

SITE INFORMATION

Report Type: Closure Report

General Site Information:

Site:	Honeygraham/Graham Nash Gathering Line							
Company:	COG Operating LLC							
Section, Township and Range	Unit D	Sec 29	T26S	R28E				
Lease Number:	API-30-015-38488, 30-15-37595, 30-15-37498							
County:	Eddy County							
GPS:	32.01920° N		104.11604° W					
Surface Owner:	State							
Mineral Owner:								
Directions:	South of Malaga at the intersection of Hwy 285 and CR 724 (White City Rd), travel west on CR 724 for 2.9 miles, turn left (south) and travel 2.9 miles, turn left (east) and travel 0.2 mile to the site on the south side of the lease road.							

Release Data:

Date Released:	4/15/2013
Type Release:	Produced Water
Source of Contamination:	Gathering Line
Fluid Released:	100 bbls
Fluids Recovered:	40 bbls

Official Communication:

Name:	Pat Ellis	Ike Tavarez
Company:	COG Operating, LLC	Tetra Tech
Address:	One Concho Center 600 W. Illinois Ave.	1910 N. Big Spring
City:	Midland Texas, 79701	Midland, Texas
Phone number:	(432) 686-3023	(432) 682-4559
Fax:	(432) 684-7137	
Email:	pellis@conchoresources.com	ike.tavarez@tetrachtech.com

Ranking Criteria

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

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

RECEIVED

JAN 24 2014

NMOCD ARTESIA



TETRA TECH

September 25, 2013

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

Re: Closure Request for the COG Operating LLC., Honey Graham/Graham Nash Gathering Line, Unit D, Section 29, Township 26 South, Range 28 East, Eddy County, New Mexico.

Mr. Bratcher:

Tetra Tech, Inc. (Tetra Tech) was contacted by COG Operating LLC. (COG) to assess a spill from the Honey Graham/Graham Nash Gathering Line located in Unit D, Section 29, Township 26 South, Range 28 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.01920°, W 104.11604°. The site location is shown on Figures 1 and 2.

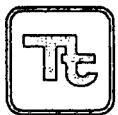
Background

According to the State of New Mexico C-141 Initial Report, the leak was discovered on April 15, 2013, and released approximately one hundred (100) barrels of produced water from a gathering line. To alleviate the problem, COG personnel replaced the line. Forty (40) barrels of standing fluids were recovered. The spill initiated and remained in the pasture and impacted an area that measured approximately 15' x 55', 95' x 115', 70' x 110', 25' x 55', 10' x 85', 85' x 130' and 40' x 45'. The initial C-141 form is enclosed in Appendix A.

Tetra Tech

1910 North Big Spring, Midland, TX 79705

Tel 432.682.4559 Fax 432.682.3946 www.tetratech.com



TETRA TECH

Hydrogeology and Groundwater

According to the Geology and Groundwater Resources of Eddy County, New Mexico (Report 3), the Rustler and Castile formation (Ochoa Series) is present west and east of the Pecos River. The Salado formation overlies the Castile formation east of the Pecos River and was removed by solution west of the river. The Rustler and Castile formations consist of anhydrite, gypsum, interbedded sandy clay and beds of dolomite. Groundwater from the Castile and Rustler formations west of the Pecos River is historically high in chloride and sulfate concentrations which increase towards the river.

According to the USGS, no water wells are listed in Section 29. One water well is reported in Section 22, with a depth to groundwater of 120.0' bgs. According to the NMOCD groundwater map the reported depth to groundwater in this area is approximately 50.0' below surface. The groundwater data is shown in Appendix B.

Regulatory

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

Soil Assessment and Analytical Results

On May 15, 2013, Tetra Tech personnel inspected and sampled the spill area. Thirteen (13) auger holes (AH-1 through AH-13) and two (2) background samples were installed using a stainless steel hand auger to assess the impacted soils. Selected samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The results of the sampling are summarized in Table 1. The auger hole locations are shown on Figure 3.



TETRA TECH

Referring to Table 1, elevated chlorides were detected in all auger hole samples. Due to the geology of the area and the location of the spill, the background samples show elevated chloride concentrations that are native to this specific area. The spill area is located in a natural drainage or run-off as shown on Figure 4.

Background 1 shows surface chlorides of 7,380 mg/kg and bottom hole samples of 2,540 mg/kg at 7.5' bgs. Background 2 shows surface chlorides of 3,770 mg/kg and bottom hole samples of 3,330 mg/kg at 7.5' bgs.

Closure Request

Due to site location and background chloride concentrations, the chloride detected are comparable to the natural chloride detected in the surrounding soils. Based on the results, COG proposes to leave the soils in place due to the elevated background chloride concentrations.

If you have any questions or comments concerning the assessment or the proposed remediation activities for this site, please call me at (432) 682-4559.

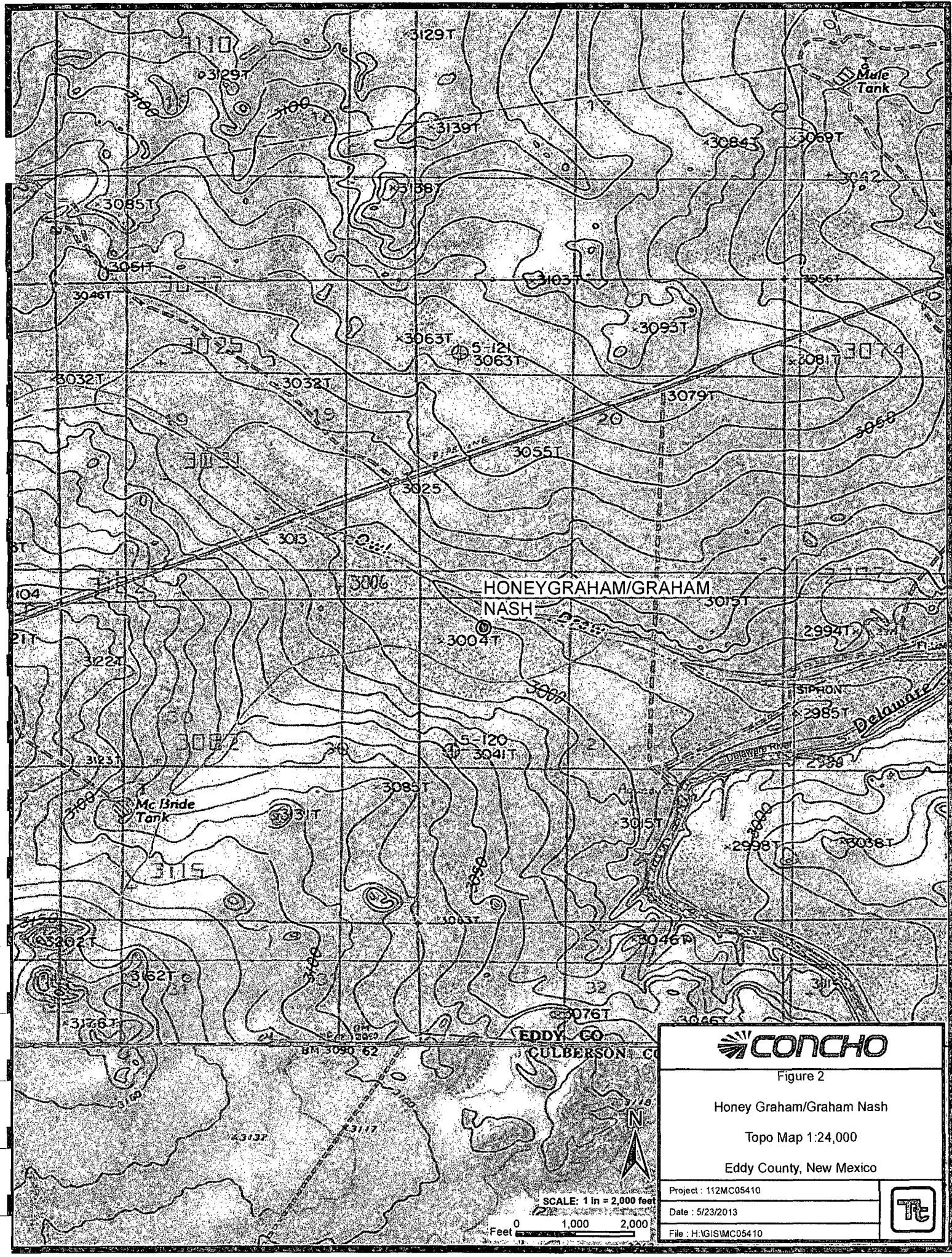
Respectfully submitted,
TETRA TECH

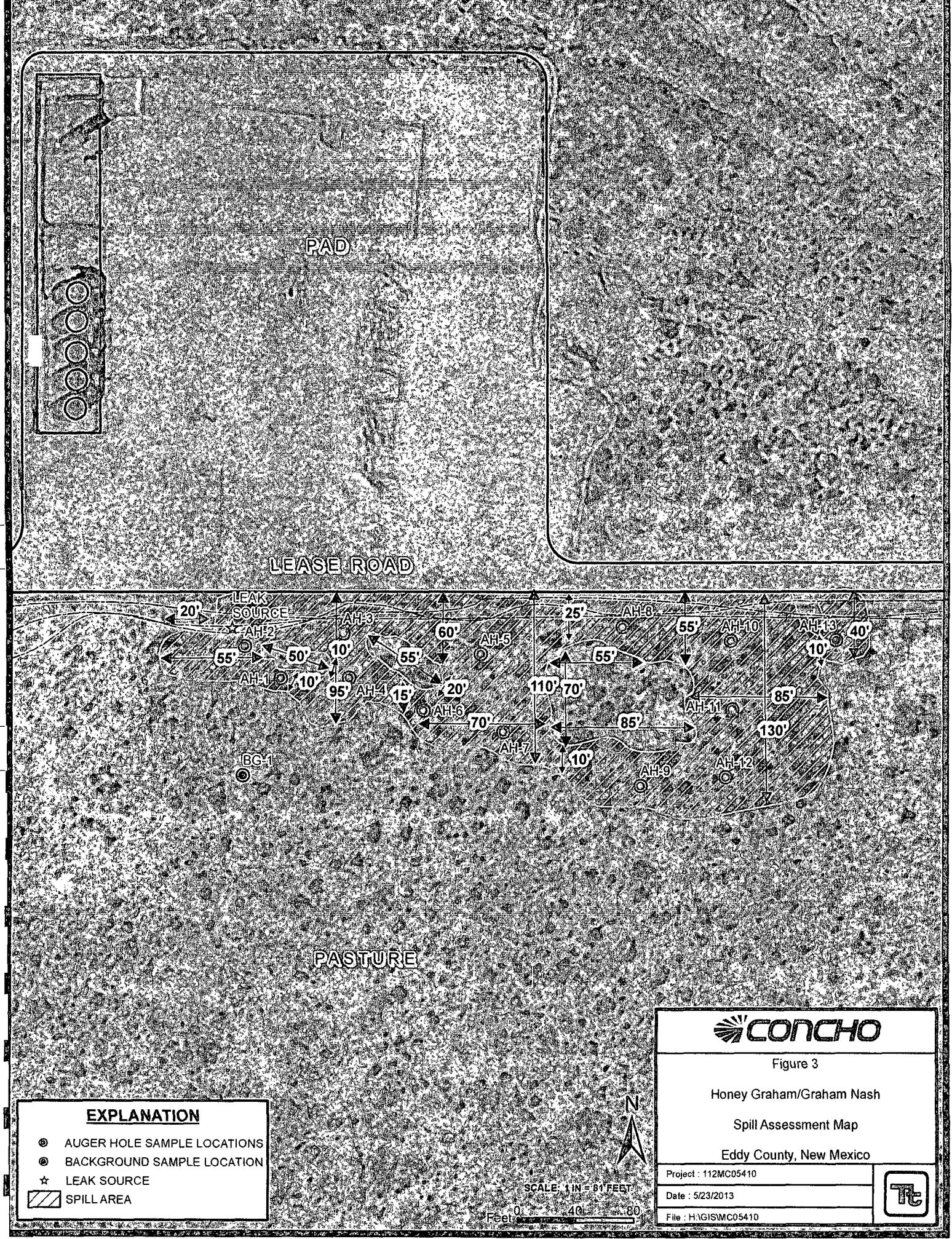


Ike Tavarez, PG
Senior Project Manager

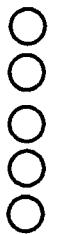
cc: Robert McNeill – COG

Figures

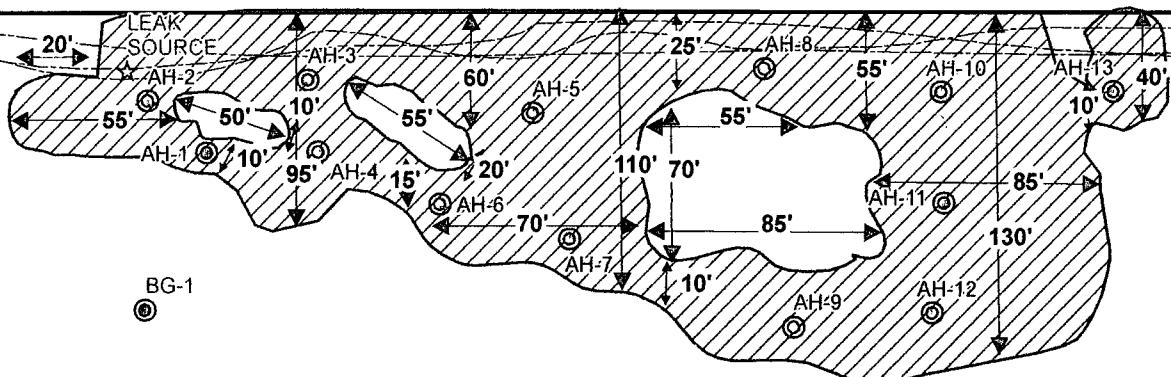




PAD



LEASE ROAD



PASTURE

EXPLANATION

- Ⓐ AUGER HOLE SAMPLE LOCATIONS
- Ⓑ BACKGROUND SAMPLE LOCATION
- ★ LEAK SOURCE
- / SPILL AREA

SCALE: 1 IN = 81 FEET
Feet 0 40 80



CONCHO

Figure 3

Honey Graham/Graham Nash

Spill Assessment Map

Eddy County, New Mexico

Project : 112MC05410

Date : 5/23/2013

File : H:\GIS\MC05410



HONEYGRAHAM/
GRAHAM NASH



Debtors Drive

 CONCHO

Figure 4

Honey Graham/Graham Nash

Aerial Map

Eddy County, New Mexico

Project : 112MC05410

Date : 9/27/2013

File : H:\GIS\MC05410



EXPLANATION

- ① SITE LOCATION

SCALE: 1 IN = 11250 FEET

0 250 500

Feet

Tables

Table 1
COG Operating LLC.
Honey Graham/ Graham Nash
Eddy County, New Mexico

Table 1
COG Operating LLC.
Honey Graham/ Graham Nash
Eddy County, New Mexico

Table 1
COG Operating LLC.
Honey Graham/ Graham Nash
Eddy County, New Mexico

Table 1
COG Operating LLC.
Honey Graham/ Graham Nash
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COG Operating LLC.
Honey Graham/ Graham Nash
Eddy County, New Mexico

Sample ID	Sample Date	BEB Sample Depth (ft)	Excavation Bottom Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total						
Background 1	5/15/2013	0-1	0	X		-	-	-	-	-	-	-	-	7,380
	"	1-1.5	"	X		-	-	-	-	-	-	-	-	3,420
	"	2-2.5	"	X		-	-	-	-	-	-	-	-	2,710
	"	3-3.5	"	X		-	-	-	-	-	-	-	-	2,610
	"	4-4.5	"	X		-	-	-	-	-	-	-	-	1,740
	"	5-5.5	"	X		-	-	-	-	-	-	-	-	1,110
	"	6-6.5	"	X		-	-	-	-	-	-	-	-	1,480
	"	7-7.5	"	X		-	-	-	-	-	-	-	-	2,540
Background 2	5/30/2013	0-1	0	X		-	-	-	-	-	-	-	-	3,770
	"	1-1.5	"	X		-	-	-	-	-	-	-	-	1,210
	"	2-2.5	"	X		-	-	-	-	-	-	-	-	2,920
	"	3-3.5	"	X		-	-	-	-	-	-	-	-	2,920
	"	4-4.5	"	X		-	-	-	-	-	-	-	-	3,460
	"	5-5.5	"	X		-	-	-	-	-	-	-	-	3,430
	"	6-6.5	"	X		-	-	-	-	-	-	-	-	3,100
	"	7-7.5	"	X		-	-	-	-	-	-	-	-	3,330

(-) Not Analyzed

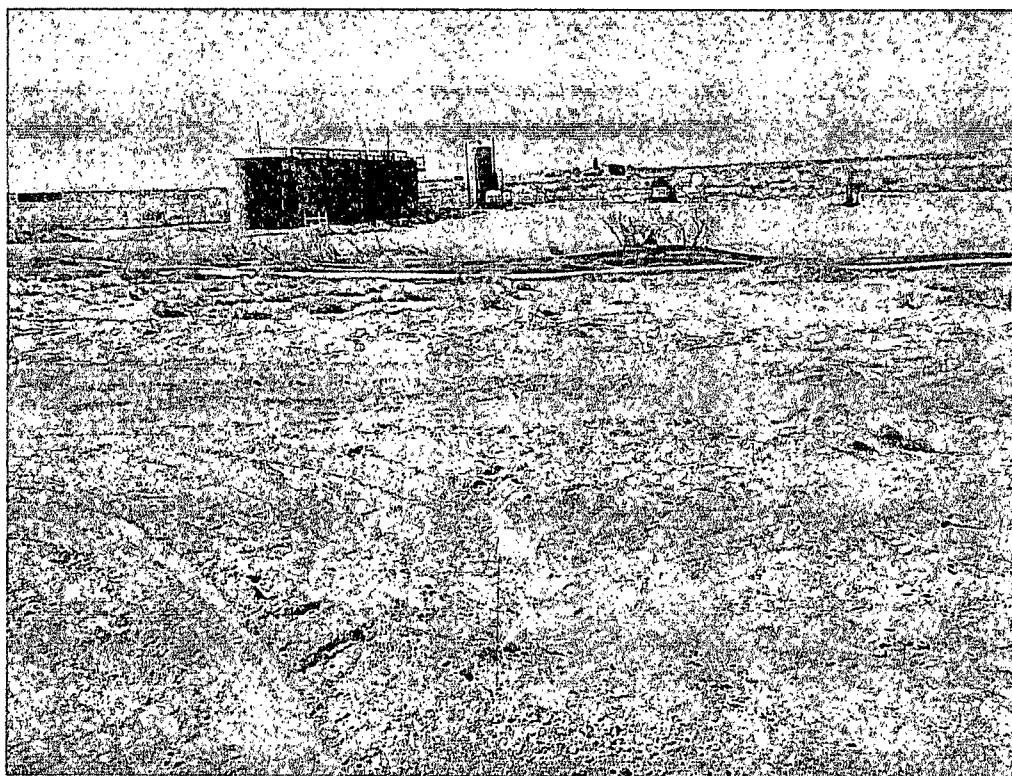
(BEB) Below Excavation Bottom

Photos

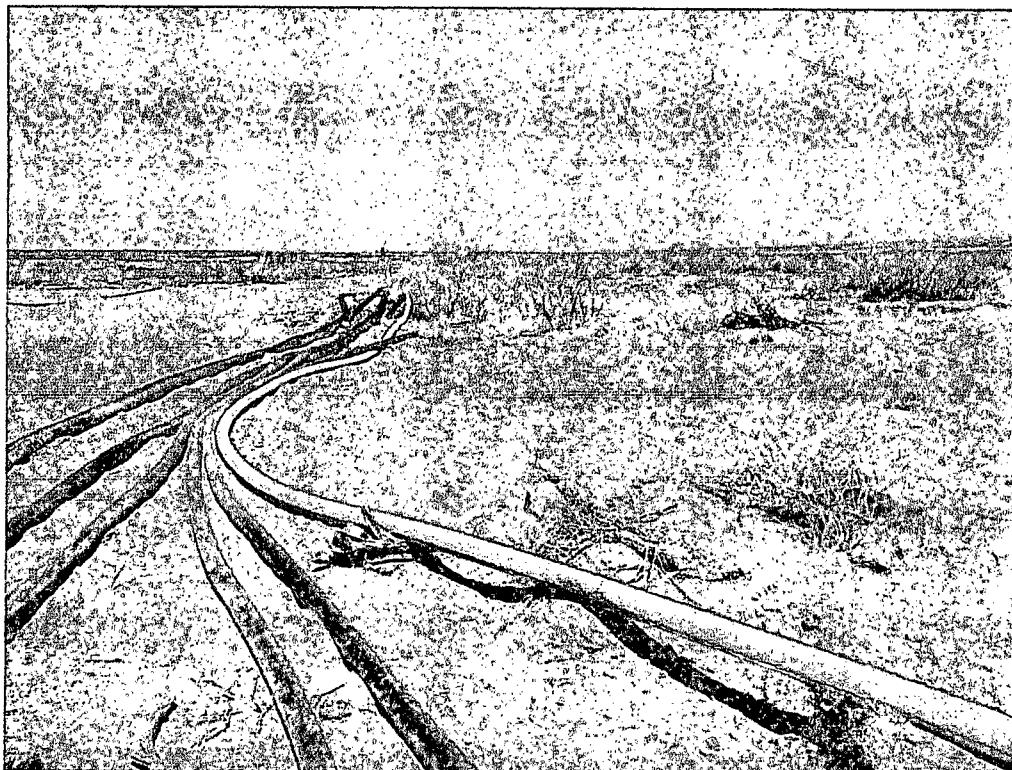
COG Operating LLC
Honeygraham – Graham Nash Gathering Line
Eddy County, New Mexico



TETRATECH



View North – View of AH-2

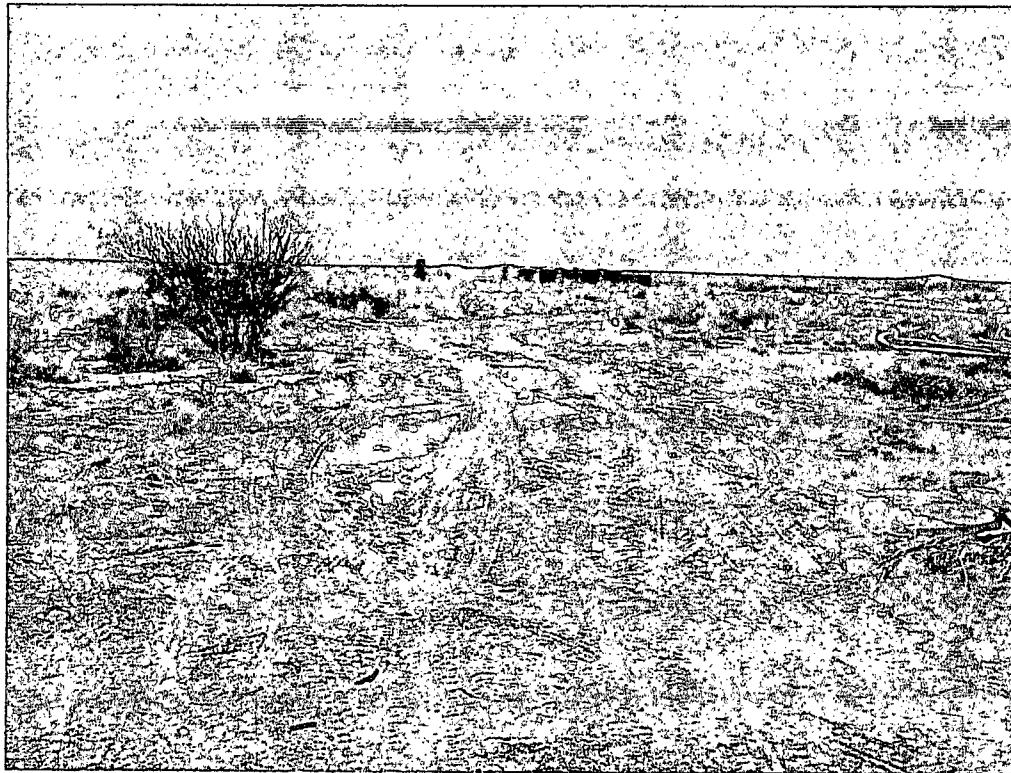


View East – Area of gathering lines

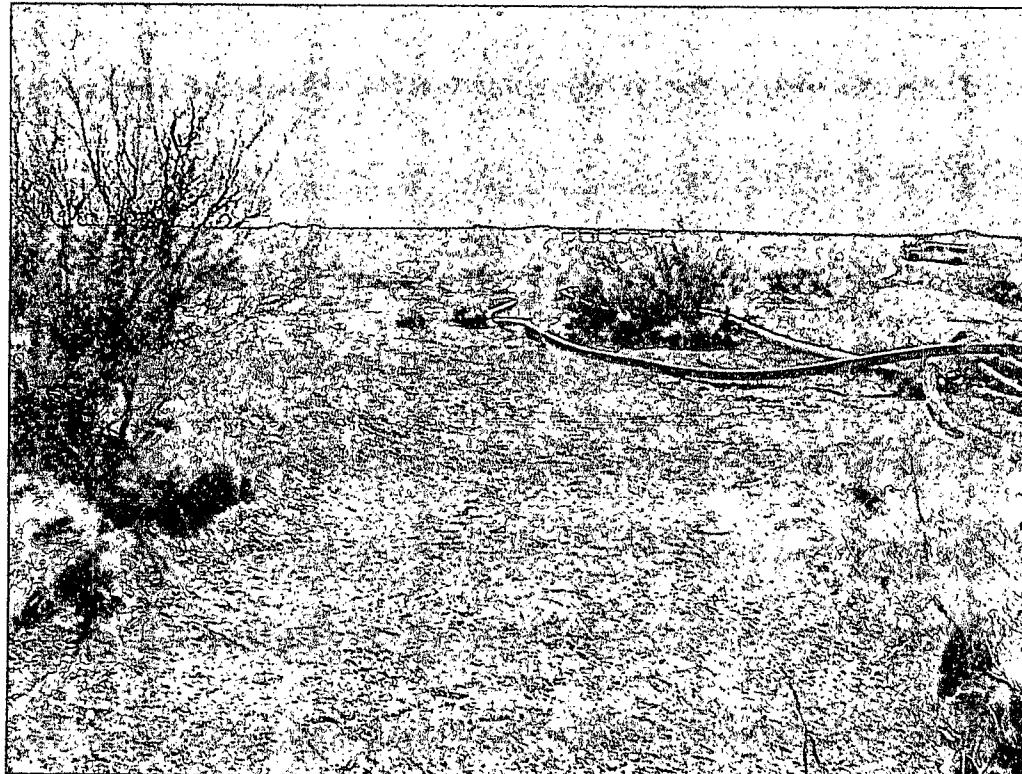
COG Operating LLC
Honeygraham – Graham Nash Gathering Line
Eddy County, New Mexico



