

SITE INFORMATION

Report Type: Closure Report

General Site Information:

Site:	Electra Federal #5 Tank Battery					
Company:	COG Operating LLC					
Section, Township and Range	Unit D	Sec 15	T17S	R30E		
Lease Number:	API-30-015-34211					
County:	Eddy County					
GPS:	32.83922° N			103.96659° W		
Surface Owner:	Federal					
Mineral Owner:						
Directions:	In Loco Hills, from the intersection of Hwy 82 and Goat Roper Rd., travel north on Goat Roper Rd. for 0.7m, turn right and travel 0.5m, turn left and travel 0.1m, turn right and travel 0.2m, turn left and travel 0.2m to site.					

Release Data:

Date Released:	8/7/2012	RECEIVED MAY 22 2013 NMOCD ARTESIA
Type Release:	Produced Water	
Source of Contamination:	Flowline failure	
Fluid Released:	145 bbls	
Fluids Recovered:	130 bbls	

Official Communication:

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

Ranking Criteria:

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

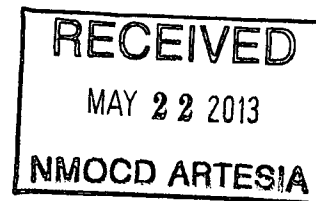
Acceptable Soil RRAL (mg/kg)		
Benzene	Total BTEX	TPH
10	50	5,000



TETRA TECH

April 19, 2013

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



Re: Closure Report for the COG Operating LLC., Electra Federal #5 Tank, Battery, Flow Line Leak, Unit D, Section 15, Township 17 South, Range 30 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 Electra Federal #5 Tank Battery, Flow Line Leak located in Unit D, Section 15, Township 17 South, Range 30 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.83922°, W 3.96659°. 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 August 7, 2012, and released approximately one hundred forty five (145) barrels of produced water from a flow line. To alleviate the problem, COG personnel repaired the flow line. One hundred thirty (130) barrels of standing fluids were recovered. The spill initiated east of the lease road and migrated south in the pasture affecting an area approximately 30' X 120'. The initial C-141 form is enclosed in Appendix A.

Groundwater

No water wells were listed within Section 15. According to the NMOCD groundwater map, the average depth to groundwater in this area is greater than 300' below surface. The groundwater data is shown in Figure B.



Regulatory

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

Soil Assessment and Analytical Results

On September 6, 2012, Tetra Tech personnel inspected and sampled the spill area. Five (5) auger holes (AH-1 through AH-5) were installed using a stainless steel hand auger to assess the impacted soils. Selected samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The sampling results are summarized in Table 1. The auger hole locations are shown on Figure 3.

Referring to Table 1, none of the auger hole samples exceeded the RRAL for TPH and BTEX. Elevated chloride concentrations were detected in all of the auger holes with chloride ranging from 1,250 mg/kg to 15,400 mg/kg. The chloride impacted soils were not vertically defined.

On November 28, 2012, Tetra Tech personnel supervised the installation of soil borings using an air rotary drilling rig. A total of five (5) soil boring (SB-1 through SB-5) were installed to define the chloride vertical extents. The soil borings were installed to total depths of 20.0' to 50.0' below surface. Soil samples were collected and submitted for analysis. The sampling results are summarized in Table 1. The soil bore locations are shown on Figure 4. Copies of the laboratory analysis and chain-of-custody documentation are included in Appendix C.

Referring to Table 1, the chlorides were vertically defined at all of the soil boring locations. A shallow chloride impact was detected in the area of SB-2 and defined at a depth of 6-7' below surface. The chlorides in the areas of AH-4 and AH-5 significantly declined with depth at approximately at 10.0' to 15.0' below surface. The chloride impacted soils were encountered deeper in the areas of SB-1 and SB-3, which significantly declined with depth at approximately 25.0' to 30.0' below surface.



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Closure Activities

Based on the approved work plan, Tetra Tech personnel supervised the excavation of the site. The excavated areas and depths are highlighted in Table 1 and shown on Figure 4. The final excavation depths of the soil remediation were met as stated in the approved work plan. Deeper excavation could not be achieved due to equipment and safety concerns. As such, Tetra Tech excavated the soils to the maximum extent practicable.

Confirmation samples were collected in all areas of the excavation. Referring to Table 1, the confirmation samples in the area of (AH-1, SB-1) and (AH-2, SB-2) had chloride highs of 6,430 mg/kg and 9,220 mg/kg on the west wall. This impact was left in place due to a lease road that ran parallel along the edge of the excavation. The remaining confirmation samples did not show a significant chloride impact the soils.

Due to the elevated chlorides, the areas of (AH-1, SB-1), (AH-2, SB-2) and (AH-3, SB-3) were capped with a 40 mil liner installed at 4.0' below surface in order to prevent the further migration of the impact. Approximately 1,396 cubic yards were transported offsite for proper disposal. Once final excavation depths were achieved and approved, the site was then backfilled with clean material, brought to grade then ripped and seeded according to the BLM.

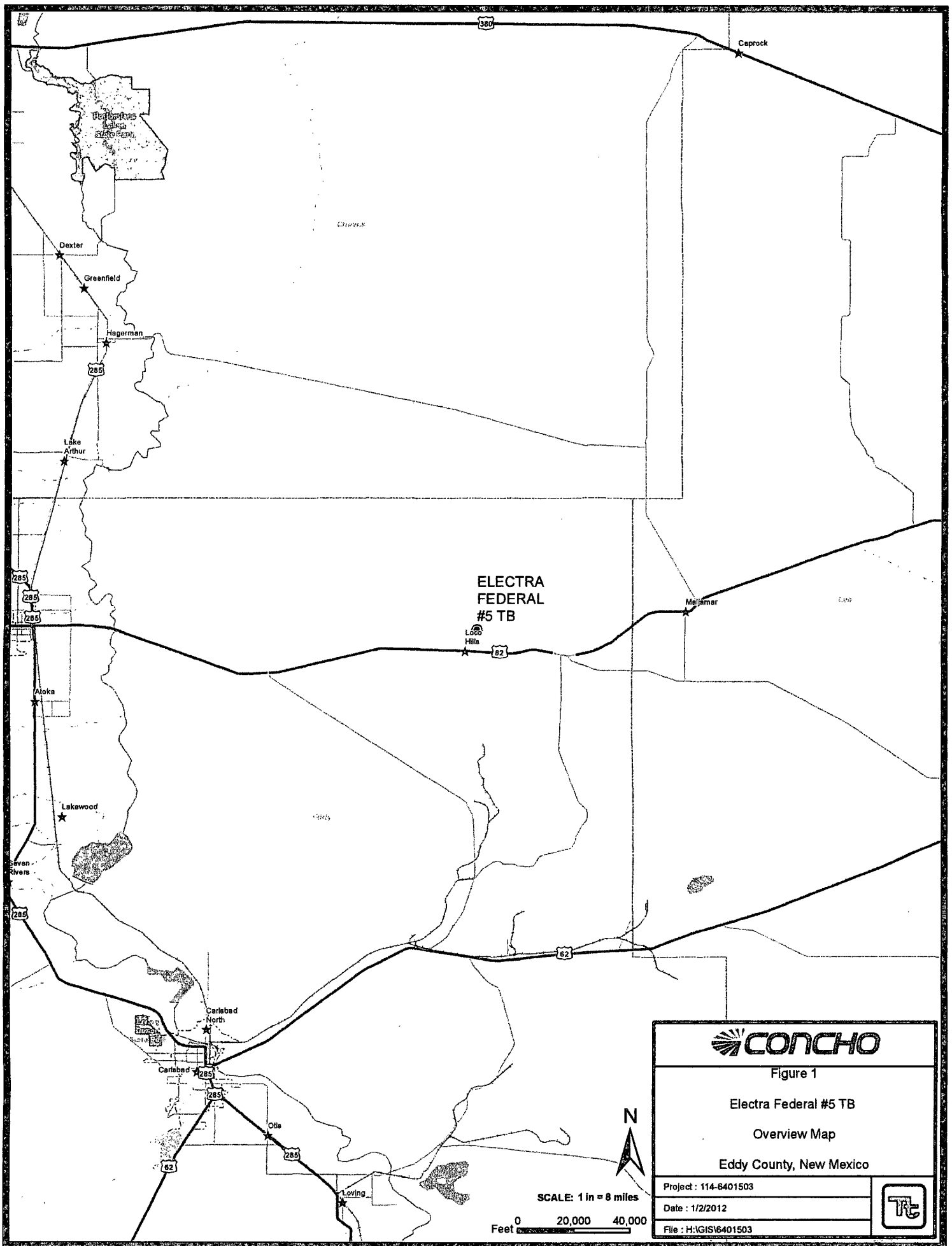
Based on the remedial activities performed, COG requests closure of the site. A copy of the C-141 (Final) is included in Appendix A. If you have any questions or comments concerning the remedial activities, please call at (432) 682-4559.

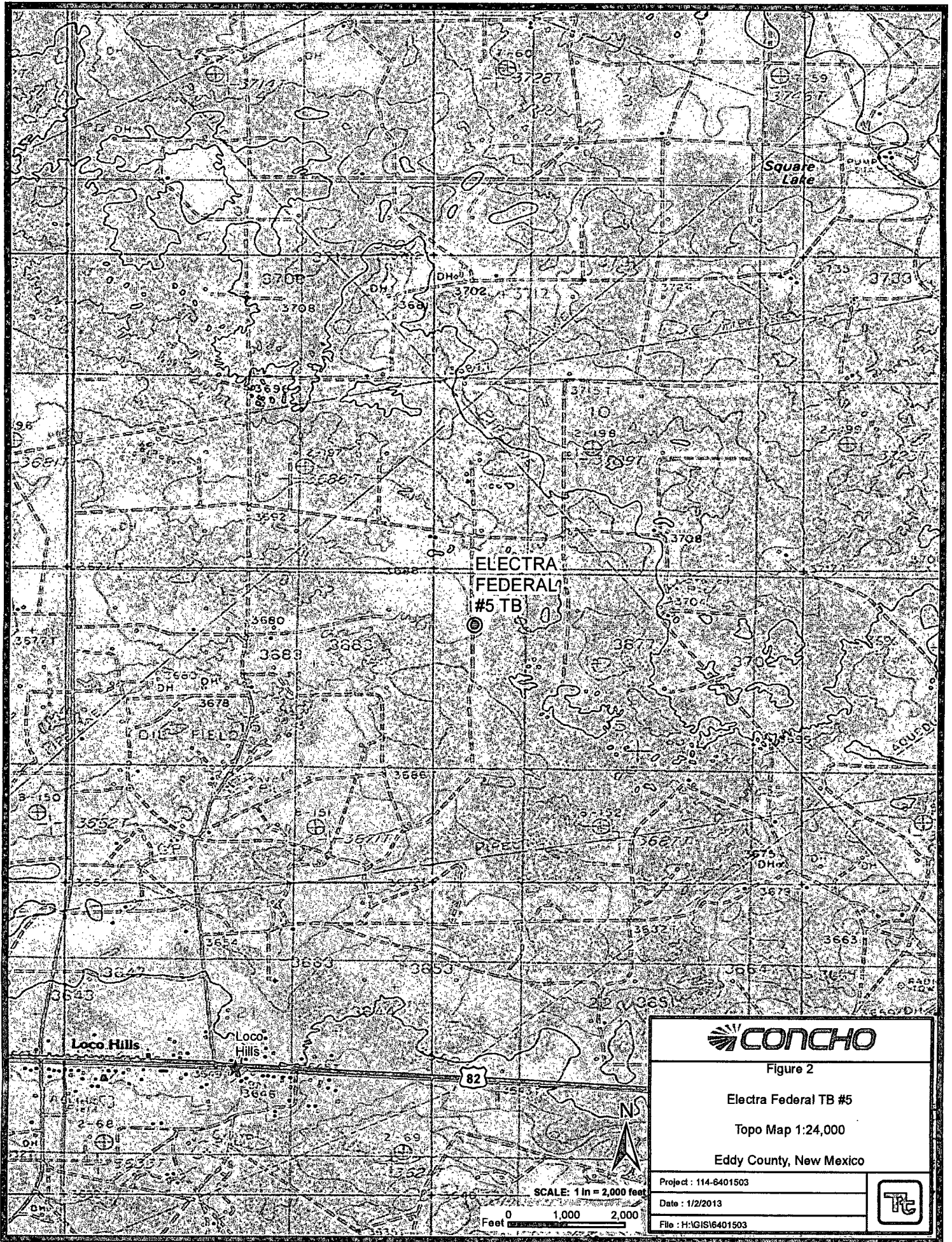
Respectfully submitted,
TETRA TECH

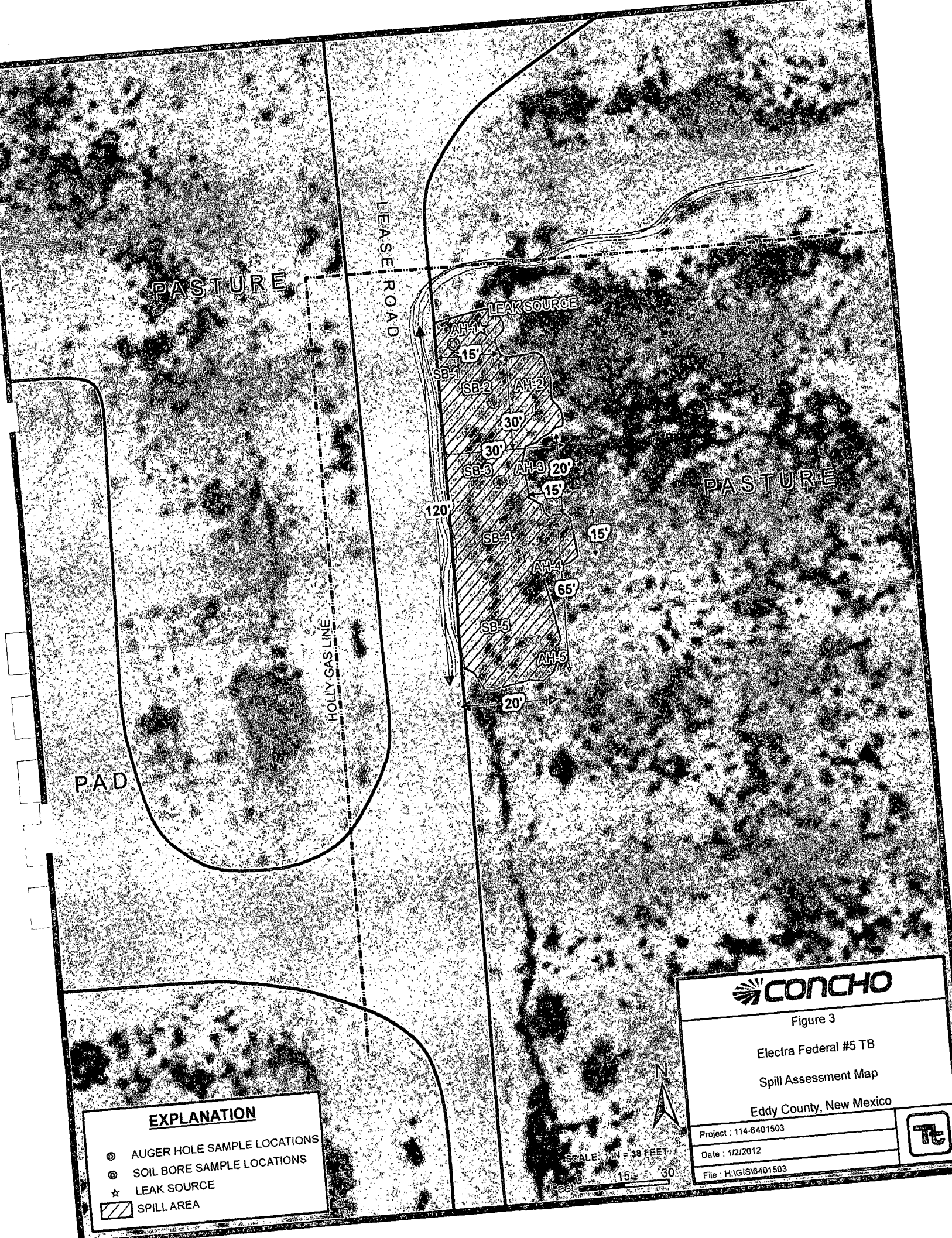
Ike Tavarez, PG
Senior Project Manager

cc: Pat Ellis – COG
Mike Burton - BLM

Figures







EXPLANATION

- ⊙ AUGER HOLE SAMPLE LOCATIONS
- ⊙ SOIL BORE SAMPLE LOCATIONS
- ☆ LEAK SOURCE
- ▨ SPILL AREA



Figure 3

Electra Federal #5 TB

Spill Assessment Map

Eddy County, New Mexico

Project : 114-6401503

Date : 1/2/2012

File : H:\GIS\6401503



PASTURE

LEASE ROAD

LEAK SOURCE

PASTURE

PAD

HOLLY GAS LINE

EXPLANATION

- ⊙ AUGER HOLE SAMPLE LOCATIONS
- ⊙ SOIL BORE SAMPLE LOCATIONS
- ★ LEAK SOURCE
- ▨ SPILL AREA

SCALE: 1 IN = 38 FEET

Feet 0 15 30



Figure 3

Electra Federal #5 TB

Spill Assessment Map

Eddy County, New Mexico

Project : 114-6401503

Date : 1/2/2012

File : H:\GIS\6401503



LEASE ROAD

HOLLY GAS LINE

PASTURE

EXPLANATION

- CONFIRMATION SAMPLE LOCATIONS
- ★ LEAK SOURCE
- ▭ INSTALLED CAP LINER
- ▨ EXCAVATED AREAS



SCALE: 1 IN = 22 FEET

Feet 0 10 20



Figure 4

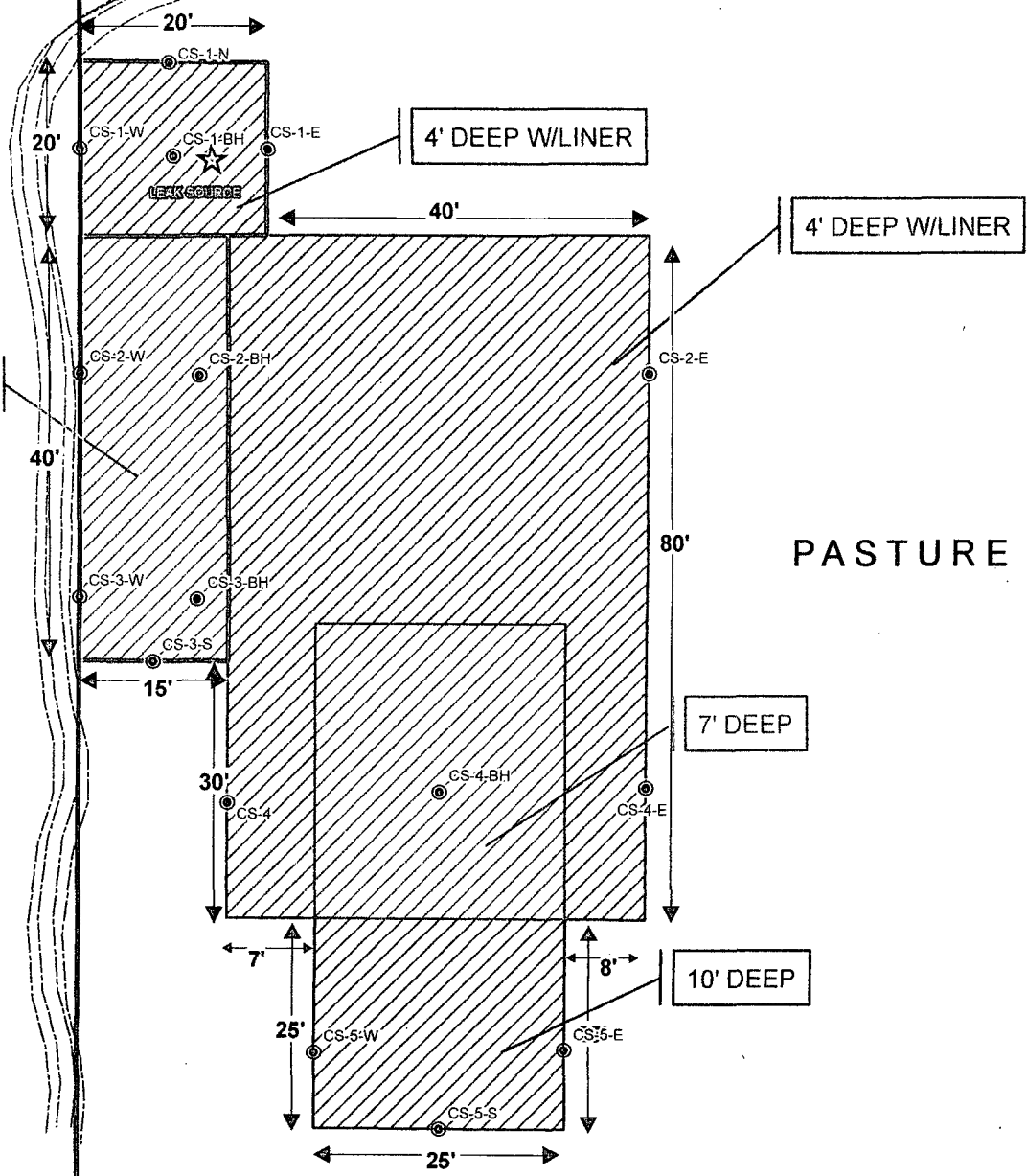
Electra Federal #5 TB

Excavation Areas & Depths Map

Eddy County, New Mexico

Project : 114-6401503
Date : 1/2/2012
File : H:\GIS\6401503





Tables

Eddy County, New Mexico

[illegible]

