

SITE INFORMATION

Report Type: Closure Report

General Site Information:

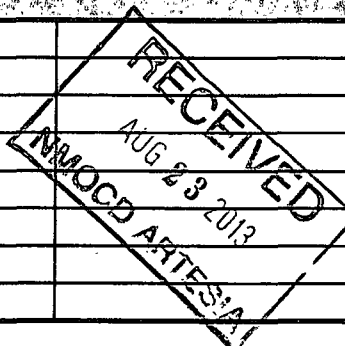
Site:	Way South State Com #1H Tank Battery				
Company:	COG Operating LLC				
Section, Township and Range	Unit A	Sec 30	T26S	R28E	
Lease Number:	API-30-015-37234				
County:	Eddy County				
GPS:	32.01878° N			104.11947° W	
Surface Owner:	State				
Mineral Owner:					
Directions:	On Hwy 285 at the Texas, 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 Tavaréz
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@tetrattech.com



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.

3rd 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.

3rd 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 yards³ 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.

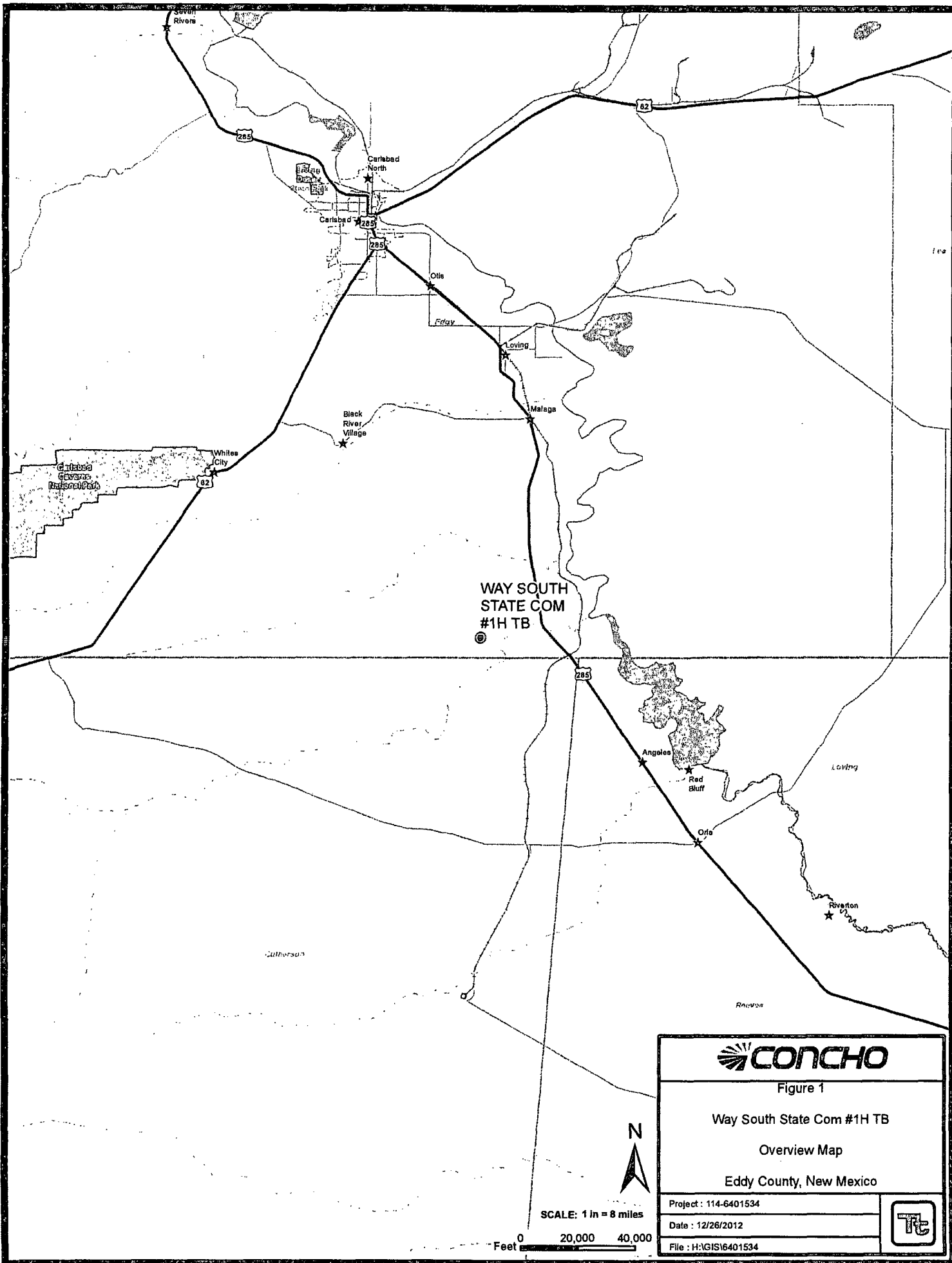
Based on the remediation activities performed at this location, COG requests closure for this site. The C-141's (Finals) are included in Appendix A. If you have any questions or comments concerning the assessment or the remediation activities performed at the site, please call me at (432) 682-4559.

Respectfully submitted,
TETRA TECH

Ike Tavares, PG
Senior Project Manager

cc: Pat Ellis – COG

Figures



WAY SOUTH
STATE COM
#1H TB

Delaware River



Figure 2A

Way South State Com #1H TB

Aerial Map(Bing Map)