TETRA TECH



View West – Middle of spill area

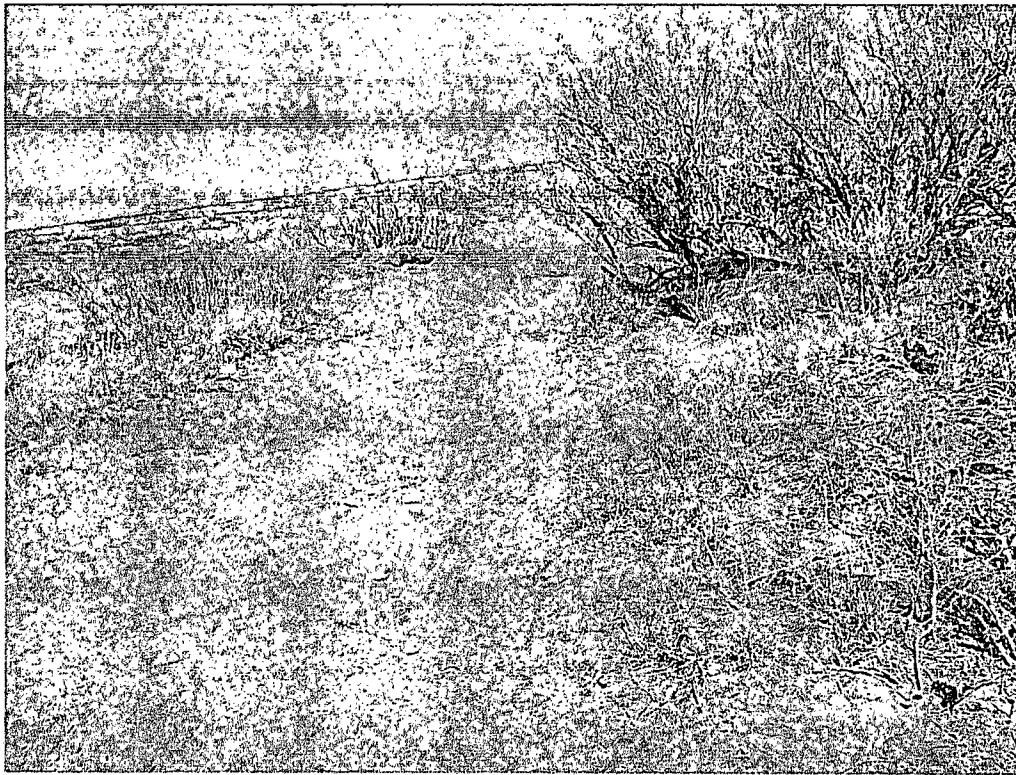


View West – South end of spill

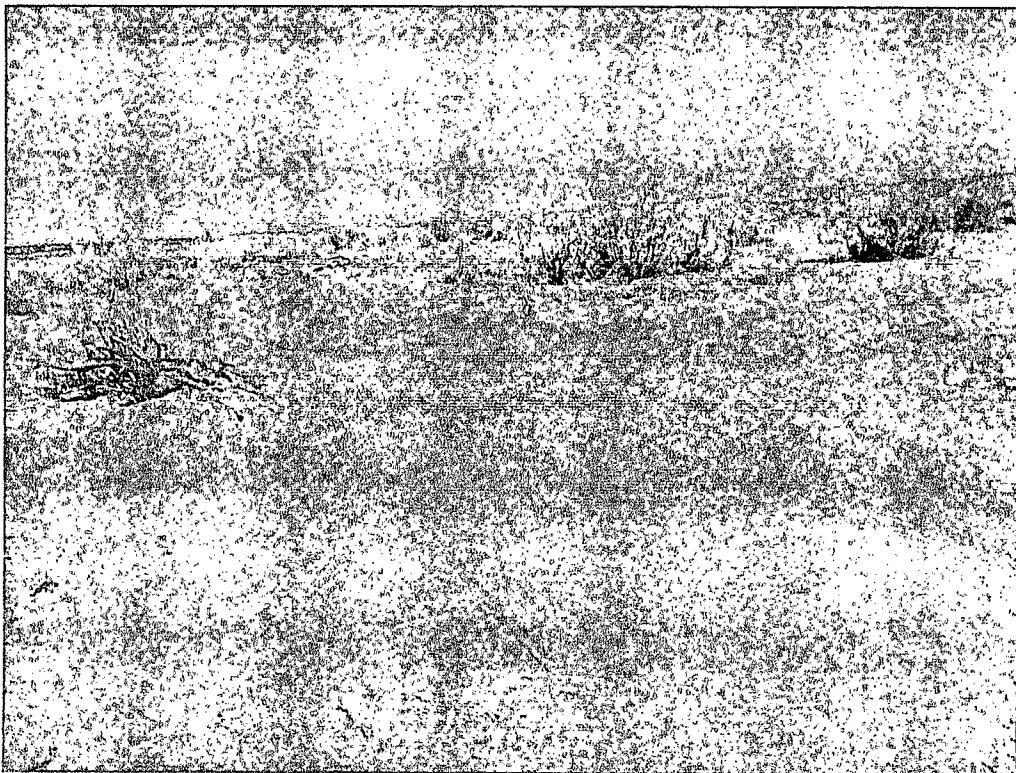
COG Operating LLC
Honeygraham – Graham Nash Gathering Line
Eddy County, New Mexico



TETRA TECH



View East– Area of AH-13



View East – Area of AH-5

Appendix A

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

State of New Mexico
 Energy Minerals and Natural Resources
 Oil Conservation Division
 1220 South St. Francis Dr.
 Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

Initial Report

Final Report

Name of Company	COG OPERATING LLC	Contact	Pat Ellis
Address	600 West Illinois Avenue, Midland, TX 79701	Telephone No.	432-230-0077
Facility Name	HONEYGRAHAM / GRAHAM NASH	Facility Type	GATHERING LINE

Surface Owner STATE	Mineral Owner	Lease No. (API#) 30-15-38488 HG #6 (API#) 30-15-37595 HG #7 (API#) 30-15-37498 GN #1
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LOCATION OF RELEASE

Unit Letter D	Section 29	Township 26S	Range 28E	Feet from the	North/South Line	Feet from the	East/West Line	County EDDY
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Latitude 32 01.178 Longitude 104 06.968

NATURE OF RELEASE

Type of Release Produced water	Volume of Release 100bbls	Volume Recovered 40bbls
Source of Release Gathering line	Date and Hour of Occurrence 04/15/2013	Date and Hour of Discovery 04/15/2013 5:00pm
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Bratcher - NMOCD	
By Whom? Michelle Mullins	Date and Hour 04/16/2013 10:41am	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

A 4" water gathering line fractured possibly due to sun fatigue and age. The 4" gathering line has been replaced.

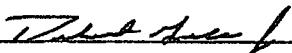
Describe Area Affected and Cleanup Action Taken.*

Initially an estimated 100bbls were released due to a fracture in a 4" gathering line in the pasture. We were able to recover 40bbls of produced water using a vacuum truck. The gathering line included the Honey Graham #6&7 and Graham Nash #1. Tetra Tech will sample the spill site area to delineate any possible contamination from the release and we will present a work plan to the NMOCD for approval prior to any significant remediation work.

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

OIL CONSERVATION DIVISION

Signature:



Printed Name:

Robert Grubbs Jr.

Approved by District Supervisor:

Title:

Senior Environmental Coordinator

Approval Date:

Expiration Date:

E-mail Address:

rgrubbs@concho.com

Conditions of Approval:

Attached

Date: 04-30-2013 Phone: 432-661-6601

* Attach Additional Sheets If Necessary

District I
 1625 N. French Dr., Hobbs, NM 88240
 District II
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 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 16 on back
 side of form

Release Notification and Corrective Action

OPERATOR

Initial Report

Final Report

Name of Company	COG Operating LLC	Contact	Pat Ellis
Address	600 West Illinois Ave, Midland, Texas 79701	Telephone No.	(432) 230-0077
Facility Name	Honey Graham / Graham Nash	Facility Type	Gathering Line
Surface Owner: Federal	Mineral Owner	Lease No. (API#) 30-15-38488 HG#6 (API#) 30-15-37595 HG#7 (API#) 30-15-37498 GN#1	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	29	26S	28E					EDDY

Latitude N 32.01906° Longitude W 104.11605°

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release 100 bbls	Volume Recovered 40 bbls
Source of Release: Gathering Line	Date and Hour of Occurrence	Date and Hour of Discovery
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Bratcher - NMOCD	
By Whom? Michelle Mullins	Date and Hour 4/16/2013 10:41 a.m.	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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.*

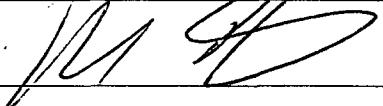
A 4" water gathering line fractured possibly due to sun fatigue and age. The 4" gathering line has been replaced.

Describe Area Affected and Cleanup Action Taken.*

Tetra Tech personnel inspected the site and collected samples to define the spills extent. Due to the geology of the area, surface chlorides were higher than the samples collected. 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.

OIL CONSERVATION DIVISION

Signature: 	Approved by District Supervisor:	
Printed Name: Ike Tavarez		
Title: Project Manager	Approval Date:	Expiration Date:
E-mail Address: Ike.Tavarez@TetraTech.com	Conditions of Approval:	
Date: 9-25-13	Attached <input type="checkbox"/>	
Phone: (432) 682-4559		

* Attach Additional Sheets If Necessary

Appendix B

Water Well Data
Average Depth to Groundwater (ft)
COG-Honeygraham/Graham Nash
Eddy County, New Mexico

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

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

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

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

25 South			28 East		
6	5	4	35	3	1
	59		32		
7	8	9	10	11	12
18	17	16	15	48	13
67			49		
19	20	21	22	23	24
	86				
30	29	28	27	26	25
	15	90	30		
31	32	33	34	35	36
			40		

26 South			29 East		
6	5	4	3	2	1
40					
7	8	9	10	11	12
				40	
18	17	16	15	14	13
				60	
19	20	21	22	23	24
30	29	28	27	26	25
31	32	115	33	34	36

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

26 South			28 East		
6	5	4	3	2	1
			21		
7	8	9	10	11	12
				100	
18	17	16	15	14	13
			120	68	
19	20	21	22	23	24
			120		
30	29	28	27	26	25
	SITE				
31	32	33	34	35	36

26 South			29 East		
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
			125		
19	20	21	22	23	24
			67		
30	29	28	27	26	25
			69		
31	32	33	34	35	36

- New Mexico State Engineers Well Reports
- USGS Well Reports
- Geology and Groundwater Conditions in Southern Eddy, County, NM
- NMOCD - Groundwater Data
- Field water level
- New Mexico Water and Infrastructure Data System

Appendix C

Summary Report

(Corrected Report)

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

Report Date: May 30, 2013

Work Order: 13052002

Project Location: Eddy Co., NM
 Project Name: COG/Honey Graham/Graham Nash
 Project Number: 112MC05410

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
329652	AH-1 0-1'	soil	2013-05-16	00:00	2013-05-17
329653	AH-1 1-1.5'	soil	2013-05-16	00:00	2013-05-17
329654	AH-1 2-2.5'	soil	2013-05-16	00:00	2013-05-17
329655	AH-1 3-3.5'	soil	2013-05-16	00:00	2013-05-17
329656	AH-1 4-4.5'	soil	2013-05-16	00:00	2013-05-17
329657	AH-1 5-5.5'	soil	2013-05-16	00:00	2013-05-17
329658	AH-1 6-6.5'	soil	2013-05-16	00:00	2013-05-17
329659	AH-1 7-7.5'	soil	2013-05-16	00:00	2013-05-17
329660	AH-2 0-1'	soil	2013-05-16	00:00	2013-05-17
329661	AH-2 1-1.5'	soil	2013-05-16	00:00	2013-05-17
329662	AH-2 2-2.5'	soil	2013-05-16	00:00	2013-05-17
329663	AH-2 3-3.5'	soil	2013-05-16	00:00	2013-05-17
329664	AH-2 4-4.5'	soil	2013-05-16	00:00	2013-05-17
329665	AH-2 5-5.5'	soil	2013-05-16	00:00	2013-05-17
329666	AH-2 6-6.5'	soil	2013-05-16	00:00	2013-05-17
329667	AH-2 7-7.5'	soil	2013-05-16	00:00	2013-05-17
329668	AH-3 0-1'	soil	2013-05-16	00:00	2013-05-17
329669	AH-3 1-1.5'	soil	2013-05-16	00:00	2013-05-17
329670	AH-3 2-2.5'	soil	2013-05-16	00:00	2013-05-17
329671	AH-3 3-3.5'	soil	2013-05-16	00:00	2013-05-17
329672	AH-3 4-4.5'	soil	2013-05-16	00:00	2013-05-17
329673	AH-3 5-5.5'	soil	2013-05-16	00:00	2013-05-17
329674	AH-3 6-6.5'	soil	2013-05-16	00:00	2013-05-17
329675	AH-3 7-7.5'	soil	2013-05-16	00:00	2013-05-17
329676	AH-4 0-1'	soil	2013-05-16	00:00	2013-05-17
329677	AH-4 1-1.5'	soil	2013-05-16	00:00	2013-05-17
329678	AH-4 2-2.5'	soil	2013-05-16	00:00	2013-05-17
329679	AH-4 3-3.5'	soil	2013-05-16	00:00	2013-05-17

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
329680	AH-4 4-4.5'	soil	2013-05-16	00:00	2013-05-17
329681	AH-4 5-5.5'	soil	2013-05-16	00:00	2013-05-17
329682	AH-4 6-6.5'	soil	2013-05-16	00:00	2013-05-17
329683	AH-4 7-7.5'	soil	2013-05-16	00:00	2013-05-17
329684	AH-5 0-1'	soil	2013-05-16	00:00	2013-05-17
329685	AH-5 1-1.5'	soil	2013-05-16	00:00	2013-05-17
329686	AH-5 2-2.5'	soil	2013-05-16	00:00	2013-05-17
329687	AH-5 3-3.5'	soil	2013-05-16	00:00	2013-05-17
329688	AH-5 4-4.5'	soil	2013-05-16	00:00	2013-05-17
329689	AH-6 0-1'	soil	2013-05-16	00:00	2013-05-17
329690	AH-6 1-1.5'	soil	2013-05-16	00:00	2013-05-17
329691	AH-6 2-2.5'	soil	2013-05-16	00:00	2013-05-17
329692	AH-6 3-3.5'	soil	2013-05-16	00:00	2013-05-17
329693	AH-6 4-4.5'	soil	2013-05-16	00:00	2013-05-17
329694	AH-7 0-1'	soil	2013-05-16	00:00	2013-05-17
329695	AH-7 1-1.5'	soil	2013-05-16	00:00	2013-05-17
329696	AH-7 2-2.5'	soil	2013-05-16	00:00	2013-05-17
329697	AH-7 3-3.5'	soil	2013-05-16	00:00	2013-05-17
329698	AH-7 4-4.5'	soil	2013-05-16	00:00	2013-05-17
329699	AH-8 0-1'	soil	2013-05-16	00:00	2013-05-17
329700	AH-8 1-1.5'	soil	2013-05-16	00:00	2013-05-17
329701	AH-8 2-2.5'	soil	2013-05-16	00:00	2013-05-17
329702	AH-8 3-3.5'	soil	2013-05-16	00:00	2013-05-17
329703	AH-8 4-4.5'	soil	2013-05-16	00:00	2013-05-17
329704	AH-9 0-1'	soil	2013-05-16	00:00	2013-05-17
329705	AH-9 1-1.5'	soil	2013-05-16	00:00	2013-05-17
329706	AH-9 2-2.5'	soil	2013-05-16	00:00	2013-05-17
329707	AH-9 3-3.5'	soil	2013-05-16	00:00	2013-05-17
329708	AH-9 4-4.5'	soil	2013-05-16	00:00	2013-05-17
329709	AH-10 0-1'	soil	2013-05-16	00:00	2013-05-17
329710	AH-10 1-1.5'	soil	2013-05-16	00:00	2013-05-17
329711	AH-10 2-2.5'	soil	2013-05-16	00:00	2013-05-17
329712	AH-10 3-3.5'	soil	2013-05-16	00:00	2013-05-17
329713	AH-10 4-4.5'	soil	2013-05-16	00:00	2013-05-17
329714	AH-10 5-5.5'	soil	2013-05-16	00:00	2013-05-17
329715	AH-10 6-6.5'	soil	2013-05-16	00:00	2013-05-17
329716	AH-11 0-1'	soil	2013-05-16	00:00	2013-05-17
329717	AH-11 1-1.5'	soil	2013-05-16	00:00	2013-05-17
329718	AH-11 2-2.5'	soil	2013-05-16	00:00	2013-05-17
329719	AH-11 3-3.5'	soil	2013-05-16	00:00	2013-05-17
329720	AH-11 4-4.5'	soil	2013-05-16	00:00	2013-05-17
329721	AH-11 5-5.5'	soil	2013-05-16	00:00	2013-05-17
329722	AH-11 6-6.5'	soil	2013-05-16	00:00	2013-05-17
329723	AH-12 0-1'	soil	2013-05-16	00:00	2013-05-17
329724	AH-12 1-1.5'	soil	2013-05-16	00:00	2013-05-17
329725	AH-12 2-2.5'	soil	2013-05-16	00:00	2013-05-17
329726	AH-12 3-3.5'	soil	2013-05-16	00:00	2013-05-17
329727	AH-12 4-4.5'	soil	2013-05-16	00:00	2013-05-17
329728	AH-12 5-5.5'	soil	2013-05-16	00:00	2013-05-17

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
329729	AH-12 6-6.5'	soil	2013-05-16	00:00	2013-05-17
329730	AH-13 0-1'	soil	2013-05-16	00:00	2013-05-17
329731	AH-13 1-1.5'	soil	2013-05-16	00:00	2013-05-17
329732	AH-13 2-2.5'	soil	2013-05-16	00:00	2013-05-17
329733	AH-13 3-3.5'	soil	2013-05-16	00:00	2013-05-17
329734	AH-13 4-4.5'	soil	2013-05-16	00:00	2013-05-17
329735	AH-13 5-5.5'	soil	2013-05-16	00:00	2013-05-17
329736	AH-13 6-6.5'	soil	2013-05-16	00:00	2013-05-17
329737	Background 1 0-1'	soil	2013-05-15	00:00	2013-05-17
329738	Background 1 1-1.5'	soil	2013-05-15	00:00	2013-05-17
329739	Background 1 2-2.5'	soil	2013-05-15	00:00	2013-05-17
329740	Background 1 3-3.5'	soil	2013-05-15	00:00	2013-05-17
329741	Background 1 4-4.5'	soil	2013-05-15	00:00	2013-05-17
329742	Background 5-5.5'	soil	2013-05-15	00:00	2013-05-17
329743	Background 6-6.5'	soil	2013-05-15	00:00	2013-05-17
329744	Background 7-7.5'	soil	2013-05-15	00:00	2013-05-17

Sample - Field Code	BTEX				TPH DRO - NEW DRO (mg/Kg)	TPH GRO GRO (mg/Kg)
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)		
329652 - AH-1 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	4.47 Qs
329660 - AH-2 0-1'					<50.0	4.57 Qs
329668 - AH-3 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	4.68 Qs
329676 - AH-4 0-1'					<50.0	4.56 Qs
329684 - AH-5 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	4.42 Qs
329689 - AH-6 0-1'					<50.0	4.58 Qs
329694 - AH-7 0-1'					<50.0	4.58 Qs
329699 - AH-8 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	4.62 Qs
329704 - AH-9 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	4.32 Qs
329709 - AH-10 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	4.29 Qs
329716 - AH-11 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	4.72 Qs
329723 - AH-12 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	4.60 Qs
329730 - AH-13 0-1'					<50.0	4.39 Qs

Sample: 329652 - AH-1 0-1'

Param	Flag	Result	Units	RL
Chloride		3110	mg/Kg	4

Sample: 329653 - AH-1 1-1.5'

Param	Flag	Result	Units	RL
Chloride		3470	mg/Kg	4

Sample: 329654 - AH-1 2-2.5'

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Param	Flag	Result	Units	RL
Chloride		2740	mg/Kg	4

Sample: 329655 - AH-1 3-3.5'

Param	Flag	Result	Units	RL
Chloride		4120	mg/Kg	4

Sample: 329656 - AH-1 4-4.5'

Param	Flag	Result	Units	RL
Chloride		3670	mg/Kg	4

Sample: 329657 - AH-1 5-5.5'

Param	Flag	Result	Units	RL
Chloride		3010	mg/Kg	4

Sample: 329658 - AH-1 6-6.5'

Param	Flag	Result	Units	RL
Chloride		2610	mg/Kg	4

Sample: 329659 - AH-1 7-7.5'

Param	Flag	Result	Units	RL
Chloride		1630	mg/Kg	4

Sample: 329660 - AH-2 0-1'

Param	Flag	Result	Units	RL
Chloride		1170	mg/Kg	4

Sample: 329661 - AH-2 1-1.5'

Param	Flag	Result	Units	RL
Chloride		3300	mg/Kg	4

Sample: 329662 - AH-2 2-2.5'

Param	Flag	Result	Units	RL
Chloride		3980	mg/Kg	4

Sample: 329663 - AH-2 3-3.5'

Param	Flag	Result	Units	RL
Chloride		4730	mg/Kg	4

Sample: 329664 - AH-2 4-4.5'

Param	Flag	Result	Units	RL
Chloride		3550	mg/Kg	4

Sample: 329665 - AH-2 5-5.5'

Param	Flag	Result	Units	RL
Chloride		2720	mg/Kg	4

Sample: 329666 - AH-2 6-6.5'

Param	Flag	Result	Units	RL
Chloride		3090	mg/Kg	4

Sample: 329667 - AH-2 7-7.5'

Param	Flag	Result	Units	RL
Chloride		1940	mg/Kg	4

Sample: 329668 - AH-3 0-1'

Param	Flag	Result	Units	RL
Chloride		3220	mg/Kg	4

Sample: 329669 - AH-3 1-1.5'

Param	Flag	Result	Units	RL
Chloride		3450	mg/Kg	4

Sample: 329670 - AH-3 2-2.5'

