SITE INFORMATION

Report Type: Closure Report

General Site Information:

Site:	**Foster Eddy #14 Well Site**					
Company:	**COG Operating LLC**					
Section, Township and Range	**Unit F**	**Sec 17**	**T17S**	**R31E**		
Lease Number:	**API-30-015-37136**					
County:	**Eddy County**					
GPS:	**32.83719° N**			**103.89308° W**		
Surface Owner:	Federal					
Mineral Owner:						
Directions:	From the intersection of CR 529 and Hwy 82 east of Loco Hills, travel west of Hwy 82 for 1.0 mile, turn right onto lease road and travel 1.0 mile, stay to the left and travel 0.4 miles to the site.					

Release Data:

Date Released:	9/16/2011
Type Release:	Produced Fluid
Source of Contamination:	Gauge on the top of the wellhead
Fluid Released:	15 bbls
Fluids Recovered:	14 bbls

Official Communication:

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

August 15, 2012

Mr. Mike Bratcher
Environmental Engineer Specialist
Oil Conservation Division, District 2
1301 West Grand Avenue
Artesia, New Mexico 88210

Re: Closure Report for the COG Operating LLC., Foster Eddy #14 Well Site, Unit F, Section 17, Township 17 South, Range 31 East, Eddy County, New Mexico.

Mr. Bratcher:

Tetra Tech, Inc. (Tetra Tech) was contacted by COG Operating LLC. (COG) to assess a spill from Foster Eddy #14 located in Unit F, Section 17, Township 17 South, Range 31 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.83719 °, W 103.89308 °. 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 September 16, 2011 and released approximately fifteen (15) barrels of produced fluid from the top of the wellhead. To alleviate the problem, COG personnel replaced the faulty gauge on the well head. Fourteen (14) barrels of standing fluids were recovered. The spill initiated on the pad and ran into the pasture affecting an area approximately 25' X 55'. The initial C-141 form is enclosed in Appendix A.

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

Groundwater

No water wells were listed within Section 17. According to the NMOCD groundwater map, the average depth to groundwater in this area is approximately 325' below surface. The groundwater data is shown in Appendix B.

Regulatory

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

Soil Assessment and Analytical Results

On October 31, 2011, Tetra Tech personnel inspected and sampled the spill area. Three (3) auger holes (AH-1 and AH-3) 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 samples exceeded the TPH and BTEX RRAL. Auger holes (AH-1 and AH-2) did not show a chloride impact to the soils. However, the area of AH-3 showed a shallow impact with a chloride high of 2,920 mg/kg at 0-1.0' and declined to 216 mg/kg at 1-1.5' below surface.

TETRA TECH

Closure Activities

Based on the approved work plan, Tetra Tech personnel supervised the excavation of the site. The final excavation depth of the soil remediation was met as stated in the approved work plan. The spill area (AH-3) measured approximately 5' x 15' at a depth of approximately 1.0' below surface. Once completed, confirmation samples were collected from the excavation. Based on the results, the excavation was backfilled with clean soil to grade. A total of 20 cubic yards of soil were excavated and transported to proper disposal. The confirmation samples are shown in Table 1.

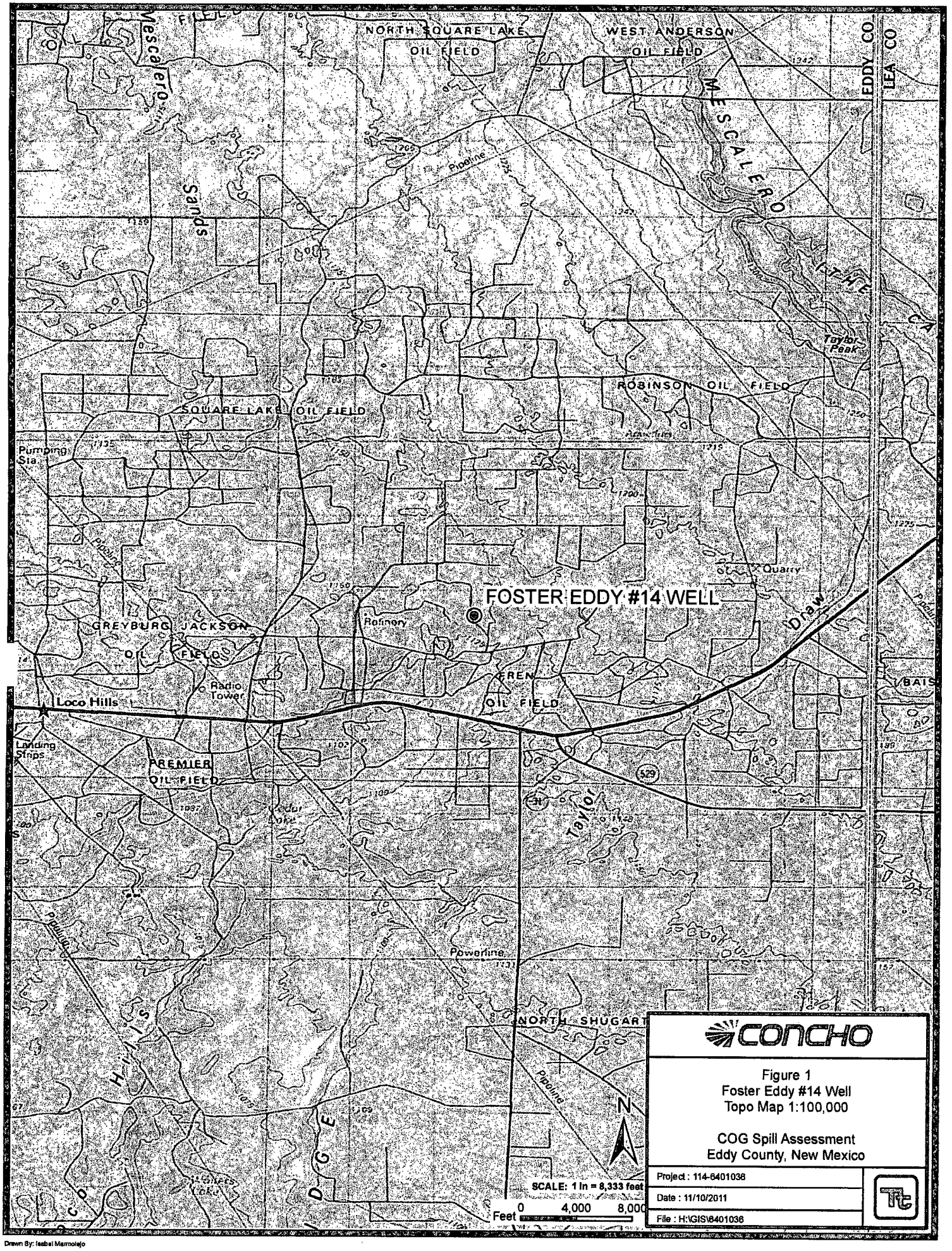
Based on the remedial activities performed, COG request closure of the site. A copy of the C-141 (Final) is included in Appendix A. If you have any questions or comments concerning the remedial activities, please call at (432) 682-4559.

