg/Kg	1	2.00	<0.00470	112	86.5 - 124.9
Toluene		2	2.16	mg/Kg	1	2.00	<0.00980	108	84.7 - 122.5
Ethylbenzene		2	2.06	mg/Kg	1	2.00	<0.00500	103	79.4 - 118.9
Xylene		2	6.13	mg/Kg	1	6.00	<0.0170	102	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	3	20
Toluene		2	2.24	mg/Kg	1	2.00	<0.00980	112	84.7 - 122.5	4	20
Ethylbenzene		2	2.14	mg/Kg	1	2.00	<0.00500	107	79.4 - 118.9	4	20
Xylene		2	6.38	mg/Kg	1	6.00	<0.0170	106	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)	1.99	2.06	mg/Kg	1	2.00	100	103	73.9 - 127
4-Bromofluorobenzene (4-BFB)	1.85	1.81	mg/Kg	1	2.00	92	90	70.4 - 119

Laboratory Control Spike (LCS-1)

QC Batch: 88374 | Date Analyzed: 2012-02-07 | Analyzed By: DA
Prep Batch: 75024 | QC Preparation: 2012-02-07 | Prepared By: DA

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		2	16.8	mg/Kg	1	20.0	<1.22	84	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	17.4	mg/Kg	1	20.0	<1.22	87	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)	1.83	1.79	mg/Kg	1	2.00	92	90	80 - 111.2
4-Bromofluorobenzene (4-BFB)	1.96	1.82	mg/Kg	1	2.00	98	91	66.4 - 106.6

Laboratory Control Spike (LCS-1)

QC Batch: 88376 | Date Analyzed: 2012-02-07 | Analyzed By: AR
Prep Batch: 75016 | QC Preparation: 2012-02-06 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			97.8	mg/Kg	1	100	<3.85	98	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	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: 88377 | Date Analyzed: 2012-02-07 | Analyzed By: AR
Prep Batch: 75016 | QC Preparation: 2012-02-06 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			93.5	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	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: 88390 | Date Analyzed: 2012-02-08 | Analyzed By: CM
Prep Batch: 75033 | QC Preparation: 2012-02-07 | Prepared By: CM

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	216	mg/Kg	1	250	<17.1	86	75.6 - 120

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	212	mg/Kg	1	250	<17.1	85	75.6 - 120	2	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	97.8	97.7	mg/Kg	1	100	98	98	61.5 - 159

Laboratory Control Spike (LCS-1)

QC Batch: 88406 | Date Analyzed: 2012-02-08 | Analyzed By: DA
Prep Batch: 75042 | QC Preparation: 2012-02-08 | Prepared By: DA

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		2	2.27	mg/Kg	1	2.00	<0.00470	114	86.5 - 124.9
Toluene		2	2.20	mg/Kg	1	2.00	<0.00980	110	84.7 - 122.5
Ethylbenzene		2	2.12	mg/Kg	1	2.00	<0.00500	106	79.4 - 118.9
Xylene		2	6.28	mg/Kg	1	6.00	<0.0170	105	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	2.43	mg/Kg	1	2.00	<0.00470	122	86.5 - 124.9	7	20
Toluene		2	2.37	mg/Kg	1	2.00	<0.00980	118	84.7 - 122.5	7	20

continued ...

control spikes continued ...

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Ethylbenzene		2	2.24	mg/Kg	1	2.00	<0.00500	112	79.4 - 118.9	6	20
Xylene		2	6.68	mg/Kg	1	6.00	<0.0170	111	79.5 - 118.9	6	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)	1.98	2.08	mg/Kg	1	2.00	99	104	73.9 - 127
4-Bromofluorobenzene (4-BFB)	1.76	1.81	mg/Kg	1	2.00	88	90	70.4 - 119

Laboratory Control Spike (LCS-1)

QC Batch: 88407 | Date Analyzed: 2012-02-08 | Analyzed By: DA
Prep Batch: 75042 | QC Preparation: 2012-02-08 | Prepared By: DA

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		2	17.4	mg/Kg	1	20.0	<1.22	87	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	17.8	mg/Kg	1	20.0	<1.22	89	68.3 - 105.7	2	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.83	1.86	mg/Kg	1	2.00	92	93	80 - 111.2
4-Bromofluorobenzene (4-BFB)	1.86	1.92	mg/Kg	1	2.00	93	96	66.4 - 106.6

Laboratory Control Spike (LCS-1)

QC Batch: 88452 | Date Analyzed: 2012-02-09 | Analyzed By: DA
Prep Batch: 75093 | QC Preparation: 2012-02-09 | Prepared By: DA

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		2	252	mg/Kg	1	250	<14.5	101	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	268	mg/Kg	1	250	<14.5	107	62 - 128.3	6	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	103	105	mg/Kg	1	100	103	105	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

Matrix Spike (MS-1) Spiked Sample: 287908

QC Batch: 88262 | Date Analyzed: 2012-02-02 | Analyzed By: tc
Prep Batch: 74935 | QC Preparation: 2012-02-02 | Prepared By: tc

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	Qs	Qs 2	46.4	mg/Kg	1	20.0	7.1711	196	61.8 - 114

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	Qs	Qs 2	47.2	mg/Kg	1	20.0	7.1711	200	61.8 - 114	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)	2.03	2.02	mg/Kg	1	2	102	101	29.4 - 161.7
4-Bromofluorobenzene (4-BFB)	2.43	2.47	mg/Kg	1	2	122	124	37.3 - 162

Matrix Spike (MS-1) Spiked Sample: 287907

QC Batch: 88263 | Date Analyzed: 2012-02-02 | Analyzed By: tc
Prep Batch: 74935 | QC Preparation: 2012-02-02 | Prepared By: tc

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		2	2.03	mg/Kg	1	2.00	<0.0118	102	69.4 - 123.6

continued ...

matrix spikes continued ...

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Toluene		2	1.96	mg/Kg	1	2.00	<0.00600	98	75.4 - 134.3
Ethylbenzene		2	2.02	mg/Kg	1	2.00	<0.00850	101	58.8 - 133.7
Xylene		2	6.02	mg/Kg	1	6.00	<0.00613	100	57 - 134.2

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
Benzene		2	2.03	mg/Kg	1	2.00	<0.0118	102	69.4 - 123.6	0	20
Toluene		2	2.02	mg/Kg	1	2.00	<0.00600	101	75.4 - 134.3	3	20
Ethylbenzene		2	2.03	mg/Kg	1	2.00	<0.00850	102	58.8 - 133.7	0	20
Xylene		2	6.08	mg/Kg	1	6.00	<0.00613	101	57 - 134.2	1	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.09	2.01	mg/Kg	1	2	104	100	79.4 - 141.1
4-Bromofluorobenzene (4-BFB)	2.07	2.04	mg/Kg	1	2	104	102	71 - 167

Matrix Spike (MS-1) Spiked Sample: 287884

QC Batch: 88324 | Date Analyzed: 2012-02-06 | Analyzed By: CM
Prep Batch: 74990 | QC Preparation: 2012-02-03 | Prepared By: CM

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	298	mg/Kg	1	250	<17.1	119	58 - 129

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		1	306	mg/Kg	1	250	<17.1	122	58 - 129	3	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	99.3	98.5	mg/Kg	1	100	99	98	61.5 - 159

Matrix Spike (MS-1) Spiked Sample: 288271

QC Batch: 88356 | Date Analyzed: 2012-02-07 | Analyzed By: CM
Prep Batch: 75013 | QC Preparation: 2012-02-06 | Prepared By: CM

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	202	mg/Kg	1	250	<17.1	81	58 - 129

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		1	197	mg/Kg	1	250	<17.1	79	58 - 129	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
n-Tricosane	104	99.6	mg/Kg	1	100	104	100	61.5 - 159

Matrix Spike (MS-1) Spiked Sample: 288202

QC Batch: 88373 | Date Analyzed: 2012-02-07 | Analyzed By: DA
Prep Batch: 75024 | QC Preparation: 2012-02-07 | Prepared By: DA

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		2	2.20	mg/Kg	1	2.00	<0.00470	110	69.3 - 159.2
Toluene		2	2.19	mg/Kg	1	2.00	<0.00980	110	68.7 - 157
Ethylbenzene		2	2.29	mg/Kg	1	2.00	<0.00500	114	71.6 - 158.2
Xylene		2	6.80	mg/Kg	1	6.00	<0.0170	113	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	2.23	mg/Kg	1	2.00	<0.00470	112	69.3 - 159.2	1	20
Toluene		2	2.24	mg/Kg	1	2.00	<0.00980	112	68.7 - 157	2	20
Ethylbenzene		2	2.29	mg/Kg	1	2.00	<0.00500	114	71.6 - 158.2	0	20
Xylene		2	6.82	mg/Kg	1	6.00	<0.0170	114	70.8 - 159.8	0	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.09	2.09	mg/Kg	1	2	104	104	71.4 - 133.9

continued ...

matrix spikes continued ...

