

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company COG Operating LLC	Contact Pat Ellis
Address 550 W. Texas, Suite 1300 Midland, Texas 79701	Telephone No. (432) 685-4332
Facility Name GC FEDERAL #10	Facility Type Flowline

Surface Owner: Federal	Mineral Owner	Lease No. API#30-025-38993
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LOCATION OF RELEASE

Unit Letter J	Section 19	Township 17S	Range 32E	Feet from the 1615	North/South Line South	Feet from the 1525	East/West Line East	County Lea
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Latitude 32 49.027 Longitude 103 48.133

NATURE OF RELEASE

Type of Release: Produced Fluids	Volume of Release 70 bbls	Volume Recovered 50 bbls
Source of Release Flowline	Date and Hour of Occurrence 05/19/2010	Date and Hour of Discovery 05/19/2010 4:00p.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Larry Johnson - OCD Geoffrey Leking - OCD	
By Whom? Josh Russo	Date and Hour 05/20/2010 5:23p.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*

N/A

Describe Cause of Problem and Remedial Action Taken.*

A 1/4" nipple broke on the flowline. The nipple/flowline has been repaired and put back into service.

Describe Area Affected and Cleanup Action Taken.*

Tetra Tech inspected site and collected samples to define spills extent. Soil that exceeded RRAL was removed and hauled away for proper disposal. Site was then brought up to surface grade with clean backfill material. Tetra Tech prepared closure report and submitted to NMOCD for review.

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

Signature: 		OIL CONSERVATION DIVISION	
Printed Name: Patrick L. Ellis		Approved by District Supervisor:	
Title: Environmental and Safety Supervisor		Approval Date:	Expiration Date:
E-mail Address: pellis@conchoresources.com		Conditions of Approval:	
Date: Phone: (432) 686-3023		Attached ☐	

* Attach Additional Sheets If Necessary

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State of New Mexico
Energy Minerals and Natural Resources

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

PLWJ101442768

2548

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Revised October 10, 2003

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with Rule 116 on back
side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	COG OPERATING LLC	Contact	Pat Ellis
Address	550 W. Texas, Suite 100, Midland, TX 79701	Telephone No.	432-230-0077
Facility Name	GC FEDERAL #10	Facility Type	Flowline
Surface Owner	Federal	Mineral Owner	
		Lease No. API# 30-025-38993	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	19	17S	32E	1615	South	1525	East	Lea

Latitude 32 49.027 Longitude 103 48.133

NATURE OF RELEASE

Type of Release	Produced Fluids	Volume of Release	70bbls	Volume Recovered	50bbls
Source of Release	Flowline	Date and Hour of Occurrence	05/19/2010	Date and Hour of Discovery	05/19/2010 4:00 p.m.
Was Immediate Notice Given?	☒ Yes ☐ No ☐ Not Required	If YES, To Whom?	Larry Johnson - OCD Geoffrey Leking - OCD		
By Whom?	Josh Russo	Date and Hour	05/20/2010	5:23 P.M.	
Was a Watercourse Reached?	☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.*

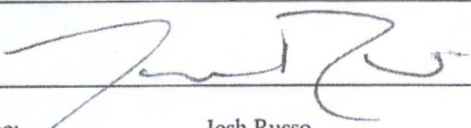
Describe Cause of Problem and Remedial Action Taken.*

A 1/4" nipple broke on the flowline. The nipple / flowline has been repaired and put back into service.

Describe Area Affected and Cleanup Action Taken.*

70bbls of produced fluids was initially released and we were able to recover 50bbls of produced fluids by a vacuum truck. The release flowed of the south end of the pad into the pasture covering an area of 15'x15'. It also flowed into the pasture southwest off the pad 10'x20'. The estimated chloride content of any water that is involved in this release would be 113,000 mg/l. The estimated oil gravity of any oil involved in this release would be 35.6. 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 BLM / 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: 05/21/2010 Phone: 432-212-2399			

* Attach Additional Sheets If Necessary

SITE INFORMATION

Report Type: Closure Report (1 RP #2540)

General Site Information:

Site:	GC Federal #10	
Company:	COG Operating LLC	
Section, Township and Range	Unit J - Section 19 - T17S - R32E	
Lease Number:	API-30-025-38993	
County:	Lea County	
GPS:	32.81721° N	103.80233° W
Surface Owner:	Federal	
Mineral Owner:		
Directions:	From intersection of Hwy 82 and CR-126, 4.2 mi west on Hwy 82, left CR-224 2.0 mi, right 0.2 mi, right 0.1 mi to location	

Release Data:

Date Released:	5/19/2010
Type Release:	Produced Water
Source of Contamination:	1/4" Nipple on flowline broke
Fluid Released:	70 bbls
Fluids Recovered:	50 bbls

Official Communication:

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

Ranking Criteria

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

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

RECEIVED
FEB 11 2011
HOBBSOCD



TETRA TECH

RECEIVED
FEB 11 2011
HOBBSUCD

February 3, 2011

Mr. Geoffrey Leking
Environmental Engineer Specialist
Oil Conservation Division, District 1
1625 North French Drive
Hobbs, New Mexico 88240

**Re: Closure Report for the COG Operating LLC., GC Federal #10
Flow Line, Unit J, Section 19, Township 17 South, Range 32
East, Lea County, New Mexico. (1 RP #2540)**

Mr. Leking:

Tetra Tech, Inc. (Tetra Tech) was contacted by COG Operating LLC. (COG) to assess a spill from the GC Federal #10 Flow Line, Unit J, Section 19, Township 17 South, Range 32 East, Lea County, New Mexico (Site). The spill site coordinates are N 32.81721°, W 103.80233°. The site location is shown on Figures 1 and 2.

Background

According to the State of New Mexico C-141 Initial Report, the leak was discovered on May 19, 2010, and released approximately seventy (70) barrels of produced water due to a broken ¼" nipple on a flow line. To alleviate the problem, COG personnel repaired the nipple and flow line. Fifty (50) barrels of standing fluids were recovered. The majority of the spill was contained on the well pad. Two smaller areas of the pasture were impacted, one south of the source measuring approximately 40' x 15' and the second west of the source measuring approximately 20' x 60'. The initial C-141 form is enclosed in Appendix C.

Groundwater

The United States Geological Survey (USGS) Well Reports did not list any wells in Section 19. To establish depth to groundwater, Tetra Tech previously installed a temporary monitor well (TMW) in Section 30 on July 14, 2009, to a depth of 180' bgs and did not encounter groundwater. According to the NMOCD groundwater map, the average depth to

Tetra Tech

1910 North Big Spring, Midland, TX 79705

Tel 432.682.4559

Fax 432.682.3946

www.tetrattech.com



groundwater in this area is greater than 200' below surface. The Water Well Data is shown in Appendix A.

Regulatory

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

Soil Assessment and Analytical Results

On May 25, 2010, Tetra Tech personnel inspected and sampled the spill area. A total of six (6) auger holes (AH-1 through AH-6) were installed using a stainless steel hand auger to assess the impacted soils. Select samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B, and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix B. The results of the sampling are summarized in Table 1. The auger hole locations are shown on Figure 3.

Referring to Table 1, AH-1 showed a TPH concentration of 8,430 mg/kg and a total BTEX of 113.25 mg/kg, exceeding the RRAL. AH-5 only exceeded the RRAL for total BTEX at 0-1' of 55.9 mg/kg. The deeper samples at 1-1.5' declined below the RRAL for both auger holes.

Auger hole (AH-3) did not show a chloride impact to the area. Auger holes (AH-2, AH-4 and AH-6) showed a shallow chloride impact at 0-1', which decline at 1.0' below surface to <200 mg/kg, <200 mg/kg and 309 mg/kg, respectively. Auger hole (AH-1) declined below reporting limit at 3.0' below surface. The deepest chloride impact was encountered at AH-5, with a chloride concentration declining to 241 mg/kg at 7.0' below surface.



Remediation and Closure Activities

On January 10, 2011, Tetra Tech personnel supervised the removal of impacted material as discussed in the work plan. The areas of AH-2, AH-4, and AH-6 were excavated to a depth of 0-1' bgs and 3.0' in the area of AH-1. In addition, the area of AH-5 was excavated to a depth of approximately 7.0' bgs. Once excavated to the appropriate depths, Tetra Tech collected confirmation samples from the site. The confirmation samples are shown in Table 2 and Figure 4. Approximately 450 cubic yards of impacted soil were transported offsite for disposal at Controlled Recovery, Inc. of Hobbs, New Mexico. Based on the results, the excavations have been backfilled with clean material to surface grade.

Based on the results, COG requests closure of the site. The C-141 (Final) is included in Appendix C. 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 Tavaréz
Project Manager

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

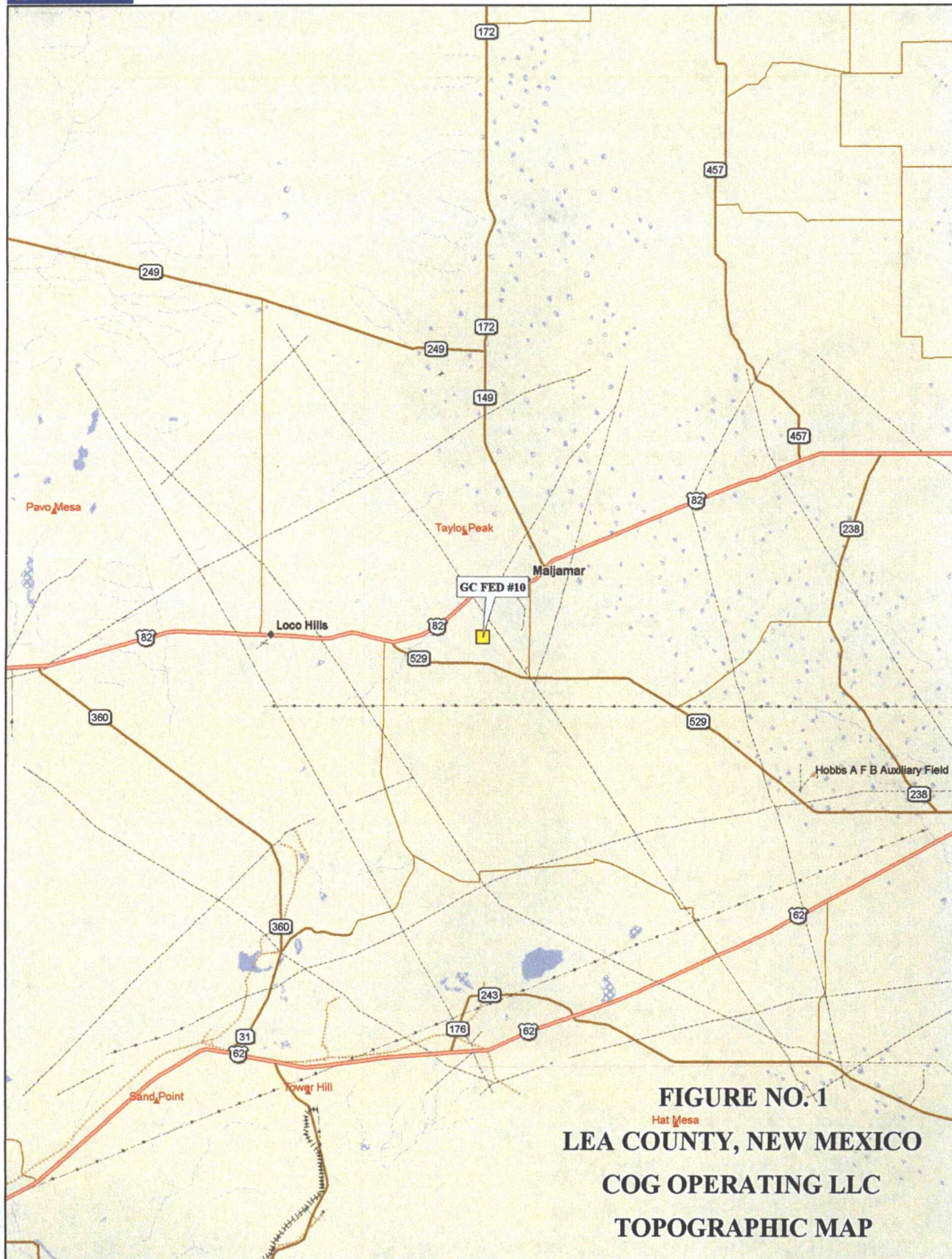


FIGURE NO. 1
LEA COUNTY, NEW MEXICO
COG OPERATING LLC
TOPOGRAPHIC MAP

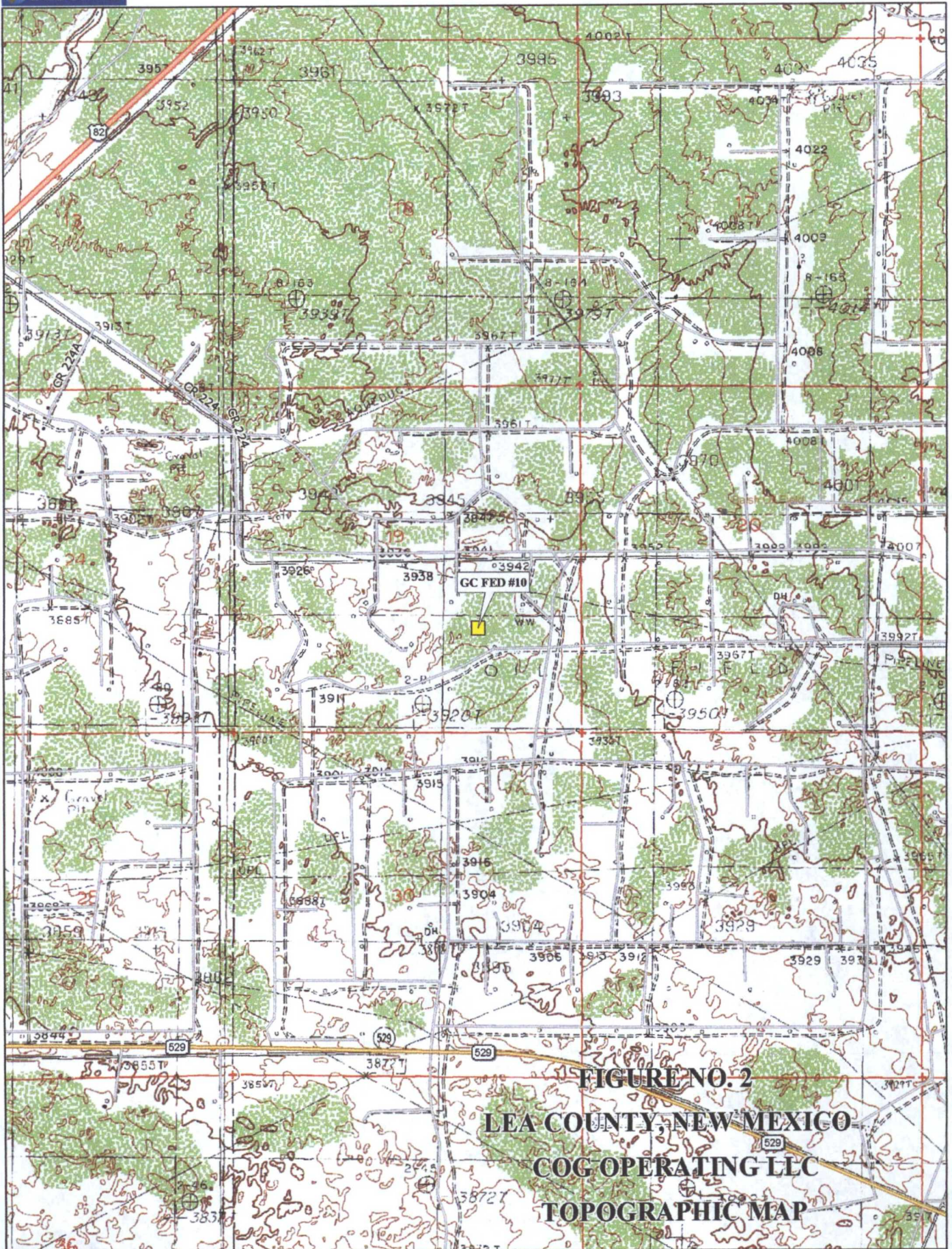


FIGURE NO. 2

LEA COUNTY, NEW MEXICO

COG OPERATING LLC

TOPOGRAPHIC MAP

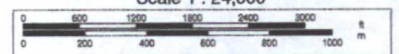
Data use subject to license.