Eddy County, New Mexico

Project : 114-6401534

Date : 12/26/2012

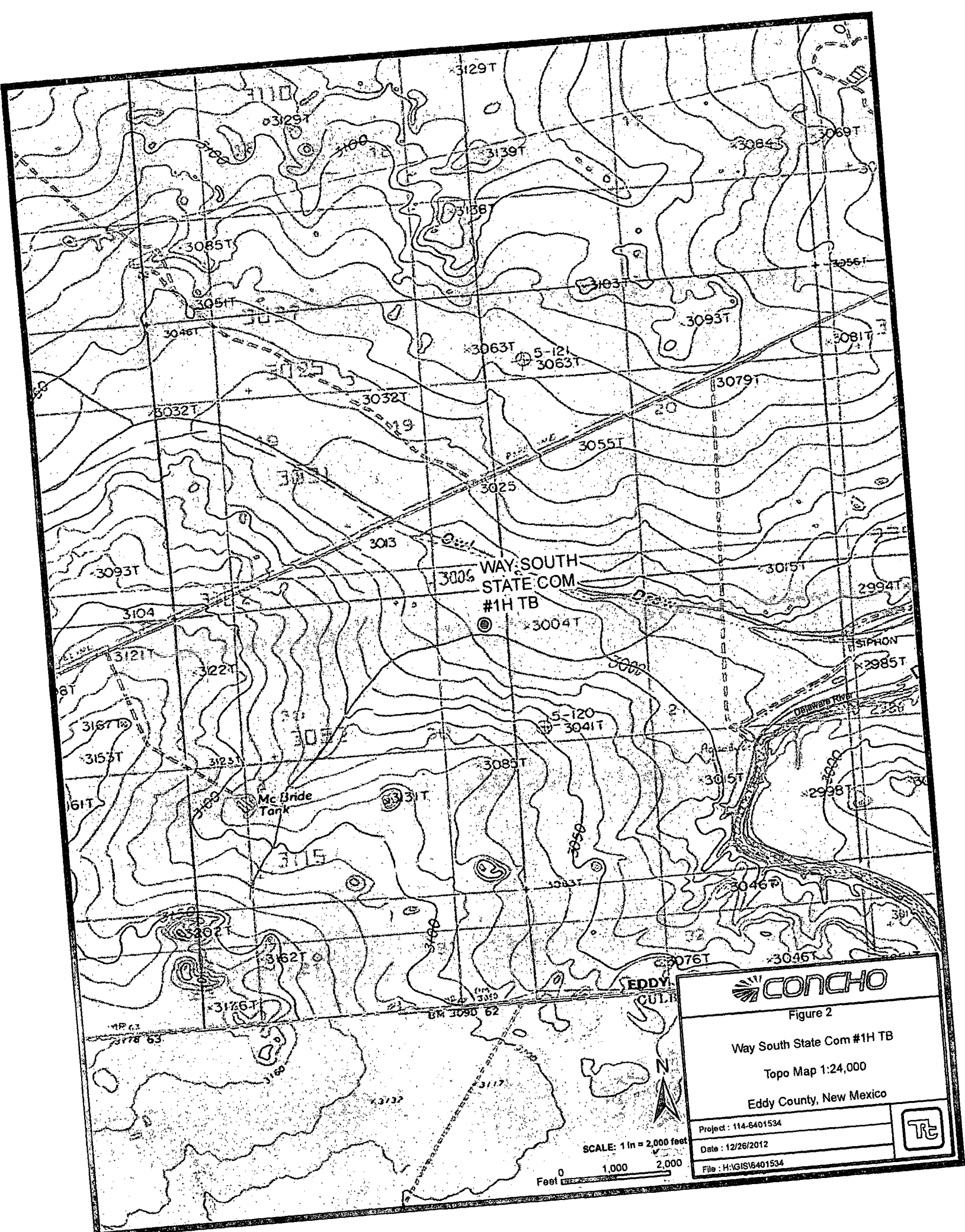
File : H:\GIS\6401534



SCALE: 1 in = 2,000 feet

Feet 0 1,000 2,000





CONCHO

Figure 2

Way South State Com #1H TB

Topo Map 1:24,000

Eddy County, New Mexico

Project : 114-6401534

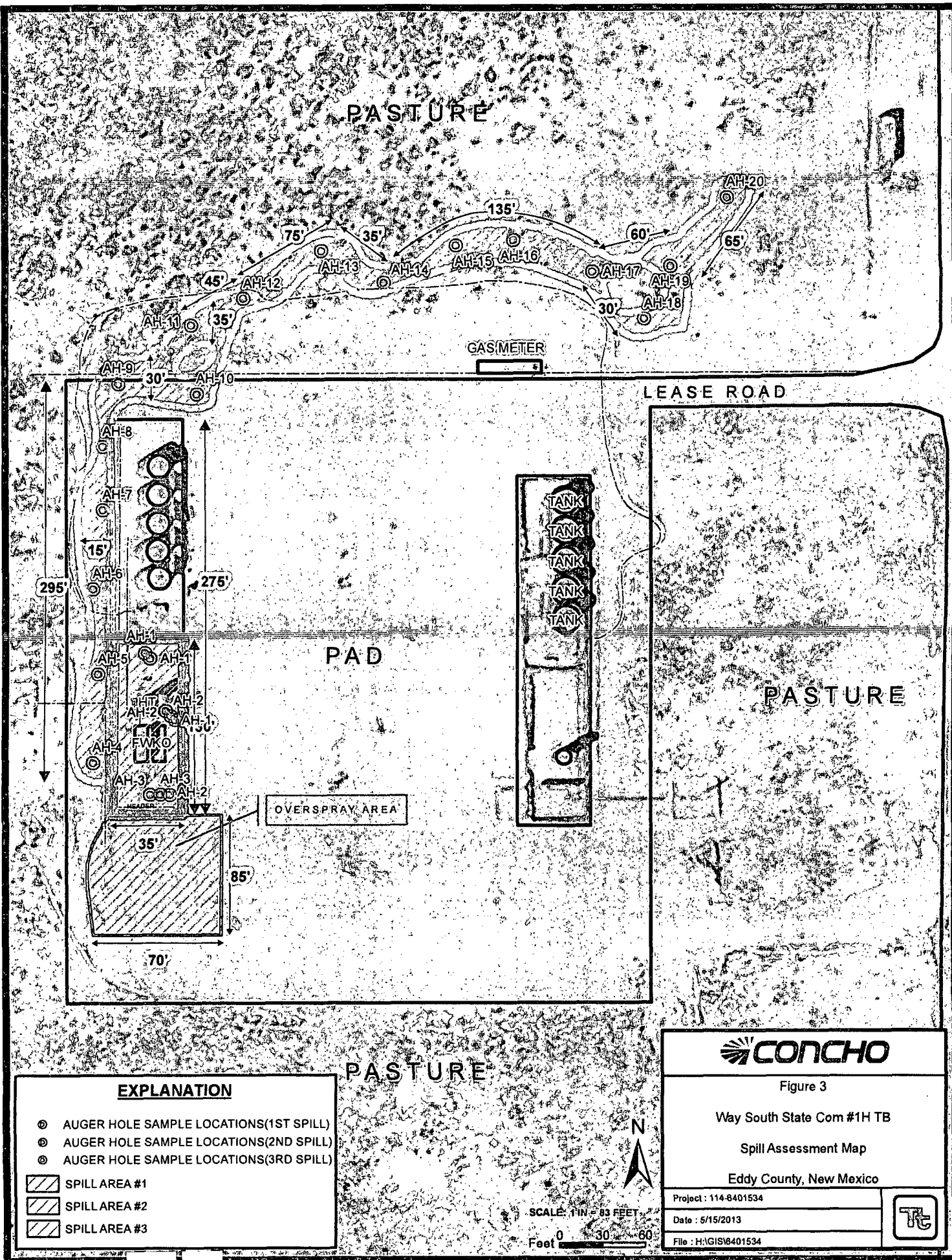
Date : 12/26/2012

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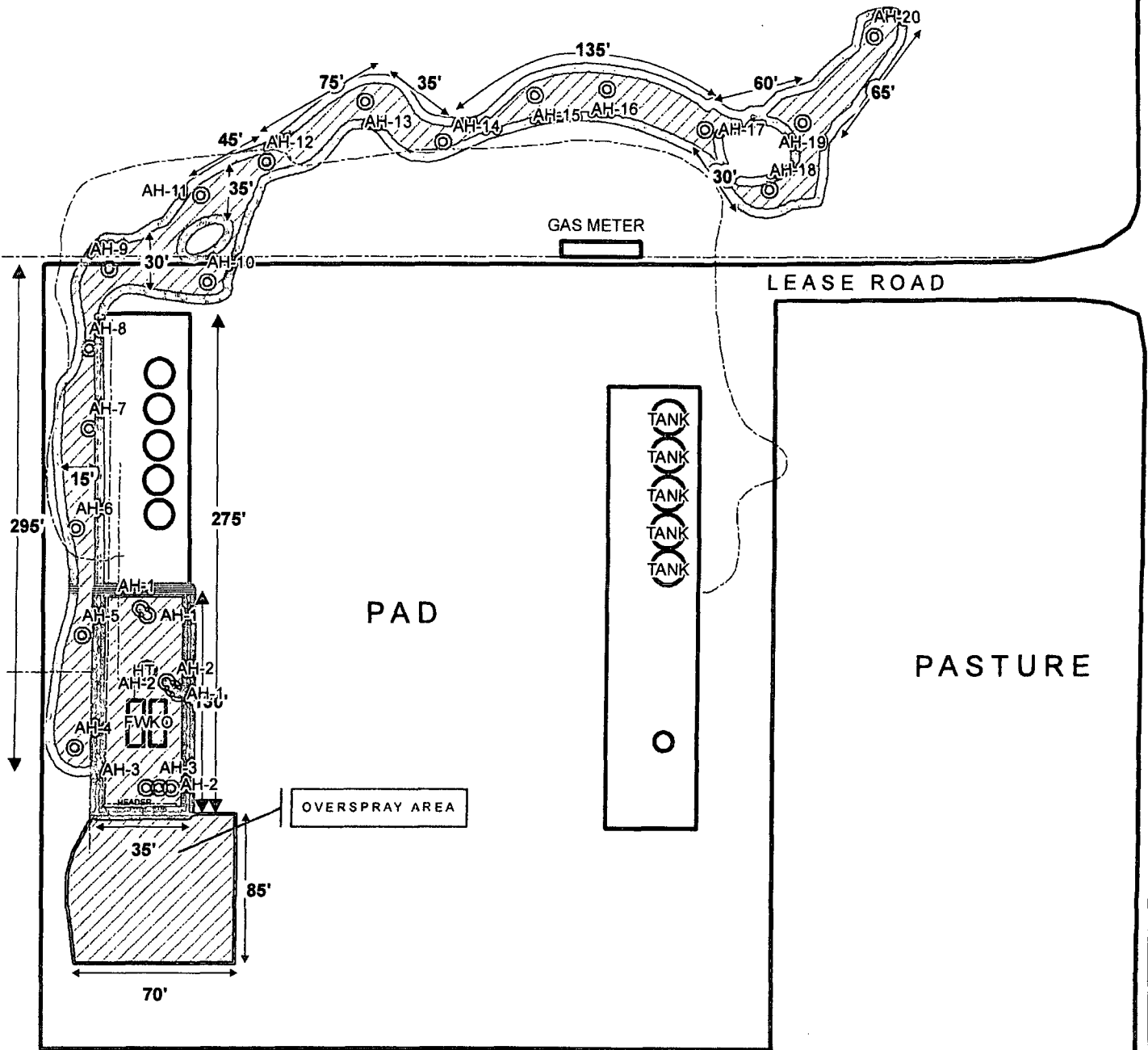


SCALE: 1 in = 2,000 feet

Feet 0 1,000 2,000



PASTURE



PAD

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



SCALE: 1 IN = 83 FEET

Feet 0 30 60



Figure 3

Way South State Com #1H TB

Spill Assessment Map

Eddy County, New Mexico

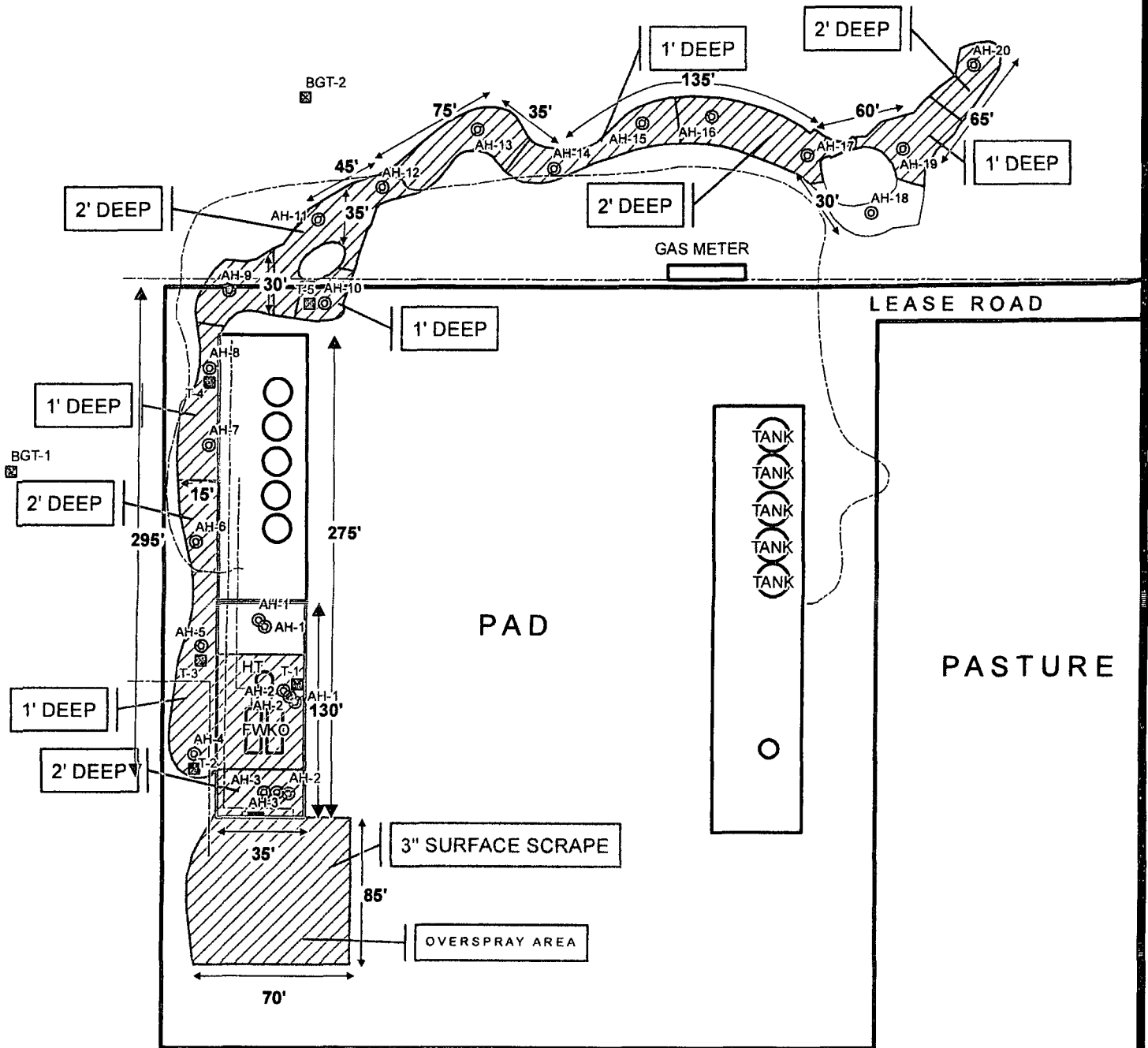
Project : 114-6401534

Date : 5/15/2013

File : H:\GIS\6401534



PASTURE



EXPLANATION

- ⊙ AUGER HOLE SAMPLE LOCATIONS(1ST SPILL)
- ⊙ AUGER HOLE SAMPLE LOCATIONS(2ND SPILL)
- ⊙ AUGER HOLE SAMPLE LOCATIONS(3RD SPILL)
- ⊠ TRENCH LOCATIONS
- ▨ EXCAVATED AREAS

PASTURE



SCALE: 1 IN = 83 FEET

Feet 0 30 60



Figure 4

Way South State Com #1H TB

Excavation Areas & Depths Map

Eddy County, New Mexico

Project: 114-6401534

Date: 5/15/2013

File: H:\GIS\6401534



Tables

Eddy County, New Mexico

[illegible]

Table 1
COG Operating LLC.

[illegible]

Eddy County, New Mexico

[illegible]

Eddy County, New Mexico

[illegible]

Eddy County, New Mexico

[illegible]

Eddy County, New Mexico

[illegible]