Respectfully submitted,
TETRA TECH

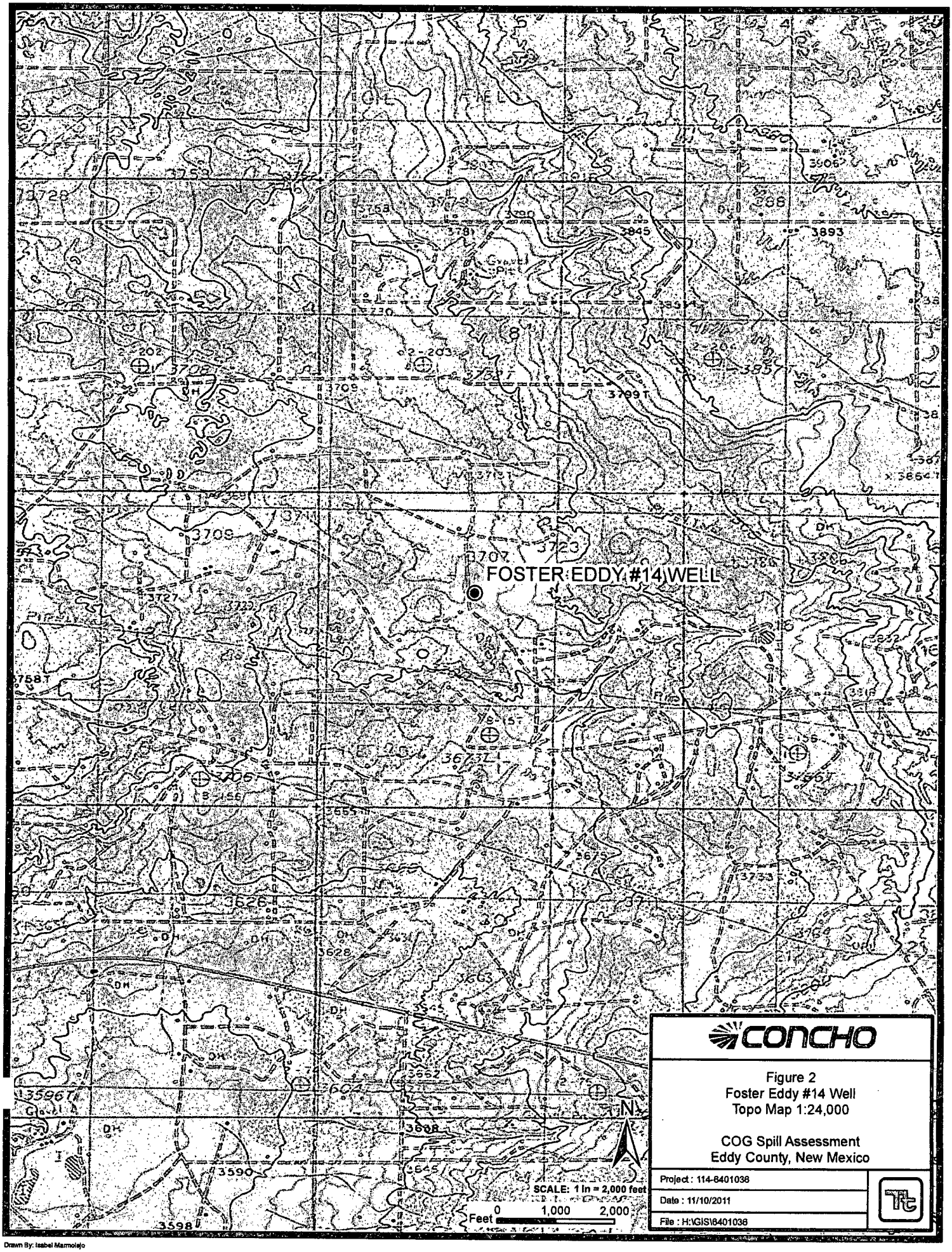
Ike Tavarez, PG
Senior Project Manager

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

Figures



Drawn By: Isabel Marmolejo



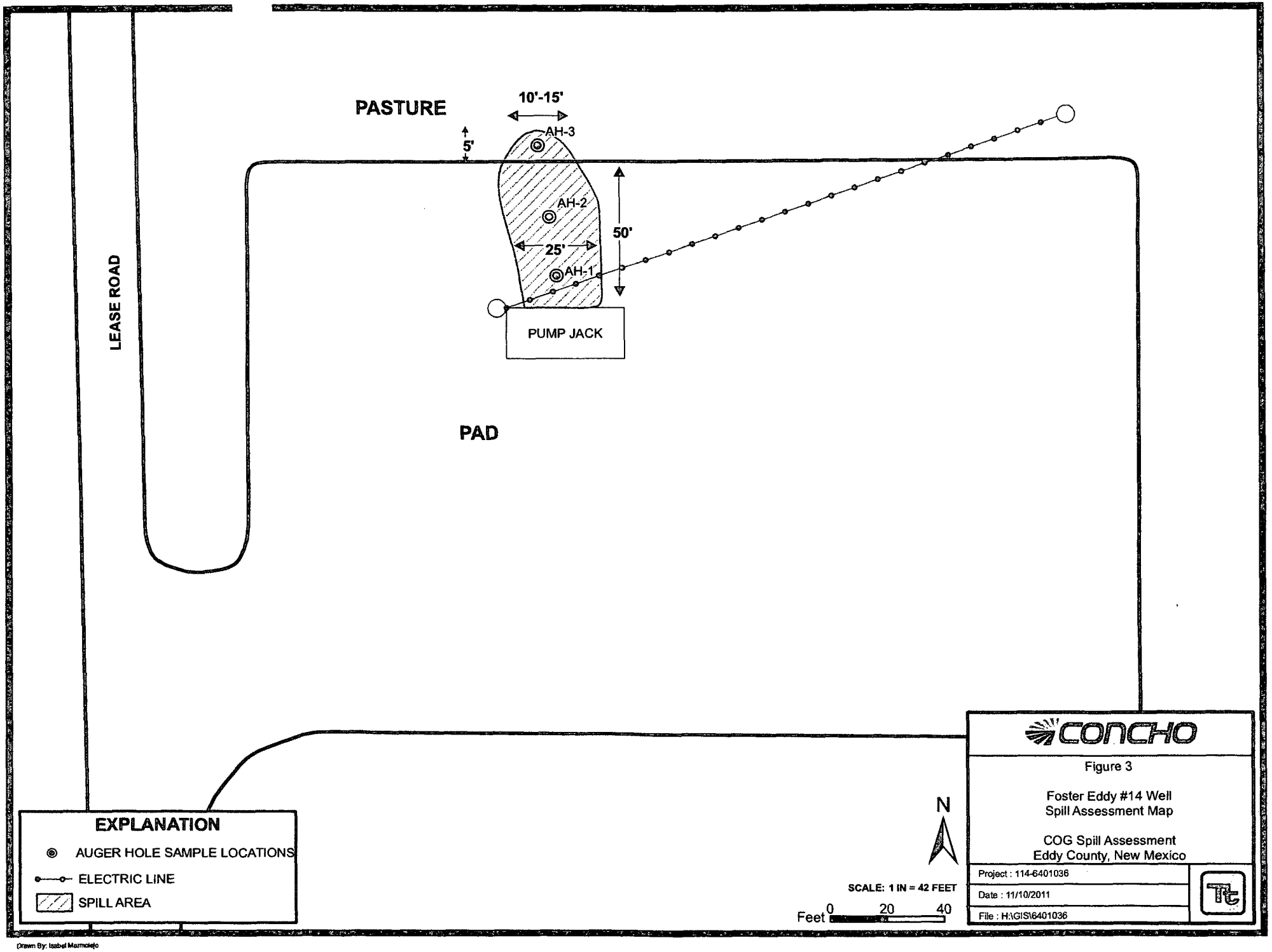
CONCHO

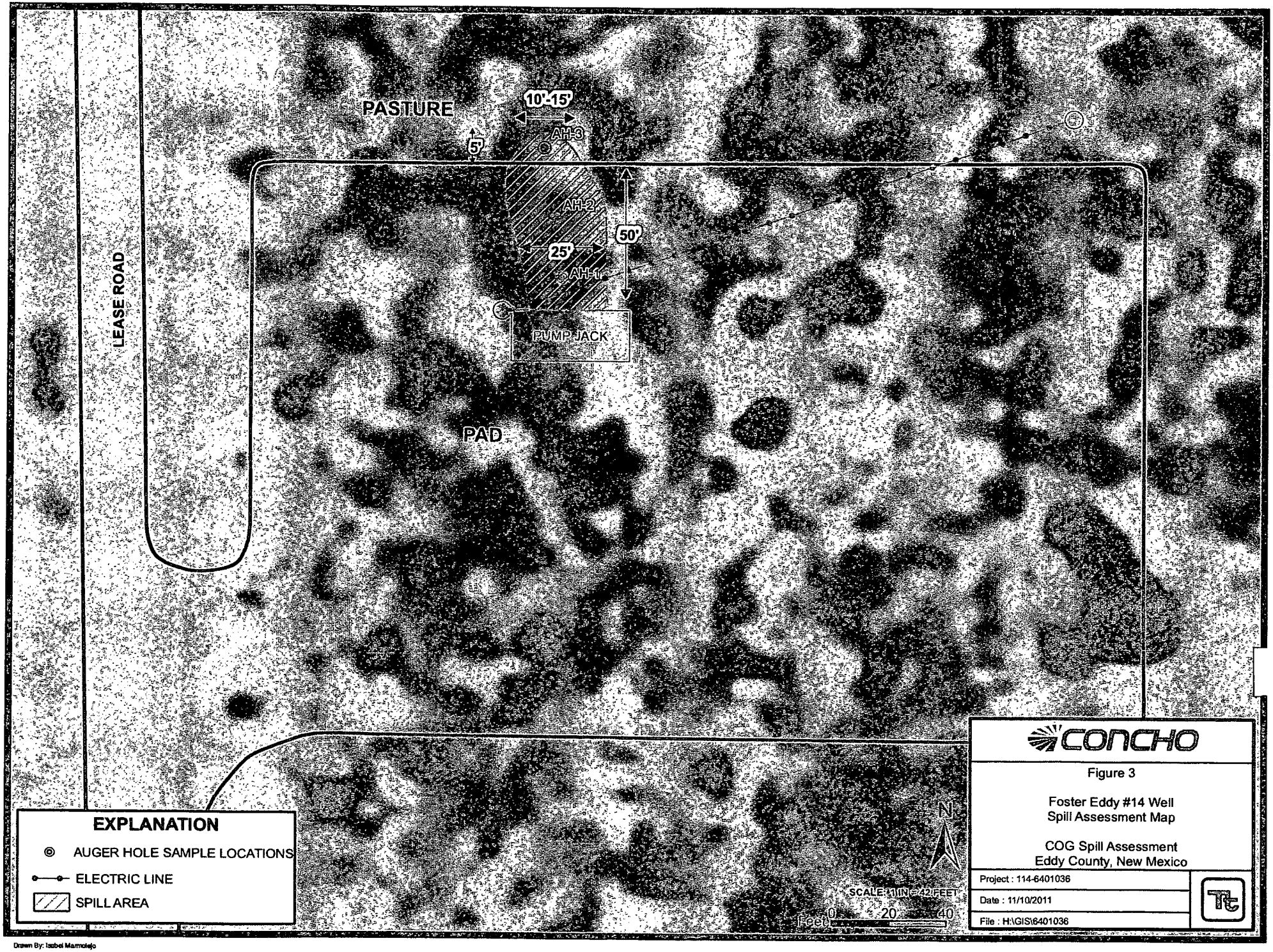
Figure 2
Foster Eddy #14 Well
Topo Map 1:24,000