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Scale 1 : 24,000



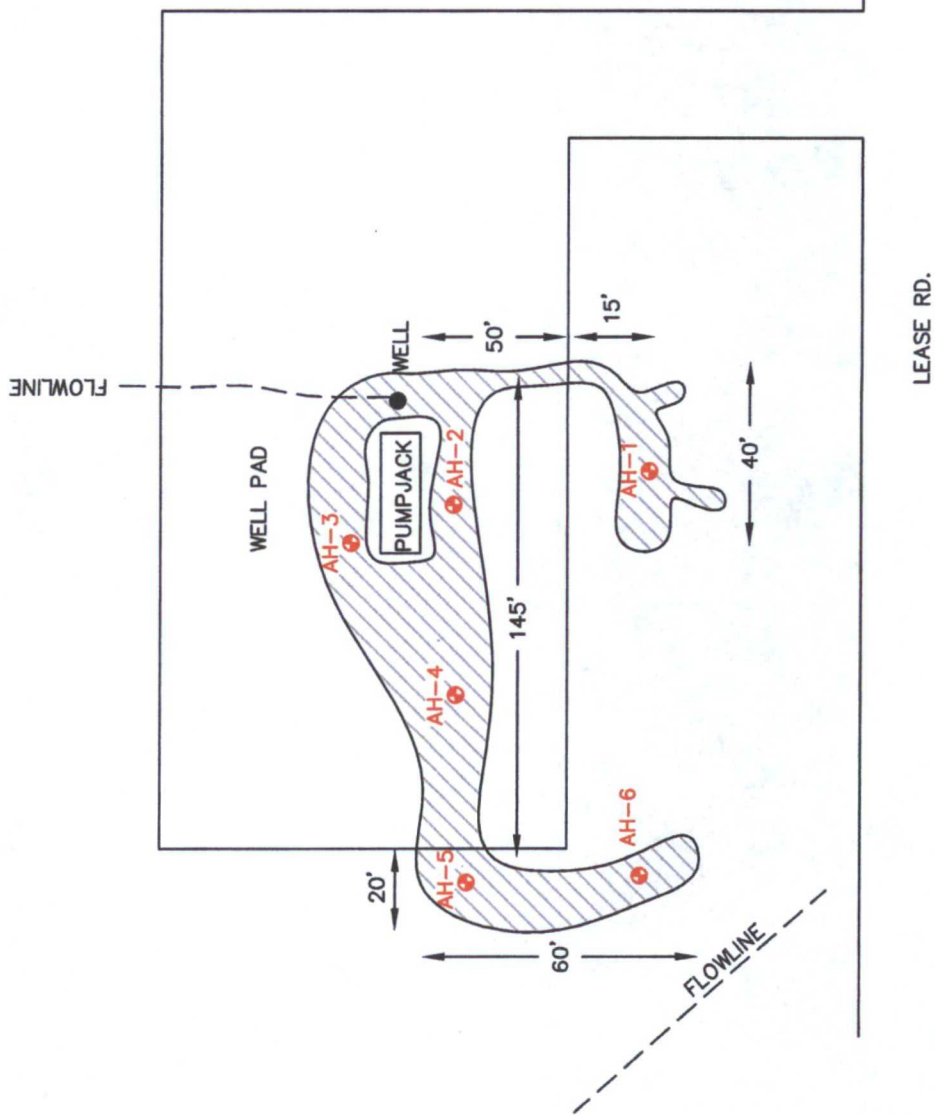


FIGURE NO. 3

LEA COUNTY, NEW MEXICO

COG OPERATING LLC

GC FED #10

TETRA TECH, INC.
MIDLAND, TEXAS

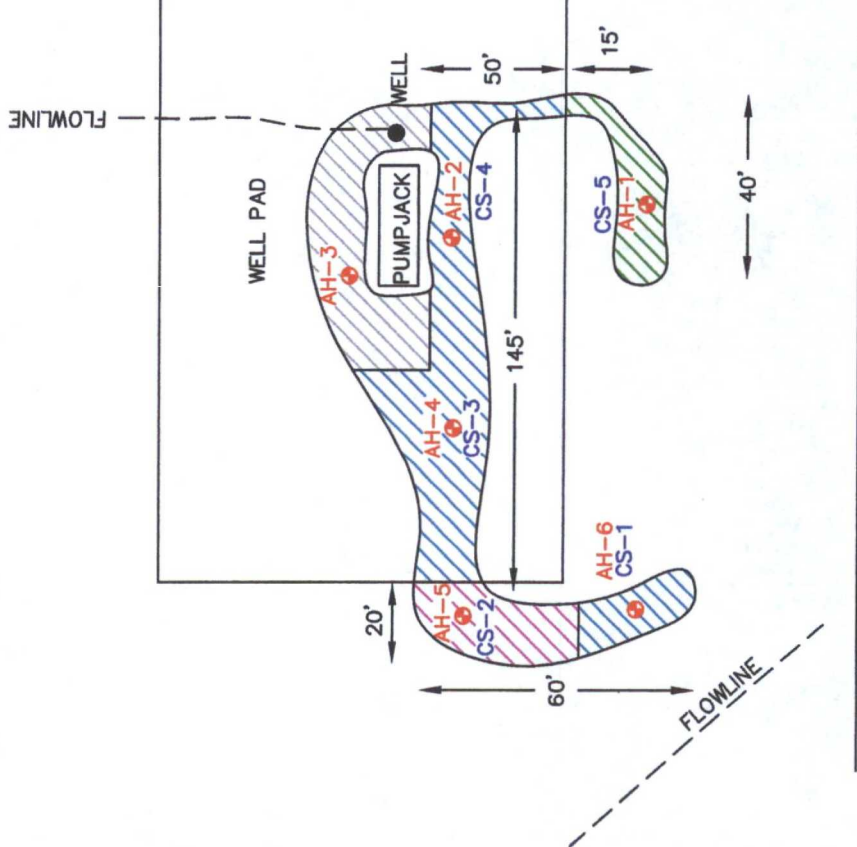
DATE:
6/25/10

DRAWN BY:
JJ

FILE:
MIDLAND\4400027
GC FED #10

SPILL AREA
AUGER HOLE SAMPLE LOCATIONS

NOT TO SCALE



NOT TO SCALE

FIGURE NO. 4

LEA COUNTY, NEW MEXICO

COG OPERATING LLC

GC FED #10

TETRA TECH, INC.
MIDLAND, TEXAS

DATE: 6/25/10

DWN. BY:

FILE:
t:\009\6400327
DC FED #10

-  SPILL AREA
 EXCAVATION DEPTHS (1.0' DEEP)
 EXCAVATION DEPTHS (3.0' DEEP)
 EXCAVATION DEPTHS (7.0' DEEP)
 AUGER HOLE SAMPLE LOCATIONS
 CONFIRMATION SAMPLES

Table 1

COG Operating LLC.

GC Federal #10

LEA COUNTY, NEW MEXICO

Sample ID	Sample Date	Sample Depth (ft)	Depth (BEB)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylene (mg/kg)	BTEX Total	Chloride (mg/kg)
				In-Situ	Removed	DRO	GRO	Total						
AH-1	5/25/2010	0-1'			X	5,620	2,810	8,430	1.45	22	40.1	49.7	113.25	4,470
		1-1.5'			X	<50.0	<1.00	<50.0	<0.0200	<0.0200	<0.0200	0.0573	0.05	9,540
		2-2.5'			X	-	-	-	-	-	-	-	-	9,880
		3-3.5'		X		-	-	-	-	-	-	-	-	<200
		4-4.5'		X		-	-	-	-	-	-	-	-	<200
		5-5.5'		X		-	-	-	-	-	-	-	-	<200
AH-2		0-1'			X	110	30.9	140.9	<0.0200	<0.0200	0.0626	0.126	0.18	1,050
		1-1.5'		X		-	-	-	-	-	-	-	-	<200
		2-2.5'		X		-	-	-	-	-	-	-	-	<200
		3-3.5'		X		-	-	-	-	-	-	-	-	<200
AH-3		0-1'		X		<50.0	<1.00	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.02	<200
		1-1.5'		X		<50.0	<1.00	<50.0	-	-	-	-	-	<200
		2-2.5'		X		<50.0	<1.00	<50.0	-	-	-	-	-	<200
		3-3.5'		X		<50.0	<1.00	<50.0	-	-	-	-	-	515
		4-4.5'		X		<50.0	<1.00	<50.0	-	-	-	-	-	<200
		5-5.5'		X		<50.0	<1.00	<50.0	-	-	-	-	-	442
AH-4		0-1'			X	<50.0	5.59	5.59	<0.0200	<0.0200	<0.0200	<0.0200	<0.02	3,880
		1-1.5'		X		<50.0	<1.00	<50.0	-	-	-	-	-	<200
		2-2.5'		X		<50.0	<1.00	<50.0	-	-	-	-	-	<200
		3-3.5'		X		<50.0	<1.00	<50.0	-	-	-	-	-	<200

Table 1

COG Operating LLC.
GC Federal #10
LEA CCOUNTY, NEW MEXICO

Sample ID	Sample Date	Sample Depth (ft)	Depth (BEB)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	BTEX Total	Chloride (mg/kg)
				In-Situ	Removed	DRO	GRO	Total						
AH-5		0-1'			X	<50.0	<1.00	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.02	285
		1-1.5'			X	-	-	-	-	-	-	-	-	1,030
		2-2.5'			X	-	-	-	-	-	-	-	-	10,000
		3-3.5'			X	-	-	-	-	-	-	-	-	12,100
		4-4.5'			X	-	-	-	-	-	-	-	-	14,500
		5-5.5'			X	-	-	-	-	-	-	-	-	10,400
		6-6.5'			X	-	-	-	-	-	-	-	-	10,600
		7-7.5'		X		-	-	-	-	-	-	-	-	241
		8-8.5'		X		-	-	-	-	-	-	-	-	334
		9-9.5'		X		-	-	-	-	-	-	-	-	<200
AH-6		0-1'			X	3,130	1,580	4,710	<2.00	14.9	16	25	55.9	2,490
		1-1.5'		X		-	-	-	<0.0200	<0.0200	0.0442	0.0936	0.13	309
		2-2.5'		X		-	-	-	-	-	-	-	-	<200
		3-3.5'		X		-	-	-	-	-	-	-	-	<200
		4-4.5'		X		-	-	-	-	-	-	-	-	<200

BEB Below Excavation Bottom

(-) Not Analyzed

Excavation Depths

Table 2
COG Operating LLC.
GC Federal #10
LEA CCOUNTY, NEW MEXICO

Confirmation Samples	Sample Date	Sample Depth (ft)	Soil Status		Chloride (mg/kg)
			In-Situ	Removed	
CS-1 Bottom Hole	1/12/11	1'	X		237
CS-2 Bottom Hole	1/12/11	7'	X		<200
CS-2 North Wall	1/12/11	n/a	X		360
CS-2 South Wal	1/12/11	n/a	X		<200
CS-3 East Wall	1/12/11	n/a	X		<200
CS-4 West Wall	1/12/11	n/a	X		<200
CS-3 Bottom Hole	1/12/11	1'	X		<200
CS-4 Bottom Hole	1/12/11	1'	X		<200
CS-5 Bottom Hole	1/12/11	3'	X		547
CS-5 North Wall	1/12/11	n/a	X		<200
CS-5 South Wall	1/12/11	n/a	X		<200
CS-5 East Wall	1/12/11	n/a	X		<200
CS-5 West Wall	1/12/11	n/a	X		318



View South – CS-1



View North – CS-2

COG Operating LLC
GC Federal #10
Lea County, New Mexico



TETRA TECH



View East – CS-3, CS-4



View South – CS-5



View West



View West

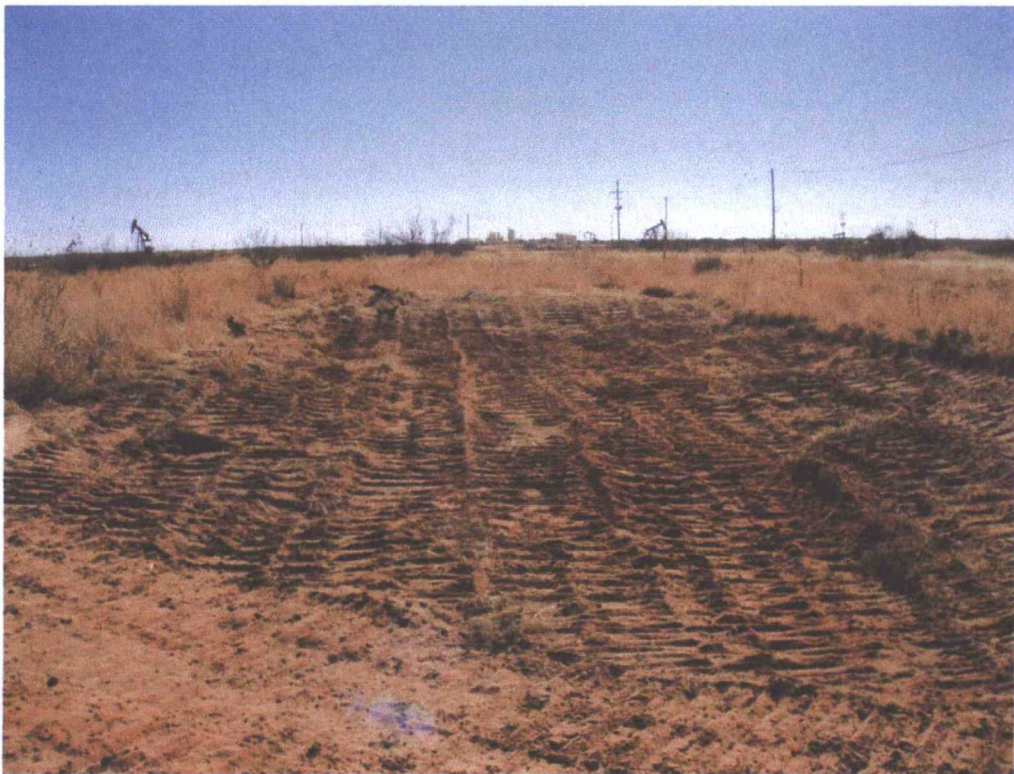
COG Operating LLC
GC Federal #10
Lea County, New Mexico



TETRA TECH



View West



View South

Water Well Data
Average Depth to Groundwater (ft)
COG - GC Federal #10
Lea County, New Mexico

16 South 31 East					
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36
290					

17 South 31 East					
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36
					271

18 South 31 East					
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36
					261

16 South 32 East					
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36
					260

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

18 South 32 East					
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36
					117

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

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

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

- New Mexico State Engineers Well Reports
- USGS Well Reports
- Geology and Groundwater Conditions in Southern Eddy, County, NM
- NMOCD - Groundwater Data
- Field water level
- New Mexico Water and Infrastructure Data System
- Tetra Tech Temporary well (TD 180' - Dry Well)