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
4-Bromofluorobenzene (4-BFB)	1.89	1.90	mg/Kg	1	2	94	95	72.6 - 144.1

Matrix Spike (MS-1) Spiked Sample: 288203

QC Batch: 88374 | Date Analyzed: 2012-02-07 | Analyzed By: DA
Prep Batch: 75024 | QC Preparation: 2012-02-07 | Prepared By: DA

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		2	17.7	mg/Kg	1	20.0	<1.22	88	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	19.8	mg/Kg	1	20.0	<1.22	99	28.2 - 157.2	11	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.90	1.85	mg/Kg	1	2	95	92	75.5 - 122.3
4-Bromofluorobenzene (4-BFB)	2.11	2.08	mg/Kg	1	2	106	104	77.9 - 122.4

Matrix Spike (MS-1) Spiked Sample: 287895

QC Batch: 88376 | Date Analyzed: 2012-02-07 | Analyzed By: AR
Prep Batch: 75016 | QC Preparation: 2012-02-06 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			17300	mg/Kg	100	10000	7920	94	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			18100	mg/Kg	100	10000	7920	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: 287974

QC Batch: 88377 | Date Analyzed: 2012-02-07 | Analyzed By: AR
Prep Batch: 75016 | QC Preparation: 2012-02-06 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			14600	mg/Kg	100	10000	3760	108	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			15100	mg/Kg	100	10000	3760	113	79.4 - 120.6	3	20

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

Matrix Spike (MS-1) Spiked Sample: 288201

QC Batch: 88390 | Date Analyzed: 2012-02-08 | Analyzed By: CM
Prep Batch: 75033 | QC Preparation: 2012-02-07 | Prepared By: CM

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	408	mg/Kg	1	250	202	82	58 - 129

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		1	453	mg/Kg	1	250	202	100	58 - 129	10	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	122	128	mg/Kg	1	100	122	128	61.5 - 159

Matrix Spike (MS-1) Spiked Sample: 288094

QC Batch: 88406 | Date Analyzed: 2012-02-08 | Analyzed By: DA
Prep Batch: 75042 | QC Preparation: 2012-02-08 | Prepared By: DA

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		2	5.77	mg/Kg	5	5.00	<0.0235	115	69.3 - 159.2
Toluene		2	6.02	mg/Kg	5	5.00	0.1741	117	68.7 - 157
Ethylbenzene		2	6.37	mg/Kg	5	5.00	0.5249	117	71.6 - 158.2
Xylene		2	21.3	mg/Kg	5	15.0	4.0379	115	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	5.67	mg/Kg	5	5.00	<0.0235	113	69.3 - 159.2	2	20
Toluene		2	6.06	mg/Kg	5	5.00	0.1741	118	68.7 - 157	1	20
Ethylbenzene		2	6.42	mg/Kg	5	5.00	0.5249	118	71.6 - 158.2	1	20
Xylene		2	21.9	mg/Kg	5	15.0	4.0379	119	70.8 - 159.8	3	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	5.26	5.11	mg/Kg	5	5	105	102	71.4 - 133.9
4-Bromofluorobenzene (4-BFB)	5.46	5.67	mg/Kg	5	5	109	113	72.6 - 144.1

Matrix Spike (MS-1) Spiked Sample: 287902

QC Batch: 88407 | Date Analyzed: 2012-02-08 | Analyzed By: DA
Prep Batch: 75042 | QC Preparation: 2012-02-08 | Prepared By: DA

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		2	4340	mg/Kg	100	2000	2924.83	71	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	4600	mg/Kg	100	2000	2924.83	84	28.2 - 157.2	6	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)	87.9	86.4	mg/Kg	100	100	88	86	75.5 - 122.3
4-Bromofluorobenzene (4-BFB)	117	127	mg/Kg	100	100	117	127	77.9 - 122.4

Matrix Spike (MS-1) Spiked Sample: 287896

QC Batch: 88452 | Date Analyzed: 2012-02-09 | Analyzed By: DA
Prep Batch: 75093 | QC Preparation: 2012-02-09 | Prepared By: DA

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		2	8580	mg/Kg	5	1250	7140	115	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	8050	mg/Kg	5	1250	7140	73	45.5 - 127	6	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	504	568	mg/Kg	5	500	101	114	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

Calibration Standards

Standard (CCV-2)

QC Batch: 88262 | Date Analyzed: 2012-02-02 | 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	1.11	111	80 - 120	2012-02-02

Standard (CCV-3)

QC Batch: 88262 | Date Analyzed: 2012-02-02 | 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	2012-02-02

Standard (CCV-2)

QC Batch: 88263 | Date Analyzed: 2012-02-02 | 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	0.0992	99	80 - 120	2012-02-02
Toluene		2	mg/Kg	0.100	0.0956	96	80 - 120	2012-02-02
Ethylbenzene		2	mg/Kg	0.100	0.0903	90	80 - 120	2012-02-02
Xylene		2	mg/Kg	0.300	0.270	90	80 - 120	2012-02-02

Standard (CCV-3)

QC Batch: 88263 | Date Analyzed: 2012-02-02 | 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	2012-02-02
Toluene		2	mg/Kg	0.100	0.0987	99	80 - 120	2012-02-02
Ethylbenzene		2	mg/Kg	0.100	0.0933	93	80 - 120	2012-02-02
Xylene		2	mg/Kg	0.300	0.279	93	80 - 120	2012-02-02

Standard (CCV-1)

QC Batch: 88324 Date Analyzed: 2012-02-06 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	200	80	80 - 120	2012-02-06

Standard (CCV-2)

QC Batch: 88324 Date Analyzed: 2012-02-06 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	216	86	80 - 120	2012-02-06

Standard (CCV-3)

QC Batch: 88324 Date Analyzed: 2012-02-06 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	211	84	80 - 120	2012-02-06

Standard (CCV-1)

QC Batch: 88356 Date Analyzed: 2012-02-07 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	206	82	80 - 120	2012-02-07

Standard (CCV-2)

QC Batch: 88356 Date Analyzed: 2012-02-07 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	204	82	80 - 120	2012-02-07

Standard (CCV-2)

QC Batch: 88373 Date Analyzed: 2012-02-07 Analyzed By: DA

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	2012-02-07
Toluene		2	mg/Kg	0.100	0.113	113	80 - 120	2012-02-07
Ethylbenzene		2	mg/Kg	0.100	0.106	106	80 - 120	2012-02-07
Xylene		2	mg/Kg	0.300	0.314	105	80 - 120	2012-02-07

Standard (CCV-3)

QC Batch: 88373 Date Analyzed: 2012-02-07 Analyzed By: DA

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		2	mg/Kg	0.100	0.119	119	80 - 120	2012-02-07
Toluene		2	mg/Kg	0.100	0.117	117	80 - 120	2012-02-07
Ethylbenzene		2	mg/Kg	0.100	0.110	110	80 - 120	2012-02-07
Xylene		2	mg/Kg	0.300	0.325	108	80 - 120	2012-02-07

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
(Corrected Report)

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

Report Date: April 27, 2012

Work Order: 12032206

Project Location: Eddy Co., NM
Project Name: COG/Tenneco State #3
Project Number: 114-6401208

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
291964	BH-1 @ AH-1 0-1'	soil	2012-03-16	00:00	2012-03-22
291965	BH-1 @ AH-1 2-3'	soil	2012-03-16	00:00	2012-03-22
291966	BH-1 @ AH-1 4-5'	soil	2012-03-16	00:00	2012-03-22
291967	BH-1 @ AH-1 6-7'	soil	2012-03-16	00:00	2012-03-22
291968	BH-1 @ AH-1 9-10'	soil	2012-03-16	00:00	2012-03-22
291969	BH-1 @ AH-1 14-15'	soil	2012-03-16	00:00	2012-03-22
291970	BH-1 @ AH-1 19-20'	soil	2012-03-16	00:00	2012-03-22
291971	BH-1 @ AH-1 24-25'	soil	2012-03-16	00:00	2012-03-22
291972	BH-1 @ AH-1 29-30'	soil	2012-03-16	00:00	2012-03-22
291974	BH-2 @ AH-2 0-1'	soil	2012-03-16	00:00	2012-03-22
291975	BH-2 @ AH-2 2-.3'	soil	2012-03-16	00:00	2012-03-22
291976	BH-2 @ AH-2 4-5'	soil	2012-03-16	00:00	2012-03-22
291977	BH-2 @ AH-2 6-7'	soil	2012-03-16	00:00	2012-03-22
291978	BH-2 @ AH-2 9-10'	soil	2012-03-16	00:00	2012-03-22
291979	BH-2 @ AH-2 19-20'	soil	2012-03-16	00:00	2012-03-22
291980	BH-2 @ AH-2 14-15'	soil	2012-03-16	00:00	2012-03-22

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
291981	BH-3 @ AH-4 0-1'	soil	2012-03-19	00:00	2012-03-22
291982	BH-3 @ AH-4 2-3'	soil	2012-03-19	00:00	2012-03-22
291983	BH-3 @ AH-4 4-5'	soil	2012-03-19	00:00	2012-03-22
291984	BH-3 @ AH-4 6-7'	soil	2012-03-19	00:00	2012-03-22
291987	BH-4 @ AH-5 0-1'	soil	2012-03-19	00:00	2012-03-22
291988	BH-4 @ AH-5 2-3'	soil	2012-03-19	00:00	2012-03-22
291989	BH-4 @ AH-5 4-5'	soil	2012-03-19	00:00	2012-03-22

Report Corrections (Work Order 12032206)

- 4/2/12: Added tests to samples 291966, 291967, 291977, 291978, 291987-9.
- 4/5/12: Added tests to samples 291968-9, 291979-80, and 291983-4.
- 4/27/12: Corrected field codes for samples 291979 and 291980 per client.