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



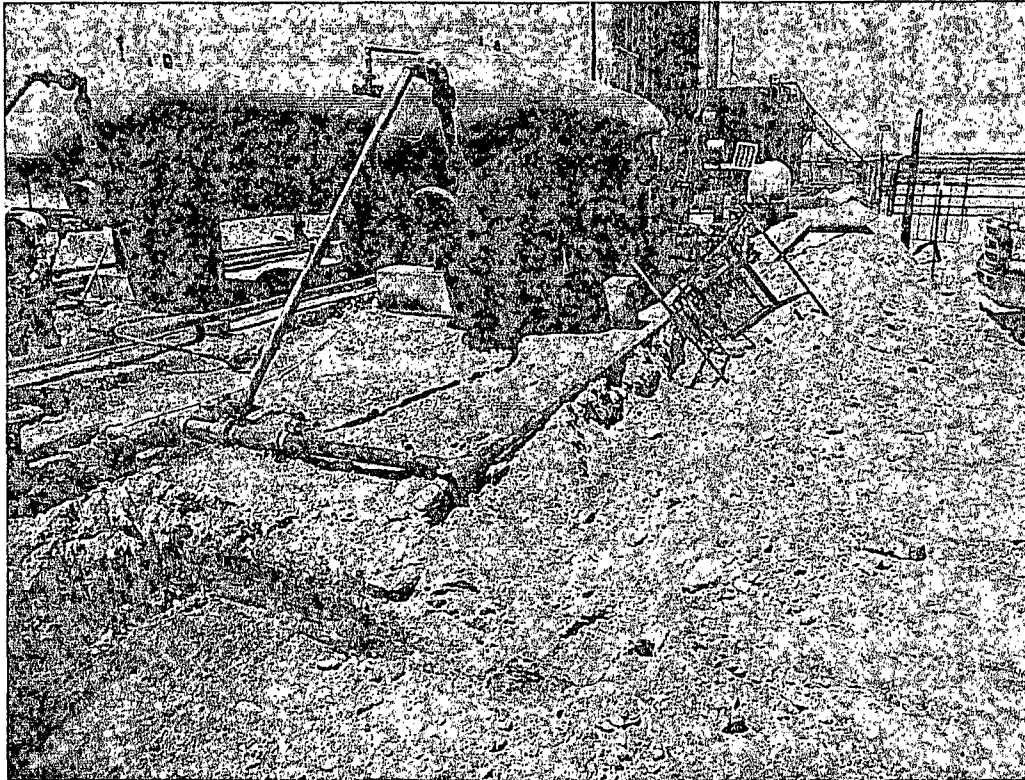
Excavated Areas and Depths

Photos

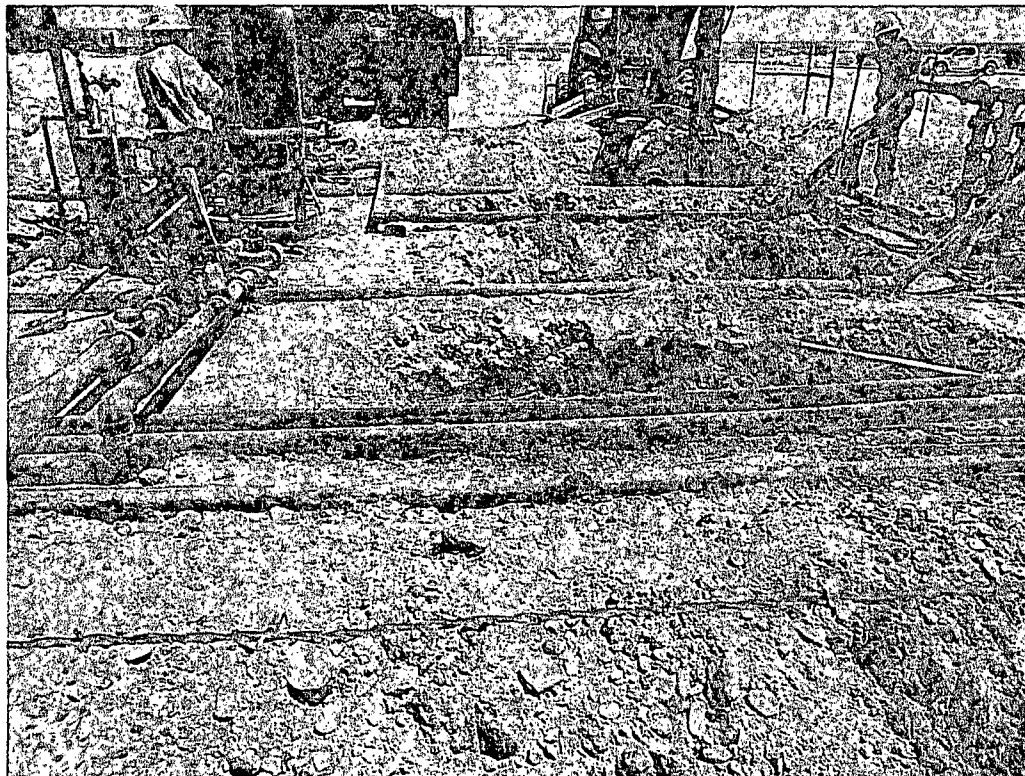
COG Operating LLC
Way South State Com #1H Tank Battery Eddy
County, New Mexico



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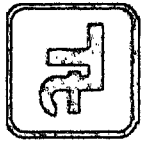


View North – Area of AH-2.

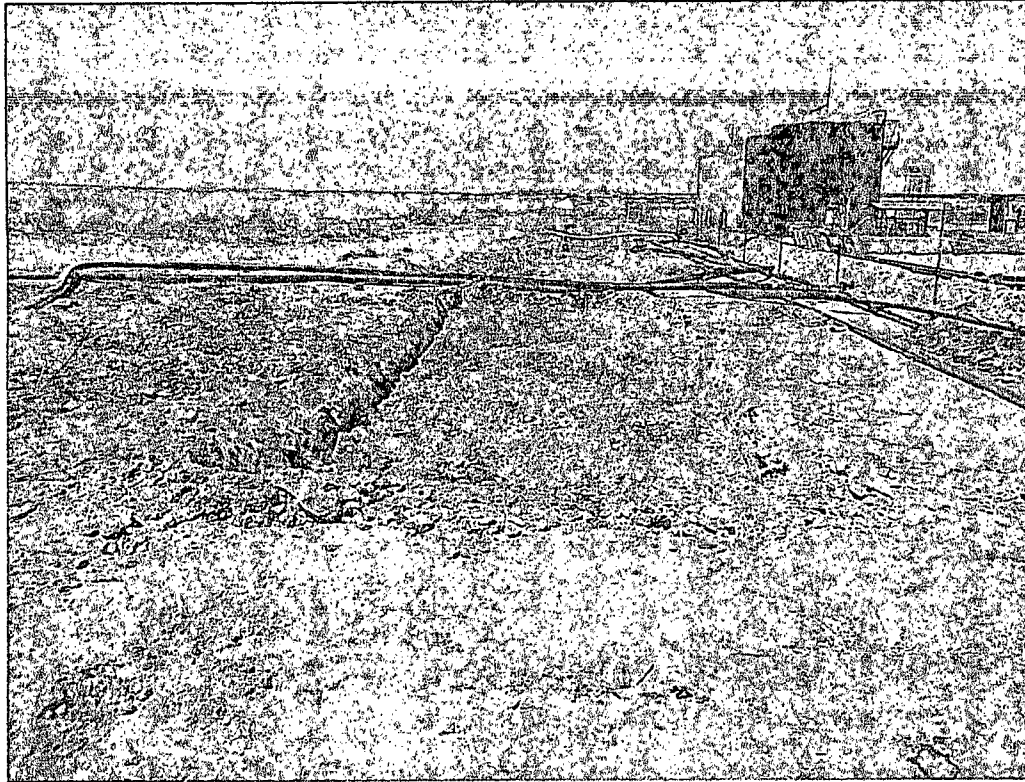


View South – Area of AH-3.

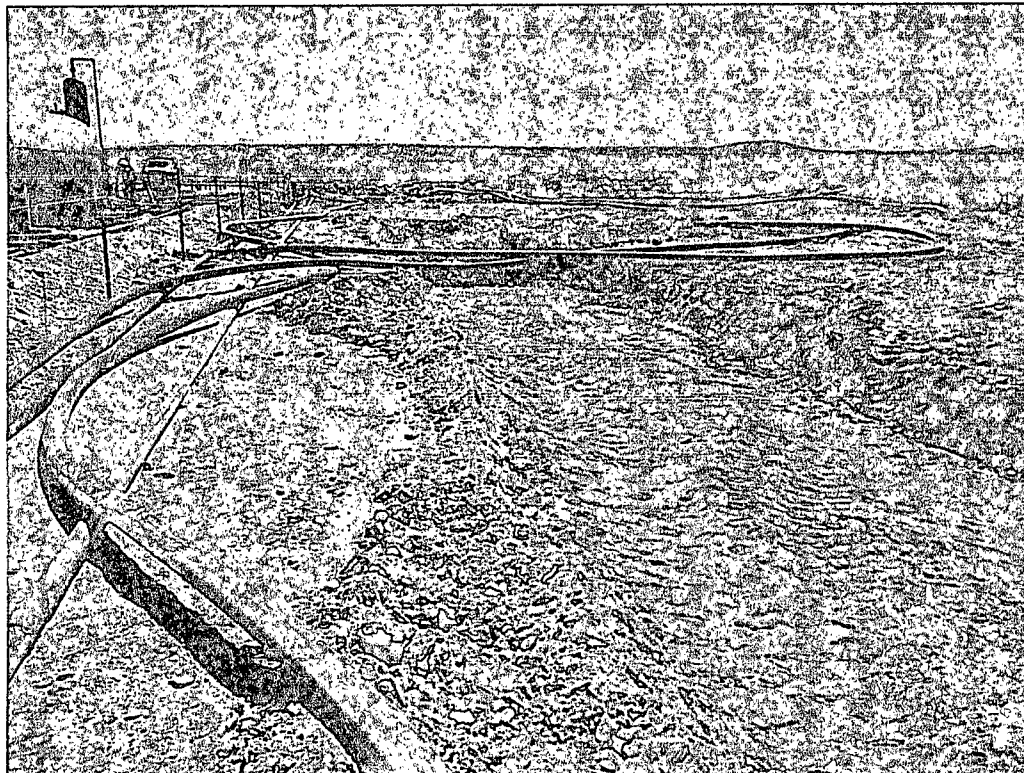
COG Operating LLC
Way South State Com #1H Tank Battery Eddy
County, New Mexico



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View North – Area of AH-4 and AH-5.

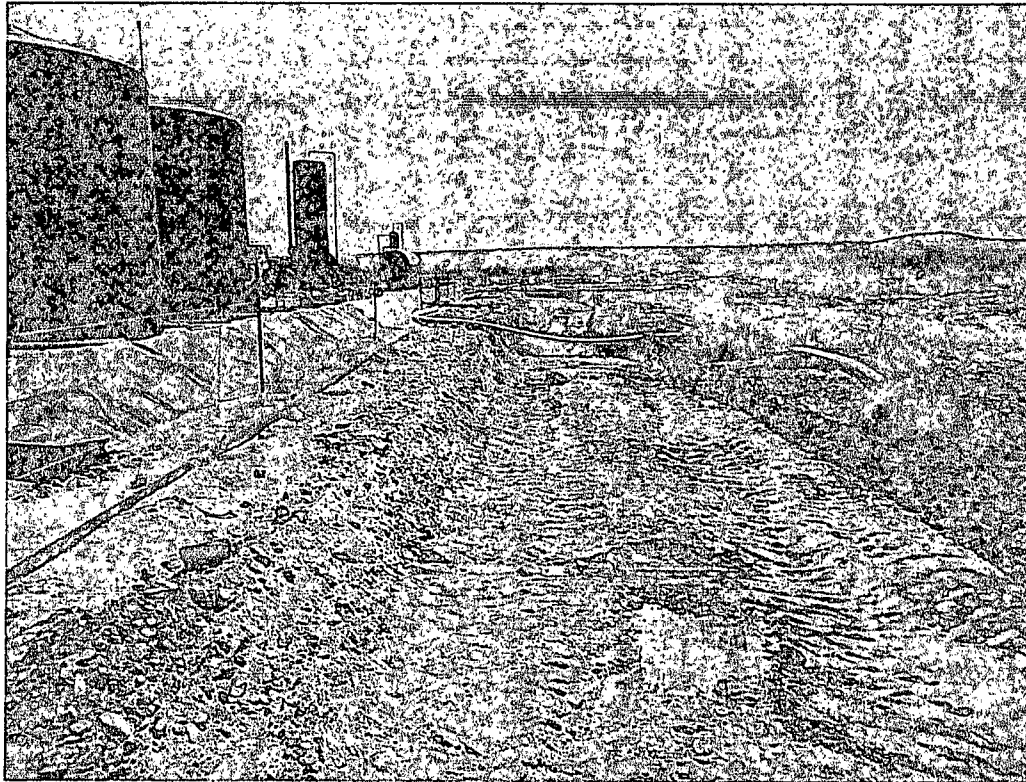


View South – Area of AH-6.

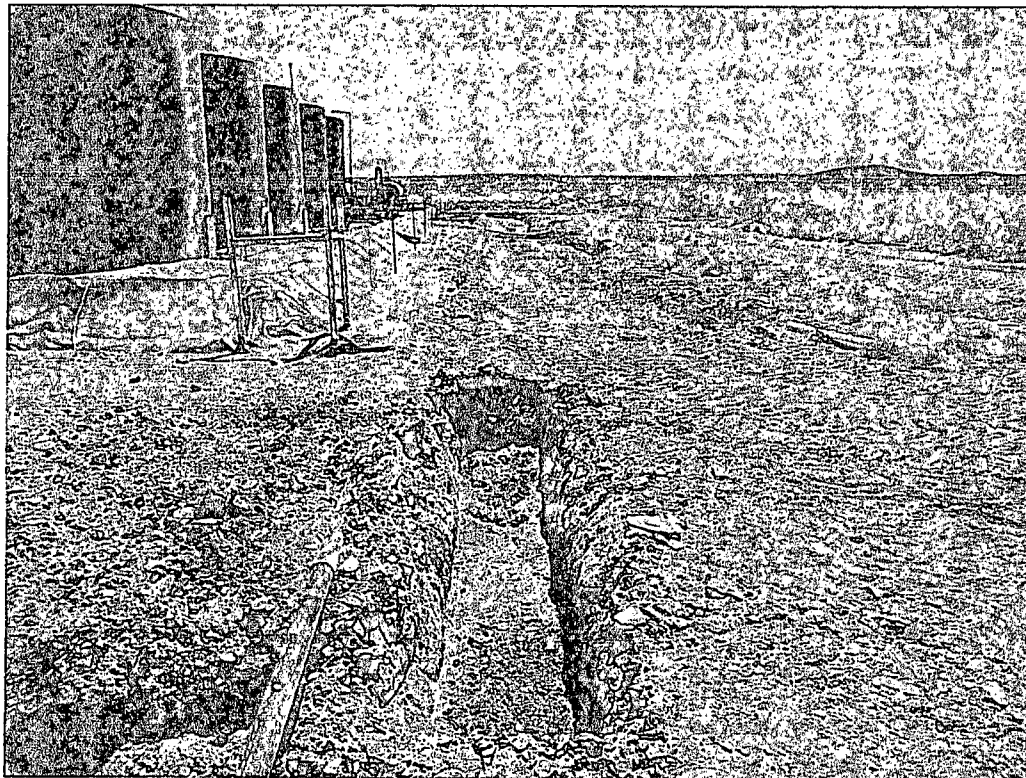
COG Operating LLC
Way South State Com #1H Tank Battery Eddy
County, New Mexico



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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.