Summary Report

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

Report Date: June 25, 2010

Work Order: 10052815



Project Location: Lea County, NM
Project Name: COG/GC Federal #10
Project Number: 114-6400527

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
233149	AH-1 0-1'	soil	2010-05-25	00:00	2010-05-27
233150	AH-1 1-1.5'	soil	2010-05-25	00:00	2010-05-27
233155	AH-2 0-1'	soil	2010-05-25	00:00	2010-05-27
233159	AH-3 0-1'	soil	2010-05-25	00:00	2010-05-27
233165	AH-4 0-1'	soil	2010-05-25	00:00	2010-05-27
233169	AH-5 0-1'	soil	2010-05-25	00:00	2010-05-27
233179	AH-6 0-1'	soil	2010-05-25	00:00	2010-05-27
233180	AH-6 1-1.5'	soil	2010-05-25	00:00	2010-05-27

Sample - Field Code	BTEX			
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)
233149 - AH-1 0-1'	1.45	22.0	40.1	49.7
233150 - AH-1 1-1.5'	<0.0200	<0.0200	<0.0200	0.0573
233155 - AH-2 0-1'	<0.0200	<0.0200	0.0626	0.126
233159 - AH-3 0-1'	<0.0200	<0.0200	<0.0200	<0.0200
233165 - AH-4 0-1'	<0.0200	<0.0200	<0.0200	<0.0200
233169 - AH-5 0-1'	<0.0200	<0.0200	<0.0200	<0.0200
233179 - AH-6 0-1'	<2.00	14.9	16.0	25.0
233180 - AH-6 1-1.5'	<0.0200	<0.0200	0.0442	0.0936



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E-Mail: lab@traceanalysis.com

Certifications

WBENC: 237019

HUB: 1752439743100-86536
NCTRCA WFWB38444Y0909

DBE: VN 20657

NELAP Certifications

Lubbock: T104704219-08-TX
LELAP-02003
Kansas E-10317

El Paso: T104704221-08-TX
LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

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

Report Date: June 25, 2010

Work Order: 10052815



Project Location: Lea County, NM
Project Name: COG/GC Federal #10
Project Number: 114-6400527

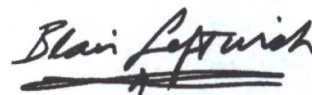
Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
233149	AH-1 0-1'	soil	2010-05-25	00:00	2010-05-27
233150	AH-1 1-1.5'	soil	2010-05-25	00:00	2010-05-27
233155	AH-2 0-1'	soil	2010-05-25	00:00	2010-05-27
233159	AH-3 0-1'	soil	2010-05-25	00:00	2010-05-27
233165	AH-4 0-1'	soil	2010-05-25	00:00	2010-05-27
233169	AH-5 0-1'	soil	2010-05-25	00:00	2010-05-27
233179	AH-6 0-1'	soil	2010-05-25	00:00	2010-05-27
233180	AH-6 1-1.5'	soil	2010-05-25	00:00	2010-05-27

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 16 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

Standard Flags

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

Case Narrative

Samples for project COG/GC Federal #10 were received by TraceAnalysis, Inc. on 2010-05-27 and assigned to work order 10052815. Samples for work order 10052815 were received intact at a temperature of 3.1 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	60437	2010-06-02 at 14:15	70573	2010-06-02 at 16:31
BTEX	S 8021B	60485	2010-06-03 at 10:30	70618	2010-06-03 at 12:09
BTEX	S 8021B	60589	2010-06-08 at 08:30	70735	2010-06-08 at 15:28
BTEX	S 8021B	60936	2010-06-24 at 09:00	71176	2010-06-24 at 10:53

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 10052815 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: 233149 - AH-1 0-1'

Laboratory: Midland
Analysis: BTEX
QC Batch: 70573
Prep Batch: 60437

Analytical Method: S 8021B
Date Analyzed: 2010-06-02
Sample Preparation: 2010-06-02

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

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		1.45	mg/Kg	20	0.0200
Toluene		22.0	mg/Kg	20	0.0200
Ethylbenzene		40.1	mg/Kg	20	0.0200
Xylene		49.7	mg/Kg	20	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		18.6	mg/Kg	20	20.0	93	52.8 - 137
4-Bromofluorobenzene (4-BFB)	¹	33.2	mg/Kg	20	20.0	166	38.4 - 157

Sample: 233150 - AH-1 1-1.5'

Laboratory: Midland
Analysis: BTEX
QC Batch: 70735
Prep Batch: 60589

Analytical Method: S 8021B
Date Analyzed: 2010-06-08
Sample Preparation: 2010-06-08

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

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0200	mg/Kg	1	0.0200
Toluene		<0.0200	mg/Kg	1	0.0200
Ethylbenzene		<0.0200	mg/Kg	1	0.0200
Xylene		0.0573	mg/Kg	1	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.45	mg/Kg	1	2.00	72	52.8 - 137
4-Bromofluorobenzene (4-BFB)		1.34	mg/Kg	1	2.00	67	38.4 - 157

Sample: 233155 - AH-2 0-1'

Laboratory: Midland
Analysis: BTEX
QC Batch: 70573
Prep Batch: 60437

Analytical Method: S 8021B
Date Analyzed: 2010-06-02
Sample Preparation: 2010-06-02

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

¹High surrogate recovery due to peak interference.

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Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0200	mg/Kg	1	0.0200
Toluene		<0.0200	mg/Kg	1	0.0200
Ethylbenzene		0.0626	mg/Kg	1	0.0200
Xylene		0.126	mg/Kg	1	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.93	mg/Kg	1	2.00	96	52.8 - 137
4-Bromofluorobenzene (4-BFB)		1.90	mg/Kg	1	2.00	95	38.4 - 157

Sample: 233159 - AH-3 0-1'

Laboratory: Midland
Analysis: BTEX
QC Batch: 70573
Prep Batch: 60437

Analytical Method: S 8021B
Date Analyzed: 2010-06-02
Sample Preparation: 2010-06-02

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

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.44	mg/Kg	1	2.00	72	52.8 - 137
4-Bromofluorobenzene (4-BFB)		1.33	mg/Kg	1	2.00	66	38.4 - 157

Sample: 233165 - AH-4 0-1'

Laboratory: Midland
Analysis: BTEX
QC Batch: 70573
Prep Batch: 60437

Analytical Method: S 8021B
Date Analyzed: 2010-06-02
Sample Preparation: 2010-06-02

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

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

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.02	mg/Kg	1	2.00	101	52.8 - 137
4-Bromofluorobenzene (4-BFB)		1.90	mg/Kg	1	2.00	95	38.4 - 157

Sample: 233169 - AH-5 0-1'

Laboratory: Midland
Analysis: BTEX
QC Batch: 70618
Prep Batch: 60485

Analytical Method: S 8021B
Date Analyzed: 2010-06-03
Sample Preparation: 2010-06-03

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

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.19	mg/Kg	1	2.00	60	52.8 - 137
4-Bromofluorobenzene (4-BFB)		1.14	mg/Kg	1	2.00	57	38.4 - 157

Sample: 233179 - AH-6 0-1'

Laboratory: Midland
Analysis: BTEX
QC Batch: 70618
Prep Batch: 60485

Analytical Method: S 8021B
Date Analyzed: 2010-06-03
Sample Preparation: 2010-06-03

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

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<2.00	mg/Kg	100	0.0200
Toluene		14.9	mg/Kg	100	0.0200
Ethylbenzene		16.0	mg/Kg	100	0.0200
Xylene		25.0	mg/Kg	100	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		93.9	mg/Kg	100	100	94	52.8 - 137
4-Bromofluorobenzene (4-BFB)		97.4	mg/Kg	100	100	97	38.4 - 157

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Sample: 233180 - AH-6 1-1.5'

Laboratory: Midland
Analysis: BTEX
QC Batch: 71176
Prep Batch: 60936

Analytical Method: S 8021B
Date Analyzed: 2010-06-24
Sample Preparation: 2010-06-24

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

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0200	mg/Kg	1	0.0200
Toluene		<0.0200	mg/Kg	1	0.0200
Ethylbenzene		0.0442	mg/Kg	1	0.0200
Xylene		0.0936	mg/Kg	1	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.15	mg/Kg	1	2.00	108	52.8 - 137
4-Bromofluorobenzene (4-BFB)		1.98	mg/Kg	1	2.00	99	38.4 - 157

Method Blank (1) QC Batch: 70573

QC Batch: 70573
Prep Batch: 60437

Date Analyzed: 2010-06-02
QC Preparation: 2010-06-02

Analyzed By: AG
Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.0150	mg/Kg	0.02
Toluene		<0.00950	mg/Kg	0.02
Ethylbenzene		<0.0106	mg/Kg	0.02
Xylene		<0.00930	mg/Kg	0.02

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.83	mg/Kg	1	2.00	92	66.6 - 122
4-Bromofluorobenzene (4-BFB)		1.50	mg/Kg	1	2.00	75	55.4 - 104

Method Blank (1) QC Batch: 70618

QC Batch: 70618
Prep Batch: 60485

Date Analyzed: 2010-06-03
QC Preparation: 2010-06-03

Analyzed By: AG
Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.0150	mg/Kg	0.02
Toluene		<0.00950	mg/Kg	0.02

continued ...

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method blank continued ...

Parameter	Flag	MDL Result	Units	RL
Ethylbenzene		<0.0106	mg/Kg	0.02
Xylene		<0.00930	mg/Kg	0.02

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.90	mg/Kg	1	2.00	95	66.6 - 122
4-Bromofluorobenzene (4-BFB)		1.74	mg/Kg	1	2.00	87	55.4 - 104

Method Blank (1) QC Batch: 70735

QC Batch: 70735
Prep Batch: 60589

Date Analyzed: 2010-06-08
QC Preparation: 2010-06-08

Analyzed By: AG
Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.0150	mg/Kg	0.02
Toluene		<0.00950	mg/Kg	0.02
Ethylbenzene		<0.0106	mg/Kg	0.02
Xylene		<0.00930	mg/Kg	0.02

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.64	mg/Kg	1	2.00	82	66.6 - 122
4-Bromofluorobenzene (4-BFB)		1.36	mg/Kg	1	2.00	68	55.4 - 104

Method Blank (1) QC Batch: 71176

QC Batch: 71176
Prep Batch: 60936

Date Analyzed: 2010-06-24
QC Preparation: 2010-06-24

Analyzed By: AG
Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.0150	mg/Kg	0.02
Toluene		<0.00950	mg/Kg	0.02
Ethylbenzene		<0.0106	mg/Kg	0.02
Xylene		<0.00930	mg/Kg	0.02

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.16	mg/Kg	1	2.00	108	66.6 - 122
4-Bromofluorobenzene (4-BFB)		1.75	mg/Kg	1	2.00	88	55.4 - 104

Laboratory Control Spike (LCS-1)

QC Batch: 70573
Prep Batch: 60437

Date Analyzed: 2010-06-02
QC Preparation: 2010-06-02

Analyzed By: AG
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.83	mg/Kg	1	2.00	<0.0150	92	81.9 - 108
Toluene	1.84	mg/Kg	1	2.00	<0.00950	92	81.9 - 107
Ethylbenzene	1.80	mg/Kg	1	2.00	<0.0106	90	78.4 - 107
Xylene	5.44	mg/Kg	1	6.00	<0.00930	91	79.1 - 107

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	1.90	mg/Kg	1	2.00	<0.0150	95	81.9 - 108	4	20
Toluene	1.91	mg/Kg	1	2.00	<0.00950	96	81.9 - 107	4	20
Ethylbenzene	1.87	mg/Kg	1	2.00	<0.0106	94	78.4 - 107	4	20
Xylene	5.64	mg/Kg	1	6.00	<0.00930	94	79.1 - 107	4	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.86	1.82	mg/Kg	1	2.00	93	91	70.2 - 114
4-Bromofluorobenzene (4-BFB)	1.76	1.76	mg/Kg	1	2.00	88	88	69.8 - 121

Laboratory Control Spike (LCS-1)

QC Batch: 70618
Prep Batch: 60485

Date Analyzed: 2010-06-03
QC Preparation: 2010-06-03

Analyzed By: AG
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.82	mg/Kg	1	2.00	<0.0150	91	81.9 - 108
Toluene	1.82	mg/Kg	1	2.00	<0.00950	91	81.9 - 107
Ethylbenzene	1.77	mg/Kg	1	2.00	<0.0106	88	78.4 - 107
Xylene	5.32	mg/Kg	1	6.00	<0.00930	89	79.1 - 107

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	1.82	mg/Kg	1	2.00	<0.0150	91	81.9 - 108	0	20
Toluene	1.83	mg/Kg	1	2.00	<0.00950	92	81.9 - 107	0	20
Ethylbenzene	1.78	mg/Kg	1	2.00	<0.0106	89	78.4 - 107	1	20
Xylene	5.34	mg/Kg	1	6.00	<0.00930	89	79.1 - 107	0	20

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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)	1.72	1.66	mg/Kg	1	2.00	86	83	70.2 - 114
4-Bromofluorobenzene (4-BFB)	1.69	1.60	mg/Kg	1	2.00	84	80	69.8 - 121

Laboratory Control Spike (LCS-1)

QC Batch: 70735
Prep Batch: 60589

Date Analyzed: 2010-06-08
QC Preparation: 2010-06-08

Analyzed By: AG
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.71	mg/Kg	1	2.00	<0.0150	86	81.9 - 108
Toluene	1.70	mg/Kg	1	2.00	<0.00950	85	81.9 - 107
Ethylbenzene	1.64	mg/Kg	1	2.00	<0.0106	82	78.4 - 107
Xylene	4.95	mg/Kg	1	6.00	<0.00930	82	79.1 - 107

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	1.89	mg/Kg	1	2.00	<0.0150	94	81.9 - 108	10	20
Toluene	1.88	mg/Kg	1	2.00	<0.00950	94	81.9 - 107	10	20
Ethylbenzene	1.83	mg/Kg	1	2.00	<0.0106	92	78.4 - 107	11	20
Xylene	5.53	mg/Kg	1	6.00	<0.00930	92	79.1 - 107	11	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)	1.47	1.72	mg/Kg	1	2.00	74	86	70.2 - 114
4-Bromofluorobenzene (4-BFB)	1.39	1.65	mg/Kg	1	2.00	70	82	69.8 - 121

Laboratory Control Spike (LCS-1)

QC Batch: 71176
Prep Batch: 60936

Date Analyzed: 2010-06-24
QC Preparation: 2010-06-24

Analyzed By: AG
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	2.00	mg/Kg	1	2.00	<0.0150	100	81.9 - 108
Toluene	1.98	mg/Kg	1	2.00	<0.00950	99	81.9 - 107
Ethylbenzene	1.92	mg/Kg	1	2.00	<0.0106	96	78.4 - 107
Xylene	5.72	mg/Kg	1	6.00	<0.00930	95	79.1 - 107

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

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Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	1.97	mg/Kg	1	2.00	<0.0150	98	81.9 - 108	2	20
Toluene	1.95	mg/Kg	1	2.00	<0.00950	98	81.9 - 107	2	20
Ethylbenzene	1.90	mg/Kg	1	2.00	<0.0106	95	78.4 - 107	1	20
Xylene	5.71	mg/Kg	1	6.00	<0.00930	95	79.1 - 107	0	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.22	2.18	mg/Kg	1	2.00	111	109	70.2 - 114
4-Bromofluorobenzene (4-BFB)	2.07	1.98	mg/Kg	1	2.00	104	99	69.8 - 121