Table 1
COG Operating LLC.
Electra Federal #5 Tank Battery
Eddy County, New Mexico

[illegible]

Eddy County, New Mexico

[illegible]

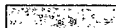
Table 1
COG Operating LLC.
Electra Federal #5 Tank Battery
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	Total						
AH-5	9/6/2012	0-1		X	4.29	<50.0	4.29	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	9,710
	"	1-1.5		X	-	-	-	-	-	-	-	-	11,900
	"	2-2.5		X	-	-	-	-	-	-	-	-	12,900
	"	3-3.5		X	-	-	-	-	-	-	-	-	10,000
	"	4-4.5		X	-	-	-	-	-	-	-	-	7,430
	"	5-5.5		X	-	-	-	-	-	-	-	-	15,400
	"	6-6.5		X	-	-	-	-	-	-	-	-	15,000
	"	7-7.5		X	-	-	-	-	-	-	-	-	10,600
SB-5	11/29/2012	0-1		X	-	-	-	-	-	-	-	-	5,600
	"	2-3		X	-	-	-	-	-	-	-	-	8,350
	"	4-5		X	-	-	-	-	-	-	-	-	8,620
	"	6-7		X	-	-	-	-	-	-	-	-	15,200
	"	9-10		X	-	-	-	-	-	-	-	-	6,440
	"	14-15	X		-	-	-	-	-	-	-	-	205
	"	19-20	X		-	-	-	-	-	-	-	-	139
	"	24-25	X		-	-	-	-	-	-	-	-	707
	"	29-30	X		-	-	-	-	-	-	-	-	81.2
	"	39-40	X		-	-	-	-	-	-	-	-	<20.0
CS-5 South Wall	3/19/2013	-	X		-	-	-	-	-	-	-	-	85.1
CS-5 East Wall	"	-	X		-	-	-	-	-	-	-	-	156
CS-5 West Wall	"	-	X		-	-	-	-	-	-	-	-	180
CS-5 Bottom Hole	"	10	X		-	-	-	-	-	-	-	-	302

(-)

Not Analyzed

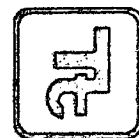
Liner Installed



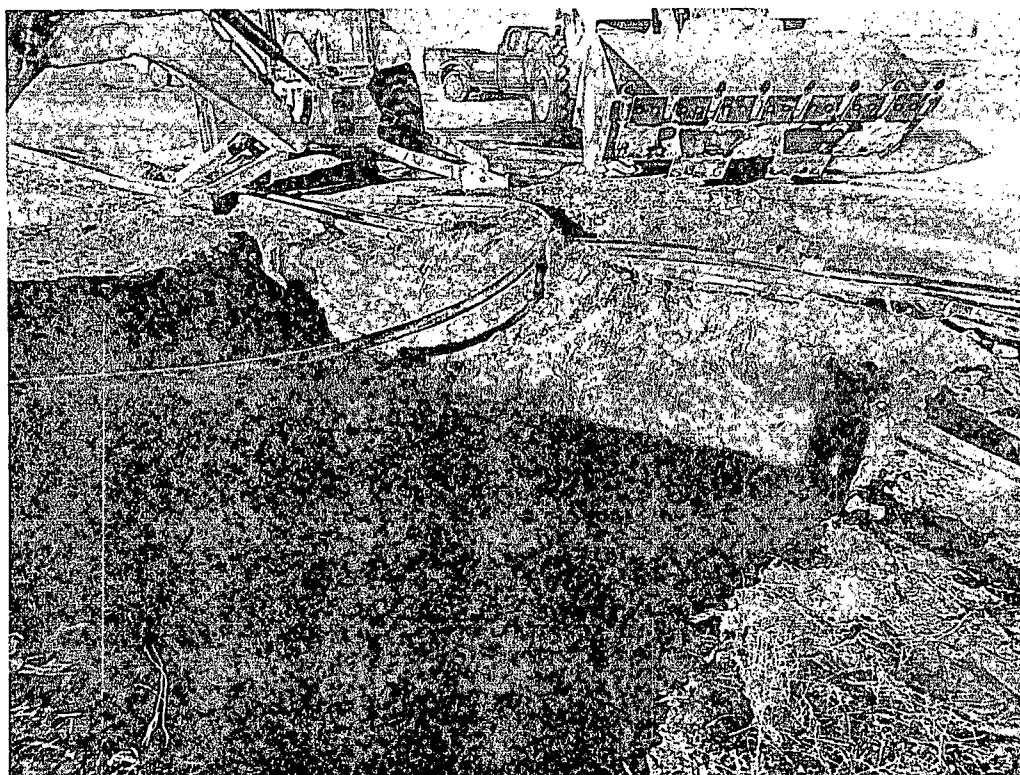
Excavated Depths

Photos

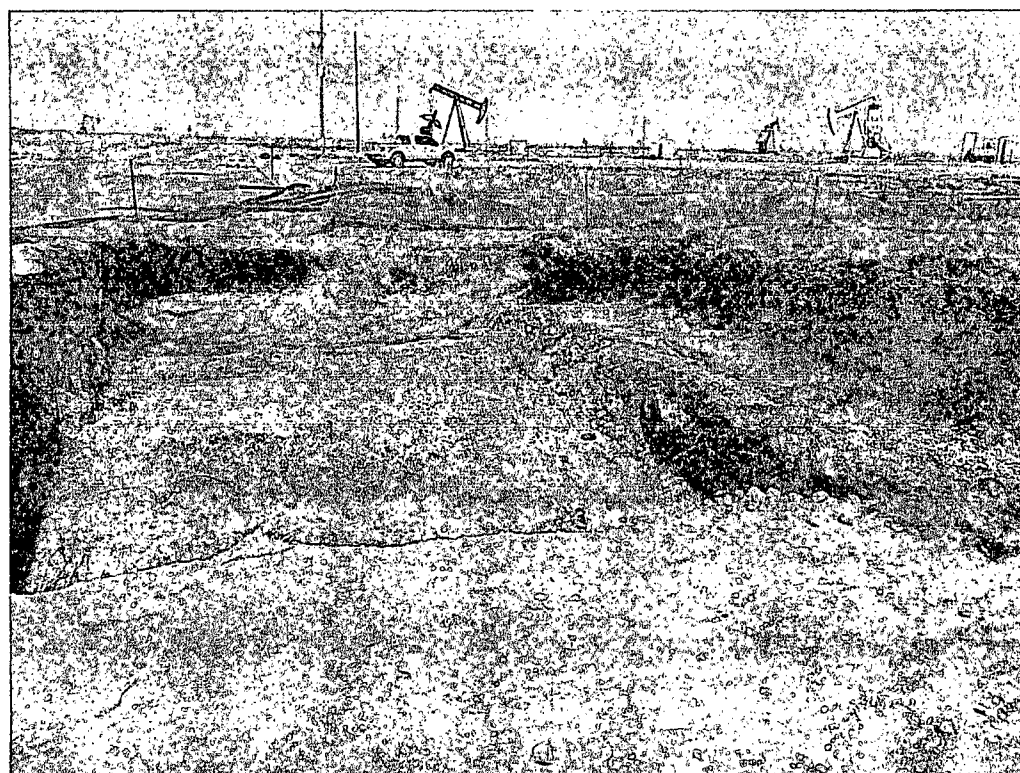
COG Operating LLC
Electra Federal #5 Tank Battery
Eddy County, New Mexico



TETRA TECH



View West – Area of AH-1, SB-1

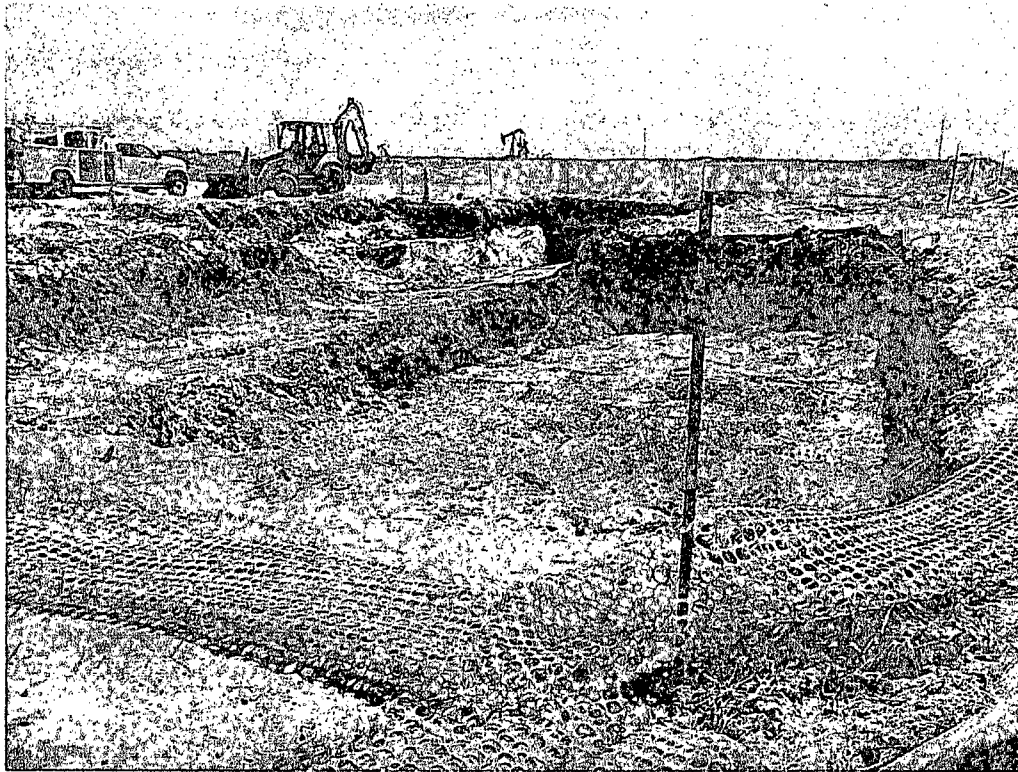


View North – Area of AH-2, SB-2

COG Operating LLC
Electra Federal #5 Tank Battery
Eddy County, New Mexico



TETRA TECH

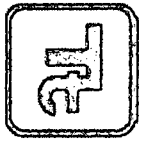


View South – Area of AH-3, SB-3



View North – Area of AH-4, SB-4 and AH-5, SB-5

COG Operating LLC
Electra Federal #5 Tank Battery
Eddy County, New Mexico



TETRA TECH



View Southeast - Liner



View North - Liner

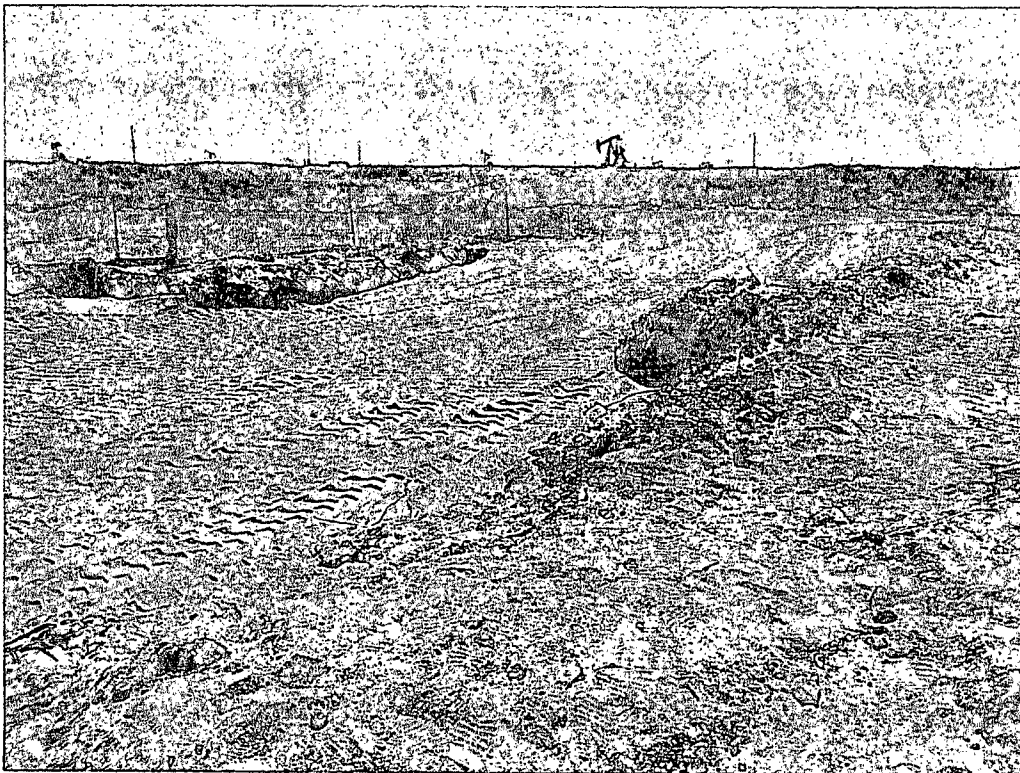
COG Operating LLC
Electra Federal #5 Tank Battery
Eddy County, New Mexico



TETRA TECH

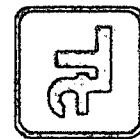


View Southeast - Liner

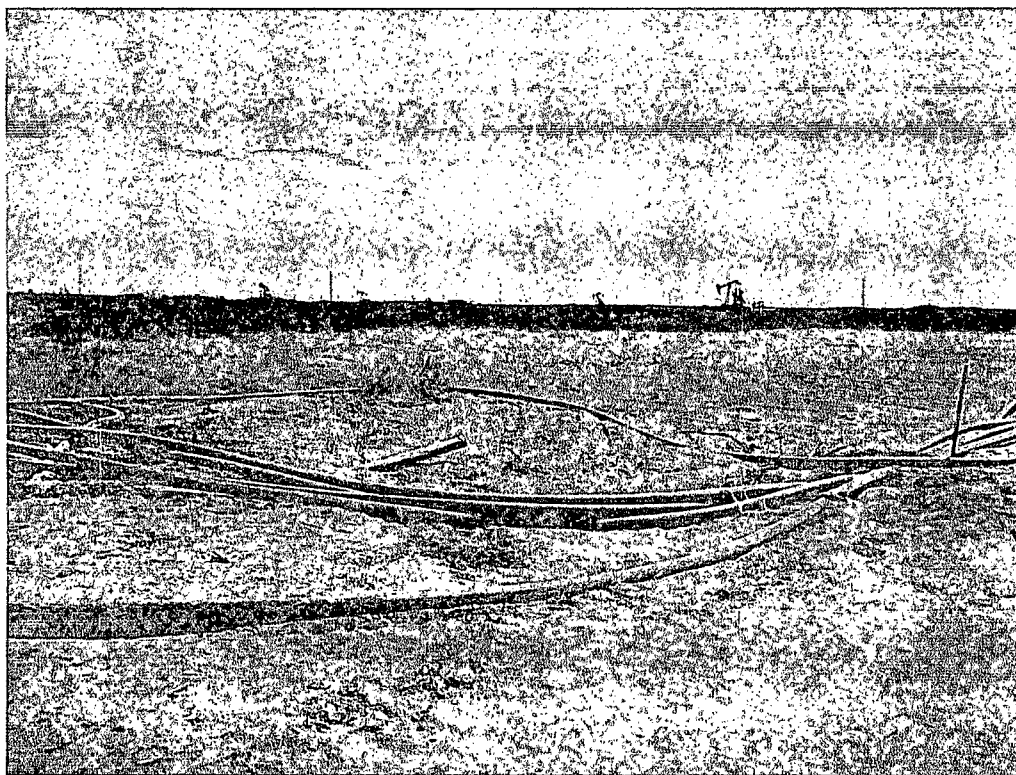


View Southeast - Backfill

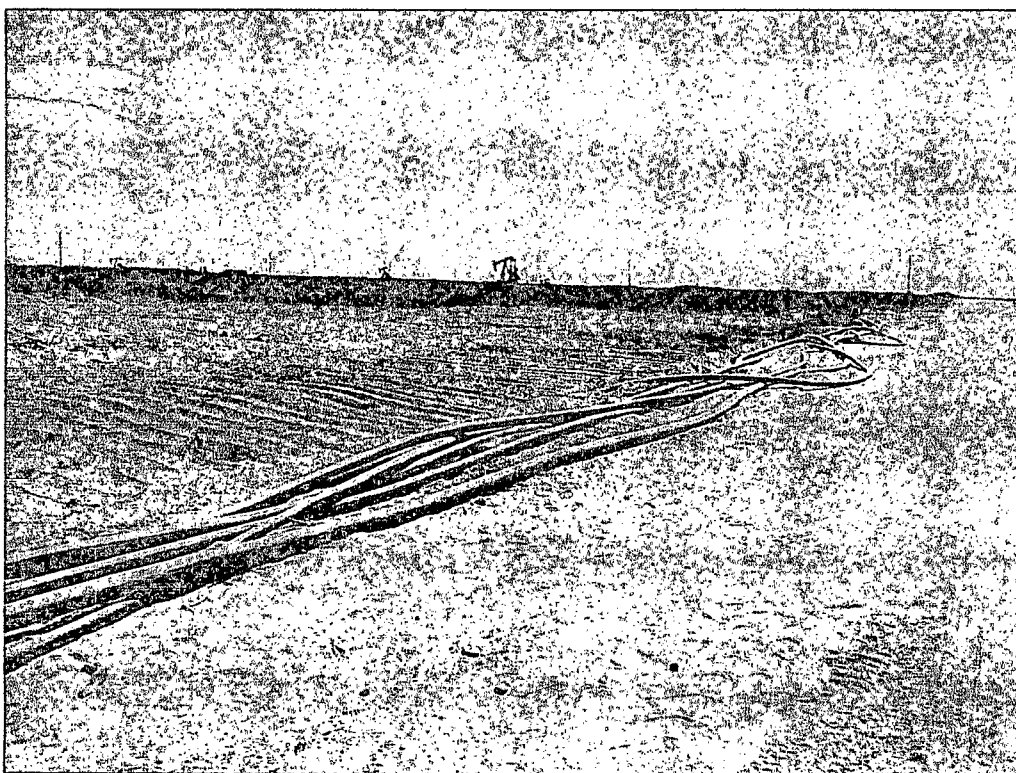
COG Operating LLC
Electra Federal #5 Tank Battery
Eddy County, New Mexico



TETRA TECH



View Southeast - Backfill

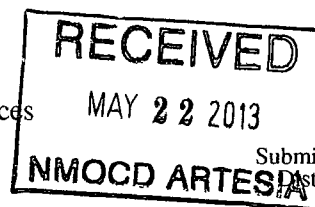


View Southeast – Backfill and Ripped

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 W. Illinois Midland, Texas 79701	Telephone No.	(432) 230-0077
Facility Name	Electra Federal #5 Tank Battery	Facility Type	Poly Water Line
Surface Owner: Federal		Mineral Owner	Lease No. (API#) 30-015-34211

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	15	17S	30E					Eddy

Latitude N 32.83922° Longitude W 103.96659°

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release 145 bbls	Volume Recovered 130 bbls
Source of Release: Flowline	Date and Hour of Occurrence 08/07/2012	Date and Hour of Discovery 08/07/2012 7:30a.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher-OCD Jim Amos-BLM Terry Gregston-BLM	
By Whom? Michelle Mullins	Date and Hour 08/07/2012 12:53 p.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*

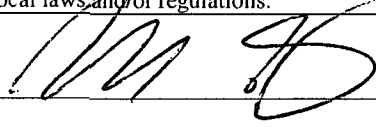
Describe Cause of Problem and Remedial Action Taken.*

A failed weld on a poly flowline allowed for the release of fluid. We have fused the line and returned it to service.