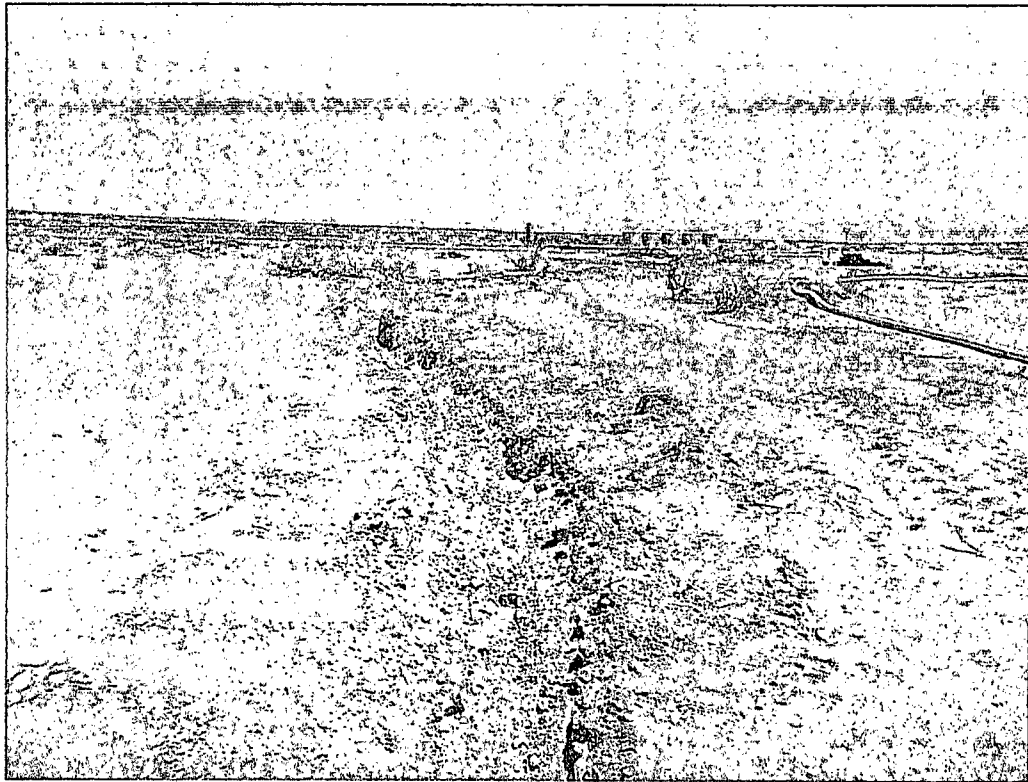


View Northeast – Area of AH-12 and AH-13.

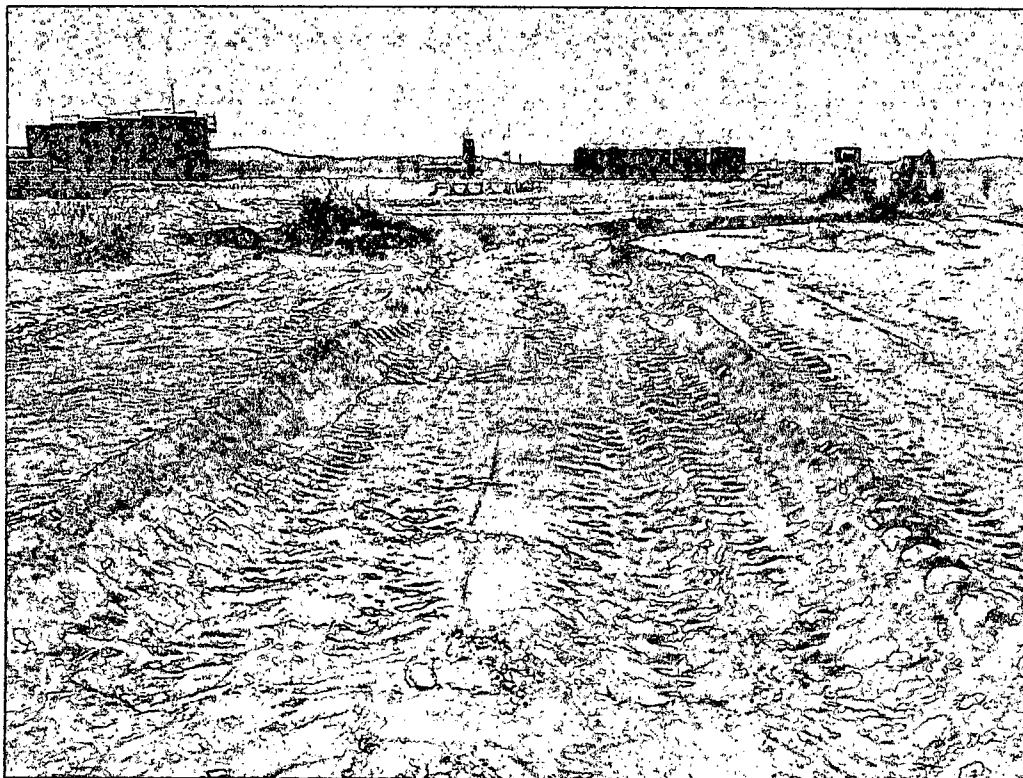
COG Operating LLC
Way South State Com #1H Tank Battery Eddy
County, New Mexico



TETRA TECH



View Northeast – Area of AH-14.

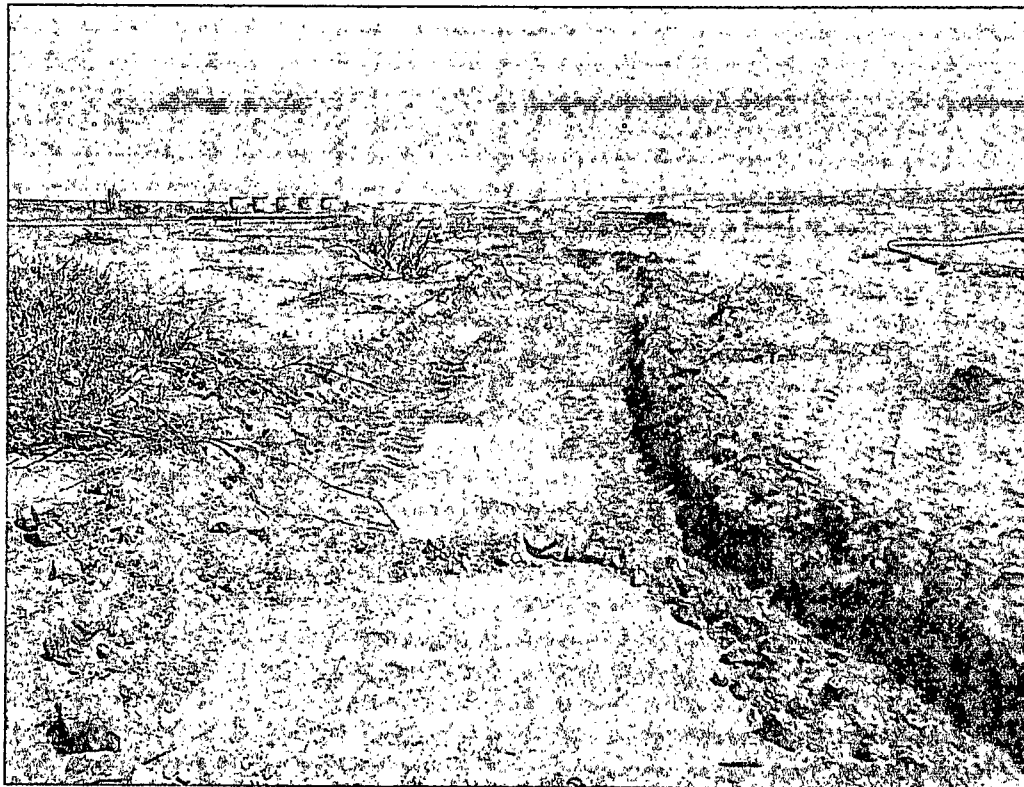


View Southwest – Area of AH-15 and AH-16.

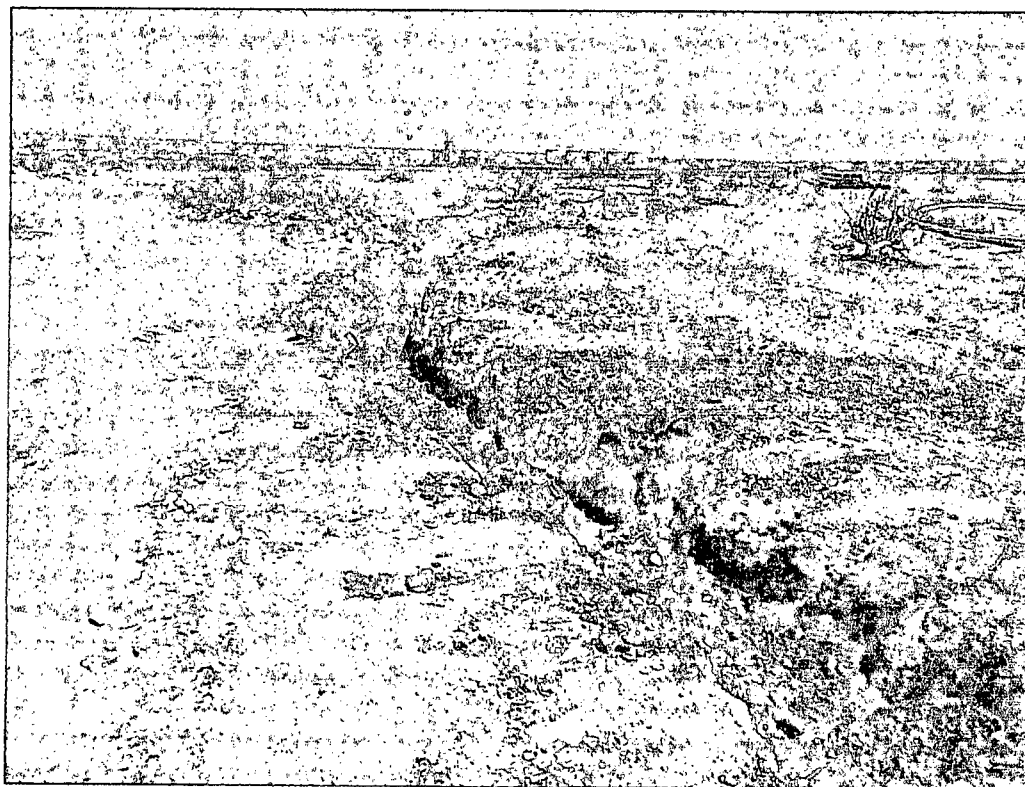
COG Operating LLC
Way South State Com #1H Tank Battery Eddy
County, New Mexico



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.*

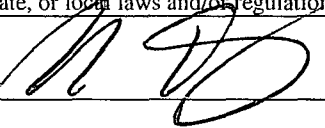
Describe Cause of Problem and Remedial Action Taken.*

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.

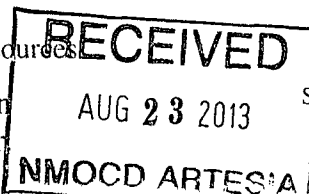
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger 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@tetrattech.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
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 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@tetrattech.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
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

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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 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.*

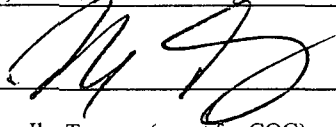
Describe Cause of Problem and Remedial Action Taken.*

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@tetrattech.com	Conditions of Approval:		Attached ☐
Date: 5-15-13	Phone: (432) 682-4559		

* Attach Additional Sheets If Necessary

District I
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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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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 Mullins	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.*

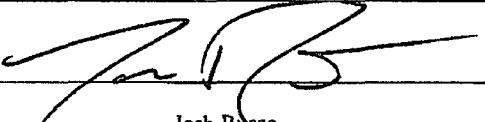
Describe Cause of Problem and Remedial Action Taken.*

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:			
Printed Name:	Josh Russo		
Title:	Senior Environmental Coordinator		
E-mail Address:	jrusso@concho.com		
Date:	03-22-2013	Phone:	432-212-2399
		OIL CONSERVATION DIVISION	
		Approved by District Supervisor:	
		Approval Date:	Expiration Date:
		Conditions of Approval:	Attached ☐

* Attach Additional Sheets If Necessary

District I
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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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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 #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.*

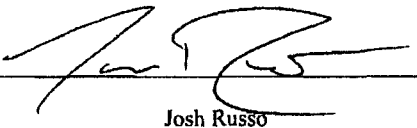
Describe Cause of Problem and Remedial Action Taken.*

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
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Revised October 10, 2003

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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.*

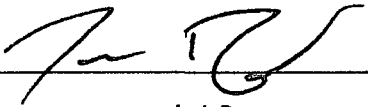
Describe Cause of Problem and Remedial Action Taken.*

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	10	11
		43			12
18	17	16	15	14	13
34					31
19	20	21	22	23	24
			70		
30	29	28	27	26	25
31	32	33	34	35	36

24 South			28 East		
6	70	5	30	4	30
7	8	50	9	10	11
				17	20
18	17	16	15	14	13
	42	29	18	52	34
19	20	21	22	23	24
	48				
30	29	28	27	26	25
31	32	33	34	35	36

24 South			29 East		
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
		18			
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	34	35	36

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

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

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

26 South			28 East		
6	5	4	3	2	1
				120	
7	8	9	10	11	12
18	17	16	15	14	13
				120	56
19	20	21	22	23	24
			120		
30	29	28	27	26	25
SITE					
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	23
			69		
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				TPH DRO - NEW	TPH GRO
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	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: 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



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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.

