SITE INFORMATION

Report Type: Closure Report

General Site Information:						
Site:	Way South State Com #1H Tank Battery					
Company:	COG Operating LLC					
Section, Township and Range	Unit A	Sec 30	T26S	R28E		
Lease Number:	API-30-015-37234					
County:	Eddy County					
GPS:	32.01878° N			104.11947° W		
Surface Owner:	State					
Mineral Owner:						
Directions:	On Hwy 285 at the Texas, New Mexico state line travel north on Hwy 285 for 4.8 miles. Turn left onto White City Rd and travel for 3.0 miles, turn left and travel for 3.1 miles to site on right side of road.					

Release Data:	1st Spill	2nd Spill	3rd Spill
Date Released:	9/16/2012	11/28/2012	3/12/2013
Type Release:	Produced Water/Oil	Produced Water/Oil	Produced Water/Oil
Source of Contamination:	Burned lines	FWKO	FWKO
Fluid Released:	75 bbls pw 10bbls oil	25 bbls pw 5bbls oil	40 bbls
Fluids Recovered:	71 bbls pw 10bbls oil	15 bbls pw 2 bbls oil	20 bbls

Official Communication:			
Name:	Pat Ellis		Ike Tavarez
Company:	COG Operating, LLC		Tetra Tech
Address:	One Concho Center		1910 N. Big Spring
	600 W. Illinois Ave.		
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

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

Acceptable Soil RRAL (mg/kg)		
Benzene	*Total BTEX*	*TPH*
10	50	100

TETRA TECH

May 15, 2013

Mr. Mike Bratcher
Environmental Engineer Specialist
Oil Conservation Division, District 2
811 S. First Street
Artesia, New Mexico 88210

Re: Closure Report for the COG Operating LLC., Way South State Com #1H Tank Battery, Unit A, Section 30, Township 26 South, Range 28 East, Eddy County, New Mexico.

Mr. Bratcher:

Tetra Tech, Inc. (Tetra Tech) was contacted by COG Operating LLC. (COG) to assess a spill from the Way South State Com #1H Tank Battery located in Unit A, Section 30, Township 26 South, Range 28 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.01878°, W 104.11947°. The site location is shown on Figures 1 and 2.

Background

1st Spill

According to the State of New Mexico C-141 Initial Report, the leak was discovered on September 16, 2012, and released approximately seventy five (75) barrels of produced water and ten (10) barrels of oil from the burned lines at the free water knock out and heater treater. To alleviate the problem, COG personnel repaired the equipment. Eighty-one (81) barrels of standing fluids were recovered. The spill initiated inside of the tank battery affecting an area approximately 35' X 30', then it breached the firewall and migrated north in the pasture affecting an area approximately 15' x 295' and east affecting an area 30' x 400'. The final C-141 form is enclosed in Appendix A.

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

2nd Spill

According to the State of New Mexico C-141 Initial Report, the leak was discovered on November 28, 2012, and released approximately twenty five (25) barrels of produced water and five (5) barrels of oil from a failed gasket on the free water knock out. To alleviate the problem, COG personnel have replaced the gasket. Seventeen (17) barrels of standing fluids were recovered. The spill initiated and remained inside of the tank battery firewall affecting an area approximately 35' x 130'. The final C-141 form is enclosed in Appendix A.

3nd Spill

According to the State of New Mexico C-141 Initial Report, the leak was discovered on March 12, 2013, and released approximately forty (40) barrels of produced water from a failed gasket on the free water knock out. To alleviate the problem, COG personnel have replaced the gasket with a high pressure gasket. Twenty (20) barrels of standing fluids were recovered. The spill initiated inside of the tank battery firewall affecting an area approximately 20' x 40' and over sprayed an area outside of the firewall approximately 70' x 85'. The final C-141 form is enclosed in Appendix A.

Groundwater

No water wells were listed within Section 30. According to the NMOCD groundwater map, the average depth to groundwater in this area is less than 50' below surface. The groundwater data is shown in Figure B.

Regulatory

A risk-based evaluation was performed for the Site in accordance with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and Releases, dated August 13, 1993. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene and xylene (collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) in soil. The proposed RRAL for benzene was determined to be 10 parts per million (ppm) or milligrams per kilogram (mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene, and xylene). Based upon the depth to groundwater, the proposed RRAL for TPH is 100 mg/kg.

Soil Assessment

1st Spill Assessment

On October 8, 2012, Tetra Tech personnel inspected and sampled the spill area. Twenty (20) auger holes (AH-1 through AH-20) 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. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The sampling results are summarized in Table 1. The auger hole locations are shown on Figure 3.

2nd Spill Assessment

On December 12, 2012, Tetra Tech personnel inspected and sampled the spill area. The spill area overlapped the previous spill in the areas of AH-AH-1, AH-2 and AH-3. To assess the spill, three (3) auger holes (AH-1, AH-2 and AH-3) were installed using a stainless steel hand auger. Selected samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The sampling results are summarized in Table 1. The auger hole locations are shown on Figure 3.

3nd Spill Assessment

On April 3, 2013, Tetra Tech personnel inspected and sampled the spill area. The spill area overlapped the previous two spills in the areas of AH-2 (from the first and second spill) and AH-3 (from the first and second spill). To assess the spill, two (2) auger holes (AH-1 and AH-2) were installed using a stainless steel hand auger. Selected samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The sampling results are summarized in Table 1. The auger hole locations are shown on Figure 3.

Assessment Results

Referring to Table 1, the areas of AH-2 and AH-3 from the second spill exceeded the TPH RRAL, with TPH concentrations of 3,250 mg/kg and 3,830 mg/kg, respectively. The deeper sample in the area of AH-3 declined below the TPH RRAL. The area of AH-3 (spill #2) exceeded the total BTEX concentrations of 86.0 mg/kg, but declined below the regulatory level at 1-1.5' below surface.

The area of AH-1 and AH-2 from the third spill exceeded the TPH RRAL, with concentration of 176 mg/kg and 195 mg/kg, respectively at 0-1' below surface. The concentrations of AH-1 and AH-2 declined to 4.80 mg/kg and 12.7 mg/kg, respectively at 1-1.5' below surface.

The area of AH-1 did not show a chloride impact to the soils. Elevated chloride concentrations were detected in the majority of the auger holes. In the areas of auger holes (AH-2, AH-4, AH-5, AH-8 and AH-10), elevated chloride concentrations at 0-1' were detected in the shallow soils and were not vertically defined. Deeper samples were not collected due to a dense caliche formation. The remaining auger holes did show declining chlorides with depth and appeared to be background concentrations for the area.

Background Sampling Results

Prior to assessing the impacted soils, Tetra Tech installed two (2) background trenches in the pasture to evaluate natural chloride concentrations in the area. Due to the site setting and the facility located in a dry draw (Owl Draw), natural chloride concentrations were suspected in the subsurface soils. The aerial is shown on Figure 2A. The background trench results are shown in Table 2. Referring to Table 2, the background sample results showed elevated chloride concentrations ranging 1,330 mg/kg (10.0') to 3,650 mg/kg (4.0').

Additional Delineation - Trench Sampling and Results

On January 15, 2013, Tetra Tech installed five (5) backhoe trenches to define the chloride extents in the areas of auger holes (AH-2, AH-4, AH-5, AH-8 and AH-10). The remaining auger holes were not assessed due to the background concentrations detected in the area. The trench results are shown in Table 1. Referring to Table 1, all of the chloride concentrations declined with depth and some of the deeper samples showed concentrations comparable to the background chlorides detected in the area.

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Remediation and Conclusion

On April 8, 2013 through April 17, 2013, Tetra Tech personnel supervised the excavation of the impacted soils. In order to remove the hydrocarbon and the elevated chloride concentrations in the shallow soils, the excavation depths ranged from a 3" surficial scrape (overspray) to 2.0' below surface. The excavated areas and depths are highlighted in Table 1 and shown on Figure 4.

Approximately 540 cubic yards^3 of soil were removed and transported to R360 facility for proper disposal. The site was then backfilled with clean material to surface grade, ripped and seeded.

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

Respectfully submitted,
TETRA TECH

Ike Tavarez, PG
Senior Project Manager

cc: Pat Ellis – COG

Figures

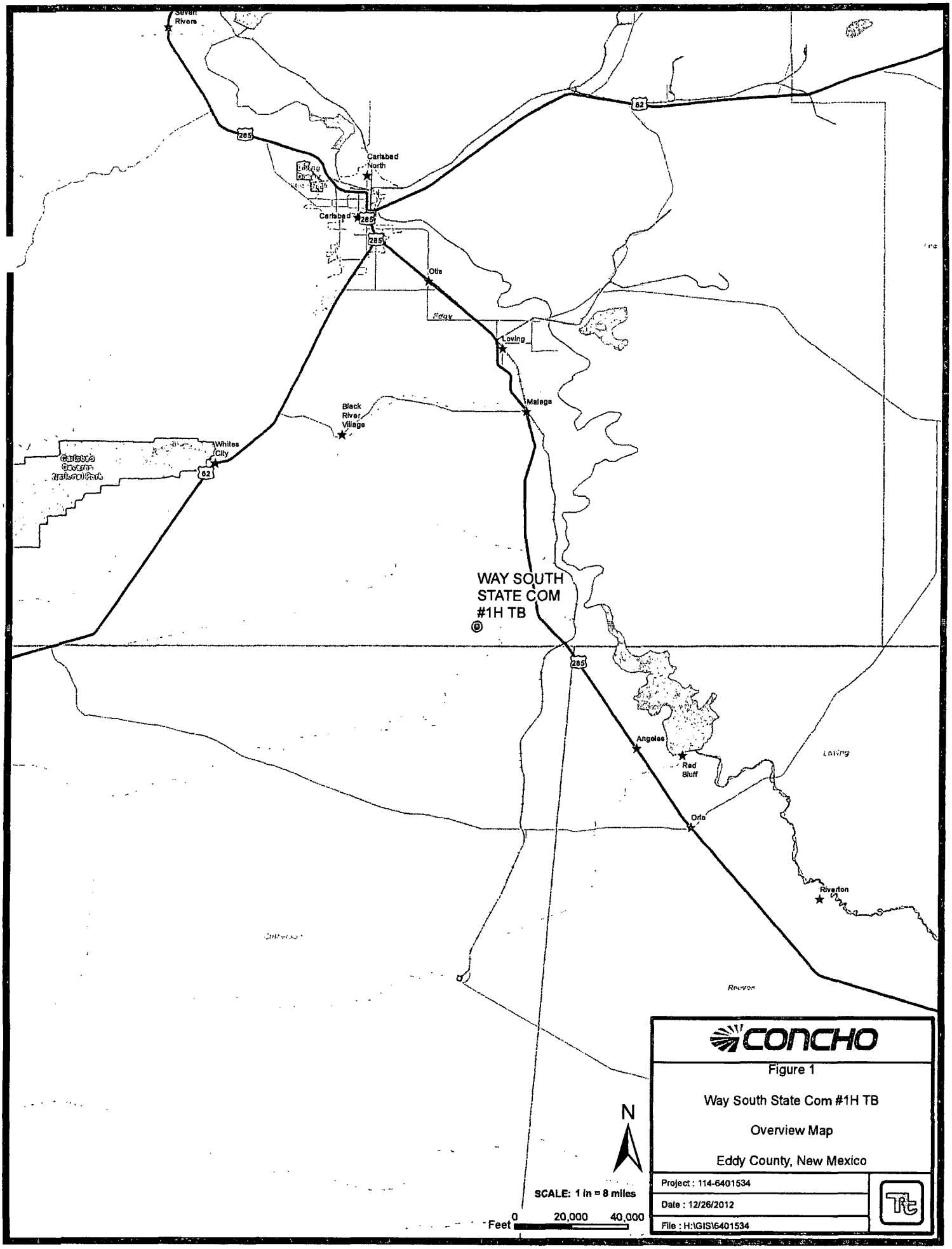

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Figure 1

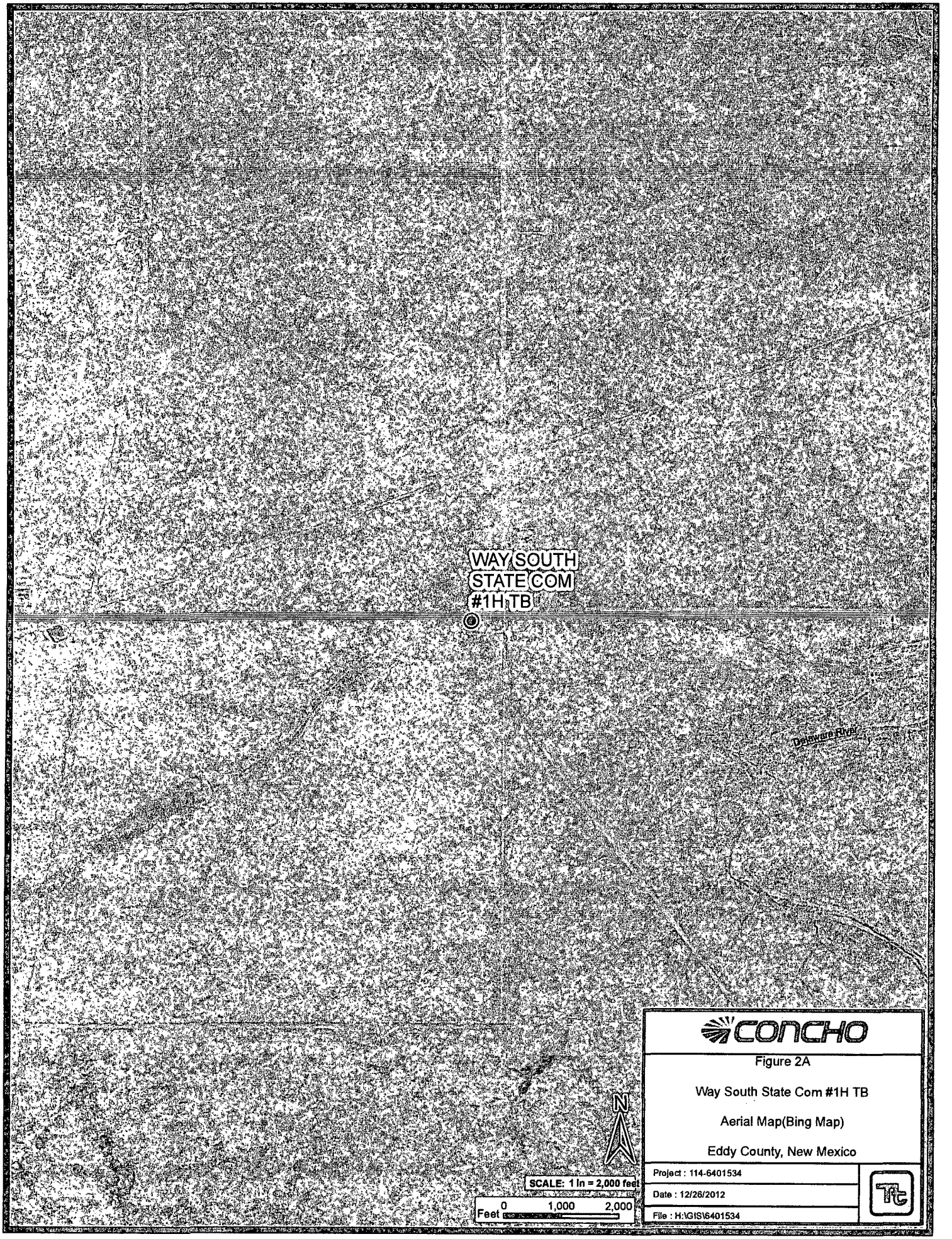
Way South State Com #1H TB

Overview Map

Eddy County, New Mexico

Project : 114-6401534	
Date : 12/26/2012	
File : H:\GIS\6401534	

Drawn By: Isabel Marmolejo



CONCHO

Figure 2A

Way South State Com #1H TB

Aerial Map(Bing Map)

Eddy County, New Mexico

Project : 114-6401534	
Date : 12/26/2012	
File : H:\GIS\6401534	

Drawn By: Isabel Mamolejo

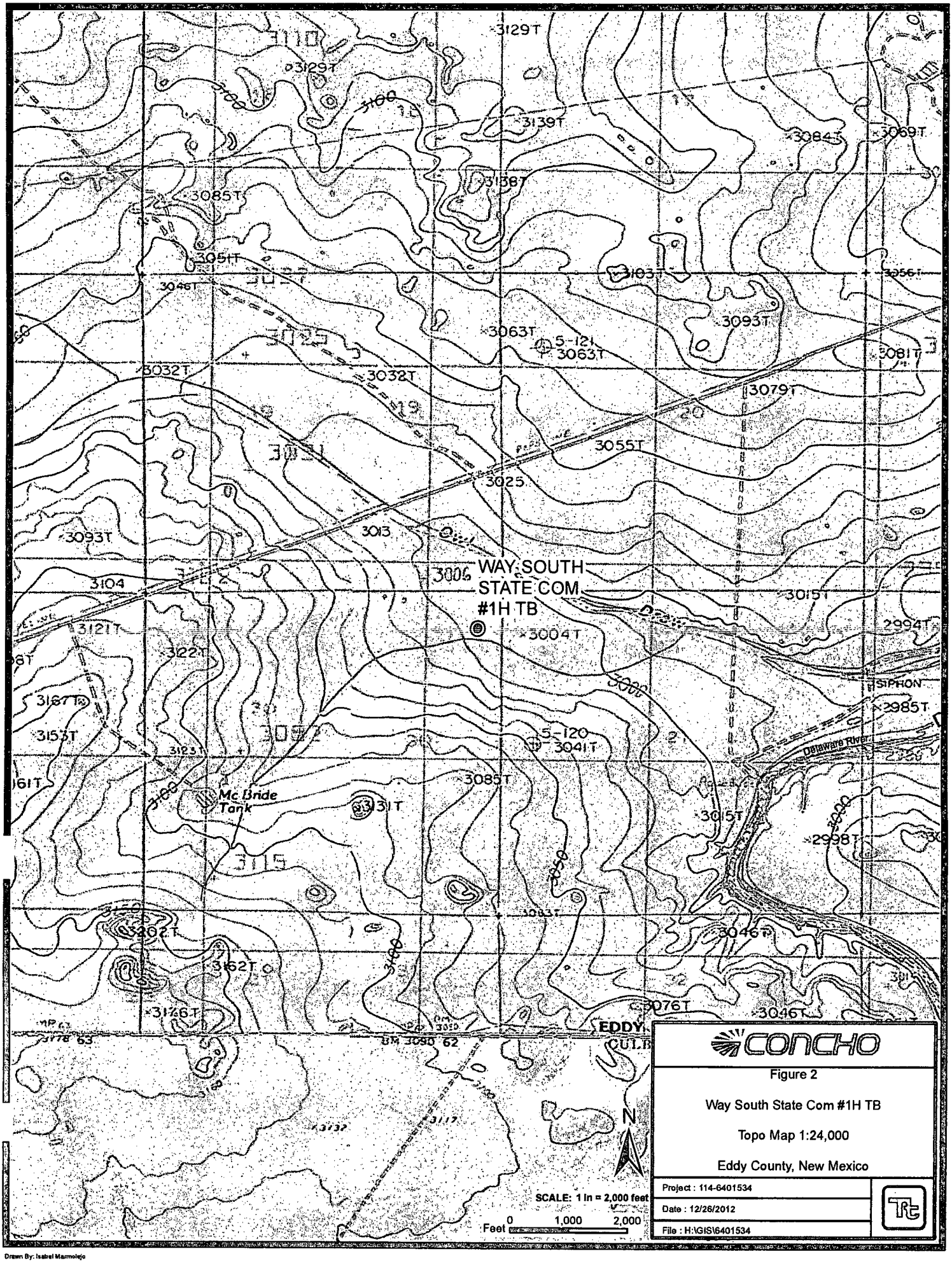


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Figure 2

Way South State Com #1H TB

Topo Map 1:24,000

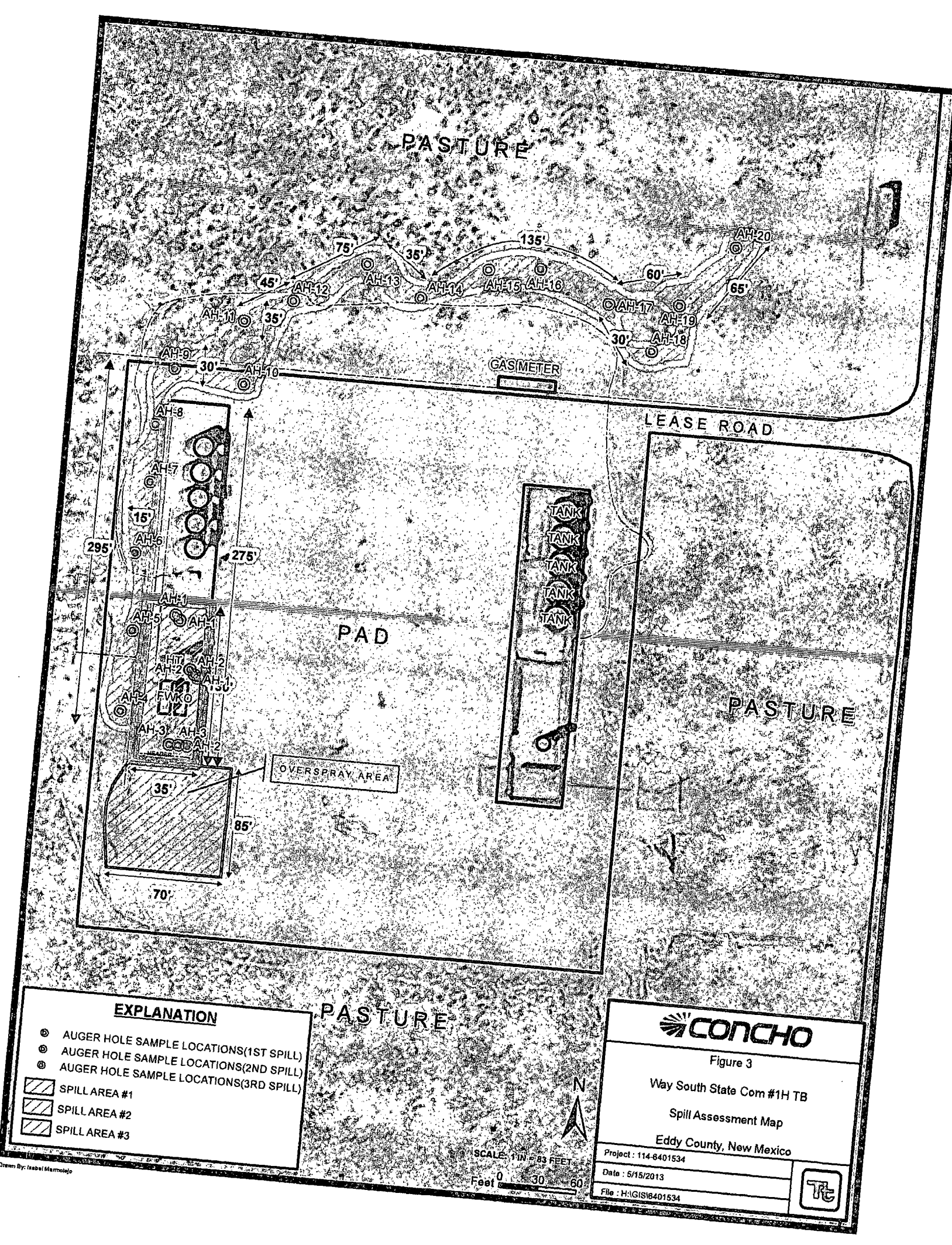
Eddy County, New Mexico

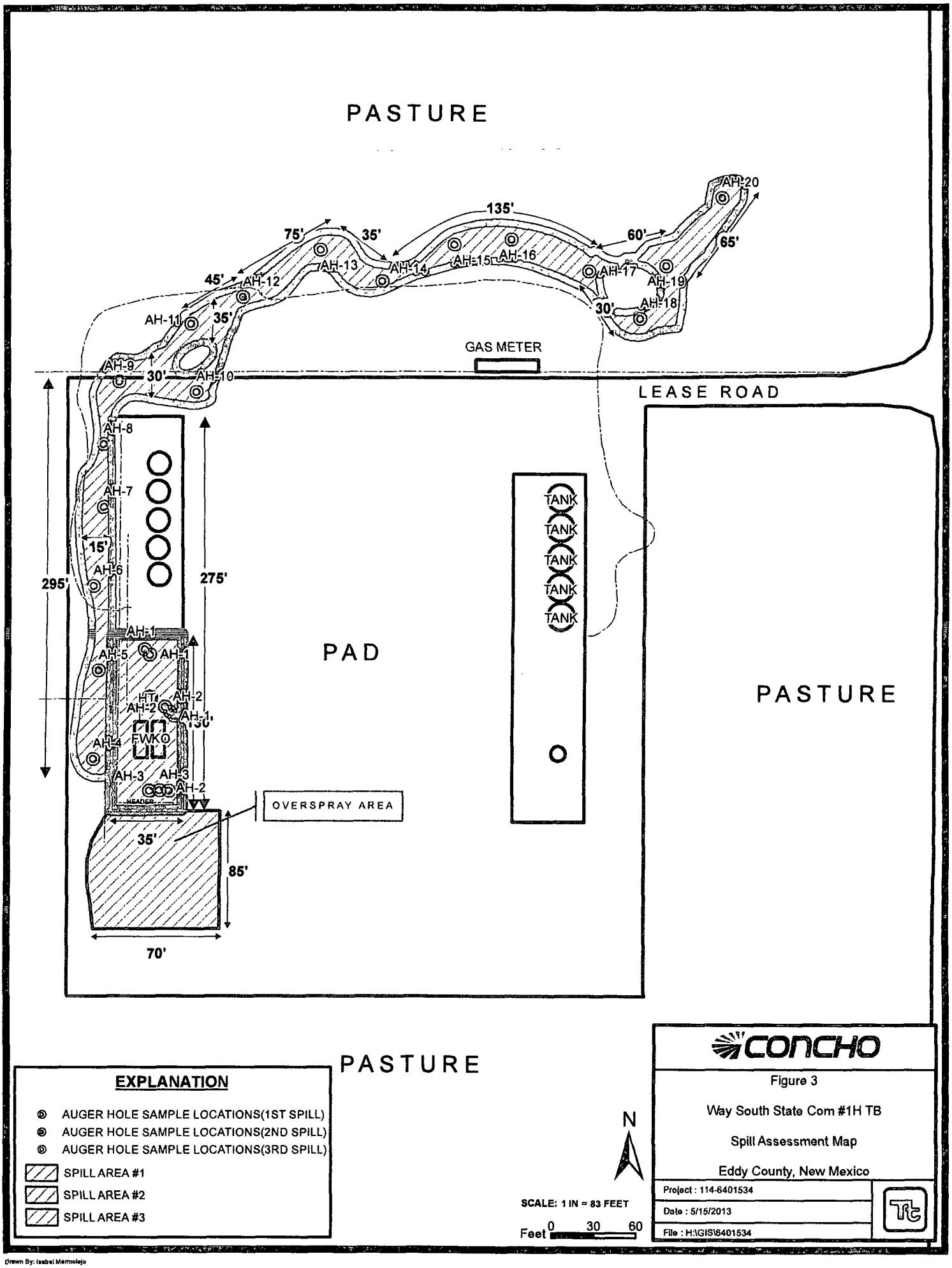
Project : 114-6401534

Date : 12/26/2012

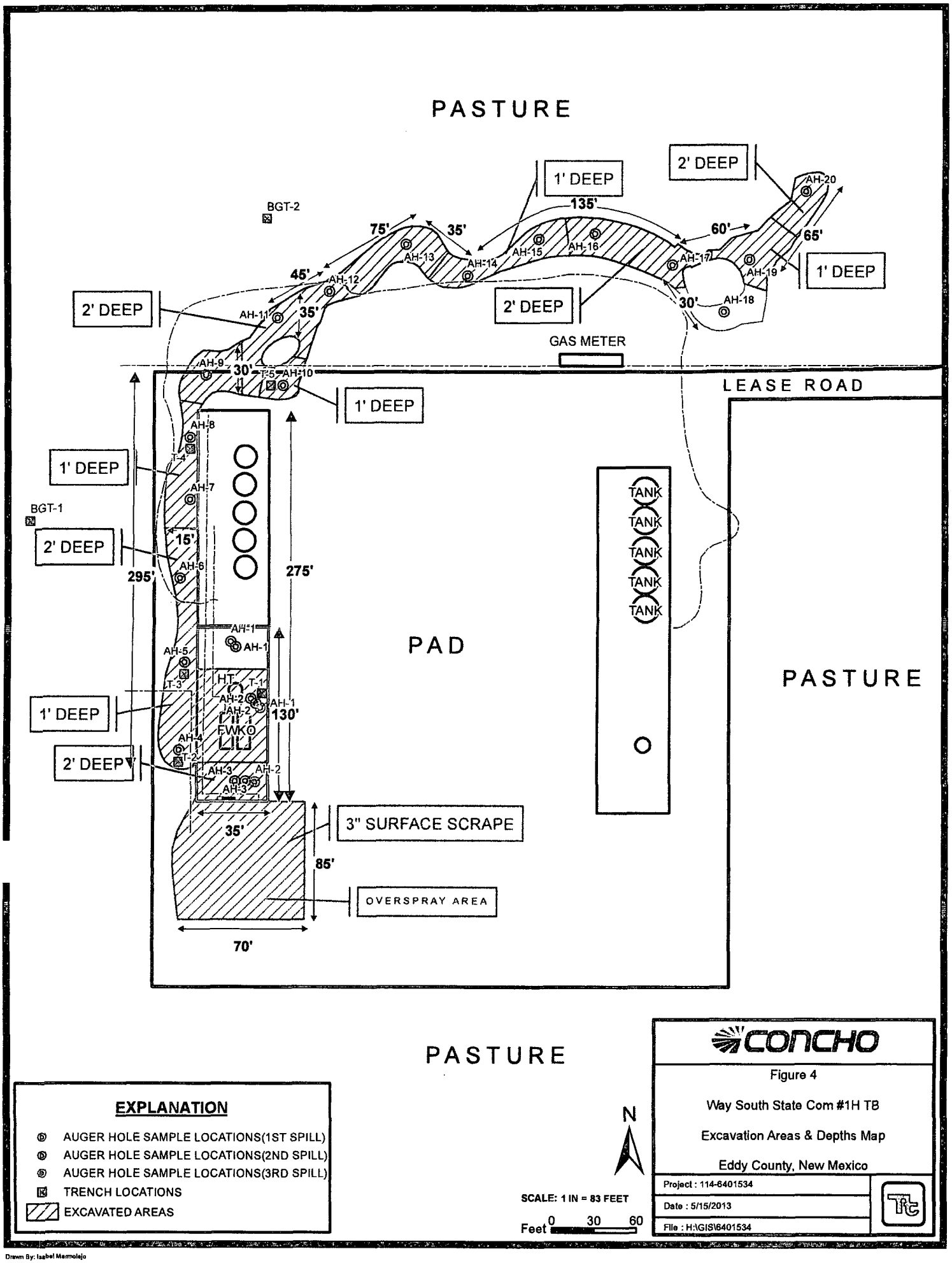
File : H:\GIS\6401534

Drawn By: Isabel Marmolejo


PASTURE
AH-20
75'
35'
135'
60'
65'
45'
AH-12
AH-13
AH-14
AH-15
AH-16
AH-17
AH-19
AH-18
AH-11
35'
30'
AH-9
30'
AH-10
GAS METER
LEASE ROAD
AH-8
AH-7
15'
AH-6
295'
275'
AH-1
AH-5
PAD
TANK
TANK
TANK
TANK
TANK
AH-2
AH-4
FWKO
AH-3
AH-3
AH-2
OVERSPRAY AREA
35'
85'
70'
PASTURE
PASTURE
EXPLANATION
AUGER HOLE SAMPLE LOCATIONS(1ST SPILL)
AUGER HOLE SAMPLE LOCATIONS(2ND SPILL)
AUGER HOLE SAMPLE LOCATIONS(3RD SPILL)
SPILL AREA #1
SPILL AREA #2
SPILL AREA #3
N
SCALE: 1"IN = 83 FEET
Feet 0 30 60
CONCHO
Figure 3
Way South State Com #1H TB
Spill Assessment Map
Eddy County, New Mexico
Project : 114-6401534
Date : 5/15/2013
File : H:\GIS\6401534
Drawn By: Isabel Marmolejo



Drawn By: Isabel Marmolejo



Drawn By: Isabel Mermolejo

Tables

Table 1
COG Operating LLC.
Way South State Commingle #1H Tank Battery
Eddy County, New Mexico

Sample ID	Sample Date	Sample 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 (spill #1)	10/8/2012	0-1	X		<1.00	<50.0	<50.0	-	-	-	-	-	<20.0
AH-1 (spill #2)	12/12/2012	0-1	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	61.6
AH-2 (spill #1)	10/8/2012	0-1	X		286	278	564	<0.0200	0.130	0.482	1.56	2.17	465
AH-2 (spill #2)	12/12/2012	0-1		X	1,200	2,050	3,250	<0.400	5.76	6.78	31.7	44.2	6,070
AH-1 (spill #3)	4/4/2013	0-1		X	15.5	160	176	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	2,450
	"	1-1.5	X		4.80	<50.0	4.80	-	-	-	-	-	4,900
	"	2-2.5	X		-	-	-	-	-	-	-	-	910
	"	3-3.5	X		-	-	-	-	-	-	-	-	668
Trench-1	1/15/2013	0-1		X	-	-	-	-	-	-	-	-	5,700
	"	2	X		-	-	-	-	-	-	-	-	770
	"	4	X		-	-	-	-	-	-	-	-	721
	"	6	X		-	-	-	-	-	-	-	-	1,120

Table 1
COG Operating LLC.
Way South State Commingle #1H Tank Battery
Eddy County, New Mexico