Param	Flag	Result	Units	RL
Chloride		3160	mg/Kg	4

Sample: 329671 - AH-3 3-3.5'

Param	Flag	Result	Units	RL
Chloride		3040	mg/Kg	4

Sample: 329672 - AH-3 4-4.5'

Param	Flag	Result	Units	RL
Chloride		2440	mg/Kg	4

Sample: 329673 - AH-3 5-5.5'

Param	Flag	Result	Units	RL
Chloride		1980	mg/Kg	4

Sample: 329674 - AH-3 6-6.5'

Param	Flag	Result	Units	RL
Chloride		1200	mg/Kg	4

Sample: 329675 - AH-3 7-7.5'

Param	Flag	Result	Units	RL
Chloride		1100	mg/Kg	4

Sample: 329676 - AH-4 0-1'

Param	Flag	Result	Units	RL
Chloride		2220	mg/Kg	4

Sample: 329677 - AH-4 1-1.5'

Param	Flag	Result	Units	RL
Chloride		3350	mg/Kg	4

Sample: 329678 - AH-4 2-2.5'

Param	Flag	Result	Units	RL
Chloride		975	mg/Kg	4

Sample: 329679 - AH-4 3-3.5'

Param	Flag	Result	Units	RL
Chloride		3820	mg/Kg	4

Sample: 329680 - AH-4 4-4.5'

Param	Flag	Result	Units	RL
Chloride		3180	mg/Kg	4

Sample: 329681 - AH-4 5-5.5'

Param	Flag	Result	Units	RL
Chloride		2790	mg/Kg	4

Sample: 329682 - AH-4 6-6.5'

Param	Flag	Result	Units	RL
Chloride		2820	mg/Kg	4

Sample: 329683 - AH-4 7-7.5'

Param	Flag	Result	Units	RL
Chloride		2040	mg/Kg	4

Sample: 329684 - AH-5 0-1'

Param	Flag	Result	Units	RL
Chloride		7680	mg/Kg	4

Sample: 329685 - AH-5 1-1.5'

Param	Flag	Result	Units	RL
Chloride		9320	mg/Kg	4

Sample: 329686 - AH-5 2-2.5'

Param	Flag	Result	Units	RL
Chloride		4130	mg/Kg	4

Sample: 329687 - AH-5 3-3.5'

Param	Flag	Result	Units	RL
Chloride		3220	mg/Kg	4

Sample: 329688 - AH-5 4-4.5'

Param	Flag	Result	Units	RL
Chloride		3590	mg/Kg	4

Sample: 329689 - AH-6 0-1'

Param	Flag	Result	Units	RL
Chloride		2010	mg/Kg	4

Sample: 329690 - AH-6 1-1.5'

Param	Flag	Result	Units	RL
Chloride		2910	mg/Kg	4

Sample: 329691 - AH-6 2-2.5'

Param	Flag	Result	Units	RL
Chloride		3650	mg/Kg	4

Sample: 329692 - AH-6 3-3.5'

Param	Flag	Result	Units	RL
Chloride		1990	mg/Kg	4

Sample: 329693 - AH-6 4-4.5'

Param	Flag	Result	Units	RL
Chloride		1490	mg/Kg	4

Sample: 329694 - AH-7 0-1'

Param	Flag	Result	Units	RL
Chloride		1460	mg/Kg	4

Sample: 329695 - AH-7 1-1.5'

Param	Flag	Result	Units	RL
Chloride		1800	mg/Kg	4

Sample: 329696 - AH-7 2-2.5'

Param	Flag	Result	Units	RL
Chloride		2110	mg/Kg	4

Sample: 329697 - AH-7 3-3.5'

Param	Flag	Result	Units	RL
Chloride		2250	mg/Kg	4

Sample: 329698 - AH-7 4-4.5'

Param	Flag	Result	Units	RL
Chloride		1130	mg/Kg	4

Sample: 329699 - AH-8 0-1'

Param	Flag	Result	Units	RL
Chloride		8270	mg/Kg	4

Sample: 329700 - AH-8 1-1.5'

Param	Flag	Result	Units	RL
Chloride		5220	mg/Kg	4

Sample: 329701 - AH-8 2-2.5'

Param	Flag	Result	Units	RL
Chloride		7140	mg/Kg	4

Sample: 329702 - AH-8 3-3.5'

Param	Flag	Result	Units	RL
Chloride		7130	mg/Kg	4

Sample: 329703 - AH-8 4-4.5'

Param	Flag	Result	Units	RL
Chloride		4560	mg/Kg	4

Sample: 329704 - AH-9 0-1'

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

Sample: 329705 - AH-9 1-1.5'

Param	Flag	Result	Units	RL
Chloride		412	mg/Kg	4

Sample: 329706 - AH-9 2-2.5'

Param	Flag	Result	Units	RL
Chloride		2220	mg/Kg	4

Sample: 329707 - AH-9 3-3.5'

Param	Flag	Result	Units	RL
Chloride		2680	mg/Kg	4

Sample: 329708 - AH-9 4-4.5'

Param	Flag	Result	Units	RL
Chloride		2390	mg/Kg	4

Sample: 329709 - AH-10 0-1'

Param	Flag	Result	Units	RL
Chloride		7220	mg/Kg	4

Sample: 329710 - AH-10 1-1.5'

Param	Flag	Result	Units	RL
Chloride		7370	mg/Kg	4

Sample: 329711 - AH-10 2-2.5'

Param	Flag	Result	Units	RL
Chloride		7650	mg/Kg	4

Sample: 329712 - AH-10 3-3.5'

Param	Flag	Result	Units	RL
Chloride		7230	mg/Kg	4

Sample: 329713 - AH-10 4-4.5'

Param	Flag	Result	Units	RL
Chloride		8110	mg/Kg	4

Sample: 329714 - AH-10 5-5.5'

Param	Flag	Result	Units	RL
Chloride		5080	mg/Kg	4

Sample: 329715 - AH-10 6-6.5'

Param	Flag	Result	Units	RL
Chloride		4310	mg/Kg	4

Sample: 329716 - AH-11 0-1'

Param	Flag	Result	Units	RL
Chloride		5300	mg/Kg	4

Sample: 329717 - AH-11 1-1.5'

Param	Flag	Result	Units	RL
Chloride		3590	mg/Kg	4

Sample: 329718 - AH-11 2-2.5'

Param	Flag	Result	Units	RL
Chloride		2920	mg/Kg	4

Sample: 329719 - AH-11 3-3.5'

Param	Flag	Result	Units	RL
Chloride		1990	mg/Kg	4

Sample: 329720 - AH-11 4-4.5'

Param	Flag	Result	Units	RL
Chloride		1820	mg/Kg	4

Sample: 329721 - AH-11 5-5.5'

Param	Flag	Result	Units	RL
Chloride		1220	mg/Kg	4

Sample: 329722 - AH-11 6-6.5'

Param	Flag	Result	Units	RL
Chloride		1150	mg/Kg	4

Sample: 329723 - AH-12 0-1'

Param	Flag	Result	Units	RL
Chloride		78.5	mg/Kg	4

Sample: 329724 - AH-12 1-1.5'

Param	Flag	Result	Units	RL
Chloride		1190	mg/Kg	4

Sample: 329725 - AH-12 2-2.5'

Param	Flag	Result	Units	RL
Chloride		1760	mg/Kg	4

Sample: 329726 - AH-12 3-3.5'

Param	Flag	Result	Units	RL
Chloride		1540	mg/Kg	4

Sample: 329727 - AH-12 4-4.5'

Param	Flag	Result	Units	RL
Chloride		1650	mg/Kg	4

Sample: 329728 - AH-12 5-5.5'

Param	Flag	Result	Units	RL
Chloride		1380	mg/Kg	4

Sample: 329729 - AH-12 6-6.5'

Param	Flag	Result	Units	RL
Chloride		1450	mg/Kg	4

Sample: 329730 - AH-13 0-1'

Param	Flag	Result	Units	RL
Chloride		7260	mg/Kg	4

Sample: 329731 - AH-13 1-1.5'

Param	Flag	Result	Units	RL
Chloride		7230	mg/Kg	4

Sample: 329732 - AH-13 2-2.5'

Param	Flag	Result	Units	RL
Chloride		5950	mg/Kg	4

Sample: 329733 - AH-13 3-3.5'

Param	Flag	Result	Units	RL
Chloride		4960	mg/Kg	4

Sample: 329734 - AH-13 4-4.5'

Param	Flag	Result	Units	RL
Chloride		4350	mg/Kg	4

Sample: 329735 - AH-13 5-5.5'

Param	Flag	Result	Units	RL
Chloride		3290	mg/Kg	4

Sample: 329736 - AH-13 6-6.5'

Param	Flag	Result	Units	RL
Chloride		3130	mg/Kg	4

Sample: 329737 - Background 1 0-1'

Param	Flag	Result	Units	RL
Chloride		7380	mg/Kg	4

Sample: 329738 - Background 1 1-1.5'

Param	Flag	Result	Units	RL
Chloride		3420	mg/Kg	4

Sample: 329739 - Background 1 2-2.5'

Param	Flag	Result	Units	RL
Chloride		2710	mg/Kg	4

Sample: 329740 - Background 1 3-3.5'

Param	Flag	Result	Units	RL
Chloride		2610	mg/Kg	4

Sample: 329741 - Background 1 4-4.5'

Param	Flag	Result	Units	RL
Chloride		1740	mg/Kg	4

Sample: 329742 - Background 5-5.5'

Param	Flag	Result	Units	RL
Chloride		1110	mg/Kg	4

Sample: 329743 - Background 6-6.5'

Param	Flag	Result	Units	RL
Chloride		1480	mg/Kg	4

Sample: 329744 - Background 7-7.5'

Param	Flag	Result	Units	RL
Chloride		2540	mg/Kg	4

TRACEANALYSIS, INC.

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Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report (Corrected Report)

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

Report Date: May 30, 2013

Work Order: 13052002

##

Project Location: Eddy Co., NM
Project Name: COG/Honey Graham/Graham Nash
Project Number: 112MC05410

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
329652	AH-1 0-1'	soil	2013-05-16	00:00	2013-05-17
329653	AH-1 1-1.5'	soil	2013-05-16	00:00	2013-05-17
329654	AH-1 2-2.5'	soil	2013-05-16	00:00	2013-05-17
329655	AH-1 3-3.5'	soil	2013-05-16	00:00	2013-05-17
329656	AH-1 4-4.5'	soil	2013-05-16	00:00	2013-05-17
329657	AH-1 5-5.5'	soil	2013-05-16	00:00	2013-05-17
329658	AH-1 6-6.5'	soil	2013-05-16	00:00	2013-05-17
329659	AH-1 7-7.5'	soil	2013-05-16	00:00	2013-05-17
329660	AH-2 0-1'	soil	2013-05-16	00:00	2013-05-17
329661	AH-2 1-1.5'	soil	2013-05-16	00:00	2013-05-17
329662	AH-2 2-2.5'	soil	2013-05-16	00:00	2013-05-17
329663	AH-2 3-3.5'	soil	2013-05-16	00:00	2013-05-17
329664	AH-2 4-4.5'	soil	2013-05-16	00:00	2013-05-17
329665	AH-2 5-5.5'	soil	2013-05-16	00:00	2013-05-17
329666	AH-2 6-6.5'	soil	2013-05-16	00:00	2013-05-17
329667	AH-2 7-7.5'	soil	2013-05-16	00:00	2013-05-17

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
329668	AH-3 0-1'	soil	2013-05-16	00:00	2013-05-17
329669	AH-3 1-1.5'	soil	2013-05-16	00:00	2013-05-17
329670	AH-3 2-2.5'	soil	2013-05-16	00:00	2013-05-17
329671	AH-3 3-3.5'	soil	2013-05-16	00:00	2013-05-17
329672	AH-3 4-4.5'	soil	2013-05-16	00:00	2013-05-17
329673	AH-3 5-5.5'	soil	2013-05-16	00:00	2013-05-17
329674	AH-3 6-6.5'	soil	2013-05-16	00:00	2013-05-17
329675	AH-3 7-7.5'	soil	2013-05-16	00:00	2013-05-17
329676	AH-4 0-1'	soil	2013-05-16	00:00	2013-05-17
329677	AH-4 1-1.5'	soil	2013-05-16	00:00	2013-05-17
329678	AH-4 2-2.5'	soil	2013-05-16	00:00	2013-05-17
329679	AH-4 3-3.5'	soil	2013-05-16	00:00	2013-05-17
329680	AH-4 4-4.5'	soil	2013-05-16	00:00	2013-05-17
329681	AH-4 5-5.5'	soil	2013-05-16	00:00	2013-05-17
329682	AH-4 6-6.5'	soil	2013-05-16	00:00	2013-05-17
329683	AH-4 7-7.5'	soil	2013-05-16	00:00	2013-05-17
329684	AH-5 0-1'	soil	2013-05-16	00:00	2013-05-17
329685	AH-5 1-1.5'	soil	2013-05-16	00:00	2013-05-17
329686	AH-5 2-2.5'	soil	2013-05-16	00:00	2013-05-17
329687	AH-5 3-3.5'	soil	2013-05-16	00:00	2013-05-17
329688	AH-5 4-4.5'	soil	2013-05-16	00:00	2013-05-17
329689	AH-6 0-1'	soil	2013-05-16	00:00	2013-05-17
329690	AH-6 1-1.5'	soil	2013-05-16	00:00	2013-05-17
329691	AH-6 2-2.5'	soil	2013-05-16	00:00	2013-05-17
329692	AH-6 3-3.5'	soil	2013-05-16	00:00	2013-05-17
329693	AH-6 4-4.5'	soil	2013-05-16	00:00	2013-05-17
329694	AH-7 0-1'	soil	2013-05-16	00:00	2013-05-17
329695	AH-7 1-1.5'	soil	2013-05-16	00:00	2013-05-17
329696	AH-7 2-2.5'	soil	2013-05-16	00:00	2013-05-17
329697	AH-7 3-3.5'	soil	2013-05-16	00:00	2013-05-17
329698	AH-7 4-4.5'	soil	2013-05-16	00:00	2013-05-17
329699	AH-8 0-1'	soil	2013-05-16	00:00	2013-05-17
329700	AH-8 1-1.5'	soil	2013-05-16	00:00	2013-05-17
329701	AH-8 2-2.5'	soil	2013-05-16	00:00	2013-05-17
329702	AH-8 3-3.5'	soil	2013-05-16	00:00	2013-05-17
329703	AH-8 4-4.5'	soil	2013-05-16	00:00	2013-05-17
329704	AH-9 0-1'	soil	2013-05-16	00:00	2013-05-17
329705	AH-9 1-1.5'	soil	2013-05-16	00:00	2013-05-17
329706	AH-9 2-2.5'	soil	2013-05-16	00:00	2013-05-17
329707	AH-9 3-3.5'	soil	2013-05-16	00:00	2013-05-17
329708	AH-9 4-4.5'	soil	2013-05-16	00:00	2013-05-17
329709	AH-10 0-1'	soil	2013-05-16	00:00	2013-05-17
329710	AH-10 1-1.5'	soil	2013-05-16	00:00	2013-05-17
329711	AH-10 2-2.5'	soil	2013-05-16	00:00	2013-05-17
329712	AH-10 3-3.5'	soil	2013-05-16	00:00	2013-05-17
329713	AH-10 4-4.5'	soil	2013-05-16	00:00	2013-05-17

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
329714	AH-10 5-5.5'	soil	2013-05-16	00:00	2013-05-17
329715	AH-10 6-6.5'	soil	2013-05-16	00:00	2013-05-17
329716	AH-11 0-1'	soil	2013-05-16	00:00	2013-05-17
329717	AH-11 1-1.5'	soil	2013-05-16	00:00	2013-05-17
329718	AH-11 2-2.5'	soil	2013-05-16	00:00	2013-05-17
329719	AH-11 3-3.5'	soil	2013-05-16	00:00	2013-05-17
329720	AH-11 4-4.5'	soil	2013-05-16	00:00	2013-05-17
329721	AH-11 5-5.5'	soil	2013-05-16	00:00	2013-05-17
329722	AH-11 6-6.5'	soil	2013-05-16	00:00	2013-05-17
329723	AH-12 0-1'	soil	2013-05-16	00:00	2013-05-17
329724	AH-12 1-1.5'	soil	2013-05-16	00:00	2013-05-17
329725	AH-12 2-2.5'	soil	2013-05-16	00:00	2013-05-17
329726	AH-12 3-3.5'	soil	2013-05-16	00:00	2013-05-17
329727	AH-12 4-4.5'	soil	2013-05-16	00:00	2013-05-17
329728	AH-12 5-5.5'	soil	2013-05-16	00:00	2013-05-17
329729	AH-12 6-6.5'	soil	2013-05-16	00:00	2013-05-17
329730	AH-13 0-1'	soil	2013-05-16	00:00	2013-05-17
329731	AH-13 1-1.5'	soil	2013-05-16	00:00	2013-05-17
329732	AH-13 2-2.5'	soil	2013-05-16	00:00	2013-05-17
329733	AH-13 3-3.5'	soil	2013-05-16	00:00	2013-05-17
329734	AH-13 4-4.5'	soil	2013-05-16	00:00	2013-05-17
329735	AH-13 5-5.5'	soil	2013-05-16	00:00	2013-05-17
329736	AH-13 6-6.5'	soil	2013-05-16	00:00	2013-05-17
329737	Background 1 0-1'	soil	2013-05-15	00:00	2013-05-17
329738	Background 1 1-1.5'	soil	2013-05-15	00:00	2013-05-17
329739	Background 1 2-2.5'	soil	2013-05-15	00:00	2013-05-17
329740	Background 1 3-3.5'	soil	2013-05-15	00:00	2013-05-17
329741	Background 1 4-4.5'	soil	2013-05-15	00:00	2013-05-17
329742	Background 5-5.5'	soil	2013-05-15	00:00	2013-05-17
329743	Background 6-6.5'	soil	2013-05-15	00:00	2013-05-17
329744	Background 7-7.5'	soil	2013-05-15	00:00	2013-05-17

Report Corrections (Work Order 13052002)

- 5/30/13: Reporting re-run of sample 329689 at 1x dilution.

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



Dr. Blair Leftwich, Director

Dr. Michael Abel, Project Manager

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Case Narrative

Samples for project COG/Honey Graham/Graham Nash were received by TraceAnalysis, Inc. on 2013-05-17 and assigned to work order 13052002. Samples for work order 13052002 were received intact at a temperature of 3.8 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	86209	2013-05-27 at 10:45	101749	2013-05-28 at 08:15
Chloride (Titration)	SM 4500-Cl B	86091	2013-05-21 at 10:22	101644	2013-05-22 at 14:41
Chloride (Titration)	SM 4500-Cl B	86091	2013-05-21 at 10:22	101645	2013-05-22 at 14:42
Chloride (Titration)	SM 4500-Cl B	86091	2013-05-21 at 10:22	101646	2013-05-22 at 14:42
Chloride (Titration)	SM 4500-Cl B	86091	2013-05-21 at 10:22	101647	2013-05-22 at 14:43
Chloride (Titration)	SM 4500-Cl B	86091	2013-05-21 at 10:22	101648	2013-05-22 at 14:44
Chloride (Titration)	SM 4500-Cl B	86091	2013-05-21 at 10:22	101649	2013-05-22 at 14:45
Chloride (Titration)	SM 4500-Cl B	86124	2013-05-22 at 10:39	101714	2013-05-23 at 11:14
Chloride (Titration)	SM 4500-Cl B	86124	2013-05-22 at 10:39	101715	2013-05-23 at 11:15
Chloride (Titration)	SM 4500-Cl B	86124	2013-05-22 at 10:39	101716	2013-05-24 at 11:16
Chloride (Titration)	SM 4500-Cl B	86124	2013-05-22 at 10:39	101717	2013-05-24 at 11:17
TPH DRO - NEW	S 8015 D	86150	2013-05-21 at 11:00	101673	2013-05-23 at 10:59
TPH DRO - NEW	S 8015 D	86291	2013-05-29 at 15:00	101846	2013-05-30 at 09:10
TPH GRO	S 8015 D	86200	2013-05-23 at 15:45	101739	2013-05-26 at 18:39

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 13052002 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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112MC05410

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COG/Honey Graham/Graham Nash

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Analytical Report

Sample: 329652 - AH-1 0-1'

Laboratory:	Midland	Analytical Method:	S 8021B	Prep Method:	S 5035
Analysis:	BTEX	Date Analyzed:	2013-05-28	Analyzed By:	AH
QC Batch:	101749	Sample Preparation:	2013-05-27	Prepared By:	AH
Prep Batch:	86209				

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike	Percent	Recovery
						Amount	Recovery	Limits
Trifluorotoluene (TFT)			1.82	mg/Kg	1	2.00	91	70 - 130
4-Bromofluorobenzene (4-BFB)			1.94	mg/Kg	1	2.00	97	70 - 130

Sample: 329652 - AH-1 0-1'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-05-22	Analyzed By:	AR
QC Batch:	101644	Sample Preparation:	2013-05-21	Prepared By:	AR
Prep Batch:	86091				

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

Sample: 329652 - AH-1 0-1'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2013-05-23	Analyzed By:	CW
QC Batch:	101673	Sample Preparation:	2011-05-21	Prepared By:	CW
Prep Batch:	86150				

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

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

Sample: 329652 - AH-1 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 101739
Prep Batch: 86200

Analytical Method: S 8015 D
Date Analyzed: 2013-05-26
Sample Preparation: 2013-05-23

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

Parameter	Flag	Cert	Result	RL		Dilution	Percent Recovery	Recovery Limits
				B.Qs	1			
GRO			4.47		mg/Kg	1	4.00	

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.85	mg/Kg	1	2.00	92	70 - 130
4-Bromofluorobenzene (4-BFB)			1.83	mg/Kg	1	2.00	92	70 - 130

Sample: 329653 - AH-1 1-1.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 101644
Prep Batch: 86091

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-05-22
Sample Preparation: 2013-05-21

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

Parameter	Flag	Cert	Result	RL		Dilution	Percent Recovery	Recovery Limits
				B.Qs	1			
Chloride			3470		mg/Kg	10	4.00	

Sample: 329654 - AH-1 2-2.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 101644
Prep Batch: 86091

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-05-22
Sample Preparation: 2013-05-21

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

continued ...