This report consists of a total of 80 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



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

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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.

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Analytical Report

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

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

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

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

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	u	i	<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	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2012-10-13	Analyzed By:	YG
QC Batch:	95688	Sample Preparation:	2012-10-13	Prepared By:	YG
Prep Batch:	81087				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	u	i	<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 ...

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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
QC Batch: 95828
Prep Batch: 81195

Analytical Method: S 8021B
Date Analyzed: 2012-10-17
Sample Preparation: 2012-10-17

Prep Method: S 5035
Analyzed By: YG
Prepared By: YG

Parameter	Flag	Cert	RL Result	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)
QC Batch: 95773
Prep Batch: 81143

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-10-16
Sample Preparation: 2012-10-15

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

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

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

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 95773
Prep Batch: 81152

Analytical Method: S 8015 D
Date Analyzed: 2012-10-17
Sample Preparation: 2012-10-16

Prep Method: N/A
Analyzed By: CW
Prepared By: CW

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		i	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	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2012-10-13	Analyzed By:	YG
QC Batch:	95715	Sample Preparation:	2012-10-13	Prepared By:	YG
Prep Batch:	81099				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		i	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	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-10-16	Analyzed By:	AR
QC Batch:	95759	Sample Preparation:	2012-10-15	Prepared By:	AR
Prep Batch:	81143				

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

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

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

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	u	i	<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
QC Batch: 95688
Prep Batch: 81087

Analytical Method: S 8015 D
Date Analyzed: 2012-10-13
Sample Preparation: 2012-10-13

Prep Method: S 5035
Analyzed By: YG
Prepared By: YG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	u	i	<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)
QC Batch: 95759
Prep Batch: 81143

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-10-16
Sample Preparation: 2012-10-15

Prep Method: N/A
Analyzed By: AR
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
QC Batch: 95773
Prep Batch: 81152

Analytical Method: S 8015 D
Date Analyzed: 2012-10-17
Sample Preparation: 2012-10-16

Prep Method: N/A
Analyzed By: CW
Prepared By: CW

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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
QC Batch: 95688
Prep Batch: 81087

Analytical Method: S 8015 D
Date Analyzed: 2012-10-13
Sample Preparation: 2012-10-13

Prep Method: S 5035
Analyzed By: YG
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
QC Batch: 95828
Prep Batch: 81195

Analytical Method: S 8021B
Date Analyzed: 2012-10-17
Sample Preparation: 2012-10-17

Prep Method: S 5035
Analyzed By: YG
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

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

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

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

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

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	I	<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	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2012-10-13	Analyzed By:	YG
QC Batch:	95688	Sample Preparation:	2012-10-13	Prepared By:	YG
Prep Batch:	81087				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		I	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

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

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

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

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

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	u	i	<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	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2012-10-13	Analyzed By:	YG
QC Batch:	95688	Sample Preparation:	2012-10-13	Prepared By:	YG
Prep Batch:	81087				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	u	i	<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

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

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

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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

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

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

Parameter	Flag	Cert	RL Result	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
QC Batch:	95760	Date Analyzed:	2012-10-16
Prep Batch:	81143	Sample Preparation:	2012-10-15
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

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

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

Laboratory:	Midland		
Analysis:	BTEX	Analytical Method:	S 8021B
QC Batch:	95828	Date Analyzed:	2012-10-17
Prep Batch:	81195	Sample Preparation:	2012-10-17
		Prep Method:	S 5035
		Analyzed By:	YG
		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)			1.90	mg/Kg	1	2.00	95	70 - 130

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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	RL Result	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	RL Result	Units	Dilution	RL
DRO	u	i	<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	RL Result	Units	Dilution	RL
GRO		i	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

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

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

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

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

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

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

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

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

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

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

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

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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

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

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

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

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

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

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

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

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

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

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

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

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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
QC Batch: 95688
Prep Batch: 81087

Analytical Method: S 8015 D
Date Analyzed: 2012-10-13
Sample Preparation: 2012-10-13

Prep Method: S 5035
Analyzed By: YG
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
QC Batch: 95828
Prep Batch: 81195

Analytical Method: S 8021B
Date Analyzed: 2012-10-17
Sample Preparation: 2012-10-17

Prep Method: S 5035
Analyzed By: YG
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

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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	RL Result	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	RL Result	Units	Dilution	RL
DRO	u	i	<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	RL Result	Units	Dilution	RL
GRO	u	i	<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

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

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

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

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

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

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

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

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

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

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

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

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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

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

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

Parameter	Flag	Cert	RL Result	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
QC Batch:	95762	Date Analyzed:	2012-10-16
Prep Batch:	81143	Sample Preparation:	2012-10-15
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	Cert	RL Result	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
QC Batch:	95773	Date Analyzed:	2012-10-17
Prep Batch:	81152	Sample Preparation:	2012-10-16
		Prep Method:	N/A
		Analyzed By:	CW
		Prepared By:	CW

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	u	,	<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
QC Batch:	95688	Date Analyzed:	2012-10-13
Prep Batch:	81087	Sample Preparation:	2012-10-13
		Prep Method:	S 5035
		Analyzed By:	YG
		Prepared By:	YG

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	u	i	<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
QC Batch: 95828
Prep Batch: 81195

Analytical Method: S 8021B
Date Analyzed: 2012-10-17
Sample Preparation: 2012-10-17

Prep Method: S 5035
Analyzed By: YG
Prepared By: YG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	u	i	<0.0200	mg/Kg	1	0.0200
Toluene	u	i	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	u	i	<0.0200	mg/Kg	1	0.0200
Xylene	u	i	<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)
QC Batch: 95799
Prep Batch: 81144

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-10-17
Sample Preparation: 2012-10-16

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

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

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

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	u	i	<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
QC Batch:	95688	Date Analyzed:	2012-10-13
Prep Batch:	81087	Sample Preparation:	2012-10-13
		Prep Method:	S 5035
		Analyzed By:	YG
		Prepared By:	YG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	u	i	<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
QC Batch:	95799	Date Analyzed:	2012-10-17
Prep Batch:	81144	Sample Preparation:	2012-10-16
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

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

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

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

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

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

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

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

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

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

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

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

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

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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

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

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 95773
Prep Batch: 81152

Analytical Method: S 8015 D
Date Analyzed: 2012-10-17
Sample Preparation: 2012-10-16

Prep Method: N/A
Analyzed By: CW
Prepared By: CW

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	I	<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
QC Batch: 95688
Prep Batch: 81087

Analytical Method: S 8015 D
Date Analyzed: 2012-10-13
Sample Preparation: 2012-10-13

Prep Method: S 5035
Analyzed By: YG
Prepared By: YG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	I	<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)
QC Batch: 95799
Prep Batch: 81144

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-10-17
Sample Preparation: 2012-10-16

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

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

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

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

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

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

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

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

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

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

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

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

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

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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	i	<0.0200	mg/Kg	1	0.0200
Toluene	u	i	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	u	i	<0.0200	mg/Kg	1	0.0200

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Xylene	u	i	<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	ub	i	<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

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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

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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

QC Batch: 95828

Prep Batch: 81195

Analytical Method: S 8021B

Date Analyzed: 2012-10-17

Sample Preparation: 2012-10-17

Prep Method: S 5035

Analyzed By: YG

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)

QC Batch: 95801

Prep Batch: 81144

Analytical Method: SM 4500-Cl B

Date Analyzed: 2012-10-17

Sample Preparation: 2012-10-16

Prep Method: N/A

Analyzed By: AR

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

QC Batch: 95775

Prep Batch: 81154

Analytical Method: S 8015 D

Date Analyzed: 2012-10-17

Sample Preparation: 2012-10-16

Prep Method: N/A

Analyzed By: CW

Prepared By: CW

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	UB	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
QC Batch: 95688
Prep Batch: 81087

Analytical Method: S 8015 D
Date Analyzed: 2012-10-13
Sample Preparation: 2012-10-13

Prep Method: S 5035
Analyzed By: YG
Prepared By: YG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	UB	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)
QC Batch: 95801
Prep Batch: 81144

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-10-17
Sample Preparation: 2012-10-16

Prep Method: N/A
Analyzed By: AR
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)
QC Batch: 95801
Prep Batch: 81144

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-10-17
Sample Preparation: 2012-10-16

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

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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	i	<0.0200	mg/Kg	1	0.0200
Toluene	u	i	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	u	i	<0.0200	mg/Kg	1	0.0200
Xylene	u	i	<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

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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
QC Batch: 95775
Prep Batch: 81154

Analytical Method: S 8015 D
Date Analyzed: 2012-10-17
Sample Preparation: 2012-10-16

Prep Method: N/A
Analyzed By: CW
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			90.5	mg/Kg	1	100	90	55.1 - 135.7

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

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 95688
Prep Batch: 81087

Analytical Method: S 8015 D
Date Analyzed: 2012-10-13
Sample Preparation: 2012-10-13

Prep Method: S 5035
Analyzed By: YG
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)
QC Batch: 95801
Prep Batch: 81144

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-10-17
Sample Preparation: 2012-10-16

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

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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

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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	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			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	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)			1.78	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	RL Result	Units	Dilution	RL
Chloride			5190	mg/Kg	10	4.00

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

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

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

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

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

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

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

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

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)			1.98	mg/Kg	1	2.00	99	70 - 130
4-Bromofluorobenzene (4-BFB)			2.08	mg/Kg	1	2.00	104	70 - 130

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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	RL Result	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	RL Result	Units	Dilution	RL
DRO			<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	RL Result	Units	Dilution	RL
GRO			<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

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

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

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

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

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

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

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

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

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

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

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

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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	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: 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

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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

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

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 95773
Prep Batch: 81152

Analytical Method: S 8015 D
Date Analyzed: 2012-10-17
Sample Preparation: 2012-10-16

Prep Method: N/A
Analyzed By: CW
Prepared By: CW

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	I	<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
QC Batch: 95688
Prep Batch: 81087

Analytical Method: S 8015 D
Date Analyzed: 2012-10-13
Sample Preparation: 2012-10-13

Prep Method: S 5035
Analyzed By: YG
Prepared By: YG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	I	<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)
QC Batch: 95847
Prep Batch: 81144

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-10-17
Sample Preparation: 2012-10-16

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

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

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

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

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

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

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

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

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

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

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

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

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

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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

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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

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

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

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

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

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

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

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

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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

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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			<15.7	mg/Kg	50

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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		1	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

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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

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

Method Blank (1) QC Batch: 95848

QC Batch: 95848
Prep Batch: 81144

Date Analyzed: 2012-10-17
QC Preparation: 2012-10-16

Analyzed By: AR
Prepared By: AR

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

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Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 95688
Prep Batch: 81087

Date Analyzed: 2012-10-13
QC Preparation: 2012-10-13

Analyzed By: YG
Prepared By: YG

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO			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			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
Prep Batch: 81099

Date Analyzed: 2012-10-13
QC Preparation: 2012-10-13

Analyzed By: YG
Prepared By: YG

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO			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			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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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
Prep Batch: 81143

Date Analyzed: 2012-10-16
QC Preparation: 2012-10-15

Analyzed By: AR
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
Prep Batch: 81143

Date Analyzed: 2012-10-16
QC Preparation: 2012-10-15

Analyzed By: AR
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
Prep Batch: 81143

Date Analyzed: 2012-10-16
QC Preparation: 2012-10-15

Analyzed By: AR
Prepared By: AR

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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
Prep Batch: 81143

Date Analyzed: 2012-10-16
QC Preparation: 2012-10-15

Analyzed By: AR
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
Prep Batch: 81152

Date Analyzed: 2012-10-17
QC Preparation: 2012-10-16

Analyzed By: CW
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.