Sample ID	Sample Date	Sample 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 (spill #1)	10/8/2012	0-0.5		X	<1.00	<50.0	<50.0	-	-	-	-	-	455
AH-3 (spill #2)	12/12/2012	0-1		X	1,880	1,950	3,830	<0.400	10.9	10.2	64.9	86.0	6,000
	"	1-1.5		X	27.2	53.9	81.1	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	7,250
	"	2-2.5	X		4.32	<50.0	4.32	-	-	-	-	-	2,480
	"	3-3.5	X		-	-	-	-	-	-	-	-	1,700
	"	4-4.5	X		-	-	-	-	-	-	-	-	858
	"	5-5.5	X		-	-	-	-	-	-	-	-	1,180
	"	6-6.5	X		-	-	-	-	-	-	-	-	1,280
	"	7-7.5	X		-	-	-	-	-	-	-	-	1,460
	"	8-8.5	X		-	-	-	-	-	-	-	-	1,050
	"	9-9.5	X		-	-	-	-	-	-	-	-	1,400
AH-2 (spill #3)	04/04/213	0-1		X	106	89.0	195	<0.0200	<0.0200	<0.0200	0.495	0.495	3,220
	"	1-1.5		X	12.7	<50.0	12.7	-	-	-	-	-	2,010
	"	2-2.5	X		-	-	-	-	-	-	-	-	2,320
	"	3-3.5	X		-	-	-	-	-	-	-	-	1,780

Table 1
COG Operating LLC.
Way South State Commingle #1H Tank Battery
Eddy County, New Mexico

Sample ID	Sample Date	Sample 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-4	10/8/2012	0-0.5		X	<1.00	<50.0	<50.0	-	-	-	-	-	9,450
Trench-2	1/15/2013	0-1		X	-	-	-	-	-	-	-	-	4,320
	"	2	X		-	-	-	-	-	-	-	-	2,560
	"	4	X		-	-	-	-	-	-	-	-	1,120
	"	6	X		-	-	-	-	-	-	-	-	924
AH-5	10/8/2012	0-0.5		X	8.71	<50.0	8.71	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	15,000
Trench-3	1/15/2013	0-1		X	-	-	-	-	-	-	-	-	4,450
	"	2	X		-	-	-	-	-	-	-	-	3,250
	"	4	X		-	-	-	-	-	-	-	-	170
	"	6	X		-	-	-	-	-	-	-	-	40.0
AH-6	10/8/2012	0-1		X	<1.00	<50.0	<50.0	-	-	-	-	-	6,520
	"	1-1.5		X	-	-	-	-	-	-	-	-	6,720
	"	2-2.5	X		-	-	-	-	-	-	-	-	2,170
	"	3-3.5	X		-	-	-	-	-	-	-	-	824
	"	4-4.5	X		-	-	-	-	-	-	-	-	465
	"	5-5.5	X		-	-	-	-	-	-	-	-	953
	"	6-6.5	X		-	-	-	-	-	-	-	-	2,030
	"	7-7.5	X		-	-	-	-	-	-	-	-	1,680
	"	8-8.5	X		-	-	-	-	-	-	-	-	1,690
	"	9-9.5	X		-	-	-	-	-	-	-	-	1,480

Table 1
COG Operating LLC.
Way South State Commingle #1H Tank Battery
Eddy County, New Mexico

Sample ID	Sample Date	Sample 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-7	10/8/2012	0-1		X	3.30	<50.0	3.30	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	4,550
	"	1-1.5	X		-	-	-	-	-	-	-	-	2,190
	"	2-2.5	X		-	-	-	-	-	-	-	-	1,270
	"	3-3.5	X		-	-	-	-	-	-	-	-	299
	"	4-4.5	X		-	-	-	-	-	-	-	-	82.0
	"	5-5.5	X		-	-	-	-	-	-	-	-	28.9
	"	6-6.5	X		-	-	-	-	-	-	-	-	116
	"	7-7.5	X		-	-	-	-	-	-	-	-	188
	"	8-8.5	X		-	-	-	-	-	-	-	-	381
	"	9-9.5	X		-	-	-	-	-	-	-	-	733
AH-8	10/9/2102	0-0.5		X	<1.00	<50.0	<50.0	-	-	-	-	-	7,400
Trench-4	1/15/2013	0-1		X	-	-	-	-	-	-	-	-	6,130
	"	2	X		-	-	-	-	-	-	-	-	380
	"	4	X		-	-	-	-	-	-	-	-	1,040
	"	6	X		-	-	-	-	-	-	-	-	2,960
AH-9	10/9/2012	0-1	X		<1.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	2,420
	"	1-1.5	X		-	-	-	-	-	-	-	-	8,870
	"	2-2.5	X		-	-	-	-	-	-	-	-	3,200
	"	3-3.5	X		-	-	-	-	-	-	-	-	2,840
	"	4-4.5	X		-	-	-	-	-	-	-	-	2,680
	"	5-5.5	X		-	-	-	-	-	-	-	-	148
	"	6-6.5	X		-	-	-	-	-	-	-	-	259
	"	7-7.5	X		-	-	-	-	-	-	-	-	182
	"	8-8.5	X		-	-	-	-	-	-	-	-	307

Table 1
COG Operating LLC.
Way South State Commingle #1H Tank Battery
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	Total						
AH-10	10/9/2012	0-0.5		X	<1.00	<50.0	<50.0	-	-	-	-	-	3,180
Trench-5	1/15/2013	0-1		X	-	-	-	-	-	-	-	-	64.9
	"	2	X		-	-	-	-	-	-	-	-	2,730
	"	4	X		-	-	-	-	-	-	-	-	3,140
	"	6	X		-	-	-	-	-	-	-	-	2,310
AH-11	10/9/2012	0-1		X	<1.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	15,600
	"	1-1.5		X	-	-	-	-	-	-	-	-	7,820
	"	2-2.5	X		-	-	-	-	-	-	-	-	4,340
	"	3-3.5	X		-	-	-	-	-	-	-	-	311
	"	4-4.5	X		-	-	-	-	-	-	-	-	837
	"	5-5.5	X		-	-	-	-	-	-	-	-	765
	"	6-6.5	X		-	-	-	-	-	-	-	-	1,150
	"	7-7.5	X		-	-	-	-	-	-	-	-	1,210
AH-12	10/9/2012	0-1		X	<1.00	<50.0	<50.0	-	-	-	-	-	10,600
	"	1-1.5		X	-	-	-	-	-	-	-	-	12,200
	"	2-2.5	X		-	-	-	-	-	-	-	-	2,820
	"	3-3.5	X		-	-	-	-	-	-	-	-	3,830
	"	4-4.5	X		-	-	-	-	-	-	-	-	3,330
	"	5-5.5	X		-	-	-	-	-	-	-	-	2,380
	"	6-6.5	X		-	-	-	-	-	-	-	-	1,420
	"	7-7.5	X		-	-	-	-	-	-	-	-	1,610

Table 1
COG Operating LLC.
Way South State Commingle #1H Tank Battery
Eddy County, New Mexico

Sample ID	Sample Date	Sample 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-13	10/9/2012	0-1		X	<1.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	11,200
	"	1-1.5		X	-	-	-	-	-	-	-	-	5,010
	"	2-2.5	X		-	-	-	-	-	-	-	-	2,970
	"	3-3.5	X		-	-	-	-	-	-	-	-	1,150
AH-14	10/9/2012	0-1		X	<1.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	12,600
	"	1-1.5	X		-	-	-	-	-	-	-	-	3,770
	"	2-2.5	X		-	-	-	-	-	-	-	-	4,040
	"	3-3.5	X		-	-	-	-	-	-	-	-	2,600
AH-15	10/9/2012	0-1		X	<1.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	10,800
	"	1-1.5	X		-	-	-	-	-	-	-	-	6,890
	"	2-2.5	X		-	-	-	-	-	-	-	-	2,780
	"	3-3.5	X		-	-	-	-	-	-	-	-	3,080
AH-16	10/9/2012	0-1		X	<1.00	<50.0	<50.0	-	-	-	-	-	11,200
	"	1-1.5		X	-	-	-	-	-	-	-	-	5,190
	"	2-2.5	X		-	-	-	-	-	-	-	-	3,110
	"	3-3.5	X		-	-	-	-	-	-	-	-	2,590
AH-17	10/9/2012	0-1		X	<1.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	17,500
	"	1-1.5		X	-	-	-	-	-	-	-	-	12,200
	"	2-2.5	X		-	-	-	-	-	-	-	-	5,170
	"	3-3.5	X		-	-	-	-	-	-	-	-	3,020

Table 1
COG Operating LLC.
Way South State Commingle #1H Tank Battery
Eddy County, New Mexico

Sample ID	Sample Date	Sample 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-18	10/9/2012	0-1	X		<1.00	<50.0	<50.0	-	-	-	-	-	2,980
	"	1-1.5	X		-	-	-	-	-	-	-	-	2,140
	"	2-2.5	X		-	-	-	-	-	-	-	-	1,370
	"	3-3.5	X		-	-	-	-	-	-	-	-	1,050
AH-19	10/9/2012	0-1		X	<1.00	<50.0	<50.0	-	-	-	-	-	6,390
	"	1-1.5	X		-	-	-	-	-	-	-	-	2,980
	"	2-2.5	X		-	-	-	-	-	-	-	-	3,530
	"	3-3.5	X		-	-	-	-	-	-	-	-	3,500
	"	4-4.5	X		-	-	-	-	-	-	-	-	2,340
AH-20	10/9/2012	0-1		X	<1.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	22,700
	"	1-1.5		X	-	-	-	-	-	-	-	-	7,230
	"	2-2.5	X		-	-	-	-	-	-	-	-	3,820
	"	3-3.5	X		-	-	-	-	-	-	-	-	2,140
	"	4-4.5	X		-	-	-	-	-	-	-	-	1,170
	"	5-5.5	X		-	-	-	-	-	-	-	-	1,220

Table 1
COG Operating LLC.
Way South State Commingle #1H Tank Battery
Eddy County, New Mexico

Sample ID	Sample Date	Sample 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						
Background Trench-1	1/8/2013	0-1	X		-	-	-	-	-	-	-	-	194
	"	2	X		-	-	-	-	-	-	-	-	995
	"	4	X		-	-	-	-	-	-	-	-	2,160
	"	6	X		-	-	-	-	-	-	-	-	2,170
	"	8	X		-	-	-	-	-	-	-	-	1,080
	"	10	X		-	-	-	-	-	-	-	-	991
Background Trench-2	1/8/2013	0-1	X		-	-	-	-	-	-	-	-	<20.0
	"	2	X		-	-	-	-	-	-	-	-	1,810
	"	4	X		-	-	-	-	-	-	-	-	3,650
	"	6	X		-	-	-	-	-	-	-	-	1,650
	"	8	X		-	-	-	-	-	-	-	-	1,340
	"	10	X		-	-	-	-	-	-	-	-	1,330

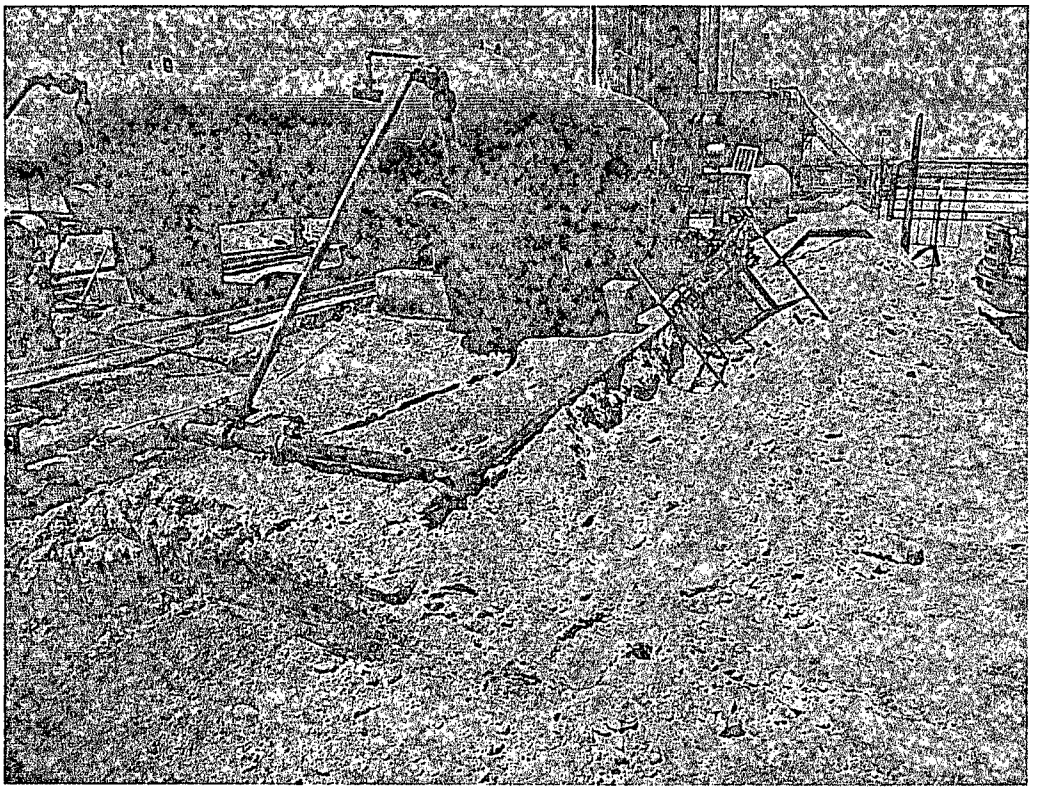
(-) Not Analyzed

Excavated Areas and Depths

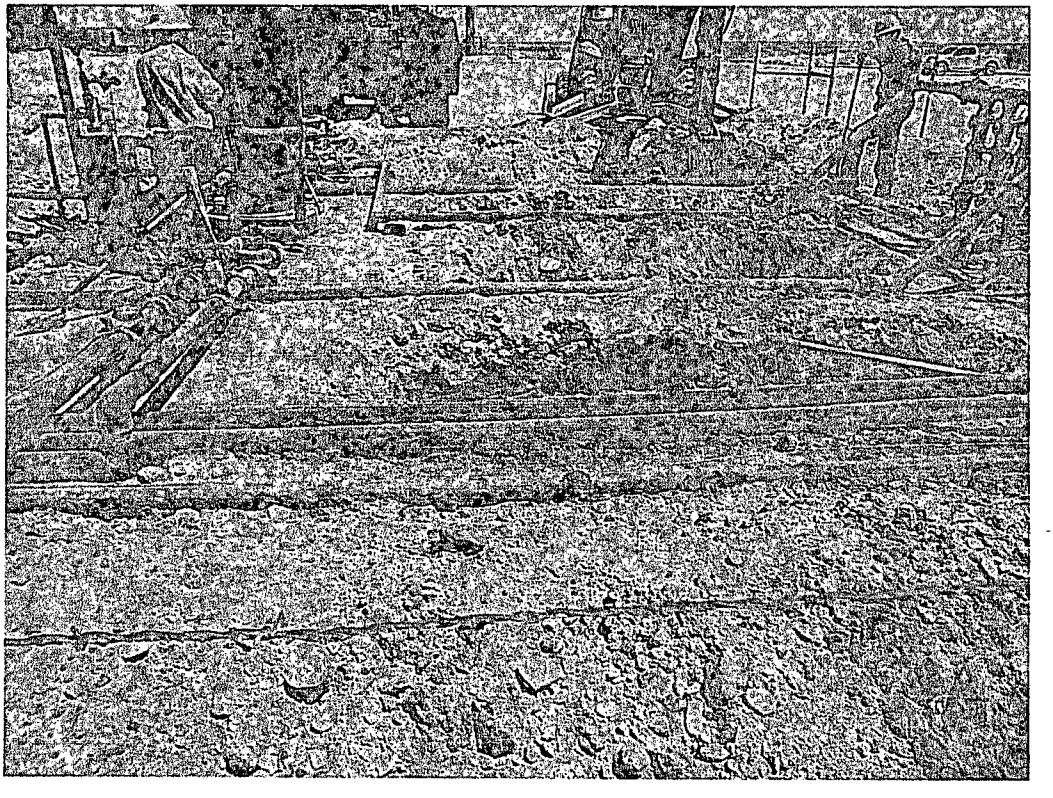
Photos

COG Operating LLC
Way South State Com #1H Tank Battery Eddy County, New Mexico

TETRA TECH



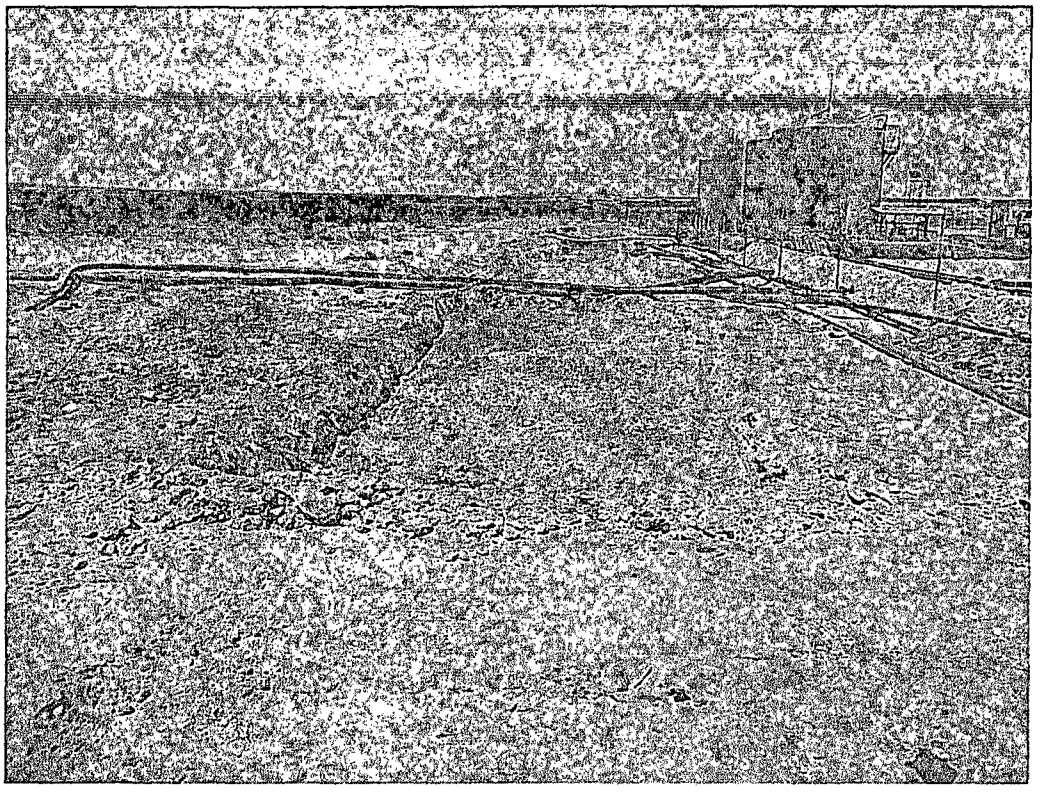
View North – Area of AH-2.



View South – Area of AH-3.

COG Operating LLC
Way South State Com #1H Tank Battery Eddy County, New Mexico

TETRA TECH

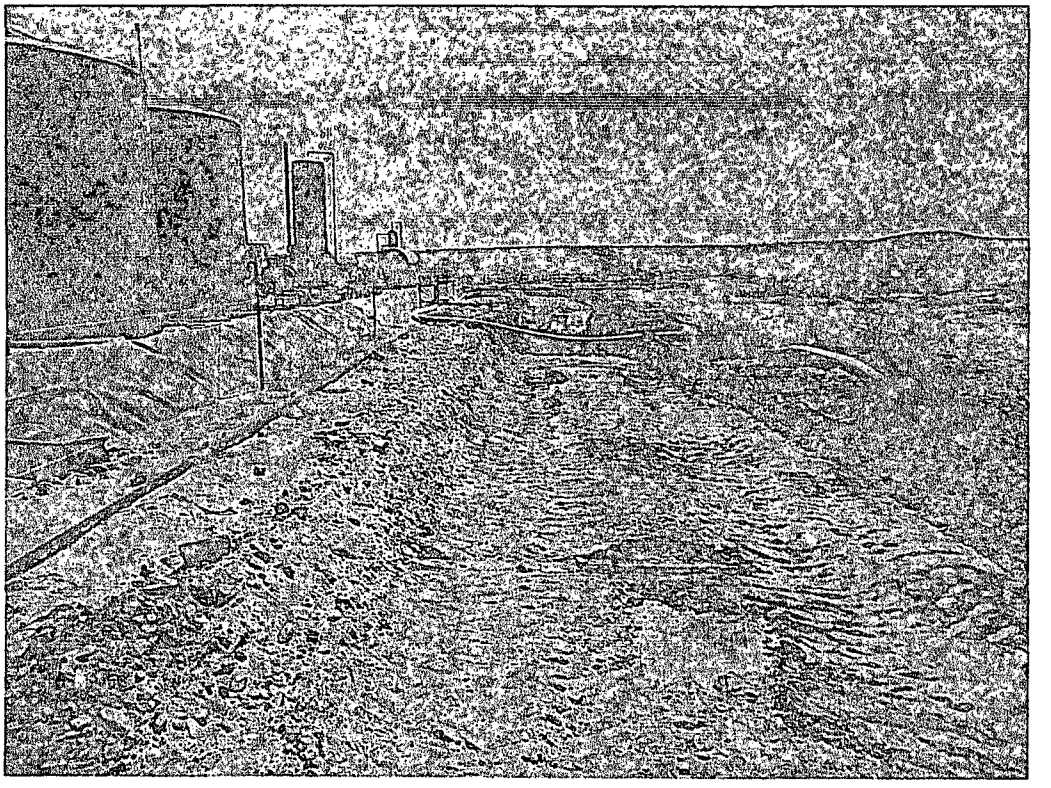


View North – Area of AH-4 and AH-5.

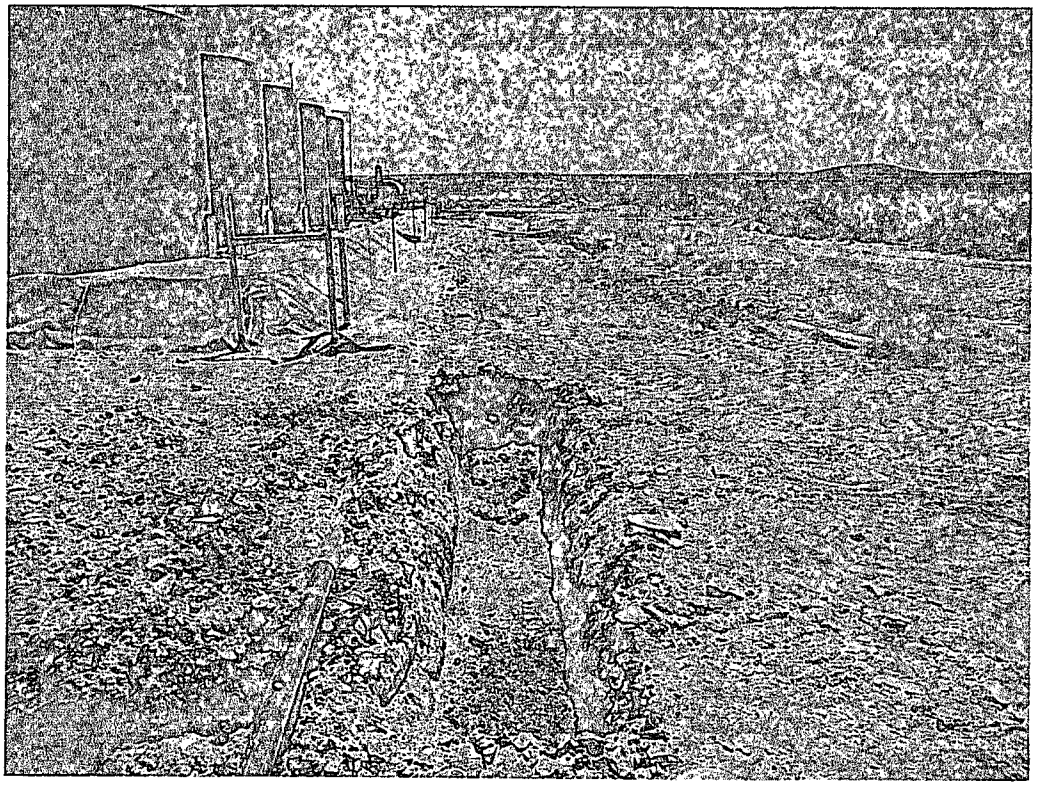
View South – Area of AH-6.

COG Operating LLC
Way South State Com #1H Tank Battery Eddy County, New Mexico

TETRA TECH



View South – Area of AH-7 and AH-8.

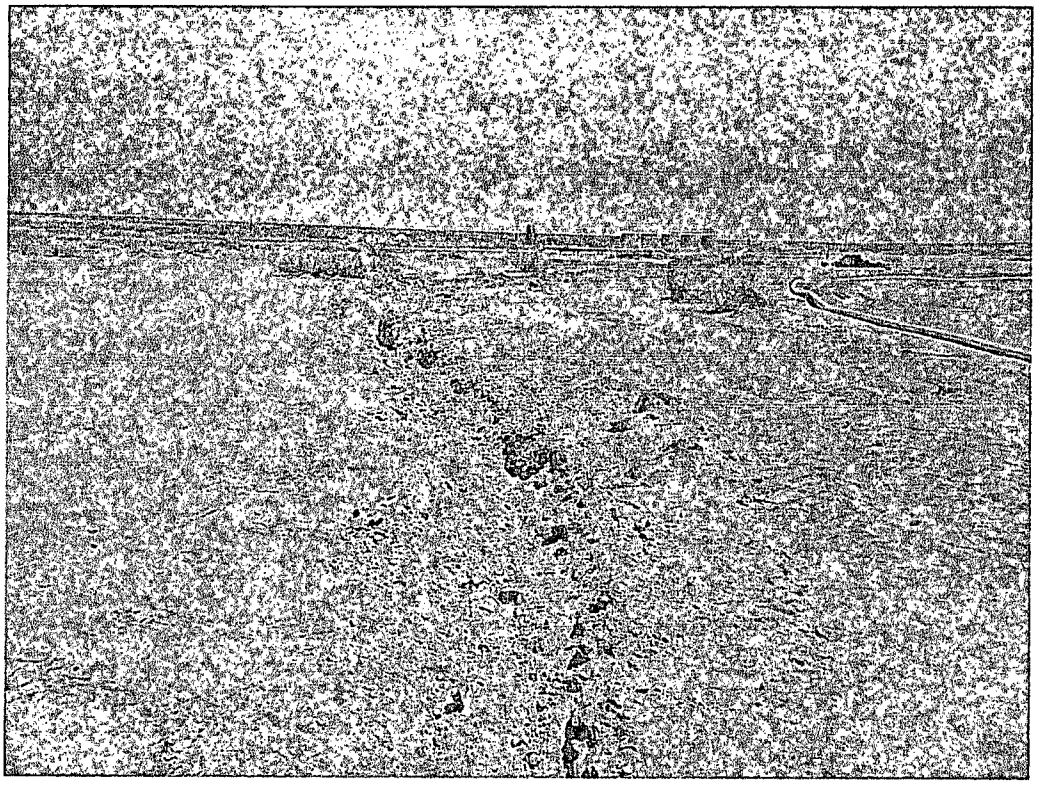


View South – Area of AH-9.

COG Operating LLC
Way South State Com #1H Tank Battery Eddy County, New Mexico

TETRA TECH

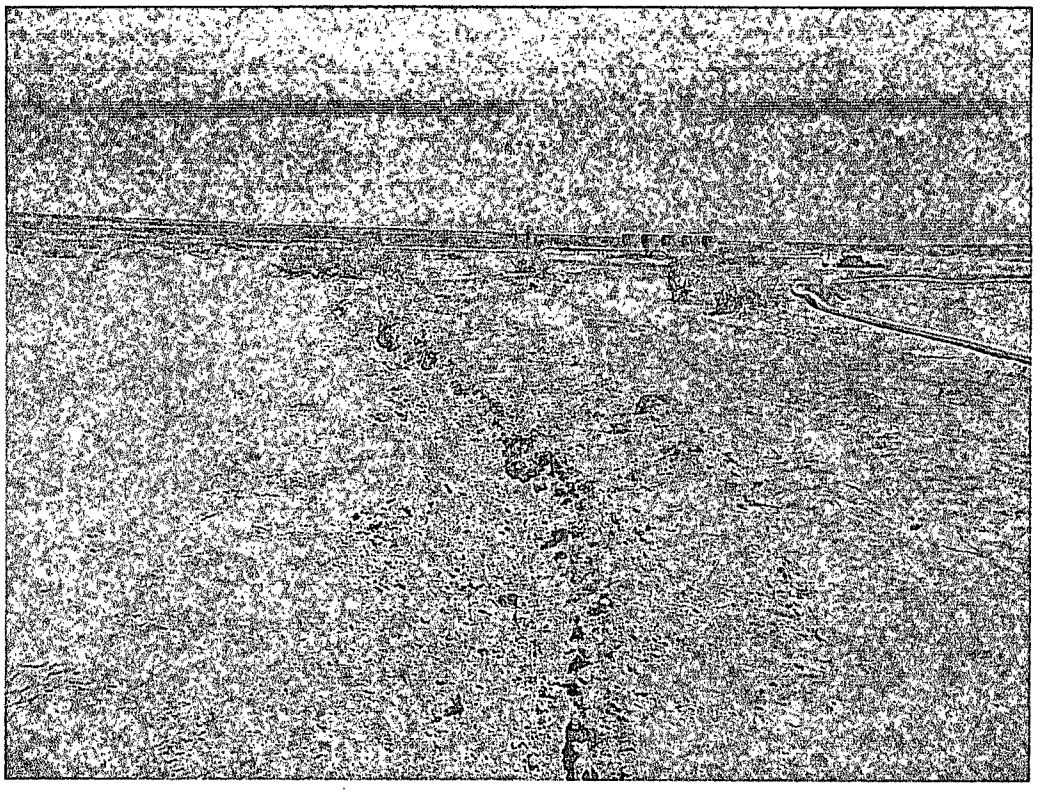
View East – Area of AH-11.



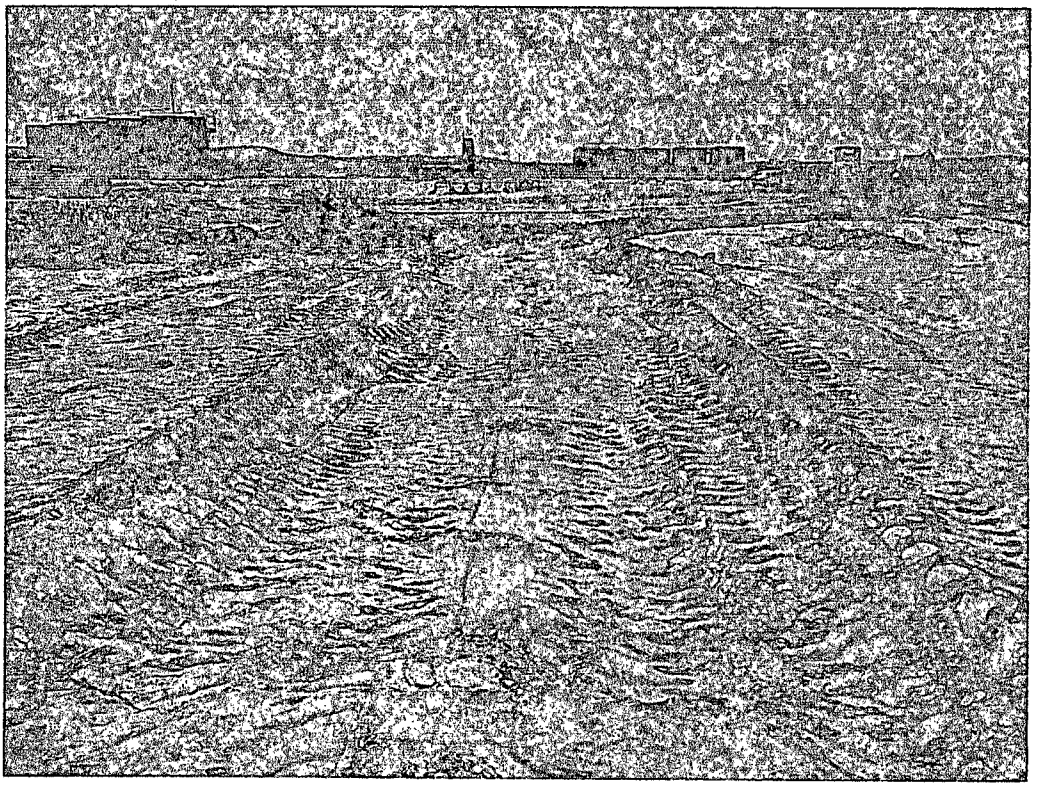
View Northeast – Area of AH-12 and AH-13.

COG Operating LLC
Way South State Com #1H Tank Battery Eddy County, New Mexico

TETRA TECH



View Northeast – Area of AH-14.

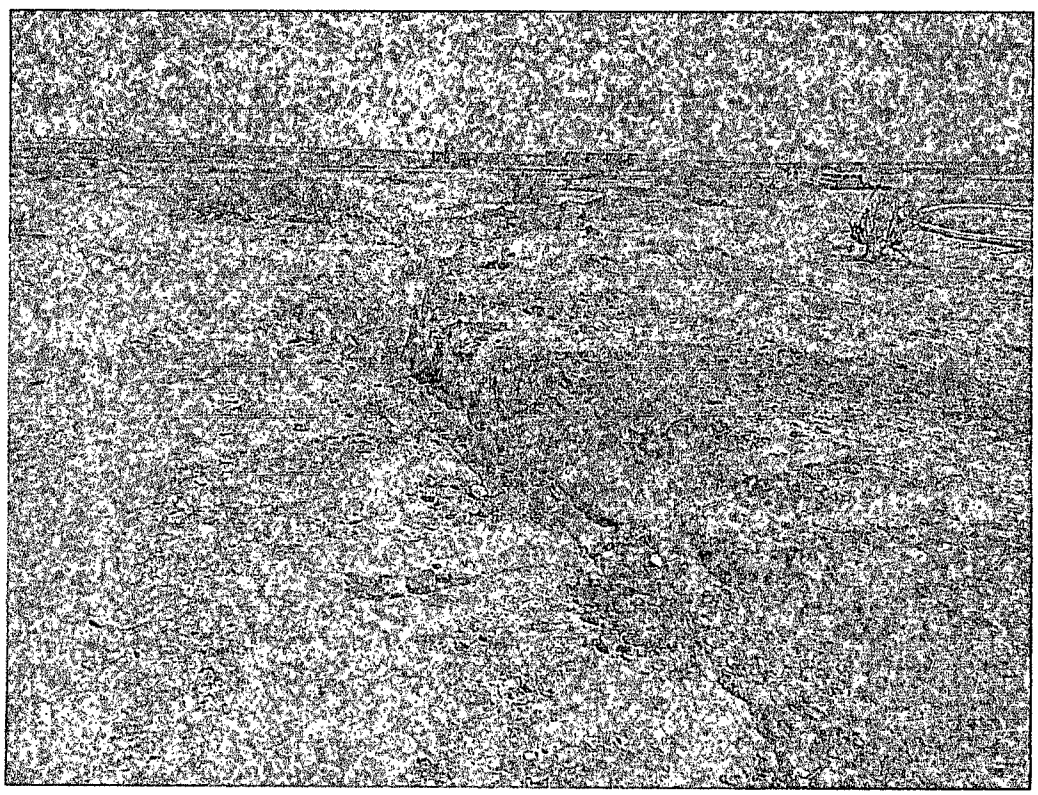


View Southwest – Area of AH-15 and AH-16.