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 67 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Michael Abel

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

Report Contents

Case Narrative

Samples for project COG/Tenneco State #3 were received by TraceAnalysis, Inc. on 2012-03-22 and assigned to work order 12032206. Samples for work order 12032206 were received intact at a temperature of 0.9 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	76174	2012-03-27 at 10:36	89744	2012-03-27 at 10:53
BTEX	S 8021B	76308	2012-04-02 at 10:48	89915	2012-04-02 at 11:09
BTEX	S 8021B	76371	2012-04-04 at 10:00	89995	2012-04-04 at 11:05
BTEX	S 8021B	76405	2012-04-05 at 09:44	90033	2012-04-05 at 09:59
Chloride (Titration)	SM 4500-Cl B	76156	2012-03-26 at 10:12	89721	2012-03-27 at 12:31
Chloride (Titration)	SM 4500-Cl B	76156	2012-03-26 at 10:12	89722	2012-03-27 at 12:32
Chloride (Titration)	SM 4500-Cl B	76156	2012-03-26 at 10:12	89723	2012-03-27 at 12:32
Chloride (Titration)	SM 4500-Cl B	76284	2012-04-02 at 12:18	89877	2012-04-02 at 13:19
TPH DRO - NEW	S 8015 D	76071	2012-03-22 at 11:43	89608	2012-03-22 at 13:21
TPH DRO - NEW	S 8015 D	76092	2012-03-23 at 10:41	89637	2012-03-23 at 10:42
TPH DRO - NEW	S 8015 D	76144	2012-03-26 at 15:08	89702	2012-03-26 at 15:12
TPH DRO - NEW	S 8015 D	76291	2012-04-02 at 13:55	89889	2012-04-02 at 14:02
TPH DRO - NEW	S 8015 D	76359	2012-04-04 at 14:12	89977	2012-04-04 at 14:16
TPH DRO - NEW	S 8015 D	76385	2012-04-05 at 13:14	90014	2012-04-05 at 13:16
TPH GRO	S 8015 D	76115	2012-03-23 at 10:00	89669	2012-03-23 at 15:12
TPH GRO	S 8015 D	76174	2012-03-27 at 10:36	89746	2012-03-27 at 11:20
TPH GRO	S 8015 D	76308	2012-04-02 at 10:48	89908	2012-04-03 at 11:36
TPH GRO	S 8015 D	76371	2012-04-04 at 10:00	89994	2012-04-04 at 10:25
TPH GRO	S 8015 D	76405	2012-04-05 at 09:44	90034	2012-04-05 at 10:36

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 12032206 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: 291964 - BH-1 @ AH-1 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89721	Date Analyzed:	2012-03-27	Analyzed By:	AR
Prep Batch:	76156	Sample Preparation:	2012-03-27	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2490**	mg/Kg	100	4.00

Sample: 291965 - BH-1 @ AH-1 2-3'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89721	Date Analyzed:	2012-03-27	Analyzed By:	AR
Prep Batch:	76156	Sample Preparation:	2012-03-27	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**4350**	mg/Kg	100	4.00

Sample: 291966 - BH-1 @ AH-1 4-5'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	89915	Date Analyzed:	2012-04-02	Analyzed By:	tc
Prep Batch:	76308	Sample Preparation:	2012-04-02	Prepared By:	tc

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	Qr	1	**20.4**	mg/Kg	50	0.0200
Toluene	Qr	1	**98.8**	mg/Kg	50	0.0200
Ethylbenzene	Qr	1	**74.6**	mg/Kg	50	0.0200
Xylene	Qr	1	**108**	mg/Kg	50	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			44.9	mg/Kg	50	50.0	90	75 - 135.4
4-Bromofluorobenzene (4-BFB)			56.6	mg/Kg	50	50.0	113	63.6 - 158.9

Sample: 291966 - BH-1 @ AH-1 4-5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89721	Date Analyzed:	2012-03-27	Analyzed By:	AR
Prep Batch:	76156	Sample Preparation:	2012-03-27	Prepared By:	AR

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

Sample: 291966 - BH-1 @ AH-1 4-5'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	89889	Date Analyzed:	2012-04-02	Analyzed By:	DA
Prep Batch:	76291	Sample Preparation:	2012-04-02	Prepared By:	DA

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	**11400**	mg/Kg	20	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		1010	mg/Kg	20	100	1010	49.3 - 157.5

Sample: 291966 - BH-1 @ AH-1 4-5'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	89908	Date Analyzed:	2012-04-03	Analyzed By:	tc
Prep Batch:	76308	Sample Preparation:	2012-04-02	Prepared By:	tc

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	**5570**	mg/Kg	50	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			45.1	mg/Kg	50	50.0	90	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)			62.0	mg/Kg	50	50.0	124	45.1 - 162.2

Sample: 291967 - BH-1 @ AH-1 6-7'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	89915	Date Analyzed:	2012-04-02	Analyzed By:	tc
Prep Batch:	76308	Sample Preparation:	2012-04-02	Prepared By:	tc

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	Qr	1	**5.04**	mg/Kg	50	0.0200
Toluene	Qr	1	**65.4**	mg/Kg	50	0.0200
Ethylbenzene	Qr	1	**63.1**	mg/Kg	50	0.0200
Xylene	Qr	1	**94.5**	mg/Kg	50	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			48.1	mg/Kg	50	50.0	96	75 - 135.4
4-Bromofluorobenzene (4-BFB)			57.7	mg/Kg	50	50.0	115	63.6 - 158.9

Sample: 291967 - BH-1 @ AH-1 6-7'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89721	Date Analyzed:	2012-03-27	Analyzed By:	AR
Prep Batch:	76156	Sample Preparation:	2012-03-27	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**3340**	mg/Kg	100	4.00

Sample: 291967 - BH-1 @ AH-1 6-7'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	89889	Date Analyzed:	2012-04-02	Analyzed By:	DA
Prep Batch:	76291	Sample Preparation:	2012-04-02	Prepared By:	DA

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
DRO		1	**15700**		mg/Kg	20	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr Qsr		1330	mg/Kg	20	100	1330	49.3 - 157.5

Sample: 291967 - BH-1 @ AH-1 6-7'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	89908	Date Analyzed:	2012-04-03	Analyzed By:	tc
Prep Batch:	76308	Sample Preparation:	2012-04-02	Prepared By:	tc

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
GRO		1	**5280**		mg/Kg	50	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			48.2	mg/Kg	50	50.0	96	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)			65.1	mg/Kg	50	50.0	130	45.1 - 162.2

Sample: 291968 - BH-1 @ AH-1 9-10'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	89995	Date Analyzed:	2012-04-04	Analyzed By:	tc
Prep Batch:	76371	Sample Preparation:	2012-04-04	Prepared By:	tc

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Benzene		1	**8.63**		mg/Kg	100	0.0200
Toluene		1	**91.5**		mg/Kg	100	0.0200
Ethylbenzene		1	**89.0**		mg/Kg	100	0.0200
Xylene		1	**134**		mg/Kg	100	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr Qsr		73.6	mg/Kg	100	100	74	75 - 135.4
4-Bromofluorobenzene (4-BFB)			89.7	mg/Kg	100	100	90	63.6 - 158.9

Sample: 291968 - BH-1 @ AH-1 9-10'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89721	Date Analyzed:	2012-03-27	Analyzed By:	AR
Prep Batch:	76156	Sample Preparation:	2012-03-27	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2640**	mg/Kg	100	4.00

Sample: 291968 - BH-1 @ AH-1 9-10'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	89977	Date Analyzed:	2012-04-04	Analyzed By:	DA
Prep Batch:	76359	Sample Preparation:	2012-04-04	Prepared By:	DA

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qs	1	**11300**	mg/Kg	10	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		1230	mg/Kg	10	100	1230	49.3 - 157.5

Sample: 291968 - BH-1 @ AH-1 9-10'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	89994	Date Analyzed:	2012-04-04	Analyzed By:	tc
Prep Batch:	76371	Sample Preparation:	2012-04-04	Prepared By:	tc

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	**7120**	mg/Kg	100	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			72.4	mg/Kg	100	100	72	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)			97.0	mg/Kg	100	100	97	45.1 - 162.2

Sample: 291969 - BH-1 @ AH-1 14-15'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	89995	Date Analyzed:	2012-04-04	Analyzed By:	tc
Prep Batch:	76371	Sample Preparation:	2012-04-04	Prepared By:	tc

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene		1	**5.38**	mg/Kg	100	0.0200
Toluene		1	**67.9**	mg/Kg	100	0.0200
Ethylbenzene		1	**75.7**	mg/Kg	100	0.0200
Xylene		1	**108**	mg/Kg	100	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			95.4	mg/Kg	100	100	95	75 - 135.4
4-Bromofluorobenzene (4-BFB)			113	mg/Kg	100	100	113	63.6 - 158.9

Sample: 291969 - BH-1 @ AH-1 14-15'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89721	Date Analyzed:	2012-03-27	Analyzed By:	AR
Prep Batch:	76156	Sample Preparation:	2012-03-27	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**2930**	mg/Kg	100	4.00

Sample: 291969 - BH-1 @ AH-1 14-15'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	89977	Date Analyzed:	2012-04-04	Analyzed By:	DA
Prep Batch:	76359	Sample Preparation:	2012-04-04	Prepared By:	DA

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
DRO	Qs	1	**9130**	mg/Kg	10	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		1040	mg/Kg	10	100	1040	49.3 - 157.5

Sample: 291969 - BH-1 @ AH-1 14-15'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	89994	Date Analyzed:	2012-04-04	Analyzed By:	tc
Prep Batch:	76371	Sample Preparation:	2012-04-04	Prepared By:	tc

Parameter	Flag	Cert	Result	RL Result	Units	Dilution	RL
GRO		1		**6120**	mg/Kg	100	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			93.4	mg/Kg	100	100	93	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)			118	mg/Kg	100	100	118	45.1 - 162.2

Sample: 291970 - BH-1 @ AH-1 19-20'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	90033	Date Analyzed:	2012-04-05	Analyzed By:	tc
Prep Batch:	76405	Sample Preparation:	2012-04-05	Prepared By:	tc