Describe Area Affected and Cleanup Action Taken.*

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

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

Signature: 	OIL CONSERVATION DIVISION		
Printed Name: Ike Tavarez	Approved by District Supervisor:		
Title: Project Manager	Approval Date:	Expiration Date:	
E-mail Address: Ike.Tavarez@TetraTech.com	Conditions of Approval:		Attached ☐
Date: 4-19-13 Phone: (432) 682-4559			

* Attach Additional Sheets If Necessary

District I
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Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	COG OPERATING LLC	Contact	Pat Ellis
Address	550 W. Texas, Suite 100, Midland, TX 79701	Telephone No.	432-230-0077
Facility Name	Electra Federal #5 Tank Battery	Facility Type	Poly water line

Surface Owner	Federal	Mineral Owner		Lease No. (API#)	30-015-34211
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LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	15	17S	30E					Eddy

Latitude 32 50.355 Longitude 103 57.992

NATURE OF RELEASE

Type of Release Produced water	Volume of Release 145bbls	Volume Recovered 130bbls
Source of Release Flowline	Date and Hour of Occurrence 08/07/2012	Date and Hour of Discovery 08/07/2012 7:30 a.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher-OCD Jim Amos-BLM Terry Gregston-BLM	
By Whom? Michelle Mullins	Date and Hour 08/07/2012 12:53 p.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

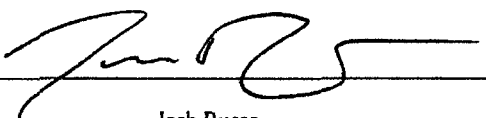
Describe Cause of Problem and Remedial Action Taken.*

A failed weld on a poly flowline allowed for the release of fluid. We have fused the line and returned it to service.

Describe Area Affected and Cleanup Action Taken.*

Initially 145bbls were released from the flowline and we were able to recover 130bbls with a vacuum truck. The spill area was located to the southwest of the Electra Federal #5 Tank Battery. All free fluids have been recovered. Tetra Tech will sample the spill site area to delineate any possible contamination from the release and we will present a remediation work plan to the NMOCD/BLM for approval prior to any significant remediation work.

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

Signature: 		OIL CONSERVATION DIVISION	
Printed Name:	Josh Russo	Approved by District Supervisor:	
Title:	HSE Coordinator	Approval Date:	Expiration Date:
E-mail Address:	jrusso@conchoresources.com	Conditions of Approval:	
Date:	08/20/2012	Phone:	432-212-2399
		Attached ☐	

* Attach Additional Sheets If Necessary

Appendix B

Water Well Data
Average Depth to Groundwater (ft)
COG- Electra Federal #5 Tank Battery
Eddy County, New Mexico

16 South			29 East		
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14 220	13
19	20	21	22	23	24
110	29	28	27	26	25
30	32	33	34	35	36
31					

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

16 South			31 East		
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36
280					

17 South			29 East		
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29 210	28	27	26	25
31	208	33	34	35	36
					153

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

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

18 South			29 East		
6	5	4	3	2	1
7	8	9	10	95	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

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

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

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

Appendix C

Summary Report

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

Report Date: April 4, 2013

Work Order: 13040109



Project Location: Eddy Co., NM
Project Name: COG/Electra Fed. #5 TB
Project Number: 114-6401503

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
324925	CS-5 (AH-5) South Wall	soil	2013-03-19	00:00	2013-03-29
324926	CS-5 (AH-5) East Wall	soil	2013-03-19	00:00	2013-03-29
324927	CS-5 (AH-5) West Wall	soil	2013-03-19	00:00	2013-03-29
324928	CS-5 (AH-5) Bottom Hole	soil	2013-03-19	00:00	2013-03-29

Sample: 324925 - CS-5 (AH-5) South Wall

Param	Flag	Result	Units	RL
Chloride		85.1	mg/Kg	4

Sample: 324926 - CS-5 (AH-5) East Wall

Param	Flag	Result	Units	RL
Chloride		156	mg/Kg	4

Sample: 324927 - CS-5 (AH-5) West Wall

Param	Flag	Result	Units	RL
Chloride		180	mg/Kg	4

Sample: 324928 - CS-5 (AH-5) Bottom Hole

Report Date: April 4, 2013

Work Order: 13040109

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Param	Flag	Result	Units	RL
Chloride		302	mg/Kg	4



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200 East Sunset Road, Suite E El Paso, Texas 79922 915-585-3443 FAX 915-585-4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432-689-6301 FAX 432-689-6313
(BioAquatic) 2501 Mayes Rd., Suite 100 Carrollton, Texas 75006 972-242-7750
E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

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

Report Date: April 4, 2013

Work Order: 13040109



Project Location: Eddy Co., NM
Project Name: COG/Electra Fed. #5 TB
Project Number: 114-6401503

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
324925	CS-5 (AH-5) South Wall	soil	2013-03-19	00:00	2013-03-29
324926	CS-5 (AH-5) East Wall	soil	2013-03-19	00:00	2013-03-29
324927	CS-5 (AH-5) West Wall	soil	2013-03-19	00:00	2013-03-29
324928	CS-5 (AH-5) Bottom Hole	soil	2013-03-19	00:00	2013-03-29

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

This report consists of a total of 10 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

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

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Case Narrative

Samples for project COG/Electra Fed. #5 TB were received by TraceAnalysis, Inc. on 2013-03-29 and assigned to work order 13040109. Samples for work order 13040109 were received intact at a temperature of 19.9 C. Samples were not on ice when received.

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	84916	2013-04-02 at 14:27	100232	2013-04-03 at 14:29

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 13040109 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Report Date: April 4, 2013
114-6401503

Work Order: 13040109
COG/Electra Fed. #5 TB

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Eddy Co., NM

Analytical Report

Sample: 324925 - CS-5 (AH-5) South Wall

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-04-03	Analyzed By:	AR
QC Batch:	100232	Sample Preparation:	2013-04-02	Prepared By:	AR
Prep Batch:	84916				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			85.1	mg/Kg	5	4.00

Sample: 324926 - CS-5 (AH-5) East Wall

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-04-03	Analyzed By:	AR
QC Batch:	100232	Sample Preparation:	2013-04-02	Prepared By:	AR
Prep Batch:	84916				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			156	mg/Kg	5	4.00

Sample: 324927 - CS-5 (AH-5) West Wall

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-04-03	Analyzed By:	AR
QC Batch:	100232	Sample Preparation:	2013-04-02	Prepared By:	AR
Prep Batch:	84916				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			180	mg/Kg	5	4.00

Report Date: April 4, 2013
114-6401503

Work Order: 13040109
COG/Electra Fed. #5 TB

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Eddy Co., NM

Sample: 324928 - CS-5 (AH-5) Bottom Hole

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-04-03	Analyzed By:	AR
QC Batch:	100232	Sample Preparation:	2013-04-02	Prepared By:	AR
Prep Batch:	84916				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			302	mg/Kg	5	4.00

Report Date: April 4, 2013
114-6401503

Work Order: 13040109
COG/Electra Fed. #5 TB

Page Number: 6 of 10
Eddy Co., NM

Method Blanks

Method Blank (1) QC Batch: 100232

QC Batch: 100232
Prep Batch: 84916

Date Analyzed: 2013-04-03
QC Preparation: 2013-04-02

Analyzed By: AR
Prepared By: AR

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

Report Date: April 4, 2013
114-6401503

Work Order: 13040109
COG/Electra Fed. #5 TB

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Eddy Co., NM

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 100232
Prep Batch: 84916

Date Analyzed: 2013-04-03
QC Preparation: 2013-04-02

Analyzed By: AR
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	RPD Limit
Chloride			2550	mg/Kg	1	2500	<3.85	102	85 - 115	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: 324957

QC Batch: 100232
Prep Batch: 84916

Date Analyzed: 2013-04-03
QC Preparation: 2013-04-02

Analyzed By: AR
Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			35200	mg/Kg	10	2500	32900	92	78.9 - 121

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			35500	mg/Kg	10	2500	32900	104	78.9 - 121	1	20

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

Report Date: April 4, 2013
114-6401503

Work Order: 13040109
COG/Electra Fed. #5 TB

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Eddy Co., NM

Calibration Standards

Standard (CCV-1)

QC Batch: 100232

Date Analyzed: 2013-04-03

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2013-04-03

Standard (CCV-2)

QC Batch: 100232

Date Analyzed: 2013-04-03

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.9	100	85 - 115	2013-04-03

Appendix

Report Definitions

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

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis

Standard Flags

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

Attachments

Report Date: April 4, 2013
114-6401503

Work Order: 13040109
COG/Electra Fed. #5 TB

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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.

13040104

Analysis Request of Chain of Custody Record

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OF: 1

**TETRA TECH**

1910 N. Big Spring St.

Midland, Texas 79705

(432) 682-4559 • Fax (432) 682-3946

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME:

COG

SITE MANAGER:

Ike Taveraz

PROJECT NO.:

114-6401503

PROJECT NAME:

COG- Electric Fence #5 TB

LAB I.D.
NUMBER

DATE

TIME

MATRIX

COMP

GRAB

Echelon Co. NM
SAMPLE IDENTIFICATION

NUMBER OF CONTAINERS

FILTERED (Y/N)

HCL

HNO3

ICE

NONE

PRESERVATIVE
METHOD

BTEX 8021B

TPH 8015 MOD. TX1005 (Ext. to C35)

PAH 8270

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

PCBs 8080/608

Pest. 808/608

Chloride

Gamma Spec.

Alpha Beta (Air)

PLM (Asbestos)

Major Anions/Cations, pH, TDS

RELINQUISHED BY: (Signature)

Date: 8-29-11

Time: 1045

RELINQUISHED BY: (Signature)

Date: _____

Time: _____

RELINQUISHED BY: (Signature)

Date: _____

Time: _____

Date: 8-29-11

Time: 1045

Date: _____

Time: _____

Date: _____

Time: _____

RECEIVED BY: (Signature)

Date: 8-29-11

Time: 1045

RECEIVED BY: (Signature)

Date: _____

Time: _____

RECEIVED BY: (Signature)

Date: _____

Time: _____

Date: 8-29-11

Time: 1045

Date: _____

Time: _____

Date: _____

Time: _____

SAMPLED BY: (Print & Initial)

Date: 8-29-11

Time: 1045

SAMPLE SHIPPED BY: (Circle)

FEDEX BUS

HAND DELIVERED UPS

OTHER: _____

Date: _____

Time: _____

AIRBILL #: _____

OTHER: _____

TETRA TECH CONTACT PERSON:

Ike Taveraz

Results by:

RUSH Charges

Authorized:

Yes No

SAMPLE CONDITION WHEN RECEIVED:

19.9°C

REMARKS:

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

Summary Report

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

Report Date: April 4, 2013

Work Order: 13040108



Project Location: Eddy Co., NM
Project Name: COG/Electra Fed. #5 TB
Project Number: 114-6401503

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
324918	CS-4 (AH-4) North Wall	soil	2013-03-20	00:00	2013-03-29
324919	CS-4 (AH-4) East Wall	soil	2013-03-20	00:00	2013-03-29
324920	CS-4 (AH-4) West Wall	soil	2013-03-20	00:00	2013-03-29
324921	CS-4 (AH-4) Bottom Hole	soil	2013-03-20	00:00	2013-03-29
324922	CS-2 (AH-2) East Wall	soil	2013-03-20	00:00	2013-03-29
324923	CS-2 (AH-2) West Wall	soil	2013-03-20	00:00	2013-03-29
324924	CS-2 (AH-2) Bottom Hole	soil	2013-03-20	00:00	2013-03-29

Sample: 324918 - CS-4 (AH-4) North Wall

Param	Flag	Result	Units	RL
Chloride		42.4	mg/Kg	4

Sample: 324919 - CS-4 (AH-4) East Wall

Param	Flag	Result	Units	RL
Chloride		1140	mg/Kg	4

Sample: 324920 - CS-4 (AH-4) West Wall

Param	Flag	Result	Units	RL
Chloride		169	mg/Kg	4

Sample: 324921 - CS-4 (AH-4) Bottom Hole

Param	Flag	Result	Units	RL
Chloride		865	mg/Kg	4

Sample: 324922 - CS-2 (AH-2) East Wall

Param	Flag	Result	Units	RL
Chloride		94.5	mg/Kg	4

Sample: 324923 - CS-2 (AH-2) West Wall

Param	Flag	Result	Units	RL
Chloride		9220	mg/Kg	4

Sample: 324924 - CS-2 (AH-2) Bottom Hole

Param	Flag	Result	Units	RL
Chloride		10400	mg/Kg	4



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5002 Basin Street, Suite A1 Midland, Texas 79703 432-689-6301 FAX 432-689-6313
(BioAquatic) 2501 Mayes Rd., Suite 100 Carrollton, Texas 75006 972-242-7750
E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

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

Report Date: April 4, 2013

Work Order: 13040108



Project Location: Eddy Co., NM
Project Name: COG/Electra Fed. #5 TB
Project Number: 114-6401503

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
324918	CS-4 (AH-4) North Wall	soil	2013-03-20	00:00	2013-03-29
324919	CS-4 (AH-4) East Wall	soil	2013-03-20	00:00	2013-03-29
324920	CS-4 (AH-4) West Wall	soil	2013-03-20	00:00	2013-03-29
324921	CS-4 (AH-4) Bottom Hole	soil	2013-03-20	00:00	2013-03-29
324922	CS-2 (AH-2) East Wall	soil	2013-03-20	00:00	2013-03-29
324923	CS-2 (AH-2) West Wall	soil	2013-03-20	00:00	2013-03-29
324924	CS-2 (AH-2) Bottom Hole	soil	2013-03-20	00:00	2013-03-29

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.

Michael Abel

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

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Case Narrative

Samples for project COG/Electra Fed. #5 TB were received by TraceAnalysis, Inc. on 2013-03-29 and assigned to work order 13040108. Samples for work order 13040108 were received intact at a temperature of 19.9 C. Samples were not on ice when received.

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	84916	2013-04-02 at 14:27	100231	2013-04-03 at 14:28
Chloride (Titration)	SM 4500-Cl B	84916	2013-04-02 at 14:27	100232	2013-04-03 at 14:29

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 13040108 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Report Date: April 4, 2013
114-6401503

Work Order: 13040108
COG/Electra Fed. #5 TB

Page Number: 5 of 13
Eddy Co., NM

Analytical Report

Sample: 324918 - CS-4 (AH-4) North Wall

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-04-03	Analyzed By:	AR
QC Batch:	100231	Sample Preparation:	2013-04-02	Prepared By:	AR
Prep Batch:	84916				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			42.4	mg/Kg	5	4.00

Sample: 324919 - CS-4 (AH-4) East Wall

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-04-03	Analyzed By:	AR
QC Batch:	100231	Sample Preparation:	2013-04-02	Prepared By:	AR
Prep Batch:	84916				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			1140	mg/Kg	5	4.00

Sample: 324920 - CS-4 (AH-4) West Wall

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-04-03	Analyzed By:	AR
QC Batch:	100231	Sample Preparation:	2013-04-02	Prepared By:	AR
Prep Batch:	84916				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			169	mg/Kg	5	4.00

Report Date: April 4, 2013
114-6401503

Work Order: 13040108
COG/Electra Fed. #5 TB

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Eddy Co., NM

Sample: 324921 - CS-4 (AH-4) Bottom Hole

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 100232 Date Analyzed: 2013-04-03 Analyzed By: AR
Prep Batch: 84916 Sample Preparation: 2013-04-02 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			865	mg/Kg	5	4.00

Sample: 324922 - CS-2 (AH-2) East Wall

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 100232 Date Analyzed: 2013-04-03 Analyzed By: AR
Prep Batch: 84916 Sample Preparation: 2013-04-02 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			94.5	mg/Kg	5	4.00

Sample: 324923 - CS-2 (AH-2) West Wall

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 100232 Date Analyzed: 2013-04-03 Analyzed By: AR
Prep Batch: 84916 Sample Preparation: 2013-04-02 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			9220	mg/Kg	10	4.00

Sample: 324924 - CS-2 (AH-2) Bottom Hole

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 100232 Date Analyzed: 2013-04-03 Analyzed By: AR
Prep Batch: 84916 Sample Preparation: 2013-04-02 Prepared By: AR

Report Date: April 4, 2013
114-6401503

Work Order: 13040108
COG/Electra Fed. #5 TB

Page Number: 7 of 13
Eddy Co., NM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			10400	mg/Kg	10	4.00

Report Date: April 4, 2013
114-6401503

Work Order: 13040108
COG/Electra Fed. #5 TB

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Eddy Co., NM

Method Blanks

Method Blank (1) QC Batch: 100231

QC Batch: 100231
Prep Batch: 84916

Date Analyzed: 2013-04-03
QC Preparation: 2013-04-02

Analyzed By: AR
Prepared By: AR

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

Method Blank (1) QC Batch: 100232

QC Batch: 100232
Prep Batch: 84916

Date Analyzed: 2013-04-03
QC Preparation: 2013-04-02

Analyzed By: AR
Prepared By: AR

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

Report Date: April 4, 2013
114-6401503

Work Order: 13040108
COG/Electra Fed. #5 TB

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Eddy Co., NM

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 100231
Prep Batch: 84916

Date Analyzed: 2013-04-03
QC Preparation: 2013-04-02

Analyzed By: AR
Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2390	mg/Kg	1	2500	<3.85	96	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2480	mg/Kg	1	2500	<3.85	99	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: 100232
Prep Batch: 84916

Date Analyzed: 2013-04-03
QC Preparation: 2013-04-02

Analyzed By: AR
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	RPD Limit
Chloride			2550	mg/Kg	1	2500	<3.85	102	85 - 115	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: 324920

QC Batch: 100231
Prep Batch: 84916

Date Analyzed: 2013-04-03
QC Preparation: 2013-04-02

Analyzed By: AR
Prepared By: AR

Report Date: April 4, 2013
114-6401503

Work Order: 13040108
COG/Electra Fed. #5 TB

Page Number: 10 of 13
Eddy Co., NM

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2610	mg/Kg	5	2500	169	98	78.9 - 121

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2690	mg/Kg	5	2500	169	101	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: 324957

QC Batch: 100232
Prep Batch: 84916

Date Analyzed: 2013-04-03
QC Preparation: 2013-04-02

Analyzed By: AR
Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			35200	mg/Kg	10	2500	32900	92	78.9 - 121

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			35500	mg/Kg	10	2500	32900	104	78.9 - 121	1	20

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

Report Date: April 4, 2013
114-6401503

Work Order: 13040108
COG/Electra Fed. #5 TB

Page Number: 11 of 13
Eddy Co., NM

Calibration Standards

Standard (CCV-1)

QC Batch: 100231

Date Analyzed: 2013-04-03

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2013-04-03

Standard (CCV-2)

QC Batch: 100231

Date Analyzed: 2013-04-03

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	2013-04-03

Standard (CCV-1)

QC Batch: 100232

Date Analyzed: 2013-04-03

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2013-04-03

Standard (CCV-2)

QC Batch: 100232

Date Analyzed: 2013-04-03

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.9	100	85 - 115	2013-04-03

Appendix

Report Definitions

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

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis

Standard Flags

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

Attachments

Report Date: April 4, 2013
114-6401503

Work Order: 13040108
COG/Electra Fed. #5 TB

Page Number: 13 of 13
Eddy Co., NM

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

Summary Report

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

Report Date: April 4, 2013

Work Order: 13040107



Project Location: Eddy Co., NM
Project Name: COG/Electra Fed. #5 TB
Project Number: 114-6401503

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
324915	CS-3 (AH-3) South Wall	soil	2013-03-21	00:00	2013-03-29
324916	CS-3 (AH-3) West Wall	soil	2013-03-21	00:00	2013-03-29
324917	CS-3 (AH-3) Bottom Hole	soil	2013-03-21	00:00	2013-03-29

Sample: 324915 - CS-3 (AH-3) South Wall

Param	Flag	Result	Units	RL
Chloride		75.3	mg/Kg	4

Sample: 324916 - CS-3 (AH-3) West Wall

Param	Flag	Result	Units	RL
Chloride		551	mg/Kg	4

Sample: 324917 - CS-3 (AH-3) Bottom Hole

Param	Flag	Result	Units	RL
Chloride		9560	mg/Kg	4



6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800-378-1298 806-794-1298 FAX 806-794-1298
200 East Sunset Road, Suite E El Paso, Texas 79922 915-585-3443 FAX 915-585-4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432-689-6301 FAX 432-689-6313
(BioAquatic) 2501 Mayes Rd., Suite 100 Carrollton, Texas 75006 972-242-7750
E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

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

Report Date: April 4, 2013

Work Order: 13040107



Project Location: Eddy Co., NM
Project Name: COG/Electra Fed. #5 TB
Project Number: 114-6401503

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
324915	CS-3 (AH-3) South Wall	soil	2013-03-21	00:00	2013-03-29
324916	CS-3 (AH-3) West Wall	soil	2013-03-21	00:00	2013-03-29
324917	CS-3 (AH-3) Bottom Hole	soil	2013-03-21	00:00	2013-03-29

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 9 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/Electra Fed. #5 TB were received by TraceAnalysis, Inc. on 2013-03-29 and assigned to work order 13040107. Samples for work order 13040107 were received intact at a temperature of 19.9 C. Samples were not on ice when received.

