

# SITE INFORMATION

2RP.447

## Report Type: Closure Report

General Site Information:		
<b>Site:</b>	Coyote State #5 Water Trunk Line	
<b>Company:</b>	COG Operating LLC	
<b>Section, Township and Range</b>	Unit I - Sec 36 - T17S - R31E	
<b>Lease Number:</b>	30-015-32563	
<b>County:</b>	Eddy County	
<b>GPS:</b>	32.78846° N	103.81546° W
<b>Surface Owner:</b>	State	
<b>Mineral Owner:</b>		
<b>Directions:</b>		

Release Data:	
<b>Date Released:</b>	3/27/2010
<b>Type Release:</b>	Produced Water
<b>Source of Contamination:</b>	Produced Water Trunk Line
<b>Fluid Released:</b>	150 bbls
<b>Fluids Recovered:</b>	140 bbls

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

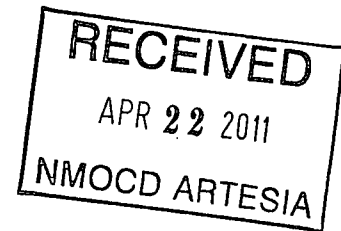
Ranking Criteria		
<b>Depth to Groundwater:</b>	<b>Ranking Score</b>	<b>Site Data</b>
<50 ft	20	
50-99 ft	10	
>100 ft.	0	0
<b>Wellhead Protection:</b>	<b>Ranking Score</b>	<b>Site Data</b>
Water Source <1,000 ft., Private <200 ft.	20	
Water Source >1,000 ft., Private >200 ft.	0	0
<b>Surface Body of Water: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

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



TETRA TECH

April 5, 2011



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

**Re: Closure Report for the COG Operating LLC., Coyote State #5, Water Trunk Line Leak, Unit I, Section 36, Township 17 South, Range 31 East, Eddy County, New Mexico. (API 30-015-03563)**

Mr. Bratcher:

Tetra Tech Inc. (Tetra Tech) was contacted by COG Operating LLC. (COG) to assess the spill from the Coyote State #5, Water Trunk Line Leak located in Unit I, Section 36 Township 17 South, Range 31 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.78846°, W 103.81546°. 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 March 27, 2010. Approximately 150 barrels of produced water was released from a broken tee on a produced water truck line. Vacuum trucks were utilized to recover 140 barrels of standing fluids. The initial C-141 is enclosed in Appendix A.

### **Groundwater**

No water wells were listed within Section 36. According to the *Geology and Groundwater Resources of Eddy County, New Mexico* (Report 3), one well is located in Section 34, with a reported depth to water of 271' below surface. According to the NMOCD groundwater map, the average depth to groundwater in this area is greater than 350' below surface. The *Geology and Groundwater Resources of Eddy County, New Mexico* (Report 3) well report data is shown in Appendix B.

Tetra Tech

1910 North Big Spring, Midland, TX 79705

Tel 432.682.4559 Fax 432.682.3946 [www.tetrattech.com](http://www.tetrattech.com)



## 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 Results

On April 22, 2010, Tetra Tech personnel inspected and sampled the spill area. The spill area is shown on Figure 3. A total of fifteen (15) auger holes (AH-1 through AH-15) were installed using a stainless steel hand auger to assess the impacted soils. Select samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method SM 4500-CL B. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The results of the sampling are summarized in Table 1.

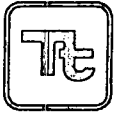
No BTEX and TPH concentrations exceeded the RRAL. Chloride impact was vertically defined in the majority of the auger holes, with the exception of AH-4, AH-5, AH-7, AH-8, AH-9 and AH-10. These auger holes were not vertically defined and required additional delineation.

On August 11, 2010, Tetra Tech personnel were onsite to supervise the installation of six (6) soil borings (SB-1 through SB-6) utilizing an air rotary drilling rig. The soil boring locations are shown on Figure 3. The borings were installed in the vicinity of the undefined auger holes. The soil borings were extended to a depth from 20' to 50' below surface, with samples collected at 2 to 3 foot intervals for the first 10 feet and 5 foot intervals thereafter and submitted to the laboratory for chloride analysis. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The results of the sampling are summarized in Table 1.

Referring to Table 1, the deepest chloride impact was detected in the areas of AH-8 (SB-2) and AH-9 (SB-3) at a depth of approximately 20' below surface. Auger holes (AH-3, AH-4, AH-5, AH-6, AH-7 and AH-10) showed an impact to approximate depths of 3' to 10' below surface. The remaining areas of auger holes (AH-1, AH-2, AH-11, AH-12, AH-13, AH-14 and AH-15) showed a maximum impact to 0-1' below surface.