Parameter	Flag	Cert	Result	RL Result	Units	Dilution	RL
Benzene	U	1		<1.00	mg/Kg	50	0.0200
Toluene		1		**3.91**	mg/Kg	50	0.0200
Ethylbenzene		1		**12.0**	mg/Kg	50	0.0200
Xylene		1		**22.5**	mg/Kg	50	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			51.0	mg/Kg	50	50.0	102	75 - 135.4
4-Bromofluorobenzene (4-BFB)			53.2	mg/Kg	50	50.0	106	63.6 - 158.9

Sample: 291970 - BH-1 @ AH-1 19-20'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89721	Date Analyzed:	2012-03-27	Analyzed By:	AR
Prep Batch:	76156	Sample Preparation:	2012-03-27	Prepared By:	AR

continued ...

sample 291970 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**4030**	mg/Kg	100	4.00

Sample: 291970 - BH-1 @ AH-1 19-20'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	90014	Date Analyzed:	2012-04-05	Analyzed By:	DA
Prep Batch:	76385	Sample Preparation:	2012-04-05	Prepared By:	DA

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	**2020**	mg/Kg	1	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		270	mg/Kg	1	100	270	49.3 - 157.5

Sample: 291970 - BH-1 @ AH-1 19-20'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	90034	Date Analyzed:	2012-04-05	Analyzed By:	tc
Prep Batch:	76405	Sample Preparation:	2012-04-05	Prepared By:	tc

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	**1100**	mg/Kg	50	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			52.1	mg/Kg	50	50.0	104	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)			53.8	mg/Kg	50	50.0	108	45.1 - 162.2

Sample: 291971 - BH-1 @ AH-1 24-25'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89722	Date Analyzed:	2012-03-27	Analyzed By:	AR
Prep Batch:	76156	Sample Preparation:	2012-03-27	Prepared By:	AR

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

Sample: 291972 - BH-1 @ AH-1 29-30'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89722	Date Analyzed:	2012-03-27	Analyzed By:	AR
Prep Batch:	76156	Sample Preparation:	2012-03-27	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**266**	mg/Kg	50	4.00

Sample: 291974 - BH-2 @ AH-2 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89722	Date Analyzed:	2012-03-27	Analyzed By:	AR
Prep Batch:	76156	Sample Preparation:	2012-03-27	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**301**	mg/Kg	50	4.00

Sample: 291975 - BH-2 @ AH-2 2-.3'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89722	Date Analyzed:	2012-03-27	Analyzed By:	AR
Prep Batch:	76156	Sample Preparation:	2012-03-27	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**276**	mg/Kg	50	4.00

Sample: 291976 - BH-2 @ AH-2 4-5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89722	Date Analyzed:	2012-03-27	Analyzed By:	AR
Prep Batch:	76156	Sample Preparation:	2012-03-27	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**3470**	mg/Kg	100	4.00

Sample: 291977 - BH-2 @ AH-2 6-7'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	89915	Date Analyzed:	2012-04-02	Analyzed By:	tc
Prep Batch:	76308	Sample Preparation:	2012-04-02	Prepared By:	tc

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	Qr	1	**17.6**	mg/Kg	50	0.0200
Toluene	Qr	1	**155**	mg/Kg	50	0.0200
Ethylbenzene	Qr	1	**110**	mg/Kg	50	0.0200
Xylene	Qr	1	**157**	mg/Kg	50	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			50.0	mg/Kg	50	50.0	100	75 - 135.4
4-Bromofluorobenzene (4-BFB)			64.5	mg/Kg	50	50.0	129	63.6 - 158.9

Sample: 291977 - BH-2 @ AH-2 6-7'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89722	Date Analyzed:	2012-03-27	Analyzed By:	AR
Prep Batch:	76156	Sample Preparation:	2012-03-27	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**934**	mg/Kg	50	4.00

Sample: 291977 - BH-2 @ AH-2 6-7'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	89889	Date Analyzed:	2012-04-02	Analyzed By:	DA
Prep Batch:	76291	Sample Preparation:	2012-04-02	Prepared By:	DA

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	**11900**	mg/Kg	10	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		951	mg/Kg	10	100	951	49.3 - 157.5

Sample: 291977 - BH-2 @ AH-2 6-7'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	89908	Date Analyzed:	2012-04-03	Analyzed By:	tc
Prep Batch:	76308	Sample Preparation:	2012-04-02	Prepared By:	tc

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	**5970**	mg/Kg	50	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			51.3	mg/Kg	50	50.0	103	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)			64.3	mg/Kg	50	50.0	129	45.1 - 162.2

Sample: 291978 - BH-2 @ AH-2 9-10'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	89915	Date Analyzed:	2012-04-02	Analyzed By:	tc
Prep Batch:	76308	Sample Preparation:	2012-04-02	Prepared By:	tc

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	Qr	1	**1.38**	mg/Kg	20	0.0200
Toluene	Qr	1	**36.2**	mg/Kg	20	0.0200
Ethylbenzene	Qr	1	**41.4**	mg/Kg	20	0.0200
Xylene	Qr	1	**62.2**	mg/Kg	20	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			18.2	mg/Kg	20	20.0	91	75 - 135.4
4-Bromofluorobenzene (4-BFB)			25.0	mg/Kg	20	20.0	125	63.6 - 158.9

Sample: 291978 - BH-2 @ AH-2 9-10'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89722	Date Analyzed:	2012-03-27	Analyzed By:	AR
Prep Batch:	76156	Sample Preparation:	2012-03-27	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**552**	mg/Kg	50	4.00

Sample: 291978 - BH-2 @ AH-2 9-10'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	89889	Date Analyzed:	2012-04-02	Analyzed By:	DA
Prep Batch:	76291	Sample Preparation:	2012-04-02	Prepared By:	DA

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
DRO		1	**5180**	mg/Kg	5	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr Qsr		466	mg/Kg	5	100	466	49.3 - 157.5

Sample: 291978 - BH-2 @ AH-2 9-10'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	89908	Date Analyzed:	2012-04-03	Analyzed By:	tc
Prep Batch:	76308	Sample Preparation:	2012-04-02	Prepared By:	tc

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	**2860**	mg/Kg	20	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			18.6	mg/Kg	20	20.0	93	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)			23.1	mg/Kg	20	20.0	116	45.1 - 162.2

Sample: 291979 - BH-2 @ AH-2 19-20'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	90033	Date Analyzed:	2012-04-05	Analyzed By:	tc
Prep Batch:	76405	Sample Preparation:	2012-04-05	Prepared By:	tc

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.12	mg/Kg	1	2.00	106	75 - 135.4
4-Bromofluorobenzene (4-BFB)			2.11	mg/Kg	1	2.00	106	63.6 - 158.9

Sample: 291979 - BH-2 @ AH-2 19-20'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89722	Date Analyzed:	2012-03-27	Analyzed By:	AR
Prep Batch:	76156	Sample Preparation:	2012-03-27	Prepared By:	AR

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

Sample: 291979 - BH-2 @ AH-2 19-20'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	89977	Date Analyzed:	2012-04-04	Analyzed By:	DA
Prep Batch:	76359	Sample Preparation:	2012-04-04	Prepared By:	DA

Parameter	Flag	Cert	Result	RL Result	Units	Dilution	RL
DRO	Qs	1	**71.0**		mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			125	mg/Kg	1	100	125	49.3 - 157.5

Sample: 291979 - BH-2 @ AH-2 19-20'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	90034	Date Analyzed:	2012-04-05	Analyzed By:	tc
Prep Batch:	76405	Sample Preparation:	2012-04-05	Prepared By:	tc

Parameter	Flag	Cert	Result	RL Result	Units	Dilution	RL
GRO		1		**15.4**	mg/Kg	1	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.16	mg/Kg	1	2.00	108	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)			1.99	mg/Kg	1	2.00	100	45.1 - 162.2

Sample: 291980 - BH-2 @ AH-2 14-15'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	89995	Date Analyzed:	2012-04-04	Analyzed By:	tc
Prep Batch:	76371	Sample Preparation:	2012-04-04	Prepared By:	tc

Parameter	Flag	Cert	Result	RL Result	Units	Dilution	RL
Benzene		1		**5.78**	mg/Kg	100	0.0200
Toluene		1		**33.7**	mg/Kg	100	0.0200
Ethylbenzene		1		**31.2**	mg/Kg	100	0.0200
Xylene		1		**51.1**	mg/Kg	100	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			90.7	mg/Kg	100	100	91	75 - 135.4
4-Bromofluorobenzene (4-BFB)			101	mg/Kg	100	100	101	63.6 - 158.9

Sample: 291980 - BH-2 @ AH-2 14-15'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	90014	Date Analyzed:	2012-04-05	Analyzed By:	DA
Prep Batch:	76385	Sample Preparation:	2012-04-05	Prepared By:	DA

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	**2810**	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	386	mg/Kg	1	100	386	49.3 - 157.5

Sample: 291980 - BH-2 @ AH-2 14-15'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	89994	Date Analyzed:	2012-04-04	Analyzed By:	tc
Prep Batch:	76371	Sample Preparation:	2012-04-04	Prepared By:	tc

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	**2490**	mg/Kg	100	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			90.9	mg/Kg	100	100	91	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)			104	mg/Kg	100	100	104	45.1 - 162.2

Sample: 291981 - BH-3 @ AH-4 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89722	Date Analyzed:	2012-03-27	Analyzed By:	AR
Prep Batch:	76156	Sample Preparation:	2012-03-27	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**3850**	mg/Kg	100	4.00

Sample: 291982 - BH-3 @ AH-4 2-3'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89722	Date Analyzed:	2012-03-27	Analyzed By:	AR
Prep Batch:	76156	Sample Preparation:	2012-03-27	Prepared By:	AR