COG Operating LLC
Way South State Com #1H Tank Battery Eddy County, New Mexico

TETRA TECH

View Southwest – Area of AH-16 and AH-17.



View Southwest – Area of AH-19 and AH-20.

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company	**COG Operating LLC**	Contact	**Pat Ellis**
Address	**600 West Illinois Avenue, Midland, TX 79701**	Telephone No.	**(432) 230-0077**
Facility Name	**Way South State Com #1 Tank Battery**	Facility Type	**Tank Battery**

Surface Owner: Federal	Mineral Owner	Lease No. (API#)30-015-37234

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	30	26S	28E					Eddy

Latitude N32.01878 ° **Longitude** W104.11947 °

NATURE OF RELEASE

Type of Release: Produced Fluids	Volume of Release 40 bbls	Volume Recovered 20 bbls
Source of Release: Knock out and clean out on tank.	Date and Hour of Occurrence 03/12/2013	Date and Hour of Discovery 03/12/2013 12:00 p.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? **Mike Bratcher-OCD**	
By Whom? Michelle Mullins	Date and Hour 03/18/2013 10:58 a.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*

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Describe Cause of Problem and Remedial Action Taken.*

Knock out and clean out gasket failed. Replaced with high pressure gasket.

Describe Area Affected and Cleanup Action Taken.*

Tetra Tech personnel inspected the site and collected samples to define the spill extents. Soil that exceeded the RRAL was removed and hauled away for proper disposal. The site was then brought up to surface grade with clean backfill material. Tetra Tech prepared a closure report and submitted it to NMOCD for review.

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

Signature:	OIL CONSERVATION DIVISION	
Printed Name: Ike Tavarez (agent for COG)	Approved by District Supervisor:	
Title: Project Manager	Approval Date:	Expiration Date:
E-mail Address: Ike Tavarez@tetratech.com	Conditions of Approval:	Attached ☐
Date: 5-15-13 Phone: (432) 682-4559		

* Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
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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

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NMOCD ARTESIA

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Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company	**COG Operating LLC**	Contact	**Pat Ellis**
Address	**600 West Illinois Avenue, Midland, TX 79701**	Telephone No.	**(432) 230-0077**
Facility Name	**Way South State Com #1 Tank Battery**	Facility Type	**Tank Battery**

Surface Owner: Federal	Mineral Owner	Lease No. (API#)30-015-37234

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	30	26S	28E					Eddy

Latitude N32.01878 ° **Longitude** W104.11947 °

NATURE OF RELEASE

Type of Release: Produced Water/Oil	Volume of Release 25 bbls pw 5 bbls oil	Volume Recovered 15 bbls pw 2 bbls oil
Source of Release: FWKO	Date and Hour of Occurrence 11/28/2012	Date and Hour of Discovery 11/28/2012 11:00 a.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? **Mike Bratcher-OCD**	
By Whom? Michelle Mullins	Date and Hour 12/03/2012 8:59 p.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

A failed gasket at the FWKO inside the Way South State Com #1H facility failed allowing the release of produced fluids into the facility. The gasket has been replaced.

Describe Area Affected and Cleanup Action Taken.*

Tetra Tech personnel inspected the site and collected samples to define the spill extents. Soil that exceeded the RRAL was removed and hauled away for proper disposal. The site was then brought up to surface grade with clean backfill material. Tetra Tech prepared a closure report and submitted it to NMOCD for review.

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

Signature:	OIL CONSERVATION DIVISION	
Printed Name: Ike Tavarez (agent for COG)	Approved by District Supervisor:	
Title: Project Manager	Approval Date:	Expiration Date:
E-mail Address: Ike Tavarez@tetratech.com	Conditions of Approval:	Attached ☐
Date: 5-15-13 Phone: (432) 682-4559		

* Attach Additional Sheets If Necessary

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1000 Rio Brazos Road, Aztec, NM 87410
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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

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Revised October 10, 2003

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Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company	**COG Operating LLC**	Contact	**Pat Ellis**
Address	**600 West Illinois Avenue, Midland, TX 79701**	Telephone No.	**(432) 230-0077**
Facility Name	**Way South State Com #1 Tank Battery**	Facility Type	**Tank Battery**

Surface Owner: Federal	Mineral Owner	Lease No. (API#)30-015-37234

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	30	26S	28E					Eddy

Latitude N32.01878 ° **Longitude** W104.11947 °

NATURE OF RELEASE

Type of Release: Produced Water/Oil	Volume of Release 75 bbls pw 10 bbls oil	Volume Recovered 71 bbls pw 10 bbls oil
Source of Release: Burned Lines at FWKO	Date and Hour of Occurrence 09/16/2012	Date and Hour of Discovery 09/16/2012 2:15 p.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? **Mike Bratcher-OCD**	
By Whom? Michelle Mullins	Date and Hour 09/17/2012 8:19 p.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

A fire caused several lines to be burned; this caused the release of fluid. The equipment in the facility was repaired and returned to service.

Describe Area Affected and Cleanup Action Taken.*

Tetra Tech personnel inspected the site and collected samples to define the spill extents. Soil that exceeded the RRAL was removed and hauled away for proper disposal. The site was then brought up to surface grade with clean backfill material. Tetra Tech prepared a closure report and submitted it to NMOCD for review.

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

Signature:	OIL CONSERVATION DIVISION	
Printed Name: Ike Tavarez (agent for COG)	Approved by District Supervisor:	
Title: Project Manager	Approval Date:	Expiration Date:
E-mail Address: Ike Tavarez@tetratech.com	Conditions of Approval:	Attached ☐
Date: 5-15-13 Phone: (432) 682-4559		

* Attach Additional Sheets If Necessary

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State of New Mexico
Energy Minerals and Natural Resources

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

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Revised October 10, 2003

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Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	COG OPERATING LLC	Contact	Pat Ellis
Address	600 West Illinois Avenue, Midland, TX 79701	Telephone No.	432-230-0077
Facility Name	WAY SOUTH STATE COM #001H	Facility Type	TANK BATTERY

Surface Owner STATE	Mineral Owner	Lease No. (API#) 30-015-37234

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	30	26S	28E					EDDY

Latitude 32.01862 **Longitude** 104.13424

NATURE OF RELEASE

Type of Release Produced fluids	Volume of Release 40bbls	Volume Recovered 20bbls
Source of Release Knock out and clean out on tank.	Date and Hour of Occurrence 03-12-2013	Date and Hour of Discovery 03-12-2013 12:00pm
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher - NMOCD	
By Whom? Michelle Mulllins	Date and Hour 03-18-2013 10:58am	
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.*

Knock out and clean out gasket failed. Replaced with a hi pressure gasket.

Describe Area Affected and Cleanup Action Taken.*

Initially 40bbls of produced fluid were released. We were able to recover 20bbls of fluid with a vacuum truck. All free fluid has been recovered. Tetra Tech will sample the spill site area to delineate any possible contamination from the release and we will present a 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: Senior Environmental Coordinator	Approval Date:	Expiration Date:
E-mail Address: jrusso@concho.com	Conditions of Approval:	Attached ☐
Date: 03-22-2013 Phone: 432-212-2399		

* Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
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State of New Mexico
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Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	COG OPERATING LLC	Contact	Pat Ellis
Address	600 West Illinois Avenue, Midland, TX 79701	Telephone No.	432-230-0077
Facility Name	Way South State Com #1H	Facility Type	Tank Battery

Surface Owner State	Mineral Owner	Lease No. (API#) 30-015-37234

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	30	26S	28E					Eddy

Latitude 32 01.128 **Longitude** 104 07.136

NATURE OF RELEASE

Type of Release Produced water / Oil	Volume of Release 25bbls pw 5bbls oil	Volume Recovered 15bbls pw 2bbls oil
Source of Release FWKO	Date and Hour of Occurrence 11/28/2012	Date and Hour of Discovery 11/28/2012 11:00 a.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher-OCD	
By Whom? Michelle Mullins	Date and Hour 12/03/2012 8:59 a.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

A failed gasket at the FWKO inside the Way South State Com #1H facility failed allowing the release of produced fluids into the facility. The failed gasket has been replaced.

Describe Area Affected and Cleanup Action Taken.*

Initially 30bbls of produced fluid were released from the FWKO and we were able to recover 17bbls with a vacuum truck. The release was contained inside the containment at the Way South State Com #1H facility. All free fluid has been recovered from the spill area. Tetra Tech will sample the spill site area to delineate any possible contamination from the release and we will present a remediation work plan to the NMOCD 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: Senior Environmental Coordinator	Approval Date:	Expiration Date:
E-mail Address: jrusso@concho.com	Conditions of Approval:	Attached ☐
Date: 12/10/2012 Phone: 432-212-2399		

* Attach Additional Sheets If Necessary

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	COG OPERATING LLC	Contact	Pat Ellis
Address	550 W. Texas, Suite 100, Midland, TX 79701	Telephone No.	432-230-0077
Facility Name	Way South State Com #1H Tank Battery	Facility Type	Tank Battery

Surface Owner State	Mineral Owner	Lease No. (API#) 30-015-37234 Closest Well Location

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	30	26S	28E					Eddy

Latitude 32 01.152 **Longitude** 104 07.165

NATURE OF RELEASE

Type of Release Produced Water / Oil	Volume of Release 75bbls pw 10bbls oil	Volume Recovered 71bbls pw 10bbls oil
Source of Release Burned lines at FWKO and heater	Date and Hour of Occurrence 09/16/2012	Date and Hour of Discovery 09/16/212 2:15 p.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher-OCD	
By Whom? Michelle Mullins	Date and Hour 09/17/2012 8:19 p.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

A fire caused several lines to be burned; this caused the release of fluid. The equipment in the facility is being repaired in order to be returned to service.

Describe Area Affected and Cleanup Action Taken.*

Initially 85bbls of produced fluid was released and we were able to recover 81bbls with a vacuum truck. Majority of the release was around the production equipment where the lines were burned. 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: 09/27/2012 Phone: 432-212-2399		

* Attach Additional Sheets If Necessary

Appendix B

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

24 South 27 East

6	5	4	3	2	1
7	8 **26**	9 **43**	10	11	12 **27**
18 **34**	17	16	15	14	13 **31**
19	20	21	22 **70**	23	24
30	29	28	27	26	25
31	32	33	34	35	36

24 South 28 East

6 **70**	5 **30**	4 **30**	3	2 **55**	1 **60**
7	8 **50**	9	10 **17**	11 **20**	12 **73**
18	17 **42**	16 **29**	15 **18**	14 **52**	13 **34**
19	20 **48**	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

24 South 29 East

6	5	4	3	2	1
7 **160**	8	9	10	11	12
18	17	16 **18**	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

25 South 27 East

6	5	4	3	2	1
7	8	9	10	11	12 **92**
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33 **19**	34	35	36

25 South 28 East

6	5 **59**	4 **35**	3 **32**	2	1
7	8	9	10	11	12
18 **67**	17	16	15 **48** **49**	14	13
19	20 **96**	21	22	23	24
30	29 **15**	28 **90**	27	26 **30**	25
31	32	33	34	35	36 **40**

25 South 29 East

6 **40**	5	4	3	2	1
7	8	9	10 **40**	11	12
18	17	16	15 **60**	14	13
19	20	21	22	23	24
30 **30**	29	28	27	26	25
31	32	33	34	35	36

26 South 27 East

6	5 **12**	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13 **35**
19	20	21	22 **50**	23	24
30	29	28	27	26	25
31	32	33	34	35	36

26 South 28 East

6	5	4	3	2 **120**	1
7	8	9	10	11	12 **100**
18	17	16	15	14 **120**	13 **56**
19	20	21	22 **120**	23	24
30 SITE	29	28	27	26	25
31	32	33	34	35	36

26 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 **57** **69**	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

Appendix C

Summary Report

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

Report Date: October 18, 2012

Work Order: 12101040

Project Location: Eddy Co., NM
Project Name: COG/Way South State Com. #1H TB
Project Number: 114-6401534

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
311472	AH-1 (0-1')	soil	2012-10-08	00:00	2012-10-10
311473	AH-2 (0-1')	soil	2012-10-08	00:00	2012-10-10
311474	AH-3 (0-6 in.)	soil	2012-10-08	00:00	2012-10-10
311475	AH-4 (0-6 in.)	soil	2012-10-08	00:00	2012-10-10
311476	AH-5 (0-6 in.)	soil	2012-10-08	00:00	2012-10-10
311477	AH-6 (0-1')	soil	2012-10-08	00:00	2012-10-10
311478	AH-6 (1-1.5')	soil	2012-10-08	00:00	2012-10-10
311479	AH-6 (2-2.5')	soil	2012-10-08	00:00	2012-10-10
311480	AH-6 (3-3.5')	soil	2012-10-08	00:00	2012-10-10
311481	AH-6 (4-4.5')	soil	2012-10-08	00:00	2012-10-10
311482	AH-6 (5-5.5')	soil	2012-10-08	00:00	2012-10-10
311483	AH-6 (6-6.5')	soil	2012-10-08	00:00	2012-10-10
311484	AH-6 (7-7.5')	soil	2012-10-08	00:00	2012-10-10
311485	AH-6 (8-8.5')	soil	2012-10-08	00:00	2012-10-10
311486	AH-6 (9-9.5')	soil	2012-10-08	00:00	2012-10-10
311487	AH-7 (0-1')	soil	2012-10-08	00:00	2012-10-10
311488	AH-7 (1-1.5')	soil	2012-10-08	00:00	2012-10-10
311489	AH-7 (2-2.5')	soil	2012-10-08	00:00	2012-10-10
311490	AH-7 (3-3.5')	soil	2012-10-08	00:00	2012-10-10
311491	AH-7 (4-4.5')	soil	2012-10-08	00:00	2012-10-10
311492	AH-7 (5-5.5')	soil	2012-10-08	00:00	2012-10-10
311493	AH-7 (6-6.5')	soil	2012-10-08	00:00	2012-10-10
311494	AH-7 (7-7.5')	soil	2012-10-08	00:00	2012-10-10
311495	AH-7 (8-8.5')	soil	2012-10-08	00:00	2012-10-10
311496	AH-7 (9-9.5')	soil	2012-10-08	00:00	2012-10-10
311497	AH-8 (0-6 in.)	soil	2012-10-09	00:00	2012-10-10
311498	AH-9 (0-1')	soil	2012-10-09	00:00	2012-10-10
311499	AH-9 (1-1.5')	soil	2012-10-09	00:00	2012-10-10
311500	AH-9 (2-2.5')	soil	2012-10-09	00:00	2012-10-10
311501	AH-9 (3-3.5')	soil	2012-10-09	00:00	2012-10-10

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
311502	AH-9 (4-4.5')	soil	2012-10-09	00:00	2012-10-10
311503	AH-9 (5-5.5')	soil	2012-10-09	00:00	2012-10-10
311504	AH-9 (6-6.5')	soil	2012-10-09	00:00	2012-10-10
311505	AH-9 (7-7.5')	soil	2012-10-09	00:00	2012-10-10
311506	AH-9 (8-8.5')	soil	2012-10-09	00:00	2012-10-10
311507	AH-10 (0-6 in.)	soil	2012-10-09	00:00	2012-10-10
311508	AH-11 (0-1')	soil	2012-10-09	00:00	2012-10-10
311509	AH-11 (1-1.5')	soil	2012-10-09	00:00	2012-10-10
311510	AH-11 (2-2.5')	soil	2012-10-09	00:00	2012-10-10
311511	AH-11 (3-3.5')	soil	2012-10-09	00:00	2012-10-10
311512	AH-11 (4-4.5')	soil	2012-10-09	00:00	2012-10-10
311513	AH-11 (5-5.5')	soil	2012-10-09	00:00	2012-10-10
311514	AH-11 (6-6.5')	soil	2012-10-09	00:00	2012-10-10
311515	AH-11 (7-7.5')	soil	2012-10-09	00:00	2012-10-10
311516	AH-12 (0-1')	soil	2012-10-09	00:00	2012-10-10
311517	AH-12 (1-1.5')	soil	2012-10-09	00:00	2012-10-10
311518	AH-12 (2-2.5')	soil	2012-10-09	00:00	2012-10-10
311519	AH-12 (3-3.5')	soil	2012-10-09	00:00	2012-10-10
311520	AH-12 (4-4.5')	soil	2012-10-09	00:00	2012-10-10
311521	AH-12 (5-5.5')	soil	2012-10-09	00:00	2012-10-10
311522	AH-12 (6-6.5')	soil	2012-10-09	00:00	2012-10-10
311523	AH-12 (7-7.5')	soil	2012-10-09	00:00	2012-10-10
311524	AH-13 (0-1')	soil	2012-10-09	00:00	2012-10-10
311525	AH-13 (1-1.5')	soil	2012-10-09	00:00	2012-10-10
311526	AH-13 (2-2.5')	soil	2012-10-09	00:00	2012-10-10
311527	AH-13 (3-3.5')	soil	2012-10-09	00:00	2012-10-10
311528	AH-14 (0-1')	soil	2012-10-09	00:00	2012-10-10
311529	AH-14 (1-1.5')	soil	2012-10-09	00:00	2012-10-10
311530	AH-14 (2-2.5')	soil	2012-10-09	00:00	2012-10-10
311531	AH-14 (3-3.5')	soil	2012-10-09	00:00	2012-10-10
311532	AH-15 (0-1')	soil	2012-10-09	00:00	2012-10-10
311533	AH-15 (1-1.5')	soil	2012-10-09	00:00	2012-10-10
311534	AH-15 (2-2.5')	soil	2012-10-09	00:00	2012-10-10
311535	AH-15 (3-3.5')	soil	2012-10-09	00:00	2012-10-10
311536	AH-16 (0-1')	soil	2012-10-09	00:00	2012-10-10
311537	AH-16 (1-1.5')	soil	2012-10-09	00:00	2012-10-10
311538	AH-16 (2-2.5')	soil	2012-10-09	00:00	2012-10-10
311539	AH-16 (3-3.5')	soil	2012-10-09	00:00	2012-10-10
311540	AH-17 (0-1')	soil	2012-10-09	00:00	2012-10-10
311541	AH-17 (1-1.5')	soil	2012-10-09	00:00	2012-10-10
311542	AH-17 (2-2.5')	soil	2012-10-09	00:00	2012-10-10
311543	AH-17 (3-3.5')	soil	2012-10-09	00:00	2012-10-10
311544	AH-18 (0-1')	soil	2012-10-09	00:00	2012-10-10
311545	AH-18 (1-1.5')	soil	2012-10-09	00:00	2012-10-10
311546	AH-18 (2-2.5')	soil	2012-10-09	00:00	2012-10-10
311547	AH-18 (3-3.5')	soil	2012-10-09	00:00	2012-10-10
311548	AH-19 (0-1')	soil	2012-10-09	00:00	2012-10-10
311549	AH-19 (1-1.5')	soil	2012-10-09	00:00	2012-10-10
311550	AH-19 (2-2.5')	soil	2012-10-09	00:00	2012-10-10

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
311551	AH-19 (3-3.5')	soil	2012-10-09	00:00	2012-10-10
311552	AH-19 (4-4.5')	soil	2012-10-09	00:00	2012-10-10
311553	AH-20 (0-1')	soil	2012-10-09	00:00	2012-10-10
311554	AH-20 (1-1.5')	soil	2012-10-09	00:00	2012-10-10
311555	AH-20 (2-2.5')	soil	2012-10-09	00:00	2012-10-10
311556	AH-20 (3-3.5')	soil	2012-10-09	00:00	2012-10-10
311557	AH-20 (4-4.5')	soil	2012-10-09	00:00	2012-10-10
311558	AH-20 (5-5.5')	soil	2012-10-09	00:00	2012-10-10

Sample - Field Code	BTEX Benzene (mg/Kg)	BTEX Toluene (mg/Kg)	BTEX Ethylbenzene (mg/Kg)	BTEX Xylene (mg/Kg)	TPH DRO - NEW DRO (mg/Kg)	TPH GRO GRO (mg/Kg)
311472 - AH-1 (0-1')					<50.0	<1.00
311473 - AH-2 (0-1')	<0.0200	**0.130**	**0.482**	**1.56**	**278**	**286**
311474 - AH-3 (0-6 in.)					<50.0	<1.00
311475 - AH-4 (0-6 in.)					<50.0	<1.00
311476 - AH-5 (0-6 in.)	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	**8.71**
311477 - AH-6 (0-1')					<50.0	<1.00
311487 - AH-7 (0-1')	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	**3.30**
311497 - AH-8 (0-6 in.)					<50.0	<1.00
311498 - AH-9 (0-1')	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<1.00
311507 - AH-10 (0-6 in.)					<50.0	<1.00
311508 - AH-11 (0-1')	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<1.00
311516 - AH-12 (0-1')					<50.0	<1.00
311524 - AH-13 (0-1')	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<1.00
311528 - AH-14 (0-1')	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<1.00
311532 - AH-15 (0-1')	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<1.00
311536 - AH-16 (0-1')					<50.0	<1.00
311540 - AH-17 (0-1')	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<1.00
311544 - AH-18 (0-1')					<50.0	<1.00
311548 - AH-19 (0-1')					<50.0	<1.00
311553 - AH-20 (0-1')	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<1.00

Sample: 311472 - AH-1 (0-1')

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

Sample: 311473 - AH-2 (0-1')

Param	Flag	Result	Units	RL
Chloride		**465**	mg/Kg	4

Sample: 311474 - AH-3 (0-6 in.)

Param	Flag	Result	Units	RL
Chloride		**455**	mg/Kg	4

Sample: 311475 - AH-4 (0-6 in.)

Param	Flag	Result	Units	RL
Chloride		**9450**	mg/Kg	4

Sample: 311476 - AH-5 (0-6 in.)

Param	Flag	Result	Units	RL
Chloride		**15000**	mg/Kg	4

Sample: 311477 - AH-6 (0-1')

Param	Flag	Result	Units	RL
Chloride		**6520**	mg/Kg	4

Sample: 311478 - AH-6 (1-1.5')

Param	Flag	Result	Units	RL
Chloride		**6720**	mg/Kg	4

Sample: 311479 - AH-6 (2-2.5')

Param	Flag	Result	Units	RL
Chloride		**2170**	mg/Kg	4

Sample: 311480 - AH-6 (3-3.5')

Param	Flag	Result	Units	RL
Chloride		**824**	mg/Kg	4

Sample: 311481 - AH-6 (4-4.5')

Param	Flag	Result	Units	RL
Chloride		**465**	mg/Kg	4

Sample: 311482 - AH-6 (5-5.5')

Param	Flag	Result	Units	RL
Chloride		**953**	mg/Kg	4

Sample: 311483 - AH-6 (6-6.5')

Param	Flag	Result	Units	RL
Chloride		**2030**	mg/Kg	4

Sample: 311484 - AH-6 (7-7.5')

Param	Flag	Result	Units	RL
Chloride		**1680**	mg/Kg	4

Sample: 311485 - AH-6 (8-8.5')

Param	Flag	Result	Units	RL
Chloride		**1690**	mg/Kg	4

Sample: 311486 - AH-6 (9-9.5')

Param	Flag	Result	Units	RL
Chloride		**1480**	mg/Kg	4

Sample: 311487 - AH-7 (0-1')

Param	Flag	Result	Units	RL
Chloride		**4550**	mg/Kg	4

Sample: 311488 - AH-7 (1-1.5')

Param	Flag	Result	Units	RL
Chloride		**2190**	mg/Kg	4

Sample: 311489 - AH-7 (2-2.5')

Param	Flag	Result	Units	RL
Chloride		**1270**	mg/Kg	4

Sample: 311490 - AH-7 (3-3.5')

Param	Flag	Result	Units	RL
Chloride		**299**	mg/Kg	4

Sample: 311491 - AH-7 (4-4.5')

Param	Flag	Result	Units	RL
Chloride		**82.0**	mg/Kg	4

Sample: 311492 - AH-7 (5-5.5')

Param	Flag	Result	Units	RL
Chloride		**28.9**	mg/Kg	4

Sample: 311493 - AH-7 (6-6.5')

Param	Flag	Result	Units	RL
Chloride		**116**	mg/Kg	4

Sample: 311494 - AH-7 (7-7.5')

Param	Flag	Result	Units	RL
Chloride		**188**	mg/Kg	4

Sample: 311495 - AH-7 (8-8.5')

Param	Flag	Result	Units	RL
Chloride		**381**	mg/Kg	4

Sample: 311496 - AH-7 (9-9.5')

Param	Flag	Result	Units	RL
Chloride		**733**	mg/Kg	4

Sample: 311497 - AH-8 (0-6 in.)

Param	Flag	Result	Units	RL
Chloride		**7400**	mg/Kg	4

Sample: 311498 - AH-9 (0-1')

Param	Flag	Result	Units	RL
Chloride		**2420**	mg/Kg	4

Sample: 311499 - AH-9 (1-1.5')

Param	Flag	Result	Units	RL
Chloride		**8870**	mg/Kg	4

Sample: 311500 - AH-9 (2-2.5')

Param	Flag	Result	Units	RL
Chloride		**3200**	mg/Kg	4

Sample: 311501 - AH-9 (3-3.5')

Param	Flag	Result	Units	RL
Chloride		**2840**	mg/Kg	4

Sample: 311502 - AH-9 (4-4.5')

Param	Flag	Result	Units	RL
Chloride		**2680**	mg/Kg	4

Sample: 311503 - AH-9 (5-5.5')

Param	Flag	Result	Units	RL
Chloride		**148**	mg/Kg	4

Sample: 311504 - AH-9 (6-6.5')

Param	Flag	Result	Units	RL
Chloride		**259**	mg/Kg	4

Sample: 311505 - AH-9 (7-7.5')

Param	Flag	Result	Units	RL
Chloride		**182**	mg/Kg	4

Sample: 311506 - AH-9 (8-8.5')

Param	Flag	Result	Units	RL
Chloride		**307**	mg/Kg	4

Sample: 311507 - AH-10 (0-6 in.)

Param	Flag	Result	Units	RL
Chloride		**3180**	mg/Kg	4

Sample: 311508 - AH-11 (0-1')

Param	Flag	Result	Units	RL
Chloride		**15600**	mg/Kg	4

Sample: 311509 - AH-11 (1-1.5')

Param	Flag	Result	Units	RL
Chloride		**7820**	mg/Kg	4

Sample: 311510 - AH-11 (2-2.5')

Param	Flag	Result	Units	RL
Chloride		**4340**	mg/Kg	4

Sample: 311511 - AH-11 (3-3.5')

Param	Flag	Result	Units	RL
Chloride		**311**	mg/Kg	4

Sample: 311512 - AH-11 (4-4.5')

Param	Flag	Result	Units	RL
Chloride		**837**	mg/Kg	4

Sample: 311513 - AH-11 (5-5.5')

Param	Flag	Result	Units	RL
Chloride		**765**	mg/Kg	4

Sample: 311514 - AH-11 (6-6.5')

Param	Flag	Result	Units	RL
Chloride		**1150**	mg/Kg	4

Sample: 311515 - AH-11 (7-7.5')

Param	Flag	Result	Units	RL
Chloride		**1210**	mg/Kg	4

Sample: 311516 - AH-12 (0-1')

Param	Flag	Result	Units	RL
Chloride		**10600**	mg/Kg	4

Sample: 311517 - AH-12 (1-1.5')

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

Sample: 311518 - AH-12 (2-2.5')

Param	Flag	Result	Units	RL
Chloride		**2820**	mg/Kg	4

Sample: 311519 - AH-12 (3-3.5')

Param	Flag	Result	Units	RL
Chloride		**3830**	mg/Kg	4

Sample: 311520 - AH-12 (4-4.5')

Param	Flag	Result	Units	RL
Chloride		**3330**	mg/Kg	4

Sample: 311521 - AH-12 (5-5.5')

Param	Flag	Result	Units	RL
Chloride		**2380**	mg/Kg	4

Sample: 311522 - AH-12 (6-6.5')

Param	Flag	Result	Units	RL
Chloride		**1420**	mg/Kg	4

Sample: 311523 - AH-12 (7-7.5')

Param	Flag	Result	Units	RL
Chloride		**1610**	mg/Kg	4

Sample: 311524 - AH-13 (0-1')

Param	Flag	Result	Units	RL
Chloride		**11200**	mg/Kg	4

Sample: 311525 - AH-13 (1-1.5')

Param	Flag	Result	Units	RL
Chloride		**5010**	mg/Kg	4

Sample: 311526 - AH-13 (2-2.5')

Param	Flag	Result	Units	RL
Chloride		**2970**	mg/Kg	4

Sample: 311527 - AH-13 (3-3.5')

Param	Flag	Result	Units	RL
Chloride		**1150**	mg/Kg	4

Sample: 311528 - AH-14 (0-1')

Param	Flag	Result	Units	RL
Chloride		**12600**	mg/Kg	4

Sample: 311529 - AH-14 (1-1.5')

Param	Flag	Result	Units	RL
Chloride		**3770**	mg/Kg	4

Sample: 311530 - AH-14 (2-2.5')

Param	Flag	Result	Units	RL
Chloride		**4040**	mg/Kg	4

Sample: 311531 - AH-14 (3-3.5')

Param	Flag	Result	Units	RL
Chloride		**2600**	mg/Kg	4

Sample: 311532 - AH-15 (0-1')

Param	Flag	Result	Units	RL
Chloride		**10800**	mg/Kg	4

Sample: 311533 - AH-15 (1-1.5')

Param	Flag	Result	Units	RL
Chloride		**6890**	mg/Kg	4

Sample: 311534 - AH-15 (2-2.5')

Param	Flag	Result	Units	RL
Chloride		**2780**	mg/Kg	4

Sample: 311535 - AH-15 (3-3.5')

Param	Flag	Result	Units	RL
Chloride		**3080**	mg/Kg	4

Sample: 311536 - AH-16 (0-1')

Param	Flag	Result	Units	RL
Chloride		**11200**	mg/Kg	4

Sample: 311537 - AH-16 (1-1.5')

Param	Flag	Result	Units	RL
Chloride		**5190**	mg/Kg	4

Sample: 311538 - AH-16 (2-2.5')

Param	Flag	Result	Units	RL
Chloride		**3110**	mg/Kg	4

Sample: 311539 - AH-16 (3-3.5')

Param	Flag	Result	Units	RL
Chloride		**2590**	mg/Kg	4

Sample: 311540 - AH-17 (0-1')

Param	Flag	Result	Units	RL
Chloride		**17500**	mg/Kg	4

Sample: 311541 - AH-17 (1-1.5')

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

Sample: 311542 - AH-17 (2-2.5')

Param	Flag	Result	Units	RL
Chloride		**5170**	mg/Kg	4

Sample: 311543 - AH-17 (3-3.5')

Param	Flag	Result	Units	RL
Chloride		**3020**	mg/Kg	4

Sample: 311544 - AH-18 (0-1')

Param	Flag	Result	Units	RL
Chloride		**2980**	mg/Kg	4

Sample: 311545 - AH-18 (1-1.5')

Param	Flag	Result	Units	RL
Chloride		**2140**	mg/Kg	4

Sample: 311546 - AH-18 (2-2.5')

Param	Flag	Result	Units	RL
Chloride		**1370**	mg/Kg	4

Sample: 311547 - AH-18 (3-3.5')

Param	Flag	Result	Units	RL
Chloride		**1050**	mg/Kg	4

Sample: 311548 - AH-19 (0-1')

Param	Flag	Result	Units	RL
Chloride		**6390**	mg/Kg	4

Sample: 311549 - AH-19 (1-1.5')

Param	Flag	Result	Units	RL
Chloride		**2980**	mg/Kg	4

Sample: 311550 - AH-19 (2-2.5')

Param	Flag	Result	Units	RL
Chloride		**3530**	mg/Kg	4

Sample: 311551 - AH-19 (3-3.5')

Param	Flag	Result	Units	RL
Chloride		**3500**	mg/Kg	4

Sample: 311552 - AH-19 (4-4.5')

Param	Flag	Result	Units	RL
Chloride		**2340**	mg/Kg	4

Sample: 311553 - AH-20 (0-1')

Param	Flag	Result	Units	RL
Chloride		**22700**	mg/Kg	4

Sample: 311554 - AH-20 (1-1.5')

Param	Flag	Result	Units	RL
Chloride		**7230**	mg/Kg	4

Sample: 311555 - AH-20 (2-2.5')

Param	Flag	Result	Units	RL
Chloride		**3820**	mg/Kg	4

Sample: 311556 - AH-20 (3-3.5')

Param	Flag	Result	Units	RL
Chloride		**2140**	mg/Kg	4

Sample: 311557 - AH-20 (4-4.5')

Param	Flag	Result	Units	RL
Chloride		**1170**	mg/Kg	4

Sample: 311558 - AH-20 (5-5.5')

Param	Flag	Result	Units	RL
Chloride		**1220**	mg/Kg	4

TRACEANALYSIS, INC.