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	84916	2013-04-02 at 14:27	100231	2013-04-03 at 14:28

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 13040107 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Report Date: April 4, 2013
114-6401503

Work Order: 13040107
COG/Electra Fed. #5 TB

Page Number: 4 of 9
Eddy Co., NM

Analytical Report

Sample: 324915 - CS-3 (AH-3) South Wall

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-04-03	Analyzed By:	AR
QC Batch:	100231	Sample Preparation:	2013-04-02	Prepared By:	AR
Prep Batch:	84916				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			75.3	mg/Kg	5	4.00

Sample: 324916 - CS-3 (AH-3) West Wall

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-04-03	Analyzed By:	AR
QC Batch:	100231	Sample Preparation:	2013-04-02	Prepared By:	AR
Prep Batch:	84916				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			551	mg/Kg	5	4.00

Sample: 324917 - CS-3 (AH-3) Bottom Hole

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-04-03	Analyzed By:	AR
QC Batch:	100231	Sample Preparation:	2013-04-02	Prepared By:	AR
Prep Batch:	84916				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			9560	mg/Kg	10	4.00

Report Date: April 4, 2013
114-6401503

Work Order: 13040107
COG/Electra Fed. #5 TB

Page Number: 5 of 9
Eddy Co., NM

Method Blanks

Method Blank (1) QC Batch: 100231

QC Batch: 100231
Prep Batch: 84916

Date Analyzed: 2013-04-03
QC Preparation: 2013-04-02

Analyzed By: AR
Prepared By: AR

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

Report Date: April 4, 2013
114-6401503

Work Order: 13040107
COG/Electra Fed. #5 TB

Page Number: 6 of 9
Eddy Co., NM

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 100231
Prep Batch: 84916

Date Analyzed: 2013-04-03
QC Preparation: 2013-04-02

Analyzed By: AR
Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2390	mg/Kg	1	2500	<3.85	96	85 - 115

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

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2480	mg/Kg	1	2500	<3.85	99	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: 324920

QC Batch: 100231
Prep Batch: 84916

Date Analyzed: 2013-04-03
QC Preparation: 2013-04-02

Analyzed By: AR
Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2610	mg/Kg	5	2500	169	98	78.9 - 121

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2690	mg/Kg	5	2500	169	101	78.9 - 121	3	20

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

Report Date: April 4, 2013
114-6401503

Work Order: 13040107
COG/Electra Fed. #5 TB

Page Number: 7 of 9
Eddy Co., NM

Calibration Standards

Standard (CCV-1)

QC Batch: 100231

Date Analyzed: 2013-04-03

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2013-04-03

Standard (CCV-2)

QC Batch: 100231

Date Analyzed: 2013-04-03

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	2013-04-03

Appendix

Report Definitions

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

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis

Standard Flags

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

Attachments

Report Date: April 4, 2013
114-6401503

Work Order: 13040107
COG/Electra Fed. #5 TB

Page Number: 9 of 9
Eddy Co., NM

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

13040107

Analysis Request of Chain of Custody Record


TETRA TECH

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

PAGE: 1 OF: 1

 ANALYSIS REQUEST
 (Circle or Specify Method No.)

CLIENT NAME:

COG

SITE MANAGER:

Ike Taverer

PROJECT NO.:

114-6401503

PROJECT NAME:

LAB I.D.
NUMBER

DATE

TIME

MATRIX

COMP.

GRAB

SAMPLE IDENTIFICATION

NUMBER OF CONTAINERS

FILTERED (Y/N)

HCL

HNO3

ICE

NONE

PRESERVATIVE
METHOD

BTEX 8021B

TPH 8015 MOD. TX1005 (Ext. to C35)

PAH 8270

PCRA 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. 809/608

Chlorides

Gamma Spec.

Alpha Beta (Air)

PLM (Asbestos)

Major Anions/Cations, pH, TDS

RELINQUISHED BY: (Signature)

Date: 3-29-13

Time: 10:45

RECEIVED BY: (Signature)

Date: 3-29-13

Time: 10:45

SAMPLED BY: (Print & Initial)

Marcy Kimball / mk

Date:

Time:

RELINQUISHED BY: (Signature)

Date:

Time:

RECEIVED BY: (Signature)

Date:

Time:

SAMPLE SHIPPED BY: (Circle)

FEDEX BUS

HAND DELIVERED UPS

AIRBILL #:

OTHER:

RELINQUISHED BY: (Signature)

Date:

Time:

RECEIVED BY: (Signature)

Date:

Time:

TETRA TECH CONTACT PERSON:

Ike Taverer

Results by:

RUSH Charges

Authorized:

Yes

No

RECEIVING LABORATORY:

TRAC

RECEIVED BY: (Signature)

ADDRESS:

CITY: MIDLAND

STATE: TX

ZIP:

CONTACT:

PHONE:

DATE:

TIME:

SAMPLE CONDITION WHEN RECEIVED:

19.9°C

REMARKS:

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

Summary Report

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

Report Date: April 4, 2013

Work Order: 13040106



Project Location: Eddy Co., NM
Project Name: COG/Electra Fed. #5 TB
Project Number: 114-6401503

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
324911	CS-1 (AH-1) North Wall	soil	2013-03-27	00:00	2013-03-29
324912	CS-1 (AH-1) East Wall	soil	2013-03-27	00:00	2013-03-29
324913	CS-1 (AH-1) West Wall	soil	2013-03-27	00:00	2013-03-29
324914	CS-1 (AH-1) Bottom Hole	soil	2013-03-27	00:00	2013-03-29

Sample: 324911 - CS-1 (AH-1) North Wall

Param	Flag	Result	Units	RL
Chloride		522	mg/Kg	4

Sample: 324912 - CS-1 (AH-1) East Wall

Param	Flag	Result	Units	RL
Chloride		193	mg/Kg	4

Sample: 324913 - CS-1 (AH-1) West Wall

Param	Flag	Result	Units	RL
Chloride		6430	mg/Kg	4

Sample: 324914 - CS-1 (AH-1) Bottom Hole

Report Date: April 4, 2013

Work Order: 13040106

Page Number: 2 of 2

Param	Flag	Result	Units	RL
Chloride		8740	mg/Kg	4



6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800-378-1296 806-794-1296 FAX 806-794-1298
200 East Sunset Road, Suite E El Paso, Texas 79922 915-585-3443 FAX 915-585-4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432-689-6301 FAX 432-689-6313
(BioAquatic) 2501 Mayes Rd., Suite 100 Carrollton, Texas 75006 972-242-7750
E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

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

Report Date: April 4, 2013

Work Order: 13040106



Project Location: Eddy Co., NM
Project Name: COG/Electra Fed. #5 TB
Project Number: 114-6401503

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
324911	CS-1 (AH-1) North Wall	soil	2013-03-27	00:00	2013-03-29
324912	CS-1 (AH-1) East Wall	soil	2013-03-27	00:00	2013-03-29
324913	CS-1 (AH-1) West Wall	soil	2013-03-27	00:00	2013-03-29
324914	CS-1 (AH-1) Bottom Hole	soil	2013-03-27	00:00	2013-03-29

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

This report consists of a total of 10 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

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

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Case Narrative

Samples for project COG/Electra Fed. #5 TB were received by TraceAnalysis, Inc. on 2013-03-29 and assigned to work order 13040106. Samples for work order 13040106 were received intact at a temperature of 19.9 C. Samples were not on ice when received.

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	84916	2013-04-02 at 14:27	100231	2013-04-03 at 14:28

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 13040106 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Report Date: April 4, 2013
114-6401503

Work Order: 13040106
COG/Electra Fed. #5 TB

Page Number: 4 of 10
Eddy Co., NM

Analytical Report

Sample: 324911 - CS-1 (AH-1) North Wall

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-04-03	Analyzed By:	AR
QC Batch:	100231	Sample Preparation:	2013-04-02	Prepared By:	AR
Prep Batch:	84916				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			522	mg/Kg	5	4.00

Sample: 324912 - CS-1 (AH-1) East Wall

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-04-03	Analyzed By:	AR
QC Batch:	100231	Sample Preparation:	2013-04-02	Prepared By:	AR
Prep Batch:	84916				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			193	mg/Kg	5	4.00

Sample: 324913 - CS-1 (AH-1) West Wall

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-04-03	Analyzed By:	AR
QC Batch:	100231	Sample Preparation:	2013-04-02	Prepared By:	AR
Prep Batch:	84916				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			6430	mg/Kg	10	4.00

Report Date: April 4, 2013
114-6401503

Work Order: 13040106
COG/Electra Fed. #5 TB

Page Number: 5 of 10
Eddy Co., NM

Sample: 324914 - CS-1 (AH-1) Bottom Hole

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2013-04-03	Analyzed By:	AR
QC Batch:	100231	Sample Preparation:	2013-04-02	Prepared By:	AR
Prep Batch:	84916				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			8740	mg/Kg	10	4.00

Report Date: April 4, 2013
114-6401503

Work Order: 13040106
COG/Electra Fed. #5 TB

Page Number: 6 of 10
Eddy Co., NM

Method Blanks

Method Blank (1) QC Batch: 100231

QC Batch: 100231
Prep Batch: 84916

Date Analyzed: 2013-04-03
QC Preparation: 2013-04-02

Analyzed By: AR
Prepared By: AR

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

Report Date: April 4, 2013
114-6401503

Work Order: 13040106
COG/Electra Fed. #5 TB

Page Number: 7 of 10
Eddy Co., NM

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 100231
Prep Batch: 84916

Date Analyzed: 2013-04-03
QC Preparation: 2013-04-02

Analyzed By: AR
Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2390	mg/Kg	1	2500	<3.85	96	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2480	mg/Kg	1	2500	<3.85	99	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: 324920

QC Batch: 100231
Prep Batch: 84916

Date Analyzed: 2013-04-03
QC Preparation: 2013-04-02

Analyzed By: AR
Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2610	mg/Kg	5	2500	169	98	78.9 - 121

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2690	mg/Kg	5	2500	169	101	78.9 - 121	3	20

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

Report Date: April 4, 2013
114-6401503

Work Order: 13040106
COG/Electra Fed. #5 TB

Page Number: 8 of 10
Eddy Co., NM

Calibration Standards

Standard (CCV-1)

QC Batch: 100231

Date Analyzed: 2013-04-03

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2013-04-03

Standard (CCV-2)

QC Batch: 100231

Date Analyzed: 2013-04-03

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	2013-04-03

Appendix

Report Definitions

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

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis

Standard Flags

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

Attachments

Report Date: April 4, 2013
114-6401503

Work Order: 13040106
COG/Electra Fed. #5 TB

Page Number: 10 of 10
Eddy Co., NM

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

13040106

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:

COG

SITE MANAGER:

The Tawarec

PROJECT NO.:

114-6401503

PROJECT NAME:

COG-Electra Fed #5 TR

LAB I.D.
NUMBER

DATE

TIME

MATRIX

COMP.

GRAB

Eddy Co, NM
SAMPLE IDENTIFICATION

NUMBER OF CONTAINERS

FILTERED (Y/N)

HCL

HNO3

ICE

NONE

PRESERVATIVE
METHOD

BTEX 8021B

TPH 8015 MOD. TX1005 (Ext. to C35)

PAH 8270

RCRA Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Volatiles

TCLP Semi Volatiles

RCI

GC/MS Vol. 8240/8260/824

GC/MS Semi. Vol. 8270/625

PCB's 8080/608

Pest. 808/608

Chloride

Gamma Spec.

Alpha Beta (Air)

PLM (Asbestos)

Major Anions/Cations, pH, TDS

RELINQUISHED BY: (Signature)

Date:

3-29-13

Time:

10:45

RECEIVED BY: (Signature)

Date:

3-29-13

Time:

10:45

SAMPLED BY: (Print & Initial)

Date:

Time:

RELINQUISHED BY: (Signature)

Date:

Time:

RECEIVED BY: (Signature)

Date:

Time:

SAMPLE SHIPPED BY: (Circle)

AIRBILL #:

RELINQUISHED BY: (Signature)

Date:

Time:

RECEIVED BY: (Signature)

Date:

Time:

FEDEX BUS
HAND DELIVERED UPS

OTHER:

RECEIVING LABORATORY:

TRAC

RECEIVED BY: (Signature)

ADDRESS:

CITY: MIDLAND

STATE: TX

ZIP:

CONTACT:

PHONE:

DATE:

TIME:

SAMPLE CONDITION WHEN RECEIVED:

19.9°C

REMARKS:

TETRA TECH CONTACT PERSON:

The Tawarec

Results by:

RUSH Charges

Authorized:

Yes

No

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

Summary Report

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

Report Date: December 12, 2012

Work Order: 12120311



Project Location: Eddy Co., NM
Project Name: COG/Electra Fed. #5 TB
Project Number: 114-6401503

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
315459	SB-1 0-1'	soil	2012-11-28	00:00	2012-12-03
315460	SB-1 2-3'	soil	2012-11-28	00:00	2012-12-03
315461	SB-1 4-5'	soil	2012-11-28	00:00	2012-12-03
315462	SB-1 6-7'	soil	2012-11-28	00:00	2012-12-03
315463	SB-1 9-10'	soil	2012-11-28	00:00	2012-12-03
315464	SB-1 14-15'	soil	2012-11-28	00:00	2012-12-03
315465	SB-1 19-20'	soil	2012-11-28	00:00	2012-12-03
315466	SB-1 24-25'	soil	2012-11-28	00:00	2012-12-03
315467	SB-1 29-30'	soil	2012-11-28	00:00	2012-12-03
315468	SB-1 39-40'	soil	2012-11-28	00:00	2012-12-03
315469	SB-1 49-50'	soil	2012-11-28	00:00	2012-12-03
315470	SB-2 0-1'	soil	2012-11-29	00:00	2012-12-03
315471	SB-2 2-3'	soil	2012-11-29	00:00	2012-12-03
315472	SB-2 4-5'	soil	2012-11-29	00:00	2012-12-03
315473	SB-2 6-7'	soil	2012-11-29	00:00	2012-12-03
315474	SB-2 9-10'	soil	2012-11-29	00:00	2012-12-03
315475	SB-2 14-15'	soil	2012-11-29	00:00	2012-12-03
315476	SB-2 19-20'	soil	2012-11-29	00:00	2012-12-03
315477	SB-3 0-1'	soil	2012-11-29	00:00	2012-12-03
315478	SB-3 2-3'	soil	2012-11-29	00:00	2012-12-03
315479	SB-3 4-5'	soil	2012-11-29	00:00	2012-12-03
315480	SB-3 6-7'	soil	2012-11-29	00:00	2012-12-03
315481	SB-3 9-10'	soil	2012-11-29	00:00	2012-12-03
315482	SB-3 14-15'	soil	2012-11-29	00:00	2012-12-03
315483	SB-3 19-20'	soil	2012-11-29	00:00	2012-12-03
315484	SB-3 24-25'	soil	2012-11-29	00:00	2012-12-03
315485	SB-3 29-30'	soil	2012-11-29	00:00	2012-12-03
315486	SB-3 39-40'	soil	2012-11-29	00:00	2012-12-03
315488	SB-4 0-1'	soil	2012-11-29	00:00	2012-12-03
315489	SB-4 2-3'	soil	2012-11-29	00:00	2012-12-03

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
315490	SB-4 4-5'	soil	2012-11-29	00:00	2012-12-03
315491	SB-4 6-7'	soil	2012-11-29	00:00	2012-12-03
315492	SB-4 9-10'	soil	2012-11-29	00:00	2012-12-03
315493	SB-4 14-15'	soil	2012-11-29	00:00	2012-12-03
315494	SB-4 19-20'	soil	2012-11-29	00:00	2012-12-03
315495	SB-5 0-1'	soil	2012-11-29	00:00	2012-12-03
315496	SB-5 2-3'	soil	2012-11-29	00:00	2012-12-03
315497	SB-5 4-5'	soil	2012-11-29	00:00	2012-12-03
315498	SB-5 6-7'	soil	2012-11-29	00:00	2012-12-03
315499	SB-5 9-10'	soil	2012-11-29	00:00	2012-12-03
315500	SB-5 14-15'	soil	2012-11-29	00:00	2012-12-03
315501	SB-5 19-20'	soil	2012-11-29	00:00	2012-12-03
315502	SB-5 24-25'	soil	2012-11-29	00:00	2012-12-03
315503	SB-5 29-30'	soil	2012-11-29	00:00	2012-12-03
315504	SB-5 39-40'	soil	2012-11-29	00:00	2012-12-03

Sample: 315459 - SB-1 0-1'

Param	Flag	Result	Units	RL
Chloride		7660	mg/Kg	4

Sample: 315460 - SB-1 2-3'

Param	Flag	Result	Units	RL
Chloride		9670	mg/Kg	4

Sample: 315461 - SB-1 4-5'

Param	Flag	Result	Units	RL
Chloride		10900	mg/Kg	4

Sample: 315462 - SB-1 6-7'

Param	Flag	Result	Units	RL
Chloride		15900	mg/Kg	4

Sample: 315463 - SB-1 9-10'*continued ...*

sample 315463 continued ...