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

Sample: 291983 - BH-3 @ AH-4 4-5'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	90033	Date Analyzed:	2012-04-05	Analyzed By:	tc
Prep Batch:	76405	Sample Preparation:	2012-04-05	Prepared By:	tc

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.24	mg/Kg	1	2.00	112	75 - 135.4
4-Bromofluorobenzene (4-BFB)			2.19	mg/Kg	1	2.00	110	63.6 - 158.9

Sample: 291983 - BH-3 @ AH-4 4-5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89723	Date Analyzed:	2012-03-27	Analyzed By:	AR
Prep Batch:	76156	Sample Preparation:	2012-03-27	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**443**	mg/Kg	50	4.00

Sample: 291983 - BH-3 @ AH-4 4-5'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	90014	Date Analyzed:	2012-04-05	Analyzed By:	DA
Prep Batch:	76385	Sample Preparation:	2012-04-05	Prepared By:	DA

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	**226**	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			136	mg/Kg	1	100	136	49.3 - 157.5

Sample: 291983 - BH-3 @ AH-4 4-5'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	90034	Date Analyzed:	2012-04-05	Analyzed By:	tc
Prep Batch:	76405	Sample Preparation:	2012-04-05	Prepared By:	tc

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	**62.2**	mg/Kg	1	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.29	mg/Kg	1	2.00	114	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)			2.14	mg/Kg	1	2.00	107	45.1 - 162.2

Sample: 291984 - BH-3 @ AH-4 6-7'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	90033	Date Analyzed:	2012-04-05	Analyzed By:	tc
Prep Batch:	76405	Sample Preparation:	2012-04-05	Prepared By:	tc

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.22	mg/Kg	1	2.00	111	75 - 135.4
4-Bromofluorobenzene (4-BFB)			2.19	mg/Kg	1	2.00	110	63.6 - 158.9

Sample: 291984 - BH-3 @ AH-4 6-7'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89723	Date Analyzed:	2012-03-27	Analyzed By:	AR
Prep Batch:	76156	Sample Preparation:	2012-03-27	Prepared By:	AR

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

Sample: 291984 - BH-3 @ AH-4 6-7'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	90014	Date Analyzed:	2012-04-05	Analyzed By:	DA
Prep Batch:	76385	Sample Preparation:	2012-04-05	Prepared By:	DA

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	**372**	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			151	mg/Kg	1	100	151	49.3 - 157.5

Sample: 291984 - BH-3 @ AH-4 6-7'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	90034	Date Analyzed:	2012-04-05	Analyzed By:	tc
Prep Batch:	76405	Sample Preparation:	2012-04-05	Prepared By:	tc

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	**85.0**	mg/Kg	1	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.25	mg/Kg	1	2.00	112	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)			2.17	mg/Kg	1	2.00	108	45.1 - 162.2

Sample: 291987 - BH-4 @ AH-5 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89877	Date Analyzed:	2012-04-02	Analyzed By:	AR
Prep Batch:	76284	Sample Preparation:	2012-04-02	Prepared By:	AR

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

Sample: 291987 - BH-4 @ AH-5 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	89608	Date Analyzed:	2012-03-22	Analyzed By:	DA
Prep Batch:	76071	Sample Preparation:	2012-03-22	Prepared By:	DA

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qs	1	**9020**	mg/Kg	20	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane Qsr	Qsr		1030	mg/Kg	20	100	1030	49.3 - 157.5

Sample: 291987 - BH-4 @ AH-5 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	89669	Date Analyzed:	2012-03-23	Analyzed By:	tc
Prep Batch:	76115	Sample Preparation:	2012-03-23	Prepared By:	tc

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	**1260**	mg/Kg	10	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			9.38	mg/Kg	10	10.0	94	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)			12.2	mg/Kg	10	10.0	122	45.1 - 162.2

Sample: 291988 - BH-4 @ AH-5 2-3'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89877	Date Analyzed:	2012-04-02	Analyzed By:	AR
Prep Batch:	76284	Sample Preparation:	2012-04-02	Prepared By:	AR

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

Sample: 291988 - BH-4 @ AH-5 2-3'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	89637	Date Analyzed:	2012-03-23	Analyzed By:	DA
Prep Batch:	76092	Sample Preparation:	2012-03-23	Prepared By:	DA

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qs	1	**7310**	mg/Kg	20	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane Qsr	Qsr		722	mg/Kg	20	100	722	49.3 - 157.5

Sample: 291988 - BH-4 @ AH-5 2-3'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	89669	Date Analyzed:	2012-03-23	Analyzed By:	tc
Prep Batch:	76115	Sample Preparation:	2012-03-23	Prepared By:	tc

Parameter	Flag	Cert	Result	RL Result	Units	Dilution	RL
GRO		1		**1220**	mg/Kg	5	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			4.29	mg/Kg	5	5.00	86	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)			5.91	mg/Kg	5	5.00	118	45.1 - 162.2

Sample: 291989 - BH-4 @ AH-5 4-5'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	89744	Date Analyzed:	2012-03-27	Analyzed By:	tc
Prep Batch:	76174	Sample Preparation:	2012-03-27	Prepared By:	tc

Parameter	Flag	Cert	Result	RL Result	Units	Dilution	RL
Benzene	U	1		<0.0200	mg/Kg	1	0.0200
Toluene		1		**0.201**	mg/Kg	1	0.0200
Ethylbenzene		1		**0.102**	mg/Kg	1	0.0200
Xylene		1		**0.407**	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.36	mg/Kg	1	2.00	118	75 - 135.4
4-Bromofluorobenzene (4-BFB)			2.34	mg/Kg	1	2.00	117	63.6 - 158.9

Sample: 291989 - BH-4 @ AH-5 4-5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	89877	Date Analyzed:	2012-04-02	Analyzed By:	AR
Prep Batch:	76284	Sample Preparation:	2012-04-02	Prepared By:	AR

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

Sample: 291989 - BH-4 @ AH-5 4-5'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	89702	Date Analyzed:	2012-03-26	Analyzed By:	DA
Prep Batch:	76144	Sample Preparation:	2012-03-26	Prepared By:	DA

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	<50.0	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: 291989 - BH-4 @ AH-5 4-5'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	89746	Date Analyzed:	2012-03-27	Analyzed By:	tc
Prep Batch:	76174	Sample Preparation:	2012-03-27	Prepared By:	tc

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	**3.74**	mg/Kg	1	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.30	mg/Kg	1	2.00	115	58.5 - 155.1
4-Bromofluorobenzene (4-BFB)			2.16	mg/Kg	1	2.00	108	45.1 - 162.2

Method Blanks

Method Blank (1) QC Batch: 89608

QC Batch: 89608 | Date Analyzed: 2012-03-22 | Analyzed By: DA
Prep Batch: 76071 | QC Preparation: 2012-03-22 | Prepared By: DA

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	<14.5	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			95.5	mg/Kg	1	100	96	52 - 140.8

Method Blank (1) QC Batch: 89637

QC Batch: 89637 | Date Analyzed: 2012-03-23 | Analyzed By: DA
Prep Batch: 76092 | QC Preparation: 2012-03-23 | Prepared By: DA

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	<14.5	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			88.3	mg/Kg	1	100	88	52 - 140.8

Method Blank (1) QC Batch: 89669

QC Batch: 89669 | Date Analyzed: 2012-03-23 | Analyzed By: tc
Prep Batch: 76115 | QC Preparation: 2012-03-23 | Prepared By: tc

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1	1.45	mg/Kg	2

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.99	mg/Kg	1	2.00	100	78.6 - 111
4-Bromofluorobenzene (4-BFB)			1.83	mg/Kg	1	2.00	92	55 - 100

Method Blank (1) QC Batch: 89702

QC Batch: 89702 | Date Analyzed: 2012-03-26 | Analyzed By: DA
Prep Batch: 76144 | QC Preparation: 2012-03-26 | Prepared By: DA

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	22.7	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			99.8	mg/Kg	1	100	100	52 - 140.8

Method Blank (1) QC Batch: 89721

QC Batch: 89721 | Date Analyzed: 2012-03-27 | Analyzed By: AR
Prep Batch: 76156 | QC Preparation: 2012-03-26 | Prepared By: AR

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

Method Blank (1) QC Batch: 89722

QC Batch: 89722 | Date Analyzed: 2012-03-27 | Analyzed By: AR
Prep Batch: 76156 | QC Preparation: 2012-03-26 | Prepared By: AR

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

Method Blank (1) QC Batch: 89723

QC Batch: 89723 | Date Analyzed: 2012-03-27 | Analyzed By: AR
Prep Batch: 76156 | QC Preparation: 2012-03-26 | Prepared By: AR

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

Method Blank (1) QC Batch: 89744

QC Batch: 89744 | Date Analyzed: 2012-03-27 | Analyzed By: tc
Prep Batch: 76174 | QC Preparation: 2012-03-27 | Prepared By: tc

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.00470	mg/Kg	0.02
Toluene		1	<0.00980	mg/Kg	0.02
Ethylbenzene		1	<0.00500	mg/Kg	0.02
Xylene		1	<0.0170	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.06	mg/Kg	1	2.00	103	78 - 123.6
4-Bromofluorobenzene (4-BFB)			2.00	mg/Kg	1	2.00	100	55.9 - 112.4

Method Blank (1) QC Batch: 89746

QC Batch: 89746 | Date Analyzed: 2012-03-27 | Analyzed By: tc
Prep Batch: 76174 | QC Preparation: 2012-03-27 | Prepared By: tc