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Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

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

Report Date: October 18, 2012

Work Order: 12101040

Project Location: Eddy Co., NM
Project Name: COG/Way South State Com. #1H TB
Project Number: 114-6401534

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
311472	AH-1 (0-1')	soil	2012-10-08	00:00	2012-10-10
311473	AH-2 (0-1')	soil	2012-10-08	00:00	2012-10-10
311474	AH-3 (0-6 in.)	soil	2012-10-08	00:00	2012-10-10
311475	AH-4 (0-6 in.)	soil	2012-10-08	00:00	2012-10-10
311476	AH-5 (0-6 in.)	soil	2012-10-08	00:00	2012-10-10
311477	AH-6 (0-1')	soil	2012-10-08	00:00	2012-10-10
311478	AH-6 (1-1.5')	soil	2012-10-08	00:00	2012-10-10
311479	AH-6 (2-2.5')	soil	2012-10-08	00:00	2012-10-10
311480	AH-6 (3-3.5')	soil	2012-10-08	00:00	2012-10-10
311481	AH-6 (4-4.5')	soil	2012-10-08	00:00	2012-10-10
311482	AH-6 (5-5.5')	soil	2012-10-08	00:00	2012-10-10
311483	AH-6 (6-6.5')	soil	2012-10-08	00:00	2012-10-10
311484	AH-6 (7-7.5')	soil	2012-10-08	00:00	2012-10-10
311485	AH-6 (8-8.5')	soil	2012-10-08	00:00	2012-10-10
311486	AH-6 (9-9.5')	soil	2012-10-08	00:00	2012-10-10
311487	AH-7 (0-1')	soil	2012-10-08	00:00	2012-10-10
311488	AH-7 (1-1.5')	soil	2012-10-08	00:00	2012-10-10
311489	AH-7 (2-2.5')	soil	2012-10-08	00:00	2012-10-10

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
311490	AH-7 (3-3.5')	soil	2012-10-08	00:00	2012-10-10
311491	AH-7 (4-4.5')	soil	2012-10-08	00:00	2012-10-10
311492	AH-7 (5-5.5')	soil	2012-10-08	00:00	2012-10-10
311493	AH-7 (6-6.5')	soil	2012-10-08	00:00	2012-10-10
311494	AH-7 (7-7.5')	soil	2012-10-08	00:00	2012-10-10
311495	AH-7 (8-8.5')	soil	2012-10-08	00:00	2012-10-10
311496	AH-7 (9-9.5')	soil	2012-10-08	00:00	2012-10-10
311497	AH-8 (0-6 in.)	soil	2012-10-09	00:00	2012-10-10
311498	AH-9 (0-1')	soil	2012-10-09	00:00	2012-10-10
311499	AH-9 (1-1.5')	soil	2012-10-09	00:00	2012-10-10
311500	AH-9 (2-2.5')	soil	2012-10-09	00:00	2012-10-10
311501	AH-9 (3-3.5')	soil	2012-10-09	00:00	2012-10-10
311502	AH-9 (4-4.5')	soil	2012-10-09	00:00	2012-10-10
311503	AH-9 (5-5.5')	soil	2012-10-09	00:00	2012-10-10
311504	AH-9 (6-6.5')	soil	2012-10-09	00:00	2012-10-10
311505	AH-9 (7-7.5')	soil	2012-10-09	00:00	2012-10-10
311506	AH-9 (8-8.5')	soil	2012-10-09	00:00	2012-10-10
311507	AH-10 (0-6 in.)	soil	2012-10-09	00:00	2012-10-10
311508	AH-11 (0-1')	soil	2012-10-09	00:00	2012-10-10
311509	AH-11 (1-1.5')	soil	2012-10-09	00:00	2012-10-10
311510	AH-11 (2-2.5')	soil	2012-10-09	00:00	2012-10-10
311511	AH-11 (3-3.5')	soil	2012-10-09	00:00	2012-10-10
311512	AH-11 (4-4.5')	soil	2012-10-09	00:00	2012-10-10
311513	AH-11 (5-5.5')	soil	2012-10-09	00:00	2012-10-10
311514	AH-11 (6-6.5')	soil	2012-10-09	00:00	2012-10-10
311515	AH-11 (7-7.5')	soil	2012-10-09	00:00	2012-10-10
311516	AH-12 (0-1')	soil	2012-10-09	00:00	2012-10-10
311517	AH-12 (1-1.5')	soil	2012-10-09	00:00	2012-10-10
311518	AH-12 (2-2.5')	soil	2012-10-09	00:00	2012-10-10
311519	AH-12 (3-3.5')	soil	2012-10-09	00:00	2012-10-10
311520	AH-12 (4-4.5')	soil	2012-10-09	00:00	2012-10-10
311521	AH-12 (5-5.5')	soil	2012-10-09	00:00	2012-10-10
311522	AH-12 (6-6.5')	soil	2012-10-09	00:00	2012-10-10
311523	AH-12 (7-7.5')	soil	2012-10-09	00:00	2012-10-10
311524	AH-13 (0-1')	soil	2012-10-09	00:00	2012-10-10
311525	AH-13 (1-1.5')	soil	2012-10-09	00:00	2012-10-10
311526	AH-13 (2-2.5')	soil	2012-10-09	00:00	2012-10-10
311527	AH-13 (3-3.5')	soil	2012-10-09	00:00	2012-10-10
311528	AH-14 (0-1')	soil	2012-10-09	00:00	2012-10-10
311529	AH-14 (1-1.5')	soil	2012-10-09	00:00	2012-10-10
311530	AH-14 (2-2.5')	soil	2012-10-09	00:00	2012-10-10
311531	AH-14 (3-3.5')	soil	2012-10-09	00:00	2012-10-10
311532	AH-15 (0-1')	soil	2012-10-09	00:00	2012-10-10
311533	AH-15 (1-1.5')	soil	2012-10-09	00:00	2012-10-10
311534	AH-15 (2-2.5')	soil	2012-10-09	00:00	2012-10-10
311535	AH-15 (3-3.5')	soil	2012-10-09	00:00	2012-10-10

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
311536	AH-16 (0-1')	soil	2012-10-09	00:00	2012-10-10
311537	AH-16 (1-1.5')	soil	2012-10-09	00:00	2012-10-10
311538	AH-16 (2-2.5')	soil	2012-10-09	00:00	2012-10-10
311539	AH-16 (3-3.5')	soil	2012-10-09	00:00	2012-10-10
311540	AH-17 (0-1')	soil	2012-10-09	00:00	2012-10-10
311541	AH-17 (1-1.5')	soil	2012-10-09	00:00	2012-10-10
311542	AH-17 (2-2.5')	soil	2012-10-09	00:00	2012-10-10
311543	AH-17 (3-3.5')	soil	2012-10-09	00:00	2012-10-10
311544	AH-18 (0-1')	soil	2012-10-09	00:00	2012-10-10
311545	AH-18 (1-1.5')	soil	2012-10-09	00:00	2012-10-10
311546	AH-18 (2-2.5')	soil	2012-10-09	00:00	2012-10-10
311547	AH-18 (3-3.5')	soil	2012-10-09	00:00	2012-10-10
311548	AH-19 (0-1')	soil	2012-10-09	00:00	2012-10-10
311549	AH-19 (1-1.5')	soil	2012-10-09	00:00	2012-10-10
311550	AH-19 (2-2.5')	soil	2012-10-09	00:00	2012-10-10
311551	AH-19 (3-3.5')	soil	2012-10-09	00:00	2012-10-10
311552	AH-19 (4-4.5')	soil	2012-10-09	00:00	2012-10-10
311553	AH-20 (0-1')	soil	2012-10-09	00:00	2012-10-10
311554	AH-20 (1-1.5')	soil	2012-10-09	00:00	2012-10-10
311555	AH-20 (2-2.5')	soil	2012-10-09	00:00	2012-10-10
311556	AH-20 (3-3.5')	soil	2012-10-09	00:00	2012-10-10
311557	AH-20 (4-4.5')	soil	2012-10-09	00:00	2012-10-10
311558	AH-20 (5-5.5')	soil	2012-10-09	00:00	2012-10-10

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

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

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Case Narrative

Samples for project COG/Way South State Com. #1H TB were received by TraceAnalysis, Inc. on 2012-10-10 and assigned to work order 12101040. Samples for work order 12101040 were received intact at a temperature of -0.6 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	81195	2012-10-17 at 11:30	95828	2012-10-17 at 11:30
Chloride (Titration)	SM 4500-Cl B	81143	2012-10-15 at 12:12	95759	2012-10-16 at 16:15
Chloride (Titration)	SM 4500-Cl B	81143	2012-10-15 at 12:12	95760	2012-10-16 at 16:16
Chloride (Titration)	SM 4500-Cl B	81143	2012-10-15 at 12:12	95761	2012-10-16 at 16:17
Chloride (Titration)	SM 4500-Cl B	81143	2012-10-15 at 12:12	95762	2012-10-16 at 16:18
Chloride (Titration)	SM 4500-Cl B	81144	2012-10-16 at 11:19	95799	2012-10-17 at 14:42
Chloride (Titration)	SM 4500-Cl B	81144	2012-10-16 at 11:19	95800	2012-10-17 at 14:43
Chloride (Titration)	SM 4500-Cl B	81144	2012-10-16 at 11:19	95801	2012-10-17 at 14:44
Chloride (Titration)	SM 4500-Cl B	81144	2012-10-16 at 11:19	95802	2012-10-17 at 14:45
Chloride (Titration)	SM 4500-Cl B	81144	2012-10-16 at 11:19	95847	2012-10-17 at 15:48
Chloride (Titration)	SM 4500-Cl B	81144	2012-10-16 at 11:19	95848	2012-10-17 at 15:49
TPH DRO - NEW	S 8015 D	81152	2012-10-16 at 08:00	95773	2012-10-17 at 08:28
TPH DRO - NEW	S 8015 D	81154	2012-10-16 at 09:00	95775	2012-10-17 at 09:29
TPH GRO	S 8015 D	81087	2012-10-13 at 12:06	95688	2012-10-13 at 12:06
TPH GRO	S 8015 D	81099	2012-10-13 at 12:06	95715	2012-10-13 at 12:06

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 12101040 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: 311472 - AH-1 (0-1')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95759	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	Sample Preparation:	2012-10-15	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 311472 - AH-1 (0-1')

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	95773	Date Analyzed:	2012-10-17	Analyzed By:	CW
Prep Batch:	81152	Sample Preparation:	2012-10-16	Prepared By:	CW

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			108	mg/Kg	1	100	108	55.1 - 135.7

Sample: 311472 - AH-1 (0-1')

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	95688	Date Analyzed:	2012-10-13	Analyzed By:	YG
Prep Batch:	81087	Sample Preparation:	2012-10-13	Prepared By:	YG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.17	mg/Kg	1	2.00	108	70 - 130

continued ...

sample continued ...

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)			1.85	mg/Kg	1	2.00	92	70 - 130

Sample: 311473 - AH-2 (0-1')

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	95828	Date Analyzed:	2012-10-17	Analyzed By:	YG
Prep Batch:	81195	Sample Preparation:	2012-10-17	Prepared By:	YG

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	1	<0.0200	mg/Kg	1	0.0200
Toluene		1	**0.130**	mg/Kg	1	0.0200
Ethylbenzene		1	**0.482**	mg/Kg	1	0.0200
Xylene		1	**1.56**	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.85	mg/Kg	1	2.00	92	70 - 130
4-Bromofluorobenzene (4-BFB)			2.12	mg/Kg	1	2.00	106	70 - 130

Sample: 311473 - AH-2 (0-1')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95759	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	Sample Preparation:	2012-10-15	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**465**	mg/Kg	5	4.00

Sample: 311473 - AH-2 (0-1')

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	95773	Date Analyzed:	2012-10-17	Analyzed By:	CW
Prep Batch:	81152	Sample Preparation:	2012-10-16	Prepared By:	CW

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO			**278**	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			123	mg/Kg	1	100	123	55.1 - 135.7

Sample: 311473 - AH-2 (0-1')

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	95715	Date Analyzed:	2012-10-13	Analyzed By:	YG
Prep Batch:	81099	Sample Preparation:	2012-10-13	Prepared By:	YG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO			**286**	mg/Kg	5	1.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			8.76	mg/Kg	5	10.0	88	70 - 130
4-Bromofluorobenzene (4-BFB)			12.4	mg/Kg	5	10.0	124	70 - 130

Sample: 311474 - AH-3 (0-6 in.)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95759	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	Sample Preparation:	2012-10-15	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**455**	mg/Kg	5	4.00

Sample: 311474 - AH-3 (0-6 in.)

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	95773	Date Analyzed:	2012-10-17	Analyzed By:	CW
Prep Batch:	81152	Sample Preparation:	2012-10-16	Prepared By:	CW

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			91.6	mg/Kg	1	100	92	55.1 - 135.7

Sample: 311474 - AH-3 (0-6 in.)

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	95688	Date Analyzed:	2012-10-13	Analyzed By:	YG
Prep Batch:	81087	Sample Preparation:	2012-10-13	Prepared By:	YG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.23	mg/Kg	1	2.00	112	70 - 130
4-Bromofluorobenzene (4-BFB)			1.81	mg/Kg	1	2.00	90	70 - 130

Sample: 311475 - AH-4 (0-6 in.)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95759	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	Sample Preparation:	2012-10-15	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**9450**	mg/Kg	10	4.00

Sample: 311475 - AH-4 (0-6 in.)

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	95773	Date Analyzed:	2012-10-17	Analyzed By:	CW
Prep Batch:	81152	Sample Preparation:	2012-10-16	Prepared By:	CW

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			102	mg/Kg	1	100	102	55.1 - 135.7

Sample: 311475 - AH-4 (0-6 in.)

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	95688	Date Analyzed:	2012-10-13	Analyzed By:	YG
Prep Batch:	81087	Sample Preparation:	2012-10-13	Prepared By:	YG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.25	mg/Kg	1	2.00	112	70 - 130
4-Bromofluorobenzene (4-BFB)			1.80	mg/Kg	1	2.00	90	70 - 130

Sample: 311476 - AH-5 (0-6 in.)

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	95828	Date Analyzed:	2012-10-17	Analyzed By:	YG
Prep Batch:	81195	Sample Preparation:	2012-10-17	Prepared By:	YG

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)			1.89	mg/Kg	1	2.00	94	70 - 130
4-Bromofluorobenzene (4-BFB)			1.96	mg/Kg	1	2.00	98	70 - 130

Sample: 311476 - AH-5 (0-6 in.)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95759	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	Sample Preparation:	2012-10-15	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**15000**	mg/Kg	10	4.00

Sample: 311476 - AH-5 (0-6 in.)

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	95773	Date Analyzed:	2012-10-17	Analyzed By:	CW
Prep Batch:	81152	Sample Preparation:	2012-10-16	Prepared By:	CW

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			78.5	mg/Kg	1	100	78	55.1 - 135.7

Sample: 311476 - AH-5 (0-6 in.)

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	95688	Date Analyzed:	2012-10-13	Analyzed By:	YG
Prep Batch:	81087	Sample Preparation:	2012-10-13	Prepared By:	YG

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
GRO		1	**8.71**	mg/Kg	1	1.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.80	mg/Kg	1	2.00	90	70 - 130
4-Bromofluorobenzene (4-BFB)			1.92	mg/Kg	1	2.00	96	70 - 130

Sample: 311477 - AH-6 (0-1')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95759	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	Sample Preparation:	2012-10-15	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**6520**	mg/Kg	10	4.00

Sample: 311477 - AH-6 (0-1')

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	95773	Date Analyzed:	2012-10-17	Analyzed By:	CW
Prep Batch:	81152	Sample Preparation:	2012-10-16	Prepared By:	CW

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			77.3	mg/Kg	1	100	77	55.1 - 135.7

Sample: 311477 - AH-6 (0-1')

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	95688	Date Analyzed:	2012-10-13	Analyzed By:	YG
Prep Batch:	81087	Sample Preparation:	2012-10-13	Prepared By:	YG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.87	mg/Kg	1	2.00	94	70 - 130
4-Bromofluorobenzene (4-BFB)			1.81	mg/Kg	1	2.00	90	70 - 130

Sample: 311478 - AH-6 (1-1.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95760	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	Sample Preparation:	2012-10-15	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**6720**	mg/Kg	10	4.00

Sample: 311479 - AH-6 (2-2.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95760	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	Sample Preparation:	2012-10-15	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2170**	mg/Kg	10	4.00

Sample: 311480 - AH-6 (3-3.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95760	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	Sample Preparation:	2012-10-15	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**824**	mg/Kg	5	4.00

Sample: 311481 - AH-6 (4-4.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95760	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	Sample Preparation:	2012-10-15	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**465**	mg/Kg	5	4.00

Sample: 311482 - AH-6 (5-5.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95760	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	Sample Preparation:	2012-10-15	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**953**	mg/Kg	5	4.00

Sample: 311483 - AH-6 (6-6.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95760	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	Sample Preparation:	2012-10-15	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2030**	mg/Kg	10	4.00

Sample: 311484 - AH-6 (7-7.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95760	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	Sample Preparation:	2012-10-15	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1680**	mg/Kg	10	4.00

Sample: 311485 - AH-6 (8-8.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95760	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	Sample Preparation:	2012-10-15	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**1690**	mg/Kg	10	4.00

Sample: 311486 - AH-6 (9-9.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95760	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	Sample Preparation:	2012-10-15	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**1480**	mg/Kg	10	4.00

Sample: 311487 - AH-7 (0-1')

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	95828	Date Analyzed:	2012-10-17	Analyzed By:	YG
Prep Batch:	81195	Sample Preparation:	2012-10-17	Prepared By:	YG

Parameter	Flag	Cert	Result	RL 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)			1.93	mg/Kg	1	2.00	96	70 - 130
4-Bromofluorobenzene (4-BFB)			1.90	mg/Kg	1	2.00	95	70 - 130

Sample: 311487 - AH-7 (0-1')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95760	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	Sample Preparation:	2012-10-15	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**4550**	mg/Kg	10	4.00

Sample: 311487 - AH-7 (0-1')

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	95773	Date Analyzed:	2012-10-17	Analyzed By:	CW
Prep Batch:	81152	Sample Preparation:	2012-10-16	Prepared By:	CW

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			95.1	mg/Kg	1	100	95	55.1 - 135.7

Sample: 311487 - AH-7 (0-1')

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	95688	Date Analyzed:	2012-10-13	Analyzed By:	YG
Prep Batch:	81087	Sample Preparation:	2012-10-13	Prepared By:	YG

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
GRO		1	**3.30**	mg/Kg	1	1.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.19	mg/Kg	1	2.00	110	70 - 130
4-Bromofluorobenzene (4-BFB)			1.81	mg/Kg	1	2.00	90	70 - 130

Sample: 311488 - AH-7 (1-1.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95761	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	Sample Preparation:	2012-10-15	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**2190**	mg/Kg	10	4.00

Sample: 311489 - AH-7 (2-2.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95761	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	Sample Preparation:	2012-10-15	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**1270**	mg/Kg	10	4.00

Sample: 311490 - AH-7 (3-3.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95761	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	Sample Preparation:	2012-10-15	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**299**	mg/Kg	5	4.00

Sample: 311491 - AH-7 (4-4.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95761	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	Sample Preparation:	2012-10-15	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**82.0**	mg/Kg	5	4.00

Sample: 311492 - AH-7 (5-5.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95761	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	Sample Preparation:	2012-10-15	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**28.9**	mg/Kg	5	4.00

Sample: 311493 - AH-7 (6-6.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95761	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	Sample Preparation:	2012-10-15	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**116**	mg/Kg	5	4.00

Sample: 311494 - AH-7 (7-7.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95761	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	Sample Preparation:	2012-10-15	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**188**	mg/Kg	5	4.00

Sample: 311495 - AH-7 (8-8.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95761	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	Sample Preparation:	2012-10-15	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**381**	mg/Kg	5	4.00

Sample: 311496 - AH-7 (9-9.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95761	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	Sample Preparation:	2012-10-15	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**733**	mg/Kg	5	4.00

Sample: 311497 - AH-8 (0-6 in.)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95761	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	Sample Preparation:	2012-10-15	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**7400**	mg/Kg	10	4.00

Sample: 311497 - AH-8 (0-6 in.)

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	95773	Date Analyzed:	2012-10-17	Analyzed By:	CW
Prep Batch:	81152	Sample Preparation:	2012-10-16	Prepared By:	CW

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			103	mg/Kg	1	100	103	55.1 - 135.7

Sample: 311497 - AH-8 (0-6 in.)

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	95688	Date Analyzed:	2012-10-13	Analyzed By:	YG
Prep Batch:	81087	Sample Preparation:	2012-10-13	Prepared By:	YG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.28	mg/Kg	1	2.00	114	70 - 130
4-Bromofluorobenzene (4-BFB)			1.83	mg/Kg	1	2.00	92	70 - 130

Sample: 311498 - AH-9 (0-1')

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	95828	Date Analyzed:	2012-10-17	Analyzed By:	YG
Prep Batch:	81195	Sample Preparation:	2012-10-17	Prepared By:	YG

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)			1.94	mg/Kg	1	2.00	97	70 - 130
4-Bromofluorobenzene (4-BFB)			1.93	mg/Kg	1	2.00	96	70 - 130

Sample: 311498 - AH-9 (0-1')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95762	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	Sample Preparation:	2012-10-15	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**2420**	mg/Kg	10	4.00

Sample: 311498 - AH-9 (0-1')

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	95773	Date Analyzed:	2012-10-17	Analyzed By:	CW
Prep Batch:	81152	Sample Preparation:	2012-10-16	Prepared By:	CW

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
DRO	U	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	55.1 - 135.7

Sample: 311498 - AH-9 (0-1')

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	95688	Date Analyzed:	2012-10-13	Analyzed By:	YG
Prep Batch:	81087	Sample Preparation:	2012-10-13	Prepared By:	YG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.14	mg/Kg	1	2.00	107	70 - 130
4-Bromofluorobenzene (4-BFB)			1.80	mg/Kg	1	2.00	90	70 - 130

Sample: 311499 - AH-9 (1-1.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95762	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	Sample Preparation:	2012-10-15	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**8870**	mg/Kg	10	4.00

Sample: 311500 - AH-9 (2-2.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95762	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	Sample Preparation:	2012-10-15	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**3200**	mg/Kg	10	4.00

Sample: 311501 - AH-9 (3-3.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95762	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	Sample Preparation:	2012-10-15	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**2840**	mg/Kg	10	4.00

Sample: 311502 - AH-9 (4-4.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95762	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	Sample Preparation:	2012-10-15	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2680**	mg/Kg	10	4.00

Sample: 311503 - AH-9 (5-5.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95762	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	Sample Preparation:	2012-10-15	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**148**	mg/Kg	5	4.00

Sample: 311504 - AH-9 (6-6.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95762	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	Sample Preparation:	2012-10-15	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**259**	mg/Kg	5	4.00

Sample: 311505 - AH-9 (7-7.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95762	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	Sample Preparation:	2012-10-15	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**182**	mg/Kg	5	4.00

Sample: 311506 - AH-9 (8-8.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95762	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	Sample Preparation:	2012-10-15	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**307**	mg/Kg	5	4.00

Sample: 311507 - AH-10 (0-6 in.)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95762	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	Sample Preparation:	2012-10-15	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**3180**	mg/Kg	10	4.00

Sample: 311507 - AH-10 (0-6 in.)

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	95773	Date Analyzed:	2012-10-17	Analyzed By:	CW
Prep Batch:	81152	Sample Preparation:	2012-10-16	Prepared By:	CW

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			91.0	mg/Kg	1	100	91	55.1 - 135.7

Sample: 311507 - AH-10 (0-6 in.)

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	95688	Date Analyzed:	2012-10-13	Analyzed By:	YG
Prep Batch:	81087	Sample Preparation:	2012-10-13	Prepared By:	YG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.22	mg/Kg	1	2.00	111	70 - 130
4-Bromofluorobenzene (4-BFB)			1.79	mg/Kg	1	2.00	90	70 - 130

Sample: 311508 - AH-11 (0-1')

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	95828	Date Analyzed:	2012-10-17	Analyzed By:	YG
Prep Batch:	81195	Sample Preparation:	2012-10-17	Prepared By:	YG

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)			1.97	mg/Kg	1	2.00	98	70 - 130
4-Bromofluorobenzene (4-BFB)			2.00	mg/Kg	1	2.00	100	70 - 130

Sample: 311508 - AH-11 (0-1')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95799	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**15600**	mg/Kg	10	4.00

Sample: 311508 - AH-11 (0-1')

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	95773	Date Analyzed:	2012-10-17	Analyzed By:	CW
Prep Batch:	81152	Sample Preparation:	2012-10-16	Prepared By:	CW

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			99.8	mg/Kg	1	100	100	55.1 - 135.7

Sample: 311508 - AH-11 (0-1')

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	95688	Date Analyzed:	2012-10-13	Analyzed By:	YG
Prep Batch:	81087	Sample Preparation:	2012-10-13	Prepared By:	YG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.18	mg/Kg	1	2.00	109	70 - 130
4-Bromofluorobenzene (4-BFB)			1.81	mg/Kg	1	2.00	90	70 - 130

Sample: 311509 - AH-11 (1-1.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95799	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**7820**	mg/Kg	10	4.00

Sample: 311510 - AH-11 (2-2.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95799	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**4340**	mg/Kg	10	4.00

Sample: 311511 - AH-11 (3-3.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95799	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**311**	mg/Kg	5	4.00

Sample: 311512 - AH-11 (4-4.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95799	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**837**	mg/Kg	5	4.00

Sample: 311513 - AH-11 (5-5.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95799	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**765**	mg/Kg	5	4.00

Sample: 311514 - AH-11 (6-6.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95799	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1150**	mg/Kg	5	4.00

Sample: 311515 - AH-11 (7-7.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95799	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1210**	mg/Kg	5	4.00

Sample: 311516 - AH-12 (0-1')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95799	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**10600**	mg/Kg	10	4.00

Sample: 311516 - AH-12 (0-1')

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	95773	Date Analyzed:	2012-10-17	Analyzed By:	CW
Prep Batch:	81152	Sample Preparation:	2012-10-16	Prepared By:	CW

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			100	mg/Kg	1	100	100	55.1 - 135.7

Sample: 311516 - AH-12 (0-1')

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	95688	Date Analyzed:	2012-10-13	Analyzed By:	YG
Prep Batch:	81087	Sample Preparation:	2012-10-13	Prepared By:	YG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.14	mg/Kg	1	2.00	107	70 - 130
4-Bromofluorobenzene (4-BFB)			1.80	mg/Kg	1	2.00	90	70 - 130

Sample: 311517 - AH-12 (1-1.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95799	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**12200**	mg/Kg	10	4.00

Sample: 311518 - AH-12 (2-2.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95800	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2820**	mg/Kg	10	4.00

Sample: 311519 - AH-12 (3-3.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95800	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**3830**	mg/Kg	10	4.00

Sample: 311520 - AH-12 (4-4.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95800	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**3330**	mg/Kg	10	4.00

Sample: 311521 - AH-12 (5-5.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95800	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2380**	mg/Kg	10	4.00

Sample: 311522 - AH-12 (6-6.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95800	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1420**	mg/Kg	10	4.00

Sample: 311523 - AH-12 (7-7.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95800	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1610**	mg/Kg	10	4.00

Sample: 311524 - AH-13 (0-1')

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	95828	Date Analyzed:	2012-10-17	Analyzed By:	YG
Prep Batch:	81195	Sample Preparation:	2012-10-17	Prepared By:	YG

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

continued ...

sample 311524 continued . . .

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.94	mg/Kg	1	2.00	97	70 - 130
4-Bromofluorobenzene (4-BFB)			1.91	mg/Kg	1	2.00	96	70 - 130

Sample: 311524 - AH-13 (0-1')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95800	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**11200**	mg/Kg	10	4.00

Sample: 311524 - AH-13 (0-1')

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	95775	Date Analyzed:	2012-10-17	Analyzed By:	CW
Prep Batch:	81154	Sample Preparation:	2012-10-16	Prepared By:	CW

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			93.1	mg/Kg	1	100	93	55.1 - 135.7

Sample: 311524 - AH-13 (0-1')

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	95688	Date Analyzed:	2012-10-13	Analyzed By:	YG
Prep Batch:	81087	Sample Preparation:	2012-10-13	Prepared By:	YG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.84	mg/Kg	1	2.00	92	70 - 130
4-Bromofluorobenzene (4-BFB)			1.80	mg/Kg	1	2.00	90	70 - 130

Sample: 311525 - AH-13 (1-1.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95800	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**5010**	mg/Kg	10	4.00

Sample: 311526 - AH-13 (2-2.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95800	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2970**	mg/Kg	10	4.00

Sample: 311527 - AH-13 (3-3.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95800	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1150**	mg/Kg	10	4.00

Sample: 311528 - AH-14 (0-1')

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	95828	Date Analyzed:	2012-10-17	Analyzed By:	YG
Prep Batch:	81195	Sample Preparation:	2012-10-17	Prepared By:	YG

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)			1.92	mg/Kg	1	2.00	96	70 - 130
4-Bromofluorobenzene (4-BFB)			1.85	mg/Kg	1	2.00	92	70 - 130

Sample: 311528 - AH-14 (0-1')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95801	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**12600**	mg/Kg	10	4.00

Sample: 311528 - AH-14 (0-1')

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	95775	Date Analyzed:	2012-10-17	Analyzed By:	CW
Prep Batch:	81154	Sample Preparation:	2012-10-16	Prepared By:	CW

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			87.7	mg/Kg	1	100	88	55.1 - 135.7

Sample: 311528 - AH-14 (0-1')

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	95688	Date Analyzed:	2012-10-13	Analyzed By:	YG
Prep Batch:	81087	Sample Preparation:	2012-10-13	Prepared By:	YG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.35	mg/Kg	1	2.00	118	70 - 130
4-Bromofluorobenzene (4-BFB)			1.79	mg/Kg	1	2.00	90	70 - 130

Sample: 311529 - AH-14 (1-1.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95801	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**3770**	mg/Kg	10	4.00

Sample: 311530 - AH-14 (2-2.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95801	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**4040**	mg/Kg	10	4.00

Sample: 311531 - AH-14 (3-3.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95801	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2600**	mg/Kg	10	4.00

Sample: 311532 - AH-15 (0-1')

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	95828	Date Analyzed:	2012-10-17	Analyzed By:	YG
Prep Batch:	81195	Sample Preparation:	2012-10-17	Prepared By:	YG

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)			1.93	mg/Kg	1	2.00	96	70 - 130
4-Bromofluorobenzene (4-BFB)			1.85	mg/Kg	1	2.00	92	70 - 130

Sample: 311532 - AH-15 (0-1')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95801	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**10800**	mg/Kg	10	4.00

Sample: 311532 - AH-15 (0-1')

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	95775	Date Analyzed:	2012-10-17	Analyzed By:	CW
Prep Batch:	81154	Sample Preparation:	2012-10-16	Prepared By:	CW

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			90.5	mg/Kg	1	100	90	55.1 - 135.7

Sample: 311532 - AH-15 (0-1')

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	95688	Date Analyzed:	2012-10-13	Analyzed By:	YG
Prep Batch:	81087	Sample Preparation:	2012-10-13	Prepared By:	YG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.20	mg/Kg	1	2.00	110	70 - 130
4-Bromofluorobenzene (4-BFB)			1.80	mg/Kg	1	2.00	90	70 - 130

Sample: 311533 - AH-15 (1-1.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95801	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**6890**	mg/Kg	10	4.00

Sample: 311534 - AH-15 (2-2.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95801	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2780**	mg/Kg	10	4.00

Sample: 311535 - AH-15 (3-3.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95801	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**3080**	mg/Kg	10	4.00

Sample: 311536 - AH-16 (0-1')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95801	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**11200**	mg/Kg	10	4.00

Sample: 311536 - AH-16 (0-1')

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	95775	Date Analyzed:	2012-10-17	Analyzed By:	CW
Prep Batch:	81154	Sample Preparation:	2012-10-16	Prepared By:	CW

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			96.0	mg/Kg	1	100	96	55.1 - 135.7

Sample: 311536 - AH-16 (0-1')

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	95688	Date Analyzed:	2012-10-13	Analyzed By:	YG
Prep Batch:	81087	Sample Preparation:	2012-10-13	Prepared By:	YG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.20	mg/Kg	1	2.00	110	70 - 130
4-Bromofluorobenzene (4-BFB)			1.78	mg/Kg	1	2.00	89	70 - 130

Sample: 311537 - AH-16 (1-1.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95801	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**5190**	mg/Kg	10	4.00

Sample: 311538 - AH-16 (2-2.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95802	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Chloride			**3110**		mg/Kg	10	4.00

Sample: 311539 - AH-16 (3-3.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95802	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Chloride			**2590**		mg/Kg	10	4.00

Sample: 311540 - AH-17 (0-1')

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	95828	Date Analyzed:	2012-10-17	Analyzed By:	YG
Prep Batch:	81195	Sample Preparation:	2012-10-17	Prepared By:	YG

Parameter	Flag	Cert	Result	RL	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)			1.98	mg/Kg	1	2.00	99	70 - 130
4-Bromofluorobenzene (4-BFB)			2.08	mg/Kg	1	2.00	104	70 - 130

Sample: 311540 - AH-17 (0-1')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95802	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**17500**	mg/Kg	10	4.00

Sample: 311540 - AH-17 (0-1')

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	95775	Date Analyzed:	2012-10-17	Analyzed By:	CW
Prep Batch:	81154	Sample Preparation:	2012-10-16	Prepared By:	CW

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			102	mg/Kg	1	100	102	55.1 - 135.7

Sample: 311540 - AH-17 (0-1')

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	95688	Date Analyzed:	2012-10-13	Analyzed By:	YG
Prep Batch:	81087	Sample Preparation:	2012-10-13	Prepared By:	YG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.18	mg/Kg	1	2.00	109	70 - 130
4-Bromofluorobenzene (4-BFB)			1.78	mg/Kg	1	2.00	89	70 - 130

Sample: 311541 - AH-17 (1-1.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95802	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**12200**	mg/Kg	10	4.00

Sample: 311542 - AH-17 (2-2.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95802	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**5170**	mg/Kg	10	4.00

Sample: 311543 - AH-17 (3-3.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95802	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**3020**	mg/Kg	10	4.00

Sample: 311544 - AH-18 (0-1')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95802	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2980**	mg/Kg	10	4.00

Sample: 311544 - AH-18 (0-1')

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	95775	Date Analyzed:	2012-10-17	Analyzed By:	CW
Prep Batch:	81154	Sample Preparation:	2012-10-16	Prepared By:	CW

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			102	mg/Kg	1	100	102	55.1 - 135.7

Sample: 311544 - AH-18 (0-1')

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	95688	Date Analyzed:	2012-10-13	Analyzed By:	YG
Prep Batch:	81087	Sample Preparation:	2012-10-13	Prepared By:	YG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.24	mg/Kg	1	2.00	112	70 - 130
4-Bromofluorobenzene (4-BFB)			1.77	mg/Kg	1	2.00	88	70 - 130

Sample: 311545 - AH-18 (1-1.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95802	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2140**	mg/Kg	10	4.00

Sample: 311546 - AH-18 (2-2.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95802	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1370**	mg/Kg	10	4.00

Sample: 311547 - AH-18 (3-3.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95802	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1050**	mg/Kg	5	4.00

Sample: 311548 - AH-19 (0-1')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95847	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**6390**	mg/Kg	10	4.00

Sample: 311548 - AH-19 (0-1')

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	95773	Date Analyzed:	2012-10-17	Analyzed By:	CW
Prep Batch:	81152	Sample Preparation:	2012-10-16	Prepared By:	CW

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			89.7	mg/Kg	1	100	90	55.1 - 135.7

Sample: 311548 - AH-19 (0-1')