Matrix Spike (MS-1) Spiked Sample: 233018

QC Batch: 70573
Prep Batch: 60437

Date Analyzed: 2010-06-02
QC Preparation: 2010-06-02

Analyzed By: AG
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.82	mg/Kg	1	2.00	<0.0150	91	80.5 - 112
Toluene	1.88	mg/Kg	1	2.00	<0.00950	94	82.4 - 113
Ethylbenzene	1.90	mg/Kg	1	2.00	<0.0106	95	83.9 - 114
Xylene	5.72	mg/Kg	1	6.00	<0.00930	95	84 - 114

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	1.86	mg/Kg	1	2.00	<0.0150	93	80.5 - 112	2	20
Toluene	1.92	mg/Kg	1	2.00	<0.00950	96	82.4 - 113	2	20
Ethylbenzene	1.94	mg/Kg	1	2.00	<0.0106	97	83.9 - 114	2	20
Xylene	5.82	mg/Kg	1	6.00	<0.00930	97	84 - 114	2	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.48	1.54	mg/Kg	1	2	74	77	41.3 - 117
4-Bromofluorobenzene (4-BFB)	1.44	1.48	mg/Kg	1	2	72	74	35.5 - 129

Matrix Spike (MS-1) Spiked Sample: 233463

QC Batch: 70618
Prep Batch: 60485

Date Analyzed: 2010-06-03
QC Preparation: 2010-06-03

Analyzed By: AG
Prepared By: AG

Report Date: June 25, 2010
114-6400527

Work Order: 10052815
COG/GC Federal #10

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Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.93	mg/Kg	1	2.00	<0.0150	96	80.5 - 112
Toluene	1.98	mg/Kg	1	2.00	<0.00950	99	82.4 - 113
Ethylbenzene	1.97	mg/Kg	1	2.00	<0.0106	98	83.9 - 114
Xylene	5.94	mg/Kg	1	6.00	<0.00930	99	84 - 114

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	1.82	mg/Kg	1	2.00	<0.0150	91	80.5 - 112	6	20
Toluene	1.86	mg/Kg	1	2.00	<0.00950	93	82.4 - 113	6	20
Ethylbenzene	1.86	mg/Kg	1	2.00	<0.0106	93	83.9 - 114	6	20
Xylene	5.60	mg/Kg	1	6.00	<0.00930	93	84 - 114	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)	1.78	1.42	mg/Kg	1	2	89	71	41.3 - 117
4-Bromofluorobenzene (4-BFB)	1.72	1.42	mg/Kg	1	2	86	71	35.5 - 129

Matrix Spike (MS-1) Spiked Sample: 233402

QC Batch: 70735
Prep Batch: 60589

Date Analyzed: 2010-06-08
QC Preparation: 2010-06-08

Analyzed By: AG
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.93	mg/Kg	1	2.00	<0.0150	96	80.5 - 112
Toluene	1.98	mg/Kg	1	2.00	<0.00950	99	82.4 - 113
Ethylbenzene	2.00	mg/Kg	1	2.00	<0.0106	100	83.9 - 114
Xylene	6.00	mg/Kg	1	6.00	0.0563	99	84 - 114

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	1.85	mg/Kg	1	2.00	<0.0150	92	80.5 - 112	4	20
Toluene	1.90	mg/Kg	1	2.00	<0.00950	95	82.4 - 113	4	20
Ethylbenzene	1.92	mg/Kg	1	2.00	<0.0106	96	83.9 - 114	4	20
Xylene	5.78	mg/Kg	1	6.00	0.0563	95	84 - 114	4	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.995	1.90	mg/Kg	1	2	50	95	41.3 - 117

continued ...

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114-6400527

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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)	0.956	1.82	mg/Kg	1	2	48	91	35.5 - 129

Matrix Spike (MS-1) Spiked Sample: 235527

QC Batch: 71176
Prep Batch: 60936

Date Analyzed: 2010-06-24
QC Preparation: 2010-06-24

Analyzed By: AG
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	2.07	mg/Kg	1	2.00	<0.0150	104	80.5 - 112
Toluene	2.08	mg/Kg	1	2.00	<0.00950	104	82.4 - 113
Ethylbenzene	2.06	mg/Kg	1	2.00	<0.0106	103	83.9 - 114
Xylene	6.22	mg/Kg	1	6.00	0.0675	102	84 - 114

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	1.88	mg/Kg	1	2.00	<0.0150	94	80.5 - 112	10	20
Toluene	1.91	mg/Kg	1	2.00	<0.00950	96	82.4 - 113	8	20
Ethylbenzene	1.89	mg/Kg	1	2.00	<0.0106	94	83.9 - 114	9	20
Xylene	5.70	mg/Kg	1	6.00	0.0675	94	84 - 114	9	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.65	2.00	mg/Kg	1	2	82	100	41.3 - 117
4-Bromofluorobenzene (4-BFB)	1.60	1.84	mg/Kg	1	2	80	92	35.5 - 129

Standard (CCV-2)

QC Batch: 70573

Date Analyzed: 2010-06-02

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0906	91	80 - 120	2010-06-02
Toluene		mg/Kg	0.100	0.0911	91	80 - 120	2010-06-02
Ethylbenzene		mg/Kg	0.100	0.0879	88	80 - 120	2010-06-02
Xylene		mg/Kg	0.300	0.264	88	80 - 120	2010-06-02

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114-6400527

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Standard (CCV-3)

QC Batch: 70573

Date Analyzed: 2010-06-02

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0919	92	80 - 120	2010-06-02
Toluene		mg/Kg	0.100	0.0921	92	80 - 120	2010-06-02
Ethylbenzene		mg/Kg	0.100	0.0886	89	80 - 120	2010-06-02
Xylene		mg/Kg	0.300	0.266	89	80 - 120	2010-06-02

Standard (CCV-1)

QC Batch: 70618

Date Analyzed: 2010-06-03

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0858	86	80 - 120	2010-06-03
Toluene		mg/Kg	0.100	0.0867	87	80 - 120	2010-06-03
Ethylbenzene		mg/Kg	0.100	0.0834	83	80 - 120	2010-06-03
Xylene		mg/Kg	0.300	0.250	83	80 - 120	2010-06-03

Standard (CCV-2)

QC Batch: 70618

Date Analyzed: 2010-06-03

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0891	89	80 - 120	2010-06-03
Toluene		mg/Kg	0.100	0.0896	90	80 - 120	2010-06-03
Ethylbenzene		mg/Kg	0.100	0.0866	87	80 - 120	2010-06-03
Xylene		mg/Kg	0.300	0.259	86	80 - 120	2010-06-03

Standard (CCV-3)

QC Batch: 70618

Date Analyzed: 2010-06-03

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0893	89	80 - 120	2010-06-03
Toluene		mg/Kg	0.100	0.0893	89	80 - 120	2010-06-03
Ethylbenzene		mg/Kg	0.100	0.0853	85	80 - 120	2010-06-03

continued ...

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standard continued ...

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Xylene		mg/Kg	0.300	0.255	85	80 - 120	2010-06-03

Standard (CCV-1)

QC Batch: 70735

Date Analyzed: 2010-06-08

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0888	89	80 - 120	2010-06-08
Toluene		mg/Kg	0.100	0.0883	88	80 - 120	2010-06-08
Ethylbenzene		mg/Kg	0.100	0.0851	85	80 - 120	2010-06-08
Xylene		mg/Kg	0.300	0.257	86	80 - 120	2010-06-08

Standard (CCV-2)

QC Batch: 70735

Date Analyzed: 2010-06-08

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0943	94	80 - 120	2010-06-08
Toluene		mg/Kg	0.100	0.0942	94	80 - 120	2010-06-08
Ethylbenzene		mg/Kg	0.100	0.0909	91	80 - 120	2010-06-08
Xylene		mg/Kg	0.300	0.272	91	80 - 120	2010-06-08

Standard (CCV-2)

QC Batch: 71176

Date Analyzed: 2010-06-24

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0981	98	80 - 120	2010-06-24
Toluene		mg/Kg	0.100	0.0967	97	80 - 120	2010-06-24
Ethylbenzene		mg/Kg	0.100	0.0918	92	80 - 120	2010-06-24
Xylene		mg/Kg	0.300	0.277	92	80 - 120	2010-06-24

Standard (CCV-3)

QC Batch: 71176

Date Analyzed: 2010-06-24

Analyzed By: AG

Report Date: June 25, 2010
114-6400527

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0972	97	80 - 120	2010-06-24
Toluene		mg/Kg	0.100	0.0950	95	80 - 120	2010-06-24
Ethylbenzene		mg/Kg	0.100	0.0890	89	80 - 120	2010-06-24
Xylene		mg/Kg	0.300	0.268	89	80 - 120	2010-06-24

W0# 10051815

Analysis Request of Chain of Custody Record



TETRA TECH

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

CLIENT NAME: COG		SITE MANAGER: Ive Tovar	
PROJECT NO.: 114-6400527	PROJECT NAME: COG	PRESERVATIVE METHOD: HCL HNO3 ICE NONE	
LAB I.D. NUMBER	DATE	TIME	SAMPLE IDENTIFICATION
233149	5/25	2010	Lea Co NM
150			0-1'
151			1-1.5'
152			2-2.5'
153			3-3.5'
154			4-4.5'
155			5-5.5'
156			0-1'
157			1-1.5'
158			2-2.5'
			3-3.5'

ANALYSIS REQUEST (Circle or Specify Method No.)		PAGE: 1 OF: 4
PAH 8270 RCRA Metals Ag As Ba Cd Cr Pb Hg Se TCLP Metals Ag As Ba Cd Vr Pd Hg Se TCLP Volatiles TCLP Semi Volatiles RCI GC/MS Vol. 8240/8260/824 GC/MS Semi. Vol. 8270/625 PCB's 8080/608 Pest. 808/608 Chloride Gamma Spec. Alpha Beta (Air) PLM (Asbestos) Major Anions/Cations, pH, TDS		Date: 5-25-10 Time: 16:05 SAMPLED BY: (Print & Initial) Rg IF SAMPLE SHIPPED BY: (Circle) FEDEX HAND DELIVERED UPS AIRBILL #: OTHER: Results by: IVE Tovar RUSH Charges Authorized: Yes No

RECEIVING LABORATORY: **Tracie**
 ADDRESS: **Midland** STATE: **Tx** ZIP: **79701**
 CITY: **Midland** PHONE: **682-4559**
 SAMPLE CONDITION WHEN RECEIVED: **7.1c**
 REMARKS: **1.1 TPH exceeds 5000 mg/kg - Return Original copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.**

W04 10051815

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 4

ANALYSIS REQUEST

(Circle or Specify Method No.)



TETRA TECH

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

CLIENT NAME: CDG		SITE MANAGER: Ike Tavaraz	
PROJECT NO.: 114-6400527		PROJECT NAME: CDG GC Federal #10	
LAB I.D. NUMBER	DATE	TIME	MATRIX
238159	5/25	2010	S
160			
161			
162			
163			
164			
165			
166			
167			
168			
REINQUISHED BY: (Signature) <i>[Signature]</i>		RECEIVED BY: (Signature) <i>[Signature]</i>	
REINQUISHED BY: (Signature) <i>[Signature]</i>		RECEIVED BY: (Signature) <i>[Signature]</i>	
REINQUISHED BY: (Signature) <i>[Signature]</i>		RECEIVED BY: (Signature) <i>[Signature]</i>	
RECEIVING LABORATORY: Trace		RECEIVED BY: (Signature) <i>[Signature]</i>	
ADDRESS:	CITY:	STATE:	ZIP:
	Midland	Tx	79701
CONTACT:	PHONE:	DATE:	TIME:
3.1. C. [Signature]		5-27-10	16:00
REMARKS: If TPH exceeds 5000 mg/kg then chain of custody sample			

NUMBER OF CONTAINERS
1

PRESERVATIVE METHOD
HCL
HNO3
ICE
NONE

BTEX 8021B	TPH 8015 MOD	TX1005	Ext to C35
PAH 8270			
RCRA Metals Ag As Ba Cd Cr Pb Hg Se			
TCLP Metals Ag As Ba Cd 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			

SAMPLED BY: (Print & Initial)
RK TF

Date: **5-15-10**

Time: _____

SAMPLE SHIPPED BY: (Circle)
FEDEX
BUS
UPS

OTHER: _____

TETRA TECH CONTACT PERSON:
Ike Tavaraz

Results by: _____

RUSH Charges Authorized:
Yes _____ No _____

Analysis Request of Chain of Custody Record

PAGE: 3 OF: 4

OF: 7

ANALYSIS REQUEST

(Circle or Specify Method No.)



TETRA TECH

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

CLIENT NAME:		SITE MANAGER:		PROJECT NAME:		PRESERVATIVE METHOD	
CDG		Ike Tavares		CDG GC Federal #10		HCL	
PROJECT NO.:		DATE		TIME		HNO3	
114-6400527		2010		5/25		ICE	
LAB I.D. NUMBER		DATE		TIME		NONE	
233169		5/25		5/25			
170	171	172	173	174	175	176	177
178	179	180	181	182	183	184	185
186	187	188	189	190	191	192	193
194	195	196	197	198	199	200	201
202	203	204	205	206	207	208	209
210	211	212	213	214	215	216	217
218	219	220	221	222	223	224	225
226	227	228	229	230	231	232	233
234	235	236	237	238	239	240	241
242	243	244	245	246	247	248	249
250	251	252	253	254	255	256	257
258	259	260	261	262	263	264	265
266	267	268	269	270	271	272	273
274	275	276	277	278	279	280	281
282	283	284	285	286	287	288	289
290	291	292	293	294	295	296	297
298	299	300	301	302	303	304	305
306	307	308	309	310	311	312	313
314	315	316	317	318	319	320	321
322	323	324	325	326	327	328	329
330	331	332	333	334	335	336	337
338	339	340	341	342	343	344	345
346	347	348	349	350	351	352	353
354	355	356	357	358	359	360	361
362	363	364	365	366	367	368	369
370	371	372	373	374	375	376	377
378	379	380	381	382	383	384	385
386	387	388	389	390	391	392	393
394	395	396	397	398	399	400	401
402	403	404	405	406	407	408	409
410	411	412	413	414	415	416	417
418	419	420	421	422	423	424	425
426	427	428	429	430	431	432	433
434	435	436	437	438	439	440	441
442	443	444	445	446	447	448	449
450	451	452	453	454	455	456	457
458	459	460	461	462	463	464	465
466	467	468	469	470	471	472	473
474	475	476	477	478	479	480	481
482	483	484	485	486	487	488	489
490	491	492	493	494	495	496	497
498	499	500	501	502	503	504	505
506	507	508	509	510	511	512	513
514	515	516	517	518	519	520	521
522	523	524	525	526	527	528	529
530	531	532	533	534	535	536	537
538	539	540	541	542	543	544	545
546	547	548	5				

REMARKS:

TPH exceeds 5,000 nT/km - down to 1000 nT/km

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: June 10, 2010

Work Order: 10052815



Project Location: Lea County, NM
Project Name: COG/GC Federal #10
Project Number: 114-6400527