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1	1.59	mg/Kg	2

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.02	mg/Kg	1	2.00	101	78.6 - 111
4-Bromofluorobenzene (4-BFB)			1.84	mg/Kg	1	2.00	92	55 - 100

Method Blank (1) QC Batch: 89877

QC Batch:	89877	Date Analyzed:	2012-04-02	Analyzed By:	AR
Prep Batch:	76284	QC Preparation:	2012-04-02	Prepared By:	AR

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

Method Blank (1) QC Batch: 89889

QC Batch:	89889	Date Analyzed:	2012-04-02	Analyzed By:	DA
Prep Batch:	76291	QC Preparation:	2012-04-02	Prepared By:	DA

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	<14.5	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			99.5	mg/Kg	1	100	100	52 - 140.8

Method Blank (1) QC Batch: 89908

QC Batch:	89908	Date Analyzed:	2012-04-03	Analyzed By:	tc
Prep Batch:	76308	QC Preparation:	2012-04-02	Prepared By:	tc

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1	1.22	mg/Kg	2

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.65	mg/Kg	1	2.00	82	78.6 - 111
4-Bromofluorobenzene (4-BFB)			1.53	mg/Kg	1	2.00	76	55 - 100

Method Blank (1) QC Batch: 89915

QC Batch: 89915 | Date Analyzed: 2012-04-02 | Analyzed By: tc
Prep Batch: 76308 | QC Preparation: 2012-04-02 | Prepared By: tc

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.00470	mg/Kg	0.02
Toluene		1	<0.00980	mg/Kg	0.02
Ethylbenzene		1	<0.00500	mg/Kg	0.02
Xylene		1	<0.0170	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.62	mg/Kg	1	2.00	81	78 - 123.6
4-Bromofluorobenzene (4-BFB)			1.64	mg/Kg	1	2.00	82	55.9 - 112.4

Method Blank (1) QC Batch: 89977

QC Batch: 89977 | Date Analyzed: 2012-04-04 | Analyzed By: DA
Prep Batch: 76359 | QC Preparation: 2012-04-04 | Prepared By: DA

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	<14.5	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			93.6	mg/Kg	1	100	94	52 - 140.8

Method Blank (1) QC Batch: 89994

QC Batch: 89994 | Date Analyzed: 2012-04-04 | Analyzed By: tc
Prep Batch: 76371 | QC Preparation: 2012-04-04 | Prepared By: tc

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1	1.74	mg/Kg	2

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.15	mg/Kg	1	2.00	108	78.6 - 111

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)			1.95	mg/Kg	1	2.00	98	55 - 100

Method Blank (1) QC Batch: 89995

QC Batch: 89995 | Date Analyzed: 2012-04-04 | Analyzed By: tc
Prep Batch: 76371 | QC Preparation: 2012-04-04 | Prepared By: tc

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.00470	mg/Kg	0.02
Toluene		1	<0.00980	mg/Kg	0.02
Ethylbenzene		1	<0.00500	mg/Kg	0.02
Xylene		1	<0.0170	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.12	mg/Kg	1	2.00	106	78 - 123.6
4-Bromofluorobenzene (4-BFB)			2.06	mg/Kg	1	2.00	103	55.9 - 112.4

Method Blank (1) QC Batch: 90014

QC Batch: 90014 | Date Analyzed: 2012-04-05 | Analyzed By: DA
Prep Batch: 76385 | QC Preparation: 2012-04-05 | Prepared By: DA

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	<14.5	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			111	mg/Kg	1	100	111	52 - 140.8

Method Blank (1) QC Batch: 90033

QC Batch: 90033 | Date Analyzed: 2012-04-05 | Analyzed By: tc
Prep Batch: 76405 | QC Preparation: 2012-04-05 | Prepared By: tc

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.00470	mg/Kg	0.02
Toluene		1	<0.00980	mg/Kg	0.02
Ethylbenzene		1	<0.00500	mg/Kg	0.02
Xylene		1	<0.0170	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.95	mg/Kg	1	2.00	98	78 - 123.6
4-Bromofluorobenzene (4-BFB)			1.90	mg/Kg	1	2.00	95	55.9 - 112.4

Method Blank (1) QC Batch: 90034

QC Batch:	90034	Date Analyzed:	2012-04-05	Analyzed By:	tc
Prep Batch:	76405	QC Preparation:	2012-04-05	Prepared By:	tc

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1	1.78	mg/Kg	2

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.99	mg/Kg	1	2.00	100	78.6 - 111
4-Bromofluorobenzene (4-BFB)			1.81	mg/Kg	1	2.00	90	55 - 100

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 89608 | Date Analyzed: 2012-03-22 | Analyzed By: DA
Prep Batch: 76071 | QC Preparation: 2012-03-22 | Prepared By: DA

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	214	mg/Kg	1	250	<14.5	86	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		1	218	mg/Kg	1	250	<14.5	87	62 - 128.3	2	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	99.1	99.3	mg/Kg	1	100	99	99	58.6 - 149.6

Laboratory Control Spike (LCS-1)

QC Batch: 89637 | Date Analyzed: 2012-03-23 | Analyzed By: DA
Prep Batch: 76092 | QC Preparation: 2012-03-23 | Prepared By: DA

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	277	mg/Kg	1	250	<14.5	111	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		1	282	mg/Kg	1	250	<14.5	113	62 - 128.3	2	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	93.4	95.6	mg/Kg	1	100	93	96	58.6 - 149.6

Laboratory Control Spike (LCS-1)

QC Batch: 89669 | Date Analyzed: 2012-03-23 | Analyzed By: tc
Prep Batch: 76115 | QC Preparation: 2012-03-23 | Prepared By: tc

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	20.1	mg/Kg	1	20.0	<1.22	100	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		1	19.2	mg/Kg	1	20.0	<1.22	96	68.3 - 105.7	5	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.99	1.92	mg/Kg	1	2.00	100	96	80 - 111.2
4-Bromofluorobenzene (4-BFB)	1.89	1.82	mg/Kg	1	2.00	94	91	66.4 - 106.6

Laboratory Control Spike (LCS-1)

QC Batch: 89702 | Date Analyzed: 2012-03-26 | Analyzed By: DA
Prep Batch: 76144 | QC Preparation: 2012-03-26 | Prepared By: DA

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	252	mg/Kg	1	250	<14.5	101	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		1	238	mg/Kg	1	250	<14.5	95	62 - 128.3	6	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	102	108	mg/Kg	1	100	102	108	58.6 - 149.6

Laboratory Control Spike (LCS-1)

QC Batch: 89721 | Date Analyzed: 2012-03-27 | Analyzed By: AR
Prep Batch: 76156 | QC Preparation: 2012-03-26 | 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			103	mg/Kg	1	100	<3.85	103	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: 89722 | Date Analyzed: 2012-03-27 | Analyzed By: AR
Prep Batch: 76156 | QC Preparation: 2012-03-26 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			95.3	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			108	mg/Kg	1	100	<3.85	108	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: 89723 | Date Analyzed: 2012-03-27 | Analyzed By: AR
Prep Batch: 76156 | QC Preparation: 2012-03-26 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			96.3	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			104	mg/Kg	1	100	<3.85	104	85 - 115	8	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 89744 | Date Analyzed: 2012-03-27 | Analyzed By: tc
Prep Batch: 76174 | QC Preparation: 2012-03-27 | Prepared By: tc

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.94	mg/Kg	1	2.00	<0.00470	97	86.5 - 124.9
Toluene		1	1.93	mg/Kg	1	2.00	<0.00980	96	84.7 - 122.5
Ethylbenzene		1	1.94	mg/Kg	1	2.00	<0.00500	97	79.4 - 118.9
Xylene		1	5.83	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		1	1.92	mg/Kg	1	2.00	<0.00470	96	86.5 - 124.9	1	20
Toluene		1	1.90	mg/Kg	1	2.00	<0.00980	95	84.7 - 122.5	2	20
Ethylbenzene		1	1.93	mg/Kg	1	2.00	<0.00500	96	79.4 - 118.9	0	20
Xylene		1	5.76	mg/Kg	1	6.00	<0.0170	96	79.5 - 118.9	1	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.98	1.81	mg/Kg	1	2.00	99	90	73.9 - 127
4-Bromofluorobenzene (4-BFB)	1.95	1.85	mg/Kg	1	2.00	98	92	70.4 - 119.9

Laboratory Control Spike (LCS-1)

QC Batch: 89746 | Date Analyzed: 2012-03-27 | Analyzed By: tc
Prep Batch: 76174 | QC Preparation: 2012-03-27 | Prepared By: tc

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	19.0	mg/Kg	1	20.0	<1.22	95	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		1	19.2	mg/Kg	1	20.0	<1.22	96	68.3 - 105.7	1	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.99	1.95	mg/Kg	1	2.00	100	98	80 - 111.2
4-Bromofluorobenzene (4-BFB)	1.88	1.84	mg/Kg	1	2.00	94	92	66.4 - 106.6

Laboratory Control Spike (LCS-1)

QC Batch: 89877 | Date Analyzed: 2012-04-02 | Analyzed By: AR
Prep Batch: 76284 | QC Preparation: 2012-04-02 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			96.8	mg/Kg	1	100	<3.85	97	85 - 115

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

Param	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	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: 89889 | Date Analyzed: 2012-04-02 | Analyzed By: DA
Prep Batch: 76291 | QC Preparation: 2012-04-02 | Prepared By: DA

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	234	mg/Kg	1	250	<14.5	94	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		1	219	mg/Kg	1	250	<14.5	88	62 - 128.3	7	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	106	96.8	mg/Kg	1	100	106	97	58.6 - 149.6

Laboratory Control Spike (LCS-1)

QC Batch: 89908 | Date Analyzed: 2012-04-03 | Analyzed By: tc
Prep Batch: 76308 | QC Preparation: 2012-04-02 | Prepared By: tc

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	18.9	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		1	19.2	mg/Kg	1	20.0	<1.22	96	68.3 - 105.7	2	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.91	2.00	mg/Kg	1	2.00	96	100	80 - 111.2
4-Bromofluorobenzene (4-BFB)	1.80	1.90	mg/Kg	1	2.00	90	95	66.4 - 106.6

Laboratory Control Spike (LCS-1)

QC Batch: 89915 | Date Analyzed: 2012-04-02 | Analyzed By: tc
Prep Batch: 76308 | QC Preparation: 2012-04-02 | Prepared By: tc

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	2.23	mg/Kg	1	2.00	<0.00470	112	86.5 - 124.9
Toluene		1	2.22	mg/Kg	1	2.00	<0.00980	111	84.7 - 122.5
Ethylbenzene		1	2.23	mg/Kg	1	2.00	<0.00500	112	79.4 - 118.9
Xylene		1	6.68	mg/Kg	1	6.00	<0.0170	111	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		1	2.19	mg/Kg	1	2.00	<0.00470	110	86.5 - 124.9	2	20
Toluene		1	2.20	mg/Kg	1	2.00	<0.00980	110	84.7 - 122.5	1	20

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control spikes continued ...