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	95688	Date Analyzed:	2012-10-13	Analyzed By:	YG
Prep Batch:	81087	Sample Preparation:	2012-10-13	Prepared By:	YG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.20	mg/Kg	1	2.00	110	70 - 130
4-Bromofluorobenzene (4-BFB)			1.81	mg/Kg	1	2.00	90	70 - 130

Sample: 311549 - AH-19 (1-1.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95847	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2980**	mg/Kg	10	4.00

Sample: 311550 - AH-19 (2-2.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95847	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**3530**	mg/Kg	10	4.00

Sample: 311551 - AH-19 (3-3.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95847	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**3500**	mg/Kg	10	4.00

Sample: 311552 - AH-19 (4-4.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95847	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**2340**	mg/Kg	10	4.00

Sample: 311553 - AH-20 (0-1')

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	95828	Date Analyzed:	2012-10-17	Analyzed By:	YG
Prep Batch:	81195	Sample Preparation:	2012-10-17	Prepared By:	YG

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)			1.95	mg/Kg	1	2.00	98	70 - 130
4-Bromofluorobenzene (4-BFB)			1.94	mg/Kg	1	2.00	97	70 - 130

Sample: 311553 - AH-20 (0-1')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95847	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**22700**	mg/Kg	10	4.00

Sample: 311553 - AH-20 (0-1')

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	95773	Date Analyzed:	2012-10-17	Analyzed By:	CW
Prep Batch:	81152	Sample Preparation:	2012-10-16	Prepared By:	CW

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			94.8	mg/Kg	1	100	95	55.1 - 135.7

Sample: 311553 - AH-20 (0-1')

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	95715	Date Analyzed:	2012-10-13	Analyzed By:	YG
Prep Batch:	81099	Sample Preparation:	2012-10-13	Prepared By:	YG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.12	mg/Kg	1	2.00	106	70 - 130
4-Bromofluorobenzene (4-BFB)			1.89	mg/Kg	1	2.00	94	70 - 130

Sample: 311554 - AH-20 (1-1.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95847	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**7230**	mg/Kg	10	4.00

Sample: 311555 - AH-20 (2-2.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95847	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**3820**	mg/Kg	10	4.00

Sample: 311556 - AH-20 (3-3.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95847	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2140**	mg/Kg	10	4.00

Sample: 311557 - AH-20 (4-4.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95847	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1170**	mg/Kg	10	4.00

Sample: 311558 - AH-20 (5-5.5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	95848	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	Sample Preparation:	2012-10-16	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1220**	mg/Kg	10	4.00

Method Blanks

Method Blank (1) QC Batch: 95688

QC Batch: 95688 | Date Analyzed: 2012-10-13 | Analyzed By: YG
Prep Batch: 81087 | QC Preparation: 2012-10-13 | Prepared By: YG

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1	<0.482	mg/Kg	1

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.86	mg/Kg	1	2.00	93	70 - 130
4-Bromofluorobenzene (4-BFB)			1.76	mg/Kg	1	2.00	88	70 - 130

Method Blank (1) QC Batch: 95715

QC Batch: 95715 | Date Analyzed: 2012-10-13 | Analyzed By: YG
Prep Batch: 81099 | QC Preparation: 2012-10-13 | Prepared By: YG

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1	<0.482	mg/Kg	1

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.82	mg/Kg	1	2.00	91	70 - 130
4-Bromofluorobenzene (4-BFB)			1.76	mg/Kg	1	2.00	88	70 - 130

Method Blank (1) QC Batch: 95759

QC Batch: 95759 | Date Analyzed: 2012-10-16 | Analyzed By: AR
Prep Batch: 81143 | QC Preparation: 2012-10-15 | Prepared By: AR

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

Method Blank (1) QC Batch: 95760

QC Batch:	95760	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	QC Preparation:	2012-10-15	Prepared By:	AR

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

Method Blank (1) QC Batch: 95761

QC Batch:	95761	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	QC Preparation:	2012-10-15	Prepared By:	AR

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

Method Blank (1) QC Batch: 95762

QC Batch:	95762	Date Analyzed:	2012-10-16	Analyzed By:	AR
Prep Batch:	81143	QC Preparation:	2012-10-15	Prepared By:	AR

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

Method Blank (1) QC Batch: 95773

QC Batch:	95773	Date Analyzed:	2012-10-17	Analyzed By:	CW
Prep Batch:	81152	QC Preparation:	2012-10-16	Prepared By:	CW

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	<15.7	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			89.1	mg/Kg	1	100	89	61.6 - 141.2

Method Blank (1) QC Batch: 95775

QC Batch:	95775	Date Analyzed:	2012-10-17	Analyzed By:	CW
Prep Batch:	81154	QC Preparation:	2012-10-16	Prepared By:	CW

Parameter	Flag	Cert	MDL Result	Units	RL
DRO			29.2	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			102	mg/Kg	1	100	102	61.6 - 141.2

Method Blank (1) QC Batch: 95799

QC Batch:	95799	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	QC Preparation:	2012-10-16	Prepared By:	AR

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

Method Blank (1) QC Batch: 95800

QC Batch:	95800	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	QC Preparation:	2012-10-16	Prepared By:	AR

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

Method Blank (1) QC Batch: 95801

QC Batch:	95801	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	QC Preparation:	2012-10-16	Prepared By:	AR

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

Method Blank (1) QC Batch: 95802

QC Batch:	95802	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	QC Preparation:	2012-10-16	Prepared By:	AR

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

Method Blank (1) QC Batch: 95828

QC Batch:	95828	Date Analyzed:	2012-10-17	Analyzed By:	YG
Prep Batch:	81195	QC Preparation:	2012-10-17	Prepared By:	YG

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.00100	mg/Kg	0.02
Toluene		1	<0.00100	mg/Kg	0.02
Ethylbenzene		1	<0.00110	mg/Kg	0.02
Xylene		1	<0.00360	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.87	mg/Kg	1	2.00	94	70 - 130
4-Bromofluorobenzene (4-BFB)			1.78	mg/Kg	1	2.00	89	70 - 130

Method Blank (1) QC Batch: 95847

QC Batch:	95847	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	QC Preparation:	2012-10-16	Prepared By:	AR

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

Method Blank (1) QC Batch: 95848

QC Batch:	95848	Date Analyzed:	2012-10-17	Analyzed By:	AR
Prep Batch:	81144	QC Preparation:	2012-10-16	Prepared By:	AR

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

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 95688 | Date Analyzed: 2012-10-13 | Analyzed By: YG
Prep Batch: 81087 | QC Preparation: 2012-10-13 | Prepared By: YG

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	18.4	mg/Kg	1	20.0	<0.482	92	70 - 130

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	18.9	mg/Kg	1	20.0	<0.482	94	70 - 130	3	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.02	2.13	mg/Kg	1	2.00	101	106	70 - 130
4-Bromofluorobenzene (4-BFB)	1.92	1.88	mg/Kg	1	2.00	96	94	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 95715 | Date Analyzed: 2012-10-13 | Analyzed By: YG
Prep Batch: 81099 | QC Preparation: 2012-10-13 | Prepared By: YG

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	19.5	mg/Kg	1	20.0	<0.482	98	70 - 130

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	19.0	mg/Kg	1	20.0	<0.482	95	70 - 130	3	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.04	2.05	mg/Kg	1	2.00	102	102	70 - 130

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control spikes continued ...

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
4-Bromofluorobenzene (4-BFB)	2.00	1.94	mg/Kg	1	2.00	100	97	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 95759 | Date Analyzed: 2012-10-16 | Analyzed By: AR
Prep Batch: 81143 | QC Preparation: 2012-10-15 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2760	mg/Kg	1	2500	<3.85	110	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			2670	mg/Kg	1	2500	<3.85	107	85 - 115	3	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 95760 | Date Analyzed: 2012-10-16 | Analyzed By: AR
Prep Batch: 81143 | QC Preparation: 2012-10-15 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2590	mg/Kg	1	2500	<3.85	104	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2640	mg/Kg	1	2500	<3.85	106	85 - 115	2	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 95761 | Date Analyzed: 2012-10-16 | Analyzed By: AR
Prep Batch: 81143 | QC Preparation: 2012-10-15 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2650	mg/Kg	1	2500	<3.85	106	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			2580	mg/Kg	1	2500	<3.85	103	85 - 115	3	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 95762 | Date Analyzed: 2012-10-16 | Analyzed By: AR
Prep Batch: 81143 | QC Preparation: 2012-10-15 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2510	mg/Kg	1	2500	<3.85	100	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			2600	mg/Kg	1	2500	<3.85	104	85 - 115	4	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 95773 | Date Analyzed: 2012-10-17 | Analyzed By: CW
Prep Batch: 81152 | QC Preparation: 2012-10-16 | Prepared By: CW

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	183	mg/Kg	1	250	<15.7	73	66.9 - 119.9

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
DRO		1	171	mg/Kg	1	250	<15.7	68	66.9 - 119.9	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	86.2	79.3	mg/Kg	1	100	86	79	76.8 - 140.2

Laboratory Control Spike (LCS-1)

QC Batch: 95775 | Date Analyzed: 2012-10-17 | Analyzed By: CW
Prep Batch: 81154 | QC Preparation: 2012-10-16 | Prepared By: CW

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	231	mg/Kg	1	250	29.2	81	66.9 - 119.9

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
DRO		1	198	mg/Kg	1	250	29.2	68	66.9 - 119.9	15	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	87.7	mg/Kg	1	100	102	88	76.8 - 140.2

Laboratory Control Spike (LCS-1)

QC Batch: 95799 | Date Analyzed: 2012-10-17 | Analyzed By: AR
Prep Batch: 81144 | QC Preparation: 2012-10-16 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2630	mg/Kg	1	2500	<3.85	105	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2700	mg/Kg	1	2500	<3.85	108	85 - 115	3	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 95800 | Date Analyzed: 2012-10-17 | Analyzed By: AR
Prep Batch: 81144 | QC Preparation: 2012-10-16 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2590	mg/Kg	1	2500	<3.85	104	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2670	mg/Kg	1	2500	<3.85	107	85 - 115	3	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 95801 | Date Analyzed: 2012-10-17 | Analyzed By: AR
Prep Batch: 81144 | QC Preparation: 2012-10-16 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2740	mg/Kg	1	2500	<3.85	110	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			2660	mg/Kg	1	2500	<3.85	106	85 - 115	3	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 95802 | Date Analyzed: 2012-10-17 | Analyzed By: AR
Prep Batch: 81144 | QC Preparation: 2012-10-16 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2670	mg/Kg	1	2500	<3.85	107	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			2610	mg/Kg	1	2500	<3.85	104	85 - 115	2	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 95828 | Date Analyzed: 2012-10-17 | Analyzed By: YG
Prep Batch: 81195 | QC Preparation: 2012-10-17 | Prepared By: YG

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.70	mg/Kg	1	2.00	<0.00100	85	70 - 130
Toluene		1	1.70	mg/Kg	1	2.00	<0.00100	85	70 - 130
Ethylbenzene		1	1.66	mg/Kg	1	2.00	<0.00110	83	70 - 130
Xylene		1	5.22	mg/Kg	1	6.00	<0.00360	87	70 - 130

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	1.74	mg/Kg	1	2.00	<0.00100	87	70 - 130	2	20
Toluene		1	1.74	mg/Kg	1	2.00	<0.00100	87	70 - 130	2	20
Ethylbenzene		1	1.70	mg/Kg	1	2.00	<0.00110	85	70 - 130	2	20
Xylene		1	5.36	mg/Kg	1	6.00	<0.00360	89	70 - 130	3	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.92	1.92	mg/Kg	1	2.00	96	96	70 - 130
4-Bromofluorobenzene (4-BFB)	1.95	1.90	mg/Kg	1	2.00	98	95	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 95847 | Date Analyzed: 2012-10-17 | Analyzed By: AR
Prep Batch: 81144 | QC Preparation: 2012-10-16 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2610	mg/Kg	1	2500	<3.85	104	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2570	mg/Kg	1	2500	<3.85	103	85 - 115	2	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 95848 | Date Analyzed: 2012-10-17 | Analyzed By: AR
Prep Batch: 81144 | QC Preparation: 2012-10-16 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2630	mg/Kg	1	2500	<3.85	105	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2580	mg/Kg	1	2500	<3.85	103	85 - 115	2	20

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

Matrix Spike (MS-1) Spiked Sample: 311516

QC Batch: 95688 | Date Analyzed: 2012-10-13 | Analyzed By: YG
Prep Batch: 81087 | QC Preparation: 2012-10-13 | Prepared By: YG

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	17.0	mg/Kg	1	20.0	<0.482	85	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	16.5	mg/Kg	1	20.0	<0.482	82	70 - 130	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)	2.05	2.04	mg/Kg	1	2	102	102	70 - 130
4-Bromofluorobenzene (4-BFB)	1.87	1.87	mg/Kg	1	2	94	94	70 - 130

Matrix Spike (MS-1) Spiked Sample: 311553

QC Batch: 95715 | Date Analyzed: 2012-10-13 | Analyzed By: YG
Prep Batch: 81099 | QC Preparation: 2012-10-13 | Prepared By: YG

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	14.9	mg/Kg	1	20.0	<0.482	74	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	14.8	mg/Kg	1	20.0	<0.482	74	70 - 130	1	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.04	1.98	mg/Kg	1	2	102	99	70 - 130
4-Bromofluorobenzene (4-BFB)	1.93	1.92	mg/Kg	1	2	96	96	70 - 130

Matrix Spike (MS-1) Spiked Sample: 311477

QC Batch: 95759 | Date Analyzed: 2012-10-16 | Analyzed By: AR
Prep Batch: 81143 | QC Preparation: 2012-10-15 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			8750	mg/Kg	10	2500	6520	89	78.9 - 121

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			8960	mg/Kg	10	2500	6520	98	78.9 - 121	2	20

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

Matrix Spike (MS-1) Spiked Sample: 311487

QC Batch: 95760 | Date Analyzed: 2012-10-16 | Analyzed By: AR
Prep Batch: 81143 | QC Preparation: 2012-10-15 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			6830	mg/Kg	10	2500	4550	91	78.9 - 121

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			6940	mg/Kg	10	2500	4550	96	78.9 - 121	2	20

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

Matrix Spike (MS-1) Spiked Sample: 311497

QC Batch: 95761 | Date Analyzed: 2012-10-16 | Analyzed By: AR
Prep Batch: 81143 | QC Preparation: 2012-10-15 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			9690	mg/Kg	10	2500	7400	92	78.9 - 121

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			9890	mg/Kg	10	2500	7400	100	78.9 - 121	2	20

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

Matrix Spike (MS-1) Spiked Sample: 311507

QC Batch: 95762 | Date Analyzed: 2012-10-16 | Analyzed By: AR
Prep Batch: 81143 | QC Preparation: 2012-10-15 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			5660	mg/Kg	10	2500	3180	99	78.9 - 121

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			5500	mg/Kg	10	2500	3180	93	78.9 - 121	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: 311450

QC Batch: 95773 | Date Analyzed: 2012-10-17 | Analyzed By: CW
Prep Batch: 81152 | QC Preparation: 2012-10-16 | Prepared By: CW

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	229	mg/Kg	1	250	48	72	36.1 - 147.2

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
DRO		1	238	mg/Kg	1	250	48	76	36.1 - 147.2	4	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	90.5	90.0	mg/Kg	1	100	90	90	78.3 - 131.6

Matrix Spike (MS-1) Spiked Sample: 311524

QC Batch: 95775 | Date Analyzed: 2012-10-17 | Analyzed By: CW
Prep Batch: 81154 | QC Preparation: 2012-10-16 | Prepared By: CW

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	207	mg/Kg	1	250	31.4	70	36.1 - 147.2

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
DRO		1	244	mg/Kg	1	250	31.4	85	36.1 - 147.2	16	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	91.4	112	mg/Kg	1	100	91	112	78.3 - 131.6

Matrix Spike (MS-1) Spiked Sample: 311517

QC Batch: 95799 | Date Analyzed: 2012-10-17 | Analyzed By: AR
Prep Batch: 81144 | QC Preparation: 2012-10-16 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			14700	mg/Kg	10	2500	12200	100	78.9 - 121

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	10	2500	12200	92	78.9 - 121	1	20

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

Matrix Spike (MS-1) Spiked Sample: 311527

QC Batch: 95800 | Date Analyzed: 2012-10-17 | Analyzed By: AR
Prep Batch: 81144 | QC Preparation: 2012-10-16 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			3620	mg/Kg	5	2500	1150	99	78.9 - 121

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			3560	mg/Kg	5	2500	1150	96	78.9 - 121	2	20

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

Matrix Spike (MS-1) Spiked Sample: 311537

QC Batch: 95801 | Date Analyzed: 2012-10-17 | Analyzed By: AR
Prep Batch: 81144 | QC Preparation: 2012-10-16 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			7340	mg/Kg	10	2500	5190	86	78.9 - 121

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			7190	mg/Kg	10	2500	5190	80	78.9 - 121	2	20

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

Matrix Spike (MS-1) Spiked Sample: 311547

QC Batch: 95802 | Date Analyzed: 2012-10-17 | Analyzed By: AR
Prep Batch: 81144 | QC Preparation: 2012-10-16 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			3280	mg/Kg	5	2500	1050	89	78.9 - 121

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			3370	mg/Kg	5	2500	1050	93	78.9 - 121	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: 311524

QC Batch: 95828 | Date Analyzed: 2012-10-17 | Analyzed By: YG
Prep Batch: 81195 | QC Preparation: 2012-10-17 | Prepared By: YG

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	2.28	mg/Kg	1	2.00	<0.00100	114	70 - 130
Toluene		1	2.27	mg/Kg	1	2.00	<0.00100	114	70 - 130
Ethylbenzene		1	2.18	mg/Kg	1	2.00	<0.00110	109	70 - 130
Xylene		1	6.92	mg/Kg	1	6.00	<0.00360	115	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	2.25	mg/Kg	1	2.00	<0.00100	112	70 - 130	1	20
Toluene		1	2.24	mg/Kg	1	2.00	<0.00100	112	70 - 130	1	20
Ethylbenzene		1	2.17	mg/Kg	1	2.00	<0.00110	108	70 - 130	0	20
Xylene		1	6.82	mg/Kg	1	6.00	<0.00360	114	70 - 130	1	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.92	1.92	mg/Kg	1	2	96	96	70 - 130
4-Bromofluorobenzene (4-BFB)	1.92	1.91	mg/Kg	1	2	96	96	70 - 130

Matrix Spike (MS-1) Spiked Sample: 311557

QC Batch: 95847 | Date Analyzed: 2012-10-17 | Analyzed By: AR
Prep Batch: 81144 | QC Preparation: 2012-10-16 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			3600	mg/Kg	10	2500	1170	97	78.9 - 121

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			3770	mg/Kg	10	2500	1170	104	78.9 - 121	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: 311581

QC Batch: 95848 | Date Analyzed: 2012-10-17 | Analyzed By: AR
Prep Batch: 81144 | QC Preparation: 2012-10-16 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2750	mg/Kg	5	2500	291	98	78.9 - 121

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			2830	mg/Kg	5	2500	291	102	78.9 - 121	3	20

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

Calibration Standards

Standard (CCV-1)

QC Batch: 95688 | Date Analyzed: 2012-10-13 | Analyzed By: YG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.935	94	80 - 120	2012-10-13

Standard (CCV-2)

QC Batch: 95688 | Date Analyzed: 2012-10-13 | Analyzed By: YG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	1.18	118	80 - 120	2012-10-13

Standard (CCV-3)

QC Batch: 95688 | Date Analyzed: 2012-10-13 | Analyzed By: YG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.845	84	80 - 120	2012-10-13

Standard (CCV-1)

QC Batch: 95715 | Date Analyzed: 2012-10-13 | Analyzed By: YG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.843	84	80 - 120	2012-10-13

Standard (CCV-2)

QC Batch: 95715 | Date Analyzed: 2012-10-13 | Analyzed By: YG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.859	86	80 - 120	2012-10-13

Standard (CCV-1)

QC Batch: 95759 | Date Analyzed: 2012-10-16 | Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2012-10-16

Standard (CCV-2)

QC Batch: 95759 | Date Analyzed: 2012-10-16 | Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.5	100	85 - 115	2012-10-16

Standard (CCV-1)

QC Batch: 95760 | Date Analyzed: 2012-10-16 | Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.5	100	85 - 115	2012-10-16

Standard (CCV-2)

QC Batch: 95760 | Date Analyzed: 2012-10-16 | Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2012-10-16

Standard (CCV-1)

QC Batch: 95761 Date Analyzed: 2012-10-16 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2012-10-16

Standard (CCV-2)

QC Batch: 95761 Date Analyzed: 2012-10-16 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.6	100	85 - 115	2012-10-16

Standard (CCV-1)

QC Batch: 95762 Date Analyzed: 2012-10-16 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	98.9	99	85 - 115	2012-10-16

Standard (CCV-2)

QC Batch: 95762 Date Analyzed: 2012-10-16 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2012-10-16

Standard (CCV-1)

QC Batch: 95773 Date Analyzed: 2012-10-17 Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	278	111	80 - 120	2012-10-17

Standard (CCV-2)

QC Batch: 95773 Date Analyzed: 2012-10-17 Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	233	93	80 - 120	2012-10-17

Standard (CCV-3)

QC Batch: 95773 Date Analyzed: 2012-10-17 Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	209	84	80 - 120	2012-10-17

Standard (CCV-4)

QC Batch: 95773 Date Analyzed: 2012-10-17 Analyzed By: CW

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	2012-10-17

Standard (CCV-1)

QC Batch: 95775 Date Analyzed: 2012-10-17 Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	239	96	80 - 120	2012-10-17

Standard (CCV-2)

QC Batch: 95775 Date Analyzed: 2012-10-17 Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	225	90	80 - 120	2012-10-17

Standard (CCV-3)

QC Batch: 95775 Date Analyzed: 2012-10-17 Analyzed By: CW

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	2012-10-17

Standard (CCV-1)

QC Batch: 95799 Date Analyzed: 2012-10-17 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	98.9	99	85 - 115	2012-10-17

Standard (CCV-2)

QC Batch: 95799 Date Analyzed: 2012-10-17 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2012-10-17

Standard (CCV-1)

QC Batch: 95800 Date Analyzed: 2012-10-17 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2012-10-17

Standard (CCV-2)

QC Batch: 95800 Date Analyzed: 2012-10-17 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.5	100	85 - 115	2012-10-17

Standard (CCV-1)

QC Batch: 95801 Date Analyzed: 2012-10-17 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.7	100	85 - 115	2012-10-17

Standard (CCV-2)

QC Batch: 95801 Date Analyzed: 2012-10-17 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2012-10-17

Standard (CCV-1)

QC Batch: 95802 Date Analyzed: 2012-10-17 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2012-10-17

Standard (CCV-2)

QC Batch: 95802 Date Analyzed: 2012-10-17 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.6	100	85 - 115	2012-10-17

Standard (CCV-1)

QC Batch: 95828 Date Analyzed: 2012-10-17 Analyzed By: YG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.100	100	80 - 120	2012-10-17
Toluene		1	mg/kg	0.100	0.0998	100	80 - 120	2012-10-17
Ethylbenzene		1	mg/kg	0.100	0.0943	94	80 - 120	2012-10-17
Xylene		1	mg/kg	0.300	0.296	99	80 - 120	2012-10-17

Standard (CCV-2)

QC Batch: 95828 Date Analyzed: 2012-10-17 Analyzed By: YG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.102	102	80 - 120	2012-10-17
Toluene		1	mg/kg	0.100	0.0998	100	80 - 120	2012-10-17
Ethylbenzene		1	mg/kg	0.100	0.0938	94	80 - 120	2012-10-17
Xylene		1	mg/kg	0.300	0.294	98	80 - 120	2012-10-17

Standard (CCV-1)

QC Batch: 95847 Date Analyzed: 2012-10-17 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	98.8	99	85 - 115	2012-10-17

Standard (CCV-2)

QC Batch: 95847 Date Analyzed: 2012-10-17 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2012-10-17

Standard (CCV-1)

QC Batch: 95848 | Date Analyzed: 2012-10-17 | Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2012-10-17

Standard (CCV-2)

QC Batch: 95848 | Date Analyzed: 2012-10-17 | Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.3	99	85 - 115	2012-10-17

Appendix

Report Definitions

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

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704392-12-4	Midland

Standard Flags

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

Attachments

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

12101040

Analysis Request of Chain of Custody Record

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG
SITE MANAGER: Ike Tavarez
PROJECT NO.: 114-6610 1536
PROJECT NAME: Way South State Com # 1H TB
Eddy Co, NM

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd 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
311472	10-8-12			S	X	AH1 (0-1')	1				X			X											X				
473				S	X	AH2 (0-1')	1				X			X											X				
474				S	X	AH3 (0-6")	1				X			X											X				
475				S	X	AH4 (0-6")	1				X			X											X				
476				S	X	AH5 (0-6")	1				X			X											X				
477				S	X	AH6 (0-1')	1				X			X											X				
478				S	X	AH6 (1-1.5')	1				X														X				
479				S	X	AH6 (2-2.5')	1				X														X				
480				S	X	AH6 (3-3.5')	1				X														X				
481				S	X	AH6 (4-4.5')	1				X														X				

RELINQUISHED BY: (Signature) — Date: 10-10-12 Time: 0800
RECEIVED BY: (Signature) Jeanne Fitch — Date: 10-10-12 Time: 0800
SAMPLED BY: (Print & Initial) Ryan Reich — Date: Time:

RELINQUISHED BY: (Signature) Jeanne Fitch — Date: 10-10-12 Time: 1335
RECEIVED BY: (Signature) — Date: 10-10-12 Time: 13:35
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS — AIRBILL #: OTHER:

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

RECEIVING LABORATORY: Trace
ADDRESS: Midland CITY: STATE: ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature) Run (10) BTEX on highest TPH
DATE: TIME:
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: -0.6 intact
REMARKS: Run deeper Samples if TPH Exceed 100 mg/kg

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

Run deeper Sample if Benzene exceeds 10 mg/kg or total BTEX 50 mg/kg.

~~121040~~ 12101040

Analysis Request of Chain of Custody Record

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 141-640 1534

PROJECT NAME: Way South State Com #1H TB
Eddy Co, NM

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd 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
482	10.8.12		S	X		AH 6 (5-5.5')	1				X														X				
483			S	X		AH 6 (6-6.5')	1				X														X				
484			S	X		AH 6 (7-7.5')	1				X														X				
485			S	X		AH 6 (8-8.5')	1				X														X				
486			S	X		AH 6 (9-9.5')	1				X														X				
487			S	X		AH 7 (0-1')	1				X			X											X				
488			S	X		AH 7 (1-1.5')	1				X														X				
489			S	X		AH 7 (2-2.5')	1				X														X				
490			S	X		AH 7 (3-3.5')	1				X														X				
491			S	X		AH 7 (4-4.5')	1				X														X				

RELINQUISHED BY: (Signature) — Date: 10-10-12 Time: 0800
RECEIVED BY: (Signature) Jeanne Fitch — Date: 10-10-12 Time: 0900
SAMPLED BY: (Print & Initial) Ryan Reich — Date: _____ Time: _____

RELINQUISHED BY: (Signature) Jeanne Fitch — Date: 10-10-12 Time: 1335
RECEIVED BY: (Signature) A Hernandez — Date: 10-10-12 Time: 13:35
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS — AIRBILL #: _____ OTHER: _____

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

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

SAMPLE CONDITION WHEN RECEIVED: -0.6 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.

12101040

Analysis Request of Chain of Custody Record

PAGE: 3 OF: 9

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

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-6201534

PROJECT NAME: Way South State Com #1H TB
Eddy Co, NM

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
492	10-8-12		S	X		AH 7 (5-5.5')	1				X	
493	"		S	X		AH 7 (6-6.5')	1				X	
494	"		S	X		AH 7 (7-7.5')	1				X	
495	"		S	X		AH 7 (8-8.5')	1				X	
496	"		S	X		AH 7 (9-9.5')	1				X	
497	10-9		S		X	AH 8 (0-6")	1				X	
498	"		S		X	AH 9 (0-1)	1				X	
499	"		S		X	AH 9 (1-1.5)	1				X	
508	"		S		X	AH 9 (2-2.5)	1				X	
501	"		S		X	AH 9 (3-3.5)	1				X	

ANALYSIS REQUEST (Circle or Specify Method No.)

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

RELINQUISHED BY: (Signature) — Date: 10-10-12 Time: 0820
RECEIVED BY: (Signature) — Date: 10-10-12 Time: 0820
SAMPLED BY: (Print & Initial) Ryan Reid — Date: Time:

RELINQUISHED BY: (Signature) — Date: 10-10-12 Time: 1335
RECEIVED BY: (Signature) — Date: 10-10-12 Time: 13:35
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS — AIRBILL #: OTHER:

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

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: 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: -0.6 -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.

12101040

Analysis Request of Chain of Custody Record

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG
SITE MANAGER: Ike Tavarez
PROJECT NO.: 114-640 1534
PROJECT NAME: Way South State Com #1H TB Eddy Co, NM

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd 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
502	10/9		S		X	AH 9 (4-4.5)	1				X														X				
503			S		X	AH 9 (5-5.5)	1				X														X				
504			S		X	AH 9 (6-6.5)	1				X														X				
505			S		X	AH 9 (7-7.5)	1				X														X				
506			S		X	AH 9 (8-8.5)	1				X														X				
507			S		X	AH 10 (0-6")	1				X			X											X				
508			S		X	AH 11 (0-1)	1				X			X											X				
509			S		X	AH 11 (1-1.5)	1				X														X				
510			S		X	AH 11 (2-2.5)	1				X														X				
511			S		X	AH 11 (3-3.5)	1				X														X				

RELINQUISHED BY: (Signature) — Date: 10-10-12 Time: 0800
RECEIVED BY: (Signature) — Date: 10-10-12 Time: 0800
SAMPLED BY: (Print & Initial) Marcus Wisenhunt — Date: Time:

RELINQUISHED BY: (Signature) — Date: 10-10-12 Time: 1335
RECEIVED BY: (Signature) — Date: 10-10-12 Time: 13:35
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS — AIRBILL #: OTHER:

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

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

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: -0.6 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.

12101040

Analysis Request of Chain of Custody Record

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

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-640 1534

PROJECT NAME: Way South State Com #1H TB Eddy CO, NM

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd 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
512	10/9		S		X	AH 11 (4-4.5)	1				X														X				
513			S		X	AH 11 (5-5.5)	1				X														X				
514			S		X	AH 11 (6-6.5)	1				X														X				
515			S		X	AH 11 (7-7.5)	1				X														X				
516			S		X	AH 12 (0-1')	1				X			X											X				
517			S		X	AH 12 (1-1.5')	1				X														X				
518			S		X	AH 12 (2-2.5')	1				X														X				
519			S		X	AH 12 (3-3.5')	1				X														X				
520			S		X	AH 12 (4-4.5')	1				X														X				
521			S		X	AH 12 (5-5.5')	1				X														X				

RELINQUISHED BY: (Signature) — Date: 10-10-12 Time: 0800
RECEIVED BY: (Signature) Jeanne Fitch — Date: 10-10-12 Time: 0800
SAMPLED BY: (Print & Initial) Mario Rojas, AR — Date: Time:

RELINQUISHED BY: (Signature) Jeanne Fitch — Date: 10-10-12 Time: 1335
RECEIVED BY: (Signature) — Date: 10-10-12 Time: 13:35
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS — AIRBILL #: OTHER:

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

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

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: -0.6 intact

REMARKS:

ANALYSIS REQUEST (Circle or Specify Method No.)

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

12101040

Analysis Request of Chain of Custody Record

PAGE: 6 OF: 9

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-640 1534

PROJECT NAME: Way South State Com #4 TB
Eddy CO, NM

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd 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
522	10/9		S		X	AH 12 (6-6.5')	1				X													X				
523			S		X	AH 12 (7-7.5')	1				X													X				
524			S		X	AH 13 (0-1')	1				X			X										X				
525			S		X	AH 13 (1-1.5')	1				X													X				
526			S		X	AH 13 (2-2.5')	1				X													X				
527			S		X	AH 13 (3-3.5')	1				X													X				
528			S		X	AH 14 10-1')	1				X			X										X				
529			S		X	AH 14 (1-1.5')	1				X													X				
530			S		X	AH 14 (2-2.5')	1				X													X				
531			S		X	AH 14 (3-3.5')	1				X													X				

RELINQUISHED BY: (Signature)	Date: 10-10-12 Time: 0800	RECEIVED BY: (Signature) Jeanne Fitch	Date: 10-10-12 Time: 0800
SAMPLED BY: (Print & Initial) Ryan Reich, Marcus Rojas	Date: Time:		
RELINQUISHED BY: (Signature) Jeanne Fitch	Date: 10-10-12 Time: 1335	RECEIVED BY: (Signature)	Date: 10-10-12 Time: 13:35
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS	AIRBILL #: OTHER:		
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
TETRA TECH CONTACT PERSON: Ike Tavarez	Results by:		
RECEIVING LABORATORY: Trace ADDRESS: CITY: STATE: ZIP: CONTACT: PHONE:	RECEIVED BY: (Signature) DATE: TIME:		RUSH Charges Authorized: Yes No
SAMPLE CONDITION WHEN RECEIVED: -0.6 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.

10/10/12

Analysis Request of Chain of Custody Record

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

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-6401534

PROJECT NAME: Way South State Com #1H TB
Eddy Co NM

ANALYSIS REQUEST (Circle or Specify Method No.)

PRESERVATIVE METHOD

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
532	10/9		S		X	AH15 (0-1')	1				X			X											X			
533			S		X	AH15 (1-1.5')	1				X														X			
534			S		X	AH 15 (2-2.5')	1				X														X			
535			S		X	AH 15 (3-3.5')	1				X														X			
536			S		X	AH 16 (0-1')	1				X			X											X			
537			S		X	AH 16 (1-1.5')	1				X														X			
538			S		X	AH 16 (2-2.5')	1				X														X			
539			S		X	AH 16 (3-3.5')	1				X														X			
540			S		X	AH 17 (0-1')	1				X			X											X			
541			S		X	AH 17 (1-1.5')	1				X														X			

RELINQUISHED BY: (Signature)	Date: 10-10-12 Time: 0900	RECEIVED BY: (Signature)	Date: 10-10-12 Time: 0900
RELINQUISHED BY: (Signature)	Date: 10-10-12 Time: 1335	RECEIVED BY: (Signature)	Date: 10-10-12 Time: 13:35
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:

SAMPLED BY (Print & Initial): Ryan Reich, Markus Kujawski Date: Time:

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

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

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: -0.6 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.