Report Date: May 30, 2013
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sample 329654 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			2740	mg/Kg	10	4.00

Sample: 329655 - AH-1 3-3.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 101644
Prep Batch: 86091

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-05-22
Sample Preparation: 2013-05-21

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			4120	mg/Kg	10	4.00

Sample: 329656 - AH-1 4-4.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 101644
Prep Batch: 86091

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-05-22
Sample Preparation: 2013-05-21

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			3670	mg/Kg	10	4.00

Sample: 329657 - AH-1 5-5.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 101644
Prep Batch: 86091

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-05-22
Sample Preparation: 2013-05-21

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

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Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			3010	mg/Kg	10	4.00

Sample: 329658 - AH-1 6-6.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 101644 Date Analyzed: 2013-05-22 Analyzed By: AR
Prep Batch: 86091 Sample Preparation: 2013-05-21 Prepared By: AR

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			2610	mg/Kg	10	4.00

Sample: 329659 - AH-1 7-7.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 101644 Date Analyzed: 2013-05-22 Analyzed By: AR
Prep Batch: 86091 Sample Preparation: 2013-05-21 Prepared By: AR

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			1630	mg/Kg	10	4.00

Sample: 329660 - AH-2 0-1'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 101644 Date Analyzed: 2013-05-22 Analyzed By: AR
Prep Batch: 86091 Sample Preparation: 2013-05-21 Prepared By: AR

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

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Sample: 329660 - AH-2 0-1'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2013-05-23	Analyzed By:	CW
QC Batch:	101673	Sample Preparation:	2011-05-21	Prepared By:	CW
Prep Batch:	86150				

Parameter	Flag	Cert	Result	RL		Dilution	RL
				Units	mg/Kg		
DRO	in	1	<50.0			1	50.0
Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery
n-Tricosane			96.3	mg/Kg	1	100	96
							55.1 - 135.7

Sample: 329660 - AH-2 0-1'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2013-05-26	Analyzed By:	AH
QC Batch:	101739	Sample Preparation:	2013-05-23	Prepared By:	AH
Prep Batch:	86200				

Parameter	Flag	Cert	Result	RL		Dilution	RL
				Units	mg/Kg		
GRO	B,Qs	1	4.57			1	4.00
Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery
Trifluorotoluene (TFT)			1.78	mg/Kg	1	2.00	89
4-Bromofluorobenzene (4-BFB)			1.70	mg/Kg	1	2.00	85
							70 - 130

Sample: 329661 - AH-2 1-1.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-05-22	Analyzed By:	AR
QC Batch:	101644	Sample Preparation:	2013-05-21	Prepared By:	AR
Prep Batch:	86091				

Parameter	Flag	Cert	Result	RL		Dilution	RL
				Units	mg/Kg		
Chloride			3300			10	4.00

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Sample: 329662 - AH-2 2-2.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-05-22	Analyzed By:	AR
QC Batch:	101645	Sample Preparation:	2013-05-21	Prepared By:	AR
Prep Batch:	86091				

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			3980	mg/Kg	10	4.00

Sample: 329663 - AH-2 3-3.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A	
Analysis:	Chloride (Titration)	Date Analyzed:	2013-05-22	Analyzed By:	AR	
QC Batch:	101645	Sample Preparation:	2013-05-21	Prepared By:	AR	
Prep Batch:	86091					

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			4730	mg/Kg	10	4.00

Sample: 329664 - AH-2 4-4.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A	
Analysis:	Chloride (Titration)	Date Analyzed:	2013-05-22	Analyzed By:	AR	
QC Batch:	101645	Sample Preparation:	2013-05-21	Prepared By:	AR	
Prep Batch:	86091					

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			3550	mg/Kg	10	4.00

Sample: 329665 - AH-2 5-5.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A	
Analysis:	Chloride (Titration)	Date Analyzed:	2013-05-22	Analyzed By:	AR	
QC Batch:	101645	Sample Preparation:	2013-05-21	Prepared By:	AR	
Prep Batch:	86091					

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Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			2720	mg/Kg	10	4.00

Sample: 329666 - AH-2 6-6.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 101645
Prep Batch: 86091

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-05-22
Sample Preparation: 2013-05-21

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

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			3090	mg/Kg	10	4.00

Sample: 329667 - AH-2 7-7.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 101645
Prep Batch: 86091

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-05-22
Sample Preparation: 2013-05-21

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

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			1940	mg/Kg	10	4.00

Sample: 329668 - AH-3 0-1'

Laboratory: Midland
Analysis: BTEX
QC Batch: 101749
Prep Batch: 86209

Analytical Method: S 8021B
Date Analyzed: 2013-05-28
Sample Preparation: 2013-05-27

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

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

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Parameter	Flag	Cert	RL		Dilution	RL
			Result	Units		
Xylene	u	i	<0.0200	mg/Kg	1	0.0200
Surrogate	Flag	Cert	Result	Units	Spike Amount	Percent Recovery
Trifluorotoluene (TFT)			1.81	mg/Kg	1	2.00
4-Bromofluorobenzene (4-BFB)			1.86	mg/Kg	1	2.00
						70 - 130
						90
						93
						70 - 130

Sample: 329668 - AH-3 0-1'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 101645 Date Analyzed: 2013-05-22 Analyzed By: AR
Prep Batch: 86091 Sample Preparation: 2013-05-21 Prepared By: AR

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

Sample: 329668 - AH-3 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 101673 Date Analyzed: 2013-05-23 Analyzed By: CW
Prep Batch: 86150 Sample Preparation: 2011-05-21 Prepared By: CW

Parameter	Flag	Cert	RL		Dilution	RL
			Result	Units		
DRO	jb	i	<50.0	mg/Kg	1	50.0
Surrogate	Flag	Cert	Result	Units	Spike Amount	Percent Recovery
n-Tricosane	Qsr	Qsr	167	mg/Kg	1	100
						167
						55.1 - 135.7

Sample: 329668 - AH-3 0-1'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 101739 Date Analyzed: 2013-05-26 Analyzed By: AH
Prep Batch: 86200 Sample Preparation: 2013-05-23 Prepared By: AH

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Parameter	Flag B,Qs	Cert	RL		Dilution	RL
			Result	Units		
GRO		+	4.68	mg/Kg	1	4.00
Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount
Trifluorotoluene (TFT)			1.86	mg/Kg	1	2.00
4-Bromofluorobenzene (4-BFB)			1.75	mg/Kg	1	2.00
						Percent Recovery
						Recovery Limits
						70 - 130

Sample: 329669 - AH-3 1-1.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 101645 Date Analyzed: 2013-05-22 Analyzed By: AR
Prep Batch: 86091 Sample Preparation: 2013-05-21 Prepared By: AR

Parameter	Flag	Cert	RL		Dilution	RL
			Result	Units		
Chloride			3450	mg/Kg	10	4.00

Sample: 329670 - AH-3 2-2.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 101645 Date Analyzed: 2013-05-22 Analyzed By: AR
Prep Batch: 86091 Sample Preparation: 2013-05-21 Prepared By: AR

Parameter	Flag	Cert	RL		Dilution	RL
			Result	Units		
Chloride			3160	mg/Kg	10	4.00

Sample: 329671 - AH-3 3-3.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 101645 Date Analyzed: 2013-05-22 Analyzed By: AR
Prep Batch: 86091 Sample Preparation: 2013-05-21 Prepared By: AR

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Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			3040	mg/Kg	10	4.00

Sample: 329672 - AH-3 4-4.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 101646 Date Analyzed: 2013-05-22 Analyzed By: AR
Prep Batch: 86091 Sample Preparation: 2013-05-21 Prepared By: AR

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			2440	mg/Kg	10	4.00

Sample: 329673 - AH-3 5-5.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 101646 Date Analyzed: 2013-05-22 Analyzed By: AR
Prep Batch: 86091 Sample Preparation: 2013-05-21 Prepared By: AR

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			1980	mg/Kg	10	4.00

Sample: 329674 - AH-3 6-6.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 101646 Date Analyzed: 2013-05-22 Analyzed By: AR
Prep Batch: 86091 Sample Preparation: 2013-05-21 Prepared By: AR

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			1200	mg/Kg	10	4.00

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Sample: 329675 - AH-3 7-7.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-05-22	Analyzed By:	AR
QC Batch:	101646	Sample Preparation:	2013-05-21	Prepared By:	AR
Prep Batch:	86091				

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			1100	mg/Kg	10	4.00

Sample: 329676 - AH-4 0-1'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-05-22	Analyzed By:	AR
QC Batch:	101646	Sample Preparation:	2013-05-21	Prepared By:	AR
Prep Batch:	86091				

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			2220	mg/Kg	10	4.00

Sample: 329676 - AH-4 0-1'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2013-05-23	Analyzed By:	CW
QC Batch:	101673	Sample Preparation:	2011-05-21	Prepared By:	CW
Prep Batch:	86150				

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			96.1	mg/Kg	1	100	96	55.1 - 135.7

Sample: 329676 - AH-4 0-1'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2013-05-26	Analyzed By:	AH
QC Batch:	101739	Sample Preparation:	2013-05-23	Prepared By:	AH
Prep Batch:	86200				

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Parameter	Flag	Cert	RL		Units	Dilution	RL
			Result	4.56			
GRO	B,QS	1			mg/Kg	1	4.00
Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery
Trifluorotoluene (TFT)			1.81	mg/Kg	1	2.00	90
4-Bromofluorobenzene (4-BFB)			1.71	ng/Kg	1	2.00	86
							70 - 130
							70 - 130

Sample: 329677 - AH-4 1-1.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 101646
Prep Batch: 86091

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-05-22
Sample Preparation: 2013-05-21

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

Parameter	Flag	Cert	RL		Units	Dilution	RL
			Result	3350			
Chloride					mg/Kg	10	4.00

Sample: 329678 - AH-4 2-2.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 101646
Prep Batch: 86091

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-05-22
Sample Preparation: 2013-05-21

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

Parameter	Flag	Cert	RL		Units	Dilution	RL
			Result	975			
Chloride					mg/Kg	5	4.00

Sample: 329679 - AH-4 3-3.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 101646
Prep Batch: 86091

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-05-22
Sample Preparation: 2013-05-21

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

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

Sample: 329680 - AH-4 4-4.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 101646
Prep Batch: 86091

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-05-22
Sample Preparation: 2013-05-21

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

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

Sample: 329681 - AH-4 5-5.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 101646
Prep Batch: 86091

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-05-22
Sample Preparation: 2013-05-21

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

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			2790	mg/Kg	10	4.00

Sample: 329682 - AH-4 6-6.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 101647
Prep Batch: 86091

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-05-22
Sample Preparation: 2013-05-21

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

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

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Sample: 329683 - AH-4 7-7.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-05-22	Analyzed By:	AR
QC Batch:	101647	Sample Preparation:	2013-05-21	Prepared By:	AR
Prep Batch:	86091				

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			2040	mg/Kg	10	4.00

Sample: 329684 - AH-5 0-1'

Laboratory:	Midland	Analytical Method:	S 8021B	Prep Method:	S 5035
Analysis:	BTEX	Date Analyzed:	2013-05-28	Analyzed By:	AH
QC Batch:	101749	Sample Preparation:	2013-05-27	Prepared By:	AH
Prep Batch:	86209				

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.81	mg/Kg	1	2.00	90	70 - 130
4-Bromofluorobenzene (4-BFB)			1.82	mg/Kg	1	2.00	91	70 - 130

Sample: 329684 - AH-5 0-1'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-05-22	Analyzed By:	AR
QC Batch:	101647	Sample Preparation:	2013-05-21	Prepared By:	AR
Prep Batch:	86091				

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			7680	mg/Kg	10	4.00

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Sample: 329684 - AH-5 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 101673
Prep Batch: 86150

Analytical Method: S 8015 D
Date Analyzed: 2013-05-23
Sample Preparation: 2011-05-21

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

Parameter	Flag	Cert	Result	RL		Dilution	RL
				Units	mg/Kg		
DRO	u	1	<50.0			1	50.0
Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery
n-Tricosane	Qsr	Qsr	140	mg/Kg	1	100	140
							55.1 - 135.7

Sample: 329684 - AH-5 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 101739
Prep Batch: 86200

Analytical Method: S 8015 D
Date Analyzed: 2013-05-26
Sample Preparation: 2013-05-23

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

Parameter	Flag	Cert	Result	RL		Dilution	RL
				Units	mg/Kg		
GRO	u,Qs	1	4.42			1	4.00
Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery
Trifluorotoluene (TFT)			1.75	mg/Kg	1	2.00	88
4-Bromofluorobenzene (4-BFB)			1.66	mg/Kg	1	2.00	83
							70 - 130

Sample: 329685 - AH-5 1-1.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 101647
Prep Batch: 86091

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-05-22
Sample Preparation: 2013-05-21

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

Parameter	Flag	Cert	Result	RL		Dilution	RL
				Units	mg/Kg		
Chloride			9320			10	4.00

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Sample: 329686 - AH-5 2-2.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-05-22	Analyzed By:	AR
QC Batch:	101647	Sample Preparation:	2013-05-21	Prepared By:	AR
Prep Batch:	86091				

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			4130	mg/Kg	10	4.00

Sample: 329687 - AH-5 3-3.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A	
Analysis:	Chloride (Titration)	Date Analyzed:	2013-05-22	Analyzed By:	AR	
QC Batch:	101647	Sample Preparation:	2013-05-21	Prepared By:	AR	
Prep Batch:	86091					

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

Sample: 329688 - AH-5 4-4.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A	
Analysis:	Chloride (Titration)	Date Analyzed:	2013-05-22	Analyzed By:	AR	
QC Batch:	101647	Sample Preparation:	2013-05-21	Prepared By:	AR	
Prep Batch:	86091					

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			3590	mg/Kg	10	4.00

Sample: 329689 - AH-6 0-1'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A	
Analysis:	Chloride (Titration)	Date Analyzed:	2013-05-22	Analyzed By:	AR	
QC Batch:	101647	Sample Preparation:	2013-05-21	Prepared By:	AR	
Prep Batch:	86091					

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Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			2010	mg/Kg	10	4.00

Sample: 329689 - AH-6 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 101846
Prep Batch: 86291

Analytical Method: S 8015 D
Date Analyzed: 2013-05-30
Sample Preparation: 2013-05-29

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

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		,	122	mg/Kg	1	100	122	55.1 - 135.7

Sample: 329689 - AH-6 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 101739
Prep Batch: 86200

Analytical Method: S 8015 D
Date Analyzed: 2013-05-26
Sample Preparation: 2013-05-23

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

Parameter	Flag	Cert	Result	Units	Dilution	RL
GRO	B,QS	,	4.58	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.81	mg/Kg	1	2.00	90	70 - 130
4-Bromofluorobenzene (4-BFB)			1.72	mg/Kg	1	2.00	86	70 - 130

Sample: 329690 - AH-6 1-1.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 101647
Prep Batch: 86091

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-05-22
Sample Preparation: 2013-05-21

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

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Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			2910	mg/Kg	10	4.00

Sample: 329691 - AH-6 2-2.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 101647
Prep Batch: 86091

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-05-22
Sample Preparation: 2013-05-21

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

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			3650	mg/Kg	10	4.00

Sample: 329692 - AH-6 3-3.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 101648
Prep Batch: 86091

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-05-22
Sample Preparation: 2013-05-21

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

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			1990	mg/Kg	10	4.00

Sample: 329693 - AH-6 4-4.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 101648
Prep Batch: 86091

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-05-22
Sample Preparation: 2013-05-21

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

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			1490	mg/Kg	10	4.00

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Sample: 329694 - AH-7 0-1'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-05-22	Analyzed By:	AR
QC Batch:	101648	Sample Preparation:	2013-05-21	Prepared By:	AR
Prep Batch:	86091				

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			1460	mg/Kg	10	4.00

Sample: 329694 - AH-7 0-1'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2013-05-23	Analyzed By:	CW
QC Batch:	101673	Sample Preparation:	2011-05-21	Prepared By:	CW
Prep Batch:	86150				

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

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

Sample: 329694 - AH-7 0-1'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2013-05-26	Analyzed By:	AH
QC Batch:	101739	Sample Preparation:	2013-05-23	Prepared By:	AH
Prep Batch:	86200				

Parameter	Flag	Cert	Result	Units	Dilution	RL
GRO	B.QS		4.58	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.82	mg/Kg	1	2.00	91	70 - 130
4-Bromofluorobenzene (4-BFB)			1.72	mg/Kg	1	2.00	86	70 - 130

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Sample: 329695 - AH-7 1-1.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-05-22	Analyzed By:	AR
QC Batch:	101648	Sample Preparation:	2013-05-21	Prepared By:	AR
Prep Batch:	86091				

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			1800	mg/Kg	10	4.00

Sample: 329696 - AH-7 2-2.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A	
Analysis:	Chloride (Titration)	Date Analyzed:	2013-05-22	Analyzed By:	AR	
QC Batch:	101648	Sample Preparation:	2013-05-21	Prepared By:	AR	
Prep Batch:	86091					

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			2110	mg/Kg	10	4.00

Sample: 329697 - AH-7 3-3.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A	
Analysis:	Chloride (Titration)	Date Analyzed:	2013-05-22	Analyzed By:	AR	
QC Batch:	101648	Sample Preparation:	2013-05-21	Prepared By:	AR	
Prep Batch:	86091					

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			2250	mg/Kg	10	4.00

Sample: 329698 - AH-7 4-4.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A	
Analysis:	Chloride (Titration)	Date Analyzed:	2013-05-22	Analyzed By:	AR	
QC Batch:	101648	Sample Preparation:	2013-05-21	Prepared By:	AR	
Prep Batch:	86091					

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Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			1130	mg/Kg	10	4.00

Sample: 329699 - AH-8 0-1'

Laboratory: Midland
Analysis: BTEX
QC Batch: 101749
Prep Batch: 86209

Analytical Method: S 8021B
Date Analyzed: 2013-05-28
Sample Preparation: 2013-05-27

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

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.85	mg/Kg	1	2.00	92	70 - 130
4-Bromofluorobenzene (4-BFB)			1.88	mg/Kg	1	2.00	94	70 - 130

Sample: 329699 - AH-8 0-1'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 101648
Prep Batch: 86091

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-05-22
Sample Preparation: 2013-05-21

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

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			8270	mg/Kg	10	4.00

Sample: 329699 - AH-8 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 101673
Prep Batch: 86150

Analytical Method: S 8015 D
Date Analyzed: 2013-05-23
Sample Preparation: 2011-05-21

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

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q&R	Q&R	147	mg/Kg	1	100	147	55.1 - 135.7

Sample: 329699 - AH-8 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 101739
Prep Batch: 86200

Analytical Method: S 8015 D
Date Analyzed: 2013-05-26
Sample Preparation: 2013-05-23

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

Parameter	Flag	Cert	Result	Units	Dilution	RL
GRO	B,Q&R	1	4.62	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.83	mg/Kg	1	2.00	92	70 - 130
4-Bromofluorobenzene (4-BFB)			1.73	mg/Kg	1	2.00	86	70 - 130

Sample: 329700 - AH-8 1-1.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 101648
Prep Batch: 86091

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-05-22
Sample Preparation: 2013-05-21

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

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			5220	mg/Kg	10	4.00

Sample: 329701 - AH-8 2-2.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 101648
Prep Batch: 86091

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-05-22
Sample Preparation: 2013-05-21

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

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Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			7140	mg/Kg	10	4.00

Sample: 329702 - AH-8 3-3.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 101649 Date Analyzed: 2013-05-22 Analyzed By: AR
Prep Batch: 86091 Sample Preparation: 2013-05-21 Prepared By: AR

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			7130	mg/Kg	10	4.00

Sample: 329703 - AH-8 4-4.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 101649 Date Analyzed: 2013-05-22 Analyzed By: AR
Prep Batch: 86091 Sample Preparation: 2013-05-21 Prepared By: AR

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			4560	mg/Kg	10	4.00

Sample: 329704 - AH-9 0-1'

Laboratory: Midland
Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 101749 Date Analyzed: 2013-05-28 Analyzed By: AH
Prep Batch: 86209 Sample Preparation: 2013-05-27 Prepared By: AH

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

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Parameter	Flag	Cert	RL		Dilution	RL
			Result	Units		
Xylene	v	i	<0.0200	mg/Kg	1	0.0200
Surrogate	Flag	Cert	Result	Units	Spike Amount	Percent Recovery
Trifluorotoluene (TFT)			1.82	mg/Kg	1	2.00
4-Bromofluorobenzene (4-BFB)			1.83	mg/Kg	1	2.00
						Recovery Limits
						70 - 130

Sample: 329704 - AH-9 0-1'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 101649 Date Analyzed: 2013-05-22 Analyzed By: AR
Prep Batch: 86091 Sample Preparation: 2013-05-21 Prepared By: AR

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

Sample: 329704 - AH-9 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 101673 Date Analyzed: 2013-05-23 Analyzed By: CW
Prep Batch: 86150 Sample Preparation: 2011-05-21 Prepared By: CW

Parameter	Flag	Cert	RL		Dilution	RL
			Result	Units		
DRO	jb	i	<50.0	mg/Kg	1	50.0
Surrogate	Flag	Cert	Result	Units	Spike Amount	Percent Recovery
n-Tricosane			80.7	mg/Kg	1	100
						Recovery Limits
						55.1 - 135.7

Sample: 329704 - AH-9 0-1'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 101739 Date Analyzed: 2013-05-26 Analyzed By: AH
Prep Batch: 86200 Sample Preparation: 2013-05-23 Prepared By: AH

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Parameter	Flag	Cert	RL		Dilution	RL		
			Result	Units				
GRO	B,Qs	1	4.32	mg/Kg	1	4.00		
<hr/>								
Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.71	mg/Kg	1	2.00	86	70 - 130
4-Bromofluorobenzene (4-BFB)			1.63	mg/Kg	1	2.00	82	70 - 130

Sample: 329705 - AH-9 1-1.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 101649 Date Analyzed: 2013-05-22 Analyzed By: AR
Prep Batch: 86091 Sample Preparation: 2013-05-21 Prepared By: AR

Parameter	Flag	Cert	RL		Dilution	RL
			Result	Units		
Chloride			412	mg/Kg	5	4.00

Sample: 329706 - AH-9 2-2.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 101649 Date Analyzed: 2013-05-22 Analyzed By: AR
Prep Batch: 86091 Sample Preparation: 2013-05-21 Prepared By: AR

Parameter	Flag	Cert	RL		Dilution	RL
			Result	Units		
Chloride			2220	mg/Kg	10	4.00

Sample: 329707 - AH-9 3-3.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 101649 Date Analyzed: 2013-05-22 Analyzed By: AR
Prep Batch: 86091 Sample Preparation: 2013-05-21 Prepared By: AR

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

Sample: 329708 - AH-9 4-4.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 101649
Prep Batch: 86091

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-05-22
Sample Preparation: 2013-05-21

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

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			2390	mg/Kg	10	4.00

Sample: 329709 - AH-10 0-1'

Laboratory: Midland
Analysis: BTEX
QC Batch: 101749
Prep Batch: 86209

Analytical Method: S 8021B
Date Analyzed: 2013-05-28
Sample Preparation: 2013-05-27

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

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.82	mg/Kg	1	2.00	91	70 - 130
4-Bromofluorobenzene (4-BFB)			1.86	mg/Kg	1	2.00	93	70 - 130

Sample: 329709 - AH-10 0-1'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 101649
Prep Batch: 86091

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-05-22
Sample Preparation: 2013-05-21

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

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Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			7220	mg/Kg	10	4.00

Sample: 329709 - AH-10 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 101673
Prep Batch: 86150

Analytical Method: S 8015 D
Date Analyzed: 2013-05-23
Sample Preparation: 2011-05-21

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

Parameter	Flag	Cert	Result	Units	Dilution	RL	
DRO	JB	1	<50.0	mg/Kg	1	50.0	
Surrogate	Flag	Cert	Result	Units	Spike Amount	Percent Recovery	Recovery Limits

Sample: 329709 - AH-10 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 101739
Prep Batch: 86200

Analytical Method: S 8015 D
Date Analyzed: 2013-05-26
Sample Preparation: 2013-05-23

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

Parameter	Flag	Cert	Result	Units	Dilution	RL		
GRO	B.QS	1	4.29	mg/Kg	1	4.00		
Surrogate	Flag	Cert	Result	Units	Spike Amount	Percent Recovery	Recovery Limits	
Trifluorotoluene (TFT)			1.70	mg/Kg	1	2.00	85	70 - 130
4-Bromofluorobenzene (4-BFB)			1.60	mg/Kg	1	2.00	80	70 - 130

Sample: 329710 - AH-10 1-1.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 101649
Prep Batch: 86091

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-05-22
Sample Preparation: 2013-05-21

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

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Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			7370	mg/Kg	10	4.00

Sample: 329711 - AH-10 2-2.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 101649 Date Analyzed: 2013-05-22 Analyzed By: AR
Prep Batch: 86091 Sample Preparation: 2013-05-21 Prepared By: AR

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			7650	mg/Kg	10	4.00

Sample: 329712 - AH-10 3-3.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 101714 Date Analyzed: 2013-05-23 Analyzed By: AR
Prep Batch: 86124 Sample Preparation: 2013-05-22 Prepared By: AR

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

Sample: 329713 - AH-10 4-4.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 101714 Date Analyzed: 2013-05-23 Analyzed By: AR
Prep Batch: 86124 Sample Preparation: 2013-05-22 Prepared By: AR

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			8110	mg/Kg	10	4.00

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Sample: 329714 - AH-10 5-5.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 101714
Prep Batch: 86124

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-05-23
Sample Preparation: 2013-05-22

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

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			5080	mg/Kg	10	4.00

Sample: 329715 - AH-10 6-6.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 101714
Prep Batch: 86124

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-05-23
Sample Preparation: 2013-05-22

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

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			4310	mg/Kg	10	4.00

Sample: 329716 - AH-11 0-1'

Laboratory: Midland
Analysis: BTEX
QC Batch: 101749
Prep Batch: 86209

Analytical Method: S 8021B
Date Analyzed: 2013-05-28
Sample Preparation: 2013-05-27

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

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.69	mg/Kg	1	2.00	84	70 - 130
4-Bromofluorobenzene (4-BFB)			1.76	mg/Kg	1	2.00	88	70 - 130

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Sample: 329716 - AH-11 0-1'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 101714 Date Analyzed: 2013-05-23 Analyzed By: AR
Prep Batch: 86124 Sample Preparation: 2013-05-22 Prepared By: AR

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			5300	mg/Kg	10	4.00

Sample: 329716 - AH-11 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 101673 Date Analyzed: 2013-05-23 Analyzed By: CW
Prep Batch: 86150 Sample Preparation: 2011-05-21 Prepared By: CW

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			110	mg/Kg	1	100	110	55.1 - 135.7

Sample: 329716 - AH-11 0-1'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 101739 Date Analyzed: 2013-05-26 Analyzed By: AH
Prep Batch: 86200 Sample Preparation: 2013-05-23 Prepared By: AH

Parameter	Flag	Cert	Result	Units	Dilution	RL
GRO	B,QS	1	4.72	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.75	mg/Kg	1	2.00	88	70 - 130
4-Bromofluorobenzene (4-BFB)			1.75	mg/Kg	1	2.00	88	70 - 130

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Sample: 329717 - AH-11 1-1.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-05-23	Analyzed By:	AR
QC Batch:	101714	Sample Preparation:	2013-05-22	Prepared By:	AR
Prep Batch:	86124				

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			3590	mg/Kg	10	4.00

Sample: 329718 - AH-11 2-2.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A	
Analysis:	Chloride (Titration)	Date Analyzed:	2013-05-23	Analyzed By:	AR	
QC Batch:	101714	Sample Preparation:	2013-05-22	Prepared By:	AR	
Prep Batch:	86124					

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			2920	mg/Kg	10	4.00

Sample: 329719 - AH-11 3-3.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A	
Analysis:	Chloride (Titration)	Date Analyzed:	2013-05-23	Analyzed By:	AR	
QC Batch:	101714	Sample Preparation:	2013-05-22	Prepared By:	AR	
Prep Batch:	86124					

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			1990	mg/Kg	10	4.00

Sample: 329720 - AH-11 4-4.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A	
Analysis:	Chloride (Titration)	Date Analyzed:	2013-05-23	Analyzed By:	AR	
QC Batch:	101714	Sample Preparation:	2013-05-22	Prepared By:	AR	
Prep Batch:	86124					

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Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			1820	mg/Kg	10	4.00

Sample: 329721 - AH-11 5-5.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 101714 Date Analyzed: 2013-05-23 Analyzed By: AR
Prep Batch: 86124 Sample Preparation: 2013-05-22 Prepared By: AR

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

Sample: 329722 - AH-11 6-6.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 101715 Date Analyzed: 2013-05-23 Analyzed By: AR
Prep Batch: 86124 Sample Preparation: 2013-05-22 Prepared By: AR

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

Sample: 329723 - AH-12 0-1'

Laboratory: Midland
Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 101749 Date Analyzed: 2013-05-28 Analyzed By: AH
Prep Batch: 86209 Sample Preparation: 2013-05-27 Prepared By: AH

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

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sample 329723 continued ...