COG Spill Assessment
Eddy County, New Mexico

Project : 114-6401038	
Date : 11/10/2011	
File : H:\GIS\6401038	

Drawn By: Isabel Marmolejo


PASTURE
10'-15'
5'
AH-3
AH-2
AH-1
50'
25'
PUMP JACK
LEASE ROAD
PAD
EXPLANATION
AUGER HOLE SAMPLE LOCATIONS
ELECTRIC LINE
SPILL AREA
N
SCALE: 1 IN = 42 FEET
Feet 0 20 40
CONCHO
Figure 3
Foster Eddy #14 Well
Spill Assessment Map
COG Spill Assessment
Eddy County, New Mexico
Project : 114-6401036
Date : 11/10/2011
File : H:\GIS\6401036
Drawn By: Isabel Marmolejo


PASTURE
10'-15'
AH-3
5'
AH-2
50'
25'
AH-1
PUMP JACK
LEASE ROAD
PAD
EXPLANATION
AUGER HOLE SAMPLE LOCATIONS
ELECTRIC LINE
SPILL AREA
N
SCALE: 1 IN = 42 FEET
FEET 0 20 40
CONCHO
Figure 3
Foster Eddy #14 Well
Spill Assessment Map
COG Spill Assessment
Eddy County, New Mexico
Project : 114-6401036
Date : 11/10/2011
File : H:\GIS\6401036
Drawn By: Isabel Marmolejo

Tables

Table 1
COG Operating LLC
Foster Eddy #14 Well
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Depth (BEB)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total						
AH-1	10/31/2011	0-1'	-	X		3.53	<50.0	3.53	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	280
	"	1-1.5'	-	X		-	-	-	-	-	-	-	-	<200
	"	2-2.5'	-	X		-	-	-	-	-	-	-	-	286
AH-2	10/31/2011	0-1'	-	X		3.30	<50.0	3.30	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<200
	"	1-1.5'	-	X		-	-	-	-	-	-	-	-	<200
	"	2-2.5'	-	X		-	-	-	-	-	-	-	-	<200
AH-3	10/31/2011	0-1'	-		X	3.68	<50.0	3.68	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	2,920
	"	1-1.5'	-	X		-	-	-	-	-	-	-	-	216
	"	2-2.5'	-	X		-	-	-	-	-	-	-	-	<200
North Sidewall	4/17/2012	-	-	X		-	-	-	-	-	-	-	-	<20.0
South Sidewall	4/17/2012	-	-	X		-	-	-	-	-	-	-	-	<20.0
East Sidewall	4/17/2012	-	-	X		-	-	-	-	-	-	-	-	<20.0
West Sidewall	4/17/2012	-	-	X		-	-	-	-	-	-	-	-	<20.0
Bottom Hole	4/17/2012	1	-	X		-	-	-	-	-	-	-	-	<20.0

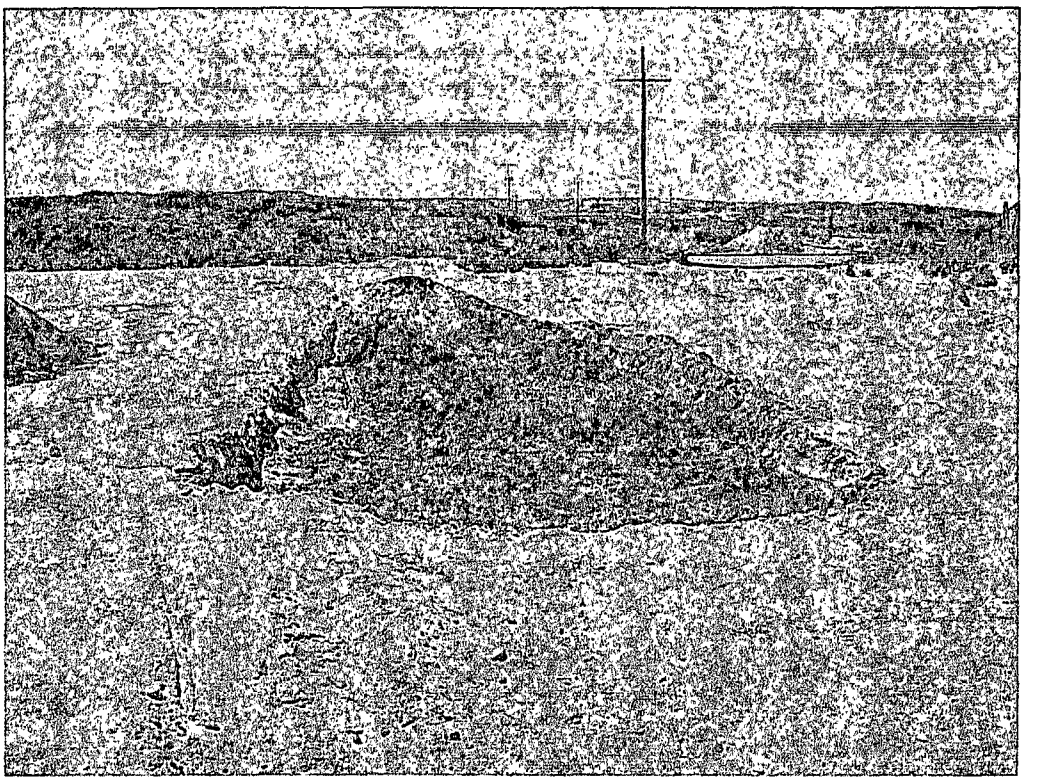
(--) Not Analyzed

Excavation Depths

Photos

COG Operating LLC
Foster Eddy #14
Eddy County, New Mexico

TETRA TECH

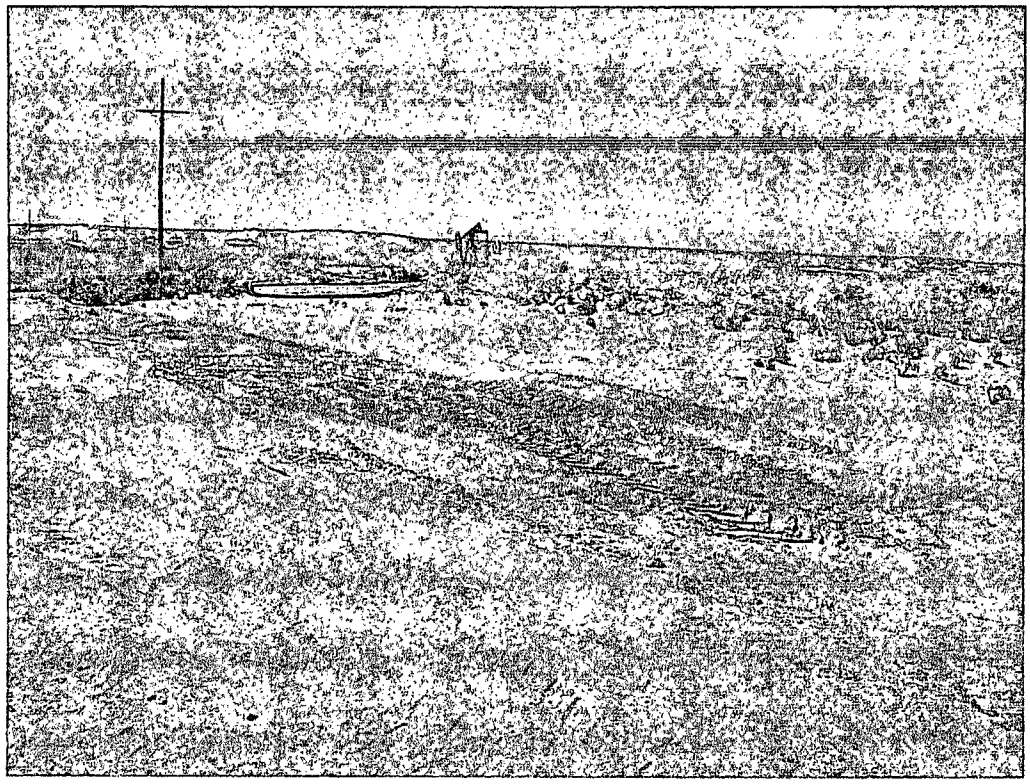


View West – Area of AH-3

View North West – Area of AH-3

COG Operating LLC
Foster Eddy #14
Eddy County, New Mexico

TETRA TECH



View West - Backfill

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	550 W. Texas, Suite 100, Midland, TX 79701	Telephone No.	432-230-0077
Facility Name	Foster Eddy #14	Facility Type	Well

Surface Owner Federal	Mineral Owner	Lease No. (API#) 30-015-37136

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	17	17S	31E					Eddy

Latitude 32 50.217 **Longitude** 103 53.583

NATURE OF RELEASE

Type of Release Produced fluid	Volume of Release 15bbls	Volume Recovered 14bbls
Source of Release Gauge on top of wellhead	Date and Hour of Occurrence 09/16/2011	Date and Hour of Discovery 09/16/2011 9:15 a.m.
Was Immediate Notice Given? ☐ Yes ☒ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
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.*

Fluid was released from the faulty gauge on top of the wellhead. The gauge has been replaced.