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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
Prep Batch: 81154

Date Analyzed: 2012-10-17
QC Preparation: 2012-10-16

Analyzed By: CW
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
Prep Batch: 81144

Date Analyzed: 2012-10-17
QC Preparation: 2012-10-16

Analyzed By: AR
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.

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Laboratory Control Spike (LCS-1)

QC Batch: 95800
Prep Batch: 81144

Date Analyzed: 2012-10-17
QC Preparation: 2012-10-16

Analyzed By: AR
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
Prep Batch: 81144

Date Analyzed: 2012-10-17
QC Preparation: 2012-10-16

Analyzed By: AR
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
Prep Batch: 81144

Date Analyzed: 2012-10-17
QC Preparation: 2012-10-16

Analyzed By: AR
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.

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Param	F	C	LCS 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
Prep Batch: 81195

Date Analyzed: 2012-10-17
QC Preparation: 2012-10-17

Analyzed By: YG
Prepared By: YG

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene			1.70	mg/Kg	1	2.00	<0.00100	85	70 - 130
Toluene			1.70	mg/Kg	1	2.00	<0.00100	85	70 - 130
Ethylbenzene			1.66	mg/Kg	1	2.00	<0.00110	83	70 - 130
Xylene			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	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene			1.74	mg/Kg	1	2.00	<0.00100	87	70 - 130	2	20
Toluene			1.74	mg/Kg	1	2.00	<0.00100	87	70 - 130	2	20
Ethylbenzene			1.70	mg/Kg	1	2.00	<0.00110	85	70 - 130	2	20
Xylene			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	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS 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
Prep Batch: 81144

Date Analyzed: 2012-10-17
QC Preparation: 2012-10-16

Analyzed By: AR
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.

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Param	F	C	LCS 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
Prep Batch: 81144

Date Analyzed: 2012-10-17
QC Preparation: 2012-10-16

Analyzed By: AR
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	LCS 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
Prep Batch: 81087

Date Analyzed: 2012-10-13
QC Preparation: 2012-10-13

Analyzed By: YG
Prepared By: YG

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO			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			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

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Matrix Spike (MS-1) Spiked Sample: 311553

QC Batch: 95715
Prep Batch: 81099

Date Analyzed: 2012-10-13
QC Preparation: 2012-10-13

Analyzed By: YG
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
Prep Batch: 81143

Date Analyzed: 2012-10-16
QC Preparation: 2012-10-15

Analyzed By: AR
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
Prep Batch: 81143

Date Analyzed: 2012-10-16
QC Preparation: 2012-10-15

Analyzed By: AR
Prepared By: AR

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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
Prep Batch: 81143

Date Analyzed: 2012-10-16
QC Preparation: 2012-10-15

Analyzed By: AR
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
Prep Batch: 81143

Date Analyzed: 2012-10-16
QC Preparation: 2012-10-15

Analyzed By: AR
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.

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Matrix Spike (MS-1) Spiked Sample: 311450

QC Batch: 95773
Prep Batch: 81152

Date Analyzed: 2012-10-17
QC Preparation: 2012-10-16

Analyzed By: CW
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
Prep Batch: 81154

Date Analyzed: 2012-10-17
QC Preparation: 2012-10-16

Analyzed By: CW
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
Prep Batch: 81144

Date Analyzed: 2012-10-17
QC Preparation: 2012-10-16

Analyzed By: AR
Prepared By: AR

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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
Prep Batch: 81144

Date Analyzed: 2012-10-17
QC Preparation: 2012-10-16

Analyzed By: AR
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
Prep Batch: 81144

Date Analyzed: 2012-10-17
QC Preparation: 2012-10-16

Analyzed By: AR
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.

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Matrix Spike (MS-1) Spiked Sample: 311547

QC Batch: 95802
Prep Batch: 81144

Date Analyzed: 2012-10-17
QC Preparation: 2012-10-16

Analyzed By: AR
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
Prep Batch: 81195

Date Analyzed: 2012-10-17
QC Preparation: 2012-10-17

Analyzed By: YG
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

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Matrix Spike (MS-1) Spiked Sample: 311557

QC Batch: 95847
Prep Batch: 81144

Date Analyzed: 2012-10-17
QC Preparation: 2012-10-16

Analyzed By: AR
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
Prep Batch: 81144

Date Analyzed: 2012-10-17
QC Preparation: 2012-10-16

Analyzed By: AR
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

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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

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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

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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

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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

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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

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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

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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

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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 than 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.

1210/040

Analysis Request of Chain of Custody Record

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**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: C06			SITE MANAGER: Ike Tavaréz			NUMBER OF CONTAINERS	PRESERVATIVE METHOD					BTEX 8021B	TPH 8015 MOB. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vt Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8260/824	GC/MS Semi. Vol. 8270/825	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS	
LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB		PROJECT NAME:	NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HNO3																		ICE
PROJECT NO.: 114-6401534			PROJECT NAME: Way South State, Com # 1H TB																										
Eddy Co, NM			SAMPLE IDENTIFICATION																										
311472	10-8-12		SX			AH1 (0-1')	1				X			X															
473			SX			AH2 (0-1')	1				X			X															
474			SX			AH3 (0-6")	1				X			X															
475			SX			AH4 (0-6")	1				X			X															
476			SX			AH5 (0-6")	1				X			X															
477			SX			AH6 (0-4')	1				X			X															
478			SX			AH6 (1-1.5')	1				X																		
479			SX			AH6 (2-2.5')	1				X																		
480			SX			AH6 (3-3.5')	1				X																		
481			SX			AH6 (4-4.5')	1				X																		

RELINQUISHED BY: (Signature)	Date: 10-10-12	RECEIVED BY: (Signature)	Date: 10-10-12	SAMPLED BY: (Print & Initial)	Date: 10-10-12
RELINQUISHED BY: (Signature)	Date: 10-10-12	RECEIVED BY: (Signature)	Date: 10-10-12	SAMPLE SHIPPED BY: (Circle)	AIRBILL #:
RELINQUISHED BY: (Signature)	Date: 10-10-12	RECEIVED BY: (Signature)	Date: 10-10-12	FEDEX	BUS
RELINQUISHED BY: (Signature)	Date: 10-10-12	RECEIVED BY: (Signature)	Date: 10-10-12	HAND DELIVERED	UPS
RECEIVING LABORATORY: Trace	RECEIVED BY: (Signature)	TETRA TECH CONTACT PERSON:		Results by:	
ADDRESS: Midland	STATE: TX	ZIP: 79701	DATE: 10-10-12	RUSH Charges Authorized:	
CITY: Midland	PHONE: (432) 682-4559	TIME: 0800	DATE: 10-10-12	Yes No	
CONTACT: Trace	DATE: 10-10-12	TIME: 0800	DATE: 10-10-12		
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 Original copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

Run deeper samples if Benzene exceeds 10 mg/kg or total BTEX 50 mg/kg.

121040 12101040

Analysis Request of Chain of Custody Record

PAGE: 2 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:

SITE MANAGER:

PROJECT NO.:

PROJECT NAME:

111-6401534

 Way South State Com #1H TB
 Eddy 10, NM
 SAMPLE IDENTIFICATION

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP	GRAB	NUMBER OF CONTAINERS	PRESERVATIVE METHOD				BTX 8021B	TEX 8015 MOD	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Sb	TCLP Metals Ag As Ba Cd V Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8060/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
							FILTERED (Y/N)	HCL	HNO3	ICE	NONE																
482	10-8-12		SX			1				X														X			
483			SX			1				X													X				
484			SX			1				X													X				
485			SX			1				X													X				
486			SX			1				X													X				
487			SX			1				X			X										X				
488			SX			1				X													X				
489			SX			1				X													X				
490			SX			1				X													X				
491			SX			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)

Date: _____

RELINQUISHED BY: (Signature)

Date: 10-10-12

Time: 1335

RECEIVED BY: (Signature)

Date: 10-10-12

Time: 1335

SAMPLE SHIPPED BY: (Circle)

AIRBILL #: _____

RELINQUISHED BY: (Signature)

Date: _____

Time: _____

RECEIVED BY: (Signature)

Date: _____

Time: _____

TETRA TECH CONTACT PERSON:

OTHER: _____

RECEIVING LABORATORY:

Frac

RECEIVED BY: (Signature)

ADDRESS:

CITY:

STATE:

ZIP:

CONTACT:

PHONE:

DATE:

TIME:

SAMPLE CONDITION WHEN RECEIVED:

REMARKS:

- 0.6 intact

Ike Tovar

Results by:

RUSH Charges

Authorized:

Yes No

Please fill out all copies - Laboratory retains Yellow copy - Return Original 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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME:

106

SITE MANAGER:

Ike Tovar

PROJECT NO.:

114-62101534

PROJECT NAME:

Way South State Can #14 TB

Eddy 10, NM

SAMPLE IDENTIFICATION

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	Eddy (0, NM) SAMPLE IDENTIFICATION	NUMBER OF FILTERED (	HCL	HNO3	IOE	NONE	BTEX 8021B	CPH 8015 MOD	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC-MS Vol. 8240/8260/824	GC-MS Semi. Vol. 8270/825	PCB's 8080/808	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/ Cations, pH, TDS		
492	10-8-12		S	X		AH 7 (5-5.5')	1			X															X					
493			S	X		AH 7 (6-6.5')	1			X															X					
494			S	X		AH 7 (7-7.5')	1			X															X					
495			S	X		AH 7 (8-8.5')	1			X															X					
496			S	X		AH 7 (9-9.5')	1			X															X					
497	10-9		S	X		AH 8 (0-6")	1			X			X												X					
498			S	X		AH 9 (0-1)	1			X			X												X					
499			S	X		AH 9 (1-1.5)	1			X															X					
500			S	X		AH 9 (2-2.5)	1			X															X					
501			S	X		AH 9 (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)

Date: _____

Time: _____

RELINQUISHED BY: (Signature)

Date: 10-10-12

Time: 1335

RECEIVED BY: (Signature)

Date: 10-10-12

Time: 1335

SAMPLE SHIPPED BY: (Circle)

AIRBILL #: _____

RELINQUISHED BY: (Signature)

Date: _____

Time: _____

RECEIVED BY: (Signature)

Date: _____

Time: _____

FEDEX

BUS

HAND DELIVERED

UPS

OTHER: _____

RECEIVING LABORATORY:

Trace

RECEIVED BY: (Signature)

ADDRESS:

CITY: Midland

STATE: _____

ZIP: _____

CONTACT:

PHONE: _____

DATE: _____

TIME: _____

SAMPLE CONDITION WHEN RECEIVED:

-0.6 intact

REMARKS:

TETRA TECH CONTACT PERSON:

Ike Tovar

Results by:

RUSH Charges
Authorized:

Yes No

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

12101040

Analysis Request of Chain of Custody Record

PAGE: 4 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: COGSITE MANAGER: The TowerPROJECT NO.: 114-6401534
 PROJECT NAME: Way South State Cont/H/TB
Eddy Co, NM
 SAMPLE IDENTIFICATION

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION										NUMBER OF	FILTERED	HCL	HNO3	ICE	NONE	BTEX 8021	PH 801	PAH 8270	RCRA Metals	TCLP Metals	TCLP Volat	TCLP Semi	RCI	GC/MS Vol	GC/MS Semi	PCB's 8080/608	Pest. 809/609	Chloride	Gamma Sp	Alpha Beta	PLM (Asbes	Major Anio																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
502	10/9		S		X	AA9 (4-4.5)	1					X																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												

RELINQUISHED BY: (Signature)

Date: 10-10-12Time: 0800

RECEIVED BY: (Signature)

Date: 10-10-12Time: 0800

SAMPLED BY: (Print & Initial)

Date: _____

RELINQUISHED BY: (Signature)

Date: 10-10-12Time: 1335

RECEIVED BY: (Signature)

Date: 10-10-12Time: 1335

SAMPLE SHIPPED BY: (Circle)

AIRBILL #: _____

RELINQUISHED BY: (Signature)

Date: _____

Time: _____

RECEIVED BY: (Signature)

Date: _____

Time: _____

TETRA TECH CONTACT PERSON:

Results by:

RECEIVING LABORATORY: Tower

RECEIVED BY: (Signature)

ADDRESS: _____

CITY: MidlandSTATE: TX

ZIP: _____

CONTACT: _____

PHONE: _____

DATE: _____

TIME: _____

SAMPLE CONDITION WHEN RECEIVED:

REMARKS:

- 0.6 intact

The Tower

RUSH Charges Authorized:

Yes No

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

12/10/1040

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: C06

SITE MANAGER: Ike Tovar

PROJECT NO.: 114-6401534

 PROJECT NAME: Way South State Co #4 TB
 Eddy Co, NM
 SAMPLE IDENTIFICATION

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	Eddy (D, Nm) SAMPLE IDENTIFICATION	NUMBER OF FILTERED (Y)	HCL	HNO3	ICE	NONE	BTEX 8021B	PH 8015	PAH 8270	RCRA Metals	TCLP Metals	TCLP Volatiles	TCLP Semi V	RCI	GC/MS Vol. &	GC/MS Semi	PCB's 8080/	Pest. 808/60	Chlorides	Gamma Spec	Alpha Beta (	PLM (Asbest	Major Anions	
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 (0-1')	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)

Kara Reich, Marcus Kujawa

Date: _____
Time: _____

RELINQUISHED BY: (Signature)

Date: 10-10-12
Time: 1335

RECEIVED BY: (Signature)

D. Hernandez

Date: 10-10-12
Time: 1335

SAMPLE SHIPPED BY: (Circle)

FEDEX BUS

AIRBILL #: _____

HAND DELIVERED UPS

OTHER: _____

RECEIVING LABORATORY: Tetra

RECEIVED BY: (Signature)

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

CONTACT: _____ PHONE: _____

DATE: _____ TIME: _____

SAMPLE CONDITION WHEN RECEIVED:

- 0.6 intact

REMARKS:

TETRA TECH CONTACT PERSON:

Ike Tovar

Results by:

RUSH Charges Authorized:

Yes No

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

10101010

Analysis Request of Chain of Custody Record

PAGE: 7 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 Tavares**

PROJECT NO.: **7141-6401534**

PROJECT NAME: **Way South State Can #14 TB**
Eddy 10 NM
SAMPLE IDENTIFICATION

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	Eddy 10 NM SAMPLE IDENTIFICATION	NUMBER OF FILTERED (	HCL	HNO3	ICE	NONE		BTEX 8021E	TPH 8015	PAH 8270	RCRA Metals	TCLP Metals	TCLP Volatiles	TCLP Semi	RCI	GC/MS Vol.	GC/MS Semi	PCB's 8080	Pest. 808/606	Chlorides	Gamma Sp.	Alpha Beta	PLM (Asbes	Major Anion	
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		AH15 (2-2.5')	1			X															X					
535			S	X		AH15 (3-3.5')	1			X															X					
536			S	X		AH16 (0-1')	1			X				X											X					
537			S	X		AH16 (1-1.5')	1			X															X					
538			S	X		AH16 (2-2.5')	1			X															X					
539			S	X		AH16 (3-3.5')	1			X															X					
540			S	X		AH17 (0-1')	1			X				X											X					
541			S	X		AH17 (1-1.5')	1			X															X					

RELINQUISHED BY: (Signature) **[Signature]** Date: **10-10-12** Time: **0800**
RELINQUISHED BY: (Signature) **[Signature]** Date: **10-10-12** Time: **1335**
RELINQUISHED BY: (Signature) **[Signature]** Date: _____ Time: _____

RECEIVED BY: (Signature) **[Signature]** Date: **10-10-12** Time: **0800**
RECEIVED BY: (Signature) **[Signature]** Date: **10-10-12** Time: **13:35**
RECEIVED BY: (Signature) _____ Date: _____ Time: _____

SAMPLED BY: (Print & Initial) **Ryan Krich, Marcus Kuigowski** Date: _____
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS AIRBILL #: _____
OTHER: _____

RECEIVING LABORATORY: **Trace**
ADDRESS: _____
CITY: **Midland** STATE: _____ ZIP: _____
CONTACT: _____ PHONE: _____

RECEIVED BY: (Signature) _____
DATE: _____ TIME: _____

TETRA TECH CONTACT PERSON: **Ike Tavares**
Results by: _____
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: **- 0.6 intact**

REMARKS: _____

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME:

COB

SITE MANAGER:

Ike Tavaraz

PROJECT NO.:

114-6401534

PROJECT NAME:

Way South Site Cont #1H DB

Eddy 10 NM
SAMPLE IDENTIFICATION

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	Eddy 10 NM SAMPLE IDENTIFICATION										NUMBER	FILTERED	HCL	HNO3	ICE	NONE	BTEX 8021	TPH 8015	PAH 8270	RCRA Metals	TCLP Metals	TCLP Volatiles	TCLP Semivolatiles	RCI	GC/MS Volatiles	GC/MS Semivolatiles	PCB's 8080	Pest. 808/608	Chloride	Gamma S	Alpha Bet	PLM (Asb)	Major Anions																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
552	10/9		S	x		AH 19 (4-4.5')	1				X																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												

RELINQUISHED BY: (Signature)

Date: 10-10-12
Time: 0800

RECEIVED BY: (Signature)

Date: 10-10-12
Time: 0800

SAMPLED BY: (Print & Initial)

Date: 10-10-12
Time: 0800

RELINQUISHED BY: (Signature)

Date: 10-10-12
Time: 1335

RECEIVED BY: (Signature)

Date: 10-10-12
Time: 1335

SAMPLE SHIPPED BY: (Circle)

AIRBILL #: _____

RELINQUISHED BY: (Signature)

Date: _____
Time: _____

RECEIVED BY: (Signature)

Date: _____
Time: _____

FEDEX

BUS

HAND DELIVERED

UPS

OTHER: _____

RECEIVING LABORATORY:

Trace

ADDRESS:

CITY: Midland

STATE:

ZIP:

CONTACT:

PHONE:

RECEIVED BY: (Signature)

DATE:

TIME:

TETRA TECH CONTACT PERSON:

Ike Tavaraz

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 Original copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

Summary Report

Ike Tavaréz
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				TPH DRO - NEW	TPH GRO
	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 Q ₈	27.2
316750 - AH-3 2-2.5'					<50.0 Q ₈	4.32

Sample: 316746 - AH-1 0-1'

continued ...

¹Dilution due to hydrocarbons.²Dilution 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'

Report Date: December 26, 2012

Work Order: 12121345

Page Number: 3 of 3

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



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 Tavaréz
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.

This report consists of a total of 29 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Michael Abel

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

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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.

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Analytical Report

Sample: 316746 - AH-1 0-1'

Laboratory: Midland

Analysis: BTEX

QC Batch: 97588

Prep Batch: 82683

Analytical Method: S 8021B

Date Analyzed: 2012-12-19

Sample Preparation: 2012-12-19

Prep Method: S 5035

Analyzed By: YG

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)			1.90	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)

QC Batch: 97669

Prep Batch: 82736

Analytical Method: SM 4500-Cl B

Date Analyzed: 2012-12-21

Sample Preparation: 2012-12-20

Prep Method: N/A

Analyzed By: AR

Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			61.6	mg/Kg	5	4.00

Sample: 316746 - AH-1 0-1'

Laboratory: Midland

Analysis: TPH DRO - NEW

QC Batch: 97482

Prep Batch: 82608

Analytical Method: S 8015 D

Date Analyzed: 2012-12-17

Sample Preparation: 2012-12-14

Prep Method: N/A

Analyzed By: CW

Prepared By: CW

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

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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	RL Result	Units	Dilution	RL
GRO	U	I	<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	RL Result	Units	Dilution	RL
Benzene	I	U	<0.400	mg/Kg	20	0.0200
Toluene		I	5.76	mg/Kg	20	0.0200
Ethylbenzene		I	6.78	mg/Kg	20	0.0200
Xylene		I	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

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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	RL Result	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	RL Result	Units	Dilution	RL
DRO			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	RL Result	Units	Dilution	RL
GRO			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

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Sample: 316748 - AH-3 0-1'

Laboratory: Midland

Analysis: BTEX

QC Batch: 97588

Prep Batch: 82683

Analytical Method: S 8021B

Date Analyzed: 2012-12-19

Sample Preparation: 2012-12-19

Prep Method: S 5035

Analyzed By: YG

Prepared By: YG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	2	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)

QC Batch: 97669

Prep Batch: 82736

Analytical Method: SM 4500-Cl B

Date Analyzed: 2012-12-21

Sample Preparation: 2012-12-20

Prep Method: N/A

Analyzed By: AR

Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			6000	mg/Kg	10	4.00

Sample: 316748 - AH-3 0-1'

Laboratory: Midland

Analysis: TPH DRO - NEW

QC Batch: 97482

Prep Batch: 82608

Analytical Method: S 8015 D

Date Analyzed: 2012-12-17

Sample Preparation: 2012-12-14

Prep Method: N/A

Analyzed By: CW

Prepared By: CW

Parameter	Flag	Cert	RL Result	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

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Sample: 316748 - AH-3 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 97594
Prep Batch: 82693

Analytical Method: S 8015 D
Date Analyzed: 2012-12-19
Sample Preparation: 2012-12-19

Prep Method: S 5035
Analyzed By: YG
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
QC Batch: 97588
Prep Batch: 82683

Analytical Method: S 8021B
Date Analyzed: 2012-12-19
Sample Preparation: 2012-12-19

Prep Method: S 5035
Analyzed By: YG
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)
QC Batch: 97669
Prep Batch: 82736

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-12-21
Sample Preparation: 2012-12-20

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

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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	Q*	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

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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

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Sample: 316751 - AH-3 3-3.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-12-21	Analyzed By:	AR
QC Batch:	97669	Sample Preparation:	2012-12-20	Prepared By:	AR
Prep Batch:	82736				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			1700	mg/Kg	10	4.00

Sample: 316752 - AH-3 4-4.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-12-21	Analyzed By:	AR
QC Batch:	97670	Sample Preparation:	2012-12-20	Prepared By:	AR
Prep Batch:	82736				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			858	mg/Kg	5	4.00

Sample: 316753 - AH-3 5-5.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-12-21	Analyzed By:	AR
QC Batch:	97670	Sample Preparation:	2012-12-20	Prepared By:	AR
Prep Batch:	82736				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			1180	mg/Kg	5	4.00

Sample: 316754 - AH-3 6-6.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-12-21	Analyzed By:	AR
QC Batch:	97670	Sample Preparation:	2012-12-20	Prepared By:	AR
Prep Batch:	82736				

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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

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Method Blanks

Method Blank (1) QC Batch: 97482

QC Batch: 97482
Prep Batch: 82608

Date Analyzed: 2012-12-17
QC Preparation: 2012-12-14

Analyzed By: CW
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
Prep Batch: 82632

Date Analyzed: 2012-12-18
QC Preparation: 2012-12-17

Analyzed By: CW
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
Prep Batch: 82683

Date Analyzed: 2012-12-19
QC Preparation: 2012-12-19

Analyzed By: YG
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

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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

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

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Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 97482
Prep Batch: 82608

Date Analyzed: 2012-12-17
QC Preparation: 2012-12-14

Analyzed By: CW
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
Prep Batch: 82632

Date Analyzed: 2012-12-18
QC Preparation: 2012-12-17

Analyzed By: CW
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

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Laboratory Control Spike (LCS-1)

QC Batch: 97588
Prep Batch: 82683

Date Analyzed: 2012-12-19
QC Preparation: 2012-12-19

Analyzed By: YG
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
Prep Batch: 82693

Date Analyzed: 2012-12-19
QC Preparation: 2012-12-19

Analyzed By: YG
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 ...

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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
Prep Batch: 82736

Date Analyzed: 2012-12-21
QC Preparation: 2012-12-20

Analyzed By: AR
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
Prep Batch: 82736

Date Analyzed: 2012-12-21
QC Preparation: 2012-12-20

Analyzed By: AR
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.

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Matrix Spike (MS-1) Spiked Sample: 316746

QC Batch: 97482
Prep Batch: 82608

Date Analyzed: 2012-12-17
QC Preparation: 2012-12-14

Analyzed By: CW
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	139	143	mg/Kg	1	100	139	143	70 - 130

Matrix Spike (MS-1) Spiked Sample: 316642

QC Batch: 97518
Prep Batch: 82632

Date Analyzed: 2012-12-18
QC Preparation: 2012-12-17

Analyzed By: CW
Prepared By: CW

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	
DRO	Q ^s	Q ^s	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	Q _s	Q _s		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	420	407	mg/Kg	10	100	420	407	70 - 130

Matrix Spike (MS-1) Spiked Sample: 316746

QC Batch: 97588
Prep Batch: 82683

Date Analyzed: 2012-12-19
QC Preparation: 2012-12-19

Analyzed By: YG
Prepared By: YG

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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
Prep Batch: 82693

Date Analyzed: 2012-12-19
QC Preparation: 2012-12-19

Analyzed By: YG
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

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Matrix Spike (MS-1) Spiked Sample: 316751

QC Batch: 97669
Prep Batch: 82736

Date Analyzed: 2012-12-21
QC Preparation: 2012-12-20

Analyzed By: AR
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
Prep Batch: 82736

Date Analyzed: 2012-12-21
QC Preparation: 2012-12-20

Analyzed By: AR
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.