1210040

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: 8 OF: 9

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-640/534

PROJECT NAME: Way South State Com #1H TB

Eddy Co, NM

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 Mod. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd 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
542	10/9		S		X	AH 17 (2-2.5')	1				X														X				
543			S		X	AH 17 (3-3.5')	1				X														X				
544			S		X	AH 18 (0-1')	1				X			X											X				
545			S		X	AH 18 (1-1.5')	1				X														X				
546			S		X	AH 18 (2-2.5')	1				X														X				
547			S		X	AH 18 (3-3.5')	1				X														X				
548			S		X	AH 19 (0-1')	1				X			X											X				
549			S		X	AH 19 (1-1.5')	1				X														X				
550			S		X	AH 19 (2-2.5')	1				X														X				
551			S		X	AH 19 (3-3.5')	1				X														X				

RELINQUISHED BY: (Signature)	Date: 10-10-12 Time: 0800	RECEIVED BY: (Signature) Ikenne Fitch	Date: 10-10-12 Time: 0800
SAMPLED BY: (Print & Initial) Ryan Reich / Marcus Kujawski	Date:		
RELINQUISHED BY: (Signature) Ikenne Fitch	Date: 10-10-12 Time: 1335	RECEIVED BY: (Signature)	Date: 10-10-12 Time: 13:35
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS	AIRBILL #: OTHER:		
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
TETRA TECH CONTACT PERSON: Ike Tavarez	Results by:		
RECEIVING LABORATORY: Trace ADDRESS: CITY: Midland STATE: ZIP: CONTACT: PHONE:	RECEIVED BY: (Signature) DATE: TIME:		RUSH Charges Authorized: Yes No
SAMPLE CONDITION WHEN RECEIVED: -0.6 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.

12/10/1040

Analysis Request of Chain of Custody Record

PAGE: 9 OF: 9

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.: 114-6401534

PROJECT NAME: Way South State Com #1H TB
Eddy Co, NM

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 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
552	10/9		S		X	AH 19 (4-4.5')	1				X														X				
553			S		X	AH 20 (0-1')	1				X			X											X				
554			S		X	AH 20 (1-1.5')	1				X														X				
555			S		X	AH 20 (2-2.5')	1				X														X				
556			S		X	AH 20 (3-3.5')	1				X														X				
557			S		X	AH 20 (4-4.5')	1				X														X				
558			S		X	AH 20 (5-5.5')	1				X														X				

RELINQUISHED BY: (Signature) — Date: 10-10-12 Time: 0800
RECEIVED BY: (Signature) — Date: 10-10-12 Time: 0800
SAMPLED BY: (Print & Initial) Ryan Reich, Marcus Hernandez — Date: Time:

RELINQUISHED BY: (Signature) — Date: 10-10-12 Time: 1335
RECEIVED BY: (Signature) — Date: 10-10-12 Time: 13:35
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS — AIRBILL #: OTHER:

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

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

SAMPLE CONDITION WHEN RECEIVED: -0.6 intact

REMARKS:

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

Summary Report

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

Report Date: December 26, 2012

Work Order: 12121345

Project Location: Eddy Co., NM
Project Name: COG/Way South State Com. #1H TB
Project Number: 114-6401534

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
316746	AH-1 0-1'	soil	2012-12-12	00:00	2012-12-13
316747	AH-2 0-1'	soil	2012-12-12	00:00	2012-12-13
316748	AH-3 0-1'	soil	2012-12-12	00:00	2012-12-13
316749	AH-3 1-1.5'	soil	2012-12-12	00:00	2012-12-13
316750	AH-3 2-2.5'	soil	2012-12-12	00:00	2012-12-13
316751	AH-3 3-3.5'	soil	2012-12-12	00:00	2012-12-13
316752	AH-3 4-4.5'	soil	2012-12-12	00:00	2012-12-13
316753	AH-3 5-5.5'	soil	2012-12-12	00:00	2012-12-13
316754	AH-3 6-6.5'	soil	2012-12-12	00:00	2012-12-13
316755	AH-3 7-7.5'	soil	2012-12-12	00:00	2012-12-13
316756	AH-3 8-8.5'	soil	2012-12-12	00:00	2012-12-13
316757	AH-3 9-9.5'	soil	2012-12-12	00:00	2012-12-13

	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)
316746 - AH-1 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
316747 - AH-2 0-1'	<0.400 [1]	**5.76**	**6.78**	**31.7**	**2050**	**1200**
316748 - AH-3 0-1'	<0.400 [2]	**10.9**	**10.2**	**64.9**	**1950**	**1880**
316749 - AH-3 1-1.5'	<0.0200	<0.0200	<0.0200	<0.0200	**53.9** Qs	**27.2**
316750 - AH-3 2-2.5'					<50.0 Qs	**4.32**

Sample: 316746 - AH-1 0-1'

continued ...

[1] Dilution due to hydrocarbons.
[2] Dilution due to hydrocarbons.

sample 316746 continued ...

Param	Flag	Result	Units	RL

Param	Flag	Result	Units	RL
Chloride		**61.6**	mg/Kg	4

Sample: 316747 - AH-2 0-1'

Param	Flag	Result	Units	RL
Chloride		**6070**	mg/Kg	4

Sample: 316748 - AH-3 0-1'

Param	Flag	Result	Units	RL
Chloride		**6000**	mg/Kg	4

Sample: 316749 - AH-3 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**7250**	mg/Kg	4

Sample: 316750 - AH-3 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**2480**	mg/Kg	4

Sample: 316751 - AH-3 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**1700**	mg/Kg	4

Sample: 316752 - AH-3 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**858**	mg/Kg	4

Sample: 316753 - AH-3 5-5.5'

Param	Flag	Result	Units	RL
Chloride		**1180**	mg/Kg	4

Sample: 316754 - AH-3 6-6.5'

Param	Flag	Result	Units	RL
Chloride		**1280**	mg/Kg	4

Sample: 316755 - AH-3 7-7.5'

Param	Flag	Result	Units	RL
Chloride		**1460**	mg/Kg	4

Sample: 316756 - AH-3 8-8.5'

Param	Flag	Result	Units	RL
Chloride		**1050**	mg/Kg	4

Sample: 316757 - AH-3 9-9.5'

Param	Flag	Result	Units	RL
Chloride		**1400**	mg/Kg	4

TRACEANALYSIS, INC.

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

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

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

Report Date: December 26, 2012

Work Order: 12121345

Project Location: Eddy Co., NM
Project Name: COG/Way South State Com. #1H TB
Project Number: 114-6401534

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
316746	AH-1 0-1'	soil	2012-12-12	00:00	2012-12-13
316747	AH-2 0-1'	soil	2012-12-12	00:00	2012-12-13
316748	AH-3 0-1'	soil	2012-12-12	00:00	2012-12-13
316749	AH-3 1-1.5'	soil	2012-12-12	00:00	2012-12-13
316750	AH-3 2-2.5'	soil	2012-12-12	00:00	2012-12-13
316751	AH-3 3-3.5'	soil	2012-12-12	00:00	2012-12-13
316752	AH-3 4-4.5'	soil	2012-12-12	00:00	2012-12-13
316753	AH-3 5-5.5'	soil	2012-12-12	00:00	2012-12-13
316754	AH-3 6-6.5'	soil	2012-12-12	00:00	2012-12-13
316755	AH-3 7-7.5'	soil	2012-12-12	00:00	2012-12-13
316756	AH-3 8-8.5'	soil	2012-12-12	00:00	2012-12-13
316757	AH-3 9-9.5'	soil	2012-12-12	00:00	2012-12-13

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.

Michael Abel

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

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- Sample 316752 (AH-3 4-4.5') . . . 13
- Sample 316753 (AH-3 5-5.5') . . . 13
- Sample 316754 (AH-3 6-6.5') . . . 13
- Sample 316755 (AH-3 7-7.5') . . . 14
- Sample 316756 (AH-3 8-8.5') . . . 14
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Case Narrative

Samples for project COG/Way South State Com. #1H TB were received by TraceAnalysis, Inc. on 2012-12-13 and assigned to work order 12121345. Samples for work order 12121345 were received intact at a temperature of 1.3 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	82683	2012-12-19 at 16:47	97588	2012-12-19 at 16:47
Chloride (Titration)	SM 4500-Cl B	82736	2012-12-20 at 14:28	97669	2012-12-21 at 16:19
Chloride (Titration)	SM 4500-Cl B	82736	2012-12-20 at 14:28	97670	2012-12-21 at 16:27
TPH DRO - NEW	S 8015 D	82608	2012-12-14 at 13:00	97482	2012-12-17 at 10:41
TPH DRO - NEW	S 8015 D	82632	2012-12-17 at 10:00	97518	2012-12-18 at 10:09
TPH GRO	S 8015 D	82693	2012-12-19 at 16:47	97594	2012-12-19 at 16:47

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 12121345 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: 316746 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	97588	Date Analyzed:	2012-12-19	Analyzed By:	YG
Prep Batch:	82683	Sample Preparation:	2012-12-19	Prepared By:	YG

Parameter	Flag	Cert	Result	RL 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)			1.90	mg/Kg	1	2.00	95	79.5 - 108
4-Bromofluorobenzene (4-BFB)			1.83	mg/Kg	1	2.00	92	71.4 - 108

Sample: 316746 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	97669	Date Analyzed:	2012-12-21	Analyzed By:	AR
Prep Batch:	82736	Sample Preparation:	2012-12-20	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**61.6**	mg/Kg	5	4.00

Sample: 316746 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	97482	Date Analyzed:	2012-12-17	Analyzed By:	CW
Prep Batch:	82608	Sample Preparation:	2012-12-14	Prepared By:	CW

Parameter	Flag	Cert	Result	RL 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	Qsr	Qsr		159	mg/Kg	1	100	159	70 - 130

Sample: 316746 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	97594	Date Analyzed:	2012-12-19	Analyzed By:	YG
Prep Batch:	82693	Sample Preparation:	2012-12-19	Prepared By:	YG

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
GRO	U	1	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.80	mg/Kg	1	2.00	90	70 - 130
4-Bromofluorobenzene (4-BFB)			1.84	mg/Kg	1	2.00	92	70 - 130

Sample: 316747 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	97588	Date Analyzed:	2012-12-19	Analyzed By:	YG
Prep Batch:	82683	Sample Preparation:	2012-12-19	Prepared By:	YG

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene [1]	U	1	<0.400	mg/Kg	20	0.0200
Toluene		1	**5.76**	mg/Kg	20	0.0200
Ethylbenzene		1	**6.78**	mg/Kg	20	0.0200
Xylene		1	**31.7**	mg/Kg	20	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			38.5	mg/Kg	20	40.0	96	79.5 - 108
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	48.5	mg/Kg	20	40.0	121	71.4 - 108

Sample: 316747 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	97669	Date Analyzed:	2012-12-21	Analyzed By:	AR
Prep Batch:	82736	Sample Preparation:	2012-12-20	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**6070**	mg/Kg	10	4.00

Sample: 316747 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	97482	Date Analyzed:	2012-12-17	Analyzed By:	CW
Prep Batch:	82608	Sample Preparation:	2012-12-14	Prepared By:	CW

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
DRO		1	**2050**	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	191	mg/Kg	1	100	191	70 - 130

Sample: 316747 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	97594	Date Analyzed:	2012-12-19	Analyzed By:	YG
Prep Batch:	82693	Sample Preparation:	2012-12-19	Prepared By:	YG

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
GRO		1	**1200**	mg/Kg	20	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			35.6	mg/Kg	20	40.0	89	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	57.1	mg/Kg	20	40.0	143	70 - 130

Sample: 316748 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	97588	Date Analyzed:	2012-12-19	Analyzed By:	YG
Prep Batch:	82683	Sample Preparation:	2012-12-19	Prepared By:	YG

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene [2]	U	1	<0.400	mg/Kg	20	0.0200
Toluene		1	**10.9**	mg/Kg	20	0.0200
Ethylbenzene		1	**10.2**	mg/Kg	20	0.0200
Xylene		1	**64.9**	mg/Kg	20	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			38.6	mg/Kg	20	40.0	96	79.5 - 108
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	50.8	mg/Kg	20	40.0	127	71.4 - 108

Sample: 316748 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	97669	Date Analyzed:	2012-12-21	Analyzed By:	AR
Prep Batch:	82736	Sample Preparation:	2012-12-20	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**6000**	mg/Kg	10	4.00

Sample: 316748 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	97482	Date Analyzed:	2012-12-17	Analyzed By:	CW
Prep Batch:	82608	Sample Preparation:	2012-12-14	Prepared By:	CW

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
DRO		1	**1950**	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	195	mg/Kg	1	100	195	70 - 130

Sample: 316748 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	97594	Date Analyzed:	2012-12-19	Analyzed By:	YG
Prep Batch:	82693	Sample Preparation:	2012-12-19	Prepared By:	YG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	**1880**	mg/Kg	20	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			36.2	mg/Kg	20	40.0	90	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	63.0	mg/Kg	20	40.0	158	70 - 130

Sample: 316749 - AH-3 1-1.5'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	97588	Date Analyzed:	2012-12-19	Analyzed By:	YG
Prep Batch:	82683	Sample Preparation:	2012-12-19	Prepared By:	YG

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)			1.93	mg/Kg	1	2.00	96	79.5 - 108
4-Bromofluorobenzene (4-BFB)			2.06	mg/Kg	1	2.00	103	71.4 - 108

Sample: 316749 - AH-3 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	97669	Date Analyzed:	2012-12-21	Analyzed By:	AR
Prep Batch:	82736	Sample Preparation:	2012-12-20	Prepared By:	AR

continued ...

sample 316749 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**7250**	mg/Kg	10	4.00

Sample: 316749 - AH-3 1-1.5'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	97518	Date Analyzed:	2012-12-18	Analyzed By:	CW
Prep Batch:	82632	Sample Preparation:	2012-12-17	Prepared By:	CW

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qs	1	**53.9**	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	70 - 130

Sample: 316749 - AH-3 1-1.5'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	97594	Date Analyzed:	2012-12-19	Analyzed By:	YG
Prep Batch:	82693	Sample Preparation:	2012-12-19	Prepared By:	YG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	B	1	**27.2**	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.89	mg/Kg	1	2.00	94	70 - 130
4-Bromofluorobenzene (4-BFB)			2.07	mg/Kg	1	2.00	104	70 - 130

Sample: 316750 - AH-3 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	97669	Date Analyzed:	2012-12-21	Analyzed By:	AR
Prep Batch:	82736	Sample Preparation:	2012-12-20	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2480**	mg/Kg	10	4.00

Sample: 316750 - AH-3 2-2.5'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	97518	Date Analyzed:	2012-12-18	Analyzed By:	CW
Prep Batch:	82632	Sample Preparation:	2012-12-17	Prepared By:	CW

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			107	mg/Kg	1	100	107	70 - 130

Sample: 316750 - AH-3 2-2.5'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	97594	Date Analyzed:	2012-12-19	Analyzed By:	YG
Prep Batch:	82693	Sample Preparation:	2012-12-19	Prepared By:	YG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	B	1	**4.32**	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.33	mg/Kg	1	2.00	116	70 - 130
4-Bromofluorobenzene (4-BFB)			2.08	mg/Kg	1	2.00	104	70 - 130

Sample: 316751 - AH-3 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	97669	Date Analyzed:	2012-12-21	Analyzed By:	AR
Prep Batch:	82736	Sample Preparation:	2012-12-20	Prepared By:	AR

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Chloride			**1700**		mg/Kg	10	4.00

Sample: 316752 - AH-3 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	97670	Date Analyzed:	2012-12-21	Analyzed By:	AR
Prep Batch:	82736	Sample Preparation:	2012-12-20	Prepared By:	AR

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Chloride			**858**		mg/Kg	5	4.00

Sample: 316753 - AH-3 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	97670	Date Analyzed:	2012-12-21	Analyzed By:	AR
Prep Batch:	82736	Sample Preparation:	2012-12-20	Prepared By:	AR

Parameter	Flag	Cert	Result	RL	Units	Dilution	RL
Chloride			**1180**		mg/Kg	5	4.00

Sample: 316754 - AH-3 6-6.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	97670	Date Analyzed:	2012-12-21	Analyzed By:	AR
Prep Batch:	82736	Sample Preparation:	2012-12-20	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1280**	mg/Kg	10	4.00

Sample: 316755 - AH-3 7-7.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	97670	Date Analyzed:	2012-12-21	Analyzed By:	AR
Prep Batch:	82736	Sample Preparation:	2012-12-20	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1460**	mg/Kg	10	4.00

Sample: 316756 - AH-3 8-8.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	97670	Date Analyzed:	2012-12-21	Analyzed By:	AR
Prep Batch:	82736	Sample Preparation:	2012-12-20	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1050**	mg/Kg	10	4.00

Sample: 316757 - AH-3 9-9.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	97670	Date Analyzed:	2012-12-21	Analyzed By:	AR
Prep Batch:	82736	Sample Preparation:	2012-12-20	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1400**	mg/Kg	10	4.00

Method Blanks

Method Blank (1) QC Batch: 97482

QC Batch:	97482	Date Analyzed:	2012-12-17	Analyzed By:	CW
Prep Batch:	82608	QC Preparation:	2012-12-14	Prepared By:	CW

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	<6.88	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			106	mg/Kg	1	100	106	70 - 130

Method Blank (1) QC Batch: 97518

QC Batch:	97518	Date Analyzed:	2012-12-18	Analyzed By:	CW
Prep Batch:	82632	QC Preparation:	2012-12-17	Prepared By:	CW

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	<6.88	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			114	mg/Kg	1	100	114	70 - 130

Method Blank (1) QC Batch: 97588

QC Batch:	97588	Date Analyzed:	2012-12-19	Analyzed By:	YG
Prep Batch:	82683	QC Preparation:	2012-12-19	Prepared By:	YG

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.00810	mg/Kg	0.02
Toluene		1	<0.00750	mg/Kg	0.02
Ethylbenzene		1	<0.00730	mg/Kg	0.02

continued ...

method blank continued ...

Parameter	Flag	Cert	MDL Result	Units	RL
Xylene		1	<0.00700	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.92	mg/Kg	1	2.00	96	79.5 - 108
4-Bromofluorobenzene (4-BFB)			1.81	mg/Kg	1	2.00	90	71.4 - 108

Method Blank (1) QC Batch: 97594

QC Batch:	97594	Date Analyzed:	2012-12-19	Analyzed By:	YG
Prep Batch:	82693	QC Preparation:	2012-12-19	Prepared By:	YG

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1	<2.32	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.82	mg/Kg	1	2.00	91	70 - 130
4-Bromofluorobenzene (4-BFB)			1.85	mg/Kg	1	2.00	92	70 - 130

Method Blank (1) QC Batch: 97669

QC Batch:	97669	Date Analyzed:	2012-12-21	Analyzed By:	AR
Prep Batch:	82736	QC Preparation:	2012-12-20	Prepared By:	AR

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

Method Blank (1) QC Batch: 97670

QC Batch:	97670	Date Analyzed:	2012-12-21	Analyzed By:	AR
Prep Batch:	82736	QC Preparation:	2012-12-20	Prepared By:	AR

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

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 97482 | Date Analyzed: 2012-12-17 | Analyzed By: CW
Prep Batch: 82608 | QC Preparation: 2012-12-14 | Prepared By: CW

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	288	mg/Kg	1	250	<6.88	115	70 - 130

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	298	mg/Kg	1	250	<6.88	119	70 - 130	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	127	130	mg/Kg	1	100	127	130	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 97518 | Date Analyzed: 2012-12-18 | Analyzed By: CW
Prep Batch: 82632 | QC Preparation: 2012-12-17 | Prepared By: CW

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	252	mg/Kg	1	250	<6.88	101	70 - 130

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	257	mg/Kg	1	250	<6.88	103	70 - 130	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	124	124	mg/Kg	1	100	124	124	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 97588 | Date Analyzed: 2012-12-19 | Analyzed By: YG
Prep Batch: 82683 | QC Preparation: 2012-12-19 | Prepared By: YG

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.76	mg/Kg	1	2.00	<0.00810	88	72.4 - 111
Toluene		1	1.78	mg/Kg	1	2.00	<0.00750	89	77 - 110
Ethylbenzene		1	1.86	mg/Kg	1	2.00	<0.00730	93	71.8 - 115
Xylene		1	5.45	mg/Kg	1	6.00	<0.00700	91	78.3 - 114

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	1.62	mg/Kg	1	2.00	<0.00810	81	72.4 - 111	8	20
Toluene		1	1.65	mg/Kg	1	2.00	<0.00750	82	77 - 110	8	20
Ethylbenzene		1	1.69	mg/Kg	1	2.00	<0.00730	84	71.8 - 115	10	20
Xylene		1	5.03	mg/Kg	1	6.00	<0.00700	84	78.3 - 114	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)	1.96	1.95	mg/Kg	1	2.00	98	98	82.1 - 110
4-Bromofluorobenzene (4-BFB)	1.90	1.85	mg/Kg	1	2.00	95	92	79.6 - 114

Laboratory Control Spike (LCS-1)

QC Batch: 97594 | Date Analyzed: 2012-12-19 | Analyzed By: YG
Prep Batch: 82693 | QC Preparation: 2012-12-19 | Prepared By: YG

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	20.5	mg/Kg	1	20.0	4.49	102	70 - 130

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	21.1	mg/Kg	1	20.0	4.49	106	70 - 130	3	20

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

continued ...

control spikes continued ...

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.54	2.21	mg/Kg	1	2.00	127	110	70 - 130
4-Bromofluorobenzene (4-BFB)	1.97	1.96	mg/Kg	1	2.00	98	98	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 97669 | Date Analyzed: 2012-12-21 | Analyzed By: AR
Prep Batch: 82736 | QC Preparation: 2012-12-20 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2420	mg/Kg	1	2500	<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			2560	mg/Kg	1	2500	<3.85	102	85 - 115	6	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 97670 | Date Analyzed: 2012-12-21 | Analyzed By: AR
Prep Batch: 82736 | QC Preparation: 2012-12-20 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2590	mg/Kg	1	2500	<3.85	104	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2430	mg/Kg	1	2500	<3.85	97	85 - 115	6	20

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

Matrix Spike (MS-1) Spiked Sample: 316746

QC Batch: 97482 | Date Analyzed: 2012-12-17 | Analyzed By: CW
Prep Batch: 82608 | QC Preparation: 2012-12-14 | Prepared By: CW

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	295	mg/Kg	1	250	8.58	114	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	328	mg/Kg	1	250	8.58	128	70 - 130	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
n-Tricosane	Qsr	Qsr	139	143	mg/Kg	1	100	139	143	70 - 130

Matrix Spike (MS-1) Spiked Sample: 316642

QC Batch: 97518 | Date Analyzed: 2012-12-18 | Analyzed By: CW
Prep Batch: 82632 | QC Preparation: 2012-12-17 | Prepared By: CW

Param		F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	Qs	Qs	1	8980	mg/Kg	10	250	10800	-728	70 - 130

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

Param		F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	Qs	Qs	1	8440	mg/Kg	10	250	10800	-944	70 - 130	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	Qsr	Qsr	420	407	mg/Kg	10	100	420	407	70 - 130

Matrix Spike (MS-1) Spiked Sample: 316746

QC Batch: 97588 | Date Analyzed: 2012-12-19 | Analyzed By: YG
Prep Batch: 82683 | QC Preparation: 2012-12-19 | Prepared By: YG

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.88	mg/Kg	1	2.00	<0.00810	94	66.3 - 138
Toluene		1	1.90	mg/Kg	1	2.00	<0.00750	95	64.8 - 142
Ethylbenzene		1	1.96	mg/Kg	1	2.00	<0.00730	98	72 - 132
Xylene		1	5.77	mg/Kg	1	6.00	<0.00700	96	60.8 - 148

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		1	1.97	mg/Kg	1	2.00	<0.00810	98	66.3 - 138	5	20
Toluene		1	1.99	mg/Kg	1	2.00	<0.00750	100	64.8 - 142	5	20
Ethylbenzene		1	2.08	mg/Kg	1	2.00	<0.00730	104	72 - 132	6	20
Xylene		1	6.13	mg/Kg	1	6.00	<0.00700	102	60.8 - 148	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)	1.97	1.95	mg/Kg	1	2	98	98	76.6 - 112
4-Bromofluorobenzene (4-BFB)	1.86	1.84	mg/Kg	1	2	93	92	67.6 - 125

Matrix Spike (MS-1) Spiked Sample: 316746

QC Batch: 97594 | Date Analyzed: 2012-12-19 | Analyzed By: YG
Prep Batch: 82693 | QC Preparation: 2012-12-19 | Prepared By: YG

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	22.8	mg/Kg	1	20.0	<2.32	114	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	21.5	mg/Kg	1	20.0	<2.32	108	70 - 130	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)	1.74	1.78	mg/Kg	1	2	87	89	70 - 130
4-Bromofluorobenzene (4-BFB)	1.98	1.92	mg/Kg	1	2	99	96	70 - 130

Matrix Spike (MS-1) Spiked Sample: 316751

QC Batch: 97669 | Date Analyzed: 2012-12-21 | Analyzed By: AR
Prep Batch: 82736 | QC Preparation: 2012-12-20 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			3920	mg/Kg	10	2500	1700	89	78.9 - 121

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			4130	mg/Kg	10	2500	1700	97	78.9 - 121	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: 316757

QC Batch: 97670 | Date Analyzed: 2012-12-21 | Analyzed By: AR
Prep Batch: 82736 | QC Preparation: 2012-12-20 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			4100	mg/Kg	10	2500	1400	108	78.9 - 121

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			4340	mg/Kg	10	2500	1400	118	78.9 - 121	6	20

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

Calibration Standards

Standard (CCV-1)

QC Batch: 97482 | Date Analyzed: 2012-12-17 | Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	281	112	80 - 120	2012-12-17

Standard (CCV-2)

QC Batch: 97482 | Date Analyzed: 2012-12-17 | Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	274	110	80 - 120	2012-12-17

Standard (CCV-1)

QC Batch: 97518 | Date Analyzed: 2012-12-18 | Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	250	100	80 - 120	2012-12-18

Standard (CCV-2)

QC Batch: 97518 | Date Analyzed: 2012-12-18 | Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	240	96	80 - 120	2012-12-18

Standard (CCV-1)

QC Batch: 97588 | Date Analyzed: 2012-12-19 | Analyzed By: YG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0960	96	80 - 120	2012-12-19
Toluene		1	mg/kg	0.100	0.0953	95	80 - 120	2012-12-19
Ethylbenzene		1	mg/kg	0.100	0.0942	94	80 - 120	2012-12-19
Xylene		1	mg/kg	0.300	0.276	92	80 - 120	2012-12-19

Standard (CCV-2)

QC Batch: 97588 | Date Analyzed: 2012-12-19 | Analyzed By: YG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0954	95	80 - 120	2012-12-19
Toluene		1	mg/kg	0.100	0.0953	95	80 - 120	2012-12-19
Ethylbenzene		1	mg/kg	0.100	0.0942	94	80 - 120	2012-12-19
Xylene		1	mg/kg	0.300	0.276	92	80 - 120	2012-12-19

Standard (CCV-3)

QC Batch: 97588 | Date Analyzed: 2012-12-19 | Analyzed By: YG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0974	97	80 - 120	2012-12-19
Toluene		1	mg/kg	0.100	0.0965	96	80 - 120	2012-12-19
Ethylbenzene		1	mg/kg	0.100	0.0958	96	80 - 120	2012-12-19
Xylene		1	mg/kg	0.300	0.279	93	80 - 120	2012-12-19

Standard (CCV-1)

QC Batch: 97594 | Date Analyzed: 2012-12-19 | Analyzed By: YG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.971	97	80 - 120	2012-12-19

Standard (CCV-2)

QC Batch: 97594 Date Analyzed: 2012-12-19 Analyzed By: YG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.960	96	80 - 120	2012-12-19

Standard (CCV-3)

QC Batch: 97594 Date Analyzed: 2012-12-19 Analyzed By: YG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.969	97	80 - 120	2012-12-19

Standard (CCV-1)

QC Batch: 97669 Date Analyzed: 2012-12-21 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.2	99	85 - 115	2012-12-21

Standard (CCV-2)

QC Batch: 97669 Date Analyzed: 2012-12-21 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2012-12-21

Standard (CCV-1)

QC Batch: 97670 Date Analyzed: 2012-12-21 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.8	100	85 - 115	2012-12-21

Standard (CCV-2)

QC Batch: 97670 Date Analyzed: 2012-12-21 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2012-12-21

Appendix

Report Definitions

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

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704392-12-4	Midland

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Result Comments

1 Dilution due to hydrocarbons.
2 Dilution due to hydrocarbons.

Attachments

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

1212345

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 2

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.: 114-640534

PROJECT NAME: COG - Way South State Com #1H Eddy Co, NM

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 mod. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd 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
316746	12/12		S		X	AH-1 0-1	1				X		X	X											X				
747						AH-2 0-1							X	X											X				
748						AH-3 0-1							X	X											X				
749						AH-3 14.5																			X				
750						AH-3 2-2.5																			X				
751						AH-3 3-3.5																			X				
752						AH-3 4-4.5																			X				
753						AH-3 5-5.5																			X				
754						AH-3 6-6.5																			X				
755						AH-3 7-7.5																			X				

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature) — Date: — Time:
RECEIVED BY: (Signature) Jessica Fitch — Date: 12-13-12 — Time: 0900
SAMPLED BY: (Print & Initial) Marcus Kujawski / Ryan Rash — Date: 12-12-12 — Time:

RELINQUISHED BY: (Signature) Jessica Fitch — Date: 12-13-12 — Time: 1412
RECEIVED BY: (Signature) — Date: 12/13/12 — Time: 14:12
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS — AIRBILL #: — OTHER:

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

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

SAMPLE CONDITION WHEN RECEIVED: 1.3°

REMARKS: Run deeper Sample if TPH Exceeds 100 mg/kg. AH

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

Run deeper Sample if benzene exceed 10 mg/kg or total BTEX exceeds 50 mg/kg.

12121345

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: 2 OF: 2

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-640 1534

PROJECT NAME: Cogs Way South State Com #2H Eddy Co, NM

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
756	12/12		S		X	AH-3 8-8.5	1				X	
757	12/12		S		X	AH-3 9-9.5	1				X	

ANALYSIS REQUEST (Circle or Specify Method No.)

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

RELINQUISHED BY: (Signature) — Date: — Time: — RECEIVED BY: (Signature) Jeanne Fitch — Date: 12-13-12 — Time: 0900

RELINQUISHED BY: (Signature) Jeanne Fitch — Date: 12-13-12 — Time: 1412 — RECEIVED BY: (Signature) — Date: 12/13/12 — Time: 14:12

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

SAMPLED BY: (Print & Initial) Marcus Kinsolving/Ryan Reich — Date: 12-12-12 — Time:

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

RECEIVING LABORATORY: Trace — RECEIVED BY: (Signature)

ADDRESS: — CITY: Midland — STATE: TX — ZIP: — CONTACT: — PHONE: — DATE: — TIME:

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 1.5

REMARKS: AH

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

Summary Report

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

Report Date: January 11, 2013

Work Order: 13011002

Project Location: Eddy Co., NM
Project Name: COG/Way South State Com. #1H TB
Project Number: 114-6401534

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
318048	Background Trench 1 0-1'	soil	2013-01-08	00:00	2013-01-09
318049	Background Trench 1 2'	soil	2013-01-08	00:00	2013-01-09
318050	Background Trench 1 4'	soil	2013-01-08	00:00	2013-01-09
318051	Background Trench 1 6'	soil	2013-01-08	00:00	2013-01-09
318052	Background Trench 1 8'	soil	2013-01-08	00:00	2013-01-09
318053	Background Trench 1 10'	soil	2013-01-08	00:00	2013-01-09
318054	Background Trench 2 0-1'	soil	2013-01-08	00:00	2013-01-09
318055	Background Trench 2 2'	soil	2013-01-08	00:00	2013-01-09
318056	Background Trench 2 4'	soil	2013-01-08	00:00	2013-01-09
318057	Background Trench 2 6'	soil	2013-01-08	00:00	2013-01-09
318058	Background Trench 2 8'	soil	2013-01-08	00:00	2013-01-09
318059	Background Trench 2 10'	soil	2013-01-08	00:00	2013-01-09

Sample: 318048 - Background Trench 1 0-1'

Param	Flag	Result	Units	RL
Chloride	Qs	**194**	mg/Kg	4

Sample: 318049 - Background Trench 1 2'

Param	Flag	Result	Units	RL
Chloride	Qs	**995**	mg/Kg	4

Sample: 318050 - Background Trench 1 4'

Param	Flag	Result	Units	RL
Chloride	Qs	**2160**	mg/Kg	4

Sample: 318051 - Background Trench 1 6'

Param	Flag	Result	Units	RL
Chloride	Qs	**2170**	mg/Kg	4

Sample: 318052 - Background Trench 1 8'

Param	Flag	Result	Units	RL
Chloride	Qs	**1080**	mg/Kg	4

Sample: 318053 - Background Trench 1 10'

Param	Flag	Result	Units	RL
Chloride	Qs	**991**	mg/Kg	4

Sample: 318054 - Background Trench 2 0-1'

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

Sample: 318055 - Background Trench 2 2'

Param	Flag	Result	Units	RL
Chloride	Qs	**1810**	mg/Kg	4

Sample: 318056 - Background Trench 2 4'

Param	Flag	Result	Units	RL
Chloride	Qs	**3650**	mg/Kg	4

Sample: 318057 - Background Trench 2 6'

Param	Flag	Result	Units	RL
Chloride	Qs	**1650**	mg/Kg	4

Sample: 318058 - Background Trench 2 8'

Param	Flag	Result	Units	RL
Chloride		**1340**	mg/Kg	4

Sample: 318059 - Background Trench 2 10'

Param	Flag	Result	Units	RL
Chloride		**1330**	mg/Kg	4

TRACEANALYSIS, INC.