Describe Area Affected and Cleanup Action Taken.*

Initially 15bbls of produced fluid were released from the faulty gauge on top of the Foster Eddy #14 wellhead. The release area was limited to a 30' x 60' area around the wellhead. All free fluid has been picked up and the location has been scraped; contaminated soil has been removed and hauled off the location. Terra 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: / Attached ☐
Date: 09/26/2011 Phone: 432-212-2399	

* Attach Additional Sheets If Necessary

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company **COG Operating LLC**	Contact **Pat Ellis**
Address **550 W. Texas, Suite 1300 Midland, Texas 79701**	Telephone No. **(432) 230-0077**
Facility Name Foster Eddy #14	Facility Type **Well**

Surface Owner: Federal	Mineral Owner	Lease No. (API)30-015-37136

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	17	17S	31E					Eddy

Latitude N 32.83719° **Longitude** W 103.89308°

NATURE OF RELEASE

Type of Release: Produced Fluid	Volume of Release 15 bbls	Volume Recovered 14 bbls
Source of Release: Gauge on top of wellhead	Date and Hour of Occurrence 09/16/2011	Date and Hour of Discovery 09/16/2011 9:15 a.m.
Was Immediate Notice Given? ☐ Yes ☒ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*

N/A

Describe Cause of Problem and Remedial Action Taken.*

Fluid was released from the faulty gauge on top of the wellhead. The gauge has been replaced.

Describe Area Affected and Cleanup Action Taken.*

Tetra Tech inspected the site and collected samples to define the spills extent. The elevated chloride impact was removed and transported to proper disposal. The site was then brought up to surface grade with clean backfill material. Tetra Tech prepared a closure report for NMOCD.

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

Signature:	OIL CONSERVATION DIVISION	
Printed Name: Ike Tavarez (agent for COG)	Approved by District Supervisor:	
Title: Project Manager	Approval Date:	Expiration Date:
E-mail Address: Ike.Tavarez@TetraTech.com	Conditions of Approval:	Attached ☐
Date: 8/15/12 Phone: (432) 682-4559		

Attach Additional Sheets If Necessary

Appendix B

Water Well Data
Average Depth to Groundwater (ft)
COG - Foster Eddy #14
Eddy County, New Mexico

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	12 288
18	17	16	15	14	13 113
19	20	21	22	23	24
30	29	28	27	26	25
31 290	32	33	34	35	36

16 South 32 East

6	5	4	3 65	2 265	1 285
7	8	9	10	11	12 215
18	17	16 221	15	14	13 215
19 220	20	21 210	22	23 210	24
30	29	28	27	26 243	25
31	32	33	34	35	36 260

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 SITE	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34 271	35	36

17 South 32 East

6	5	4 62	3 175	2 60	1 225
7	8	9	10	11 70 88	12
18	17	16	15	14	13
19	20	21	22	23	24
30 180 dry	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	12 400
18	17	16	15	14 317	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35 261	36

18 South 32 East

6	5	4 85	3	2	1
7 460 82	8	9	10	11	12
18	17	16 84	15	14	13
19	20 184	21	22 429	23	24
30	29	28	27	26	25
31	32	33	34 117	35	36

- New Mexico State Engineers Well Reports
- USGS Well Reports
- Geology and Groundwater Conditions in Southern Eddy, County, NM
- NMOCD - Groundwater Data
- Field water level
- New Mexico Water and Infrastructure Data System
- SITE - Foster Eddy #14

Appendix C

Summary Report

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

Report Date: November 10, 2011

Work Order: 11110410

Project Location: Eddy Co., NM
Project Name: Foster Eddy #14 Well
Project Number: 114-6401036

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
281549	AH-1 0-1'	soil	2011-10-31	00:00	2011-11-03
281550	AH-1 1-1.5'	soil	2011-10-31	00:00	2011-11-03
281551	AH-1 2-2.5'	soil	2011-10-31	00:00	2011-11-03
281552	AH-2 0-1'	soil	2011-10-31	00:00	2011-11-03
281553	AH-2 1-1.5'	soil	2011-10-31	00:00	2011-11-03
281554	AH-2 2-2.5'	soil	2011-10-31	00:00	2011-11-03
281555	AH-3 0-1'	soil	2011-10-31	00:00	2011-11-03
281556	AH-3 1-1.5'	soil	2011-10-31	00:00	2011-11-03
281557	AH-3 2-2.5'	soil	2011-10-31	00:00	2011-11-03

	BTEX				TPH DRO - NEW	TPH GRO
Sample - Field Code	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
281549 - AH-1 0-1'	<0.0200 Qr	<0.0200 Qr	<0.0200 Qr	<0.0200 Qr	<50.0	**3.53**
281552 - AH-2 0-1'	<0.0200 Qr	<0.0200 Qr	<0.0200 Qr	<0.0200 Qr	<50.0	**3.30**
281555 - AH-3 0-1'	<0.0200 Qr	<0.0200 Qr	<0.0200 Qr	<0.0200 Qr	<50.0	**3.68**

Sample: 281549 - AH-1 0-1'

Param	Flag	Result	Units	RL
Chloride		**280**	mg/Kg	4

Sample: 281550 - AH-1 1-1.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 281551 - AH-1 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**286**	mg/Kg	4

Sample: 281552 - AH-2 0-1'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 281553 - AH-2 1-1.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 281554 - AH-2 2-2.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Sample: 281555 - AH-3 0-1'

Param	Flag	Result	Units	RL
Chloride		**2920**	mg/Kg	4

Sample: 281556 - AH-3 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**216**	mg/Kg	4

Sample: 281557 - AH-3 2-2.5'

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

TRACEANALYSIS, INC.

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

Certifications

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: November 10, 2011

Work Order: 11110410

Project Location: Eddy Co., NM
Project Name: Foster Eddy #14 Well
Project Number: 114-6401036

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
281549	AH-1 0-1'	soil	2011-10-31	00:00	2011-11-03
281550	AH-1 1-1.5'	soil	2011-10-31	00:00	2011-11-03
281551	AH-1 2-2.5'	soil	2011-10-31	00:00	2011-11-03
281552	AH-2 0-1'	soil	2011-10-31	00:00	2011-11-03
281553	AH-2 1-1.5'	soil	2011-10-31	00:00	2011-11-03
281554	AH-2 2-2.5'	soil	2011-10-31	00:00	2011-11-03
281555	AH-3 0-1'	soil	2011-10-31	00:00	2011-11-03
281556	AH-3 1-1.5'	soil	2011-10-31	00:00	2011-11-03
281557	AH-3 2-2.5'	soil	2011-10-31	00:00	2011-11-03

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.

Michael Abel

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

Report Contents

Case Narrative

Samples for project Foster Eddy #14 Well were received by TraceAnalysis, Inc. on 2011-11-03 and assigned to work order 11110410. Samples for work order 11110410 were received intact at a temperature of 4.3 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	73143	2011-11-04 at 12:45	86134	2011-11-05 at 02:47
Chloride (Titration)	SM 4500-Cl B	73222	2011-11-07 at 09:37	86236	2011-11-09 at 10:59
Chloride (Titration)	SM 4500-Cl B	73222	2011-11-07 at 09:37	86237	2011-11-09 at 11:01
TPH DRO - NEW	S 8015 D	73148	2011-11-04 at 13:42	86138	2011-11-04 at 13:42
TPH GRO	S 8015 D	73143	2011-11-04 at 12:45	86135	2011-11-05 at 03:14

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 11110410 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

Analytical Report

Sample: 281549 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	86134	Date Analyzed:	2011-11-05	Analyzed By:	AG
Prep Batch:	73143	Sample Preparation:	2011-11-04	Prepared By:	AG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.96	mg/Kg	1	2.00	98	82.8 - 143.1
4-Bromofluorobenzene (4-BFB)			1.98	mg/Kg	1	2.00	99	70.6 - 179

Sample: 281549 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	86236	Date Analyzed:	2011-11-09	Analyzed By:	AR
Prep Batch:	73222	Sample Preparation:	2011-11-07	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**280**	mg/Kg	50	4.00

Sample: 281549 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	86138	Date Analyzed:	2011-11-04	Analyzed By:	kg
Prep Batch:	73148	Sample Preparation:	2011-11-04	Prepared By:	kg

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			123	mg/Kg	1	100	123	67.5 - 147.1