Parameter	Flag	Cert	RL		Dilution	RL
			Result	Units		
Xylene	u	i	<0.0200	mg/Kg	1	0.0200
Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount
Trifluorotoluene (TFT)			1.84	mg/Kg	1	2.00
4-Bromofluorobenzene (4-BFB)			1.86	mg/Kg	1	2.00
						Percent Recovery
						Recovery Limits
						70 - 130

Sample: 329723 - AH-12 0-1'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 101715 Date Analyzed: 2013-05-23 Analyzed By: AR
Prep Batch: 86124 Sample Preparation: 2013-05-22 Prepared By: AR

Parameter	Flag	Cert	RL		Dilution	RL
			Result	Units		
Chloride			78.5	mg/Kg	5	4.00

Sample: 329723 - AH-12 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 101673 Date Analyzed: 2013-05-23 Analyzed By: CW
Prep Batch: 86150 Sample Preparation: 2011-05-21 Prepared By: CW

Parameter	Flag	Cert	RL		Dilution	RL
			Result	Units		
DRO	jb	i	<50.0	mg/Kg	1	50.0
Surrogate	Flag	Cert	Result	Units	Spike Amount	Percent Recovery
n-Tricosane			88.8	mg/Kg	1	100
						Recovery Limits
						55.1 - 135.7

Sample: 329723 - AH-12 0-1'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 101739 Date Analyzed: 2013-05-26 Analyzed By: AH
Prep Batch: 86200 Sample Preparation: 2013-05-23 Prepared By: AH

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Parameter	Flag	Cert	RL		Dilution	RL
			Result	Units		
GRO	B,QS	1	4.60	mg/Kg	1	4.00
<hr/>						
Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount
Trifluorotoluene (TFT)			1.82	mg/Kg	1	2.00
4-Bromofluorobenzene (4-BFB)			1.73	mg/Kg	1	2.00
						91
						86
						70 - 130
						70 - 130

Sample: 329724 - AH-12 1-1.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 101715 Date Analyzed: 2013-05-23 Analyzed By: AR
Prep Batch: 86124 Sample Preparation: 2013-05-22 Prepared By: AR

Parameter	Flag	Cert	RL		Dilution	RL
			Result	Units		
Chloride			1190	mg/Kg	10	4.00

Sample: 329725 - AH-12 2-2.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 101715 Date Analyzed: 2013-05-23 Analyzed By: AR
Prep Batch: 86124 Sample Preparation: 2013-05-22 Prepared By: AR

Parameter	Flag	Cert	RL		Dilution	RL
			Result	Units		
Chloride			1760	mg/Kg	10	4.00

Sample: 329726 - AH-12 3-3.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 101715 Date Analyzed: 2013-05-23 Analyzed By: AR
Prep Batch: 86124 Sample Preparation: 2013-05-22 Prepared By: AR

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Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			1540	mg/Kg	10	4.00

Sample: 329727 - AH-12 4-4.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 101715
Prep Batch: 86124

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-05-23
Sample Preparation: 2013-05-22

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

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			1650	mg/Kg	10	4.00

Sample: 329728 - AH-12 5-5.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 101715
Prep Batch: 86124

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-05-23
Sample Preparation: 2013-05-22

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

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			1380	mg/Kg	10	4.00

Sample: 329729 - AH-12 6-6.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 101715
Prep Batch: 86124

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-05-23
Sample Preparation: 2013-05-22

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

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			1450	mg/Kg	10	4.00

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Sample: 329730 - AH-13 0-1'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-05-23	Analyzed By:	AR
QC Batch:	101715	Sample Preparation:	2013-05-22	Prepared By:	AR
Prep Batch:	86124				

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			7260	mg/Kg	10	4.00

Sample: 329730 - AH-13 0-1'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2013-05-23	Analyzed By:	CW
QC Batch:	101673	Sample Preparation:	2011-05-21	Prepared By:	CW
Prep Batch:	86150				

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			78.2	mg/Kg	1	100	78	55.1 - 135.7

Sample: 329730 - AH-13 0-1'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2013-05-26	Analyzed By:	AH
QC Batch:	101739	Sample Preparation:	2013-05-23	Prepared By:	AH
Prep Batch:	86200				

Parameter	Flag	Cert	Result	Units	Dilution	RL
GRO	R.Qs		4.39	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.74	mg/Kg	1	2.00	87	70 - 130
4-Bromofluorobenzene (4-BFB)			1.65	mg/Kg	1	2.00	82	70 - 130

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Sample: 329731 - AH-13 1-1.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-05-23	Analyzed By:	AR
QC Batch:	101715	Sample Preparation:	2013-05-22	Prepared By:	AR
Prep Batch:	86124				

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

Sample: 329732 - AH-13 2-2.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A	
Analysis:	Chloride (Titration)	Date Analyzed:	2013-05-24	Analyzed By:	AR	
QC Batch:	101716	Sample Preparation:	2013-05-22	Prepared By:	AR	
Prep Batch:	86124					

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			5950	mg/Kg	10	4.00

Sample: 329733 - AH-13 3-3.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A	
Analysis:	Chloride (Titration)	Date Analyzed:	2013-05-24	Analyzed By:	AR	
QC Batch:	101716	Sample Preparation:	2013-05-22	Prepared By:	AR	
Prep Batch:	86124					

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			4960	mg/Kg	10	4.00

Sample: 329734 - AH-13 4-4.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A	
Analysis:	Chloride (Titration)	Date Analyzed:	2013-05-24	Analyzed By:	AR	
QC Batch:	101716	Sample Preparation:	2013-05-22	Prepared By:	AR	
Prep Batch:	86124					

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Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			4350	mg/Kg	10	4.00

Sample: 329735 - AH-13 5-5.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 101716
Prep Batch: 86124

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-05-24
Sample Preparation: 2013-05-22

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

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			3290	mg/Kg	10	4.00

Sample: 329736 - AH-13 6-6.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 101716
Prep Batch: 86124

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-05-24
Sample Preparation: 2013-05-22

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

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			3130	mg/Kg	10	4.00

Sample: 329737 - Background 1 0-1'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 101716
Prep Batch: 86124

Analytical Method: SM 4500-Cl B
Date Analyzed: 2013-05-24
Sample Preparation: 2013-05-22

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

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			7380	mg/Kg	10	4.00

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Sample: 329738 - Background 1 1-1.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-05-24	Analyzed By:	AR
QC Batch:	101716	Sample Preparation:	2013-05-22	Prepared By:	AR
Prep Batch:	86124				

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			3420	mg/Kg	10	4.00

Sample: 329739 - Background 1 2-2.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A	
Analysis:	Chloride (Titration)	Date Analyzed:	2013-05-24	Analyzed By:	AR	
QC Batch:	101716	Sample Preparation:	2013-05-22	Prepared By:	AR	
Prep Batch:	86124					

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			2710	mg/Kg	10	4.00

Sample: 329740 - Background 1 3-3.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A	
Analysis:	Chloride (Titration)	Date Analyzed:	2013-05-24	Analyzed By:	AR	
QC Batch:	101716	Sample Preparation:	2013-05-22	Prepared By:	AR	
Prep Batch:	86124					

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			2610	mg/Kg	10	4.00

Sample: 329741 - Background 1 4-4.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A	
Analysis:	Chloride (Titration)	Date Analyzed:	2013-05-24	Analyzed By:	AR	
QC Batch:	101716	Sample Preparation:	2013-05-22	Prepared By:	AR	
Prep Batch:	86124					

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Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			1740	mg/Kg	10	4.00

Sample: 329742 - Background 5-5.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 101717 Date Analyzed: 2013-05-24 Analyzed By: AR
Prep Batch: 86124 Sample Preparation: 2013-05-22 Prepared By: AR

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			1110	mg/Kg	5	4.00

Sample: 329743 - Background 6-6.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 101717 Date Analyzed: 2013-05-24 Analyzed By: AR
Prep Batch: 86124 Sample Preparation: 2013-05-22 Prepared By: AR

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

Sample: 329744 - Background 7-7.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 101717 Date Analyzed: 2013-05-24 Analyzed By: AR
Prep Batch: 86124 Sample Preparation: 2013-05-22 Prepared By: AR

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			2540	mg/Kg	10	4.00

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Method Blanks

Method Blank (1) QC Batch: 101644

QC Batch: 101644 Date Analyzed: 2013-05-22 Analyzed By: AR
Prep Batch: 86091 QC Preparation: 2013-05-21 Prepared By: AR

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

Method Blank (1) QC Batch: 101645

QC Batch: 101645 Date Analyzed: 2013-05-22 Analyzed By: AR
Prep Batch: 86091 QC Preparation: 2013-05-21 Prepared By: AR

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

Method Blank (1) QC Batch: 101646

QC Batch: 101646 Date Analyzed: 2013-05-22 Analyzed By: AR
Prep Batch: 86091 QC Preparation: 2013-05-21 Prepared By: AR

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

Method Blank (1) QC Batch: 101647

QC Batch: 101647 Date Analyzed: 2013-05-22 Analyzed By: AR
Prep Batch: 86091 QC Preparation: 2013-05-21 Prepared By: AR

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

Method Blank (1) QC Batch: 101648

QC Batch: 101648 Date Analyzed: 2013-05-22 Analyzed By: AR
Prep Batch: 86091 QC Preparation: 2013-05-21 Prepared By: AR

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

Method Blank (1) QC Batch: 101649

QC Batch: 101649 Date Analyzed: 2013-05-22 Analyzed By: AR
Prep Batch: 86091 QC Preparation: 2013-05-21 Prepared By: AR

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

Method Blank (1) QC Batch: 101673

QC Batch: 101673 Date Analyzed: 2013-05-23 Analyzed By: CW
Prep Batch: 86150 QC Preparation: 2013-05-21 Prepared By: CW

Parameter	Flag	Cert	MDL Result	Units	RL
DRO			13.3	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	138	mg/Kg	1	100	138	55.1 - 135.7

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Method Blank (1) QC Batch: 101714

QC Batch: 101714
Prep Batch: 86124

Date Analyzed: 2013-05-23
QC Preparation: 2013-05-22

Analyzed By: AR
Prepared By: AR

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

Method Blank (1) QC Batch: 101715

QC Batch: 101715
Prep Batch: 86124

Date Analyzed: 2013-05-23
QC Preparation: 2013-05-22

Analyzed By: AR
Prepared By: AR

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

Method Blank (1) QC Batch: 101716

QC Batch: 101716
Prep Batch: 86124

Date Analyzed: 2013-05-24
QC Preparation: 2013-05-22

Analyzed By: AR
Prepared By: AR

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

Method Blank (1) QC Batch: 101717

QC Batch: 101717
Prep Batch: 86124

Date Analyzed: 2013-05-24
QC Preparation: 2013-05-22

Analyzed By: AR
Prepared By: AR

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

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Method Blank (1) QC Batch: 101739

QC Batch: 101739
Prep Batch: 86200

Date Analyzed: 2013-05-26
QC Preparation: 2013-05-23

Analyzed By: AH
Prepared By: AH

Parameter	Flag	Cert	MDL		Units	RL
			Result	4.42		
GRO		1			mg/Kg	4
Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount
Trifluorotoluene (TFT)			1.78	mg/Kg	1	2.00
4-Bromofluorobenzene (4-BFB)			1.62	mg/Kg	1	2.00
						Percent Recovery
						70 - 130
						89
						81
						70 - 130

Method Blank (1) QC Batch: 101749

QC Batch: 101749
Prep Batch: 86209

Date Analyzed: 2013-05-28
QC Preparation: 2013-05-27

Analyzed By: AH
Prepared By: AH

Parameter	Flag	Cert	MDL		Units	RL
			Result			
Benzene		1	<0.00810		mg/Kg	0.02
Toluene		1	<0.00750		mg/Kg	0.02
Ethylbenzene		1	<0.00730		mg/Kg	0.02
Xylene		1	<0.00700		mg/Kg	0.02
Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount
Trifluorotoluene (TFT)			1.85	mg/Kg	1	2.00
4-Bromofluorobenzene (4-BFB)			1.79	mg/Kg	1	2.00
						Percent Recovery
						70 - 130
						92
						90
						70 - 130

Method Blank (1) QC Batch: 101846

QC Batch: 101846
Prep Batch: 86291

Date Analyzed: 2013-05-30
QC Preparation: 2013-05-29

Analyzed By: CW
Prepared By: CW

Parameter	Flag	Cert	MDL		Units	RL
			Result			
DRO		1	<10.2		mg/Kg	50

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	137	mg/Kg	1	100	137	55.1 - 135.7

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Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 101644 Date Analyzed: 2013-05-22 Analyzed By: AR
Prep Batch: 86091 QC Preparation: 2013-05-21 Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit
Chloride			2650	mg/Kg	1	2500	<3.85	106	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. RPD Limit
Chloride			2790	mg/Kg	1	2500	<3.85	112	85 - 115 5 20

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

Laboratory Control Spike (LCS-1)

QC Batch: 101645 Date Analyzed: 2013-05-22 Analyzed By: AR
Prep Batch: 86091 QC Preparation: 2013-05-21 Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit
Chloride			2730	mg/Kg	1	2500	<3.85	109	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. RPD Limit
Chloride			2670	mg/Kg	1	2500	<3.85	107	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: 101646 Date Analyzed: 2013-05-22 Analyzed By: AR
Prep Batch: 86091 QC Preparation: 2013-05-21 Prepared By: AR

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Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2420	mg/Kg	1	2500	<3.85	97	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	
Chloride			2520	mg/Kg	1	2500	<3.85	101	85 - 115	4	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 101647 Date Analyzed: 2013-05-22 Analyzed By: AR
Prep Batch: 86091 QC Preparation: 2013-05-21 Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2600	mg/Kg	1	2500	<3.85	104	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	
Chloride			2430	mg/Kg	1	2500	<3.85	97	85 - 115	7	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 101648 Date Analyzed: 2013-05-22 Analyzed By: AR
Prep Batch: 86091 QC Preparation: 2013-05-21 Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2450	mg/Kg	1	2500	<3.85	98	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	
Chloride			2660	mg/Kg	1	2500	<3.85	106	85 - 115	8	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: 101649
Prep Batch: 86091

Date Analyzed: 2013-05-22
QC Preparation: 2013-05-21

Analyzed By: AR
Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2660	mg/Kg	1	2500	<3.85	106	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride			2540	mg/Kg	1	2500	<3.85	102	85 - 115	5	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 101673
Prep Batch: 86150

Date Analyzed: 2013-05-23
QC Preparation: 2013-05-21

Analyzed By: CW
Prepared By: CW

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO			260	mg/Kg	1	250	13.3	99	66.9 - 119.9

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
DRO			282	mg/Kg	1	250	13.3	107	66.9 - 119.9	8	20

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

Surrogate	LCS Result		LCSD Result		Spike Amount		LCS Rec.		LCSD Rec.		Rec. Limit	
n-Tricosane	Qsr	Qsr	155	166	mg/Kg	1	100	155	166		76.8 - 140.2	

Laboratory Control Spike (LCS-1)

QC Batch: 101714
Prep Batch: 86124

Date Analyzed: 2013-05-23
QC Preparation: 2013-05-22

Analyzed By: AR
Prepared By: AR

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Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2690	mg/Kg	1	2500	<3.85	108	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	Limit
Chloride			2580	mg/Kg	1	2500	<3.85	103	85 - 115	4	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 101715 Date Analyzed: 2013-05-23 Analyzed By: AR
Prep Batch: 86124 QC Preparation: 2013-05-22 Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2470	mg/Kg	1	2500	<3.85	99	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	Limit
Chloride			2590	mg/Kg	1	2500	<3.85	104	85 - 115	5	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 101716 Date Analyzed: 2013-05-24 Analyzed By: AR
Prep Batch: 86124 QC Preparation: 2013-05-22 Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2680	mg/Kg	1	2500	<3.85	107	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	Limit
Chloride			2570	mg/Kg	1	2500	<3.85	103	85 - 115	4	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: 101717
Prep Batch: 86124

Date Analyzed: 2013-05-24
QC Preparation: 2013-05-22

Analyzed By: AR
Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2770	mg/Kg	1	2500	<3.85	111	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride			2830	mg/Kg	1	2500	<3.85	113	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: 101739
Prep Batch: 86200

Date Analyzed: 2013-05-26
QC Preparation: 2013-05-23

Analyzed By: AH
Prepared By: AH

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	23.4	mg/Kg	1	20.0	4.42	117	70 - 130

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
GRO		1	24.8	mg/Kg	1	20.0	4.42	124	70 - 130	6	20

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

Surrogate		LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)		1.86	1.88	mg/Kg	1	2.00	93	94	70 - 130
4-Bromofluorobenzene (4-BFB)		1.74	1.76	mg/Kg	1	2.00	87	88	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 101749
Prep Batch: 86209

Date Analyzed: 2013-05-28
QC Preparation: 2013-05-27

Analyzed By: AH
Prepared By: AH

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Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	+		1.87	mg/Kg	1	2.00	<0.00810	94	70 - 130
Toluene	+		1.92	mg/Kg	1	2.00	<0.00750	96	70 - 130
Ethylbenzene	+		1.89	mg/Kg	1	2.00	<0.00730	94	70 - 130
Xylene	+		5.51	mg/Kg	1	6.00	<0.00700	92	70 - 130

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	+		1.99	mg/Kg	1	2.00	<0.00810	100	70 - 130	6	20
Toluene	+		2.04	mg/Kg	1	2.00	<0.00750	102	70 - 130	6	20
Ethylbenzene	+		2.01	mg/Kg	1	2.00	<0.00730	100	70 - 130	6	20
Xylene	+		5.87	mg/Kg	1	6.00	<0.00700	98	70 - 130	6	20

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

Surrogate		LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)		1.76	1.82	mg/Kg	1	2.00	88	91	70 - 130
4-Bromofluorobenzene (4-BFB)		1.79	1.86	mg/Kg	1	2.00	90	93	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 101846 Date Analyzed: 2013-05-30 Analyzed By: CW
Prep Batch: 86291 QC Preparation: 2013-05-29 Prepared By: CW

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	+		183	mg/Kg	1	250	<10.2	73	66.9 - 119.9

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	+		204	mg/Kg	1	250	<10.2	82	66.9 - 119.9	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
n-Tricosane		114	128	mg/Kg	1	100	114	128	76.8 - 140.2

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Matrix Spike (MS-1) Spiked Sample: 329661

QC Batch: 101644
Prep Batch: 86091

Date Analyzed: 2013-05-22
QC Preparation: 2013-05-21

Analyzed By: AR
Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			5540	mg/Kg	10	2500	3300	90	78.9 - 121

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

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			5810	mg/Kg	10	2500	3300	100	78.9 - 121	5	20

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

Matrix Spike (MS-1) Spiked Sample: 329671

QC Batch: 101645
Prep Batch: 86091

Date Analyzed: 2013-05-22
QC Preparation: 2013-05-21

Analyzed By: AR
Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			5300	mg/Kg	10	2500	3040	90	78.9 - 121

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

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			5600	mg/Kg	10	2500	3040	102	78.9 - 121	6	20

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

Matrix Spike (MS-1) Spiked Sample: 329681

QC Batch: 101646
Prep Batch: 86091

Date Analyzed: 2013-05-22
QC Preparation: 2013-05-21

Analyzed By: AR
Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			5280	mg/Kg	10	2500	2790	100	78.9 - 121

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

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Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit	RPD RPD	RPD Limit
Chloride			5600	mg/Kg	10	2500	2790	112	78.9 - 121	6	20

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

Matrix Spike (MS-1) Spiked Sample: 329691

QC Batch: 101647 Date Analyzed: 2013-05-22 Analyzed By: AR
Prep Batch: 86091 QC Preparation: 2013-05-21 Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit	RPD	RPD
Chloride			6140	mg/Kg	10	2500	3650	100	78.9 - 121		

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit	RPD RPD	RPD Limit
Chloride			6420	mg/Kg	10	2500	3650	111	78.9 - 121	4	20

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

Matrix Spike (MS-1) Spiked Sample: 329701

QC Batch: 101648 Date Analyzed: 2013-05-22 Analyzed By: AR
Prep Batch: 86091 QC Preparation: 2013-05-21 Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit	RPD	RPD
Chloride			9330	mg/Kg	10	2500	7140	88	78.9 - 121		

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit	RPD RPD	RPD Limit
Chloride			9750	mg/Kg	10	2500	7140	104	78.9 - 121	4	20

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

Matrix Spike (MS-1) Spiked Sample: 329711

QC Batch: 101649 Date Analyzed: 2013-05-22 Analyzed By: AR
Prep Batch: 86091 QC Preparation: 2013-05-21 Prepared By: AR

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Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit
Chloride			10400	mg/Kg	10	2500	7650	110	78.9 - 121

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Limit	RPD	Limit	
Chloride			10300	mg/Kg	10	2500	7650	106	78.9 - 121	1	20

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

Matrix Spike (MS-1) Spiked Sample: 329652

QC Batch: 101673 Date Analyzed: 2013-05-23 Analyzed By: CW
Prep Batch: 86150 QC Preparation: 2013-05-21 Prepared By: CW

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit
DRO			319	mg/Kg	1	250	13.3	122	36.1 - 147.2

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Limit	RPD	Limit	
DRO			285	mg/Kg	1	250	13.3	109	36.1 - 147.2	11	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Rec.	Rec. Limit
n-Tricosane	106	97.9	mg/Kg	1	100	106	98	78.3 - 131.6	

Matrix Spike (MS-1) Spiked Sample: 329721

QC Batch: 101714 Date Analyzed: 2013-05-23 Analyzed By: AR
Prep Batch: 86124 QC Preparation: 2013-05-22 Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit
Chloride			3680	mg/Kg	10	2500	1220	98	78.9 - 121

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

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Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Limit	RPD	RPD Limit
Chloride			4030	mg/Kg	10	2500	1220	112	78.9 - 121	9	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: 329731

QC Batch: 101715 Date Analyzed: 2013-05-23 Analyzed By: AR
Prep Batch: 86124 QC Preparation: 2013-05-22 Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Limit	Rec.	Limit
Chloride			9650	mg/Kg	10	2500	7230	97	78.9 - 121		

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Limit	RPD	RPD Limit
Chloride			9930	mg/Kg	10	2500	7230	108	78.9 - 121	3	20