## Corrective Action

As approved by the NMOCD, from October 26 through November 11, 2010, the soils were excavated to depths as shown on the attached Figure 4. Approximately 2,700 yds<sup>3</sup> of soil was removed and taken to Controlled Recovery, Inc of Carlsbad, New Mexico for disposal. Due to the sandy conditions and to an active line between the



TETRA TECH

excavation and the road, the excavation in the vicinity of SB-4 and SB-6 was only extended to depths of 5' below surface, while the area in the vicinity of SB-2 and SB-3 were excavated to a depth of 12 to 14' below surface. In these two areas, a plastic liner was installed at a depth of 4' below surface. The excavated areas were then backfilled with clean soil to grade.

**Closure Request**

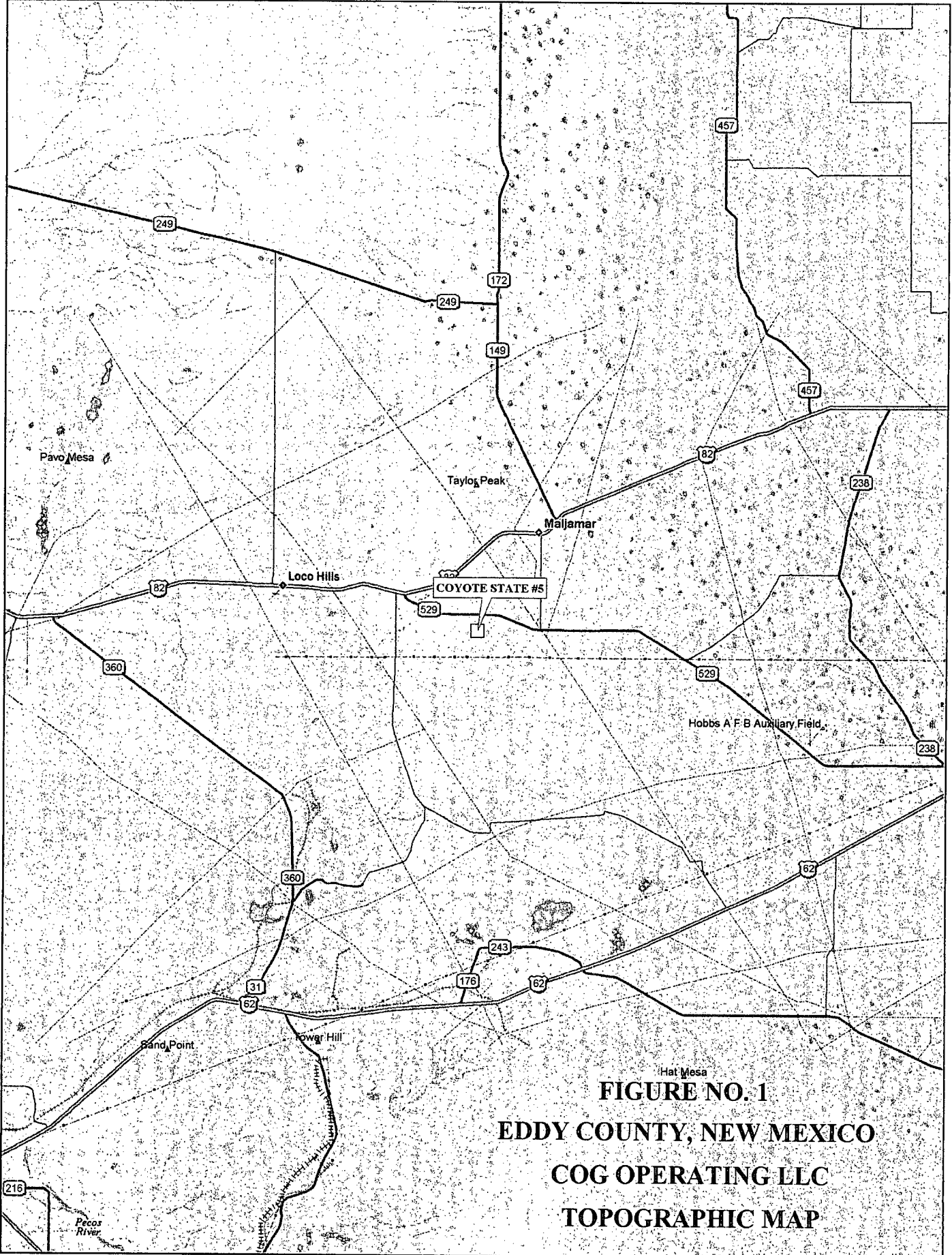
Based upon the remediation performed at this site, COG Operating LLC respectfully requests closure of this site. A form C-141 final is included in Appendix A. If you have any question or comments concerning the activities performed at the Site, please call me at (432) 682-4559

Respectfully submitted,  
TETRA TECH, INC.