Sample: 281549 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	86135	Date Analyzed:	2011-11-05	Analyzed By:	AG
Prep Batch:	73143	Sample Preparation:	2011-11-04	Prepared By:	AG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	**3.53**	mg/Kg	1	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.96	mg/Kg	1	2.00	98	30 - 134.6
4-Bromofluorobenzene (4-BFB)			1.87	mg/Kg	1	2.00	94	22.4 - 149

Sample: 281550 - AH-1 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	86237	Date Analyzed:	2011-11-09	Analyzed By:	AR
Prep Batch:	73222	Sample Preparation:	2011-11-07	Prepared By:	AR

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

Sample: 281551 - AH-1 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	86237	Date Analyzed:	2011-11-09	Analyzed By:	AR
Prep Batch:	73222	Sample Preparation:	2011-11-07	Prepared By:	AR

continued ...

sample 281551 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**286**	mg/Kg	50	4.00

Sample: 281552 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	86134	Date Analyzed:	2011-11-05	Analyzed By:	AG
Prep Batch:	73143	Sample Preparation:	2011-11-04	Prepared By:	AG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.95	mg/Kg	1	2.00	98	82.8 - 143.1
4-Bromofluorobenzene (4-BFB)			2.00	mg/Kg	1	2.00	100	70.6 - 179

Sample: 281552 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	86237	Date Analyzed:	2011-11-09	Analyzed By:	AR
Prep Batch:	73222	Sample Preparation:	2011-11-07	Prepared By:	AR

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

Sample: 281552 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	86138	Date Analyzed:	2011-11-04	Analyzed By:	kg
Prep Batch:	73148	Sample Preparation:	2011-11-04	Prepared By:	kg

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			132	mg/Kg	1	100	132	67.5 - 147.1

Sample: 281552 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	86135	Date Analyzed:	2011-11-05	Analyzed By:	AG
Prep Batch:	73143	Sample Preparation:	2011-11-04	Prepared By:	AG

Parameter	Flag	Cert	Result	RL Result	Units	Dilution	RL
GRO		1		**3.30**	mg/Kg	1	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.96	mg/Kg	1	2.00	98	30 - 134.6
4-Bromofluorobenzene (4-BFB)			1.87	mg/Kg	1	2.00	94	22.4 - 149

Sample: 281553 - AH-2 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	86237	Date Analyzed:	2011-11-09	Analyzed By:	AR
Prep Batch:	73222	Sample Preparation:	2011-11-07	Prepared By:	AR

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

Sample: 281554 - AH-2 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	86237	Date Analyzed:	2011-11-09	Analyzed By:	AR
Prep Batch:	73222	Sample Preparation:	2011-11-07	Prepared By:	AR

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

Sample: 281555 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	86134	Date Analyzed:	2011-11-05	Analyzed By:	AG
Prep Batch:	73143	Sample Preparation:	2011-11-04	Prepared By:	AG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.96	mg/Kg	1	2.00	98	82.8 - 143.1
4-Bromofluorobenzene (4-BFB)			2.00	mg/Kg	1	2.00	100	70.6 - 179

Sample: 281555 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	86237	Date Analyzed:	2011-11-09	Analyzed By:	AR
Prep Batch:	73222	Sample Preparation:	2011-11-07	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**2920**	mg/Kg	100	4.00

Sample: 281555 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	86138	Date Analyzed:	2011-11-04	Analyzed By:	kg
Prep Batch:	73148	Sample Preparation:	2011-11-04	Prepared By:	kg

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			93.0	mg/Kg	1	100	93	67.5 - 147.1

Sample: 281555 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	86135	Date Analyzed:	2011-11-05	Analyzed By:	AG
Prep Batch:	73143	Sample Preparation:	2011-11-04	Prepared By:	AG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	**3.68**	mg/Kg	1	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.96	mg/Kg	1	2.00	98	30 - 134.6
4-Bromofluorobenzene (4-BFB)			1.88	mg/Kg	1	2.00	94	22.4 - 149

Sample: 281556 - AH-3 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	86237	Date Analyzed:	2011-11-09	Analyzed By:	AR
Prep Batch:	73222	Sample Preparation:	2011-11-07	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**216**	mg/Kg	50	4.00

Sample: 281557 - AH-3 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	86237	Date Analyzed:	2011-11-09	Analyzed By:	AR
Prep Batch:	73222	Sample Preparation:	2011-11-07	Prepared By:	AR

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

Method Blanks

Method Blank (1) QC Batch: 86134

QC Batch: 86134 | Date Analyzed: 2011-11-05 | Analyzed By: AG
Prep Batch: 73143 | QC Preparation: 2011-11-04 | Prepared By: AG

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.0118	mg/Kg	0.02
Toluene		1	<0.00600	mg/Kg	0.02
Ethylbenzene		1	<0.00850	mg/Kg	0.02
Xylene		1	<0.00613	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.88	mg/Kg	1	2.00	94	65.9 - 111.8
4-Bromofluorobenzene (4-BFB)			1.67	mg/Kg	1	2.00	84	48.4 - 123.1

Method Blank (1) QC Batch: 86135

QC Batch: 86135 | Date Analyzed: 2011-11-05 | Analyzed By: AG
Prep Batch: 73143 | QC Preparation: 2011-11-04 | Prepared By: AG

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1	0.915	mg/Kg	2

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.90	mg/Kg	1	2.00	95	67.6 - 150
4-Bromofluorobenzene (4-BFB)			1.60	mg/Kg	1	2.00	80	52.4 - 130

Method Blank (1) QC Batch: 86138

QC Batch: 86138 | Date Analyzed: 2011-11-04 | Analyzed By: kg
Prep Batch: 73148 | QC Preparation: 2011-11-04 | Prepared By: kg

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	<14.5	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			114	mg/Kg	1	100	114	52.7 - 133.8

Method Blank (1) QC Batch: 86236

QC Batch: 86236 | Date Analyzed: 2011-11-09 | Analyzed By: AR
Prep Batch: 73222 | QC Preparation: 2011-11-07 | Prepared By: AR

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

Method Blank (1) QC Batch: 86237

QC Batch: 86237 | Date Analyzed: 2011-11-09 | Analyzed By: AR
Prep Batch: 73222 | QC Preparation: 2011-11-07 | Prepared By: AR

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

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 86134 | Date Analyzed: 2011-11-05 | Analyzed By: AG
Prep Batch: 73143 | QC Preparation: 2011-11-04 | Prepared By: AG

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	2.03	mg/Kg	1	2.00	<0.0118	102	77.4 - 121.7
Toluene		1	1.98	mg/Kg	1	2.00	<0.00600	99	88.6 - 121.6
Ethylbenzene		1	1.93	mg/Kg	1	2.00	<0.00850	96	74.3 - 117.9
Xylene		1	5.83	mg/Kg	1	6.00	<0.00613	97	73.4 - 118.8

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	2.01	mg/Kg	1	2.00	<0.0118	100	77.4 - 121.7	1	20
Toluene		1	1.97	mg/Kg	1	2.00	<0.00600	98	88.6 - 121.6	0	20
Ethylbenzene		1	1.89	mg/Kg	1	2.00	<0.00850	94	74.3 - 117.9	2	20
Xylene		1	5.74	mg/Kg	1	6.00	<0.00613	96	73.4 - 118.8	2	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.92	1.90	mg/Kg	1	2.00	96	95	65.5 - 116.7
4-Bromofluorobenzene (4-BFB)	1.93	1.94	mg/Kg	1	2.00	96	97	56.2 - 132.1

Laboratory Control Spike (LCS-1)

QC Batch: 86135 | Date Analyzed: 2011-11-05 | Analyzed By: AG
Prep Batch: 73143 | QC Preparation: 2011-11-04 | Prepared By: AG

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	17.8	mg/Kg	1	20.0	<0.753	89	60.9 - 95.4

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

continued ...

control spikes continued ...