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

Matrix Spike (MS-1) Spiked Sample: 329741

QC Batch: 101716 Date Analyzed: 2013-05-24 Analyzed By: AR
Prep Batch: 86124 QC Preparation: 2013-05-22 Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Limit	Rec.	Limit
Chloride			4180	mg/Kg	10	2500	1740	98	78.9 - 121		

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Limit	RPD	RPD Limit
Chloride			4430	mg/Kg	10	2500	1740	108	78.9 - 121	6	20

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

Matrix Spike (MS-1) Spiked Sample: 329753

QC Batch: 101717 Date Analyzed: 2013-05-24 Analyzed By: AR
Prep Batch: 86124 QC Preparation: 2013-05-22 Prepared By: AR

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Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			6640	mg/Kg	10	2500	4250	96	78.9 - 121

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	Limit
Chloride			7090	mg/Kg	10	2500	4250	114	78.9 - 121	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: 329652

QC Batch: 101739 Date Analyzed: 2013-05-26 Analyzed By: AH
Prep Batch: 86200 QC Preparation: 2013-05-23 Prepared By: AH

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO			16.0	mg/Kg	1	20.0	4.47	58	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	Limit
GRO	Q _s	Q _s	16.2	mg/Kg	1	20.0	4.47	59	70 - 130	1	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.70	1.74	mg/Kg	1	2	85	87	70 - 130	
4-Bromofluorobenzene (4-BFB)	1.72	1.77	mg/Kg	1	2	86	88	70 - 130	

Matrix Spike (MS-1) Spiked Sample: 329652

QC Batch: 101749 Date Analyzed: 2013-05-28 Analyzed By: AH
Prep Batch: 86209 QC Preparation: 2013-05-27 Prepared By: AH

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene			1.65	mg/Kg	1	2.00	<0.00810	82	70 - 130
Toluene			1.79	mg/Kg	1	2.00	<0.00750	90	70 - 130
Ethylbenzene			1.86	mg/Kg	1	2.00	<0.00730	93	70 - 130
Xylene			5.46	mg/Kg	1	6.00	<0.00700	91	70 - 130

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

Param	F	C	MSD		Spike		Matrix		Rec.		RPD	RPD
			Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit	
Benzene	1		1.65	mg/Kg	1	2.00	<0.00810	82	70 - 130	0	20	
Toluene	1		1.79	mg/Kg	1	2.00	<0.00750	90	70 - 130	0	20	
Ethylbenzene	1		1.87	mg/Kg	1	2.00	<0.00730	94	70 - 130	0	20	
Xylene	1		5.47	mg/Kg	1	6.00	<0.00700	91	70 - 130	0	20	

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

Surrogate	MS		MSD		Spike		MS	MSD	Rec.	Rec.
	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit	Limit	
Trifluorotoluene (TFT)	1.81	1.73	mg/Kg	1	2	90	86	70 - 130		
4-Bromofluorobenzene (4-BFB)	1.91	1.80	mg/Kg	1	2	96	90	70 - 130		

Matrix Spike (MS-1) Spiked Sample: 329689

QC Batch: 101846
Prep Batch: 86291

Date Analyzed: 2013-05-30
QC Preparation: 2013-05-29

Analyzed By: CW
Prepared By: CW

Param	F	C	MS		Spike		Matrix		Rec.		Rec.
			Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
DRO	1		284	mg/Kg	1	250	<10.2	114	36.1 - 147.2	8	20

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

Param	F	C	MSD		Spike		Matrix		Rec.		RPD	RPD
			Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit	
DRO	1		261	mg/Kg	1	250	<10.2	104	36.1 - 147.2	8	20	

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

Surrogate	MS		MSD		Spike		MS	MSD	Rec.	Rec.
	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit	Limit	
n-Tricosane	131	131	mg/Kg	1	100	131	131	78.3 - 131.6		

Report Date: May 30, 2013
112MC05410

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COG/Honey Graham/Graham Nash

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Eddy Co., NM

Calibration Standards

Standard (CCV-1)

				Date Analyzed:	2013-05-22	Analyzed By:	AR	
Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.8	100	85 - 115	2013-05-22

Standard (CCV-2)

				Date Analyzed:	2013-05-22	Analyzed By:	AR	
Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2013-05-22

Standard (CCV-1)

				Date Analyzed:	2013-05-22	Analyzed By:	AR	
Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.4	99	85 - 115	2013-05-22

Standard (CCV-2)

				Date Analyzed:	2013-05-22	Analyzed By:	AR	
Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2013-05-22

Report Date: May 30, 2013
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Eddy Co., NM

Standard (CCV-1)

QC Batch: 101646 Date Analyzed: 2013-05-22 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.9	100	85 - 115	2013-05-22

Standard (CCV-2)

QC Batch: 101646 Date Analyzed: 2013-05-22 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2013-05-22

Standard (CCV-1)

QC Batch: 101647 Date Analyzed: 2013-05-22 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2013-05-22

Standard (CCV-2)

QC Batch: 101647 Date Analyzed: 2013-05-22 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.7	100	85 - 115	2013-05-22

Standard (CCV-1)

QC Batch: 101648 Date Analyzed: 2013-05-22 Analyzed By: AR

Report Date: May 30, 2013
112MC05410

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COG/Honey Graham/Graham Nash

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Eddy Co., NM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2013-05-22

Standard (CCV-2)

QC Batch: 101648 Date Analyzed: 2013-05-22 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.5	100	85 - 115	2013-05-22

Standard (CCV-1)

QC Batch: 101649 Date Analyzed: 2013-05-22 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2013-05-22

Standard (CCV-2)

QC Batch: 101649 Date Analyzed: 2013-05-22 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.6	100	85 - 115	2013-05-22

Standard (CCV-1)

QC Batch: 101673 Date Analyzed: 2013-05-23 Analyzed By: CW

Report Date: May 30, 2013
112MC05410

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COG/Honey Graham/Graham Nash

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Eddy Co., NM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO	,		mg/Kg	250	279	112	80 - 120	2013-05-23

Standard (CCV-2)

QC Batch: 101673 Date Analyzed: 2013-05-23 Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO	,		mg/Kg	250	208	83	80 - 120	2013-05-23

Standard (CCV-3)

QC Batch: 101673 Date Analyzed: 2013-05-23 Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO	,		mg/Kg	250	282	113	80 - 120	2013-05-23

Standard (CCV-4)

QC Batch: 101673 Date Analyzed: 2013-05-23 Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO	,		mg/Kg	250	270	108	80 - 120	2013-05-23

Standard (CCV-1)

QC Batch: 101714 Date Analyzed: 2013-05-23 Analyzed By: AR

Report Date: May 30, 2013
112MC05410

Work Order: 13052002
COG/Honey Graham/Graham Nash

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Eddy Co., NM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	98.8	99	85 - 115	2013-05-23

Standard (CCV-2)

QC Batch: 101714 Date Analyzed: 2013-05-23 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2013-05-23

Standard (CCV-1)

QC Batch: 101715 Date Analyzed: 2013-05-23 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.9	100	85 - 115	2013-05-23

Standard (CCV-2)

QC Batch: 101715 Date Analyzed: 2013-05-23 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2013-05-23

Standard (CCV-1)

QC Batch: 101716 Date Analyzed: 2013-05-24 Analyzed By: AR

Report Date: May 30, 2013
112MC05410

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COG/Honey Graham/Graham Nash

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Eddy Co., NM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.9	100	85 - 115	2013-05-24

Standard (CCV-2)

QC Batch: 101716 Date Analyzed: 2013-05-24 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2013-05-24

Standard (CCV-1)

QC Batch: 101717 Date Analyzed: 2013-05-24 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2013-05-24

Standard (CCV-2)

QC Batch: 101717 Date Analyzed: 2013-05-24 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2013-05-24

Standard (CCV-1)

QC Batch: 101739 Date Analyzed: 2013-05-26 Analyzed By: AH

Report Date: May 30, 2013
112MC05410

Work Order: 13052002
COG/Honey Graham/Graham Nash

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Eddy Co., NM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO	1		mg/Kg	1.00	1.20	120	80 - 120	2013-05-26

Standard (CCV-2)

QC Batch: 101739 Date Analyzed: 2013-05-26 Analyzed By: AH

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO	1		mg/Kg	1.00	1.11	111	80 - 120	2013-05-26

Standard (CCV-3)

QC Batch: 101739 Date Analyzed: 2013-05-26 Analyzed By: AH

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO	1		mg/Kg	1.00	1.03	103	80 - 120	2013-05-26

Standard (CCV-1)

QC Batch: 101749 Date Analyzed: 2013-05-28 Analyzed By: AH

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene	1		mg/kg	0.100	0.0909	91	80 - 120	2013-05-28
Toluene	1		mg/kg	0.100	0.0936	94	80 - 120	2013-05-28
Ethylbenzene	1		mg/kg	0.100	0.0918	92	80 - 120	2013-05-28
Xylene	1		mg/kg	0.300	0.268	89	80 - 120	2013-05-28

Standard (CCV-2)

QC Batch: 101749 Date Analyzed: 2013-05-28 Analyzed By: AH

Report Date: May 30, 2013
112MC05410

Work Order: 13052002
COG/Honey Graham/Graham Nash

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Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene	1		mg/kg	0.100	0.0894	89	80 - 120	2013-05-28
Toluene	1		mg/kg	0.100	0.0917	92	80 - 120	2013-05-28
Ethylbenzene	1		mg/kg	0.100	0.0903	90	80 - 120	2013-05-28
Xylene	1		mg/kg	0.300	0.263	88	80 - 120	2013-05-28

Standard (CCV-3)

QC Batch: 101749

Date Analyzed: 2013-05-28

Analyzed By: AH

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene	1		mg/kg	0.100	0.0903	90	80 - 120	2013-05-28
Toluene	1		mg/kg	0.100	0.0922	92	80 - 120	2013-05-28
Ethylbenzene	1		mg/kg	0.100	0.0898	90	80 - 120	2013-05-28
Xylene	1		mg/kg	0.300	0.262	87	80 - 120	2013-05-28

Standard (CCV-1)

QC Batch: 101846

Date Analyzed: 2013-05-30

Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO	1		mg/Kg	250	218	87	80 - 120	2013-05-30

Standard (CCV-2)

QC Batch: 101846

Date Analyzed: 2013-05-30

Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO	1		mg/Kg	250	215	86	80 - 120	2013-05-30

Appendix

Report Definitions

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

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704392-12-4	Midland

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less than ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

Report Date: May 30, 2013
112MC05410

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COG/Honey Graham/Graham Nash

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Eddy Co., NM

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

13052002

Analysis Request of Chain of Custody Record



TETRA TECH

1910 N. Big Spring St.
Midland, Texas 79705

(432) 682-4559 • Fax (432) 682-3946

PAGE: / OF: #/10

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG				SITE MANAGER: Ike Tavarez				ANALYSIS REQUEST (Circle or Specify Method No.)																											
PROJECT NO.: 112 MC 05410			PROJECT NAME: C061 HoneyBritten/Graham Nest Early Co NN SAMPLE IDENTIFICATION			NUMBER OF CONTAINERS		PRESERVATIVE METHOD																											
LAB I.D. NUMBER	DATE 2013	TIME	MATRIX	COMP	GRAB			HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD	TX1005 (Ext. to C35)	PAH 8270	RCCA 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. 8240/8266/624	GC/MS Semi. Vol. 8270/625	PCBs 8090/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS						
329652	5/16		S	X		AH1 1 (0-1')		1 N		X		X	X																						
653	)		S	X		(1-1.5')		1 N		X																								
654	)		S	X		(2-2.5')		1 N		X																								
655	)		S	X		(3-3.5')		1 N		X																								
656	)		S	X		(4-4.5')		1 N		X																								
657	)		S	X		(5-5.5')		1 N		X																								
658	)		S	X		(6-6.5')		1 N		X																								
659	)		S	X		(7-7.5')		1 N		X																								
660	)		S	X		AH2 (0-1')		1 N		X		X																						
661	)		S	X		(1-1.5')		1 N		X																								
RELINQUISHED BY: (Signature)				Date: 5/17/13	RECEIVED BY: (Signature)	Date: 5/17/13	SAMPLED BY: (Print & Initial)	Date: 5/17/13	RELINQUISHED BY: (Signature)				Date: 5/17/13	RECEIVED BY: (Signature)	Date: 5/17/13	SAMPLED BY: (Print & Initial)	Date: 5/17/13	RELINQUISHED BY: (Signature)				Date: 5/17/13	RECEIVED BY: (Signature)	Date: 5/17/13	SAMPLED BY: (Print & Initial)	Date: 5/17/13									
				Time: 15:30		Time: 15:30	AG/PR	Time: 15:30					Time: 15:30		Time: 15:30	FEDEX	BUS	AIRBILL #:					Time: 15:30		Time: 15:30	OTHER:									
																HAND DELIVERED	UPS										TETRA TECH CONTACT PERSON:	Results by:							
RECEIVING LABORATORY: Trace				RECEIVED BY: (Signature)																								Ike Tavarez	AH						
ADDRESS: Midland				PHONE: DATE: TIME:																															
CITY: Midland STATE: ZIP: CONTACT: PHONE: DATE: TIME:																																			
SAMPLE CONDITION WHEN RECEIVED: 3.8 Neutral PH REMARKS: Benzene exceeded 10 ppb major and 50 ppb kg.																																			

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benzene Phases TC benzene exceed 10 ppb major and 50 ppb kg.

PPN

13052002

Analysis Request of Chain of Custody Record



TETRA TECH

1910 N. Big Spring St.
Midland, Texas 79705

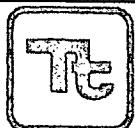
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME:				SITE MANAGER:				ANALYSIS REQUEST (Circle or Specify Method No.)															
								PAGE: 2 OF: 10 TSH 8015 MDD. TX1005 (Ext. to C35) PAH 8270 RICRA Metals Ag As Ba Cd Cr Pb Hg Se TCLP Metals Ag As Ba Cd Vr Pd Hg Se TCLP Volatiles TCLP Semi Volatiles RCI GC/MS Vol. 8240/8260/624 GC/MS Semi. Vol. 8270/625 PCB's 808/608 Pest. 808/608 Chloneide Gamma Spec. Alpha Beta (Air) PLM (Asbestos) Major Anions/Cations, pH, TDS															
PROJECT NO.:				PROJECT NAME:																			
LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP	GRAB	SAMPLE IDENTIFICATION																	
662	5/16		S	X		AH 2 (2.25')				1	N	HCL	HNO3	ICE	NONE								
663			S	X		(3-3.5')				1	N			X									
664			S	X		(4-4.5')				1	N			X									
665			S	X		(5-5.5')				1	N			X									
666			S	X		(6-6.5')				1	N			X									
667			S	X		(7-7.5')				1	N			X									
668			S	X		A1 3 (0-1')				1	N			X		X							
669			S	X		(1-1.5')				1	N			X									
670			S	X		(2-2.5')				1	N			X									
671			S	X		(3-3.5')				1	N			X									
RELINQUISHED BY: (Signature)				Date: 5/17/30	RECEIVED BY: (Signature)					Date: 5/17/30	SAMPLED BY: (Print & Initial)				Date: _____ Time: _____								
				Time: 1530	<i>John</i>					Time: 1530	<i>AS/RC</i>												
RELINQUISHED BY: (Signature)				Date: _____	RECEIVED BY: (Signature)					Date: _____	SAMPLE SHIPPED BY: (Circle)				AIRBILL #: _____								
				Time: _____	<i>John</i>					Time: _____	FEDEX HAND DELIVERED				OTHER: _____								
RELINQUISHED BY: (Signature)				Date: _____	RECEIVED BY: (Signature)					Date: _____	BUS UPS												
				Time: _____	<i>John</i>					Time: _____													
RECEIVING LABORATORY: <i>TETRA</i> ADDRESS: <i>Midland</i> CITY: <i>Midland</i> STATE: <i>TX</i> ZIP: <i>79705</i> CONTACT: <i>John</i> PHONE: <i>432-682-4559</i>												RECEIVED BY: (Signature)				TETRA TECH CONTACT PERSON: <i>John</i>				Results by: _____			
SAMPLE CONDITION WHEN RECEIVED: <i>3.8</i>												REMARKS: _____								RUSH Charges Authorized: Yes No			

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13052002

Analysis Request of Chain of Custody Record



TETRA TECH

1910 N. Big Spring St.
Midland, Texas 79705

(432) 682-4559 • Fax (432) 682-3946

PAGE: 3 OF: 10

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: (OG)				SITE MANAGER: Like Tavarez				ANALYSIS REQUEST (Circle or Specify Method No.)																							
PROJECT NO.: 112 MC OS410			PROJECT NAME: (OG) HoneyGraham / Graham Nash Eddy Co., NM			NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD																							
LAB I.D. NUMBER	DATE 2013	TIME	MATRIX	COMP	GRAB			HCL	HNO3	ICE	NONE	TPEX 8021B	TPH 8015 MOD.	TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8250/624	GC/MS Semi. Vol. 8270/625	PCBs 8080/608	Pest. 808/608	Chlorides	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS		
672	5/16		S	X	AH 3 (4-4.5')	1	N		X																						
673			S	X	(5-5.5')	1	N		X																						
674			S	X	(6-6.5')	1	N		X																						
675			S	X	(7-7.5')	1	N		X																						
676			S	X	AH 4 (0-1')	1	N		X																						
677			S	X	(1-1.5')	1	N		X																						
678			S	X	(2-2.5')	1	N		X																						
679			S	X	(3-3.5')	1	N		X																						
680			S	X	(4-4.5')	1	N		X																						
681			S	X	(5-5.5')	1	N		X																						
RELINQUISHED BY: (Signature)				Date: 5/17/13 Time: 15:30		RECEIVED BY: (Signature)				Date: 5/17/13 Time: 15:30		SAMPLED BY: (Print & Initial)				Date: 5/17/13 Time: 15:30															
				<i>J. Hernandez</i>								<i>AG/RC</i>																			
RELINQUISHED BY: (Signature)				Date: _____ Time: _____		RECEIVED BY: (Signature)				Date: _____ Time: _____		SAMPLE SHIPPED BY: (Circle)				AIRBILL #: _____															
												FEDEX BUS																			
RELINQUISHED BY: (Signature)				Date: _____ Time: _____		RECEIVED BY: (Signature)				Date: _____ Time: _____		HAND-DELIVERED UPS				OTHER: _____															
RECEIVING LABORATORY: Tatra				RECEIVED BY: (Signature)				TETRA TECH CONTACT PERSON:				Results by:																			
ADDRESS: Midland								<i>Like Tavarez</i>																							
CITY: Midland STATE: _____ ZIP: _____				DATE: _____ TIME: _____																											
CONTACT: _____ PHONE: _____																															
SAMPLE CONDITION WHEN RECEIVED: 38				REMARKS:																											

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Analysis Request of Chain of Custody Record

13052002



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

PAGE: 4 OF: 10
 ANALYSIS REQUEST
 (Circle or Specify Method No.)

CLIENT NAME: COL		PROJECT NAME: COA Honey Graham/Graham Nash Eddy Co., NM		SITE MANAGER: Ike Tavares		
PROJECT NO.: 112NC0540	LAB I.D. 2013	DATE 5/16	TIME 5	MATRIX COMP.	PRESERVATIVE METHOD	
				GRAB	NUMBER OF CONTAINERS	
					FILTERED (Y/N)	
					HCL	
					HNO3	
					ICE	
					NONE	
GTEX 8021B						
TPH 8015 MOD. TX1005 (Ext. to C35)						
PAH 8270						
RCRA Metals Ag As Ba Cd Cr Pb Hg Se						
TCLP Metals Ag As Ba Cd Vr Pd Hg Se						
TCLP Volatiles						
TCLP Semi Volatiles						
RCI						
GC.MS Vol. 8240/8260/624						
GC.MS Semi. Vol. 8270/625						
PCB's 8080/608						
Pest. 808/608						
Chloride						
Gamma Spec.						
Alpha Beta (Air)						
PLM (Asbestos)						
Major Anions/Cations, pH, TDS						
RELINQUISHED BY: (Signature): John-Paul		Date: 5/17/03	Time: 15:30	RECEIVED BY: (Signature): John Garcia	SAMPLED BY: (Print & Initial): John Garcia A/R	Date: 5/17/03
RELINQUISHED BY: (Signature): John Garcia		Date: _____	Time: _____	RECEIVED BY: (Signature): John Garcia	SAMPLED BY: (Print & Initial): John Garcia A/R	Date: 5/17/03
RECEIVING LABORATORY: Tetra		Date: _____	Time: _____	RECEIVED BY: (Signature): John Garcia	SAMPLE SHIPPED BY: (Circle): AIRMAIL	Time: _____
ADDRESS: Midland		STATE: _____	ZIP: _____	RECEIVED BY: (Signature): John Garcia	FEDEX	OTHER: _____
CITY: Midland		PHONE: _____	DATE: _____	TIME: _____	HAND DELIVERED	UPS
SAMPLE CONDITION WHEN RECEIVED: 3.8		REMARKS:				

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Analysis Request of Chain of Custody Record



TETRA TECH

1910 N. Big Spring St.
Midland, Texas 79705

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PAGE: 5 OF: 4/10

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: C06				SITE MANAGER: TIG Taguez				ANALYSIS REQUEST (Circle or Specify Method No.)											
PROJECT NO.: 112M05410		PROJECT NAME: C06/HoneyGraham/Graham Nash Eddy Co., Inc.		SAMPLE IDENTIFICATION				NUMBER OF CONTAINERS	PRESERVATIVE METHOD										
LAB I.D. NUMBER	DATE 2013	TIME	MATRIX	COMP.	GRAB	HCL	HNO3		ICE	NONE									
692	5/16		S	X	AH 6 (3-3.5)			X											
693	5/16		S	X	(4-4.5)			X											
694	5/16		S	X	AH 7 (0-1)			X											
695	5/16		S	X	(1-1.5)			X											
696	5/16		S	X	(2-2.5)			X											
697	5/16		S	X	(3-3.5)			X											
698	5/16		S	X	(4-4.5)			X											
699	5/16		S	X	AH 8 (0-1)			X											
700	5/16		S	X	(1-1.5)			X											
701	5/16		S	X	(2-2.5)			X											
RELINQUISHED BY: (Signature)				Date: 5/17/13	RECEIVED BY: (Signature)	Date: 5/17/13	SAMPLED BY: (Print & Initial)	Date: 5/17/13											
				Time: 15:30		Time: 15:30	Alpha Beta (Air)	Time: 15:30											
RELINQUISHED BY: (Signature)				Date:	RECEIVED BY: (Signature)	Date:	SAMPLE SHIPPED BY: (Circle)	AIRBILL #:											
				Time:		Time:	FEDEX	BUS											
RELINQUISHED BY: (Signature)				Date:	RECEIVED BY: (Signature)	Date:	HAND DELIVERED	UPS											
				Time:		Time:	OTHER:												
RECEIVING LABORATORY: TIGE				RECEIVED BY: (Signature)				TETRA TECH CONTACT PERSON: <i>TIG Taguez</i> Results by:											
ADDRESS: Midland STATE: ZIP: CONTACT: PHONE: DATE: TIME:								RUSH Charges Authorized: Yes No											
SAMPLE CONDITION WHEN RECEIVED: 3.8				REMARKS:															

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Analysis Request of Chain of Custody Record



TETRA TECH

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Midland, Texas 79705

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PAGE: 6 OF: 6/10

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG			SITE MANAGER: Ike Tavares			ANALYSIS REQUEST (Circle or Specify Method No.)																							
PROJECT NO.: 112 M 0541a			PROJECT NAME: COG Honey Graham / Graham Nash Eddy Co., NM																										
LAB I.D. NUMBER	DATE 2013	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION						NUMBER OF CONTAINERS				PRESERVATIVE METHOD				TESTS									
			S	X		AH 8 (3-3.5')						1	N	HCl	HNO3	ICE	NONE	80218				8015.M40D. TX1005 (Ext. to C35)							
702	5/16		S	X		(4-4.5')						1	N		X			PAH 8270				RCRA Metals Ag As Ba Cd Cr Pb Hg Se							
703	5/16		S	X		(0-1)						1	N		X			TCLP Metals Ag As Ba Cd Vr Pd Hg Se				TCLP Volatiles							
704	5/16		S	X		(0-1.5')						1	N		X			TCLP Semi Volatiles				RCI							
705	5/16		S	X		(2-2.5')						1	N		X			GC/MS Vol. 8240/8260/624				Chloride							
706	5/16		S	X		(3-3.5')						1	N		X			GC/MS Semi. Vol. 8270/625				Gamma Spec.							
707	5/16		S	X		(4-4.5')						1	N		X			PCB's 808/608				Alpha Beta (Air)							
708	5/16		S	X		AH 10 (0-1')						1	N		X			PLM (Asbestos)				PLM							
709	5/16		S	X		(1-1.5')						1	N		X			Major Anions/Cations, pH, TDS				Major Anions/Cations, pH, TDS							
710	5/16		S	X		(2-2.5')						1	N		X			Pest. 808/608											
711	5/16		S	X		(0-1')						1	N		X														
RELINQUISHED BY: (Signature) Adrian Garcia			RECEIVED BY: (Signature) Ike Tavares			Date: 5/17/13			RECEIVED BY: (Signature) Ike Tavares			Date: 5/17/13			RECEIVED BY: (Signature) Ike Tavares			RECEIVED BY: (Signature) Ike Tavares			RECEIVED BY: (Signature) Ike Tavares			RECEIVED BY: (Signature) Ike Tavares					
						Time: 15:30						Time: 15:30						Time: 15:30						Time: 15:30					
RELINQUISHED BY: (Signature)			RECEIVED BY: (Signature)			Date:			RECEIVED BY: (Signature)			Date:			RECEIVED BY: (Signature)			Date:			RECEIVED BY: (Signature)			Date:					
RELINQUISHED BY: (Signature)			RECEIVED BY: (Signature)			Date:			RECEIVED BY: (Signature)			Date:			RECEIVED BY: (Signature)			Date:			RECEIVED BY: (Signature)			Date:					
RECEIVING LABORATORY: Trace			RECEIVED BY: (Signature)																										
ADDRESS: Midland			RECEIVED BY: (Signature)																										
CITY: Midland STATE: ZIP:																													
CONTACT: PHONE: DATE: TIME:																													
SAMPLE CONDITION WHEN RECEIVED: 3.8						REMARKS:												TETRA TECH CONTACT PERSON: Ike Tavares						Results by: RUSH Charges Authorized: Yes No					

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Analysis Request of Chain of Custody Record

PAGE: 7 OF: 10

ANALYSIS REQUEST
(Circle or Specify Method No.)