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
233149	AH-1 0-1'	soil	2010-05-25	00:00	2010-05-27
233150	AH-1 1-1.5'	soil	2010-05-25	00:00	2010-05-27
233151	AH-1 2-2.5'	soil	2010-05-25	00:00	2010-05-27
233152	AH-1 3-3.5'	soil	2010-05-25	00:00	2010-05-27
233153	AH-1 4-4.5'	soil	2010-05-25	00:00	2010-05-27
233154	AH-1 5-5.5'	soil	2010-05-25	00:00	2010-05-27
233155	AH-2 0-1'	soil	2010-05-25	00:00	2010-05-27
233156	AH-2 1-1.5'	soil	2010-05-25	00:00	2010-05-27
233157	AH-2 2-2.5'	soil	2010-05-25	00:00	2010-05-27
233158	AH-2 3-3.5'	soil	2010-05-25	00:00	2010-05-27
233159	AH-3 0-1'	soil	2010-05-25	00:00	2010-05-27
233160	AH-3 1-1.5'	soil	2010-05-25	00:00	2010-05-27
233161	AH-3 2-2.5'	soil	2010-05-25	00:00	2010-05-27
233162	AH-3 3-3.5'	soil	2010-05-25	00:00	2010-05-27
233163	AH-3 4-4.5'	soil	2010-05-25	00:00	2010-05-27
233164	AH-3 5-5.5'	soil	2010-05-25	00:00	2010-05-27
233165	AH-4 0-1'	soil	2010-05-25	00:00	2010-05-27
233166	AH-4 1-1.5'	soil	2010-05-25	00:00	2010-05-27
233167	AH-4 2-2.5'	soil	2010-05-25	00:00	2010-05-27
233168	AH-4 3-3.5'	soil	2010-05-25	00:00	2010-05-27
233169	AH-5 0-1'	soil	2010-05-25	00:00	2010-05-27
233170	AH-5 1-1.5'	soil	2010-05-25	00:00	2010-05-27
233171	AH-5 2-2.5'	soil	2010-05-25	00:00	2010-05-27
233172	AH-5 3-3.5'	soil	2010-05-25	00:00	2010-05-27
233173	AH-5 4-4.5'	soil	2010-05-25	00:00	2010-05-27
233174	AH-5 5-5.5'	soil	2010-05-25	00:00	2010-05-27
233175	AH-5 6-6.5'	soil	2010-05-25	00:00	2010-05-27
233176	AH-5 7-7.5'	soil	2010-05-25	00:00	2010-05-27
233177	AH-5 8-8.5'	soil	2010-05-25	00:00	2010-05-27
233178	AH-5 9-9.5'	soil	2010-05-25	00:00	2010-05-27

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
233179	AH-6 0-1'	soil	2010-05-25	00:00	2010-05-27
233180	AH-6 1-1.5'	soil	2010-05-25	00:00	2010-05-27
233181	AH-6 2-2.5'	soil	2010-05-25	00:00	2010-05-27
233182	AH-6 3-3.5'	soil	2010-05-25	00:00	2010-05-27
233183	AH-6 4-4.5'	soil	2010-05-25	00:00	2010-05-27

Sample - Field Code	TPH DRO - NEW DRO (mg/Kg)	TPH GRO GRO (mg/Kg)
233149 - AH-1 0-1'	5620	2810
233150 - AH-1 1-1.5'	<50.0	<1.00
233155 - AH-2 0-1'	110	30.9
233159 - AH-3 0-1'	<50.0	<1.00
233160 - AH-3 1-1.5'	<50.0	<1.00
233161 - AH-3 2-2.5'	<50.0	<1.00
233162 - AH-3 3-3.5'	<50.0	<1.00
233163 - AH-3 4-4.5'	<50.0	<1.00
233164 - AH-3 5-5.5'	<50.0	<1.00
233165 - AH-4 0-1'	<50.0	5.59
233166 - AH-4 1-1.5'	<50.0	<1.00
233167 - AH-4 2-2.5'	<50.0	<1.00
233168 - AH-4 3-3.5'	<50.0	<1.00
233169 - AH-5 0-1'	<50.0	<1.00
233179 - AH-6 0-1'	3130	1580

Sample: 233149 - AH-1 0-1'

Param	Flag	Result	Units	RL
Chloride		4470	mg/Kg	4.00

Sample: 233150 - AH-1 1-1.5'

Param	Flag	Result	Units	RL
Chloride		9540	mg/Kg	4.00

Sample: 233151 - AH-1 2-2.5'

Param	Flag	Result	Units	RL
Chloride		9880	mg/Kg	4.00

Sample: 233152 - AH-1 3-3.5'

continued ...

sample 233152 continued ...

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

Sample: 233153 - AH-1 4-4.5'

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

Sample: 233154 - AH-1 5-5.5'

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

Sample: 233155 - AH-2 0-1'

Param	Flag	Result	Units	RL
Chloride		1050	mg/Kg	4.00

Sample: 233156 - AH-2 1-1.5'

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

Sample: 233157 - AH-2 2-2.5'

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

Sample: 233158 - AH-2 3-3.5'

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

Sample: 233159 - AH-3 0-1'

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

Sample: 233160 - AH-3 1-1.5'

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

Sample: 233161 - AH-3 2-2.5'

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

Sample: 233162 - AH-3 3-3.5'

Param	Flag	Result	Units	RL
Chloride		515	mg/Kg	4.00

Sample: 233163 - AH-3 4-4.5'

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

Sample: 233164 - AH-3 5-5.5'

Param	Flag	Result	Units	RL
Chloride		442	mg/Kg	4.00

Sample: 233165 - AH-4 0-1'

Param	Flag	Result	Units	RL
Chloride		3880	mg/Kg	4.00

Sample: 233166 - AH-4 1-1.5'

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

Sample: 233167 - AH-4 2-2.5'

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

Sample: 233168 - AH-4 3-3.5'

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

Sample: 233169 - AH-5 0-1'

Param	Flag	Result	Units	RL
Chloride		285	mg/Kg	4.00

Sample: 233170 - AH-5 1-1.5'

Param	Flag	Result	Units	RL
Chloride		1030	mg/Kg	4.00

Sample: 233171 - AH-5 2-2.5'

Param	Flag	Result	Units	RL
Chloride		10000	mg/Kg	4.00

Sample: 233172 - AH-5 3-3.5'

Param	Flag	Result	Units	RL
Chloride		12100	mg/Kg	4.00

Sample: 233173 - AH-5 4-4.5'

Param	Flag	Result	Units	RL
Chloride		14500	mg/Kg	4.00

Sample: 233174 - AH-5 5-5.5'

Param	Flag	Result	Units	RL
Chloride		10400	mg/Kg	4.00

Sample: 233175 - AH-5 6-6.5'

Param	Flag	Result	Units	RL
Chloride		10600	mg/Kg	4.00

Sample: 233176 - AH-5 7-7.5'

Param	Flag	Result	Units	RL
Chloride		241	mg/Kg	4.00

Sample: 233177 - AH-5 8-8.5'

Param	Flag	Result	Units	RL
Chloride		334	mg/Kg	4.00

Sample: 233178 - AH-5 9-9.5'

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

Sample: 233179 - AH-6 0-1'

Param	Flag	Result	Units	RL
Chloride		2490	mg/Kg	4.00

Sample: 233180 - AH-6 1-1.5'

Param	Flag	Result	Units	RL
Chloride		309	mg/Kg	4.00

Sample: 233181 - AH-6 2-2.5'

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

Sample: 233182 - AH-6 3-3.5'

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

Sample: 233183 - AH-6 4-4.5'

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



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6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260
E-Mail: lab@traceanalysis.com

Certifications

WBENC: 237019

HUB: 1752439743100-86536
NCTRCA WFWB38444Y0909

DBE: VN 20657

NELAP Certifications

Lubbock: T104704219-08-TX
LELAP-02003
Kansas E-10317

El Paso: T104704221-08-TX
LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

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

Report Date: June 10, 2010

Work Order: 10052815



Project Location: Lea County, NM
Project Name: COG/GC Federal #10
Project Number: 114-6400527

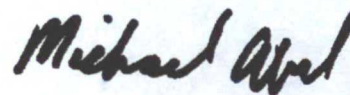
Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
233149	AH-1 0-1'	soil	2010-05-25	00:00	2010-05-27
233150	AH-1 1-1.5'	soil	2010-05-25	00:00	2010-05-27
233151	AH-1 2-2.5'	soil	2010-05-25	00:00	2010-05-27
233152	AH-1 3-3.5'	soil	2010-05-25	00:00	2010-05-27
233153	AH-1 4-4.5'	soil	2010-05-25	00:00	2010-05-27
233154	AH-1 5-5.5'	soil	2010-05-25	00:00	2010-05-27
233155	AH-2 0-1'	soil	2010-05-25	00:00	2010-05-27
233156	AH-2 1-1.5'	soil	2010-05-25	00:00	2010-05-27
233157	AH-2 2-2.5'	soil	2010-05-25	00:00	2010-05-27
233158	AH-2 3-3.5'	soil	2010-05-25	00:00	2010-05-27

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
233159	AH-3 0-1'	soil	2010-05-25	00:00	2010-05-27
233160	AH-3 1-1.5'	soil	2010-05-25	00:00	2010-05-27
233161	AH-3 2-2.5'	soil	2010-05-25	00:00	2010-05-27
233162	AH-3 3-3.5'	soil	2010-05-25	00:00	2010-05-27
233163	AH-3 4-4.5'	soil	2010-05-25	00:00	2010-05-27
233164	AH-3 5-5.5'	soil	2010-05-25	00:00	2010-05-27
233165	AH-4 0-1'	soil	2010-05-25	00:00	2010-05-27
233166	AH-4 1-1.5'	soil	2010-05-25	00:00	2010-05-27
233167	AH-4 2-2.5'	soil	2010-05-25	00:00	2010-05-27
233168	AH-4 3-3.5'	soil	2010-05-25	00:00	2010-05-27
233169	AH-5 0-1'	soil	2010-05-25	00:00	2010-05-27
233170	AH-5 1-1.5'	soil	2010-05-25	00:00	2010-05-27
233171	AH-5 2-2.5'	soil	2010-05-25	00:00	2010-05-27
233172	AH-5 3-3.5'	soil	2010-05-25	00:00	2010-05-27
233173	AH-5 4-4.5'	soil	2010-05-25	00:00	2010-05-27
233174	AH-5 5-5.5'	soil	2010-05-25	00:00	2010-05-27
233175	AH-5 6-6.5'	soil	2010-05-25	00:00	2010-05-27
233176	AH-5 7-7.5'	soil	2010-05-25	00:00	2010-05-27
233177	AH-5 8-8.5'	soil	2010-05-25	00:00	2010-05-27
233178	AH-5 9-9.5'	soil	2010-05-25	00:00	2010-05-27
233179	AH-6 0-1'	soil	2010-05-25	00:00	2010-05-27
233180	AH-6 1-1.5'	soil	2010-05-25	00:00	2010-05-27
233181	AH-6 2-2.5'	soil	2010-05-25	00:00	2010-05-27
233182	AH-6 3-3.5'	soil	2010-05-25	00:00	2010-05-27
233183	AH-6 4-4.5'	soil	2010-05-25	00:00	2010-05-27

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 39 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

Standard Flags

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

Case Narrative

Samples for project COG/GC Federal #10 were received by TraceAnalysis, Inc. on 2010-05-27 and assigned to work order 10052815. Samples for work order 10052815 were received intact at a temperature of 3.1 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
Chloride (Titration)	SM 4500-Cl B	60450	2010-06-03 at 09:49	70599	2010-06-03 at 14:05
Chloride (Titration)	SM 4500-Cl B	60451	2010-06-03 at 09:49	70600	2010-06-03 at 14:06
Chloride (Titration)	SM 4500-Cl B	60452	2010-06-03 at 09:50	70683	2010-06-07 at 13:47
Chloride (Titration)	SM 4500-Cl B	60453	2010-06-03 at 09:51	70684	2010-06-07 at 13:48
TPH DRO - NEW	S 8015 D	60418	2010-06-01 at 13:52	70542	2010-06-01 at 13:52
TPH DRO - NEW	S 8015 D	60419	2010-06-01 at 13:52	70544	2010-06-01 at 13:52
TPH DRO - NEW	S 8015 D	60585	2010-06-08 at 14:28	70733	2010-06-08 at 14:28
TPH GRO	S 8015 D	60437	2010-06-02 at 14:15	70574	2010-06-02 at 16:59
TPH GRO	S 8015 D	60485	2010-06-03 at 10:30	70619	2010-06-03 at 12:37
TPH GRO	S 8015 D	60589	2010-06-08 at 08:30	70736	2010-06-08 at 15:56

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 10052815 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: June 10, 2010
114-6400527

Work Order: 10052815
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Lea County, NM

Analytical Report

Sample: 233149 - AH-1 0-1'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-06-03	Analyzed By:	AR
QC Batch:	70599	Sample Preparation:	2010-06-03	Prepared By:	AR
Prep Batch:	60450				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		4470	mg/Kg	100	4.00

Sample: 233149 - AH-1 0-1'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-06-01	Analyzed By:	kg
QC Batch:	70542	Sample Preparation:	2010-06-01	Prepared By:	kg
Prep Batch:	60418				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		5620	mg/Kg	10	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	¹	672	mg/Kg	10	100	672	70 - 130

Sample: 233149 - AH-1 0-1'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2010-06-02	Analyzed By:	AG
QC Batch:	70574	Sample Preparation:	2010-06-02	Prepared By:	AG
Prep Batch:	60437				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		2810	mg/Kg	20	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		20.5	mg/Kg	20	20.0	102	50.3 - 155
4-Bromofluorobenzene (4-BFB)	²	47.8	mg/Kg	20	20.0	239	51.7 - 131.1

¹ High surrogate recovery due to peak interference.

² High surrogate recovery due to peak interference.

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Sample: 233150 - AH-1 1-1.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-06-03	Analyzed By:	AR
QC Batch:	70599	Sample Preparation:	2010-06-03	Prepared By:	AR
Prep Batch:	60450				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		9540	mg/Kg	100	4.00

Sample: 233150 - AH-1 1-1.5'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-06-08	Analyzed By:	kg
QC Batch:	70733	Sample Preparation:	2010-06-08	Prepared By:	kg
Prep Batch:	60585				

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		105	mg/Kg	1	100	105	70 - 130

Sample: 233150 - AH-1 1-1.5'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2010-06-08	Analyzed By:	AG
QC Batch:	70736	Sample Preparation:	2010-06-08	Prepared By:	AG
Prep Batch:	60589				

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.56	mg/Kg	1	2.00	78	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.38	mg/Kg	1	2.00	69	42 - 159

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Sample: 233151 - AH-1 2-2.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-06-03	Analyzed By:	AR
QC Batch:	70599	Sample Preparation:	2010-06-03	Prepared By:	AR
Prep Batch:	60450				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		9880	mg/Kg	100	4.00

Sample: 233152 - AH-1 3-3.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-06-03	Analyzed By:	AR
QC Batch:	70599	Sample Preparation:	2010-06-03	Prepared By:	AR
Prep Batch:	60450				

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

Sample: 233153 - AH-1 4-4.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-06-03	Analyzed By:	AR
QC Batch:	70599	Sample Preparation:	2010-06-03	Prepared By:	AR
Prep Batch:	60450				

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

Sample: 233154 - AH-1 5-5.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-06-03	Analyzed By:	AR
QC Batch:	70599	Sample Preparation:	2010-06-03	Prepared By:	AR
Prep Batch:	60450				

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

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Sample: 233155 - AH-2 0-1'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-06-03	Analyzed By:	AR
QC Batch:	70599	Sample Preparation:	2010-06-03	Prepared By:	AR
Prep Batch:	60450				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1050	mg/Kg	50	4.00

Sample: 233155 - AH-2 0-1'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-06-01	Analyzed By:	kg
QC Batch:	70542	Sample Preparation:	2010-06-01	Prepared By:	kg
Prep Batch:	60418				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		110	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		124	mg/Kg	1	100	124	70 - 130

Sample: 233155 - AH-2 0-1'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2010-06-02	Analyzed By:	AG
QC Batch:	70574	Sample Preparation:	2010-06-02	Prepared By:	AG
Prep Batch:	60437				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		30.9	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.15	mg/Kg	1	2.00	108	50.3 - 155
4-Bromofluorobenzene (4-BFB)		2.21	mg/Kg	1	2.00	110	51.7 - 131.1