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	18.2	mg/Kg	1	20.0	<0.753	91	60.9 - 95.4	2	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.97	1.96	mg/Kg	1	2.00	98	98	61.9 - 142
4-Bromofluorobenzene (4-BFB)	1.78	1.79	mg/Kg	1	2.00	89	90	56.2 - 132

Laboratory Control Spike (LCS-1)

QC Batch: 86138 | Date Analyzed: 2011-11-04 | Analyzed By: kg
Prep Batch: 73148 | QC Preparation: 2011-11-04 | Prepared By: kg

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	282	mg/Kg	1	250	<14.5	113	64.5 - 146.9

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	290	mg/Kg	1	250	<14.5	116	64.5 - 146.9	3	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	131	135	mg/Kg	1	100	131	135	65.3 - 135.8

Laboratory Control Spike (LCS-1)

QC Batch: 86236 | Date Analyzed: 2011-11-09 | Analyzed By: AR
Prep Batch: 73222 | QC Preparation: 2011-11-07 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			97.8	mg/Kg	1	100	<3.85	98	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			106	mg/Kg	1	100	<3.85	106	85 - 115	8	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 86237 | Date Analyzed: 2011-11-09 | Analyzed By: AR
Prep Batch: 73222 | QC Preparation: 2011-11-07 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			99.4	mg/Kg	1	100	<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			106	mg/Kg	1	100	<3.85	106	85 - 115	6	20

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

Matrix Spike (MS-1) Spiked Sample: 281552

QC Batch: 86134 | Date Analyzed: 2011-11-05 | Analyzed By: AG
Prep Batch: 73143 | QC Preparation: 2011-11-04 | Prepared By: AG

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	2.24	mg/Kg	1	2.00	<0.0118	112	69.4 - 123.6
Toluene		1	2.23	mg/Kg	1	2.00	<0.00600	112	75.4 - 134.3
Ethylbenzene		1	2.32	mg/Kg	1	2.00	<0.00850	116	58.8 - 133.7
Xylene		1	6.98	mg/Kg	1	6.00	<0.00613	116	57 - 134.2

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	Qr	Qr 1	1.72	mg/Kg	1	2.00	<0.0118	86	69.4 - 123.6	26	20
Toluene	Qr	Qr 1	1.70	mg/Kg	1	2.00	<0.00600	85	75.4 - 134.3	27	20
Ethylbenzene	Qr	Qr 1	1.76	mg/Kg	1	2.00	<0.00850	88	58.8 - 133.7	27	20
Xylene	Qr	Qr 1	5.30	mg/Kg	1	6.00	<0.00613	88	57 - 134.2	27	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.94	1.94	mg/Kg	1	2	97	97	79.4 - 141.1
4-Bromofluorobenzene (4-BFB)	2.07	2.04	mg/Kg	1	2	104	102	71 - 167

Matrix Spike (MS-1) Spiked Sample: 281555

QC Batch: 86135 | Date Analyzed: 2011-11-05 | Analyzed By: AG
Prep Batch: 73143 | QC Preparation: 2011-11-04 | Prepared By: AG

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	19.9	mg/Kg	1	20.0	3.68	81	61.8 - 114

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	22.0	mg/Kg	1	20.0	3.68	92	61.8 - 114	10	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.95	1.95	mg/Kg	1	2	98	98	29.4 - 161.7
4-Bromofluorobenzene (4-BFB)	2.01	2.02	mg/Kg	1	2	100	101	37.3 - 162

Matrix Spike (MS-1) Spiked Sample: 281552

QC Batch: 86138 | Date Analyzed: 2011-11-04 | Analyzed By: kg
Prep Batch: 73148 | QC Preparation: 2011-11-04 | Prepared By: kg

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	293	mg/Kg	1	250	23.1	108	38.8 - 153.3

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	302	mg/Kg	1	250	23.1	112	38.8 - 153.3	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	125	122	mg/Kg	1	100	125	122	54.6 - 149.8

Matrix Spike (MS-1) Spiked Sample: 281549

QC Batch: 86236 | Date Analyzed: 2011-11-09 | Analyzed By: AR
Prep Batch: 73222 | QC Preparation: 2011-11-07 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			9130	mg/Kg	100	10000	<385	88	79.4 - 120.6

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			9780	mg/Kg	100	10000	<385	95	79.4 - 120.6	7	20

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

Matrix Spike (MS-1) Spiked Sample: 281569

QC Batch: 86237 | Date Analyzed: 2011-11-09 | Analyzed By: AR
Prep Batch: 73222 | QC Preparation: 2011-11-07 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			10200	mg/Kg	100	10000	<385	102	79.4 - 120.6

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			10400	mg/Kg	100	10000	<385	104	79.4 - 120.6	2	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: 86134 | Date Analyzed: 2011-11-05 | Analyzed By: AG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/Kg	0.100	0.101	101	80 - 120	2011-11-05
Toluene		1	mg/Kg	0.100	0.0981	98	80 - 120	2011-11-05
Ethylbenzene		1	mg/Kg	0.100	0.0959	96	80 - 120	2011-11-05
Xylene		1	mg/Kg	0.300	0.289	96	80 - 120	2011-11-05

Standard (CCV-2)

QC Batch: 86134 | Date Analyzed: 2011-11-05 | Analyzed By: AG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/Kg	0.100	0.0921	92	80 - 120	2011-11-05
Toluene		1	mg/Kg	0.100	0.0888	89	80 - 120	2011-11-05
Ethylbenzene		1	mg/Kg	0.100	0.0859	86	80 - 120	2011-11-05
Xylene		1	mg/Kg	0.300	0.260	87	80 - 120	2011-11-05

Standard (CCV-1)

QC Batch: 86135 | Date Analyzed: 2011-11-05 | Analyzed By: AG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	1.07	107	80 - 120	2011-11-05

Standard (CCV-2)

QC Batch: 86135 | Date Analyzed: 2011-11-05 | Analyzed By: AG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	1.15	115	80 - 120	2011-11-05

Standard (CCV-1)

QC Batch: 86138 Date Analyzed: 2011-11-04 Analyzed By: kg

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	266	106	80 - 120	2011-11-04

Standard (CCV-2)

QC Batch: 86138 Date Analyzed: 2011-11-04 Analyzed By: kg

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	237	95	80 - 120	2011-11-04

Standard (ICV-1)

QC Batch: 86236 Date Analyzed: 2011-11-09 Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	96.6	97	85 - 115	2011-11-09

Standard (CCV-1)

QC Batch: 86236 Date Analyzed: 2011-11-09 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	103	103	85 - 115	2011-11-09

Standard (ICV-1)

QC Batch: 86237 Date Analyzed: 2011-11-09 Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	104	104	85 - 115	2011-11-09

Standard (CCV-1)

QC Batch: 86237 Date Analyzed: 2011-11-09 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	96.2	96	85 - 115	2011-11-09

Appendix

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704392-10-TX	Midland

Standard Flags

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

Attachments

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

WO# 11110410

Analysis Request of Chain of Custody Record

PAGE: 1 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 Tavarez

PROJECT NO.: 114-6401036

PROJECT NAME: Foster Eddy #14 Well

Eddy Co, NM

LAB I.D. NUMBER	DATE 2011	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 Mod. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
281549	10/31		S		X	AH-1 0-1'	1				X		X	X	X										X				
550						1-1.5'	1				X														X				
551						2-2.5'	1				X														X				
552						AH-2 0-1'	1				X		X	X											X				
553						1-1.5'	1				X														X				
554						2-2.5'	1				X														X				
555						AH-3 0-1'	1				X		X	X											X				
556						1-1.5'	1				X														X				
557						2-2.5'	1				X														X				
558						3-3.5'	1				X										Hold.								

RELINQUISHED BY: (Signature) C R M — Date: 11-3-11 Time: 16:50

RECEIVED BY: (Signature) — Date: — Time:

SAMPLED BY: (Print & Initial) Kim — Date: 10/31/11 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 Tavarez

Results by:

RUSH Charges Authorized: Yes No

RECEIVING LABORATORY: TRACE

ADDRESS:

CITY: MIDLAND STATE: TX ZIP:

CONTACT: PHONE:

RECEIVED BY: (Signature)

DATE: 11.3.11 TIME: 16:50

SAMPLE CONDITION WHEN RECEIVED: 4.3°C Wet

REMARKS: Run deeper depth if TPH exceed 5,000 mg/kg. Run deeper depth if Benzene exceed 10 mg/kg — or Total BTEX exceeds 50 mg/kg.

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

Summary Report

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

Report Date: May 8, 2012

Work Order: 12042427

Project Location: Eddy Co., NM
Project Name: COG/Foster Eddy #14 Well
Project Number: 114-6401036

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
295203	North Sidewall	soil	2012-04-17	00:00	2012-04-24
295204	South Sidewall	soil	2012-04-17	00:00	2012-04-24
295205	East Sidewall	soil	2012-04-17	00:00	2012-04-24
295206	West Sidewall	soil	2012-04-17	00:00	2012-04-24
295207	Bottom Hole 1'	soil	2012-04-17	00:00	2012-04-24

Sample: 295203 - North Sidewall

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

Sample: 295204 - South Sidewall

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

Sample: 295205 - East Sidewall

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

Sample: 295206 - West Sidewall

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

Sample: 295207 - Bottom Hole 1'

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

TRACEANALYSIS, INC.

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

Certifications

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: November 10, 2011

Work Order: 11110410

Project Location: Eddy Co., NM
Project Name: Foster Eddy #14 Well
Project Number: 114-6401036

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
281549	AH-1 0-1'	soil	2011-10-31	00:00	2011-11-03
281550	AH-1 1-1.5'	soil	2011-10-31	00:00	2011-11-03
281551	AH-1 2-2.5'	soil	2011-10-31	00:00	2011-11-03
281552	AH-2 0-1'	soil	2011-10-31	00:00	2011-11-03
281553	AH-2 1-1.5'	soil	2011-10-31	00:00	2011-11-03
281554	AH-2 2-2.5'	soil	2011-10-31	00:00	2011-11-03
281555	AH-3 0-1'	soil	2011-10-31	00:00	2011-11-03
281556	AH-3 1-1.5'	soil	2011-10-31	00:00	2011-11-03
281557	AH-3 2-2.5'	soil	2011-10-31	00:00	2011-11-03

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.