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

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

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

Report Date: January 11, 2013

Work Order: 13011002

Project Location: Eddy Co., NM
Project Name: COG/Way South State Com. #1H TB
Project Number: 114-6401534

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
318048	Background Trench 1 0-1'	soil	2013-01-08	00:00	2013-01-09
318049	Background Trench 1 2'	soil	2013-01-08	00:00	2013-01-09
318050	Background Trench 1 4'	soil	2013-01-08	00:00	2013-01-09
318051	Background Trench 1 6'	soil	2013-01-08	00:00	2013-01-09
318052	Background Trench 1 8'	soil	2013-01-08	00:00	2013-01-09
318053	Background Trench 1 10'	soil	2013-01-08	00:00	2013-01-09
318054	Background Trench 2 0-1'	soil	2013-01-08	00:00	2013-01-09
318055	Background Trench 2 2'	soil	2013-01-08	00:00	2013-01-09
318056	Background Trench 2 4'	soil	2013-01-08	00:00	2013-01-09
318057	Background Trench 2 6'	soil	2013-01-08	00:00	2013-01-09
318058	Background Trench 2 8'	soil	2013-01-08	00:00	2013-01-09
318059	Background Trench 2 10'	soil	2013-01-08	00:00	2013-01-09

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

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

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- Sample 318056 (Background Trench 2 4') . . . 7
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Case Narrative

Samples for project COG/Way South State Com. #1H TB were received by TraceAnalysis, Inc. on 2013-01-09 and assigned to work order 13011002. Samples for work order 13011002 were received intact at a temperature of 17.7 C. Samples were received without ice.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
Chloride (Titration)	SM 4500-Cl B	83039	2013-01-11 at 13:06	98013	2013-01-11 at 13:09
Chloride (Titration)	SM 4500-Cl B	83041	2013-01-11 at 13:47	98017	2013-01-11 at 13:50

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 13011002 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: 318048 - Background Trench 1 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	98013	Date Analyzed:	2013-01-11	Analyzed By:	AH
Prep Batch:	83039	Sample Preparation:	2013-01-11	Prepared By:	AH

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride	Qs		**194**	mg/Kg	5	4.00

Sample: 318049 - Background Trench 1 2'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	98013	Date Analyzed:	2013-01-11	Analyzed By:	AH
Prep Batch:	83039	Sample Preparation:	2013-01-11	Prepared By:	AH

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride	Qs		**995**	mg/Kg	5	4.00

Sample: 318050 - Background Trench 1 4'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	98013	Date Analyzed:	2013-01-11	Analyzed By:	AH
Prep Batch:	83039	Sample Preparation:	2013-01-11	Prepared By:	AH

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride	Qs		**2160**	mg/Kg	5	4.00

Sample: 318051 - Background Trench 1 6'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	98013	Date Analyzed:	2013-01-11	Analyzed By:	AH
Prep Batch:	83039	Sample Preparation:	2013-01-11	Prepared By:	AH

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride	Qs		**2170**	mg/Kg	5	4.00

Sample: 318052 - Background Trench 1 8'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	98013	Date Analyzed:	2013-01-11	Analyzed By:	AH
Prep Batch:	83039	Sample Preparation:	2013-01-11	Prepared By:	AH

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride	Qs		**1080**	mg/Kg	5	4.00

Sample: 318053 - Background Trench 1 10'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	98013	Date Analyzed:	2013-01-11	Analyzed By:	AH
Prep Batch:	83039	Sample Preparation:	2013-01-11	Prepared By:	AH

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride	Qs		**991**	mg/Kg	5	4.00

Sample: 318054 - Background Trench 2 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	98013	Date Analyzed:	2013-01-11	Analyzed By:	AH
Prep Batch:	83039	Sample Preparation:	2013-01-11	Prepared By:	AH

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride	Qs,U		<20.0	mg/Kg	5	4.00

Sample: 318055 - Background Trench 2 2'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	98013	Date Analyzed:	2013-01-11	Analyzed By:	AH
Prep Batch:	83039	Sample Preparation:	2013-01-11	Prepared By:	AH

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride	Qs		**1810**	mg/Kg	5	4.00

Sample: 318056 - Background Trench 2 4'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	98013	Date Analyzed:	2013-01-11	Analyzed By:	AH
Prep Batch:	83039	Sample Preparation:	2013-01-11	Prepared By:	AH

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride	Qs		**3650**	mg/Kg	5	4.00

Sample: 318057 - Background Trench 2 6'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	98013	Date Analyzed:	2013-01-11	Analyzed By:	AH
Prep Batch:	83039	Sample Preparation:	2013-01-11	Prepared By:	AH

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride	Qs		**1650**	mg/Kg	5	4.00

Sample: 318058 - Background Trench 2 8'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	98017	Date Analyzed:	2013-01-11	Analyzed By:	AH
Prep Batch:	83041	Sample Preparation:	2013-01-11	Prepared By:	AH

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1340**	mg/Kg	5	4.00

Sample: 318059 - Background Trench 2 10'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	98017	Date Analyzed:	2013-01-11	Analyzed By:	AH
Prep Batch:	83041	Sample Preparation:	2013-01-11	Prepared By:	AH

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**1330**	mg/Kg	5	4.00

Method Blanks

Method Blank (1) QC Batch: 98013

QC Batch:	98013	Date Analyzed:	2013-01-11	Analyzed By:	AH
Prep Batch:	83039	QC Preparation:	2013-01-11	Prepared By:	AH

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

Method Blank (1) QC Batch: 98017

QC Batch:	98017	Date Analyzed:	2013-01-11	Analyzed By:	AH
Prep Batch:	83041	QC Preparation:	2013-01-11	Prepared By:	AH

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

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 98013 | Date Analyzed: 2013-01-11 | Analyzed By: AH
Prep Batch: 83039 | QC Preparation: 2013-01-11 | Prepared By: AH

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2430	mg/Kg	1	2500	<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			2660	mg/Kg	1	2500	<3.85	106	85 - 115	9	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 98017 | Date Analyzed: 2013-01-11 | Analyzed By: AH
Prep Batch: 83041 | QC Preparation: 2013-01-11 | Prepared By: AH

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2880	mg/Kg	1	2500	<3.85	115	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			2570	mg/Kg	1	2500	<3.85	103	85 - 115	11	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: 318057

QC Batch: 98013 | Date Analyzed: 2013-01-11 | Analyzed By: AH
Prep Batch: 83039 | QC Preparation: 2013-01-11 | Prepared By: AH

Param		F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	Q*	Q*		4680	mg/Kg	5	2500	1650	121	78.9 - 121

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			4400	mg/Kg	5	2500	1650	110	78.9 - 121	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: 318065

QC Batch:	98017	Date Analyzed:	2013-01-11	Analyzed By:	AH
Prep Batch:	83041	QC Preparation:	2013-01-11	Prepared By:	AH

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2640	mg/Kg	5	2500	133	100	78.9 - 121

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			2690	mg/Kg	5	2500	133	102	78.9 - 121	2	20

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

Calibration Standards

Standard (ICV-1)

QC Batch: 98013 | Date Analyzed: 2013-01-11 | Analyzed By: AH

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2013-01-11

Standard (CCV-2)

QC Batch: 98013 | Date Analyzed: 2013-01-11 | Analyzed By: AH

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.0	99	85 - 115	2013-01-11

Standard (ICV-1)

QC Batch: 98017 | Date Analyzed: 2013-01-11 | Analyzed By: AH

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2013-01-11

Standard (CCV-1)

QC Batch: 98017 | Date Analyzed: 2013-01-11 | Analyzed By: AH

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2013-01-11

Appendix

Report Definitions

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

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

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

13011002

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 2

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-6401534

PROJECT NAME: Way South Strata Com #1H
Eddy Co NM

LAB I.D. NUMBER	DATE 2013	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
318048	1/8		S		X	Back Ground Trench 1	0-1'	1																	X				
049							2'																						
050							4'																						
051							6'																						
052							8'																						
053							10'																						
054						Back Ground Trench 2	0-1'																						
055							2'																						
056							4'																						
057							6'																		¥				

RELINQUISHED BY: (Signature) Date: 1/9/13 Time: 1655
RECEIVED BY: (Signature) Date: 1/9/13 Time: 1655
SAMPLED BY: (Print & Initial) TF Date: 1-8-13 Time:

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

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

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

SAMPLE CONDITION WHEN RECEIVED: H.T not mine

REMARKS: Rush (Monday?) Midland all

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

1301100 2

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: 2 OF: 2

CLIENT NAME:	SITE MANAGER:
COG	Ike Tavarez

PROJECT NO.:	PROJECT NAME:
114-6401534	Way South State Com #1H Eddy Co NM

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd 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
058	1/8/2013		S		X	Back Ground Trench 2 8'	1																	X				
059						10'																		X				

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature)	Date: 1/9/13 Time: 1600	RECEIVED BY: (Signature)	Date: 1/9/13 Time: 16:55	SAMPLED BY: (Print & Initial)	Date: 1-8-13 Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:	SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS	AIRBILL #: OTHER:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:	TETRA TECH CONTACT PERSON: Ike	Results by:

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

RUSH Charges Authorized: (Yes) No

SAMPLE CONDITION WHEN RECEIVED: 17.7°

REMARKS: Rush (Monday - ?)

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

Summary Report

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

Report Date: January 25, 2013

Work Order: 13012205

Project Location: Eddy Co., NM
Project Name: COG/Way South State Com. #1H TB
Project Number: 114-6401534

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
318935	Trench-1 @ AH-2 0-1'	soil	2013-01-15	00:00	2013-01-21
318936	Trench-1 @ AH-2 2'	soil	2013-01-15	00:00	2013-01-21
318937	Trench-1 @ AH-2 4'	soil	2013-01-15	00:00	2013-01-21
318938	Trench-1 @ AH-2 6'	soil	2013-01-15	00:00	2013-01-21
318941	Trench-2 @ AH-4 0-1'	soil	2013-01-15	00:00	2013-01-21
318942	Trench-2 @ AH-4 2'	soil	2013-01-15	00:00	2013-01-21
318943	Trench-2 @ AH-4 4'	soil	2013-01-15	00:00	2013-01-21
318944	Trench-2 @ AH-4 6'	soil	2013-01-15	00:00	2013-01-21
318947	Trench-3 @ AH-5 0-1'	soil	2013-01-15	00:00	2013-01-21
318948	Trench-3 @ AH-5 2'	soil	2013-01-15	00:00	2013-01-21
318949	Trench-3 @ AH-5 4'	soil	2013-01-15	00:00	2013-01-21
318950	Trench-3 @ AH-5 6'	soil	2013-01-15	00:00	2013-01-21
318953	Trench-4 @ AH-8 0-1'	soil	2013-01-15	00:00	2013-01-21
318954	Trench-4 @ AH-8 2'	soil	2013-01-15	00:00	2013-01-21
318955	Trench-4 @ AH-8 4'	soil	2013-01-15	00:00	2013-01-21
318956	Trench-4 @ AH-8 6'	soil	2013-01-15	00:00	2013-01-21
318959	Trench-5 @ AH-10 0-1'	soil	2013-01-15	00:00	2013-01-21
318960	Trench-5 @ AH-10 2'	soil	2013-01-15	00:00	2013-01-21
318961	Trench-5 @ AH-10 4'	soil	2013-01-15	00:00	2013-01-21
318962	Trench-5 @ AH-10 6'	soil	2013-01-15	00:00	2013-01-21

Sample: 318935 - Trench-1 @ AH-2 0-1'

Param	Flag	Result	Units	RL
Chloride		**5700**	mg/Kg	4

Sample: 318936 - Trench-1 @ AH-2 2'

Param	Flag	Result	Units	RL
Chloride		**770**	mg/Kg	4

Sample: 318937 - Trench-1 @ AH-2 4'

Param	Flag	Result	Units	RL
Chloride		**721**	mg/Kg	4

Sample: 318938 - Trench-1 @ AH-2 6'

Param	Flag	Result	Units	RL
Chloride		**1120**	mg/Kg	4

Sample: 318941 - Trench-2 @ AH-4 0-1'

Param	Flag	Result	Units	RL
Chloride		**4320**	mg/Kg	4

Sample: 318942 - Trench-2 @ AH-4 2'

Param	Flag	Result	Units	RL
Chloride		**2560**	mg/Kg	4

Sample: 318943 - Trench-2 @ AH-4 4'

Param	Flag	Result	Units	RL
Chloride		**1120**	mg/Kg	4

Sample: 318944 - Trench-2 @ AH-4 6'

Param	Flag	Result	Units	RL
Chloride		**924**	mg/Kg	4

Sample: 318947 - Trench-3 @ AH-5 0-1'

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

Sample: 318948 - Trench-3 @ AH-5 2'

Param	Flag	Result	Units	RL
Chloride		**3250**	mg/Kg	4

Sample: 318949 - Trench-3 @ AH-5 4'

Param	Flag	Result	Units	RL
Chloride		**170**	mg/Kg	4

Sample: 318950 - Trench-3 @ AH-5 6'

Param	Flag	Result	Units	RL
Chloride		**40.0**	mg/Kg	4

Sample: 318953 - Trench-4 @ AH-8 0-1'

Param	Flag	Result	Units	RL
Chloride		**6130**	mg/Kg	4

Sample: 318954 - Trench-4 @ AH-8 2'

Param	Flag	Result	Units	RL
Chloride		**380**	mg/Kg	4

Sample: 318955 - Trench-4 @ AH-8 4'

Param	Flag	Result	Units	RL
Chloride		**1040**	mg/Kg	4

Sample: 318956 - Trench-4 @ AH-8 6'

Param	Flag	Result	Units	RL
Chloride		**2960**	mg/Kg	4

Sample: 318959 - Trench-5 @ AH-10 0-1'

Param	Flag	Result	Units	RL
Chloride		**64.9**	mg/Kg	4

Sample: 318960 - Trench-5 @ AH-10 2'

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

Sample: 318961 - Trench-5 @ AH-10 4'

Param	Flag	Result	Units	RL
Chloride		**3140**	mg/Kg	4

Sample: 318962 - Trench-5 @ AH-10 6'

Param	Flag	Result	Units	RL
Chloride		**2310**	mg/Kg	4

Summary Report

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

Report Date: January 11, 2013

Work Order: 13011002

Project Location: Eddy Co., NM
Project Name: COG/Way South State Com. #1H TB
Project Number: 114-6401534

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
318048	Background Trench 1 0-1'	soil	2013-01-08	00:00	2013-01-09
318049	Background Trench 1 2'	soil	2013-01-08	00:00	2013-01-09
318050	Background Trench 1 4'	soil	2013-01-08	00:00	2013-01-09
318051	Background Trench 1 6'	soil	2013-01-08	00:00	2013-01-09
318052	Background Trench 1 8'	soil	2013-01-08	00:00	2013-01-09
318053	Background Trench 1 10'	soil	2013-01-08	00:00	2013-01-09
318054	Background Trench 2 0-1'	soil	2013-01-08	00:00	2013-01-09
318055	Background Trench 2 2'	soil	2013-01-08	00:00	2013-01-09
318056	Background Trench 2 4'	soil	2013-01-08	00:00	2013-01-09
318057	Background Trench 2 6'	soil	2013-01-08	00:00	2013-01-09
318058	Background Trench 2 8'	soil	2013-01-08	00:00	2013-01-09
318059	Background Trench 2 10'	soil	2013-01-08	00:00	2013-01-09

Sample: 318048 - Background Trench 1 0-1'

Param	Flag	Result	Units	RL
Chloride	Q=	**194**	mg/Kg	4

Sample: 318049 - Background Trench 1 2'

Param	Flag	Result	Units	RL
Chloride	Q=	**995**	mg/Kg	4

Sample: 318050 - Background Trench 1 4'

Param	Flag	Result	Units	RL
Chloride	Qs	**2160**	mg/Kg	4

Sample: 318051 - Background Trench 1 6'

Param	Flag	Result	Units	RL
Chloride	Qs	**2170**	mg/Kg	4

Sample: 318052 - Background Trench 1 8'

Param	Flag	Result	Units	RL
Chloride	Qs	**1080**	mg/Kg	4

Sample: 318053 - Background Trench 1 10'

Param	Flag	Result	Units	RL
Chloride	Qs	**991**	mg/Kg	4

Sample: 318054 - Background Trench 2 0-1'

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

Sample: 318055 - Background Trench 2 2'

Param	Flag	Result	Units	RL
Chloride	Qs	**1810**	mg/Kg	4

Sample: 318056 - Background Trench 2 4'

Param	Flag	Result	Units	RL
Chloride	Qs	**3650**	mg/Kg	4

Sample: 318057 - Background Trench 2 6'

Param	Flag	Result	Units	RL
Chloride	Qs	**1650**	mg/Kg	4

Sample: 318058 - Background Trench 2 8'

Param	Flag	Result	Units	RL
Chloride		**1340**	mg/Kg	4

Sample: 318059 - Background Trench 2 10'

Param	Flag	Result	Units	RL
Chloride		**1330**	mg/Kg	4

Summary Report

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

Report Date: December 26, 2012

Work Order: 12121345

Project Location: Eddy Co., NM
Project Name: COG/Way South State Com. #1H TB
Project Number: 114-6401534

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
316746	AH-1 0-1'	soil	2012-12-12	00:00	2012-12-13
316747	AH-2 0-1'	soil	2012-12-12	00:00	2012-12-13
316748	AH-3 0-1'	soil	2012-12-12	00:00	2012-12-13
316749	AH-3 1-1.5'	soil	2012-12-12	00:00	2012-12-13
316750	AH-3 2-2.5'	soil	2012-12-12	00:00	2012-12-13
316751	AH-3 3-3.5'	soil	2012-12-12	00:00	2012-12-13
316752	AH-3 4-4.5'	soil	2012-12-12	00:00	2012-12-13
316753	AH-3 5-5.5'	soil	2012-12-12	00:00	2012-12-13
316754	AH-3 6-6.5'	soil	2012-12-12	00:00	2012-12-13
316755	AH-3 7-7.5'	soil	2012-12-12	00:00	2012-12-13
316756	AH-3 8-8.5'	soil	2012-12-12	00:00	2012-12-13
316757	AH-3 9-9.5'	soil	2012-12-12	00:00	2012-12-13

Sample - Field Code	BTEX Benzene (mg/Kg)	BTEX Toluene (mg/Kg)	BTEX Ethylbenzene (mg/Kg)	BTEX Xylene (mg/Kg)	TPH DRO - NEW DRO (mg/Kg)	TPH GRO GRO (mg/Kg)
316746 - AH-1 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<4.00
316747 - AH-2 0-1'	<0.400 [1]	**5.76**	**6.78**	**31.7**	**2050**	**1200**
316748 - AH-3 0-1'	<0.400 [2]	**10.9**	**10.2**	**64.9**	**1950**	**1880**
316749 - AH-3 1-1.5'	<0.0200	<0.0200	<0.0200	<0.0200	**53.9** Qs	**27.2**
316750 - AH-3 2-2.5'					<50.0 Qs	**4.32**

Sample: 316746 - AH-1 0-1'

continued ...

[1] Dilution due to hydrocarbons.
[2] Dilution due to hydrocarbons.

sample 316746 continued ...

Param	Flag	Result	Units	RL

Param	Flag	Result	Units	RL
Chloride		**61.6**	mg/Kg	4

Sample: 316747 - AH-2 0-1'

Param	Flag	Result	Units	RL
Chloride		**6070**	mg/Kg	4

Sample: 316748 - AH-3 0-1'

Param	Flag	Result	Units	RL
Chloride		**6000**	mg/Kg	4

Sample: 316749 - AH-3 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**7250**	mg/Kg	4

Sample: 316750 - AH-3 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**2480**	mg/Kg	4

Sample: 316751 - AH-3 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**1700**	mg/Kg	4

Sample: 316752 - AH-3 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**858**	mg/Kg	4

Sample: 316753 - AH-3 5-5.5'

Param	Flag	Result	Units	RL
Chloride		**1180**	mg/Kg	4

Sample: 316754 - AH-3 6-6.5'

Param	Flag	Result	Units	RL
Chloride		**1280**	mg/Kg	4

Sample: 316755 - AH-3 7-7.5'

Param	Flag	Result	Units	RL
Chloride		**1460**	mg/Kg	4

Sample: 316756 - AH-3 8-8.5'

Param	Flag	Result	Units	RL
Chloride		**1050**	mg/Kg	4

Sample: 316757 - AH-3 9-9.5'

Param	Flag	Result	Units	RL
Chloride		**1400**	mg/Kg	4

Summary Report

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

Report Date: October 18, 2012

Work Order: 12101040

Project Location: Eddy Co., NM
Project Name: COG/Way South State Com. #1H TB
Project Number: 114-6401534

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
311472	AH-1 (0-1')	soil	2012-10-08	00:00	2012-10-10
311473	AH-2 (0-1')	soil	2012-10-08	00:00	2012-10-10
311474	AH-3 (0-6 in.)	soil	2012-10-08	00:00	2012-10-10
311475	AH-4 (0-6 in.)	soil	2012-10-08	00:00	2012-10-10
311476	AH-5 (0-6 in.)	soil	2012-10-08	00:00	2012-10-10
311477	AH-6 (0-1')	soil	2012-10-08	00:00	2012-10-10
311478	AH-6 (1-1.5')	soil	2012-10-08	00:00	2012-10-10
311479	AH-6 (2-2.5')	soil	2012-10-08	00:00	2012-10-10
311480	AH-6 (3-3.5')	soil	2012-10-08	00:00	2012-10-10
311481	AH-6 (4-4.5')	soil	2012-10-08	00:00	2012-10-10
311482	AH-6 (5-5.5')	soil	2012-10-08	00:00	2012-10-10
311483	AH-6 (6-6.5')	soil	2012-10-08	00:00	2012-10-10
311484	AH-6 (7-7.5')	soil	2012-10-08	00:00	2012-10-10
311485	AH-6 (8-8.5')	soil	2012-10-08	00:00	2012-10-10
311486	AH-6 (9-9.5')	soil	2012-10-08	00:00	2012-10-10
311487	AH-7 (0-1')	soil	2012-10-08	00:00	2012-10-10
311488	AH-7 (1-1.5')	soil	2012-10-08	00:00	2012-10-10
311489	AH-7 (2-2.5')	soil	2012-10-08	00:00	2012-10-10
311490	AH-7 (3-3.5')	soil	2012-10-08	00:00	2012-10-10
311491	AH-7 (4-4.5')	soil	2012-10-08	00:00	2012-10-10
311492	AH-7 (5-5.5')	soil	2012-10-08	00:00	2012-10-10
311493	AH-7 (6-6.5')	soil	2012-10-08	00:00	2012-10-10
311494	AH-7 (7-7.5')	soil	2012-10-08	00:00	2012-10-10
311495	AH-7 (8-8.5')	soil	2012-10-08	00:00	2012-10-10
311496	AH-7 (9-9.5')	soil	2012-10-08	00:00	2012-10-10
311497	AH-8 (0-6 in.)	soil	2012-10-09	00:00	2012-10-10
311498	AH-9 (0-1')	soil	2012-10-09	00:00	2012-10-10
311499	AH-9 (1-1.5')	soil	2012-10-09	00:00	2012-10-10
311500	AH-9 (2-2.5')	soil	2012-10-09	00:00	2012-10-10
311501	AH-9 (3-3.5')	soil	2012-10-09	00:00	2012-10-10

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
311502	AH-9 (4-4.5')	soil	2012-10-09	00:00	2012-10-10
311503	AH-9 (5-5.5')	soil	2012-10-09	00:00	2012-10-10
311504	AH-9 (6-6.5')	soil	2012-10-09	00:00	2012-10-10
311505	AH-9 (7-7.5')	soil	2012-10-09	00:00	2012-10-10
311506	AH-9 (8-8.5')	soil	2012-10-09	00:00	2012-10-10
311507	AH-10 (0-6 in.)	soil	2012-10-09	00:00	2012-10-10
311508	AH-11 (0-1')	soil	2012-10-09	00:00	2012-10-10
311509	AH-11 (1-1.5')	soil	2012-10-09	00:00	2012-10-10
311510	AH-11 (2-2.5')	soil	2012-10-09	00:00	2012-10-10
311511	AH-11 (3-3.5')	soil	2012-10-09	00:00	2012-10-10
311512	AH-11 (4-4.5')	soil	2012-10-09	00:00	2012-10-10
311513	AH-11 (5-5.5')	soil	2012-10-09	00:00	2012-10-10
311514	AH-11 (6-6.5')	soil	2012-10-09	00:00	2012-10-10
311515	AH-11 (7-7.5')	soil	2012-10-09	00:00	2012-10-10
311516	AH-12 (0-1')	soil	2012-10-09	00:00	2012-10-10
311517	AH-12 (1-1.5')	soil	2012-10-09	00:00	2012-10-10
311518	AH-12 (2-2.5')	soil	2012-10-09	00:00	2012-10-10
311519	AH-12 (3-3.5')	soil	2012-10-09	00:00	2012-10-10
311520	AH-12 (4-4.5')	soil	2012-10-09	00:00	2012-10-10
311521	AH-12 (5-5.5')	soil	2012-10-09	00:00	2012-10-10
311522	AH-12 (6-6.5')	soil	2012-10-09	00:00	2012-10-10
311523	AH-12 (7-7.5')	soil	2012-10-09	00:00	2012-10-10
311524	AH-13 (0-1')	soil	2012-10-09	00:00	2012-10-10
311525	AH-13 (1-1.5')	soil	2012-10-09	00:00	2012-10-10
311526	AH-13 (2-2.5')	soil	2012-10-09	00:00	2012-10-10
311527	AH-13 (3-3.5')	soil	2012-10-09	00:00	2012-10-10
311528	AH-14 (0-1')	soil	2012-10-09	00:00	2012-10-10
311529	AH-14 (1-1.5')	soil	2012-10-09	00:00	2012-10-10
311530	AH-14 (2-2.5')	soil	2012-10-09	00:00	2012-10-10
311531	AH-14 (3-3.5')	soil	2012-10-09	00:00	2012-10-10
311532	AH-15 (0-1')	soil	2012-10-09	00:00	2012-10-10
311533	AH-15 (1-1.5')	soil	2012-10-09	00:00	2012-10-10
311534	AH-15 (2-2.5')	soil	2012-10-09	00:00	2012-10-10
311535	AH-15 (3-3.5')	soil	2012-10-09	00:00	2012-10-10
311536	AH-16 (0-1')	soil	2012-10-09	00:00	2012-10-10
311537	AH-16 (1-1.5')	soil	2012-10-09	00:00	2012-10-10
311538	AH-16 (2-2.5')	soil	2012-10-09	00:00	2012-10-10
311539	AH-16 (3-3.5')	soil	2012-10-09	00:00	2012-10-10
311540	AH-17 (0-1')	soil	2012-10-09	00:00	2012-10-10
311541	AH-17 (1-1.5')	soil	2012-10-09	00:00	2012-10-10
311542	AH-17 (2-2.5')	soil	2012-10-09	00:00	2012-10-10
311543	AH-17 (3-3.5')	soil	2012-10-09	00:00	2012-10-10
311544	AH-18 (0-1')	soil	2012-10-09	00:00	2012-10-10
311545	AH-18 (1-1.5')	soil	2012-10-09	00:00	2012-10-10
311546	AH-18 (2-2.5')	soil	2012-10-09	00:00	2012-10-10
311547	AH-18 (3-3.5')	soil	2012-10-09	00:00	2012-10-10
311548	AH-19 (0-1')	soil	2012-10-09	00:00	2012-10-10
311549	AH-19 (1-1.5')	soil	2012-10-09	00:00	2012-10-10
311550	AH-19 (2-2.5')	soil	2012-10-09	00:00	2012-10-10

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
311551	AH-19 (3-3.5')	soil	2012-10-09	00:00	2012-10-10
311552	AH-19 (4-4.5')	soil	2012-10-09	00:00	2012-10-10
311553	AH-20 (0-1')	soil	2012-10-09	00:00	2012-10-10
311554	AH-20 (1-1.5')	soil	2012-10-09	00:00	2012-10-10
311555	AH-20 (2-2.5')	soil	2012-10-09	00:00	2012-10-10
311556	AH-20 (3-3.5')	soil	2012-10-09	00:00	2012-10-10
311557	AH-20 (4-4.5')	soil	2012-10-09	00:00	2012-10-10
311558	AH-20 (5-5.5')	soil	2012-10-09	00:00	2012-10-10

Sample - Field Code	BTEX Benzene (mg/Kg)	BTEX Toluene (mg/Kg)	BTEX Ethylbenzene (mg/Kg)	BTEX Xylene (mg/Kg)	TPH DRO - NEW DRO (mg/Kg)	TPH GRO GRO (mg/Kg)
311472 - AH-1 (0-1')					<50.0	<1.00
311473 - AH-2 (0-1')	<0.0200	**0.130**	**0.482**	**1.56**	**278**	**286**
311474 - AH-3 (0-6 in.)					<50.0	<1.00
311475 - AH-4 (0-6 in.)					<50.0	<1.00
311476 - AH-5 (0-6 in.)	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	**8.71**
311477 - AH-6 (0-1')					<50.0	<1.00
311487 - AH-7 (0-1')	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	**3.30**
311497 - AH-8 (0-6 in.)					<50.0	<1.00
311498 - AH-9 (0-1')	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<1.00
311507 - AH-10 (0-6 in.)					<50.0	<1.00
311508 - AH-11 (0-1')	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<1.00
311516 - AH-12 (0-1')					<50.0	<1.00
311524 - AH-13 (0-1')	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<1.00
311528 - AH-14 (0-1')	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<1.00
311532 - AH-15 (0-1')	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<1.00
311536 - AH-16 (0-1')					<50.0	<1.00
311540 - AH-17 (0-1')	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<1.00
311544 - AH-18 (0-1')					<50.0	<1.00
311548 - AH-19 (0-1')					<50.0	<1.00
311553 - AH-20 (0-1')	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<1.00

Sample: 311472 - AH-1 (0-1')

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

Sample: 311473 - AH-2 (0-1')

Param	Flag	Result	Units	RL
Chloride		**465**	mg/Kg	4

Sample: 311474 - AH-3 (0-6 in.)

Param	Flag	Result	Units	RL
Chloride		**455**	mg/Kg	4

Sample: 311475 - AH-4 (0-6 in.)

Param	Flag	Result	Units	RL
Chloride		**9450**	mg/Kg	4

Sample: 311476 - AH-5 (0-6 in.)

Param	Flag	Result	Units	RL
Chloride		**15000**	mg/Kg	4

Sample: 311477 - AH-6 (0-1')

Param	Flag	Result	Units	RL
Chloride		**6520**	mg/Kg	4

Sample: 311478 - AH-6 (1-1.5')

Param	Flag	Result	Units	RL
Chloride		**6720**	mg/Kg	4

Sample: 311479 - AH-6 (2-2.5')

Param	Flag	Result	Units	RL
Chloride		**2170**	mg/Kg	4

Sample: 311480 - AH-6 (3-3.5')

Param	Flag	Result	Units	RL
Chloride		**824**	mg/Kg	4

Sample: 311481 - AH-6 (4-4.5')

Param	Flag	Result	Units	RL
Chloride		**465**	mg/Kg	4

Sample: 311482 - AH-6 (5-5.5')

Param	Flag	Result	Units	RL
Chloride		**953**	mg/Kg	4

Sample: 311483 - AH-6 (6-6.5')

Param	Flag	Result	Units	RL
Chloride		**2030**	mg/Kg	4

Sample: 311484 - AH-6 (7-7.5')

Param	Flag	Result	Units	RL
Chloride		**1680**	mg/Kg	4

Sample: 311485 - AH-6 (8-8.5')

Param	Flag	Result	Units	RL
Chloride		**1690**	mg/Kg	4

Sample: 311486 - AH-6 (9-9.5')

Param	Flag	Result	Units	RL
Chloride		**1480**	mg/Kg	4

Sample: 311487 - AH-7 (0-1')

Param	Flag	Result	Units	RL
Chloride		**4550**	mg/Kg	4

Sample: 311488 - AH-7 (1-1.5')

Param	Flag	Result	Units	RL
Chloride		**2190**	mg/Kg	4

Sample: 311489 - AH-7 (2-2.5')

Param	Flag	Result	Units	RL
Chloride		**1270**	mg/Kg	4

Sample: 311490 - AH-7 (3-3.5')

Param	Flag	Result	Units	RL
Chloride		**299**	mg/Kg	4

Sample: 311491 - AH-7 (4-4.5')

Param	Flag	Result	Units	RL
Chloride		**82.0**	mg/Kg	4

Sample: 311492 - AH-7 (5-5.5')

Param	Flag	Result	Units	RL
Chloride		**28.9**	mg/Kg	4

Sample: 311493 - AH-7 (6-6.5')

Param	Flag	Result	Units	RL
Chloride		**116**	mg/Kg	4

Sample: 311494 - AH-7 (7-7.5')

Param	Flag	Result	Units	RL
Chloride		**188**	mg/Kg	4

Sample: 311495 - AH-7 (8-8.5')

Param	Flag	Result	Units	RL
Chloride		**381**	mg/Kg	4

Sample: 311496 - AH-7 (9-9.5')

Param	Flag	Result	Units	RL
Chloride		**733**	mg/Kg	4

Sample: 311497 - AH-8 (0-6 in.)

Param	Flag	Result	Units	RL
Chloride		**7400**	mg/Kg	4

Sample: 311498 - AH-9 (0-1')

Param	Flag	Result	Units	RL
Chloride		**2420**	mg/Kg	4

Sample: 311499 - AH-9 (1-1.5')

Param	Flag	Result	Units	RL
Chloride		**8870**	mg/Kg	4

Sample: 311500 - AH-9 (2-2.5')

Param	Flag	Result	Units	RL
Chloride		**3200**	mg/Kg	4

Sample: 311501 - AH-9 (3-3.5')

Param	Flag	Result	Units	RL
Chloride		**2840**	mg/Kg	4

Sample: 311502 - AH-9 (4-4.5')

Param	Flag	Result	Units	RL
Chloride		**2680**	mg/Kg	4

Sample: 311503 - AH-9 (5-5.5')

Param	Flag	Result	Units	RL
Chloride		**148**	mg/Kg	4

Sample: 311504 - AH-9 (6-6.5')

Param	Flag	Result	Units	RL
Chloride		**259**	mg/Kg	4

Sample: 311505 - AH-9 (7-7.5')

Param	Flag	Result	Units	RL
Chloride		**182**	mg/Kg	4

Sample: 311506 - AH-9 (8-8.5')

Param	Flag	Result	Units	RL
Chloride		**307**	mg/Kg	4

Sample: 311507 - AH-10 (0-6 in.)