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Sample: 233156 - AH-2 1-1.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-06-03	Analyzed By:	AR
QC Batch:	70599	Sample Preparation:	2010-06-03	Prepared By:	AR
Prep Batch:	60450				

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

Sample: 233157 - AH-2 2-2.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-06-03	Analyzed By:	AR
QC Batch:	70600	Sample Preparation:	2010-06-03	Prepared By:	AR
Prep Batch:	60451				

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

Sample: 233158 - AH-2 3-3.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-06-03	Analyzed By:	AR
QC Batch:	70600	Sample Preparation:	2010-06-03	Prepared By:	AR
Prep Batch:	60451				

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

Sample: 233159 - AH-3 0-1'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-06-03	Analyzed By:	AR
QC Batch:	70600	Sample Preparation:	2010-06-03	Prepared By:	AR
Prep Batch:	60451				

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

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Sample: 233159 - AH-3 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 70542
Prep Batch: 60418

Analytical Method: S 8015 D
Date Analyzed: 2010-06-01
Sample Preparation: 2010-06-01

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

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		116	mg/Kg	1	100	116	70 - 130

Sample: 233159 - AH-3 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 70574
Prep Batch: 60437

Analytical Method: S 8015 D
Date Analyzed: 2010-06-02
Sample Preparation: 2010-06-02

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

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.59	mg/Kg	1	2.00	80	50.3 - 155
4-Bromofluorobenzene (4-BFB)		1.48	mg/Kg	1	2.00	74	51.7 - 131.1

Sample: 233160 - AH-3 1-1.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 70600
Prep Batch: 60451

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-06-03
Sample Preparation: 2010-06-03

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

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

Report Date: June 10, 2010
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Lea County, NM

Sample: 233160 - AH-3 1-1.5'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-06-01	Analyzed By:	kg
QC Batch:	70542	Sample Preparation:	2010-06-01	Prepared By:	kg
Prep Batch:	60418				

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		119	mg/Kg	1	100	119	70 - 130

Sample: 233160 - AH-3 1-1.5'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2010-06-02	Analyzed By:	AG
QC Batch:	70574	Sample Preparation:	2010-06-02	Prepared By:	AG
Prep Batch:	60437				

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.17	mg/Kg	1	2.00	58	50.3 - 155
4-Bromofluorobenzene (4-BFB)		1.06	mg/Kg	1	2.00	53	51.7 - 131.1

Sample: 233161 - AH-3 2-2.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-06-03	Analyzed By:	AR
QC Batch:	70600	Sample Preparation:	2010-06-03	Prepared By:	AR
Prep Batch:	60451				

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

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Sample: 233161 - AH-3 2-2.5'

Laboratory: Midland

Analysis: TPH DRO - NEW

QC Batch: 70542

Prep Batch: 60418

Analytical Method: S 8015 D

Date Analyzed: 2010-06-01

Sample Preparation: 2010-06-01

Prep Method: N/A

Analyzed By: kg

Prepared By: kg

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		121	mg/Kg	1	100	121	70 - 130

Sample: 233161 - AH-3 2-2.5'

Laboratory: Midland

Analysis: TPH GRO

QC Batch: 70574

Prep Batch: 60437

Analytical Method: S 8015 D

Date Analyzed: 2010-06-02

Sample Preparation: 2010-06-02

Prep Method: S 5035

Analyzed By: AG

Prepared By: AG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.25	mg/Kg	1	2.00	112	50.3 - 155
4-Bromofluorobenzene (4-BFB)		2.02	mg/Kg	1	2.00	101	51.7 - 131.1

Sample: 233162 - AH-3 3-3.5'

Laboratory: Midland

Analysis: Chloride (Titration)

QC Batch: 70600

Prep Batch: 60451

Analytical Method: SM 4500-Cl B

Date Analyzed: 2010-06-03

Sample Preparation: 2010-06-03

Prep Method: N/A

Analyzed By: AR

Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		515	mg/Kg	50	4.00

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Sample: 233162 - AH-3 3-3.5'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-06-01	Analyzed By:	kg
QC Batch:	70542	Sample Preparation:	2010-06-01	Prepared By:	kg
Prep Batch:	60418				

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		118	mg/Kg	1	100	118	70 - 130

Sample: 233162 - AH-3 3-3.5'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2010-06-02	Analyzed By:	AG
QC Batch:	70574	Sample Preparation:	2010-06-02	Prepared By:	AG
Prep Batch:	60437				

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.20	mg/Kg	1	2.00	110	50.3 - 155
4-Bromofluorobenzene (4-BFB)		1.97	mg/Kg	1	2.00	98	51.7 - 131.1

Sample: 233163 - AH-3 4-4.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-06-03	Analyzed By:	AR
QC Batch:	70600	Sample Preparation:	2010-06-03	Prepared By:	AR
Prep Batch:	60451				

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

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Sample: 233163 - AH-3 4-4.5'

Laboratory: Midland

Analysis: TPH DRO - NEW

QC Batch: 70542

Prep Batch: 60418

Analytical Method: S 8015 D

Date Analyzed: 2010-06-01

Sample Preparation: 2010-06-01

Prep Method: N/A

Analyzed By: kg

Prepared By: kg

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		117	mg/Kg	1	100	117	70 - 130

Sample: 233163 - AH-3 4-4.5'

Laboratory: Midland

Analysis: TPH GRO

QC Batch: 70574

Prep Batch: 60437

Analytical Method: S 8015 D

Date Analyzed: 2010-06-02

Sample Preparation: 2010-06-02

Prep Method: S 5035

Analyzed By: AG

Prepared By: AG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.17	mg/Kg	1	2.00	108	50.3 - 155
4-Bromofluorobenzene (4-BFB)		1.92	mg/Kg	1	2.00	96	51.7 - 131.1

Sample: 233164 - AH-3 5-5.5'

Laboratory: Midland

Analysis: Chloride (Titration)

QC Batch: 70600

Prep Batch: 60451

Analytical Method: SM 4500-Cl B

Date Analyzed: 2010-06-03

Sample Preparation: 2010-06-03

Prep Method: N/A

Analyzed By: AR

Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		442	mg/Kg	50	4.00

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Sample: 233164 - AH-3 5-5.5'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-06-01	Analyzed By:	kg
QC Batch:	70542	Sample Preparation:	2010-06-01	Prepared By:	kg
Prep Batch:	60418				

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		119	mg/Kg	1	100	119	70 - 130

Sample: 233164 - AH-3 5-5.5'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2010-06-02	Analyzed By:	AG
QC Batch:	70574	Sample Preparation:	2010-06-02	Prepared By:	AG
Prep Batch:	60437				

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.40	mg/Kg	1	2.00	70	50.3 - 155
4-Bromofluorobenzene (4-BFB)		1.27	mg/Kg	1	2.00	64	51.7 - 131.1

Sample: 233165 - AH-4 0-1'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-06-03	Analyzed By:	AR
QC Batch:	70600	Sample Preparation:	2010-06-03	Prepared By:	AR
Prep Batch:	60451				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		3880	mg/Kg	100	4.00

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Sample: 233165 - AH-4 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 70542
Prep Batch: 60418

Analytical Method: S 8015 D
Date Analyzed: 2010-06-01
Sample Preparation: 2010-06-01

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

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		110	mg/Kg	1	100	110	70 - 130

Sample: 233165 - AH-4 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 70574
Prep Batch: 60437

Analytical Method: S 8015 D
Date Analyzed: 2010-06-02
Sample Preparation: 2010-06-02

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

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		5.59	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.25	mg/Kg	1	2.00	112	50.3 - 155
4-Bromofluorobenzene (4-BFB)		2.00	mg/Kg	1	2.00	100	51.7 - 131.1

Sample: 233166 - AH-4 1-1.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 70600
Prep Batch: 60451

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-06-03
Sample Preparation: 2010-06-03

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

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

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Sample: 233166 - AH-4 1-1.5'

Laboratory: Midland

Analysis: TPH DRO - NEW

QC Batch: 70542

Prep Batch: 60418

Analytical Method: S 8015 D

Date Analyzed: 2010-06-01

Sample Preparation: 2010-06-01

Prep Method: N/A

Analyzed By: kg

Prepared By: kg

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		114	mg/Kg	1	100	114	70 - 130

Sample: 233166 - AH-4 1-1.5'

Laboratory: Midland

Analysis: TPH GRO

QC Batch: 70619

Prep Batch: 60485

Analytical Method: S 8015 D

Date Analyzed: 2010-06-03

Sample Preparation: 2010-06-03

Prep Method: S 5035

Analyzed By: AG

Prepared By: AG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.00	mg/Kg	1	2.00	100	50.3 - 155
4-Bromofluorobenzene (4-BFB)		1.75	mg/Kg	1	2.00	88	51.7 - 131.1

Sample: 233167 - AH-4 2-2.5'

Laboratory: Midland

Analysis: Chloride (Titration)

QC Batch: 70683

Prep Batch: 60452

Analytical Method: SM 4500-Cl B

Date Analyzed: 2010-06-07

Sample Preparation: 2010-06-03

Prep Method: N/A

Analyzed By: AR

Prepared By: AR

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

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Sample: 233167 - AH-4 2-2.5'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 70542
Prep Batch: 60418

Analytical Method: S 8015 D
Date Analyzed: 2010-06-01
Sample Preparation: 2010-06-01

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

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		111	mg/Kg	1	100	111	70 - 130

Sample: 233167 - AH-4 2-2.5'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 70619
Prep Batch: 60485

Analytical Method: S 8015 D
Date Analyzed: 2010-06-03
Sample Preparation: 2010-06-03

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

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.16	mg/Kg	1	2.00	108	50.3 - 155
4-Bromofluorobenzene (4-BFB)		1.92	mg/Kg	1	2.00	96	51.7 - 131.1

Sample: 233168 - AH-4 3-3.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 70683
Prep Batch: 60452

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-06-07
Sample Preparation: 2010-06-03

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

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

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Sample: 233168 - AH-4 3-3.5'

Laboratory: Midland

Analysis: TPH DRO - NEW

QC Batch: 70542

Prep Batch: 60418

Analytical Method: S 8015 D

Date Analyzed: 2010-06-01

Sample Preparation: 2010-06-01

Prep Method: N/A

Analyzed By: kg

Prepared By: kg

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		113	mg/Kg	1	100	113	70 - 130

Sample: 233168 - AH-4 3-3.5'

Laboratory: Midland

Analysis: TPH GRO

QC Batch: 70619

Prep Batch: 60485

Analytical Method: S 8015 D

Date Analyzed: 2010-06-03

Sample Preparation: 2010-06-03

Prep Method: S 5035

Analyzed By: AG

Prepared By: AG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.67	mg/Kg	1	2.00	84	50.3 - 155
4-Bromofluorobenzene (4-BFB)		1.50	mg/Kg	1	2.00	75	51.7 - 131.1

Sample: 233169 - AH-5 0-1'

Laboratory: Midland

Analysis: Chloride (Titration)

QC Batch: 70683

Prep Batch: 60452

Analytical Method: SM 4500-Cl B

Date Analyzed: 2010-06-07

Sample Preparation: 2010-06-03

Prep Method: N/A

Analyzed By: AR

Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		285	mg/Kg	50	4.00

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Sample: 233169 - AH-5 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 70544
Prep Batch: 60419

Analytical Method: S 8015 D
Date Analyzed: 2010-06-01
Sample Preparation: 2010-06-01

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

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		115	mg/Kg	1	100	115	70 - 130

Sample: 233169 - AH-5 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 70619
Prep Batch: 60485

Analytical Method: S 8015 D
Date Analyzed: 2010-06-03
Sample Preparation: 2010-06-03

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

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.28	mg/Kg	1	2.00	64	50.3 - 155
4-Bromofluorobenzene (4-BFB)		1.16	mg/Kg	1	2.00	58	51.7 - 131.1

Sample: 233170 - AH-5 1-1.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 70683
Prep Batch: 60452

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-06-07
Sample Preparation: 2010-06-03

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1030	mg/Kg	100	4.00

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Sample: 233171 - AH-5 2-2.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-06-07	Analyzed By:	AR
QC Batch:	70683	Sample Preparation:	2010-06-03	Prepared By:	AR
Prep Batch:	60452				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		10000	mg/Kg	100	4.00

Sample: 233172 - AH-5 3-3.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-06-07	Analyzed By:	AR
QC Batch:	70683	Sample Preparation:	2010-06-03	Prepared By:	AR
Prep Batch:	60452				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		12100	mg/Kg	100	4.00

Sample: 233173 - AH-5 4-4.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-06-07	Analyzed By:	AR
QC Batch:	70683	Sample Preparation:	2010-06-03	Prepared By:	AR
Prep Batch:	60452				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		14500	mg/Kg	100	4.00

Sample: 233174 - AH-5 5-5.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-06-07	Analyzed By:	AR
QC Batch:	70683	Sample Preparation:	2010-06-03	Prepared By:	AR
Prep Batch:	60452				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		10400	mg/Kg	100	4.00

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Sample: 233175 - AH-5 6-6.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-06-07	Analyzed By:	AR
QC Batch:	70683	Sample Preparation:	2010-06-03	Prepared By:	AR
Prep Batch:	60452				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		10600	mg/Kg	100	4.00

Sample: 233176 - AH-5 7-7.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-06-07	Analyzed By:	AR
QC Batch:	70683	Sample Preparation:	2010-06-03	Prepared By:	AR
Prep Batch:	60452				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		241	mg/Kg	50	4.00

Sample: 233177 - AH-5 8-8.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-06-07	Analyzed By:	AR
QC Batch:	70684	Sample Preparation:	2010-06-03	Prepared By:	AR
Prep Batch:	60453				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		334	mg/Kg	50	4.00

Sample: 233178 - AH-5 9-9.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-06-07	Analyzed By:	AR
QC Batch:	70684	Sample Preparation:	2010-06-03	Prepared By:	AR
Prep Batch:	60453				

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

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Sample: 233179 - AH-6 0-1'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 70684
Prep Batch: 60453

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-06-07
Sample Preparation: 2010-06-03

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

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

Sample: 233179 - AH-6 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 70544
Prep Batch: 60419

Analytical Method: S 8015 D
Date Analyzed: 2010-06-01
Sample Preparation: 2010-06-01

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

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		3130	mg/Kg	5	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	³	483	mg/Kg	5	100	483	70 - 130

Sample: 233179 - AH-6 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 70619
Prep Batch: 60485

Analytical Method: S 8015 D
Date Analyzed: 2010-06-03
Sample Preparation: 2010-06-03

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

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		1580	mg/Kg	100	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		99.7	mg/Kg	100	100	100	50.3 - 155
4-Bromofluorobenzene (4-BFB)		102	mg/Kg	100	100	102	51.7 - 131.1

³High surrogate recovery due to peak interference.