Michael Abel

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

Report Contents

Case Narrative

Samples for project Foster Eddy #14 Well were received by TraceAnalysis, Inc. on 2011-11-03 and assigned to work order 11110410. Samples for work order 11110410 were received intact at a temperature of 4.3 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	73143	2011-11-04 at 12:45	86134	2011-11-05 at 02:47
Chloride (Titration)	SM 4500-Cl B	73222	2011-11-07 at 09:37	86236	2011-11-09 at 10:59
Chloride (Titration)	SM 4500-Cl B	73222	2011-11-07 at 09:37	86237	2011-11-09 at 11:01
TPH DRO - NEW	S 8015 D	73148	2011-11-04 at 13:42	86138	2011-11-04 at 13:42
TPH GRO	S 8015 D	73143	2011-11-04 at 12:45	86135	2011-11-05 at 03:14

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 11110410 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

Analytical Report

Sample: 281549 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	86134	Date Analyzed:	2011-11-05	Analyzed By:	AG
Prep Batch:	73143	Sample Preparation:	2011-11-04	Prepared By:	AG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.96	mg/Kg	1	2.00	98	82.8 - 143.1
4-Bromofluorobenzene (4-BFB)			1.98	mg/Kg	1	2.00	99	70.6 - 179

Sample: 281549 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	86236	Date Analyzed:	2011-11-09	Analyzed By:	AR
Prep Batch:	73222	Sample Preparation:	2011-11-07	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**280**	mg/Kg	50	4.00

Sample: 281549 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	86138	Date Analyzed:	2011-11-04	Analyzed By:	kg
Prep Batch:	73148	Sample Preparation:	2011-11-04	Prepared By:	kg

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			123	mg/Kg	1	100	123	67.5 - 147.1

Sample: 281549 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	86135	Date Analyzed:	2011-11-05	Analyzed By:	AG
Prep Batch:	73143	Sample Preparation:	2011-11-04	Prepared By:	AG

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	**3.53**	mg/Kg	1	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.96	mg/Kg	1	2.00	98	30 - 134.6
4-Bromofluorobenzene (4-BFB)			1.87	mg/Kg	1	2.00	94	22.4 - 149

Sample: 281550 - AH-1 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	86237	Date Analyzed:	2011-11-09	Analyzed By:	AR
Prep Batch:	73222	Sample Preparation:	2011-11-07	Prepared By:	AR

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

Sample: 281551 - AH-1 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	86237	Date Analyzed:	2011-11-09	Analyzed By:	AR
Prep Batch:	73222	Sample Preparation:	2011-11-07	Prepared By:	AR

continued ...

sample 281551 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**286**	mg/Kg	50	4.00

Sample: 281552 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	86134	Date Analyzed:	2011-11-05	Analyzed By:	AG
Prep Batch:	73143	Sample Preparation:	2011-11-04	Prepared By:	AG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.95	mg/Kg	1	2.00	98	82.8 - 143.1
4-Bromofluorobenzene (4-BFB)			2.00	mg/Kg	1	2.00	100	70.6 - 179

Sample: 281552 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	86237	Date Analyzed:	2011-11-09	Analyzed By:	AR
Prep Batch:	73222	Sample Preparation:	2011-11-07	Prepared By:	AR

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

Sample: 281552 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	86138	Date Analyzed:	2011-11-04	Analyzed By:	kg
Prep Batch:	73148	Sample Preparation:	2011-11-04	Prepared By:	kg

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			132	mg/Kg	1	100	132	67.5 - 147.1

Sample: 281552 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	86135	Date Analyzed:	2011-11-05	Analyzed By:	AG
Prep Batch:	73143	Sample Preparation:	2011-11-04	Prepared By:	AG

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
GRO		1	**3.30**	mg/Kg	1	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.96	mg/Kg	1	2.00	98	30 - 134.6
4-Bromofluorobenzene (4-BFB)			1.87	mg/Kg	1	2.00	94	22.4 - 149

Sample: 281553 - AH-2 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	86237	Date Analyzed:	2011-11-09	Analyzed By:	AR
Prep Batch:	73222	Sample Preparation:	2011-11-07	Prepared By:	AR

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

Sample: 281554 - AH-2 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	86237	Date Analyzed:	2011-11-09	Analyzed By:	AR
Prep Batch:	73222	Sample Preparation:	2011-11-07	Prepared By:	AR

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

Sample: 281555 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	86134	Date Analyzed:	2011-11-05	Analyzed By:	AG
Prep Batch:	73143	Sample Preparation:	2011-11-04	Prepared By:	AG

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits °
Trifluorotoluene (TFT)			1.96	mg/Kg	1	2.00	98	82.8 - 143.1
4-Bromofluorobenzene (4-BFB)			2.00	mg/Kg	1	2.00	100	70.6 - 179

Sample: 281555 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	86237	Date Analyzed:	2011-11-09	Analyzed By:	AR
Prep Batch:	73222	Sample Preparation:	2011-11-07	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2920**	mg/Kg	100	4.00

Sample: 281555 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	86138	Date Analyzed:	2011-11-04	Analyzed By:	kg
Prep Batch:	73148	Sample Preparation:	2011-11-04	Prepared By:	kg

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			93.0	mg/Kg	1	100	93	67.5 - 147.1

Sample: 281555 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	86135	Date Analyzed:	2011-11-05	Analyzed By:	AG
Prep Batch:	73143	Sample Preparation:	2011-11-04	Prepared By:	AG

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
GRO		1	**3.68**	mg/Kg	1	2.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.96	mg/Kg	1	2.00	98	30 - 134.6
4-Bromofluorobenzene (4-BFB)			1.88	mg/Kg	1	2.00	94	22.4 - 149

Sample: 281556 - AH-3 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	86237	Date Analyzed:	2011-11-09	Analyzed By:	AR
Prep Batch:	73222	Sample Preparation:	2011-11-07	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**216**	mg/Kg	50	4.00

Sample: 281557 - AH-3 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	86237	Date Analyzed:	2011-11-09	Analyzed By:	AR
Prep Batch:	73222	Sample Preparation:	2011-11-07	Prepared By:	AR

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

Method Blanks

Method Blank (1) QC Batch: 86134

QC Batch: 86134 | Date Analyzed: 2011-11-05 | Analyzed By: AG
Prep Batch: 73143 | QC Preparation: 2011-11-04 | Prepared By: AG

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.0118	mg/Kg	0.02
Toluene		1	<0.00600	mg/Kg	0.02
Ethylbenzene		1	<0.00850	mg/Kg	0.02
Xylene		1	<0.00613	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.88	mg/Kg	1	2.00	94	65.9 - 111.8
4-Bromofluorobenzene (4-BFB)			1.67	mg/Kg	1	2.00	84	48.4 - 123.1

Method Blank (1) QC Batch: 86135

QC Batch: 86135 | Date Analyzed: 2011-11-05 | Analyzed By: AG
Prep Batch: 73143 | QC Preparation: 2011-11-04 | Prepared By: AG

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1	0.915	mg/Kg	2

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.90	mg/Kg	1	2.00	95	67.6 - 150
4-Bromofluorobenzene (4-BFB)			1.60	mg/Kg	1	2.00	80	52.4 - 130

Method Blank (1) QC Batch: 86138

QC Batch: 86138 | Date Analyzed: 2011-11-04 | Analyzed By: kg
Prep Batch: 73148 | QC Preparation: 2011-11-04 | Prepared By: kg

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	<14.5	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			114	mg/Kg	1	100	114	52.7 - 133.8

Method Blank (1) QC Batch: 86236

QC Batch:	86236	Date Analyzed:	2011-11-09	Analyzed By:	AR
Prep Batch:	73222	QC Preparation:	2011-11-07	Prepared By:	AR

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

Method Blank (1) QC Batch: 86237

QC Batch:	86237	Date Analyzed:	2011-11-09	Analyzed By:	AR
Prep Batch:	73222	QC Preparation:	2011-11-07	Prepared By:	AR

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

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 86134 | Date Analyzed: 2011-11-05 | Analyzed By: AG
Prep Batch: 73143 | QC Preparation: 2011-11-04 | Prepared By: AG

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	2.03	mg/Kg	1	2.00	<0.0118	102	77.4 - 121.7
Toluene		1	1.98	mg/Kg	1	2.00	<0.00600	99	88.6 - 121.6
Ethylbenzene		1	1.93	mg/Kg	1	2.00	<0.00850	96	74.3 - 117.9
Xylene		1	5.83	mg/Kg	1	6.00	<0.00613	97	73.4 - 118.8

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	2.01	mg/Kg	1	2.00	<0.0118	100	77.4 - 121.7	1	20
Toluene		1	1.97	mg/Kg	1	2.00	<0.00600	98	88.6 - 121.6	0	20
Ethylbenzene		1	1.89	mg/Kg	1	2.00	<0.00850	94	74.3 - 117.9	2	20
Xylene		1	5.74	mg/Kg	1	6.00	<0.00613	96	73.4 - 118.8	2	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.92	1.90	mg/Kg	1	2.00	96	95	65.5 - 116.7
4-Bromofluorobenzene (4-BFB)	1.93	1.94	mg/Kg	1	2.00	96	97	56.2 - 132.1

Laboratory Control Spike (LCS-1)

QC Batch: 86135 | Date Analyzed: 2011-11-05 | Analyzed By: AG
Prep Batch: 73143 | QC Preparation: 2011-11-04 | Prepared By: AG

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	17.8	mg/Kg	1	20.0	<0.753	89	60.9 - 95.4

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

continued ...

control spikes continued ...