Param	Flag	Result	Units	RL
Param	Flag	Result	Units	RL
Chloride		14100	mg/Kg	4

Sample: 315464 - SB-1 14-15'

Param	Flag	Result	Units	RL
Chloride		9500	mg/Kg	4

Sample: 315465 - SB-1 19-20'

Param	Flag	Result	Units	RL
Chloride		4040	mg/Kg	4

Sample: 315466 - SB-1 24-25'

Param	Flag	Result	Units	RL
Chloride		400	mg/Kg	4

Sample: 315467 - SB-1 29-30'

Param	Flag	Result	Units	RL
Chloride		153	mg/Kg	4

Sample: 315468 - SB-1 39-40'

Param	Flag	Result	Units	RL
Chloride		114	mg/Kg	4

Sample: 315469 - SB-1 49-50'

Param	Flag	Result	Units	RL
Chloride		139	mg/Kg	4

Sample: 315470 - SB-2 0-1'

Param	Flag	Result	Units	RL
Chloride		1720	mg/Kg	4

Sample: 315471 - SB-2 2-3'

Param	Flag	Result	Units	RL
Chloride		1250	mg/Kg	4

Sample: 315472 - SB-2 4-5'

Param	Flag	Result	Units	RL
Chloride		15200	mg/Kg	4

Sample: 315473 - SB-2 6-7'

Param	Flag	Result	Units	RL
Chloride		436	mg/Kg	4

Sample: 315474 - SB-2 9-10'

Param	Flag	Result	Units	RL
Chloride		52.7	mg/Kg	4

Sample: 315475 - SB-2 14-15'

Param	Flag	Result	Units	RL
Chloride		67.0	mg/Kg	4

Sample: 315476 - SB-2 19-20'

Param	Flag	Result	Units	RL
Chloride		120	mg/Kg	4

Sample: 315477 - SB-3 0-1'

Param	Flag	Result	Units	RL
Chloride		2630	mg/Kg	4

Sample: 315478 - SB-3 2-3'

Param	Flag	Result	Units	RL
Chloride		3150	mg/Kg	4

Sample: 315479 - SB-3 4-5'

Param	Flag	Result	Units	RL
Chloride		10400	mg/Kg	4

Sample: 315480 - SB-3 6-7'

Param	Flag	Result	Units	RL
Chloride		18500	mg/Kg	4

Sample: 315481 - SB-3 9-10'

Param	Flag	Result	Units	RL
Chloride		6490	mg/Kg	4

Sample: 315482 - SB-3 14-15'

Param	Flag	Result	Units	RL
Chloride		6820	mg/Kg	4

Sample: 315483 - SB-3 19-20'

Param	Flag	Result	Units	RL
Chloride		8730	mg/Kg	4

Sample: 315484 - SB-3 24-25'

Param	Flag	Result	Units	RL
Chloride		7960	mg/Kg	4

Sample: 315485 - SB-3 29-30'

Param	Flag	Result	Units	RL
Chloride		345	mg/Kg	4

Sample: 315486 - SB-3 39-40'

Param	Flag	Result	Units	RL
Chloride		187	mg/Kg	4

Sample: 315488 - SB-4 0-1'

Param	Flag	Result	Units	RL
Chloride		2210	mg/Kg	4

Sample: 315489 - SB-4 2-3'

Param	Flag	Result	Units	RL
Chloride		4440	mg/Kg	4

Sample: 315490 - SB-4 4-5'

Param	Flag	Result	Units	RL
Chloride		20100	mg/Kg	4

Sample: 315491 - SB-4 6-7'

Param	Flag	Result	Units	RL
Chloride		2440	mg/Kg	4

Sample: 315492 - SB-4 9-10'

Param	Flag	Result	Units	RL
Chloride		340	mg/Kg	4

Sample: 315493 - SB-4 14-15'

Param	Flag	Result	Units	RL
Chloride		52.7	mg/Kg	4

Sample: 315494 - SB-4 19-20'

Param	Flag	Result	Units	RL
Chloride		201	mg/Kg	4

Sample: 315495 - SB-5 0-1'

Param	Flag	Result	Units	RL
Chloride		5600	mg/Kg	4

Sample: 315496 - SB-5 2-3'

Param	Flag	Result	Units	RL
Chloride		8350	mg/Kg	4

Sample: 315497 - SB-5 4-5'

Param	Flag	Result	Units	RL
Chloride		8620	mg/Kg	4

Sample: 315498 - SB-5 6-7'

Param	Flag	Result	Units	RL
Chloride		15200	mg/Kg	4

Sample: 315499 - SB-5 9-10'

Param	Flag	Result	Units	RL
Chloride		6440	mg/Kg	4

Sample: 315500 - SB-5 14-15'

Param	Flag	Result	Units	RL
Chloride		205	mg/Kg	4

Sample: 315501 - SB-5 19-20'

Param	Flag	Result	Units	RL
Chloride		139	mg/Kg	4

Sample: 315502 - SB-5 24-25'

Param	Flag	Result	Units	RL
Chloride		707	mg/Kg	4

Sample: 315503 - SB-5 29-30'

Param	Flag	Result	Units	RL
Chloride		81.2	mg/Kg	4

Sample: 315504 - SB-5 39-40'

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



6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800-378-1296 806-794-1296 FAX 806-794-1298
200 East Sunset Road, Suite E El Paso, Texas 79922 915-585-3443 FAX 915-585-4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432-689-6301 FAX 432-689-6313
(BioAquatic) 2501 Mayes Rd., Suite 100 Carrollton, Texas 75006 972-242-7750
E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

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

Report Date: December 12, 2012

Work Order: 12120311



Project Location: Eddy Co., NM
Project Name: COG/Electra Fed. #5 TB
Project Number: 114-6401503

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
315459	SB-1 0-1'	soil	2012-11-28	00:00	2012-12-03
315460	SB-1 2-3'	soil	2012-11-28	00:00	2012-12-03
315461	SB-1 4-5'	soil	2012-11-28	00:00	2012-12-03
315462	SB-1 6-7'	soil	2012-11-28	00:00	2012-12-03
315463	SB-1 9-10'	soil	2012-11-28	00:00	2012-12-03
315464	SB-1 14-15'	soil	2012-11-28	00:00	2012-12-03
315465	SB-1 19-20'	soil	2012-11-28	00:00	2012-12-03
315466	SB-1 24-25'	soil	2012-11-28	00:00	2012-12-03
315467	SB-1 29-30'	soil	2012-11-28	00:00	2012-12-03
315468	SB-1 39-40'	soil	2012-11-28	00:00	2012-12-03
315469	SB-1 49-50'	soil	2012-11-28	00:00	2012-12-03
315470	SB-2 0-1'	soil	2012-11-29	00:00	2012-12-03
315471	SB-2 2-3'	soil	2012-11-29	00:00	2012-12-03
315472	SB-2 4-5'	soil	2012-11-29	00:00	2012-12-03
315473	SB-2 6-7'	soil	2012-11-29	00:00	2012-12-03
315474	SB-2 9-10'	soil	2012-11-29	00:00	2012-12-03
315475	SB-2 14-15'	soil	2012-11-29	00:00	2012-12-03
315476	SB-2 19-20'	soil	2012-11-29	00:00	2012-12-03

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
315477	SB-3 0-1'	soil	2012-11-29	00:00	2012-12-03
315478	SB-3 2-3'	soil	2012-11-29	00:00	2012-12-03
315479	SB-3 4-5'	soil	2012-11-29	00:00	2012-12-03
315480	SB-3 6-7'	soil	2012-11-29	00:00	2012-12-03
315481	SB-3 9-10'	soil	2012-11-29	00:00	2012-12-03
315482	SB-3 14-15'	soil	2012-11-29	00:00	2012-12-03
315483	SB-3 19-20'	soil	2012-11-29	00:00	2012-12-03
315484	SB-3 24-25'	soil	2012-11-29	00:00	2012-12-03
315485	SB-3 29-30'	soil	2012-11-29	00:00	2012-12-03
315486	SB-3 39-40'	soil	2012-11-29	00:00	2012-12-03
315488	SB-4 0-1'	soil	2012-11-29	00:00	2012-12-03
315489	SB-4 2-3'	soil	2012-11-29	00:00	2012-12-03
315490	SB-4 4-5'	soil	2012-11-29	00:00	2012-12-03
315491	SB-4 6-7'	soil	2012-11-29	00:00	2012-12-03
315492	SB-4 9-10'	soil	2012-11-29	00:00	2012-12-03
315493	SB-4 14-15'	soil	2012-11-29	00:00	2012-12-03
315494	SB-4 19-20'	soil	2012-11-29	00:00	2012-12-03
315495	SB-5 0-1'	soil	2012-11-29	00:00	2012-12-03
315496	SB-5 2-3'	soil	2012-11-29	00:00	2012-12-03
315497	SB-5 4-5'	soil	2012-11-29	00:00	2012-12-03
315498	SB-5 6-7'	soil	2012-11-29	00:00	2012-12-03
315499	SB-5 9-10'	soil	2012-11-29	00:00	2012-12-03
315500	SB-5 14-15'	soil	2012-11-29	00:00	2012-12-03
315501	SB-5 19-20'	soil	2012-11-29	00:00	2012-12-03
315502	SB-5 24-25'	soil	2012-11-29	00:00	2012-12-03
315503	SB-5 29-30'	soil	2012-11-29	00:00	2012-12-03
315504	SB-5 39-40'	soil	2012-11-29	00:00	2012-12-03

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

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



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

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Sample 315467 (SB-1 29-30')	8
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Sample 315470 (SB-2 0-1')	9
Sample 315471 (SB-2 2-3')	9
Sample 315472 (SB-2 4-5')	9
Sample 315473 (SB-2 6-7')	10
Sample 315474 (SB-2 9-10')	10
Sample 315475 (SB-2 14-15')	10
Sample 315476 (SB-2 19-20')	10
Sample 315477 (SB-3 0-1')	11
Sample 315478 (SB-3 2-3')	11
Sample 315479 (SB-3 4-5')	11
Sample 315480 (SB-3 6-7')	12
Sample 315481 (SB-3 9-10')	12
Sample 315482 (SB-3 14-15')	12
Sample 315483 (SB-3 19-20')	12
Sample 315484 (SB-3 24-25')	13
Sample 315485 (SB-3 29-30')	13
Sample 315486 (SB-3 39-40')	13
Sample 315488 (SB-4 0-1')	14
Sample 315489 (SB-4 2-3')	14
Sample 315490 (SB-4 4-5')	14
Sample 315491 (SB-4 6-7')	14
Sample 315492 (SB-4 9-10')	15
Sample 315493 (SB-4 14-15')	15
Sample 315494 (SB-4 19-20')	15
Sample 315495 (SB-5 0-1')	16
Sample 315496 (SB-5 2-3')	16
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Sample 315498 (SB-5 6-7')	16
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Case Narrative

Samples for project COG/Electra Fed. #5 TB were received by TraceAnalysis, Inc. on 2012-12-03 and assigned to work order 12120311. Samples for work order 12120311 were received intact at a temperature of 19.9 C. Samples not on ice.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
Chloride (Titration)	SM 4500-Cl B	82300	2012-12-04 at 10:10	97229	2012-12-05 at 09:40
Chloride (Titration)	SM 4500-Cl B	82300	2012-12-04 at 10:10	97230	2012-12-05 at 09:41
Chloride (Titration)	SM 4500-Cl B	82300	2012-12-04 at 10:10	97231	2012-12-05 at 09:42
Chloride (Titration)	SM 4500-Cl B	82300	2012-12-04 at 10:10	97233	2012-12-05 at 09:43
Chloride (Titration)	SM 4500-Cl B	82300	2012-12-04 at 10:10	97234	2012-12-10 at 09:44

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 12120311 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

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Analytical Report

Sample: 315459 - SB-1 0-1'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-12-05	Analyzed By:	AR
QC Batch:	97229	Sample Preparation:	2012-12-04	Prepared By:	AR
Prep Batch:	82300				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			7660	mg/Kg	10	4.00

Sample: 315460 - SB-1 2-3'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-12-05	Analyzed By:	AR
QC Batch:	97229	Sample Preparation:	2012-12-04	Prepared By:	AR
Prep Batch:	82300				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			9670	mg/Kg	10	4.00

Sample: 315461 - SB-1 4-5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-12-05	Analyzed By:	AR
QC Batch:	97229	Sample Preparation:	2012-12-04	Prepared By:	AR
Prep Batch:	82300				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			10900	mg/Kg	10	4.00

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Sample: 315462 - SB-1 6-7'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-12-05	Analyzed By:	AR
QC Batch:	97229	Sample Preparation:	2012-12-04	Prepared By:	AR
Prep Batch:	82300				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			15900	mg/Kg	10	4.00

Sample: 315463 - SB-1 9-10'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-12-05	Analyzed By:	AR
QC Batch:	97229	Sample Preparation:	2012-12-04	Prepared By:	AR
Prep Batch:	82300				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			14100	mg/Kg	10	4.00

Sample: 315464 - SB-1 14-15'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-12-05	Analyzed By:	AR
QC Batch:	97229	Sample Preparation:	2012-12-04	Prepared By:	AR
Prep Batch:	82300				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			9500	mg/Kg	10	4.00

Sample: 315465 - SB-1 19-20'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-12-05	Analyzed By:	AR
QC Batch:	97229	Sample Preparation:	2012-12-04	Prepared By:	AR
Prep Batch:	82300				

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

Sample: 315466 - SB-1 24-25'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	97229	Date Analyzed:	2012-12-05	Analyzed By:	AR
Prep Batch:	82300	Sample Preparation:	2012-12-04	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			400	mg/Kg	5	4.00

Sample: 315467 - SB-1 29-30'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	97229	Date Analyzed:	2012-12-05	Analyzed By:	AR
Prep Batch:	82300	Sample Preparation:	2012-12-04	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			153	mg/Kg	5	4.00

Sample: 315468 - SB-1 39-40'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	97229	Date Analyzed:	2012-12-05	Analyzed By:	AR
Prep Batch:	82300	Sample Preparation:	2012-12-04	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			114	mg/Kg	5	4.00

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Sample: 315469 - SB-1 49-50'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-12-05	Analyzed By:	AR
QC Batch:	97230	Sample Preparation:	2012-12-04	Prepared By:	AR
Prep Batch:	82300				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			139	mg/Kg	5	4.00

Sample: 315470 - SB-2 0-1'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-12-05	Analyzed By:	AR
QC Batch:	97230	Sample Preparation:	2012-12-04	Prepared By:	AR
Prep Batch:	82300				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			1720	mg/Kg	10	4.00

Sample: 315471 - SB-2 2-3'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-12-05	Analyzed By:	AR
QC Batch:	97230	Sample Preparation:	2012-12-04	Prepared By:	AR
Prep Batch:	82300				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			1250	mg/Kg	10	4.00

Sample: 315472 - SB-2 4-5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-12-05	Analyzed By:	AR
QC Batch:	97230	Sample Preparation:	2012-12-04	Prepared By:	AR
Prep Batch:	82300				

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			15200	mg/Kg	10	4.00

Sample: 315473 - SB-2 6-7'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 97230 Date Analyzed: 2012-12-05 Analyzed By: AR
Prep Batch: 82300 Sample Preparation: 2012-12-04 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			436	mg/Kg	5	4.00

Sample: 315474 - SB-2 9-10'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 97230 Date Analyzed: 2012-12-05 Analyzed By: AR
Prep Batch: 82300 Sample Preparation: 2012-12-04 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			52.7	mg/Kg	5	4.00

Sample: 315475 - SB-2 14-15'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 97230 Date Analyzed: 2012-12-05 Analyzed By: AR
Prep Batch: 82300 Sample Preparation: 2012-12-04 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			67.0	mg/Kg	5	4.00

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Sample: 315476 - SB-2 19-20'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-12-05	Analyzed By:	AR
QC Batch:	97230	Sample Preparation:	2012-12-04	Prepared By:	AR
Prep Batch:	82300				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			120	mg/Kg	5	4.00

Sample: 315477 - SB-3 0-1'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-12-05	Analyzed By:	AR
QC Batch:	97230	Sample Preparation:	2012-12-04	Prepared By:	AR
Prep Batch:	82300				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			2630	mg/Kg	10	4.00

Sample: 315478 - SB-3 2-3'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-12-05	Analyzed By:	AR
QC Batch:	97230	Sample Preparation:	2012-12-04	Prepared By:	AR
Prep Batch:	82300				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			3150	mg/Kg	10	4.00

Sample: 315479 - SB-3 4-5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-12-05	Analyzed By:	AR
QC Batch:	97231	Sample Preparation:	2012-12-04	Prepared By:	AR
Prep Batch:	82300				

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			10400	mg/Kg	10	4.00

Sample: 315480 - SB-3 6-7'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 97231 Date Analyzed: 2012-12-05 Analyzed By: AR
Prep Batch: 82300 Sample Preparation: 2012-12-04 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			18500	mg/Kg	10	4.00

Sample: 315481 - SB-3 9-10'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 97231 Date Analyzed: 2012-12-05 Analyzed By: AR
Prep Batch: 82300 Sample Preparation: 2012-12-04 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			6490	mg/Kg	10	4.00

Sample: 315482 - SB-3 14-15'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 97231 Date Analyzed: 2012-12-05 Analyzed By: AR
Prep Batch: 82300 Sample Preparation: 2012-12-04 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			6820	mg/Kg	10	4.00

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Sample: 315483 - SB-3 19-20'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-12-05	Analyzed By:	AR
QC Batch:	97231	Sample Preparation:	2012-12-04	Prepared By:	AR
Prep Batch:	82300				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			8730	mg/Kg	10	4.00

Sample: 315484 - SB-3 24-25'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-12-05	Analyzed By:	AR
QC Batch:	97231	Sample Preparation:	2012-12-04	Prepared By:	AR
Prep Batch:	82300				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			7960	mg/Kg	10	4.00

Sample: 315485 - SB-3 29-30'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-12-05	Analyzed By:	AR
QC Batch:	97231	Sample Preparation:	2012-12-04	Prepared By:	AR
Prep Batch:	82300				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			345	mg/Kg	5	4.00

Sample: 315486 - SB-3 39-40'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-12-05	Analyzed By:	AR
QC Batch:	97231	Sample Preparation:	2012-12-04	Prepared By:	AR
Prep Batch:	82300				

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			187	mg/Kg	5	4.00

Sample: 315488 - SB-4 0-1'

Laboratory: Midland						
Analysis: Chloride (Titration)		Analytical Method: SM 4500-Cl B		Prep Method: N/A		
QC Batch: 97231		Date Analyzed: 2012-12-05		Analyzed By: AR		
Prep Batch: 82300		Sample Preparation: 2012-12-04		Prepared By: AR		

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			2210	mg/Kg	10	4.00

Sample: 315489 - SB-4 2-3'

Laboratory: Midland						
Analysis: Chloride (Titration)		Analytical Method: SM 4500-Cl B		Prep Method: N/A		
QC Batch: 97231		Date Analyzed: 2012-12-05		Analyzed By: AR		
Prep Batch: 82300		Sample Preparation: 2012-12-04		Prepared By: AR		

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			4440	mg/Kg	10	4.00

Sample: 315490 - SB-4 4-5'

Laboratory: Midland						
Analysis: Chloride (Titration)		Analytical Method: SM 4500-Cl B		Prep Method: N/A		
QC Batch: 97233		Date Analyzed: 2012-12-05		Analyzed By: AR		
Prep Batch: 82300		Sample Preparation: 2012-12-04		Prepared By: AR		

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			20100	mg/Kg	10	4.00

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Sample: 315491 - SB-4 6-7'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-12-05	Analyzed By:	AR
QC Batch:	97233	Sample Preparation:	2012-12-04	Prepared By:	AR
Prep Batch:	82300				

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

Sample: 315492 - SB-4 9-10'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-12-05	Analyzed By:	AR
QC Batch:	97233	Sample Preparation:	2012-12-04	Prepared By:	AR
Prep Batch:	82300				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			340	mg/Kg	5	4.00

Sample: 315493 - SB-4 14-15'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-12-05	Analyzed By:	AR
QC Batch:	97233	Sample Preparation:	2012-12-04	Prepared By:	AR
Prep Batch:	82300				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			52.7	mg/Kg	5	4.00

Sample: 315494 - SB-4 19-20'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-12-05	Analyzed By:	AR
QC Batch:	97233	Sample Preparation:	2012-12-04	Prepared By:	AR
Prep Batch:	82300				

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			201	mg/Kg	5	4.00

Sample: 315495 - SB-5 0-1'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 97233 Date Analyzed: 2012-12-05 Analyzed By: AR
Prep Batch: 82300 Sample Preparation: 2012-12-04 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			5600	mg/Kg	10	4.00

Sample: 315496 - SB-5 2-3'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 97233 Date Analyzed: 2012-12-05 Analyzed By: AR
Prep Batch: 82300 Sample Preparation: 2012-12-04 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			8350	mg/Kg	10	4.00

Sample: 315497 - SB-5 4-5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 97233 Date Analyzed: 2012-12-05 Analyzed By: AR
Prep Batch: 82300 Sample Preparation: 2012-12-04 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			8620	mg/Kg	10	4.00

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Sample: 315498 - SB-5 6-7'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-12-05	Analyzed By:	AR
QC Batch:	97233	Sample Preparation:	2012-12-04	Prepared By:	AR
Prep Batch:	82300				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			15200	mg/Kg	10	4.00