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Ethylbenzene		1	2.21	mg/Kg	1	2.00	<0.00500	110	79.4 - 118.9	1	20
Xylene		1	6.70	mg/Kg	1	6.00	<0.0170	112	79.5 - 118.9	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)	1.89	1.95	mg/Kg	1	2.00	94	98	73.9 - 127
4-Bromofluorobenzene (4-BFB)	1.90	1.93	mg/Kg	1	2.00	95	96	70.4 - 119.9

Laboratory Control Spike (LCS-1)

QC Batch: 89977 | Date Analyzed: 2012-04-04 | Analyzed By: DA
Prep Batch: 76359 | QC Preparation: 2012-04-04 | Prepared By: DA

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	232	mg/Kg	1	250	<14.5	93	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		1	206	mg/Kg	1	250	<14.5	82	62 - 128.3	12	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	104	98.0	mg/Kg	1	100	104	98	58.6 - 149.6

Laboratory Control Spike (LCS-1)

QC Batch: 89994 | Date Analyzed: 2012-04-04 | Analyzed By: tc
Prep Batch: 76371 | QC Preparation: 2012-04-04 | Prepared By: tc

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	17.2	mg/Kg	1	20.0	<1.22	86	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		1	17.3	mg/Kg	1	20.0	<1.22	86	68.3 - 105.7	1	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.64	1.66	mg/Kg	1	2.00	82	83	80 - 111.2
4-Bromofluorobenzene (4-BFB)	1.54	1.56	mg/Kg	1	2.00	77	78	66.4 - 106.6

Laboratory Control Spike (LCS-1)

QC Batch: 89995 | Date Analyzed: 2012-04-04 | Analyzed By: tc
Prep Batch: 76371 | QC Preparation: 2012-04-04 | Prepared By: tc

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.98	mg/Kg	1	2.00	<0.00470	99	86.5 - 124.9
Toluene		1	1.98	mg/Kg	1	2.00	<0.00980	99	84.7 - 122.5
Ethylbenzene		1	1.98	mg/Kg	1	2.00	<0.00500	99	79.4 - 118.9
Xylene		1	5.94	mg/Kg	1	6.00	<0.0170	99	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		1	2.15	mg/Kg	1	2.00	<0.00470	108	86.5 - 124.9	8	20
Toluene		1	2.16	mg/Kg	1	2.00	<0.00980	108	84.7 - 122.5	9	20
Ethylbenzene		1	2.14	mg/Kg	1	2.00	<0.00500	107	79.4 - 118.9	8	20
Xylene		1	6.42	mg/Kg	1	6.00	<0.0170	107	79.5 - 118.9	8	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)	1.75	1.88	mg/Kg	1	2.00	88	94	73.9 - 127
4-Bromofluorobenzene (4-BFB)	1.75	1.88	mg/Kg	1	2.00	88	94	70.4 - 119.9

Laboratory Control Spike (LCS-1)

QC Batch: 90014 | Date Analyzed: 2012-04-05 | Analyzed By: DA
Prep Batch: 76385 | QC Preparation: 2012-04-05 | Prepared By: DA

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	234	mg/Kg	1	250	<14.5	94	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		1	236	mg/Kg	1	250	<14.5	94	62 - 128.3	1	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	119	120	mg/Kg	1	100	119	120	58.6 - 149.6

Laboratory Control Spike (LCS-1)

QC Batch: 90033 | Date Analyzed: 2012-04-05 | Analyzed By: tc
Prep Batch: 76405 | QC Preparation: 2012-04-05 | Prepared By: tc

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	2.20	mg/Kg	1	2.00	<0.00470	110	86.5 - 124.9
Toluene		1	2.24	mg/Kg	1	2.00	<0.00980	112	84.7 - 122.5
Ethylbenzene		1	2.26	mg/Kg	1	2.00	<0.00500	113	79.4 - 118.9
Xylene		1	6.79	mg/Kg	1	6.00	<0.0170	113	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		1	2.27	mg/Kg	1	2.00	<0.00470	114	86.5 - 124.9	3	20
Toluene		1	2.28	mg/Kg	1	2.00	<0.00980	114	84.7 - 122.5	2	20
Ethylbenzene		1	2.31	mg/Kg	1	2.00	<0.00500	116	79.4 - 118.9	2	20
Xylene		1	6.91	mg/Kg	1	6.00	<0.0170	115	79.5 - 118.9	2	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.98	1.98	mg/Kg	1	2.00	99	99	73.9 - 127
4-Bromofluorobenzene (4-BFB)	2.01	2.02	mg/Kg	1	2.00	100	101	70.4 - 119.9

Laboratory Control Spike (LCS-1)

QC Batch: 90034 | Date Analyzed: 2012-04-05 | Analyzed By: tc
Prep Batch: 76405 | QC Preparation: 2012-04-05 | Prepared By: tc

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	17.8	mg/Kg	1	20.0	<1.22	89	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		1	17.9	mg/Kg	1	20.0	<1.22	90	68.3 - 105.7	1	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.94	2.04	mg/Kg	1	2.00	97	102	80 - 111.2
4-Bromofluorobenzene (4-BFB)	1.82	1.93	mg/Kg	1	2.00	91	96	66.4 - 106.6

Matrix Spike (MS-1) Spiked Sample: 291987

QC Batch: 89608 | Date Analyzed: 2012-03-22 | Analyzed By: DA
Prep Batch: 76071 | QC Preparation: 2012-03-22 | Prepared By: DA

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO Qs	Qs	1	8630	mg/Kg	20	250	8630	0	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 Qs	Qs	1	8020	mg/Kg	20	250	8630	0	45.5 - 127	7	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane Qsr Qsr	829	792	mg/Kg	20	100	829	792	45.4 - 145.8

Matrix Spike (MS-1) Spiked Sample: 291988

QC Batch: 89637 | Date Analyzed: 2012-03-23 | Analyzed By: DA
Prep Batch: 76092 | QC Preparation: 2012-03-23 | Prepared By: DA

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	Qs Qs	1	9710	mg/Kg	20	250	7310	960	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	Qs Qs	1	8920	mg/Kg	20	250	7310	644	45.5 - 127	8	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	929	884	mg/Kg	20	100	929	884	45.4 - 145.8

Matrix Spike (MS-1) Spiked Sample: 291886

QC Batch: 89669 | Date Analyzed: 2012-03-23 | Analyzed By: tc
Prep Batch: 76115 | QC Preparation: 2012-03-23 | Prepared By: tc

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	19.5	mg/Kg	1	20.0	1.5841	90	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		1	21.4	mg/Kg	1	20.0	1.5841	99	28.2 - 157.2	9	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.22	2.23	mg/Kg	1	2	111	112	75.5 - 122.3
4-Bromofluorobenzene (4-BFB)	2.12	2.11	mg/Kg	1	2	106	106	77.9 - 122.4

Matrix Spike (MS-1) Spiked Sample: 292254

QC Batch: 89702 | Date Analyzed: 2012-03-26 | Analyzed By: DA
Prep Batch: 76144 | QC Preparation: 2012-03-26 | Prepared By: DA

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	612	mg/Kg	5	250	497	46	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		1	666	mg/Kg	5	250	497	68	45.5 - 127	8	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	157	186	mg/Kg	5	100	157	186	45.4 - 145.8

Matrix Spike (MS-1) Spiked Sample: 291970

QC Batch: 89721 | Date Analyzed: 2012-03-27 | Analyzed By: AR
Prep Batch: 76156 | QC Preparation: 2012-03-26 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			13800	mg/Kg	100	10000	4030	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			14500	mg/Kg	100	10000	4030	105	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: 291982

QC Batch: 89722 | Date Analyzed: 2012-03-27 | Analyzed By: AR
Prep Batch: 76156 | QC Preparation: 2012-03-26 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			14700	mg/Kg	100	10000	4730	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			15700	mg/Kg	100	10000	4730	110	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: 292002

QC Batch: 89723 | Date Analyzed: 2012-03-27 | Analyzed By: AR
Prep Batch: 76156 | QC Preparation: 2012-03-26 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			10300	mg/Kg	100	10000	<385	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			10700	mg/Kg	100	10000	<385	107	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: 292206

QC Batch: 89744 | Date Analyzed: 2012-03-27 | Analyzed By: tc
Prep Batch: 76174 | QC Preparation: 2012-03-27 | Prepared By: tc

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	5.57	mg/Kg	5	5.00	<0.0235	111	69.3 - 159.2
Toluene		1	5.56	mg/Kg	5	5.00	<0.0490	111	68.7 - 157
Ethylbenzene		1	5.75	mg/Kg	5	5.00	<0.0250	115	71.6 - 158.2
Xylene		1	17.2	mg/Kg	5	15.0	<0.0850	115	70.8 - 159.8

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

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matrix spikes continued ...