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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

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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

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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

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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

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- 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.

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

Report Date: January 11, 2013

Work Order: 13011002

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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



6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800-378-1298 806-794-1298 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.

This report consists of a total of 14 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Michael Abel

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

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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.

Report Date: January 11, 2013
114-6401534

Work Order: 13011002
COG/Way South State Com. #1H TB

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Eddy Co., NM

Analytical Report

Sample: 318048 - Background Trench 1 0-1'

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	98013	Date Analyzed:	2013-01-11
Prep Batch:	83039	Sample Preparation:	2013-01-11
		Prep Method:	N/A
		Analyzed By:	AH
		Prepared By:	AH

Parameter	Flag	Cert	RL Result	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
QC Batch:	98013	Date Analyzed:	2013-01-11
Prep Batch:	83039	Sample Preparation:	2013-01-11
		Prep Method:	N/A
		Analyzed By:	AH
		Prepared By:	AH

Parameter	Flag	Cert	RL Result	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
QC Batch:	98013	Date Analyzed:	2013-01-11
Prep Batch:	83039	Sample Preparation:	2013-01-11
		Prep Method:	N/A
		Analyzed By:	AH
		Prepared By:	AH

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Qs		2160	mg/Kg	5	4.00

Report Date: January 11, 2013
114-6401534

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COG/Way South State Com. #1H TB

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Eddy Co., NM

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	RL Result	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	RL Result	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	RL Result	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

Report Date: January 11, 2013
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Eddy Co., NM

Parameter	Flag	Cert	RL 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	RL 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	RL 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	RL Result	Units	Dilution	RL
Chloride	Qs		1650	mg/Kg	5	4.00

Report Date: January 11, 2013
114-6401534

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COG/Way South State Com. #1H TB

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Eddy Co., NM

Sample: 318058 - Background Trench 2 8'

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	98017	Date Analyzed:	2013-01-11
Prep Batch:	83041	Sample Preparation:	2013-01-11
		Prep Method:	N/A
		Analyzed By:	AH
		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
QC Batch:	98017	Date Analyzed:	2013-01-11
Prep Batch:	83041	Sample Preparation:	2013-01-11
		Prep Method:	N/A
		Analyzed By:	AH
		Prepared By:	AH

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			1330	mg/Kg	5	4.00

Report Date: January 11, 2013
114-6401534

Work Order: 13011002
COG/Way South State Com. #1H TB

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Eddy Co., NM

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

Report Date: January 11, 2013
114-6401534

Work Order: 13011002
COG/Way South State Com. #1H TB

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Eddy Co., NM

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 98013
Prep Batch: 83039

Date Analyzed: 2013-01-11
QC Preparation: 2013-01-11

Analyzed By: AH
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
Prep Batch: 83041

Date Analyzed: 2013-01-11
QC Preparation: 2013-01-11

Analyzed By: AH
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
Prep Batch: 83039

Date Analyzed: 2013-01-11
QC Preparation: 2013-01-11

Analyzed By: AH
Prepared By: AH

Report Date: January 11, 2013
114-6401534

Work Order: 13011002
COG/Way South State Com. #1H TB

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Eddy Co., NM

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	Q _n	Q _n	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
Prep Batch: 83041

Date Analyzed: 2013-01-11
QC Preparation: 2013-01-11

Analyzed By: AH
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.

Report Date: January 11, 2013
114-6401534

Work Order: 13011002
COG/Way South State Com. #1H TB

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Eddy Co., NM

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 than 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

Report Date: January 11, 2013
114-6401534

Work Order: 13011002
COG/Way South State Com. #1H TB

Page Number: 14 of 14
Eddy Co., NM

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

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

PAGE: 1 OF: 2

 ANALYSIS REQUEST
 (Circle or Specify Method No.)

CLIENT NAME:

COG

SITE MANAGER:

Ike Tovar

PROJECT NO.:

114-6401534

PROJECT NAME:

Way South Santa Com #14

LAB I.D.
NUMBER

DATE

TIME

MATRIX

COMP

GRAB

 Eddy Co NM
 SAMPLE IDENTIFICATION

NUMBER OF CONTAINERS

FILTERED (Y/N)

HCL

HNO3

ICE

NONE

PRESERVATIVE
METHOD

BTEX 8021B

TPH 8015 MOD. TX1005 (Ext. to C35)

PAH 8270

RCHA Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Volatiles

TCLP Semi Volatiles

RCI

GC/MS Vol. 8240/8260/824

GC/MS Semi. Vol. 8270/625

PCB's 8080/608

Pest. 808/608

Chloride

Gamma Spec.

Alpha Beta (Air)

PLM (Asbestos)

Major Anions/Cations, pH, TDS

318048

1/8

S

R

Back Ground Trench 1

0-1'

1

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:

1/8/13

Time:

1655

RECEIVED BY: (Signature)

Date:

1/8/13

Time:

1655

SAMPLED BY: (Print & Initial)

TF

Date:

1-8-13

RELINQUISHED BY: (Signature)

Date:

Time:

RECEIVED BY: (Signature)

Date:

Time:

SAMPLE SHIPPED BY: (Circle)

FEDEX

BUS

AIRBILL #:

RELINQUISHED BY: (Signature)

Date:

Time:

RECEIVED BY: (Signature)

Date:

Time:

TETRA TECH CONTACT PERSON:

Ike

Results by:

RUSH Charges

Authorized:

Yes

No

RECEIVING LABORATORY:

ADDRESS:

CITY: Midland

STATE: TX

ZIP:

CONTACT:

PHONE:

RECEIVED BY: (Signature)

DATE:

TIME:

SAMPLE CONDITION WHEN RECEIVED:

h.2 not in use

REMARKS:

Rush (Monday-?)

Midland all

Please fill out all copies - Laboratory retains Yellow copy - Return Original 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	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

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				TPH DRO - NEW	TPH GRO
	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 ...

¹Dilution due to hydrocarbons.

²Dilution 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 Tavaréz
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				TPH DRO - NEW	TPH GRO
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	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 Tavaréz
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

Sample - Field Code	BTEX				TPH DRO - NEW	TPH GRO
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
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



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Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Ike Tavaraz
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.

This report consists of a total of 32 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Michael Abel

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

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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.

Report Date: April 15, 2013
114-6401534

Work Order: 13040902
COG/Way South State Com. #1H TB

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Analytical Report

Sample: 325442 - AH-1 @ AH-2 0-1'

Laboratory: Midland
Analysis: BTEX
QC Batch: 100355
Prep Batch: 85036

Analytical Method: S 8021B
Date Analyzed: 2013-04-10
Sample Preparation: 2013-04-09

Prep Method: S 5035
Analyzed By: AH
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	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)
QC Batch: 100411
Prep Batch: 85093

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-04-11
Sample Preparation: 2013-04-10

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			2450	mg/Kg	10	4.00

Sample: 325442 - AH-1 @ AH-2 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 100387
Prep Batch: 85075

Analytical Method: S 8015 D
Date Analyzed: 2013-04-11
Sample Preparation: 2013-04-10

Prep Method: N/A
Analyzed By: CW
Prepared By: CW

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	B	1	160	mg/Kg	1	50.0

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COG/Way South State Com. #1H TB

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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	RL Result	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	RL Result	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	RL Result	Units	Dilution	RL
DRO	u	1	<50.0	mg/Kg	1	50.0

Report Date: April 15, 2013
114-6401534

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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	RL Result	Units	Dilution	RL
GRO	B, Qs	1	4.80	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.00	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	RL Result	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 ...

Report Date: April 15, 2013
114-6401534

Work Order: 13040902
COG/Way South State Com. #1H TB

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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

QC Batch: 100355

Prep Batch: 85036

Analytical Method: S 8021B

Date Analyzed: 2013-04-10

Sample Preparation: 2013-04-09

Prep Method: S 5035

Analyzed By: AH

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)

QC Batch: 100411

Prep Batch: 85093

Analytical Method: SM 4500-Cl B

Date Analyzed: 2013-04-11

Sample Preparation: 2013-04-10

Prep Method: N/A

Analyzed By: AR

Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			3220	mg/Kg	10	4.00

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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	RL Result	Units	Dilution	RL
DRO			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	RL Result	Units	Dilution	RL
GRO	qs		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	RL Result	Units	Dilution	RL
Chloride			2010	mg/Kg	10	4.00

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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	RL Result	Units	Dilution	RL
DRO	3b	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	RL Result	Units	Dilution	RL
GRO	B, Qr, Qs	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	RL Result	Units	Dilution	RL
Chloride			2320	mg/Kg	10	4.00

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Sample: 325449 - AH-2 @ AH-3 3-3.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-04-11	Analyzed By:	AR
QC Batch:	100411	Sample Preparation:	2013-04-10	Prepared By:	AR
Prep Batch:	85093				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			1780	mg/Kg	10	4.00

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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

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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
Prep Batch: 85074

Date Analyzed: 2013-04-11
QC Preparation: 2013-04-11

Analyzed By: AH
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
Prep Batch: 85075

Date Analyzed: 2013-04-11
QC Preparation: 2013-04-10

Analyzed By: CW
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

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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

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Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 100353
Prep Batch: 85031

Date Analyzed: 2013-04-10
QC Preparation: 2013-04-09

Analyzed By: CW
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
Prep Batch: 85036

Date Analyzed: 2013-04-10
QC Preparation: 2013-04-10

Analyzed By: AH
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.

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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
Prep Batch: 85039

Date Analyzed: 2013-04-10
QC Preparation: 2013-04-10

Analyzed By: AH
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
Prep Batch: 85074

Date Analyzed: 2013-04-11
QC Preparation: 2013-04-11

Analyzed By: AH
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.

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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
Prep Batch: 85075

Date Analyzed: 2013-04-11
QC Preparation: 2013-04-10

Analyzed By: CW
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
Prep Batch: 85093

Date Analyzed: 2013-04-11
QC Preparation: 2013-04-10

Analyzed By: AR
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.

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Laboratory Control Spike (LCS-1)

QC Batch: 100426
Prep Batch: 85101

Date Analyzed: 2013-04-12
QC Preparation: 2013-04-12

Analyzed By: AH
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
Prep Batch: 85125

Date Analyzed: 2013-04-15
QC Preparation: 2013-04-14

Analyzed By: CW
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

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Matrix Spike (MS-1) Spiked Sample: 325446

QC Batch: 100353
Prep Batch: 85031

Date Analyzed: 2013-04-10
QC Preparation: 2013-04-09

Analyzed By: CW
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
Prep Batch: 85036

Date Analyzed: 2013-04-10
QC Preparation: 2013-04-10

Analyzed By: AH
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

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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
Prep Batch: 85039

Date Analyzed: 2013-04-10
QC Preparation: 2013-04-10

Analyzed By: AH
Prepared By: AH

Param			F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	Q*	Q*		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				MSD		Dil.	Spike	Matrix	Rec.		RPD	
	F	C		Result	Units		Amount	Result	Rec.	Limit	RPD	Limit
GRO	Q _s	Q _s	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
Prep Batch: 85074

Date Analyzed: 2013-04-11
QC Preparation: 2013-04-11

Analyzed By: AH
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			MSD		Dil.	Spike	Matrix	Rec.		RPD		
	F	C	Result	Units		Amount	Result	Rec.	Limit			
GRO	Q _r , Q _s	Q _r , Q _s	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.

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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
Prep Batch: 85075

Date Analyzed: 2013-04-11
QC Preparation: 2013-04-10

Analyzed By: CW
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	132	141	mg/Kg	1	100	132	141	70 - 130

Matrix Spike (MS-1) Spiked Sample: 325451

QC Batch: 100411
Prep Batch: 85093

Date Analyzed: 2013-04-11
QC Preparation: 2013-04-10

Analyzed By: AR
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.

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Matrix Spike (MS-1) Spiked Sample: 325467

QC Batch: 100426
Prep Batch: 85101

Date Analyzed: 2013-04-12
QC Preparation: 2013-04-12

Analyzed By: AH
Prepared By: AH

Param			F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	Qs	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				MSD	Units	Dil.	Spike	Matrix	Rec.		RPD	
	F	C	Result	Amount			Result	Rec.	Limit	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
Prep Batch: 85125

Date Analyzed: 2013-04-15
QC Preparation: 2013-04-14

Analyzed By: CW
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

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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		,	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		,	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		,	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		,	mg/Kg	250	266	106	80 - 120	2013-04-10

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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

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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

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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

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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			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			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

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Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		,	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		,	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		,	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		,	mg/Kg	250	247	99	80 - 120	2013-04-15

Standard (CCV-4)

QC Batch: 100462

Date Analyzed: 2013-04-15

Analyzed By: CW

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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

	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 than 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

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