Sample: 315499 - SB-5 9-10'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-12-05	Analyzed By:	AR
QC Batch:	97233	Sample Preparation:	2012-12-04	Prepared By:	AR
Prep Batch:	82300				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			6440	mg/Kg	10	4.00

Sample: 315500 - SB-5 14-15'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-12-10	Analyzed By:	AR
QC Batch:	97234	Sample Preparation:	2012-12-04	Prepared By:	AR
Prep Batch:	82300				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			205	mg/Kg	5	4.00

Sample: 315501 - SB-5 19-20'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-12-10	Analyzed By:	AR
QC Batch:	97234	Sample Preparation:	2012-12-04	Prepared By:	AR
Prep Batch:	82300				

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			139	mg/Kg	5	4.00

Sample: 315502 - SB-5 24-25'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-12-10	Analyzed By:	AR
QC Batch:	97234	Sample Preparation:	2012-12-04	Prepared By:	AR
Prep Batch:	82300				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			707	mg/Kg	5	4.00

Sample: 315503 - SB-5 29-30'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-12-10	Analyzed By:	AR
QC Batch:	97234	Sample Preparation:	2012-12-04	Prepared By:	AR
Prep Batch:	82300				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			81.2	mg/Kg	5	4.00

Sample: 315504 - SB-5 39-40'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-12-10	Analyzed By:	AR
QC Batch:	97234	Sample Preparation:	2012-12-04	Prepared By:	AR
Prep Batch:	82300				

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

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Method Blanks

Method Blank (1) QC Batch: 97229

QC Batch: 97229 Date Analyzed: 2012-12-05 Analyzed By: AR
Prep Batch: 82300 QC Preparation: 2012-12-04 Prepared By: AR

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

Method Blank (1) QC Batch: 97230

QC Batch: 97230 Date Analyzed: 2012-12-05 Analyzed By: AR
Prep Batch: 82300 QC Preparation: 2012-12-04 Prepared By: AR

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

Method Blank (1) QC Batch: 97231

QC Batch: 97231 Date Analyzed: 2012-12-05 Analyzed By: AR
Prep Batch: 82300 QC Preparation: 2012-12-04 Prepared By: AR

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

Method Blank (1) QC Batch: 97233

QC Batch: 97233 Date Analyzed: 2012-12-05 Analyzed By: AR
Prep Batch: 82300 QC Preparation: 2012-12-04 Prepared By: AR

Report Date: December 12, 2012
114-6401503

Work Order: 12120311
COG/Electra Fed. #5 TB

Page Number: 20 of 29
Eddy Co., NM

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

Method Blank (1) QC Batch: 97234

QC Batch: 97234
Prep Batch: 82300

Date Analyzed: 2012-12-10
QC Preparation: 2012-12-04

Analyzed By: AR
Prepared By: AR

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

Report Date: December 12, 2012
114-6401503

Work Order: 12120311
COG/Electra Fed. #5 TB

Page Number: 21 of 29
Eddy Co., NM

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 97229
Prep Batch: 82300

Date Analyzed: 2012-12-05
QC Preparation: 2012-12-04

Analyzed By: AR
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	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: 97230
Prep Batch: 82300

Date Analyzed: 2012-12-05
QC Preparation: 2012-12-04

Analyzed By: AR
Prepared By: AR

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

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2500	mg/Kg	1	2500	<3.85	100	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: 97231
Prep Batch: 82300

Date Analyzed: 2012-12-05
QC Preparation: 2012-12-04

Analyzed By: AR
Prepared By: AR

Report Date: December 12, 2012
114-6401503

Work Order: 12120311
COG/Electra Fed. #5 TB

Page Number: 22 of 29
Eddy Co., NM

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	RPD Limit
Chloride			2740	mg/Kg	1	2500	<3.85	110	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: 97233
Prep Batch: 82300

Date Analyzed: 2012-12-05
QC Preparation: 2012-12-04

Analyzed By: AR
Prepared By: AR

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

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2530	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: 97234
Prep Batch: 82300

Date Analyzed: 2012-12-10
QC Preparation: 2012-12-04

Analyzed By: AR
Prepared By: AR

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

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2510	mg/Kg	1	2500	<3.85	100	85 - 115	4	20

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

Report Date: December 12, 2012
114-6401503

Work Order: 12120311
COG/Electra Fed. #5 TB

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Eddy Co., NM

Matrix Spike (MS-1) Spiked Sample: 315468

QC Batch: 97229
Prep Batch: 82300

Date Analyzed: 2012-12-05
QC Preparation: 2012-12-04

Analyzed By: AR
Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2580	mg/Kg	5	2500	114	99	78.9 - 121

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2710	mg/Kg	5	2500	114	104	78.9 - 121	5	20

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

Matrix Spike (MS-1) Spiked Sample: 315478

QC Batch: 97230
Prep Batch: 82300

Date Analyzed: 2012-12-05
QC Preparation: 2012-12-04

Analyzed By: AR
Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			5590	mg/Kg	10	2500	3150	98	78.9 - 121

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			5280	mg/Kg	10	2500	3150	85	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: 315489

QC Batch: 97231
Prep Batch: 82300

Date Analyzed: 2012-12-05
QC Preparation: 2012-12-04

Analyzed By: AR
Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			7010	mg/Kg	10	2500	4440	103	78.9 - 121

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

Report Date: December 12, 2012
114-6401503

Work Order: 12120311
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Eddy Co., NM

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			7260	mg/Kg	10	2500	4440	113	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: 315499

QC Batch: 97233
Prep Batch: 82300

Date Analyzed: 2012-12-05
QC Preparation: 2012-12-04

Analyzed By: AR
Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			8660	mg/Kg	10	2500	6440	89	78.9 - 121

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			8620	mg/Kg	10	2500	6440	87	78.9 - 121	0	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: 315511

QC Batch: 97234
Prep Batch: 82300

Date Analyzed: 2012-12-10
QC Preparation: 2012-12-04

Analyzed By: AR
Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			5110	mg/Kg	10	2500	2510	104	78.9 - 121

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			5370	mg/Kg	10	2500	2510	114	78.9 - 121	5	20

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

Calibration Standards

Standard (CCV-1)

QC Batch: 97229

Date Analyzed: 2012-12-05

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2012-12-05

Standard (CCV-2)

QC Batch: 97229

Date Analyzed: 2012-12-05

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2012-12-05

Standard (CCV-1)

QC Batch: 97230

Date Analyzed: 2012-12-05

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2012-12-05

Standard (CCV-2)

QC Batch: 97230

Date Analyzed: 2012-12-05

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.6	100	85 - 115	2012-12-05

Report Date: December 12, 2012
114-6401503

Work Order: 12120311
COG/Electra Fed. #5 TB

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Eddy Co., NM

Standard (CCV-1)

QC Batch: 97231

Date Analyzed: 2012-12-05

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.7	100	85 - 115	2012-12-05

Standard (CCV-2)

QC Batch: 97231

Date Analyzed: 2012-12-05

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2012-12-05

Standard (CCV-1)

QC Batch: 97233

Date Analyzed: 2012-12-05

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2012-12-05

Standard (CCV-2)

QC Batch: 97233

Date Analyzed: 2012-12-05

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	2012-12-05

Standard (CCV-1)

QC Batch: 97234

Date Analyzed: 2012-12-10

Analyzed By: AR

Report Date: December 12, 2012
114-6401503

Work Order: 12120311
COG/Electra Fed. #5 TB

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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	100	100	85 - 115	2012-12-10

Standard (CCV-2)

QC Batch: 97234

Date Analyzed: 2012-12-10

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.6	100	85 - 115	2012-12-10

Appendix

Report Definitions

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

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis

Standard Flags

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

Attachments

Report Date: December 12, 2012
114-6401503

Work Order: 12120311
COG/Electra Fed. #5 TB

Page Number: 29 of 29
Eddy Co., NM

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

Analysis Request of Chain of Custody Record



TETRA TECH

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

PAGE: 1 OF: 3

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME:

COG

SITE MANAGER:

Ike Tavaraz

PROJECT NO.:

114-6401503

PROJECT NAME:

Electra Federal #5 (Flowline)
Eddy Co NM
SAMPLE IDENTIFICATION

LAB I.D.
NUMBER

DATE

TIME

MATRIX

COMP

GRAB

315459

11/28

S

K

460

461

462

463

464

Analysis Request of Chain of Custody Record

PAGE: 2

OF: 5



TETRA TECH

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME:

COLG

SITE MANAGER:

Ike Tavaraz

PROJECT NO.:

114-6401503

PROJECT NAME:

Electra Federal #5 (Flowline)

LAB I.D.
NUMBER

DATE

TIME

MATRIX

COMP

GRAB

NUMBER OF CONTAINERS

FILTERED (Y/N)

HCL

HNO3

ICE

NONE

RELINQUISHED BY: (Signature)

Date:

12-3-12

Time:

10:37

RECEIVED BY: (Signature)

Date:

12-3-12

Time:

10:37

SAMPLED BY: (Print & Initial)

Date:

11-29-12

Time:

RELINQUISHED BY: (Signature)

Date:

Time:

RECEIVED BY: (Signature)

Date:

Time:

SAMPLE SHIPPED BY: (Circle)

AIRBILL #:

RELINQUISHED BY: (Signature)

Date:

Time:

RECEIVED BY: (Signature)

Date:

Time:

TETRA TECH CONTACT PERSON:

Results by:

RECEIVING LABORATORY:

Trace

RECEIVED BY: (Signature)

ADDRESS:

CITY:

Midland

STATE:

TX

ZIP:

CONTACT:

PHONE:

DATE:

TIME:

SAMPLE CONDITION WHEN RECEIVED:

REMARKS:

19.9

AT

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

Analysis Request of Chain of Custody Record

PAGE: 3 OF: 5



TETRA TECH

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME:

COG

SITE MANAGER:

Ike Tavares

PROJECT NO.:

114-6401503

PROJECT NAME:

Electra Federal #5 (Flowline)

LAB I.D.
NUMBER

DATE

TIME

MATRIX

COMP

GRAB

NUMBER OF CONTAINERS

FILTERED (Y/N)

HCL

HNO3

ICE

NONE

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 Cr Pb Hg Se

TCLP Volatiles

TCLP Semi Volatiles

RCI

GC/MS Vol. 8240/8260/824

GC/MS Semi. Vol. 8270/825

PCB's 8080/608

Pest. 808/608

Chloride

Gamma Spec.

Alpha Beta (Air)

PLM (Asbestos)

Major Anions/Cations, pH, TDS

RELINQUISHED BY: (Signature)

Date: 12-3-12

Time: 10:37

RECEIVED BY: (Signature)

Date: 12/3/12

Time: 10:37

SAMPLED BY: (Print & Initial)

TE

Date: 11-29-12

Time:

RELINQUISHED BY: (Signature)

Date:

Time:

RECEIVED BY: (Signature)

Date:

Time:

SAMPLE SHIPPED BY: (Circle)

FEDX BUS

AIRBILL #:

HAND DELIVERED UPS

OTHER:

RECEIVING LABORATORY: Trace

RECEIVED BY: (Signature)

ADDRESS:

CITY: Midland STATE: TX ZIP:

CONTACT: PHONE: DATE: TIME:

SAMPLE CONDITION WHEN RECEIVED:

19 9"

REMARKS:

HH

TETRA TECH CONTACT PERSON:

Ike

Results by:

RUSH Charges

Authorized:

Yes No

10/10/0311

Analysis Request of Chain of Custody Record

PAGE: 4

OF: 5

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

 ANALYSIS REQUEST
 (Circle or Specify Method No.)

CLIENT NAME:

COLG

SITE MANAGER:

Ile Tavaraz

PROJECT NO.:

114-6401503

PROJECT NAME:

Electra Federal #5 (Flowline)

LAB I.D.
NUMBER

DATE

TIME

MATRIX
COMP
GRAB
 Eddy Co NM
 SAMPLE IDENTIFICATION

NUMBER OF CONTAINERS

FILTERED (Y/N)

HCL

HNO3

ICE

NONE

PRESERVATIVE
METHOD

BTX 8021B

TPH 8015 MOD. TX1005 (Ext. to C35)

PAH 8270

RCRA Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Volatiles

TCLP Semi Volatiles

RCI

GC/MS Vol. 8240/8260/824

GC/MS Semi. Vol. 8270/825

PCB's 8080/808

Pest. 808/808

Chloride

Gamma Spec.

Alpha Beta (Air)

PLM (Asbestos)

Major Anions/Cations, pH, TDS

RELINQUISHED BY: (Signature)

Date: 12-3-12

Time: 1037

RECEIVED BY: (Signature)

Date: 12/3/12

Time: 1037

SAMPLED BY: (Print & Initial)

TE

Date: 11-29-12

Time:

RELINQUISHED BY: (Signature)

Date:

Time:

RECEIVED BY: (Signature)

Date:

Time:

SAMPLE SHIPPED BY: (Circle)

FEDEX

BUS

AIRBILL #:

RELINQUISHED BY: (Signature)

Date:

Time:

RECEIVED BY: (Signature)

Date:

Time:

HAND DELIVERED

UPS

OTHER:

RECEIVING LABORATORY:

Trace

RECEIVED BY: (Signature)

ADDRESS:

CITY: Midland

STATE: TX

ZIP:

CONTACT:

PHONE:

DATE:

TIME:

SAMPLE CONDITION WHEN RECEIVED:

19.9°

REMARKS:

HT

TETRA TECH CONTACT PERSON:

Ile

Results by:

RUSH Charges
Authorized:

Yes No

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

Summary Report

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

Report Date: September 24, 2012

Work Order: 12091214



Project Location: NM
Project Name: COG/Electra Fed. #5 TB
Project Number: 114-6401503

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
309015	AH-1 0-1'	soil	2012-09-06	00:00	2012-09-11
309016	AH-1 1-1.5'	soil	2012-09-06	00:00	2012-09-11
309017	AH-1 2-2.5'	soil	2012-09-06	00:00	2012-09-11
309018	AH-1 3-3.5'	soil	2012-09-06	00:00	2012-09-11
309019	AH-1 4-4.5'	soil	2012-09-06	00:00	2012-09-11
309020	AH-1 5-5.5'	soil	2012-09-06	00:00	2012-09-11
309021	AH-1 6-6.5'	soil	2012-09-06	00:00	2012-09-11
309022	AH-1 7-7.5'	soil	2012-09-06	00:00	2012-09-11
309023	AH-1 8-8.5'	soil	2012-09-06	00:00	2012-09-11
309024	AH-1 9-9.5'	soil	2012-09-06	00:00	2012-09-11
309025	AH-2 0-1'	soil	2012-09-06	00:00	2012-09-11
309026	AH-2 1-1.5'	soil	2012-09-06	00:00	2012-09-11
309027	AH-2 2-2.5'	soil	2012-09-06	00:00	2012-09-11
309028	AH-3 0-1'	soil	2012-09-06	00:00	2012-09-11
309029	AH-3 1-1.5'	soil	2012-09-06	00:00	2012-09-11
309030	AH-3 2-2.5'	soil	2012-09-06	00:00	2012-09-11
309031	AH-3 3-3.5'	soil	2012-09-06	00:00	2012-09-11
309032	AH-3 4-4.5'	soil	2012-09-06	00:00	2012-09-11
309033	AH-3 5-5.5'	soil	2012-09-06	00:00	2012-09-11
309034	AH-3 6-6.5'	soil	2012-09-06	00:00	2012-09-11
309035	AH-3 7-7.5'	soil	2012-09-06	00:00	2012-09-11
309036	AH-3 8-8.5'	soil	2012-09-06	00:00	2012-09-11
309037	AH-3 9-9.5'	soil	2012-09-06	00:00	2012-09-11
309038	AH-4 0-1'	soil	2012-09-06	00:00	2012-09-11
309039	AH-4 1-1.5'	soil	2012-09-06	00:00	2012-09-11
309040	AH-4 1.5-2'	soil	2012-09-06	00:00	2012-09-11
309041	AH-5 0-1'	soil	2012-09-06	00:00	2012-09-11
309042	AH-5 1-1.5'	soil	2012-09-06	00:00	2012-09-11
309043	AH-5 2-2.5'	soil	2012-09-06	00:00	2012-09-11
309044	AH-5 3-3.5'	soil	2012-09-06	00:00	2012-09-11

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
309045	AH-5 4-4.5'	soil	2012-09-06	00:00	2012-09-11
309046	AH-5 5-5.5'	soil	2012-09-06	00:00	2012-09-11
309047	AH-5 6-6.5'	soil	2012-09-06	00:00	2012-09-11
309048	AH-5 7-7.5'	soil	2012-09-06	00:00	2012-09-11

Sample - Field Code	BTEX				TPH DRO - NEW	TPH GRO
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
309015 - AH-1 0-1'	<1.00 Qs	<1.00 Qs	<1.00 Qs	1.55 Qs	<50.0	376
309025 - AH-2 0-1'	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	<50.0	4.08
309028 - AH-3 0-1'	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	<50.0	4.10
309038 - AH-4 0-1'	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	252	4.01
309041 - AH-5 0-1'	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	<0.0200 Qs	<50.0	4.29

Sample: 309015 - AH-1 0-1'

Param	Flag	Result	Units	RL
Chloride		15500	mg/Kg	4

Sample: 309016 - AH-1 1-1.5'

Param	Flag	Result	Units	RL
Chloride		8360	mg/Kg	4

Sample: 309017 - AH-1 2-2.5'

Param	Flag	Result	Units	RL
Chloride		11700	mg/Kg	4

Sample: 309018 - AH-1 3-3.5'

Param	Flag	Result	Units	RL
Chloride		12700	mg/Kg	4

Sample: 309019 - AH-1 4-4.5'

Param	Flag	Result	Units	RL
Chloride		14900	mg/Kg	4

Sample: 309020 - AH-1 5-5.5'

Param	Flag	Result	Units	RL
Chloride		12200	mg/Kg	4

Sample: 309021 - AH-1 6-6.5'

Param	Flag	Result	Units	RL
Chloride		8230	mg/Kg	4

Sample: 309022 - AH-1 7-7.5'

Param	Flag	Result	Units	RL
Chloride		14900	mg/Kg	4

Sample: 309023 - AH-1 8-8.5'

Param	Flag	Result	Units	RL
Chloride		12300	mg/Kg	4

Sample: 309024 - AH-1 9-9.5'

Param	Flag	Result	Units	RL
Chloride		12600	mg/Kg	4

Sample: 309025 - AH-2 0-1'

Param	Flag	Result	Units	RL
Chloride		4340	mg/Kg	4

Sample: 309026 - AH-2 1-1.5'

Param	Flag	Result	Units	RL
Chloride		4220	mg/Kg	4

Sample: 309027 - AH-2 2-2.5'

Param	Flag	Result	Units	RL
Chloride		13700	mg/Kg	4

Sample: 309028 - AH-3 0-1'

Param	Flag	Result	Units	RL
Chloride		5700	mg/Kg	4

Sample: 309029 - AH-3 1-1.5'

Param	Flag	Result	Units	RL
Chloride		5320	mg/Kg	4

Sample: 309030 - AH-3 2-2.5'

Param	Flag	Result	Units	RL
Chloride		7420	mg/Kg	4

Sample: 309031 - AH-3 3-3.5'

Param	Flag	Result	Units	RL
Chloride		10200	mg/Kg	4

Sample: 309032 - AH-3 4-4.5'

Param	Flag	Result	Units	RL
Chloride		10800	mg/Kg	4

Sample: 309033 - AH-3 5-5.5'

Param	Flag	Result	Units	RL
Chloride		9130	mg/Kg	4

Sample: 309034 - AH-3 6-6.5'

Param	Flag	Result	Units	RL
Chloride		7690	mg/Kg	4

Sample: 309035 - AH-3 7-7.5'

Param	Flag	Result	Units	RL
Chloride		9250	mg/Kg	4

Sample: 309036 - AH-3 8-8.5'

Param	Flag	Result	Units	RL
Chloride		8720	mg/Kg	4

Sample: 309037 - AH-3 9-9.5'

Param	Flag	Result	Units	RL
Chloride		7840	mg/Kg	4

Sample: 309038 - AH-4 0-1'