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	18.2	mg/Kg	1	20.0	<0.753	91	60.9 - 95.4	2	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.97	1.96	mg/Kg	1	2.00	98	98	61.9 - 142
4-Bromofluorobenzene (4-BFB)	1.78	1.79	mg/Kg	1	2.00	89	90	56.2 - 132

Laboratory Control Spike (LCS-1)

QC Batch: 86138 | Date Analyzed: 2011-11-04 | Analyzed By: kg
Prep Batch: 73148 | QC Preparation: 2011-11-04 | Prepared By: kg

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	282	mg/Kg	1	250	<14.5	113	64.5 - 146.9

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	290	mg/Kg	1	250	<14.5	116	64.5 - 146.9	3	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	131	135	mg/Kg	1	100	131	135	65.3 - 135.8

Laboratory Control Spike (LCS-1)

QC Batch: 86236 | Date Analyzed: 2011-11-09 | Analyzed By: AR
Prep Batch: 73222 | QC Preparation: 2011-11-07 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			97.8	mg/Kg	1	100	<3.85	98	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			106	mg/Kg	1	100	<3.85	106	85 - 115	8	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 86237 | Date Analyzed: 2011-11-09 | Analyzed By: AR
Prep Batch: 73222 | QC Preparation: 2011-11-07 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			99.4	mg/Kg	1	100	<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			106	mg/Kg	1	100	<3.85	106	85 - 115	6	20

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

Matrix Spike (MS-1) Spiked Sample: 281552

QC Batch: 86134 | Date Analyzed: 2011-11-05 | Analyzed By: AG
Prep Batch: 73143 | QC Preparation: 2011-11-04 | Prepared By: AG

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	2.24	mg/Kg	1	2.00	<0.0118	112	69.4 - 123.6
Toluene		1	2.23	mg/Kg	1	2.00	<0.00600	112	75.4 - 134.3
Ethylbenzene		1	2.32	mg/Kg	1	2.00	<0.00850	116	58.8 - 133.7
Xylene		1	6.98	mg/Kg	1	6.00	<0.00613	116	57 - 134.2

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	Qr	Qr 1	1.72	mg/Kg	1	2.00	<0.0118	86	69.4 - 123.6	26	20
Toluene	Qr	Qr 1	1.70	mg/Kg	1	2.00	<0.00600	85	75.4 - 134.3	27	20
Ethylbenzene	Qr	Qr 1	1.76	mg/Kg	1	2.00	<0.00850	88	58.8 - 133.7	27	20
Xylene	Qr	Qr 1	5.30	mg/Kg	1	6.00	<0.00613	88	57 - 134.2	27	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.94	1.94	mg/Kg	1	2	97	97	79.4 - 141.1
4-Bromofluorobenzene (4-BFB)	2.07	2.04	mg/Kg	1	2	104	102	71 - 167

Matrix Spike (MS-1) Spiked Sample: 281555

QC Batch: 86135 | Date Analyzed: 2011-11-05 | Analyzed By: AG
Prep Batch: 73143 | QC Preparation: 2011-11-04 | Prepared By: AG

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	19.9	mg/Kg	1	20.0	3.68	81	61.8 - 114

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	22.0	mg/Kg	1	20.0	3.68	92	61.8 - 114	10	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.95	1.95	mg/Kg	1	2	98	98	29.4 - 161.7
4-Bromofluorobenzene (4-BFB)	2.01	2.02	mg/Kg	1	2	100	101	37.3 - 162

Matrix Spike (MS-1) Spiked Sample: 281552

QC Batch: 86138 | Date Analyzed: 2011-11-04 | Analyzed By: kg
Prep Batch: 73148 | QC Preparation: 2011-11-04 | Prepared By: kg

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	293	mg/Kg	1	250	23.1	108	38.8 - 153.3

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	302	mg/Kg	1	250	23.1	112	38.8 - 153.3	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	125	122	mg/Kg	1	100	125	122	54.6 - 149.8

Matrix Spike (MS-1) Spiked Sample: 281549

QC Batch: 86236 | Date Analyzed: 2011-11-09 | Analyzed By: AR
Prep Batch: 73222 | QC Preparation: 2011-11-07 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			9130	mg/Kg	100	10000	<385	88	79.4 - 120.6

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			9780	mg/Kg	100	10000	<385	95	79.4 - 120.6	7	20

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

Matrix Spike (MS-1) Spiked Sample: 281569

QC Batch: 86237 | Date Analyzed: 2011-11-09 | Analyzed By: AR
Prep Batch: 73222 | QC Preparation: 2011-11-07 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			10200	mg/Kg	100	10000	<385	102	79.4 - 120.6

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			10400	mg/Kg	100	10000	<385	104	79.4 - 120.6	2	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: 86134 | Date Analyzed: 2011-11-05 | Analyzed By: AG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/Kg	0.100	0.101	101	80 - 120	2011-11-05
Toluene		1	mg/Kg	0.100	0.0981	98	80 - 120	2011-11-05
Ethylbenzene		1	mg/Kg	0.100	0.0959	96	80 - 120	2011-11-05
Xylene		1	mg/Kg	0.300	0.289	96	80 - 120	2011-11-05

Standard (CCV-2)

QC Batch: 86134 | Date Analyzed: 2011-11-05 | Analyzed By: AG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/Kg	0.100	0.0921	92	80 - 120	2011-11-05
Toluene		1	mg/Kg	0.100	0.0888	89	80 - 120	2011-11-05
Ethylbenzene		1	mg/Kg	0.100	0.0859	86	80 - 120	2011-11-05
Xylene		1	mg/Kg	0.300	0.260	87	80 - 120	2011-11-05

Standard (CCV-1)

QC Batch: 86135 | Date Analyzed: 2011-11-05 | Analyzed By: AG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	1.07	107	80 - 120	2011-11-05

Standard (CCV-2)

QC Batch: 86135 | Date Analyzed: 2011-11-05 | Analyzed By: AG

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	1.15	115	80 - 120	2011-11-05

Standard (CCV-1)

QC Batch: 86138 Date Analyzed: 2011-11-04 Analyzed By: kg

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	266	106	80 - 120	2011-11-04

Standard (CCV-2)

QC Batch: 86138 Date Analyzed: 2011-11-04 Analyzed By: kg

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	237	95	80 - 120	2011-11-04

Standard (ICV-1)

QC Batch: 86236 Date Analyzed: 2011-11-09 Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	96.6	97	85 - 115	2011-11-09

Standard (CCV-1)

QC Batch: 86236 Date Analyzed: 2011-11-09 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	103	103	85 - 115	2011-11-09

Standard (ICV-1)

QC Batch: 86237 Date Analyzed: 2011-11-09 Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	104	104	85 - 115	2011-11-09

Standard (CCV-1)

QC Batch: 86237 Date Analyzed: 2011-11-09 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	96.2	96	85 - 115	2011-11-09

Appendix

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704392-10-TX	Midland

Standard Flags

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

Attachments

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

WO# 11110410

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 Tavarez

PROJECT NO.: 114-6410136

PROJECT NAME: Foster Eddy #14 Well
Eddy Co, NM

LAB I.D. NUMBER	DATE 2011	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 Mod. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
281549	10/31		S		X	AH-1 0-1'	1				X		X	X	X										X				
550						1-1.5'	1				X														X				
551						2-2.5'	1				X														X				
552						AH-2 0-1'	1				X		X	X											X				
553						1-1.5'	1				X														X				
554						2-2.5'	1				X														X				
555						AH-3 0-1'	1				X		X	X											X				
556						1-1.5'	1				X														X				
557						2-2.5'	1				X														X				
558						3-3.5'	1				X										Hold								

RELINQUISHED BY: (Signature) C R — Date: 11-3-11 Time: 16:50

RECEIVED BY: (Signature) — Date: — Time:

SAMPLED BY: (Print & Initial) Kim — Date: 10/31/11 Time:

RELINQUISHED BY: (Signature) — Date: — Time:

RECEIVED BY: (Signature) — Date: — Time:

SAMPLE SHIPPED BY: (Circle) FEDEX HAND DELIVERED BUS UPS — AIRBILL #: — OTHER:

RELINQUISHED BY: (Signature) — Date: — Time:

RECEIVED BY: (Signature) — Date: — Time:

TETRA TECH CONTACT PERSON: Ike Tavarez — Results by:

RECEIVING LABORATORY: TRACE
ADDRESS:
CITY: Midland STATE: TX ZIP:
CONTACT: PHONE:

RECEIVED BY: (Signature)
DATE: 11.3.11 TIME: 16:50

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4.3°C Iced

REMARKS: Run deeper depth if TPH exceed 5,000 mg/kg. Run deeper depth if Benzene exceed 10 mg/kg — or Total BTEX exceeds 50 mg/kg.

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