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Sample: 233180 - AH-6 1-1.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-06-07	Analyzed By:	AR
QC Batch:	70684	Sample Preparation:	2010-06-03	Prepared By:	AR
Prep Batch:	60453				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		309	mg/Kg	50	4.00

Sample: 233181 - AH-6 2-2.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-06-07	Analyzed By:	AR
QC Batch:	70684	Sample Preparation:	2010-06-03	Prepared By:	AR
Prep Batch:	60453				

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

Sample: 233182 - AH-6 3-3.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-06-07	Analyzed By:	AR
QC Batch:	70684	Sample Preparation:	2010-06-03	Prepared By:	AR
Prep Batch:	60453				

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

Sample: 233183 - AH-6 4-4.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-06-07	Analyzed By:	AR
QC Batch:	70684	Sample Preparation:	2010-06-03	Prepared By:	AR
Prep Batch:	60453				

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

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Method Blank (1) QC Batch: 70542

QC Batch: 70542
Prep Batch: 60418

Date Analyzed: 2010-06-01
QC Preparation: 2010-06-01

Analyzed By: kg
Prepared By: kg

Parameter	Flag	MDL Result	Units	RL
DRO		<5.86	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		93.9	mg/Kg	1	100	94	70 - 130

Method Blank (1) QC Batch: 70544

QC Batch: 70544
Prep Batch: 60419

Date Analyzed: 2010-06-01
QC Preparation: 2010-06-01

Analyzed By: kg
Prepared By: kg

Parameter	Flag	MDL Result	Units	RL
DRO		<5.86	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		95.4	mg/Kg	1	100	95	70 - 130

Method Blank (1) QC Batch: 70574

QC Batch: 70574
Prep Batch: 60437

Date Analyzed: 2010-06-02
QC Preparation: 2010-06-02

Analyzed By: AG
Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
GRO		<0.396	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.06	mg/Kg	1	2.00	103	66.2 - 145
4-Bromofluorobenzene (4-BFB)		1.60	mg/Kg	1	2.00	80	62 - 120.5

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Method Blank (1) QC Batch: 70599

QC Batch: 70599
Prep Batch: 60450

Date Analyzed: 2010-06-03
QC Preparation: 2010-06-03

Analyzed By: AR
Prepared By: AR

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

Method Blank (1) QC Batch: 70600

QC Batch: 70600
Prep Batch: 60451

Date Analyzed: 2010-06-03
QC Preparation: 2010-06-03

Analyzed By: AR
Prepared By: AR

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

Method Blank (1) QC Batch: 70619

QC Batch: 70619
Prep Batch: 60485

Date Analyzed: 2010-06-03
QC Preparation: 2010-06-03

Analyzed By: AG
Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
GRO		<0.396	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.14	mg/Kg	1	2.00	107	66.2 - 145
4-Bromofluorobenzene (4-BFB)		1.85	mg/Kg	1	2.00	92	62 - 120.5

Method Blank (1) QC Batch: 70683

QC Batch: 70683
Prep Batch: 60452

Date Analyzed: 2010-06-07
QC Preparation: 2010-06-03

Analyzed By: AR
Prepared By: AR

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

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Method Blank (1) QC Batch: 70684

QC Batch: 70684
Prep Batch: 60453

Date Analyzed: 2010-06-07
QC Preparation: 2010-06-03

Analyzed By: AR
Prepared By: AR

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

Method Blank (1) QC Batch: 70733

QC Batch: 70733
Prep Batch: 60585

Date Analyzed: 2010-06-08
QC Preparation: 2010-06-08

Analyzed By: kg
Prepared By: kg

Parameter	Flag	MDL Result	Units	RL
DRO		<5.86	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		90.4	mg/Kg	1	100	90	70 - 130

Method Blank (1) QC Batch: 70736

QC Batch: 70736
Prep Batch: 60589

Date Analyzed: 2010-06-08
QC Preparation: 2010-06-08

Analyzed By: AG
Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
GRO		<0.396	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.81	mg/Kg	1	2.00	90	67.6 - 150
4-Bromofluorobenzene (4-BFB)		1.42	mg/Kg	1	2.00	71	52.4 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 70542
Prep Batch: 60418

Date Analyzed: 2010-06-01
QC Preparation: 2010-06-01

Analyzed By: kg
Prepared By: kg

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Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	325	mg/Kg	1	250	<5.86	130	57.4 - 133.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	310	mg/Kg	1	250	<5.86	124	57.4 - 133.4	5	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	108	121	mg/Kg	1	100	108	121	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 70544
Prep Batch: 60419

Date Analyzed: 2010-06-01
QC Preparation: 2010-06-01

Analyzed By: kg
Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	265	mg/Kg	1	250	<5.86	106	57.4 - 133.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	277	mg/Kg	1	250	<5.86	111	57.4 - 133.4	4	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	98.0	99.8	mg/Kg	1	100	98	100	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 70574
Prep Batch: 60437

Date Analyzed: 2010-06-02
QC Preparation: 2010-06-02

Analyzed By: AG
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	15.4	mg/Kg	1	20.0	<0.396	77	52.5 - 114.3

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

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Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	16.0	mg/Kg	1	20.0	<0.396	80	52.5 - 114.3	4	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.08	1.89	mg/Kg	1	2.00	104	94	66.2 - 148.7
4-Bromofluorobenzene (4-BFB)	1.83	1.66	mg/Kg	1	2.00	92	83	64.1 - 127.4

Laboratory Control Spike (LCS-1)

QC Batch: 70599
Prep Batch: 60450

Date Analyzed: 2010-06-03
QC Preparation: 2010-06-03

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.5	mg/Kg	1	100	<2.18	98	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	100	mg/Kg	1	100	<2.18	100	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: 70600
Prep Batch: 60451

Date Analyzed: 2010-06-03
QC Preparation: 2010-06-03

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.8	mg/Kg	1	100	<2.18	99	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	100	mg/Kg	1	100	<2.18	100	85 - 115	1	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: 70619
Prep Batch: 60485

Date Analyzed: 2010-06-03
QC Preparation: 2010-06-03

Analyzed By: AG
Prepared By: AG

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Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	16.0	mg/Kg	1	20.0	<0.396	80	52.5 - 114.3

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	16.2	mg/Kg	1	20.0	<0.396	81	52.5 - 114.3	1	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.80	1.99	mg/Kg	1	2.00	90	100	66.2 - 148.7
4-Bromofluorobenzene (4-BFB)	1.62	1.79	mg/Kg	1	2.00	81	90	64.1 - 127.4

Laboratory Control Spike (LCS-1)

QC Batch: 70683
Prep Batch: 60452

Date Analyzed: 2010-06-07
QC Preparation: 2010-06-03

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	99.3	mg/Kg	1	100	<2.18	99	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	102	mg/Kg	1	100	<2.18	102	85 - 115	3	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 70684
Prep Batch: 60453

Date Analyzed: 2010-06-07
QC Preparation: 2010-06-03

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.3	mg/Kg	1	100	<2.18	98	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	101	mg/Kg	1	100	<2.18	101	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: 70733
Prep Batch: 60585

Date Analyzed: 2010-06-08
QC Preparation: 2010-06-08

Analyzed By: kg
Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	203	mg/Kg	1	250	<5.86	81	57.4 - 133.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	210	mg/Kg	1	250	<5.86	84	57.4 - 133.4	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	102	104	mg/Kg	1	100	102	104	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 70736
Prep Batch: 60589

Date Analyzed: 2010-06-08
QC Preparation: 2010-06-08

Analyzed By: AG
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	14.2	mg/Kg	1	20.0	<0.396	71	69.9 - 95.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	14.2	mg/Kg	1	20.0	<0.396	71	69.9 - 95.4	0	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.92	1.75	mg/Kg	1	2.00	96	88	61.9 - 142
4-Bromofluorobenzene (4-BFB)	1.64	1.53	mg/Kg	1	2.00	82	76	68.2 - 132

Matrix Spike (MS-1) Spiked Sample: 233168

QC Batch: 70542
Prep Batch: 60418

Date Analyzed: 2010-06-01
QC Preparation: 2010-06-01

Analyzed By: kg
Prepared By: kg

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Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	320	mg/Kg	1	250	<5.86	128	35.2 - 167.1

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	367	mg/Kg	1	250	<5.86	147	35.2 - 167.1	14	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 ⁴	116	133	mg/Kg	1	100	116	133	70 - 130

Matrix Spike (MS-1) Spiked Sample: 233169

QC Batch: 70544
Prep Batch: 60419

Date Analyzed: 2010-06-01
QC Preparation: 2010-06-01

Analyzed By: kg
Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	334	mg/Kg	1	250	37.7	118	35.2 - 167.1

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	298	mg/Kg	1	250	37.7	104	35.2 - 167.1	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	115	112	mg/Kg	1	100	115	112	70 - 130

Matrix Spike (MS-1) Spiked Sample: 233165

QC Batch: 70574
Prep Batch: 60437

Date Analyzed: 2010-06-02
QC Preparation: 2010-06-02

Analyzed By: AG
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	25.1	mg/Kg	1	20.0	5.5866	98	10 - 198.3

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

⁴High surrogate recovery due to peak interference.

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Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	26.8	mg/Kg	1	20.0	5.5866	106	10 - 198.3	7	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.28	2.37	mg/Kg	1	2	114	118	65.5 - 143
4-Bromofluorobenzene (4-BFB)	2.42	2.38	mg/Kg	1	2	121	119	58.6 - 140

Matrix Spike (MS-1) Spiked Sample: 233156

QC Batch: 70599
Prep Batch: 60450

Date Analyzed: 2010-06-03
QC Preparation: 2010-06-03

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	9750	mg/Kg	100	10000	<218	98	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	9820	mg/Kg	100	10000	<218	98	85 - 115	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: 233166

QC Batch: 70600
Prep Batch: 60451

Date Analyzed: 2010-06-03
QC Preparation: 2010-06-03

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	9890	mg/Kg	100	10000	<218	97	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	10100	mg/Kg	100	10000	<218	99	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: 233169

QC Batch: 70619
Prep Batch: 60485

Date Analyzed: 2010-06-03
QC Preparation: 2010-06-03

Analyzed By: AG
Prepared By: AG

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Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	17.3	mg/Kg	1	20.0	<0.396	86	10 - 198.3

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	19.5	mg/Kg	1	20.0	<0.396	98	10 - 198.3	12	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.61	1.31	mg/Kg	1	2	80	66	65.5 - 143
4-Bromofluorobenzene (4-BFB)	1.59	1.32	mg/Kg	1	2	80	66	58.6 - 140

Matrix Spike (MS-1) Spiked Sample: 233176

QC Batch: 70683
Prep Batch: 60452

Date Analyzed: 2010-06-07
QC Preparation: 2010-06-03

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10100	mg/Kg	100	10000	241	98	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	10200	mg/Kg	100	10000	241	100	85 - 115	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: 233300

QC Batch: 70684
Prep Batch: 60453

Date Analyzed: 2010-06-07
QC Preparation: 2010-06-03

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10300	mg/Kg	100	10000	359	99	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	10500	mg/Kg	100	10000	359	101	85 - 115	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: 233150

QC Batch: 70733
Prep Batch: 60585

Date Analyzed: 2010-06-08
QC Preparation: 2010-06-08

Analyzed By: kg
Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	181	mg/Kg	1	250	8.92	69	35.2 - 167.1

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	159	mg/Kg	1	250	8.92	60	35.2 - 167.1	13	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	106	94.7	mg/Kg	1	100	106	95	70 - 130

Matrix Spike (MS-1) Spiked Sample: 233858

QC Batch: 70736
Prep Batch: 60589

Date Analyzed: 2010-06-08
QC Preparation: 2010-06-08

Analyzed By: AG
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	15.1	mg/Kg	1	20.0	<0.396	76	61.8 - 114

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	16.0	mg/Kg	1	20.0	<0.396	80	61.8 - 114	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)	2.04	1.77	mg/Kg	1	2	102	88	50 - 162
4-Bromofluorobenzene (4-BFB)	1.92	1.64	mg/Kg	1	2	96	82	50 - 162

Standard (CCV-2)

QC Batch: 70542

Date Analyzed: 2010-06-01

Analyzed By: kg

Report Date: June 10, 2010
114-6400527

Work Order: 10052815
COG/GC Federal #10

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Lea County, NM

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	300	120	80 - 120	2010-06-01

Standard (CCV-3)

QC Batch: 70542

Date Analyzed: 2010-06-01

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	297	119	80 - 120	2010-06-01

Standard (CCV-4)

QC Batch: 70542

Date Analyzed: 2010-06-01

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	289	116	80 - 120	2010-06-01

Standard (CCV-2)

QC Batch: 70544

Date Analyzed: 2010-06-01

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	290	116	80 - 120	2010-06-01

Standard (CCV-3)

QC Batch: 70544

Date Analyzed: 2010-06-01

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	282	113	80 - 120	2010-06-01

Standard (CCV-2)

QC Batch: 70574

Date Analyzed: 2010-06-02

Analyzed By: AG

Report Date: June 10, 2010
114-6400527

Work Order: 10052815
COG/GC Federal #10

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Lea County, NM

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.01	101	80 - 120	2010-06-02

Standard (CCV-3)

QC Batch: 70574

Date Analyzed: 2010-06-02

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.05	105	80 - 120	2010-06-02

Standard (ICV-1)

QC Batch: 70599

Date Analyzed: 2010-06-03

Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2010-06-03

Standard (CCV-1)

QC Batch: 70599

Date Analyzed: 2010-06-03

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	98.6	99	85 - 115	2010-06-03

Standard (ICV-1)

QC Batch: 70600

Date Analyzed: 2010-06-03

Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.9	100	85 - 115	2010-06-03

Standard (CCV-1)

QC Batch: 70600

Date Analyzed: 2010-06-03

Analyzed By: AR

Report Date: June 10, 2010
114-6400527

Work Order: 10052815
COG/GC Federal #10

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Lea County, NM

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	100	100	85 - 115	2010-06-03

Standard (CCV-1)

QC Batch: 70619

Date Analyzed: 2010-06-03

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.03	103	80 - 120	2010-06-03

Standard (CCV-2)

QC Batch: 70619

Date Analyzed: 2010-06-03

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.856	86	80 - 120	2010-06-03

Standard (CCV-3)

QC Batch: 70619

Date Analyzed: 2010-06-03

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.980	98	80 - 120	2010-06-03

Standard (ICV-1)

QC Batch: 70683

Date Analyzed: 2010-06-07

Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	102	102	85 - 115	2010-06-07

Standard (CCV-1)

QC Batch: 70683

Date Analyzed: 2010-06-07

Analyzed By: AR

Report Date: June 10, 2010
114-6400527

Work Order: 10052815
COG/GC Federal #10

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Lea County, NM

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	98.3	98	85 - 115	2010-06-07

Standard (ICV-1)

QC Batch: 70684

Date Analyzed: 2010-06-07

Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.5	100	85 - 115	2010-06-07

Standard (CCV-1)

QC Batch: 70684

Date Analyzed: 2010-06-07

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2010-06-07

Standard (CCV-2)

QC Batch: 70733

Date Analyzed: 2010-06-08

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	210	84	80 - 120	2010-06-08

Standard (CCV-3)

QC Batch: 70733

Date Analyzed: 2010-06-08

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	212	85	80 - 120	2010-06-08

Standard (CCV-1)

QC Batch: 70736

Date Analyzed: 2010-06-08

Analyzed By: AG

Report Date: June 10, 2010
114-6400527

Work Order: 10052815
COG/GC Federal #10

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Lea County, NM

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.874	87	80 - 120	2010-06-08

Standard (CCV-2)

QC Batch: 70736

Date Analyzed: 2010-06-08

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.869	87	80 - 120	2010-06-08

W04 10051815

Analysis Request of Chain of Custody Record



TETRA TECH

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

CLIENT NAME: CDL		SITE MANAGER: Ike Tavares	
PROJECT NO.: 114-6400527		PROJECT NAME: GC Federal #10	
LAB I.D. NUMBER	DATE	TIME	MATRIX
238159	5/25		S
160			
161			
162			
163			
164			
165			
166			
167			
168			
GRAB		SAMPLE IDENTIFICATION	
X		AH-3 0-1'	
		AH-3 1-1.5'	
		AH-3 2-2.5'	
		AH-3 3-3.5'	
		AH-3 4-4.5'	
		AH-3 5-5.5'	
		AH-4 0-1'	
		AH-4 1-1.5'	
		AH-4 2-2.5'	
		AH-4 3-3.5'	
RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature)	
Date: 5-27-10		Date: 5-27-10	
Time: 1605		Time: 1605	
RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature)	
Date: _____		Date: _____	
Time: _____		Time: _____	
RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature)	
Date: _____		Date: _____	
Time: _____		Time: _____	
RECEIVING LABORATORY: Trace		RECEIVED BY: (Signature)	
ADDRESS: Midland		DATE: 5-27-10	
CITY: Midland		TIME: 16:05	
STATE: Tx			
ZIP: _____			
PHONE: _____			
REMARKS:			
SAMPLE CONDITION WHEN RECEIVED:			
9.1' C. v. r.			