Param	Flag	Result	Units	RL
Chloride		6620	mg/Kg	4

Sample: 309039 - AH-4 1-1.5'

Param	Flag	Result	Units	RL
Chloride		9370	mg/Kg	4

Sample: 309040 - AH-4 1.5-2'

Param	Flag	Result	Units	RL
Chloride		11400	mg/Kg	4

Sample: 309041 - AH-5 0-1'

Param	Flag	Result	Units	RL
Chloride		9710	mg/Kg	4

Sample: 309042 - AH-5 1-1.5'

Param	Flag	Result	Units	RL
Chloride		11900	mg/Kg	4

Sample: 309043 - AH-5 2-2.5'

Param	Flag	Result	Units	RL
Chloride		12900	mg/Kg	4

Sample: 309044 - AH-5 3-3.5'

Param	Flag	Result	Units	RL
Chloride		10000	mg/Kg	4

Sample: 309045 - AH-5 4-4.5'

Param	Flag	Result	Units	RL
Chloride		7430	mg/Kg	4

Sample: 309046 - AH-5 5-5.5'

Param	Flag	Result	Units	RL
Chloride		15400	mg/Kg	4

Sample: 309047 - AH-5 6-6.5'

Param	Flag	Result	Units	RL
Chloride		15000	mg/Kg	4

Sample: 309048 - AH-5 7-7.5'

Param	Flag	Result	Units	RL
Chloride		10600	mg/Kg	4



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Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

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

Report Date: September 24, 2012

Work Order: 12091214



Project Location: NM
Project Name: COG/Electra Fed. #5 TB
Project Number: 114-6401503

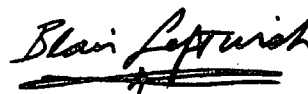
Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
309015	AH-1 0-1'	soil	2012-09-06	00:00	2012-09-11
309016	AH-1 1-1.5'	soil	2012-09-06	00:00	2012-09-11
309017	AH-1 2-2.5'	soil	2012-09-06	00:00	2012-09-11
309018	AH-1 3-3.5'	soil	2012-09-06	00:00	2012-09-11
309019	AH-1 4-4.5'	soil	2012-09-06	00:00	2012-09-11
309020	AH-1 5-5.5'	soil	2012-09-06	00:00	2012-09-11
309021	AH-1 6-6.5'	soil	2012-09-06	00:00	2012-09-11
309022	AH-1 7-7.5'	soil	2012-09-06	00:00	2012-09-11
309023	AH-1 8-8.5'	soil	2012-09-06	00:00	2012-09-11
309024	AH-1 9-9.5'	soil	2012-09-06	00:00	2012-09-11
309025	AH-2 0-1'	soil	2012-09-06	00:00	2012-09-11
309026	AH-2 1-1.5'	soil	2012-09-06	00:00	2012-09-11
309027	AH-2 2-2.5'	soil	2012-09-06	00:00	2012-09-11
309028	AH-3 0-1'	soil	2012-09-06	00:00	2012-09-11
309029	AH-3 1-1.5'	soil	2012-09-06	00:00	2012-09-11
309030	AH-3 2-2.5'	soil	2012-09-06	00:00	2012-09-11
309031	AH-3 3-3.5'	soil	2012-09-06	00:00	2012-09-11
309032	AH-3 4-4.5'	soil	2012-09-06	00:00	2012-09-11

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
309033	AH-3 5-5.5'	soil	2012-09-06	00:00	2012-09-11
309034	AH-3 6-6.5'	soil	2012-09-06	00:00	2012-09-11
309035	AH-3 7-7.5'	soil	2012-09-06	00:00	2012-09-11
309036	AH-3 8-8.5'	soil	2012-09-06	00:00	2012-09-11
309037	AH-3 9-9.5'	soil	2012-09-06	00:00	2012-09-11
309038	AH-4 0-1'	soil	2012-09-06	00:00	2012-09-11
309039	AH-4 1-1.5'	soil	2012-09-06	00:00	2012-09-11
309040	AH-4 1.5-2'	soil	2012-09-06	00:00	2012-09-11
309041	AH-5 0-1'	soil	2012-09-06	00:00	2012-09-11
309042	AH-5 1-1.5'	soil	2012-09-06	00:00	2012-09-11
309043	AH-5 2-2.5'	soil	2012-09-06	00:00	2012-09-11
309044	AH-5 3-3.5'	soil	2012-09-06	00:00	2012-09-11
309045	AH-5 4-4.5'	soil	2012-09-06	00:00	2012-09-11
309046	AH-5 5-5.5'	soil	2012-09-06	00:00	2012-09-11
309047	AH-5 6-6.5'	soil	2012-09-06	00:00	2012-09-11
309048	AH-5 7-7.5'	soil	2012-09-06	00:00	2012-09-11

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 37 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 309045 (AH-5 4-4.5')	20
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Case Narrative

Samples for project COG/Electra Fed. #5 TB were received by TraceAnalysis, Inc. on 2012-09-11 and assigned to work order 12091214. Samples for work order 12091214 were received intact at a temperature of 2.1 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	80534	2012-09-20 at 16:45	95043	2012-09-20 at 16:45
Chloride (Titration)	SM 4500-Cl B	80454	2012-09-18 at 13:01	95022	2012-09-19 at 15:46
Chloride (Titration)	SM 4500-Cl B	80454	2012-09-18 at 13:01	95023	2012-09-19 at 15:46
Chloride (Titration)	SM 4500-Cl B	80454	2012-09-18 at 13:01	95024	2012-09-19 at 15:47
Chloride (Titration)	SM 4500-Cl B	80454	2012-09-18 at 13:01	95025	2012-09-19 at 15:48
TPH DRO - NEW	S 8015 D	80415	2012-09-17 at 08:00	94898	2012-09-18 at 08:30
TPH DRO - NEW	S 8015 D	80541	2012-09-20 at 08:00	95049	2012-09-21 at 15:09
TPH GRO	S 8015 D	80534	2012-09-20 at 16:45	95048	2012-09-20 at 16:45

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 12091214 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

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Analytical Report

Sample: 309015 - AH-1 0-1'

Laboratory: Midland
Analysis: BTEX
QC Batch: 95043
Prep Batch: 80534

Analytical Method: S 8021B
Date Analyzed: 2012-09-20
Sample Preparation:

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	Qs,U	1	<1.00	mg/Kg	50	0.0200
Toluene	Qs	1	<1.00	mg/Kg	50	0.0200
Ethylbenzene	Qs,U	1	<1.00	mg/Kg	50	0.0200
Xylene	Qs	1	1.55	mg/Kg	50	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0960	mg/Kg	1	0.100	96	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0905	mg/Kg	1	0.100	90	70 - 130

Sample: 309015 - AH-1 0-1'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 95022
Prep Batch: 80454

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-09-19
Sample Preparation: 2012-09-18

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			15500	mg/Kg	10	4.00

Sample: 309015 - AH-1 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 94898
Prep Batch: 80415

Analytical Method: S 8015 D
Date Analyzed: 2012-09-18
Sample Preparation: 2012-09-17

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

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

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			112	mg/Kg	1	100	112	70 - 130

Sample: 309015 - AH-1 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 95048
Prep Batch: 80534

Analytical Method: S 8015 D
Date Analyzed: 2012-09-20
Sample Preparation:

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	376	mg/Kg	50	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0956	mg/Kg	50	0.100	96	70 - 130
4-Bromofluorobenzene (4-BFB)			0.0946	mg/Kg	50	0.100	95	70 - 130

Sample: 309016 - AH-1 1-1.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 95022
Prep Batch: 80454

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-09-19
Sample Preparation: 2012-09-18

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			8360	mg/Kg	10	4.00

Sample: 309017 - AH-1 2-2.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 95022
Prep Batch: 80454

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-09-19
Sample Preparation: 2012-09-18

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

continued ...

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sample 309017 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			11700	mg/Kg	10	4.00

Sample: 309018 - AH-1 3-3.5'

Laboratory:	Midland			
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method: N/A
QC Batch:	95022	Date Analyzed:	2012-09-19	Analyzed By: AR
Prep Batch:	80454	Sample Preparation:	2012-09-18	Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			12700	mg/Kg	10	4.00

Sample: 309019 - AH-1 4-4.5'

Laboratory:	Midland			
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method: N/A
QC Batch:	95022	Date Analyzed:	2012-09-19	Analyzed By: AR
Prep Batch:	80454	Sample Preparation:	2012-09-18	Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			14900	mg/Kg	10	4.00

Sample: 309020 - AH-1 5-5.5'

Laboratory:	Midland			
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method: N/A
QC Batch:	95022	Date Analyzed:	2012-09-19	Analyzed By: AR
Prep Batch:	80454	Sample Preparation:	2012-09-18	Prepared By: AR

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

Sample: 309021 - AH-1 6-6.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 95022 Date Analyzed: 2012-09-19 Analyzed By: AR
Prep Batch: 80454 Sample Preparation: 2012-09-18 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			8230	mg/Kg	10	4.00

Sample: 309022 - AH-1 7-7.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 95022 Date Analyzed: 2012-09-19 Analyzed By: AR
Prep Batch: 80454 Sample Preparation: 2012-09-18 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			14900	mg/Kg	10	4.00

Sample: 309023 - AH-1 8-8.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 95022 Date Analyzed: 2012-09-19 Analyzed By: AR
Prep Batch: 80454 Sample Preparation: 2012-09-18 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			12300	mg/Kg	10	4.00

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Sample: 309024 - AH-1 9-9.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 95022
Prep Batch: 80454

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-09-19
Sample Preparation: 2012-09-18

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

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

Sample: 309025 - AH-2 0-1'

Laboratory: Midland
Analysis: BTEX
QC Batch: 95043
Prep Batch: 80534

Analytical Method: S 8021B
Date Analyzed: 2012-09-20
Sample Preparation:

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

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.04	mg/Kg	1	2.00	102	70 - 130
4-Bromofluorobenzene (4-BFB)			2.10	mg/Kg	1	2.00	105	70 - 130

Sample: 309025 - AH-2 0-1'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 95023
Prep Batch: 80454

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-09-19
Sample Preparation: 2012-09-18

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

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

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Sample: 309025 - AH-2 0-1'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2012-09-18	Analyzed By:	CW
QC Batch:	94898	Sample Preparation:	2012-09-17	Prepared By:	CW
Prep Batch:	80415				

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			108	mg/Kg	1	100	108	70 - 130

Sample: 309025 - AH-2 0-1'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2012-09-20	Analyzed By:	YG
QC Batch:	95048	Sample Preparation:		Prepared By:	YG
Prep Batch:	80534				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	4.08	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0974	mg/Kg	1	0.100	97	70 - 130
4-Bromofluorobenzene (4-BFB)			0.100	mg/Kg	1	0.100	100	70 - 130

Sample: 309026 - AH-2 1-1.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-09-19	Analyzed By:	AR
QC Batch:	95023	Sample Preparation:	2012-09-18	Prepared By:	AR
Prep Batch:	80454				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			4220	mg/Kg	10	4.00

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Sample: 309027 - AH-2 2-2.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 95023 Date Analyzed: 2012-09-19 Analyzed By: AR
Prep Batch: 80454 Sample Preparation: 2012-09-18 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			13700	mg/Kg	10	4.00

Sample: 309028 - AH-3 0-1'

Laboratory: Midland
Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 95043 Date Analyzed: 2012-09-20 Analyzed By: YG
Prep Batch: 80534 Sample Preparation: Prepared By: YG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.07	mg/Kg	1	2.00	104	70 - 130
4-Bromofluorobenzene (4-BFB)			2.13	mg/Kg	1	2.00	106	70 - 130

Sample: 309028 - AH-3 0-1'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 95023 Date Analyzed: 2012-09-19 Analyzed By: AR
Prep Batch: 80454 Sample Preparation: 2012-09-18 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			5700	mg/Kg	10	4.00

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Sample: 309028 - AH-3 0-1'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2012-09-18	Analyzed By:	CW
QC Batch:	94898	Sample Preparation:	2012-09-17	Prepared By:	CW
Prep Batch:	80415				

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			108	mg/Kg	1	100	108	70 - 130

Sample: 309028 - AH-3 0-1'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2012-09-20	Analyzed By:	YG
QC Batch:	95048	Sample Preparation:		Prepared By:	YG
Prep Batch:	80534				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	4.10	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0975	mg/Kg	1	0.100	98	70 - 130
4-Bromofluorobenzene (4-BFB)			0.101	mg/Kg	1	0.100	101	70 - 130

Sample: 309029 - AH-3 1-1.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-09-19	Analyzed By:	AR
QC Batch:	95023	Sample Preparation:	2012-09-18	Prepared By:	AR
Prep Batch:	80454				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			5320	mg/Kg	10	4.00

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Sample: 309030 - AH-3 2-2.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-09-19	Analyzed By:	AR
QC Batch:	95023	Sample Preparation:	2012-09-18	Prepared By:	AR
Prep Batch:	80454				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			7420	mg/Kg	10	4.00

Sample: 309031 - AH-3 3-3.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-09-19	Analyzed By:	AR
QC Batch:	95023	Sample Preparation:	2012-09-18	Prepared By:	AR
Prep Batch:	80454				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			10200	mg/Kg	10	4.00

Sample: 309032 - AH-3 4-4.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-09-19	Analyzed By:	AR
QC Batch:	95023	Sample Preparation:	2012-09-18	Prepared By:	AR
Prep Batch:	80454				

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

Sample: 309033 - AH-3 5-5.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-09-19	Analyzed By:	AR
QC Batch:	95023	Sample Preparation:	2012-09-18	Prepared By:	AR
Prep Batch:	80454				

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			9130	mg/Kg	10	4.00

Sample: 309034 - AH-3 6-6.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-09-19	Analyzed By:	AR
QC Batch:	95023	Sample Preparation:	2012-09-18	Prepared By:	AR
Prep Batch:	80454				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			7690	mg/Kg	10	4.00

Sample: 309035 - AH-3 7-7.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-09-19	Analyzed By:	AR
QC Batch:	95024	Sample Preparation:	2012-09-18	Prepared By:	AR
Prep Batch:	80454				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			9250	mg/Kg	10	4.00

Sample: 309036 - AH-3 8-8.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-09-19	Analyzed By:	AR
QC Batch:	95024	Sample Preparation:	2012-09-18	Prepared By:	AR
Prep Batch:	80454				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			8720	mg/Kg	10	4.00

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Sample: 309037 - AH-3 9-9.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-09-19	Analyzed By:	AR
QC Batch:	95024	Sample Preparation:	2012-09-18	Prepared By:	AR
Prep Batch:	80454				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			7840	mg/Kg	10	4.00

Sample: 309038 - AH-4 0-1'

Laboratory:	Midland	Analytical Method:	S 8021B	Prep Method:	S 5035
Analysis:	BTEX	Date Analyzed:	2012-09-20	Analyzed By:	YG
QC Batch:	95043	Sample Preparation:		Prepared By:	YG
Prep Batch:	80534				

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.04	mg/Kg	1	2.00	102	70 - 130
4-Bromofluorobenzene (4-BFB)			2.10	mg/Kg	1	2.00	105	70 - 130

Sample: 309038 - AH-4 0-1'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-09-19	Analyzed By:	AR
QC Batch:	95024	Sample Preparation:	2012-09-18	Prepared By:	AR
Prep Batch:	80454				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			6620	mg/Kg	10	4.00

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Sample: 309038 - AH-4 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 95049 Date Analyzed: 2012-09-21 Analyzed By: CW
Prep Batch: 80541 Sample Preparation: 2012-09-20 Prepared By: CW

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	252	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			108	mg/Kg	1	100	108	70 - 130

Sample: 309038 - AH-4 0-1'

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 95048 Date Analyzed: 2012-09-20 Analyzed By: YG
Prep Batch: 80534 Sample Preparation: Prepared By: YG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	4.01	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.0979	mg/Kg	1	0.100	98	70 - 130
4-Bromofluorobenzene (4-BFB)			0.100	mg/Kg	1	0.100	100	70 - 130

Sample: 309039 - AH-4 1-1.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 95024 Date Analyzed: 2012-09-19 Analyzed By: AR
Prep Batch: 80454 Sample Preparation: 2012-09-18 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			9370	mg/Kg	10	4.00

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Sample: 309040 - AH-4 1.5-2'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 95024 Date Analyzed: 2012-09-19 Analyzed By: AR
Prep Batch: 80454 Sample Preparation: 2012-09-18 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			11400	mg/Kg	10	4.00

Sample: 309041 - AH-5 0-1'

Laboratory: Midland
Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 95043 Date Analyzed: 2012-09-20 Analyzed By: YG
Prep Batch: 80534 Sample Preparation: Prepared By: YG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.04	mg/Kg	1	2.00	102	70 - 130
4-Bromofluorobenzene (4-BFB)			2.11	mg/Kg	1	2.00	106	70 - 130

Sample: 309041 - AH-5 0-1'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 95024 Date Analyzed: 2012-09-19 Analyzed By: AR
Prep Batch: 80454 Sample Preparation: 2012-09-18 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			9710	mg/Kg	10	4.00

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Sample: 309041 - AH-5 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 94898
Prep Batch: 80415

Analytical Method: S 8015 D
Date Analyzed: 2012-09-18
Sample Preparation: 2012-09-17

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

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

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

Sample: 309041 - AH-5 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 95048
Prep Batch: 80534

Analytical Method: S 8015 D
Date Analyzed: 2012-09-20
Sample Preparation:

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	4.29	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.100	mg/Kg	1	0.100	100	70 - 130
4-Bromofluorobenzene (4-BFB)			0.101	mg/Kg	1	0.100	101	70 - 130

Sample: 309042 - AH-5 1-1.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 95024
Prep Batch: 80454

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-09-19
Sample Preparation: 2012-09-18

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			11900	mg/Kg	10	4.00

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Sample: 309043 - AH-5 2-2.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-09-19	Analyzed By:	AR
QC Batch:	95024	Sample Preparation:	2012-09-18	Prepared By:	AR
Prep Batch:	80454				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			12900	mg/Kg	10	4.00

Sample: 309044 - AH-5 3-3.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-09-19	Analyzed By:	AR
QC Batch:	95024	Sample Preparation:	2012-09-18	Prepared By:	AR
Prep Batch:	80454				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			10000	mg/Kg	10	4.00

Sample: 309045 - AH-5 4-4.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-09-19	Analyzed By:	AR
QC Batch:	95025	Sample Preparation:	2012-09-18	Prepared By:	AR
Prep Batch:	80454				

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			7430	mg/Kg	10	4.00

Sample: 309046 - AH-5 5-5.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2012-09-19	Analyzed By:	AR
QC Batch:	95025	Sample Preparation:	2012-09-18	Prepared By:	AR
Prep Batch:	80454				

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			15400	mg/Kg	10	4.00

Sample: 309047 - AH-5 6-6.5'

Laboratory:	Midland			
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method: N/A
QC Batch:	95025	Date Analyzed:	2012-09-19	Analyzed By: AR
Prep Batch:	80454	Sample Preparation:	2012-09-18	Prepared By: AR

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

Sample: 309048 - AH-5 7-7.5'

Laboratory:	Midland			
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method: N/A
QC Batch:	95025	Date Analyzed:	2012-09-19	Analyzed By: AR
Prep Batch:	80454	Sample Preparation:	2012-09-18	Prepared By: AR

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

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Method Blanks

Method Blank (1) QC Batch: 94898

QC Batch: 94898
Prep Batch: 80415

Date Analyzed: 2012-09-18
QC Preparation: 2012-09-17

Analyzed By: CW
Prepared By: CW

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	<9.09	mg/Kg	50

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

Method Blank (1) QC Batch: 95022

QC Batch: 95022
Prep Batch: 80454

Date Analyzed: 2012-09-19
QC Preparation: 2012-09-18

Analyzed By: AR
Prepared By: AR

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

Method Blank (1) QC Batch: 95023

QC Batch: 95023
Prep Batch: 80454

Date Analyzed: 2012-09-19
QC Preparation: 2012-09-18

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: 95024

QC Batch: 95024 Date Analyzed: 2012-09-19 Analyzed By: AR
Prep Batch: 80454 QC Preparation: 2012-09-18 Prepared By: AR

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

Method Blank (1) QC Batch: 95025

QC Batch: 95025 Date Analyzed: 2012-09-19 Analyzed By: AR
Prep Batch: 80454 QC Preparation: 2012-09-18 Prepared By: AR

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

Method Blank (1) QC Batch: 95043

QC Batch: 95043 Date Analyzed: 2012-09-20 Analyzed By: YG
Prep Batch: 80534 QC Preparation: 2012-09-20 Prepared By: YG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.103	mg/Kg	1	0.100	103	70 - 130
4-Bromofluorobenzene (4-BFB)			0.108	mg/Kg	1	0.100	108	70 - 130

Method Blank (1) QC Batch: 95048

QC Batch: 95048 Date Analyzed: 2012-09-20 Analyzed By: YG
Prep Batch: 80534 QC Preparation: 2012-09-20 Prepared By: YG

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Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1	<1.22	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			0.101	mg/Kg	1	0.100	101	70 - 130
4-Bromofluorobenzene (4-BFB)			0.103	mg/Kg	1	0.100	103	70 - 130

Method Blank (1) QC Batch: 95049

QC Batch: 95049
Prep Batch: 80541

Date Analyzed: 2012-09-21
QC Preparation: 2012-09-20

Analyzed By: CW
Prepared By: CW

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	<9.09	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			108	mg/Kg	1	100	108	70 - 130

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Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 94898
Prep Batch: 80415

Date Analyzed: 2012-09-18
QC Preparation: 2012-09-17

Analyzed By: CW
Prepared By: CW

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	293	mg/Kg	1	250	<9.09	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.	Rec. Limit	RPD	RPD Limit
DRO		1	289	mg/Kg	1	250	<9.09	116	70 - 130	1	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	110	103	mg/Kg	1	100	110	103	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 95022
Prep Batch: 80454

Date Analyzed: 2012-09-19
QC Preparation: 2012-09-18

Analyzed By: AR
Prepared By: AR

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

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2550	mg/Kg	1	2500	<3.85	102	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: 95023
Prep Batch: 80454

Date Analyzed: 2012-09-19
QC Preparation: 2012-09-18

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.	Rec. Limit	RPD	RPD Limit
Chloride			2570	mg/Kg	1	2500	<3.85	103	85 - 115	3	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 95024
Prep Batch: 80454

Date Analyzed: 2012-09-19
QC Preparation: 2012-09-18

Analyzed By: AR
Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2510	mg/Kg	1	2500	<3.85	100	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2580	mg/Kg	1	2500	<3.85	103	85 - 115	3	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 95025
Prep Batch: 80454

Date Analyzed: 2012-09-19
QC Preparation: 2012-09-18

Analyzed By: AR
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.