TETRA TECH

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CLIENT NAME: (06)				SITE MANAGER: Ike Turner						
PROJECT NO.: 112 MC05410		PROJECT NAME: (06) HoneyGraham / Graham Nash		SAMPLE IDENTIFICATION Eddy Co., Inc.						
LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	NUMBER OF CONTAINERS	PRESERVATIVE METHOD			
						1	FILTERED (Y/N)			
							HCL			
							HNO3			
							ICE			
							NONE			
712	5/16		S	X	AH1 10 (3-3.5')	1	RT/EX 8021B			
713			S	X	(4-4.5')	1	TPH 8015-MOD. TX1005 (Ext. to C35)			
714			S	X	(5-5.5')	1	PAH 8270			
715			S	X	(6-6.5')	1	RCRA Metals Ag As Ba Cd Cr Pb Hg Se			
716			S	X	AH11 (0-1')	1	TCLP Metals Ag As Ba Cd Vr Pd Hg Se			
717			S	X	(1-1.5')	1	TCLP Volatiles			
718			S	X	(2-2.5')	1	TCLP Semi Volatiles			
719			S	X	(3-3.5')	1	RCI			
720			S	X	(4-4.5')	1	GC.MS Vol. 8240/8260/624			
721			S	X	(5-5.5')	1	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			
RELINQUISHED BY: (Signature) BC						Date: 5/17/13	RECEIVED BY: (Signature) OHernan	Date: 5/17/13	SAMPLED BY: (Print & Initial) BC	Date: 5/17/13
RELINQUISHED BY: (Signature) BC						Time: 5:30	RECEIVED BY: (Signature)	Time: 5:30	Time:	Time: 5:30
RELINQUISHED BY: (Signature) BC						Date: _____	RECEIVED BY: (Signature)	Date: _____	SAMPLE SHIPPED BY: (Circle)	AIRBILL #: _____
RELINQUISHED BY: (Signature) BC						Time: _____	RECEIVED BY: (Signature)	Time: _____	FEDEX <input checked="" type="checkbox"/> BUS <input type="checkbox"/>	OTHER: _____
RECEIVING LABORATORY: TETRA ADDRESS: CITY: Midland STATE: _____ ZIP: _____ CONTACT: _____ PHONE: _____ DATE: _____ TIME: _____						RECEIVED BY: (Signature)		HAND-DELIVERED <input checked="" type="checkbox"/> UPS <input type="checkbox"/>	TETRA TECH CONTACT PERSON: Ike Turner	Results by: Ike Turner
SAMPLE CONDITION WHEN RECEIVED: 3.8						REMARKS:			RUSH Charges Authorized: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

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Analysis Request of Chain of Custody Record



TETRA TECH

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PAGE: 2 OF: 10

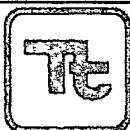
ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: C06				SITE MANAGER: Tre Tavares				ANALYSIS REQUEST (Circle or Specify Method No.)															
PROJECT NO.: 112MC05410			PROJECT NAME: C06 / HoneyBrahma / Graham Nash Eddy 10, NM			SAMPLE IDENTIFICATION				NUMBER OF CONTAINERS		PRESERVATIVE METHOD		ANALYSIS REQUEST (Circle or Specify Method No.)									
LAB I.D. NUMBER	DATE 2013	TIME	MATRIX	COMP	GRAB	HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MDD	TX1005 (Ext. to C35)	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. 8240/8250/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 8088/608	Chloride	Gamma Spec.
722	5/6	S	X	AH 11	(6-6.5')	1	N	X		TPH 8015 MDD	PAH 8270												
723		S	X	AH 12	(0-1')	1	N	X	X														
724		S	X		(1-1.5')	1	N	X															
725		S	X		(2-2.5')	1	N	X															
726		S	X		(3-3.5')	1	N	X															
727		S	X		(4-4.5')	1	N	X															
728		S	X		(5-5.5')	1	N	X															
729		S	X		(6-6.5')	1	N	X															
730		S	X	AH 13	(0-1')	1	N	X	X														
731		S	X		(1-1.5')	1	N	X															
RELINQUISHED BY: (Signature)				Date: 5/17/13		RECEIVED BY: (Signature)		Date: 5/17/13		SAMPLER BY: (Print & Initial)		Date: 5/17/13		RECEIVED BY: (Signature)		Date: 5/17/13		SAMPLER SHIPPED BY: (Circle)		AIRBILL #: _____			
				Time: 1330		J. Hernandez		Time: 1330		AG/TK								FEDEX BUS					
RELINQUISHED BY: (Signature)				Date: _____		RECEIVED BY: (Signature)		Date: _____		HAND DELIVERED UPS		OTHER: _____		TETRA TECH CONTACT PERSON:				Results by: _____					
RELINQUISHED BY: (Signature)				Time: _____		RECEIVED BY: (Signature)		Time: _____						Tre Tavares				RUSH Charges Authorized: Yes No					
RECEIVING LABORATORY: TTEC				RECEIVED BY: (Signature)																			
ADDRESS: Midland																							
CITY: Midland STATE: _____ ZIP: _____																							
CONTACT: _____ PHONE: _____				DATE: _____ TIME: _____																			
SAMPLE CONDITION WHEN RECEIVED: 3.8				REMARKS: _____																			

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Analysis Request of Chain of Custody Record



TETRA TECH

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PAGE: 9 OF: 10

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME:		COG		SITE MANAGER:		Ike Tavarez		ANALYSIS REQUEST (Circle or Specify Method No.)								
PROJECT NO.:		112mcos		PROJECT NAME:		CO6 Honey/Graham/Graham Eddy Co., NM Nash		NUMBER OF CONTAINERS PRESERVATIVE METHOD FILTERED (Y/N) HCL HNO3 ICE NONE BTEX 802/TB (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. 8240/8260/624 GC/MS Semi. Vol. 8270/625 PCB's 8080/608 Pest. 808/608 Chloro ^{es} Gamma Spec. Alpha Beta (Air) PLM (Asbestos) Major Anions/Cations, pH, TDS								
LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION										
732	5/16		S	X		AHI 13 (2 - 2.5')		1	N		X					
733	5/16		S	X		(3 - 3.5')		1	N		X					
734	5/16		S	X		(4 - 4.5')		1	N		X					
735	5/16		S	X		(5 - 5.5')		1	N		X					
736	5/16		S	X		(6 - 6.5')		1	N		X					
737	5/16		S	X		Back Ground 1 (0-1')		1	N		X					
738			S	X		(1-1.5')		1	N		X					
739			S	X		(2-2.5')		1	N		X					
740			S	X		(3-3.5')		1	N		X					
741			S	X		(4-4.5')		1	N		X					
RELINQUISHED BY: (Signature)		Date: 5/17/13		RECEIVED BY: (Signature)		Date: 5/17/13		SAMPLER BY: (Print & Initial)		Date: 5/17/13		SAMPLED BY: (Print & Initial)		Date: 5/17/13		
Adrian Garcia		Time: 15:30		C. Hernandez		Time: 15:30		Adrian Garcia (AG/13)		Time: 15:30		Adrian Garcia (AG/13)		Time: 15:30		
RELINQUISHED BY: (Signature)		Date:		RECEIVED BY: (Signature)		Date:		SAMPLE SHIPPED BY: (Circle)		Date:		AIRBILL #:		Date:		
								FEDEX	BUS			OTHER:				
RELINQUISHED BY: (Signature)		Date:		RECEIVED BY: (Signature)		Date:		HAND DELIVERED	UPS			TETRA TECH CONTACT PERSON:	Ike TAVAREZ	Results by:		
														RUSH Charges Authorized:		
RECEIVING LABORATORY: <i>TCI</i>		ADDRESS:		RECEIVED BY: (Signature)										Yes	No	
CITY: Midland STATE: ZIP: CONTACT: PHONE: DATE: TIME:		REMARKS:														
SAMPLE CONDITION WHEN RECEIVED: 3.8																

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Analysis Request of Chain of Custody Record



TETRA TECH

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PAGE: 10 OF: 10

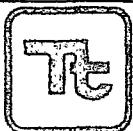
ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: (06)				SITE MANAGER: Ike Tavarez				
PROJECT NO.: 112 MLC 0541D			PROJECT NAME: (06) / Harey Graham / Graham Nash					
LAB I.D. NUMBER	DATE 2013	TIME	MATRIX	SAMPLE IDENTIFICATION				
				COMP:	GRAB:	HNO3	ICE	NONE
742	5/15	S	X	Back Ground (5-5.5')				
743	(	S	X	(6-6.5')			
744	)	S	X	(7-7.5')			
				NUMBER OF CONTAINERS	PRESERVATIVE METHOD			
				1	C	HCl		
				1	C	HNO3		
				1	C	ICE		
				1	C	NONE		
				BTEX 8021B				
				TPH 8015 MOD.	TX1005	(Ext. to C35)		
				PAH 8270				
				RCRA Metals Ag As Ba Cd Cr Pb Hg Se				
				TCLP Metals Ag As Ba Cd Vr Pd Hg Se				
				TCLP Volatiles				
				TCLP Semi Volatiles				
				RCI				
				GC/MS Vol. 8240/8260/624				
				GC/MS Sami. Vol. 8270/625				
				PCBs 8080/608				
				Pest. 808/608				
				Chloride				
				Gamma Spec.				
				Alpha Beta (Air)				
				PLM (Asbestos)				
				Major Anions/Cations, pH, TDS				
RELINQUISHED BY: (Signature) <i>B.P.</i>				Date: 5/17/13	RECEIVED BY: (Signature) <i>Ike Tavarez</i>	Date: 5/17/13	SAMPLED BY: (Print & Initial) <i>Aguilar</i>	
Date: 5/17/13				Time: 15:30			Date: 5/17/13	
RELINQUISHED BY: (Signature) <i>B.P.</i>				RECEIVED BY: (Signature)	Date:	Time:	SAMPLE SHIPPED BY: (Circle) FEDEX AIRBILL #:	
Date:				RECEIVED BY: (Signature)	Date:	Time:	BUS	
RELINQUISHED BY: (Signature) <i>B.P.</i>				RECEIVED BY: (Signature)	Date:	Time:	HAND DELIVERED UPS OTHER:	
RECEIVING LABORATORY: TMC				RECEIVED BY: (Signature)	TETRA TECH CONTACT PERSON: <i>Ike Tavarez</i>		Results by:	
ADDRESS: Midland				DATE:			TIME:	RUSH Charges Authorized: Yes No
CITY: Midland STATE: ZIP: CONTACT: PHONE:				DATE:	TIME:			
SAMPLE CONDITION WHEN RECEIVED: 3.8				REMARKS:				

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Analysis Request of Chain of Custody Record



TETRA TECH

1910 N. Big Spring St.
Midland, Texas 79705

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PAGE: 1 OF: 10

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME:		SITE MANAGER:		PRESERVATIVE METHOD											
		Ike Taguez		PROJECT NAME: COG / HoneyBraham/Graham Nash Eddy Co, NM											
LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION									
	2013		S	X		AN 1 (0-1')									
329652	5/16		S	X		(1-1.5')									
653	)		S	X		(2-2.5')									
654	)		S	X		(3-3.5')									
655	)		S	X		(4-4.5')									
656	)		S	X		(5-5.5')									
657	)		S	X		(6-6.5')									
658	)		S	X		(7-7.5')									
659	)		S	X		AN 2 (0-1')									
660	)		S	X		(1-1.5')									
661	)		S	X											
RELINQUISHED BY: (Signature)		Date: 5/17/13	RECEIVED BY: (Signature)		Date: 5/17/13	SAMPLER BY: (Print & Initial)		Date: 5/17/13							
		Time: 15:30	<i>Hernandez</i>		Time: 15:30	AG/PR		Time: 15:30							
RELINQUISHED BY: (Signature)		Date:	RECEIVED BY: (Signature)		Date:	SAMPLE SHIPPED BY: (Circle)		AIRBILL #:							
		Time:			Time:	FEDEX HAND DELIVERED		BUS UPS							
RELINQUISHED BY: (Signature)		Date:	RECEIVED BY: (Signature)		Date:	OTHER:									
		Time:			Time:	TETRA TECH CONTACT PERSON:		Results by:							
RECEIVING LABORATORY: TTEC		RECEIVED BY: (Signature)													
ADDRESS: Midland		STATE: ZIP:		PHONE:		DATE:		TIME:							
CITY: Midland		STATE: ZIP:		PHONE:		DATE:		TIME:							
CONTACT:															
SAMPLE CONDITION WHEN RECEIVED: 3.8		REMARKS: Neutral pH		3.8 Neutral pH samples of TPH applied 100 mg/m ³ 100% TPH on Agar											

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Lindale Plaza II benzene exceed 100 ug/g or total TPH exceed 50 mg/kg.

TPH

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Midland, Texas 79705

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PAGE: 2 OF: 10

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME:		SITE MANAGER:													
(01)		Ike Tavares													
PROJECT NO.:		PROJECT NAME:													
112 M 05410		(06) HoneyGraham / Gram Nash Eddy Co., NM													
LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION									
	2013		S	X		AH 2 (2.25')									
662	5/16		S	X		(3-3.5')									
663			S	X		(4-4.5')									
664			S	X		(5-5.5')									
665			S	X		(6-6.5')									
666			S	X		(7-7.5')									
667			S	X		AH 3 (0-1')									
668			S	X		(1-1.5')									
669			S	X		(2-2.5')									
670			S	X		(3-3.5')									
671			S	X											
RELINQUISHED BY: (Signature)		Date: 5/17/30	RECEIVED BY: (Signature)		Date: 5/17/30	SAMPLED BY: (Print & Initial)		Date: _____							
<i>[Signature]</i>		Time: 1530	<i>[Signature]</i>		Time: 1530	<i>[Signature]</i>		Time: _____							
RELINQUISHED BY: (Signature)		Date: _____	RECEIVED BY: (Signature)		Date: _____	SAMPLE SHIPPED BY: (Circle)		AIRBILL #: _____							
		Time: _____			Time: _____	FEDEX		BUS							
RELINQUISHED BY: (Signature)		Date: _____	RECEIVED BY: (Signature)		Date: _____	HAND DELIVERED		UPS							
		Time: _____			Time: _____			OTHER: _____							
RECEIVING LABORATORY: TETRA		RECEIVED BY: (Signature)		TETRA TECH CONTACT PERSON:		Results by:									
ADDRESS: Midland				<i>Ike Tavares</i>											
CITY: Midland STATE: TX ZIP: _____		PHONE: _____ DATE: _____ TIME: _____		RUSH Charges Authorized: Yes No											
CONTACT: _____		REMARKS: _____													
SAMPLE CONDITION WHEN RECEIVED: 3-8															

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Analysis Request of Chain of Custody Record



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PAGE: 3 OF: 910

ANALYSIS REQUEST
(Circle or Specify Method No.)

								ANALYSIS REQUEST (Circle or Specify Method No.)																	
								BTEX 8021B	TPH 8015 MOD.	TX1005 (Ext. to C35)	PAH 8270	RCCA 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	PCBs 8080/608	Pest. 809/608	Chlorine	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
								NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HNO3	ICE	NONE												
CLIENT NAME:	(06)			SITE MANAGER:	Ike Tavarez																				
PROJECT NO.:	112 MC 05410			PROJECT NAME:	(06) HoneyGraham / Graham Nash Eddy Co., NM			SAMPLE IDENTIFICATION																	
LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP	GRAB																				
672	5/16		S	X		AH 3 (4-4.5')		1	N			X													
673			S	X		(5-5.5')		1	N			X													
674			S	X		(6-6.5')		1	N			X													
675			S	X		(7-7.5')		1	N			X													
676			S	X		AH 4(0-1')		1	N			X													
677			S	X		(1-1.5')		1	N			X													
678			S	X		(2-2.5')		1	N			X													
679			S	X		(3-3.5')		1	N			X													
680			S	X		(4-4.5')		1	N			X													
681			S	X		(5-5.5')	n	1	N			X													
RELINQUISHED BY: (Signature)	<i>(13)</i>			Date: 5/17/03	RECEIVED BY: (Signature)	<i>CH</i>			Date: 5/17/03	RECEIVED BY: (Signature)	<i>CH</i>			Date: 5/17/03	RECEIVED BY: (Signature)	<i>CH</i>			SAMPLED BY: (Print & Initial)	Date: 5/17/03					
RELINQUISHED BY: (Signature)				Time: 1520	RECEIVED BY: (Signature)				Time: 15:30	RECEIVED BY: (Signature)				Time: 15:30	RECEIVED BY: (Signature)				Time: 15:30	Time: 15:30	Time: 15:30	Time: 15:30			
RELINQUISHED BY: (Signature)				Date:	RECEIVED BY: (Signature)				Date:	RECEIVED BY: (Signature)				Date:	RECEIVED BY: (Signature)				Date:	RECEIVED BY: (Signature)					
RECEIVING LABORATORY: <i>Tavarez</i>				RECEIVED BY: (Signature)				RECEIVED BY: (Signature)				RECEIVED BY: (Signature)				RECEIVED BY: (Signature)				RECEIVED BY: (Signature)					
ADDRESS: <i>Midland</i>				ZIP:	DATE:				TIME:	DATE:				TIME:	DATE:				TIME:	DATE:					
CITY: <i>Midland</i>	STATE:	ZIP:	CONTACT:	PHONE:	DATE:				TIME:	DATE:				TIME:	DATE:				TIME:	DATE:					
SAMPLE CONDITION WHEN RECEIVED: <i>3S</i>				REMARKS:																					

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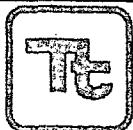
ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG			SITE MANAGER: Ike Tavares																		
PROJECT NO.: 112MC05410			PROJECT NAME: COG Honey Graham/Graham Nash Eddy Co., NM																		
LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION					NUMBER OF CONTAINERS					PRESERVATIVE METHOD					
			S	X		AH 4 (6-6.5)					1	Z	HCL	HNO3	ICE	NONE					
682	5/16		S	X		(7-7.5)					1	N		X							
683	5/16		S	X		AH 5 (0-1)					1	N		X							
684	5/16		S	X		(1-1.5)					1	N		X							
685	5/16		S	X		(2-2.5)					1	N		X							
686	5/16		S	X		(3-3.5)					1	N		X							
687	5/16		S	X		(4-4.5)					1	N		X							
688	5/16		S	X		AH 6 (0-1)					1	N		X							
689	5/16		S	X		(1-1.5)					1	N		X							
690	5/16		S	X		(2-2.5)					1	N		X							
691	5/16		S	X							1	N		X							
RELINQUISHED BY: (Signature): Adron Garcia			Date: 5/17/13	RECEIVED BY: (Signature): J Hernandez			Date: 5/17/13	SAMPLER BY: (Print & Initial): Adron Garcia			Date: 5/17/13										
RELINQUISHED BY: (Signature): Adron Garcia			Date: 5/17/13	RECEIVED BY: (Signature):			Date: 5/17/13	SAMPLE SHIPPED BY: (Circle): FEDEX			Date: 5/17/13										
RELINQUISHED BY: (Signature):			Date: 5/17/13	RECEIVED BY: (Signature):			Date: 5/17/13	BUS			Date: 5/17/13										
RECEIVING LABORATORY: True			RECEIVED BY: (Signature):			HAND DELIVERED			UPS			OTHER:									
ADDRESS: Midland			DATE: 5/17/13			TIME: 15:30			TETRA TECH CONTACT PERSON: Ike Tavares			Results by:									
CITY: Midland STATE: TX ZIP: 79705			PHONE: (432) 682-3946			TIME: 15:30			Ike Tavares			RUSH Charges Authorized: Yes No									
CONTACT: (432) 682-4559			REMARKS: 3.8																		

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ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: <i>C06</i>		SITE MANAGER: <i>TKE Taguez</i>										
PROJECT NO.: <i>112M C05410</i>		PROJECT NAME: <i>C06 / HoneyGraham/Graham Nash Eddy Co., N.M.</i>		SAMPLE IDENTIFICATION								
LAB I.D. NUMBER	DATE <i>2013</i>	TIME	MATRIX	COMP	GRAB	NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HNO3	ICE	NONE	PRESERVATIVE METHOD
692	5/16		S	X	AH 6 (3-3.5)	1	2			X		BTEX 8021B
693	5/16		S	X	(4-4.5)	1	N			X		TPH 8015 MOD. TX1005 (Ext. to C35)
694	5/16		S	X	AH 7 (0-1)	1	N			X		PAH 8270
695	5/16		S	X	(1-1.5)	1	N			X		RCRCA Metals Ag As Ba Cd Cr Pb Hg Se
696	5/16		S	X	(2-2.5)	1	N			X		TCLP Metals Ag As Ba Cd Vr Pd Hg Se
697	5/16		S	X	(3-3.5)	1	N			X		TCLP Volatiles
698	5/16		S	X	(4-4.5)	1	N			X		TCLP Semi Volatiles
699	5/16		S	X	AH 8 (0-1)	1	N			X		RCI
700	5/16		S	X	(1-1.5)	1	N			X		GC/MS Vol. 8240/8260/624
701	5/16		S	X	(2-2.5)	1	N			X		GC/MS Semi. Vol. 8270/625
RELINQUISHED BY: (Signature) <i>[Signature]</i>				RECEIVED BY: (Signature) <i>[Signature]</i>				SAMPLER BY: (Print & Initial) <i>[Signature]</i>				Date: <i>5/17/13</i> Time: <i>15:30</i>
RELINQUISHED BY: (Signature) <i>[Signature]</i>				RECEIVED BY: (Signature) <i>[Signature]</i>				SAMPLER BY: (Print & Initial) <i>[Signature]</i>				Date: <i>5/17/13</i> Time: <i>15:30</i>
RELINQUISHED BY: (Signature) <i>[Signature]</i>				RECEIVED BY: (Signature) <i>[Signature]</i>				SAMPLER BY: (Print & Initial) <i>[Signature]</i>				AIRBILL #:
RECEIVING LABORATORY: <i>TTEC</i> ADDRESS: <i>Midland</i> CITY: <i>Midland</i> STATE: <i>TX</i> ZIP: <i>79705</i> CONTACT: <i>[Signature]</i>				RECEIVED BY: (Signature) <i>[Signature]</i>				SAMPLE SHIPPED BY: (Circle) FEDEX <input checked="" type="checkbox"/> BUS <input type="checkbox"/> HAND DELIVERED <input checked="" type="checkbox"/> UPS <input type="checkbox"/> OTHER: <i>[Signature]</i>				Results by: <i>[Signature]</i>
SAMPLE CONDITION WHEN RECEIVED: <i>3.8</i>				REMARKS:				RUSH Charges Authorized: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				