Param	Flag	Result	Units	RL
Chloride		**3180**	mg/Kg	4

Sample: 311508 - AH-11 (0-1')

Param	Flag	Result	Units	RL
Chloride		**15600**	mg/Kg	4

Sample: 311509 - AH-11 (1-1.5')

Param	Flag	Result	Units	RL
Chloride		**7820**	mg/Kg	4

Sample: 311510 - AH-11 (2-2.5')

Param	Flag	Result	Units	RL
Chloride		**4340**	mg/Kg	4

Sample: 311511 - AH-11 (3-3.5')

Param	Flag	Result	Units	RL
Chloride		**311**	mg/Kg	4

Sample: 311512 - AH-11 (4-4.5')

Param	Flag	Result	Units	RL
Chloride		**837**	mg/Kg	4

Sample: 311513 - AH-11 (5-5.5')

Param	Flag	Result	Units	RL
Chloride		**765**	mg/Kg	4

Sample: 311514 - AH-11 (6-6.5')

Param	Flag	Result	Units	RL
Chloride		**1150**	mg/Kg	4

Sample: 311515 - AH-11 (7-7.5')

Param	Flag	Result	Units	RL
Chloride		**1210**	mg/Kg	4

Sample: 311516 - AH-12 (0-1')

Param	Flag	Result	Units	RL
Chloride		**10600**	mg/Kg	4

Sample: 311517 - AH-12 (1-1.5')

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

Sample: 311518 - AH-12 (2-2.5')

Param	Flag	Result	Units	RL
Chloride		**2820**	mg/Kg	4

Sample: 311519 - AH-12 (3-3.5')

Param	Flag	Result	Units	RL
Chloride		**3830**	mg/Kg	4

Sample: 311520 - AH-12 (4-4.5')

Param	Flag	Result	Units	RL
Chloride		**3330**	mg/Kg	4

Sample: 311521 - AH-12 (5-5.5')

Param	Flag	Result	Units	RL
Chloride		**2380**	mg/Kg	4

Sample: 311522 - AH-12 (6-6.5')

Param	Flag	Result	Units	RL
Chloride		**1420**	mg/Kg	4

Sample: 311523 - AH-12 (7-7.5')

Param	Flag	Result	Units	RL
Chloride		**1610**	mg/Kg	4

Sample: 311524 - AH-13 (0-1')

Param	Flag	Result	Units	RL
Chloride		**11200**	mg/Kg	4

Sample: 311525 - AH-13 (1-1.5')

Param	Flag	Result	Units	RL
Chloride		**5010**	mg/Kg	4

Sample: 311526 - AH-13 (2-2.5')

Param	Flag	Result	Units	RL
Chloride		**2970**	mg/Kg	4

Sample: 311527 - AH-13 (3-3.5')

Param	Flag	Result	Units	RL
Chloride		**1150**	mg/Kg	4

Sample: 311528 - AH-14 (0-1')

Param	Flag	Result	Units	RL
Chloride		**12600**	mg/Kg	4

Sample: 311529 - AH-14 (1-1.5')

Param	Flag	Result	Units	RL
Chloride		**3770**	mg/Kg	4

Sample: 311530 - AH-14 (2-2.5')

Param	Flag	Result	Units	RL
Chloride		**4040**	mg/Kg	4

Sample: 311531 - AH-14 (3-3.5')

Param	Flag	Result	Units	RL
Chloride		**2600**	mg/Kg	4

Sample: 311532 - AH-15 (0-1')

Param	Flag	Result	Units	RL
Chloride		**10800**	mg/Kg	4

Sample: 311533 - AH-15 (1-1.5')

Param	Flag	Result	Units	RL
Chloride		**6890**	mg/Kg	4

Sample: 311534 - AH-15 (2-2.5')

Param	Flag	Result	Units	RL
Chloride		**2780**	mg/Kg	4

Sample: 311535 - AH-15 (3-3.5')

Param	Flag	Result	Units	RL
Chloride		**3080**	mg/Kg	4

Sample: 311536 - AH-16 (0-1')

Param	Flag	Result	Units	RL
Chloride		**11200**	mg/Kg	4

Sample: 311537 - AH-16 (1-1.5')

Param	Flag	Result	Units	RL
Chloride		**5190**	mg/Kg	4

Sample: 311538 - AH-16 (2-2.5')

Param	Flag	Result	Units	RL
Chloride		**3110**	mg/Kg	4

Sample: 311539 - AH-16 (3-3.5')

Param	Flag	Result	Units	RL
Chloride		**2590**	mg/Kg	4

Sample: 311540 - AH-17 (0-1')

Param	Flag	Result	Units	RL
Chloride		**17500**	mg/Kg	4

Sample: 311541 - AH-17 (1-1.5')

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

Sample: 311542 - AH-17 (2-2.5')

Param	Flag	Result	Units	RL
Chloride		**5170**	mg/Kg	4

Sample: 311543 - AH-17 (3-3.5')

Param	Flag	Result	Units	RL
Chloride		**3020**	mg/Kg	4

Sample: 311544 - AH-18 (0-1')

Param	Flag	Result	Units	RL
Chloride		**2980**	mg/Kg	4

Sample: 311545 - AH-18 (1-1.5')

Param	Flag	Result	Units	RL
Chloride		**2140**	mg/Kg	4

Sample: 311546 - AH-18 (2-2.5')

Param	Flag	Result	Units	RL
Chloride		**1370**	mg/Kg	4

Sample: 311547 - AH-18 (3-3.5')

Param	Flag	Result	Units	RL
Chloride		**1050**	mg/Kg	4

Sample: 311548 - AH-19 (0-1')

Param	Flag	Result	Units	RL
Chloride		**6390**	mg/Kg	4

Sample: 311549 - AH-19 (1-1.5')

Param	Flag	Result	Units	RL
Chloride		**2980**	mg/Kg	4

Sample: 311550 - AH-19 (2-2.5')

Param	Flag	Result	Units	RL
Chloride		**3530**	mg/Kg	4

Sample: 311551 - AH-19 (3-3.5')

Param	Flag	Result	Units	RL
Chloride		**3500**	mg/Kg	4

Sample: 311552 - AH-19 (4-4.5')

Param	Flag	Result	Units	RL
Chloride		**2340**	mg/Kg	4

Sample: 311553 - AH-20 (0-1')

Param	Flag	Result	Units	RL
Chloride		**22700**	mg/Kg	4

Sample: 311554 - AH-20 (1-1.5')

Param	Flag	Result	Units	RL
Chloride		**7230**	mg/Kg	4

Sample: 311555 - AH-20 (2-2.5')

Param	Flag	Result	Units	RL
Chloride		**3820**	mg/Kg	4

Sample: 311556 - AH-20 (3-3.5')

Param	Flag	Result	Units	RL
Chloride		**2140**	mg/Kg	4

Sample: 311557 - AH-20 (4-4.5')

Param	Flag	Result	Units	RL
Chloride		**1170**	mg/Kg	4

Sample: 311558 - AH-20 (5-5.5')

Param	Flag	Result	Units	RL
Chloride		**1220**	mg/Kg	4

Summary Report

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

Report Date: April 15, 2013

Work Order: 13040902

Project Location: Eddy Co., NM
Project Name: COG/Way South State Com. #1H TB
Project Number: 114-6401534

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
325442	AH-1 @ AH-2 0-1'	soil	2013-04-04	00:00	2013-04-08
325443	AH-1 @ AH-2 1-1.5'	soil	2013-04-04	00:00	2013-04-08
325444	AH-1 @ AH-2 2-2.5'	soil	2013-04-04	00:00	2013-04-08
325445	AH-1 @ AH-2 3-3.5'	soil	2013-04-04	00:00	2013-04-08
325446	AH-2 @ AH-3 0-1'	soil	2013-04-04	00:00	2013-04-08
325447	AH-2 @ AH-3 1-1.5'	soil	2013-04-04	00:00	2013-04-08
325448	AH-2 @ AH-3 2-2.5'	soil	2013-04-04	00:00	2013-04-08
325449	AH-2 @ AH-3 3-3.5'	soil	2013-04-04	00:00	2013-04-08

	BTEX				TPH DRO - NEW	TPH GRO
	Benzene	Toluene	Ethylbenzene	Xylene	DRO	GRO
Sample - Field Code	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
325442 - AH-1 @ AH-2 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	**160**	**15.5** Qs
325443 - AH-1 @ AH-2 1-1.5'					<50.0	**4.80** Qs
325446 - AH-2 @ AH-3 0-1'	<0.0200	<0.0200	<0.0200	**0.495**	**89.0**	**106** Qs
325447 - AH-2 @ AH-3 1-1.5'					<50.0	**12.7** Qr,Qs

Sample: 325442 - AH-1 @ AH-2 0-1'

Param	Flag	Result	Units	RL
Chloride		**2450**	mg/Kg	4

Sample: 325443 - AH-1 @ AH-2 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**4900**	mg/Kg	4

Sample: 325444 - AH-1 @ AH-2 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**910**	mg/Kg	4

Sample: 325445 - AH-1 @ AH-2 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**668**	mg/Kg	4

Sample: 325446 - AH-2 @ AH-3 0-1'

Param	Flag	Result	Units	RL
Chloride		**3220**	mg/Kg	4

Sample: 325447 - AH-2 @ AH-3 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**2010**	mg/Kg	4

Sample: 325448 - AH-2 @ AH-3 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**2320**	mg/Kg	4

Sample: 325449 - AH-2 @ AH-3 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**1780**	mg/Kg	4

TRACEANALYSIS, INC.

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Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

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

Report Date: April 15, 2013

Work Order: 13040902

Project Location: Eddy Co., NM
Project Name: COG/Way South State Com. #1H TB
Project Number: 114-6401534

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
325442	AH-1 @ AH-2 0-1'	soil	2013-04-04	00:00	2013-04-08
325443	AH-1 @ AH-2 1-1.5'	soil	2013-04-04	00:00	2013-04-08
325444	AH-1 @ AH-2 2-2.5'	soil	2013-04-04	00:00	2013-04-08
325445	AH-1 @ AH-2 3-3.5'	soil	2013-04-04	00:00	2013-04-08
325446	AH-2 @ AH-3 0-1'	soil	2013-04-04	00:00	2013-04-08
325447	AH-2 @ AH-3 1-1.5'	soil	2013-04-04	00:00	2013-04-08
325448	AH-2 @ AH-3 2-2.5'	soil	2013-04-04	00:00	2013-04-08
325449	AH-2 @ AH-3 3-3.5'	soil	2013-04-04	00:00	2013-04-08

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.

Michael Abel

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

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Case Narrative

Samples for project COG/Way South State Com. #1H TB were received by TraceAnalysis, Inc. on 2013-04-08 and assigned to work order 13040902. Samples for work order 13040902 were received intact at a temperature of 5.6 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	85036	2013-04-10 at 09:53	100355	2013-04-10 at 09:54
Chloride (Titration)	SM 4500-Cl B	85093	2013-04-10 at 14:08	100411	2013-04-11 at 14:08
TPH DRO - NEW	S 8015 D	85031	2013-04-09 at 08:00	100353	2013-04-10 at 08:58
TPH DRO - NEW	S 8015 D	85075	2013-04-10 at 11:00	100387	2013-04-11 at 10:22
TPH DRO - NEW	S 8015 D	85125	2013-04-14 at 22:00	100462	2013-04-15 at 09:01
TPH GRO	S 8015 D	85039	2013-04-10 at 10:34	100358	2013-04-10 at 10:35
TPH GRO	S 8015 D	85074	2013-04-11 at 10:11	100386	2013-04-11 at 10:13
TPH GRO	S 8015 D	85101	2013-04-12 at 09:38	100426	2013-04-12 at 09:41

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 13040902 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: 325442 - AH-1 @ AH-2 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	100355	Date Analyzed:	2013-04-10	Analyzed By:	AH
Prep Batch:	85036	Sample Preparation:	2013-04-09	Prepared By:	AH

Parameter	Flag	Cert	Result	RL 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)			1.84	mg/Kg	1	2.00	92	70 - 130
4-Bromofluorobenzene (4-BFB)			1.71	mg/Kg	1	2.00	86	70 - 130

Sample: 325442 - AH-1 @ AH-2 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	100411	Date Analyzed:	2013-04-11	Analyzed By:	AR
Prep Batch:	85093	Sample Preparation:	2013-04-10	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**2450**	mg/Kg	10	4.00

Sample: 325442 - AH-1 @ AH-2 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	100387	Date Analyzed:	2013-04-11	Analyzed By:	CW
Prep Batch:	85075	Sample Preparation:	2013-04-10	Prepared By:	CW

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
DRO	B	1	**160**	mg/Kg	1	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		133	mg/Kg	1	100	133	70 - 130

Sample: 325442 - AH-1 @ AH-2 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	100358	Date Analyzed:	2013-04-10	Analyzed By:	AH
Prep Batch:	85039	Sample Preparation:	2013-04-10	Prepared By:	AH

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
GRO	Qs	1	**15.5**	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.69	mg/Kg	1	2.00	84	70 - 130
4-Bromofluorobenzene (4-BFB)			1.43	mg/Kg	1	2.00	72	70 - 130

Sample: 325443 - AH-1 @ AH-2 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	100411	Date Analyzed:	2013-04-11	Analyzed By:	AR
Prep Batch:	85093	Sample Preparation:	2013-04-10	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**4900**	mg/Kg	10	4.00

Sample: 325443 - AH-1 @ AH-2 1-1.5'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	100462	Date Analyzed:	2013-04-15	Analyzed By:	CW
Prep Batch:	85125	Sample Preparation:	2013-04-14	Prepared By:	CW

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			97.3	mg/Kg	1	100	97	70 - 130

Sample: 325443 - AH-1 @ AH-2 1-1.5'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	100426	Date Analyzed:	2013-04-12	Analyzed By:	AH
Prep Batch:	85101	Sample Preparation:	2013-04-11	Prepared By:	AH

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
GRO	B,Q8	1	**4.80**	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.60	mg/Kg	1	2.00	80	70 - 130
4-Bromofluorobenzene (4-BFB)			1.78	mg/Kg	1	2.00	89	70 - 130

Sample: 325444 - AH-1 @ AH-2 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	100411	Date Analyzed:	2013-04-11	Analyzed By:	AR
Prep Batch:	85093	Sample Preparation:	2013-04-10	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**910**	mg/Kg	5	4.00

Sample: 325445 - AH-1 @ AH-2 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	100411	Date Analyzed:	2013-04-11	Analyzed By:	AR
Prep Batch:	85093	Sample Preparation:	2013-04-10	Prepared By:	AR

continued ...

sample 325445 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**668**	mg/Kg	5	4.00

Sample: 325446 - AH-2 @ AH-3 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	100355	Date Analyzed:	2013-04-10	Analyzed By:	AH
Prep Batch:	85036	Sample Preparation:	2013-04-09	Prepared By:	AH

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		1	**0.495**	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.85	mg/Kg	1	2.00	92	70 - 130
4-Bromofluorobenzene (4-BFB)			1.96	mg/Kg	1	2.00	98	70 - 130

Sample: 325446 - AH-2 @ AH-3 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	100411	Date Analyzed:	2013-04-11	Analyzed By:	AR
Prep Batch:	85093	Sample Preparation:	2013-04-10	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**3220**	mg/Kg	10	4.00

Sample: 325446 - AH-2 @ AH-3 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	100353	Date Analyzed:	2013-04-10	Analyzed By:	CW
Prep Batch:	85031	Sample Preparation:	2013-04-09	Prepared By:	CW

Parameter	Flag	Cert	Result	RL Result	Units	Dilution	RL
DRO		1	**89.0**		mg/Kg	1	50.0

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

Sample: 325446 - AH-2 @ AH-3 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	100358	Date Analyzed:	2013-04-10	Analyzed By:	AH
Prep Batch:	85039	Sample Preparation:	2013-04-10	Prepared By:	AH

Parameter	Flag	Cert	Result	RL Result	Units	Dilution	RL
GRO	Qs	1	**106**		mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.69	mg/Kg	1	2.00	84	70 - 130
4-Bromofluorobenzene (4-BFB)			2.22	mg/Kg	1	2.00	111	70 - 130

Sample: 325447 - AH-2 @ AH-3 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	100411	Date Analyzed:	2013-04-11	Analyzed By:	AR
Prep Batch:	85093	Sample Preparation:	2013-04-10	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Result	Units	Dilution	RL
Chloride			**2010**		mg/Kg	10	4.00

Sample: 325447 - AH-2 @ AH-3 1-1.5'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	100387	Date Analyzed:	2013-04-11	Analyzed By:	CW
Prep Batch:	85075	Sample Preparation:	2013-04-10	Prepared By:	CW

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			88.7	mg/Kg	1	100	89	70 - 130

Sample: 325447 - AH-2 @ AH-3 1-1.5'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	100386	Date Analyzed:	2013-04-11	Analyzed By:	AH
Prep Batch:	85074	Sample Preparation:	2013-04-10	Prepared By:	AH

Parameter	Flag	Cert	Result	RL Result	Units	Dilution	RL
GRO	B,Qr,Q2	1		**12.7**	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.65	mg/Kg	1	2.00	82	70 - 130
4-Bromofluorobenzene (4-BFB)			1.64	mg/Kg	1	2.00	82	70 - 130

Sample: 325448 - AH-2 @ AH-3 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	100411	Date Analyzed:	2013-04-11	Analyzed By:	AR
Prep Batch:	85093	Sample Preparation:	2013-04-10	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Result	Units	Dilution	RL
Chloride				**2320**	mg/Kg	10	4.00

Sample: 325449 - AH-2 @ AH-3 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	100411	Date Analyzed:	2013-04-11	Analyzed By:	AR
Prep Batch:	85093	Sample Preparation:	2013-04-10	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**1780**	mg/Kg	10	4.00

Method Blanks

Method Blank (1) QC Batch: 100353

QC Batch:	100353	Date Analyzed:	2013-04-10	Analyzed By:	CW
Prep Batch:	85031	QC Preparation:	2013-04-09	Prepared By:	CW

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	<6.88	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			102	mg/Kg	1	100	102	70 - 130

Method Blank (1) QC Batch: 100355

QC Batch:	100355	Date Analyzed:	2013-04-10	Analyzed By:	AH
Prep Batch:	85036	QC Preparation:	2013-04-10	Prepared By:	AH

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.00810	mg/Kg	0.02
Toluene		1	<0.00750	mg/Kg	0.02
Ethylbenzene		1	<0.00730	mg/Kg	0.02
Xylene		1	<0.00700	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.81	mg/Kg	1	2.00	90	70 - 130
4-Bromofluorobenzene (4-BFB)			1.65	mg/Kg	1	2.00	82	70 - 130

Method Blank (1) QC Batch: 100358

QC Batch:	100358	Date Analyzed:	2013-04-10	Analyzed By:	AH
Prep Batch:	85039	QC Preparation:	2013-04-10	Prepared By:	AH

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1	<2.32	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.70	mg/Kg	1	2.00	85	70 - 130
4-Bromofluorobenzene (4-BFB)			1.66	mg/Kg	1	2.00	83	70 - 130

Method Blank (1) QC Batch: 100386

QC Batch: 100386 Date Analyzed: 2013-04-11 Analyzed By: AH
Prep Batch: 85074 QC Preparation: 2013-04-11 Prepared By: AH

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1	2.34	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.66	mg/Kg	1	2.00	83	70 - 130
4-Bromofluorobenzene (4-BFB)			1.87	mg/Kg	1	2.00	94	70 - 130

Method Blank (1) QC Batch: 100387

QC Batch: 100387 Date Analyzed: 2013-04-11 Analyzed By: CW
Prep Batch: 85075 QC Preparation: 2013-04-10 Prepared By: CW

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	19.9	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			104	mg/Kg	1	100	104	70 - 130

Method Blank (1) QC Batch: 100411

QC Batch: 100411 | Date Analyzed: 2013-04-11 | Analyzed By: AR
Prep Batch: 85093 | QC Preparation: 2013-04-10 | Prepared By: AR

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

Method Blank (1) QC Batch: 100426

QC Batch: 100426 | Date Analyzed: 2013-04-12 | Analyzed By: AH
Prep Batch: 85101 | QC Preparation: 2013-04-12 | Prepared By: AH

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1	2.94	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.66	mg/Kg	1	2.00	83	70 - 130
4-Bromofluorobenzene (4-BFB)			1.67	mg/Kg	1	2.00	84	70 - 130

Method Blank (1) QC Batch: 100462

QC Batch: 100462 | Date Analyzed: 2013-04-15 | Analyzed By: CW
Prep Batch: 85125 | QC Preparation: 2013-04-14 | Prepared By: CW

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	<6.88	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			97.1	mg/Kg	1	100	97	70 - 130

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 100353 | Date Analyzed: 2013-04-10 | Analyzed By: CW
Prep Batch: 85031 | QC Preparation: 2013-04-09 | Prepared By: CW

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	254	mg/Kg	1	250	<6.88	102	70 - 130

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	261	mg/Kg	1	250	<6.88	104	70 - 130	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	114	110	mg/Kg	1	100	114	110	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 100355 | Date Analyzed: 2013-04-10 | Analyzed By: AH
Prep Batch: 85036 | QC Preparation: 2013-04-10 | Prepared By: AH

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.78	mg/Kg	1	2.00	<0.00810	89	70 - 130
Toluene		1	1.74	mg/Kg	1	2.00	<0.00750	87	70 - 130
Ethylbenzene		1	1.78	mg/Kg	1	2.00	<0.00730	89	70 - 130
Xylene		1	5.32	mg/Kg	1	6.00	<0.00700	89	70 - 130

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	1.90	mg/Kg	1	2.00	<0.00810	95	70 - 130	6	20
Toluene		1	1.90	mg/Kg	1	2.00	<0.00750	95	70 - 130	9	20
Ethylbenzene		1	1.91	mg/Kg	1	2.00	<0.00730	96	70 - 130	7	20
Xylene		1	5.68	mg/Kg	1	6.00	<0.00700	95	70 - 130	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)	1.84	1.86	mg/Kg	1	2.00	92	93	70 - 130
4-Bromofluorobenzene (4-BFB)	1.67	1.70	mg/Kg	1	2.00	84	85	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 100358 | Date Analyzed: 2013-04-10 | Analyzed By: AH
Prep Batch: 85039 | QC Preparation: 2013-04-10 | Prepared By: AH

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	17.0	mg/Kg	1	20.0	<2.32	85	70 - 130

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	18.7	mg/Kg	1	20.0	<2.32	94	70 - 130	10	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.70	1.77	mg/Kg	1	2.00	85	88	70 - 130
4-Bromofluorobenzene (4-BFB)	1.70	1.75	mg/Kg	1	2.00	85	88	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 100386 | Date Analyzed: 2013-04-11 | Analyzed By: AH
Prep Batch: 85074 | QC Preparation: 2013-04-11 | Prepared By: AH

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	15.0	mg/Kg	1	20.0	2.34	75	70 - 130

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	15.1	mg/Kg	1	20.0	2.34	76	70 - 130	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)	1.65	1.64	mg/Kg	1	2.00	82	82	70 - 130
4-Bromofluorobenzene (4-BFB)	1.67	1.61	mg/Kg	1	2.00	84	80	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 100387 | Date Analyzed: 2013-04-11 | Analyzed By: CW
Prep Batch: 85075 | QC Preparation: 2013-04-10 | Prepared By: CW

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	245	mg/Kg	1	250	19.9	90	70 - 130

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	241	mg/Kg	1	250	19.9	88	70 - 130	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	116	111	mg/Kg	1	100	116	111	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 100411 | Date Analyzed: 2013-04-11 | Analyzed By: AR
Prep Batch: 85093 | QC Preparation: 2013-04-10 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2340	mg/Kg	1	2500	<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			2500	mg/Kg	1	2500	<3.85	100	85 - 115	7	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 100426 | Date Analyzed: 2013-04-12 | Analyzed By: AH
Prep Batch: 85101 | QC Preparation: 2013-04-12 | Prepared By: AH

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	18.4	mg/Kg	1	20.0	2.94	92	70 - 130

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	18.9	mg/Kg	1	20.0	2.94	94	70 - 130	3	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.68	1.69	mg/Kg	1	2.00	84	84	70 - 130
4-Bromofluorobenzene (4-BFB)	1.72	1.73	mg/Kg	1	2.00	86	86	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 100462 | Date Analyzed: 2013-04-15 | Analyzed By: CW
Prep Batch: 85125 | QC Preparation: 2013-04-14 | Prepared By: CW

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	231	mg/Kg	1	250	<6.88	92	70 - 130

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	244	mg/Kg	1	250	<6.88	98	70 - 130	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	101	101	mg/Kg	1	100	101	101	70 - 130

Matrix Spike (MS-1) Spiked Sample: 325446

QC Batch: 100353 | Date Analyzed: 2013-04-10 | Analyzed By: CW
Prep Batch: 85031 | QC Preparation: 2013-04-09 | Prepared By: CW

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	408	mg/Kg	1	250	89	128	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	403	mg/Kg	1	250	89	126	70 - 130	1	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	129	129	mg/Kg	1	100	129	129	70 - 130

Matrix Spike (MS-1) Spiked Sample: 325527

QC Batch: 100355 | Date Analyzed: 2013-04-10 | Analyzed By: AH
Prep Batch: 85036 | QC Preparation: 2013-04-10 | Prepared By: AH

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.83	mg/Kg	1	2.00	<0.00810	92	70 - 130
Toluene		1	1.85	mg/Kg	1	2.00	<0.00750	92	70 - 130
Ethylbenzene		1	1.92	mg/Kg	1	2.00	<0.00730	96	70 - 130
Xylene		1	5.73	mg/Kg	1	6.00	<0.00700	96	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	1.74	mg/Kg	1	2.00	<0.00810	87	70 - 130	5	20
Toluene		1	1.76	mg/Kg	1	2.00	<0.00750	88	70 - 130	5	20
Ethylbenzene		1	1.83	mg/Kg	1	2.00	<0.00730	92	70 - 130	5	20
Xylene		1	5.45	mg/Kg	1	6.00	<0.00700	91	70 - 130	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)	1.86	1.85	mg/Kg	1	2	93	92	70 - 130

continued ...

matrix spikes continued ...

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
4-Bromofluorobenzene (4-BFB)	1.59	1.57	mg/Kg	1	2	80	78	70 - 130

Matrix Spike (MS-1) Spiked Sample: 325527

QC Batch: 100358 | Date Analyzed: 2013-04-10 | Analyzed By: AH
Prep Batch: 85039 | QC Preparation: 2013-04-10 | Prepared By: AH

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	Qs	Qs	1	13.0	mg/Kg	1	20.0	2.51	52	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	Qs	Qs	1	13.3	mg/Kg	1	20.0	2.51	54	70 - 130	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)	1.64	1.62	mg/Kg	1	2	82	81	70 - 130
4-Bromofluorobenzene (4-BFB)	1.71	1.70	mg/Kg	1	2	86	85	70 - 130

Matrix Spike (MS-1) Spiked Sample: 325447

QC Batch: 100386 | Date Analyzed: 2013-04-11 | Analyzed By: AH
Prep Batch: 85074 | QC Preparation: 2013-04-11 | Prepared By: AH

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	17.5	mg/Kg	1	20.0	12.7	24	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	Qr,Qs	Qr,Qs	1	23.0	mg/Kg	1	20.0	12.7	52	70 - 130	27	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)	1.63	1.65	mg/Kg	1	2	82	82	70 - 130
4-Bromofluorobenzene (4-BFB)	1.83	1.95	mg/Kg	1	2	92	98	70 - 130

Matrix Spike (MS-1) Spiked Sample: 325442

QC Batch: 100387 | Date Analyzed: 2013-04-11 | Analyzed By: CW
Prep Batch: 85075 | QC Preparation: 2013-04-10 | Prepared By: CW

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	383	mg/Kg	1	250	160	89	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	386	mg/Kg	1	250	160	90	70 - 130	1	20

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

Surrogate			MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	Qsr	Qsr	132	141	mg/Kg	1	100	132	141	70 - 130

Matrix Spike (MS-1) Spiked Sample: 325451

QC Batch: 100411 | Date Analyzed: 2013-04-11 | Analyzed By: AR
Prep Batch: 85093 | QC Preparation: 2013-04-10 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2920	mg/Kg	5	2500	445	99	78.9 - 121

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			3050	mg/Kg	5	2500	445	104	78.9 - 121	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: 325467

QC Batch: 100426 | Date Analyzed: 2013-04-12 | Analyzed By: AH
Prep Batch: 85101 | QC Preparation: 2013-04-12 | Prepared By: AH

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	Qs	Qs	1	12.6	mg/Kg	1	20.0	3.95	43	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	Qs	Qs	1	13.4	mg/Kg	1	20.0	3.95	47	70 - 130	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)	1.65	1.64	mg/Kg	1	2	82	82	70 - 130
4-Bromofluorobenzene (4-BFB)	1.69	1.70	mg/Kg	1	2	84	85	70 - 130

Matrix Spike (MS-1) Spiked Sample: 325443

QC Batch: 100462 | Date Analyzed: 2013-04-15 | Analyzed By: CW
Prep Batch: 85125 | QC Preparation: 2013-04-14 | Prepared By: CW

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	223	mg/Kg	1	250	<6.88	89	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	223	mg/Kg	1	250	<6.88	89	70 - 130	0	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	94.6	96.3	mg/Kg	1	100	95	96	70 - 130

Calibration Standards

Standard (CCV-1)

QC Batch: 100353 | Date Analyzed: 2013-04-10 | Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	250	100	80 - 120	2013-04-10

Standard (CCV-2)

QC Batch: 100353 | Date Analyzed: 2013-04-10 | Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	257	103	80 - 120	2013-04-10

Standard (CCV-3)

QC Batch: 100353 | Date Analyzed: 2013-04-10 | Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	284	114	80 - 120	2013-04-10

Standard (CCV-4)

QC Batch: 100353 | Date Analyzed: 2013-04-10 | Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	266	106	80 - 120	2013-04-10

Standard (CCV-1)

QC Batch: 100355 | Date Analyzed: 2013-04-10 | Analyzed By: AH

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0986	99	80 - 120	2013-04-10
Toluene		1	mg/kg	0.100	0.0964	96	80 - 120	2013-04-10
Ethylbenzene		1	mg/kg	0.100	0.0974	97	80 - 120	2013-04-10
Xylene		1	mg/kg	0.300	0.291	97	80 - 120	2013-04-10

Standard (CCV-2)

QC Batch: 100355 | Date Analyzed: 2013-04-10 | Analyzed By: AH

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0984	98	80 - 120	2013-04-10
Toluene		1	mg/kg	0.100	0.0965	96	80 - 120	2013-04-10
Ethylbenzene		1	mg/kg	0.100	0.0962	96	80 - 120	2013-04-10
Xylene		1	mg/kg	0.300	0.287	96	80 - 120	2013-04-10

Standard (CCV-3)

QC Batch: 100355 | Date Analyzed: 2013-04-10 | Analyzed By: AH

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0972	97	80 - 120	2013-04-10
Toluene		1	mg/kg	0.100	0.0950	95	80 - 120	2013-04-10
Ethylbenzene		1	mg/kg	0.100	0.0940	94	80 - 120	2013-04-10
Xylene		1	mg/kg	0.300	0.279	93	80 - 120	2013-04-10

Standard (CCV-1)

QC Batch: 100358 | Date Analyzed: 2013-04-10 | Analyzed By: AH

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.834	83	80 - 120	2013-04-10

Standard (CCV-2)

QC Batch: 100358 Date Analyzed: 2013-04-10 Analyzed By: AH

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	1.04	104	80 - 120	2013-04-10

Standard (CCV-3)

QC Batch: 100358 Date Analyzed: 2013-04-10 Analyzed By: AH

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.828	83	80 - 120	2013-04-10

Standard (CCV-1)

QC Batch: 100386 Date Analyzed: 2013-04-11 Analyzed By: AH

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.922	92	80 - 120	2013-04-11

Standard (CCV-2)

QC Batch: 100386 Date Analyzed: 2013-04-11 Analyzed By: AH

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.969	97	80 - 120	2013-04-11

Standard (CCV-3)

QC Batch: 100386 Date Analyzed: 2013-04-11 Analyzed By: AH

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.931	93	80 - 120	2013-04-11

Standard (CCV-1)

QC Batch: 100387 Date Analyzed: 2013-04-11 Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	232	93	80 - 120	2013-04-11

Standard (CCV-2)

QC Batch: 100387 Date Analyzed: 2013-04-11 Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	247	99	80 - 120	2013-04-11

Standard (CCV-1)

QC Batch: 100411 Date Analyzed: 2013-04-11 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2013-04-11

Standard (CCV-2)

QC Batch: 100411 Date Analyzed: 2013-04-11 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.9	100	85 - 115	2013-04-11

Standard (CCV-1)

QC Batch: 100426 Date Analyzed: 2013-04-12 Analyzed By: AH

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	1.00	100	80 - 120	2013-04-12

Standard (CCV-2)

QC Batch: 100426 Date Analyzed: 2013-04-12 Analyzed By: AH

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.873	87	80 - 120	2013-04-12

Standard (CCV-3)

QC Batch: 100426 Date Analyzed: 2013-04-12 Analyzed By: AH

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.900	90	80 - 120	2013-04-12

Standard (CCV-1)

QC Batch: 100462 Date Analyzed: 2013-04-15 Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	251	100	80 - 120	2013-04-15

Standard (CCV-2)

QC Batch: 100462 Date Analyzed: 2013-04-15 Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	237	95	80 - 120	2013-04-15

Standard (CCV-3)

QC Batch: 100462 Date Analyzed: 2013-04-15 Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	247	99	80 - 120	2013-04-15

Standard (CCV-4)

QC Batch: 100462 Date Analyzed: 2013-04-15 Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	237	95	80 - 120	2013-04-15

Appendix

Report Definitions

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

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704392-12-4	Midland

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

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

1304902

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Analysis Request of Chain of Custody Record

PAGE: | OF: 1

ANALYSIS REQUEST
(Circle or Specify Method No.)

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.: 112-G401534

PROJECT NAME: Way South State Com #1H TB
Eddy Co NM

LAB I.D. NUMBER	DATE 2013	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 M(D) 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
325442	4/4		S		X	AH-1 @ AH-2 0-1'	1				X		X	X											X				
443						1-1.5'																							
444						2-2.5'																							
445						3-3.5'																							
446						AH-2 @ AH-3 0-1'							X	X															
447						1-1.5'																							
448						2-2.5'																							
449						3-3.5'																							

RELINQUISHED BY: (Signature)	Date: 4-8-13 Time: 1620	RECEIVED BY: (Signature)	Date: 4/8/13 Time: 1620
SAMPLED BY: (Print & Initial) TF / RP	Date: 4-4-13 Time:		
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS	AIRBILL #: OTHER:		
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
TETRA TECH CONTACT PERSON: Ike	Results by:		
RECEIVING LABORATORY: Trace ADDRESS: CITY: Midland STATE: TX ZIP: CONTACT: PHONE:	RECEIVED BY: (Signature) DATE: TIME:		RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 5.6C

REMARKS: Run deeper sample if TPH exceeds 100 mg/kg Run deeper sample if Benzene exceeds 10 mg/kg or Total BTEX exceeds 50 mg/kg. AH Mailed - all

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