ANALYSIS REQUEST
(Circle or Specify Method No.)

PAGE: 1 OF: 4

TPH 8015 MOD	X	BTX 8021B
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. 8240/8260/624		
GC/MS Semi. Vol. 8270/625		
PCB's 8080/608		
Pest. 808/608		
Chloride	X	
Gamma Spec.		
Alpha Beta (Air)		
PLM (Asbestos)		
Major Anions/Cations, pH, TDS		

SAMPLED BY: (Print & Initial) **RK TF** Date: **5-25-10**
Time: _____

SAMPLE SHIPPED BY: (Circle)
FEDEX ☒ BUS ☐ UPS ☐

OTHER: _____

TETRA TECH CONTACT PERSON: **Ike Tavares**

Results by: _____

RUSH Charges Authorized: Yes ☐ No ☐

TPH 8015 MOD 9.1' C. v. r. 5-27-10 16:05

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

W05# 10052015

Analysis Request of Chain of Custody Record

PAGE: 4 OF: 4

ANALYSIS REQUEST
(Circle or Specify Method No.)



TETRA TECH

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

CLIENT NAME: CDG		SITE MANAGER: Ike Tavaréz	
PROJECT NO.: 114-6400527		PROJECT NAME: CDG / Gr Federal #10	
LAB I.D. NUMBER	DATE	TIME	MATRIX
233179	5/25		S
180			
181			
182			
183			
NUMBER OF CONTAINERS		PRESERVATIVE METHOD	
1		HCL	
		HNO3	
		ICE	
		NONE	
BTX 8021B			
TPH 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 8080/608			
Pest. 808/608			
Chloride			
Gamma Spec.			
Alpha Beta (Air)			
PLM (Asbestos)			
Major Anions/Cations, pH, TDS			

RELINQUISHED BY: (Signature) <i>[Signature]</i>	RECEIVED BY: (Signature) <i>[Signature]</i>	DATE: 5-27-10	TIME: 11:05
RELINQUISHED BY: (Signature) <i>[Signature]</i>	RECEIVED BY: (Signature) <i>[Signature]</i>	DATE: 5-27-10	TIME: 11:05
RELINQUISHED BY: (Signature) <i>[Signature]</i>	RECEIVED BY: (Signature) <i>[Signature]</i>	DATE: 5-27-10	TIME: 11:05
RECEIVING LABORATORY: Midland		STATE: TX	
ADDRESS: 1910 N. Big Spring St.		ZIP: 79705	
CONTACT: CDG		PHONE: (432) 682-4559	
SAMPLE CONDITION WHEN RECEIVED: 3.1'C in 100% RH			
REMARKS: If TPH exceed 5000 ug/kg can deliver sample			

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: January 27, 2011

Work Order: 11012504



Project Location: Lea County, NM
Project Name: COG/GC Federal #10
Project Number: 114-6400527

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
256014	CS-1 Bottom Hole 1'	soil	2011-01-12	00:00	2011-01-24
256015	CS-2 Bottom Hole 7'	soil	2011-01-12	00:00	2011-01-24
256016	CS-2 North Wall	soil	2011-01-12	00:00	2011-01-24
256017	CS-2 South Wall	soil	2011-01-12	00:00	2011-01-24
256018	CS-2 East Wall	soil	2011-01-12	00:00	2011-01-24
256019	CS-2 West Wall	soil	2011-01-12	00:00	2011-01-24
256020	CS-3 Bottom Hole 1'	soil	2011-01-12	00:00	2011-01-24
256021	CS-4 Bottom Hole 1'	soil	2011-01-12	00:00	2011-01-24
256022	CS-5 Bottom Hole 3'	soil	2011-01-12	00:00	2011-01-24
256023	CS-5 North Wall	soil	2011-01-12	00:00	2011-01-24
256024	CS-5 South Wall	soil	2011-01-12	00:00	2011-01-24
256025	CS-5 East Wall	soil	2011-01-12	00:00	2011-01-24
256026	CS-5 West Wall	soil	2011-01-12	00:00	2011-01-24

Sample: 256014 - CS-1 Bottom Hole 1'

Param	Flag	Result	Units	RL
Chloride		237	mg/Kg	4.00

Sample: 256015 - CS-2 Bottom Hole 7'

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

Sample: 256016 - CS-2 North Wall

Param	Flag	Result	Units	RL
Chloride		360	mg/Kg	4.00

Sample: 256017 - CS-2 South Wall

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

Sample: 256018 - CS-2 East Wall

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

Sample: 256019 - CS-2 West Wall

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

Sample: 256020 - CS-3 Bottom Hole 1'

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

Sample: 256021 - CS-4 Bottom Hole 1'

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

Sample: 256022 - CS-5 Bottom Hole 3'

Param	Flag	Result	Units	RL
Chloride		547	mg/Kg	4.00

Sample: 256023 - CS-5 North Wall

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

Sample: 256024 - CS-5 South Wall

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

Sample: 256025 - CS-5 East Wall

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

Sample: 256026 - CS-5 West Wall

Param	Flag	Result	Units	RL
Chloride		318	mg/Kg	4.00



6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260
E-Mail: lab@traceanalysis.com

Certifications

WBENC: 237019

HUB: 1752439743100-86536
NCTRCA WFWB38444Y0909

DBE: VN 20657

NELAP Certifications

Lubbock: T104704219-08-TX
LELAP-02003
Kansas E-10317

El Paso: T104704221-08-TX
LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

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

Report Date: January 27, 2011

Work Order: 11012504



Project Location: Lea County, NM
Project Name: COG/GC Federal #10
Project Number: 114-6400527

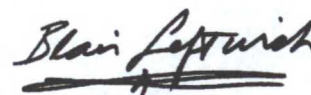
Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
256014	CS-1 Bottom Hole 1'	soil	2011-01-12	00:00	2011-01-24
256015	CS-2 Bottom Hole 7'	soil	2011-01-12	00:00	2011-01-24
256016	CS-2 North Wall	soil	2011-01-12	00:00	2011-01-24
256017	CS-2 South Wall	soil	2011-01-12	00:00	2011-01-24
256018	CS-2 East Wall	soil	2011-01-12	00:00	2011-01-24
256019	CS-2 West Wall	soil	2011-01-12	00:00	2011-01-24
256020	CS-3 Bottom Hole 1'	soil	2011-01-12	00:00	2011-01-24
256021	CS-4 Bottom Hole 1'	soil	2011-01-12	00:00	2011-01-24
256022	CS-5 Bottom Hole 3'	soil	2011-01-12	00:00	2011-01-24
256023	CS-5 North Wall	soil	2011-01-12	00:00	2011-01-24

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
256024	CS-5 South Wall	soil	2011-01-12	00:00	2011-01-24
256025	CS-5 East Wall	soil	2011-01-12	00:00	2011-01-24
256026	CS-5 West Wall	soil	2011-01-12	00:00	2011-01-24

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 10 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

Standard Flags

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

Samples for project COG/GC Federal #10 were received by TraceAnalysis, Inc. on 2011-01-24 and assigned to work order 11012504. Samples for work order 11012504 were received intact at a temperature of 4.0 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
Chloride (Titration)	SM 4500-Cl B	66172	2011-01-24 at 10:56	77162	2011-01-26 at 15:21
Chloride (Titration)	SM 4500-Cl B	66172	2011-01-24 at 10:56	77163	2011-01-26 at 15:22

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 11012504 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 27, 2011
114-6400527

Work Order: 11012504
COG/GC Federal #10

Page Number: 4 of 10
Lea County, NM

Analytical Report

Sample: 256014 - CS-1 Bottom Hole 1'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2011-01-26	Analyzed By:	AR
QC Batch:	77162	Sample Preparation:	2011-01-26	Prepared By:	AR
Prep Batch:	66172				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		237	mg/Kg	50	4.00

Sample: 256015 - CS-2 Bottom Hole 7'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2011-01-26	Analyzed By:	AR
QC Batch:	77162	Sample Preparation:	2011-01-26	Prepared By:	AR
Prep Batch:	66172				

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

Sample: 256016 - CS-2 North Wall

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2011-01-26	Analyzed By:	AR
QC Batch:	77162	Sample Preparation:	2011-01-26	Prepared By:	AR
Prep Batch:	66172				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		360	mg/Kg	50	4.00

Sample: 256017 - CS-2 South Wall

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2011-01-26	Analyzed By:	AR
QC Batch:	77162	Sample Preparation:	2011-01-26	Prepared By:	AR
Prep Batch:	66172				

continued ...

Report Date: January 27, 2011
114-6400527

Work Order: 11012504
COG/GC Federal #10

Page Number: 5 of 10
Lea County, NM

sample 256017 continued ...

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

Sample: 256018 - CS-2 East Wall

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2011-01-26	Analyzed By: AR
QC Batch: 77162	Sample Preparation: 2011-01-26	Prepared By: AR
Prep Batch: 66172		

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

Sample: 256019 - CS-2 West Wall

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2011-01-26	Analyzed By: AR
QC Batch: 77162	Sample Preparation: 2011-01-26	Prepared By: AR
Prep Batch: 66172		

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

Sample: 256020 - CS-3 Bottom Hole 1'

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2011-01-26	Analyzed By: AR
QC Batch: 77162	Sample Preparation: 2011-01-26	Prepared By: AR
Prep Batch: 66172		

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

Report Date: January 27, 2011
114-6400527

Work Order: 11012504
COG/GC Federal #10

Page Number: 6 of 10
Lea County, NM

Sample: 256021 - CS-4 Bottom Hole 1'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2011-01-26	Analyzed By:	AR
QC Batch:	77162	Sample Preparation:	2011-01-26	Prepared By:	AR
Prep Batch:	66172				

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

Sample: 256022 - CS-5 Bottom Hole 3'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2011-01-26	Analyzed By:	AR
QC Batch:	77162	Sample Preparation:	2011-01-26	Prepared By:	AR
Prep Batch:	66172				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		547	mg/Kg	50	4.00

Sample: 256023 - CS-5 North Wall

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2011-01-26	Analyzed By:	AR
QC Batch:	77163	Sample Preparation:	2011-01-26	Prepared By:	AR
Prep Batch:	66172				

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

Sample: 256024 - CS-5 South Wall

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2011-01-26	Analyzed By:	AR
QC Batch:	77163	Sample Preparation:	2011-01-26	Prepared By:	AR
Prep Batch:	66172				

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

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114-6400527

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Sample: 256025 - CS-5 East Wall

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2011-01-26	Analyzed By:	AR
QC Batch:	77163	Sample Preparation:	2011-01-26	Prepared By:	AR
Prep Batch:	66172				

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

Sample: 256026 - CS-5 West Wall

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2011-01-26	Analyzed By:	AR
QC Batch:	77163	Sample Preparation:	2011-01-26	Prepared By:	AR
Prep Batch:	66172				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		318	mg/Kg	50	4.00

Method Blank (1) QC Batch: 77162

QC Batch:	77162	Date Analyzed:	2011-01-26	Analyzed By:	AR
Prep Batch:	66172	QC Preparation:	2011-01-24	Prepared By:	AR

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

Method Blank (1) QC Batch: 77163

QC Batch:	77163	Date Analyzed:	2011-01-26	Analyzed By:	AR
Prep Batch:	66172	QC Preparation:	2011-01-24	Prepared By:	AR

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

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Laboratory Control Spike (LCS-1)

QC Batch: 77162
Prep Batch: 66172

Date Analyzed: 2011-01-26
QC Preparation: 2011-01-24

Analyzed By: AR
Prepared By: AR

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

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

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

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

Laboratory Control Spike (LCS-1)

QC Batch: 77163
Prep Batch: 66172

Date Analyzed: 2011-01-26
QC Preparation: 2011-01-24

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	96.8	mg/Kg	1	100	<2.18	97	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	104	mg/Kg	1	100	<2.18	104	85 - 115	7	20

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

Matrix Spike (MS-1) Spiked Sample: 256022

QC Batch: 77162
Prep Batch: 66172

Date Analyzed: 2011-01-26
QC Preparation: 2011-01-24

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	9930	mg/Kg	100	10000	547	94	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	10200	mg/Kg	100	10000	547	96	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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Matrix Spike (MS-1) Spiked Sample: 256042

QC Batch: 77163
Prep Batch: 66172

Date Analyzed: 2011-01-26
QC Preparation: 2011-01-24

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	11000	mg/Kg	100	10000	413	106	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	11200	mg/Kg	100	10000	413	108	85 - 115	2	20

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

Standard (ICV-1)

QC Batch: 77162

Date Analyzed: 2011-01-26

Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	103	103	85 - 115	2011-01-26

Standard (CCV-1)

QC Batch: 77162

Date Analyzed: 2011-01-26

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	97.3	97	85 - 115	2011-01-26

Standard (ICV-1)

QC Batch: 77163

Date Analyzed: 2011-01-26

Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	98.2	98	85 - 115	2011-01-26

Standard (CCV-1)

QC Batch: 77163

Date Analyzed: 2011-01-26

Analyzed By: AR

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	102	102	85 - 115	2011-01-26

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Analysis Request of Chain of Custody Record

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ANALYSIS REQUEST
(Circle or Specify Method No.)



TETRA TECH

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

CLIENT NAME:		PROJECT NAME:		SITE MANAGER:		PRESERVATIVE METHOD		NUMBER OF CONTAINERS		FILTERED (Y/N)		HCL		HNO3		ICE		NONE	
LAB ID. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION													
010014	1/12					CS-1	Bottom hole 1'		1										
0105						CS-2	Bottom hole 7'												
0106						CS-2	North wall												
0107						CS-2	South wall												
0108						CS-2	East wall												
0109						CS-2	West wall												
0200						CS-3	Bottom hole 1'												
0201						CS-4	Bottom hole 1'												
0202						CS-5	Bottom hole 3'												
0203						CS-5	North wall												
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RECEIVING LABORATORY:		Address:		City:		State:		ZIP:		Phone:		Date:		Time:		Remarks:			
CITY:		State:		ZIP:		Phone:		Date:		Time:		Remarks:							
SAMPLE CONDITION WHEN RECEIVED:		Date:		Time:		Remarks:													
4/02 intact																			

ANALYSIS REQUEST		DATE:		TIME:	
TPH 8015 MOD. TX1005 (Ext. to C35)		1/12/11	10:45	1/12/11	10:30
PAH 8270					
RCRA Metals Ag As Ba Cd Cr Pb Hg Se					
TCLP Metals Ag As Ba Cd Vt Pd Hg Se					
TCLP Volatiles					
TCAP Semi Volatiles					
RCI					
GC/MS Vol. 8240/8280/824					
GC/MS Semi. Vol. 8270/825					
PCB's 8080/808					
Pest. 808/808					
Chloride					
Gamma Spec.					
Alpha Beta (Air)					
PLM (Asbestos)					
Major Anions/Cations, pH, TDS					

SAMPLED BY: (Print & Initial)		DATE:		TIME:	
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SAMPLE SHIPPED BY: (Circle)		DATE:		TIME:	
FEDEX					
BUS					
UPS					

TETRA TECH CONTACT PERSON:		DATE:		TIME:	
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Analysis Request of Chain of Custody Record

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ANALYSIS REQUEST
(Circle or Specify Method No.)

TETRA TECH

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

[illegible]

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