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CLIENT NAME: COG				SITE MANAGER: Ike Tavarez				ANALYSIS REQUEST (Circle or Specify Method No.)																
PROJECT NO.: 112 MR 0541a				PROJECT NAME: COG HoneyGraham / Graham Nash Eddy Co., TNM				NUMBER OF CONTAINERS FILTERED (Y/N) HCL HNO3 ICE NONE																
LAB I.D. NUMBER	DATE 2013	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION				PRESERVATIVE METHOD RTEX 8022B SPH 8015.M4D TX1005 (Ext. to C35) PAH 8270 RCRA Metals Ag As Ba Cd Cr Pb Hg Se TCLP Metals Ag As Ba Cd Vr Pd Hg Se TCLP Volatiles TCLP Semi Volatiles RCI GC/MS Vol. 8240/8260/624 GC/MS Semi. Vol. 8270/625 PCB's 8080/608 Pest. 808/608														
702	5/16		S	X	AH 8	(3-3.5')	1	N		X														
703	5/16		S	X		(4-4.5)	1	N		X														
704	5/16		S	X	AH 9	(0-1)	1	N		X		X	X											
705	5/16		S	X		(0-1.5')	1	N		X														
706	5/16		S	X		(2-2.5')	1	N		X														
707	5/16		S	X		(3-3.5')	1	N		X														
708	5/16		S	X		(4-4.5')	1	N		X														
709	5/16		S	X	AH 10	(0-1')	1	N		X		X	X											
710	5/16		S	X		(1-1.5')	1	N		X														
711	5/16		S	X		(2-2.5')	1	N		X														
RELINQUISHED BY: (Signature) Adrian Garcia				RECEIVED BY: (Signature) O. Hernandez				Date: 5/17/13 Time: 15:30				SAMPLER BY: (Print & Initial) Adrian Garcia ALI/2				Date: 5/17/13 Time: 15:30								
RELINQUISHED BY: (Signature)				RECEIVED BY: (Signature)								SAMPLE SHIPPED BY: (Circle)				AIRBILL #:								
												FEDEX BUS												
												HAND DELIVERED UPS				OTHER:								
RELINQUISHED BY: (Signature)				RECEIVED BY: (Signature)				Date: _____ Time: _____				TETRA TECH CONTACT PERSON: Ike Tavarez				Results by:								
RECEIVING LABORATORY: Price				RECEIVED BY: (Signature)																RUSH Charges Authorized: Yes No				
ADDRESS: Midland				CITY: Midland STATE: ZIP: _____				DATE: _____ TIME: _____																
CONTACT: _____				PHONE: _____																				
SAMPLE CONDITION WHEN RECEIVED: 3.8				REMARKS:																				

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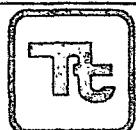
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CLIENT NAME: (OG)			SITE MANAGER: Ike Turner			ANALYSIS REQUEST (Circle or Specify Method No.)													
PROJECT NO.: 112 MCOS 410			PROJECT NAME: (OG) Home Graham / Graham Nash <i>Eddy (0, 1')</i>																
LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP	GRAB	SAMPLE IDENTIFICATION			NUMBER OF CONTAINERS	PRESERVATIVE METHOD									
										HCL	HNO3	ICE	NONE						
712	5/16		S	X		AH 10 (3-3.5')			1	N	X								
713			S	X		(4-4.5')			1	N	X								
714			S	X		(5-5.5')			1	N	X								
715			S	X		(6-6.5')			1	N	X								
716			S	X		AH 11 (0-1')			1	N	X	X							
717			S	X		(1-1.5')			1	N	X								
718			S	X		(2-2.5')			1	N	X								
719			S	X		(3-3.5')			1	N	X								
720			S	X		(4-4.5')			1	N	X								
721			S	X		(5-5.5')			1	N	X								
RELINQUISHED BY: (Signature) <i>BC2</i>			Date: 5/17/13	RECEIVED BY: (Signature) <i>CH</i>			Date: 5/17/13	SAMPLED BY: (Print & Initial) <i>BC2</i>			Date: 5/17/13								
RELINQUISHED BY: (Signature) <i>BC2</i>			Date: 5/17/13	RECEIVED BY: (Signature) <i>CH</i>			Date: 5/17/13	SAMPLE SHIPPED BY: (Circle) FEDEX			Date: 5/17/13								
RELINQUISHED BY: (Signature) <i>BC2</i>			Date: 5/17/13	RECEIVED BY: (Signature) <i>CH</i>			Date: 5/17/13	AIRBILL #:											
RECEIVING LABORATORY: Tech ADDRESS: Midland CITY: Midland STATE: TX ZIP: 79705 CONTACT: PHONE: DATE: TIME:			RECEIVED BY: (Signature)			HANDELIVERED			OTHER:										
SAMPLE CONDITION WHEN RECEIVED: 3.8			REMARKS:			TETRA TECH CONTACT PERSON: Ike Turner			Results by:										
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ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME:			SITE MANAGER:			SAMPLE IDENTIFICATION					
PROJECT NO.: 112MC05410			PROJECT NAME: C061 HoneyGraham/Graham Nash Eddy 10, NM								
LAB I.D. NUMBER	DATE 2013	TIME	MATRIX	COMP.	GRAB	HCl	HNO3	ICE	NONE	PRESERVATIVE METHOD	
722	5/16		S	X	AH 11 (6-6.5')	1	N	X		BTX 8021B	
723			S	X	AH 12 (0-1')	1	N	X	X	TPH 8015 MOD	
724			S	X	(1-1.5')	1	N	X		PAH 8270	
725			S	X	(2-2.5')	1	N	X		RCRA Metals Ag As Ba Cd Cr Pb Hg Se	
726			S	X	(3-3.5')	1	N	X		TCLP Metals Ag As Ba Cd Cr Pb Hg Se	
727			S	X	(4-4.5')	1	N	X		TCLP Volatiles	
728			S	X	(5-5.5')	1	N	X		TCLP Semi Volatiles	
729			S	X	(6-6.5')	1	N	X		RCI	
730			S	X	AH 13 (0-1')	1	N	X	X	GC/MS Vol. 8240/8260/624	
731			S	X	(1-1.5')	1	N	X		GC/MS Semi. Vol. 8270/625	
RELINQUISHED BY: (Signature)						Date: 5/17/13	RECEIVED BY: (Signature)	Date: 5/17/13	SAMPLED BY: (Print & Initial)	Date: 5/17/13	
<i>BFR</i>						Time: 15:30	<i>CJ Hernandez</i>	Time: 15:30	<i>Abby JBG</i>	Time: 15:30	
RELINQUISHED BY: (Signature)						Date:	RECEIVED BY: (Signature)	Date:	SAMPLE SHIPPED BY: (Circle)	AIRBILL #:	
						Time:		FEDEX	BUS		
RELINQUISHED BY: (Signature)						Date:	RECEIVED BY: (Signature)	Date:	HAND DELIVERED	UPS	
						Time:		OTHER:	TETRA TECH CONTACT PERSON:		
RECEIVING LABORATORY: TREC						RECEIVED BY: (Signature)			Results by:		
ADDRESS: Midland STATE: ZIP: DATE: TIME:									RUSH Charges Authorized: Yes No		
CONTACT: PHONE: DATE: TIME: SAMPLE CONDITION WHEN RECEIVED: 3.8						REMARKS:					

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OF: 10

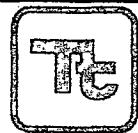
ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG			SITE MANAGER: Ike Tavarez																						
PROJECT NO.: 113MCOS			PROJECT NAME: COG Honey/Graham/Graham Eddy Co., NM Nash																						
LAB I.D. NUMBER	DATE 2013	TIME	MATRIX S	COMP: X	GRAB	SAMPLE IDENTIFICATION					PRESERVATIVE METHOD														
						NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HNO3	ICE	NONE														
732	5/16		S	X		AH 13 (2 - 2.5')					1	N	X			RTTEX 8021B					TPH 8015 MOD. TX1005 (Ext. to C35)				
733	5/16		S	X		(3 - 3.5')					1	N	X			PAH 8270					RCRA Metals Ag As Ba Cd Cr Pb Hg Se				
734	5/16		S	X		(4 - 4.5')					1	N	X			TCLP Metals Ag As Ba Cd Vr Pd Hg Se					TCLP Volatiles				
735	5/16		S	X		(5 - 5.5')					1	N	X			TCLP Semi Volatiles					RCI				
736	5/16		S	X		(6 - 6.5')					1	N	X								GC/MS Vol. 8240/8260/624				
737	5/15		S	X		Back Ground 1 (0-1')					1	N	X								GC/MS Semi. Vol. 8270/625				
738			S	X		(1-1.5')					1	N	X								PCBs 8080/608				
739			S	X		(2-2.5')					1	N	X								Pest. 8080/608				
740			S	X		(3-3.5')					1	N	X								Chromate				
741			S	X		(4-4.5')					1	N	X								Gamma Spec.				
RELINQUISHED BY: (Signature) Ike Tavarez						Date: 5/17/13	RECEIVED BY: (Signature) C. T. Alvarez	Date: 5/17/13	SAMPLED BY: (Print & Initial) Adrian Garcia (AG/AR)	Date: 5/17/13															
RELINQUISHED BY: (Signature)						Time: 15:30	RECEIVED BY: (Signature)	Time: 15:30	Time: 15:30	Time: 15:30															
RELINQUISHED BY: (Signature)						Date:	RECEIVED BY: (Signature)	Date:	SAMPLE SHIPPED BY: (Circle)	AIRBILL #:															
RELINQUISHED BY: (Signature)						Time:	RECEIVED BY: (Signature)	Time:	FEDEX	BUS															
RECEIVING LABORATORY: Tetra Tech						RECEIVED BY: (Signature)	Time:	HAND DELIVERED	UPS	OTHER:															
ADDRESS: Midland						DATE: _____	TIME: _____	TETRA TECH CONTACT PERSON: Ike TAVAREZ					Results by:												
CITY: Midland STATE: ZIP: CONTACT: PHONE: DATE: TIME:																RUSH Charges Authorized: Yes No									
SAMPLE CONDITION WHEN RECEIVED: 3.8						REMARKS:																			

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PAGE: 10 OF: 10

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: <i>(06</i>			SITE MANAGER: <i>Ike Tavares</i>										
PROJECT NO.: <i>112 MC 05410</i>		PROJECT NAME: <i>(06 / Honey Graham / Graham Nash</i>		SAMPLE IDENTIFICATION <i>Eddy 10, NM</i>									
LAB I.D. NUMBER	DATE <i>2013</i>	TIME	MATRIX	COMP.	GRAB								
742	5/15		S	X	<i>Back Ground (5-5.5')</i>	1	C	HCL	HNO3	ICE	NONE		
743			S	X	<i>(6-6.5')</i>	1	N			X			
744			S	X	<i>(7-7.5')</i>	1	N			X			
NUMBER OF CONTAINERS													
PRESERVATIVE METHOD													
BTEX 8021B													
TPH		8015 MOD.		TX1005 (Ext. to C35)		PAH 8270		RCRA Metals Ag As Ba Cd Cr Pb Hg Se		TCLP Metals Ag As Ba Cd Vr Pd Hg Se		TCLP Volatiles	
PCBs 8080/608		Pest. 808/608		Chloride		RCI		GC/MS Vol. 8240/8260/624		GC/MS Saml. Vol. 8270/625		Alpha Beta (Alt)	
Gamma Spec.												PLM (Asbestos)	
												Major Anions/Cations, pH, TDS	

RELINQUISHED BY: (Signature)

Date:

Time:

RECEIVED BY: (Signature)

Date: *5-17-13*Time: *15:30*

SAMPLER BY: (Print & Initial)

Date: *5-17-13*Time: *15:30*

RELINQUISHED BY: (Signature)

Date:

Time:

RECEIVED BY: (Signature)

Date:

Time:

SAMPLE SHIPPED BY: (Circle)

AIRBILL #:

FEDEX

BUS

HAND DELIVERED

UPS

OTHER:

RELINQUISHED BY: (Signature)

Date:

Time:

RECEIVED BY: (Signature)

Date:

Time:

TETRA TECH CONTACT PERSON:

Results by:

RECEIVING LABORATORY: *TTC*

RECEIVED BY: (Signature)

IKE Tavares

RUSH Charges

ADDRESS:

Authorized:

CITY: *midland*

Yes

STATE:

No

CONTACT: PHONE: DATE: TIME:

SAMPLE CONDITION WHEN RECEIVED:

REMARKS:

3.8

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

Summary Report

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

Report Date: June 7, 2013

Work Order: 13060303

Project Location: Eddy Co., NM
 Project Name: COG/Honey Graham/Graham Nash
 Project Number: 112MC05410

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
330702	BG 2 0-1'	soil	2013-05-30	00:00	2013-05-31
330703	BG 2 1-1.5'	soil	2013-05-30	00:00	2013-05-31
330704	BG 2 2-2.5'	soil	2013-05-30	00:00	2013-05-31
330705	BG 2 3-3.5'	soil	2013-05-30	00:00	2013-05-31
330706	BG 2 4-4.5'	soil	2013-05-30	00:00	2013-05-31
330707	BG 2 5-5.5'	soil	2013-05-30	00:00	2013-05-31
330708	BG 2 6-6.5'	soil	2013-05-30	00:00	2013-05-31
330709	BG 2 7-7.5'	soil	2013-05-30	00:00	2013-05-31

Sample: 330702 - BG 2 0-1'

Param	Flag	Result	Units	RL
Chloride		3770	mg/Kg	4

Sample: 330703 - BG 2 1-1.5'

Param	Flag	Result	Units	RL
Chloride		1210	mg/Kg	4

Sample: 330704 - BG 2 2-2.5'

Param	Flag	Result	Units	RL
Chloride		2920	mg/Kg	4

Report Date: June 7, 2013

Work Order: 13060303

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Sample: 330705 - BG 2 3-3.5'

Param	Flag	Result	Units	RL
Chloride		2920	mg/Kg	4

Sample: 330706 - BG 2 4-4.5'

Param	Flag	Result	Units	RL
Chloride		3460	mg/Kg	4

Sample: 330707 - BG 2 5-5.5'

Param	Flag	Result	Units	RL
Chloride		3430	mg/Kg	4

Sample: 330708 - BG 2 6-6.5'

Param	Flag	Result	Units	RL
Chloride		3100	mg/Kg	4

Sample: 330709 - BG 2 7-7.5'

Param	Flag	Result	Units	RL
Chloride		3330	mg/Kg	4



TRACEANALYSIS, INC.

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200 East Sunset Road, Suite E El Paso, Texas 79922 915-585-3443 FAX 915-585-4944
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(BioAquatic) 2501 Mayes Rd., Suite 100 Carrollton, Texas 75006 972-242-7750
E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

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

Report Date: June 7, 2013

Work Order: 13060303

Project Location: Eddy Co., NM
Project Name: COG/Honey Graham/Graham Nash
Project Number: 112MC05410

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
330702	BG 2 0-1'	soil	2013-05-30	00:00	2013-05-31
330703	BG 2 1-1.5'	soil	2013-05-30	00:00	2013-05-31
330704	BG 2 2-2.5'	soil	2013-05-30	00:00	2013-05-31
330705	BG 2 3-3.5'	soil	2013-05-30	00:00	2013-05-31
330706	BG 2 4-4.5'	soil	2013-05-30	00:00	2013-05-31
330707	BG 2 5-5.5'	soil	2013-05-30	00:00	2013-05-31
330708	BG 2 6-6.5'	soil	2013-05-30	00:00	2013-05-31
330709	BG 2 7-7.5'	soil	2013-05-30	00:00	2013-05-31

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

This report consists of a total of 13 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



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

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Sample 330704 (BG 2 2-2.5')	5
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Sample 330707 (BG 2 5-5.5')	6
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Case Narrative

Samples for project COG/Honey Graham/Graham Nash were received by TraceAnalysis, Inc. on 2013-05-31 and assigned to work order 13060303. Samples for work order 13060303 were received intact at a temperature of 5.1 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	86384	2013-06-04 at 08:55	102060	2013-06-06 at 15:00
Chloride (Titration)	SM 4500-Cl B	86384	2013-06-04 at 08:55	102061	2013-06-06 at 15:01

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 13060303 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 7, 2013
112MC05410

Work Order: 13060303
COG/Honey Graham/Graham Nash

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Eddy Co., NM

Analytical Report

Sample: 330702 - BG 2 0-1'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-06-06	Analyzed By:	AR
QC Batch:	102060	Sample Preparation:	2013-06-04	Prepared By:	AR
Prep Batch:	86384				

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

Sample: 330703 - BG 2 1-1.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-06-06	Analyzed By:	AR
QC Batch:	102060	Sample Preparation:	2013-06-04	Prepared By:	AR
Prep Batch:	86384				

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			1210	mg/Kg	10	4.00

Sample: 330704 - BG 2 2-2.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-06-06	Analyzed By:	AR
QC Batch:	102060	Sample Preparation:	2013-06-04	Prepared By:	AR
Prep Batch:	86384				

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			2920	mg/Kg	10	4.00

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COG/Honey Graham/Graham Nash

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Sample: 330705 - BG 2 3-3.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-06-06	Analyzed By:	AR
QC Batch:	102060	Sample Preparation:	2013-06-04	Prepared By:	AR
Prep Batch:	86384				

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			2920	mg/Kg	10	4.00

Sample: 330706 - BG 2 4-4.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A	
Analysis:	Chloride (Titration)	Date Analyzed:	2013-06-06	Analyzed By:	AR	
QC Batch:	102060	Sample Preparation:	2013-06-04	Prepared By:	AR	
Prep Batch:	86384					

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			3460	mg/Kg	10	4.00

Sample: 330707 - BG 2 5-5.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A	
Analysis:	Chloride (Titration)	Date Analyzed:	2013-06-06	Analyzed By:	AR	
QC Batch:	102060	Sample Preparation:	2013-06-04	Prepared By:	AR	
Prep Batch:	86384					

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			3430	mg/Kg	10	4.00

Sample: 330708 - BG 2 6-6.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A	
Analysis:	Chloride (Titration)	Date Analyzed:	2013-06-06	Analyzed By:	AR	
QC Batch:	102060	Sample Preparation:	2013-06-04	Prepared By:	AR	
Prep Batch:	86384					

Report Date: June 7, 2013
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Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride			3100	mg/Kg	10	4.00

Sample: 330709 - BG 2 7-7.5'

Laboratory: Midland

Analysis: Chloride (Titration)

QC Batch: 102061

Prep Batch: 86384

Analytical Method: SM 4500-Cl B

Date Analyzed: 2013-06-06

Sample Preparation: 2013-06-04

Prep Method: N/A

Analyzed By: AR

Prepared By: AR

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

Report Date: June 7, 2013
112MC05410

Work Order: 13060303
COG/Honey Graham/Graham Nash

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Method Blanks

Method Blank (1) QC Batch: 102060

QC Batch: 102060
Prep Batch: 86384

Date Analyzed: 2013-06-06
QC Preparation: 2013-06-04

Analyzed By: AR
Prepared By: AR

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

Method Blank (1) QC Batch: 102061

QC Batch: 102061
Prep Batch: 86384

Date Analyzed: 2013-06-06
QC Preparation: 2013-06-04

Analyzed By: AR
Prepared By: AR

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

Report Date: June 7, 2013
112MC05410

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COG/Honey Graham/Graham Nash

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Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 102060 Date Analyzed: 2013-06-06 Analyzed By: AR
Prep Batch: 86384 QC Preparation: 2013-06-04 Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2820	mg/Kg	1	2500	<3.85	113	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride			2740	mg/Kg	1	2500	<3.85	110	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: 102061 Date Analyzed: 2013-06-06 Analyzed By: AR
Prep Batch: 86384 QC Preparation: 2013-06-04 Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2550	mg/Kg	1	2500	<3.85	102	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride			2660	mg/Kg	1	2500	<3.85	106	85 - 115	4	20

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

Matrix Spike (MS-1) Spiked Sample: 330708

QC Batch: 102060 Date Analyzed: 2013-06-06 Analyzed By: AR
Prep Batch: 86384 QC Preparation: 2013-06-04 Prepared By: AR

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Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			5840	mg/Kg	10	2500	3100	110	78.9 - 121

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	Limit
Chloride			5570	mg/Kg	10	2500	3100	99	78.9 - 121	5	20

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

Matrix Spike (MS-1) Spiked Sample: 330835

QC Batch: 102061 Date Analyzed: 2013-06-06 Analyzed By: AR
Prep Batch: 86384 QC Preparation: 2013-06-04 Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			6060	mg/Kg	10	2500	3600	98	78.9 - 121

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	Limit
Chloride			6400	mg/Kg	10	2500	3600	112	78.9 - 121	5	20

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

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112MC05410

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COG/Honey Graham/Graham Nash

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Calibration Standards

Standard (CCV-1)

QC Batch: 102060

Date Analyzed: 2013-06-06

Analyzed By: AR

Param	Flag	Cert	Units	CCVs	CCVs	CCVs	Percent	Date
				True	Found	Percent	Recovery	
Chloride			mg/Kg	100	103	103	85 - 115	2013-06-06

Standard (CCV-2)

QC Batch: 102060

Date Analyzed: 2013-06-06

Analyzed By: AR

Param	Flag	Cert	Units	CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Conc.	Conc.	Recovery	Limits	Analyzed				
Chloride			mg/Kg	100	97.2	97	85 - 115	2013-06-06

Standard (CCV-1)

QC Batch: 102061

Date Analyzed: 2013-06-06

Analyzed By: AR

Param	Flag	Cert	Units	CCVs	CCVs	CCVs	Percent	Date
				True	Found	Percent	Recovery	
Chloride			mg/Kg	100	97.8	98	85 - 115	2013-06-06

Standard (CCV-2)

QC Batch: 102061

Date Analyzed: 2013-06-06

Analyzed By: AR

Param	Flag	Cert	Units	CCVs	CCVs	CCVs	Percent	Date
				True	Found	Percent	Recovery	Analyzed
Chloride			mg/Kg	100	102	102	85 - 115	2013-06-06

Appendix

Report Definitions

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

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704392-12-4	Midland

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less than ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

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COG/Honey Graham/Graham Nash

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

13060303

Analysis Request of Chain of Custody Record



TETRA TECH

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

PAGE: / OF: /

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: 106				SITE MANAGER: Ike Tavares						
PROJECT NO.: 112 MC 05410			PROJECT NAME: 106 / Honey/Graham/Graham Nash Eddy 10, Nr							
LAB I.D. NUMBER	DATE 2013	TIME	MATRIX S	COMP/GRAB X	FILTERED (Y/N)	HCL	HNO3	ICE	NONE	PRESERVATIVE METHOD
330702	5/30		S	X	X			X		BTEX 8021B
703	/		S	X				X		TPH 8015 MOD. TX1005 (Ext. to C35) PAH 8270
704	/		S	X				X		RCRA Metals Ag As Ba Cd Cr Pb Hg Se TCPL Metals Ag As Ba Cd Vr Pd Hg Se
705	/		S	X				X		TCPL Volatiles
706	/		S	X				X		TCPL Semi Volatiles
707	/		S	X				X		RCI
708	/		S	X				X		GC/MS Vol. 8240/6260/624 GC/MS Semi. Vol. 8270/625
709	/		S	X				X		PCBs 8080/608 Pest. 808/608
										Chloride Gamma Spec.
										Alpha Beta (Air) PLM (Asbestos)
										Major Anions/Cations, pH, TDS

RELINQUISHED BY: (Signature) <i>R. J. Hernandez</i>	Date: 5/31/13	RECEIVED BY: (Signature) <i>Ike Tavares</i>	Date: 5/31/13	SAMPLED BY: (Print & Initial) <i>R. J. Hernandez</i>	Date: 5/31/13
Time: 16:35		Time: 16:35		Time: 17:35	
RELINQUISHED BY: (Signature)	Date:	RECEIVED BY: (Signature)	Date:	SAMPLE SHIPPED BY: (Circle)	AIRBILL #:
Time:		Time:		FEDEX	BUS
RELINQUISHED BY: (Signature)	Date:	RECEIVED BY: (Signature)	Date:	HAND DELIVERED	UPS
Time:		Time:		OTHER:	
RECEIVING LABORATORY: Tavares	RECEIVED BY: (Signature)	TETRA TECH CONTACT PERSON: <i>Ike Tavares</i> Results by:			
ADDRESS:					
CITY: Midland	STATE:	ZIP:	PHONE:	DATE:	TIME:
CONTACT:					
SAMPLE CONDITION WHEN RECEIVED: 5.1°C		REMARKS: Midland oil			

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