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	5.85	mg/Kg	5	5.00	<0.0235	117	69.3 - 159.2	5	20
Toluene		1	5.90	mg/Kg	5	5.00	<0.0490	118	68.7 - 157	6	20
Ethylbenzene		1	6.02	mg/Kg	5	5.00	<0.0250	120	71.6 - 158.2	5	20
Xylene		1	18.1	mg/Kg	5	15.0	<0.0850	121	70.8 - 159.8	5	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	4.90	5.35	mg/Kg	5	5	98	107	71.4 - 133.9
4-Bromofluorobenzene (4-BFB)	4.90	5.20	mg/Kg	5	5	98	104	72.6 - 144.1

Matrix Spike (MS-1) Spiked Sample: 292254

QC Batch: 89746 | Date Analyzed: 2012-03-27 | Analyzed By: tc
Prep Batch: 76174 | QC Preparation: 2012-03-27 | Prepared By: tc

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	54.6	mg/Kg	1	20.0	35.1928	97	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		1	55.5	mg/Kg	1	20.0	35.1928	102	28.2 - 157.2	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)	2.09	2.11	mg/Kg	1	2	104	106	75.5 - 122.3
4-Bromofluorobenzene (4-BFB)	1.98	2.03	mg/Kg	1	2	99	102	77.9 - 122.4

Matrix Spike (MS-1) Spiked Sample: 292247

QC Batch: 89877 | Date Analyzed: 2012-04-02 | Analyzed By: AR
Prep Batch: 76284 | QC Preparation: 2012-04-02 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			12000	mg/Kg	100	10000	946	110	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			12800	mg/Kg	100	10000	946	118	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: 293155

QC Batch: 89889 | Date Analyzed: 2012-04-02 | Analyzed By: DA
Prep Batch: 76291 | QC Preparation: 2012-04-02 | Prepared By: DA

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	258	mg/Kg	1	250	<14.5	103	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		1	256	mg/Kg	1	250	<14.5	102	45.5 - 127	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	124	125	mg/Kg	1	100	124	125	45.4 - 145.8

Matrix Spike (MS-1) Spiked Sample: 293145

QC Batch: 89908 | Date Analyzed: 2012-04-03 | Analyzed By: tc
Prep Batch: 76308 | QC Preparation: 2012-04-02 | Prepared By: tc

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	89.9	mg/Kg	5	50.0	34.1827	111	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		1	97.4	mg/Kg	5	50.0	34.1827	126	28.2 - 157.2	8	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)	5.33	5.45	mg/Kg	5	5	107	109	75.5 - 122.3
4-Bromofluorobenzene (4-BFB)	5.00	5.12	mg/Kg	5	5	100	102	77.9 - 122.4

Matrix Spike (MS-1) Spiked Sample: 293125

QC Batch: 89915 | Date Analyzed: 2012-04-02 | Analyzed By: tc
Prep Batch: 76308 | QC Preparation: 2012-04-02 | Prepared By: tc

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.90	mg/Kg	1	2.00	<0.00470	95	69.3 - 159.2
Toluene		1	1.93	mg/Kg	1	2.00	<0.00980	96	68.7 - 157
Ethylbenzene		1	2.01	mg/Kg	1	2.00	<0.00500	100	71.6 - 158.2
Xylene		1	6.02	mg/Kg	1	6.00	<0.0170	100	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	Qr	Qr	1	2.42	mg/Kg	1	2.00	<0.00470	121	69.3 - 159.2	24	20
Toluene	Qr	Qr	1	2.48	mg/Kg	1	2.00	<0.00980	124	68.7 - 157	25	20
Ethylbenzene	Qr	Qr	1	2.59	mg/Kg	1	2.00	<0.00500	130	71.6 - 158.2	25	20
Xylene	Qr	Qr	1	7.83	mg/Kg	1	6.00	<0.0170	130	70.8 - 159.8	26	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.84	2.20	mg/Kg	1	2	92	110	71.4 - 133.9
4-Bromofluorobenzene (4-BFB)	1.76	2.17	mg/Kg	1	2	88	108	72.6 - 144.1

Matrix Spike (MS-1) Spiked Sample: 293093

QC Batch: 89977 | Date Analyzed: 2012-04-04 | Analyzed By: DA
Prep Batch: 76359 | QC Preparation: 2012-04-04 | Prepared By: DA

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	Qs Qs	1	627	mg/Kg	1	250	194	173	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	Qs Qs	1	709	mg/Kg	1	250	194	206	45.5 - 127	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
n-Tricosane	Qsr Qsr	220	241	mg/Kg	1	100	220	241	45.4 - 145.8

Matrix Spike (MS-1) Spiked Sample: 293116

QC Batch: 89994 | Date Analyzed: 2012-04-04 | Analyzed By: tc
Prep Batch: 76371 | QC Preparation: 2012-04-04 | Prepared By: tc

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	1470	mg/Kg	50	500	870.943	120	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		1	1360	mg/Kg	50	500	870.943	98	28.2 - 157.2	8	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	35.6	44.2	mg/Kg	50	50	71	88	75.5 - 122.3
4-Bromofluorobenzene (4-BFB)		39.2	45.1	mg/Kg	50	50	78	90	77.9 - 122.4

Matrix Spike (MS-1) Spiked Sample: 291980

QC Batch: 89995 | Date Analyzed: 2012-04-04 | Analyzed By: tc
Prep Batch: 76371 | QC Preparation: 2012-04-04 | Prepared By: tc

continued ...

#120322306

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 3

* Out of Hold Time Added 4/2 per Jeanna 11:30

ANALYSIS REQUEST (Circle or Specify Method No.)

CLIENT NAME:	SITE MANAGER:
COG	Ike Tavarez
PROJECT NO.:	**PROJECT NAME:**
114-6401208	Tenneco State #3

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
291964	3/16		S		X	BH-1 @ AH-1 0-1'	1				X													X				
965						2-3'	1																	X				
966						4-5'	1						X	X										X				
967						6-7'	1						X	X										X				
968						9-10'	1																	X				
969						14-15'	1																	X				
970						19-20'	1																	X				
971						24-25'	1																	X				
972						29-30'	1																	X				
973						39-40'	1																	X				

RELINQUISHED BY: (Signature) Kim	Date: March 23 2012 Time: 930	RECEIVED BY: (Signature)	Date: 3/22/12 Time: 9:30
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:

SAMPLED BY: (Print & Initial) Kim — Date: 3/21/12 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: DATE: TIME:
RECEIVED BY: (Signature)

SAMPLE CONDITION WHEN RECEIVED: 9° intact

REMARKS: All tech Midland

MAR 30 2012 EP

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

120322O6

Analysis Request of Chain of Custody Record

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

* Out of Hold Time. Proceed with analysis. Added 4/4 per Jeanne

PAGE: 2 of 3

ANALYSIS REQUEST (Circle or Specify Method No.)

CLIENT NAME:	SITE MANAGER:
COG	Ike Tavarez

PROJECT NO.:	PROJECT NAME:
114-6401208	Tenneco State #3 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
974	3/16		S		X	BH-2 @ AH-2 0-1'	1				X		X	X	X										X				
975	"		"		"	2-3'	1				"														X				
976						4-5'	1																		X				
977						6-7'	1						X	X											X				
978						9-10'	1						X	X											X				
979						14-15'	1						X	X											X				
980						19-20'	1						X	X				Added 4/5/12 per Jeanne											
981	3/19		S		X	BH-3 @ AH-4 0-1'	1																		X				
982	"		"		"	2-5'	1																		X				
983	"		"		"	4-5'	1						X	X				Per: Jeanne @ Added 4/5/12							X				

RELINQUISHED BY: (Signature)	Date: March 22, 2012 Time: 930	RECEIVED BY: (Signature)	Date: 3/22/12 Time: 9:30
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:

SAMPLED BY: (Print & Initial) Kim — Date: 3/21/12 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: TIME:

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 9° 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

120322206

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.: 114-6401208

PROJECT NAME: Tenneco State #3

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 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
984	3/19		S		X	BH-3 @ AH-4 6-7'	1						X	X												X				
985						9-10'	1																							
986						14-15'	1																							
987						BH-4 @ AH-5 0-1'	1							X												X				
988						2-3'	1							X												X				
989						4-5'	1						X	X												X				
990						6-7'	1																							
991						9-10'	1																							
992						14-15'	1																							

Added: Jeanne 4/2/12 (BTEX 8021B, TPH TX1005 (Ext. to C35), Chloride) — Added 4/2/12 per Jeanne

Added 4/5/12 per Jeanne

RELINQUISHED BY: (Signature) Allison Kindley	Date: March 22, 2012 Time: 930	RECEIVED BY: (Signature)	Date: 3/22/12 Time: 9:30
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
RECEIVING LABORATORY: TRACE		RECEIVED BY: (Signature)	
ADDRESS: CITY: MIDLAND STATE: TX ZIP:			
CONTACT: PHONE:		DATE:	TIME:

SAMPLED BY: (Print & Initial) Kim — Date: 3/21/12 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

SAMPLE CONDITION WHEN RECEIVED: 90° intact

REMARKS: IF TPH > 5,000 mg/Kg (5,000) - Run deeper Samples

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