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Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2730	mg/Kg	1	2500	<3.85	109	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: 95043
Prep Batch: 80534

Date Analyzed: 2012-09-20
QC Preparation: 2012-09-20

Analyzed By: YG
Prepared By: YG

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.90	mg/Kg	1	2.00	<0.00470	95	70 - 130
Toluene		1	1.91	mg/Kg	1	2.00	<0.00980	96	70 - 130
Ethylbenzene		1	1.93	mg/Kg	1	2.00	<0.00500	96	70 - 130
Xylene		1	5.83	mg/Kg	1	6.00	<0.0170	97	70 - 130

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

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	1.88	mg/Kg	1	2.00	<0.00470	94	70 - 130	1	20
Toluene		1	1.89	mg/Kg	1	2.00	<0.00980	94	70 - 130	1	20
Ethylbenzene		1	1.88	mg/Kg	1	2.00	<0.00500	94	70 - 130	3	20
Xylene		1	5.74	mg/Kg	1	6.00	<0.0170	96	70 - 130	2	20

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

Surrogate	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.11	2.10	mg/Kg	1	2.00	106	105	70 - 130
4-Bromofluorobenzene (4-BFB)	2.29	2.30	mg/Kg	1	2.00	114	115	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 95048
Prep Batch: 80534

Date Analyzed: 2012-09-20
QC Preparation: 2012-09-20

Analyzed By: YG
Prepared By: YG

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	21.5	mg/Kg	1	20.0	<1.22	108	70 - 130

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

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Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	21.4	mg/Kg	1	20.0	<1.22	107	70 - 130	0	20

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

Surrogate	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.101	0.100	mg/Kg	1	0.100	101	100	70 - 130
4-Bromofluorobenzene (4-BFB)	0.109	0.110	mg/Kg	1	0.100	109	110	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 95049
Prep Batch: 80541

Date Analyzed: 2012-09-21
QC Preparation: 2012-09-20

Analyzed By: CW
Prepared By: CW

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	262	mg/Kg	1	250	<9.09	105	70 - 130

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

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	274	mg/Kg	1	250	<9.09	110	70 - 130	4	20

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

Surrogate	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
n-Tricosane	110	112	mg/Kg	1	100	110	112	70 - 130

Matrix Spike (MS-1) Spiked Sample: 309041

QC Batch: 94898
Prep Batch: 80415

Date Analyzed: 2012-09-18
QC Preparation: 2012-09-17

Analyzed By: CW
Prepared By: CW

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	263	mg/Kg	1	250	<9.09	105	70 - 130

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

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matrix spikes continued ...

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	268	mg/Kg	1	250	<9.09	107	70 - 130	2	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	114	120	mg/Kg	1	100	114	120	70 - 130

Matrix Spike (MS-1) Spiked Sample: 309024

QC Batch: 95022
Prep Batch: 80454

Date Analyzed: 2012-09-19
QC Preparation: 2012-09-18

Analyzed By: AR
Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			15600	mg/Kg	10	2500	12600	120	78.9 - 121

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			15300	mg/Kg	10	2500	12600	108	78.9 - 121	2	20

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

Matrix Spike (MS-1) Spiked Sample: 309034

QC Batch: 95023
Prep Batch: 80454

Date Analyzed: 2012-09-19
QC Preparation: 2012-09-18

Analyzed By: AR
Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			10400	mg/Kg	10	2500	7690	108	78.9 - 121

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			10100	mg/Kg	10	2500	7690	96	78.9 - 121	3	20

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

Matrix Spike (MS-1) Spiked Sample: 309044

QC Batch: 95024
Prep Batch: 80454

Date Analyzed: 2012-09-19
QC Preparation: 2012-09-18

Analyzed By: AR
Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			12500	mg/Kg	10	2500	10000	100	78.9 - 121

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			12700	mg/Kg	10	2500	10000	108	78.9 - 121	2	20

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

Matrix Spike (MS-1) Spiked Sample: 309055

QC Batch: 95025
Prep Batch: 80454

Date Analyzed: 2012-09-19
QC Preparation: 2012-09-18

Analyzed By: AR
Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2790	mg/Kg	5	2500	176	104	78.9 - 121

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2870	mg/Kg	5	2500	176	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: 309017

QC Batch: 95043
Prep Batch: 80534

Date Analyzed: 2012-09-20
QC Preparation: 2012-09-20

Analyzed By: YG
Prepared By: YG

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Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	Q ₉	Q ₉	1	<0.00470	mg/Kg	1	2.00	<0.00470	0 70 - 130
Toluene	Q ₉	Q ₉	1	<0.00980	mg/Kg	1	2.00	<0.00980	0 70 - 130
Ethylbenzene	Q ₉	Q ₉	1	<0.00500	mg/Kg	1	2.00	<0.00500	0 70 - 130
Xylene	Q ₉	Q ₉	1	<0.0170	mg/Kg	1	6.00	<0.0170	0 70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	<0.00470	mg/Kg	1	2.00	<0.00470		70 - 130		20
Toluene		1	<0.00980	mg/Kg	1	2.00	<0.00980		70 - 130		20
Ethylbenzene		1	<0.00500	mg/Kg	1	2.00	<0.00500		70 - 130		20
Xylene		1	<0.0170	mg/Kg	1	6.00	<0.0170		70 - 130		20

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

Surrogate			MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	Q ₉	Q ₉	0.00	0.00	mg/Kg	1	2	0		70 - 130
4-Bromofluorobenzene (4-BFB)	Q ₉	Q ₉	0.00	0.00	mg/Kg	1	2	0		70 - 130

Matrix Spike (MS-1) Spiked Sample: 309038

QC Batch: 95049
Prep Batch: 80541

Date Analyzed: 2012-09-21
QC Preparation: 2012-09-20

Analyzed By: CW
Prepared By: CW

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	267	mg/Kg	1	250	<9.09	107	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	260	mg/Kg	1	250	<9.09	104	70 - 130	3	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	111	109	mg/Kg	1	100	111	109	70 - 130

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Calibration Standards

Standard (CCV-1)

QC Batch: 94898

Date Analyzed: 2012-09-18

Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	278	111	80 - 120	2012-09-18

Standard (CCV-2)

QC Batch: 94898

Date Analyzed: 2012-09-18

Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	288	115	80 - 120	2012-09-18

Standard (CCV-3)

QC Batch: 94898

Date Analyzed: 2012-09-18

Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	256	102	80 - 120	2012-09-18

Standard (CCV-1)

QC Batch: 95022

Date Analyzed: 2012-09-19

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2012-09-19

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Standard (CCV-2)

QC Batch: 95022

Date Analyzed: 2012-09-19

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.3	99	85 - 115	2012-09-19

Standard (CCV-1)

QC Batch: 95023

Date Analyzed: 2012-09-19

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.3	99	85 - 115	2012-09-19

Standard (CCV-2)

QC Batch: 95023

Date Analyzed: 2012-09-19

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	101	101	85 - 115	2012-09-19

Standard (CCV-1)

QC Batch: 95024

Date Analyzed: 2012-09-19

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	2012-09-19

Standard (CCV-2)

QC Batch: 95024

Date Analyzed: 2012-09-19

Analyzed By: AR

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Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2012-09-19

Standard (CCV-1)

QC Batch: 95025

Date Analyzed: 2012-09-19

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.7	100	85 - 115	2012-09-19

Standard (CCV-2)

QC Batch: 95025

Date Analyzed: 2012-09-19

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2012-09-19

Standard (CCV-1)

QC Batch: 95043

Date Analyzed: 2012-09-20

Analyzed By: YG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0999	100	80 - 120	2012-09-20
Toluene		1	mg/kg	0.100	0.0985	98	80 - 120	2012-09-20
Ethylbenzene		1	mg/kg	0.100	0.0929	93	80 - 120	2012-09-20
Xylene		1	mg/kg	0.300	0.281	94	80 - 120	2012-09-20

Standard (CCV-2)

QC Batch: 95043

Date Analyzed: 2012-09-20

Analyzed By: YG

Report Date: September 24, 2012
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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	0.0977	98	80 - 120	2012-09-20
Toluene		1	mg/kg	0.100	0.0952	95	80 - 120	2012-09-20
Ethylbenzene		1	mg/kg	0.100	0.0892	89	80 - 120	2012-09-20
Xylene		1	mg/kg	0.300	0.271	90	80 - 120	2012-09-20

Standard (CCV-1)

QC Batch: 95048

Date Analyzed: 2012-09-20

Analyzed By: YG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.990	99	80 - 120	2012-09-20

Standard (CCV-2)

QC Batch: 95048

Date Analyzed: 2012-09-20

Analyzed By: YG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.933	93	80 - 120	2012-09-20

Standard (CCV-1)

QC Batch: 95049

Date Analyzed: 2012-09-21

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	261	104	80 - 120	2012-09-21

Standard (CCV-2)

QC Batch: 95049

Date Analyzed: 2012-09-21

Analyzed By: CW

Report Date: September 24, 2012
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Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	296	118	80 - 120	2012-09-21

Appendix

Report Definitions

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

Laboratory Certifications

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

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less than ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

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

12091214

Analysis Request of Chain of Custody Record

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**TETRA TECH**1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME:

COC

SITE MANAGER:

The Tavor

PROJECT NO.:

114-6401503

PROJECT NAME:

COC - Electron Feed #5 TB

LAB I.D.
NUMBER

DATE

TIME

MATRIX

COMP.

GRAB

SAMPLE IDENTIFICATION

NUMBER OF CONTAINERS

FILTERED (Y/N)

PRESERVATIVE
METHOD

HCL

HNO3

ICE

NONE

BTEX 802/812
PAH 8015-8100 TX1005 (Ext. to C35)

RCRA Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Volatiles

TCLP Semi Volatiles

RCI

GC-MS Vol. 8240/8260/624

GC-MS Semi. Vol. 8270/625

PCB's 8080/608

Pest. 808/608

Chloride

Gamma Spec.

Alpha Beta (Air)

PLM (Asbestos)

Major Anions/Cations, pH, TDS

30905

9/6

5

X

AH-1 0-1

1

X

BTEX 802/812

PAH 8015-8100

RCRA Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Volatiles

TCLP Semi Volatiles

RCI

GC-MS Vol. 8240/8260/624

GC-MS Semi. Vol. 8270/625

PCB's 8080/608

Pest. 808/608

Chloride

Gamma Spec.

Alpha Beta (Air)

PLM (Asbestos)

Major Anions/Cations, pH, TDS

016

AH-1 1-1.5

1

017

AH-1 2-2.5

1

018

AH-1 3-3.5

1

019

AH-1 4-4.5

1

020

AH-1 5-5.5

1

021

AH-1 6-6.5

1

022

AH-1 7-7.5

1

023

AH-1 8-8.5

1

024

AH-1 9-9.5

1

RELINQUISHED BY: (Signature)

RELINQUISHED BY: (Signature)

RELINQUISHED BY: (Signature)

RELINQUISHED BY: (Signature)

RELINQUISHED BY: (Signature)

Date: 9-11-12

Time: 1645

Date:

Time:

Date:

Time:

RECEIVED BY: (Signature)

RECEIVED BY: (Signature)

RECEIVED BY: (Signature)

RECEIVED BY: (Signature)

RECEIVED BY: (Signature)

RECEIVED BY: (Signature)

Date: 9/11/12

Time: 1645

Date:

Time:

Date:

Time:

SAMPLED BY: (Print & Initial)

SAMPLED BY: (Print & Initial)

SAMPLE SHIPPED BY: (Circle)

FEDEX BUS

HAND DELIVERED UPS

TETRA TECH CONTACT PERSON:

Date:

Time:

AIRBILL #:

OTHER:

Results by:

RUSH Charges

Authorized:

Yes

No

RECEIVING LABORATORY:

ADDRESS:

CITY:

CONTACT:

STATE:

ZIP:

PHONE:

RECEIVED BY: (Signature)

DATE:

TIME:

SAMPLE CONDITION WHEN RECEIVED:

REMARKS:

The Tavor

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

Remediation Sample #1 TPH Deced 5, on mailing

Remediation Sample #2 benzene Deced 10 mailing w/ Lt. 1 & 2 v. Deced 10 mailing

12091214

Analysis Request of Chain of Custody Record

PAGE: 2 OF: 4

**TETRA TECH**

1910 N. Big Spring St.

Midland, Texas 79705

(432) 682-4559 • Fax (432) 682-3946

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME:

COG

SITE MANAGER:

Ih Tawer

PROJECT NO.:

114-6401803

PROJECT NAME:

COG - Electric Fuel #5 TB

LAB I.D.
NUMBER

DATE

TIME

MATRIX

COMP.

GRAB

SAMPLE IDENTIFICATION

NUMBER OF CONTAINERS

FILTERED (Y/N)

HCL

HNO3

ICE

NONE

PRESERVATIVE
METHODBTEX 802/B
TPH 8015/802/D, TX1005 (Ext. to C35)

PAH 8270

PCRA Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Volatiles

TCLP Semi Volatiles

FCI

GC/MS Vol. 8240/8260/824

GC/MS Semi. Vol. 8270/825

PCB's 8080/608

Pest. 808/608

Chlorides

Gamma Spec.

Alpha Beta (Air)

PLM (Asbestos)

Major Anions/Cations, pH, TDS

RELINQUISHED BY: (Signature)

Date: 9-11-12

Time: 1645

RECEIVED BY: (Signature)

Date: 9-11-12

Time: 1645

SAMPLED BY: (Print & Initial)

Marius Kujewski / Ryan Raithe

Date: 9-11-12

Time: 1645

RELINQUISHED BY: (Signature)

Date: _____

Time: _____

RECEIVED BY: (Signature)

Date: _____

Time: _____

SAMPLE SHIPPED BY: (Circle)

FEDEX BUS

HAND DELIVERED UPS

AIRBILL #:

OTHER:

RELINQUISHED BY: (Signature)

Date: _____

Time: _____

RECEIVED BY: (Signature)

Date: _____

Time: _____

TETRA TECH CONTACT PERSON:

Results by:

RECEIVING LABORATORY:

Tetra

RECEIVED BY: (Signature)

ADDRESS:

CITY:

STATE:

ZIP:

CONTACT:

PHONE:

DATE:

TIME:

SAMPLE CONDITION WHEN RECEIVED:

REMARKS:

Ih Tawer

RUSH Charges
Authorized:

Yes

No

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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: 4

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG

SITE MANAGER: The Tower

PROJECT NO.:
114-6401503

PROJECT NAME:
COG - Election Fed #5 TB

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HNO3	ICE	NONE	BTX 80275	TPH 8015 80270	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	Chlorides	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
035	9/1		S	X		AH-3 7-9.5	1				X														X				
036						AH-3 8-9.5	1				X														X				
037						AH-3 9-9.5	1				X														X				
038						AH-4 0-1	1				X			XX											X				
039						AH-4 1-1.5	1				X														X				
040						AH-4 1.5-2	1				X														X				
041						AH-5 0-1	1				X			XX											X				
042						AH-5 1-1.5	1				X														X				
043						AH-5 2-2.5	1				X														X				
044						AH-5 3-3.5	1				X														X				

RELINQUISHED BY: (Signature)
[Signature]

Date: 9-1-15
Time: 16:45

RECEIVED BY: (Signature)
[Signature]

Date: 9-1-15
Time: 16:45

SAMPLED BY: (Print & Initial)
Marcus Kujawa / Ryan Reich

Date: _____
Time: _____

RELINQUISHED BY: (Signature)

Date: _____

RECEIVED BY: (Signature)

Date: _____

SAMPLE SHIPPED BY: (Circle)

AIRBILL #: _____

RELINQUISHED BY: (Signature)

Date: _____

RECEIVED BY: (Signature)

Date: _____

HAND DELIVERED

UPS

OTHER: _____

RECEIVING LABORATORY: Tetra

RECEIVED BY: (Signature)

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

CONTACT: _____ PHONE: _____

DATE: _____ TIME: _____

TETRA TECH CONTACT PERSON:

The Tower

Results by:

RUSH Charges Authorized:

Yes No

SAMPLE CONDITION WHEN RECEIVED:

REMARKS:

12091214

Analysis Request of Chain of Custody Record

PAGE: 4 OF: 4

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

 ANALYSIS REQUEST
 (Circle or Specify Method No.)

CLIENT NAME:

COG

SITE MANAGER:

The Tower

PROJECT NO.:

114-1401503

PROJECT NAME:

COG - Electric Field #5 TB

LAB I.D.
NUMBER

DATE

TIME

MATRIX

COMP

GRAB

SAMPLE IDENTIFICATION

NUMBER OF CONTAINERS

FILTERED (Y/N)

HCL

HNO3

ICE

NONE

PRESERVATIVE
METHOD

BTEX 8021B

TPH 8015 MOD. TX1005 (Ext. to C35)

PAH 8270

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. 809/608

Chloride

Gamma Spec.

Alpha Beta (Air)

PLM (Asbestos)

Major Anions/Cations, pH, TDS

RELINQUISHED BY: (Signature)

RELINQUISHED BY: (Signature)

RELINQUISHED BY: (Signature)

RELINQUISHED BY: (Signature)

RECEIVING LABORATORY:

ADDRESS:

CITY:

STATE:

ZIP:

CONTACT:

PHONE:

RECEIVED BY: (Signature)

DATE:

TIME:

SAMPLE CONDITION WHEN RECEIVED:

REMARKS:

21

Date:

Time:

Date:

Date:

Date:

Time:

Time:

SAMPLED BY: (Print & Initial)

SAMPLE SHIPPED BY: (Circle)

FEDEX BUS

HAND DELIVERED UPS

TETRA TECH CONTACT PERSON:

The Tower

Date:

Time:

AIRBILL #:

OTHER:

Results by:

RUSH Charges

Authorized:

Yes No

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