Ike Tavarez, P.E.  
Senior Project Manager

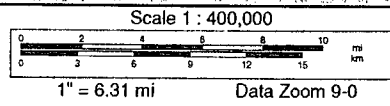
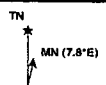
cc: Pat Ellis – COG

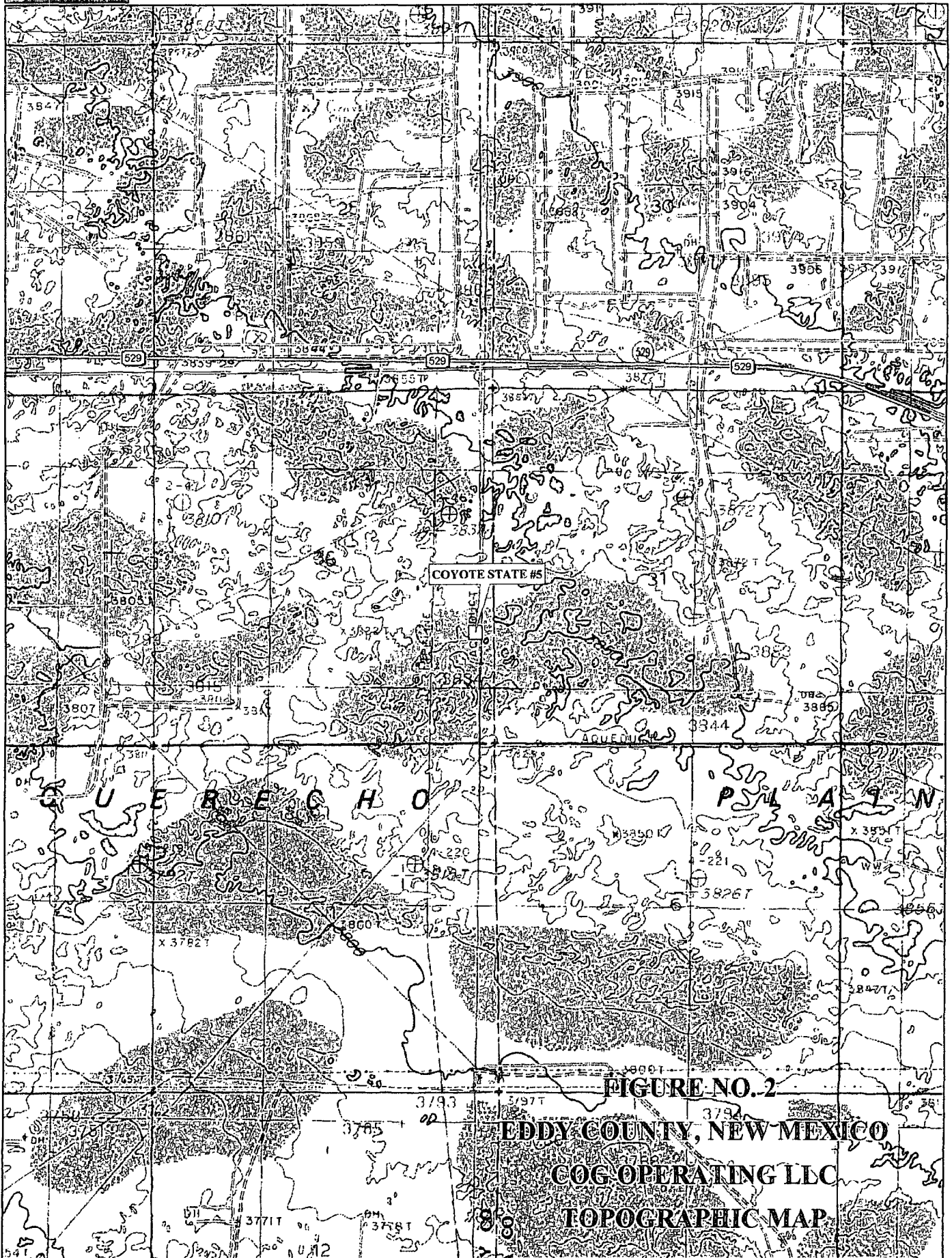
## FIGURES



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

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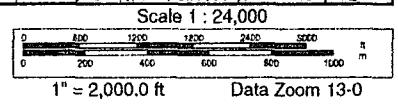
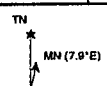
COYOTE STATE #5

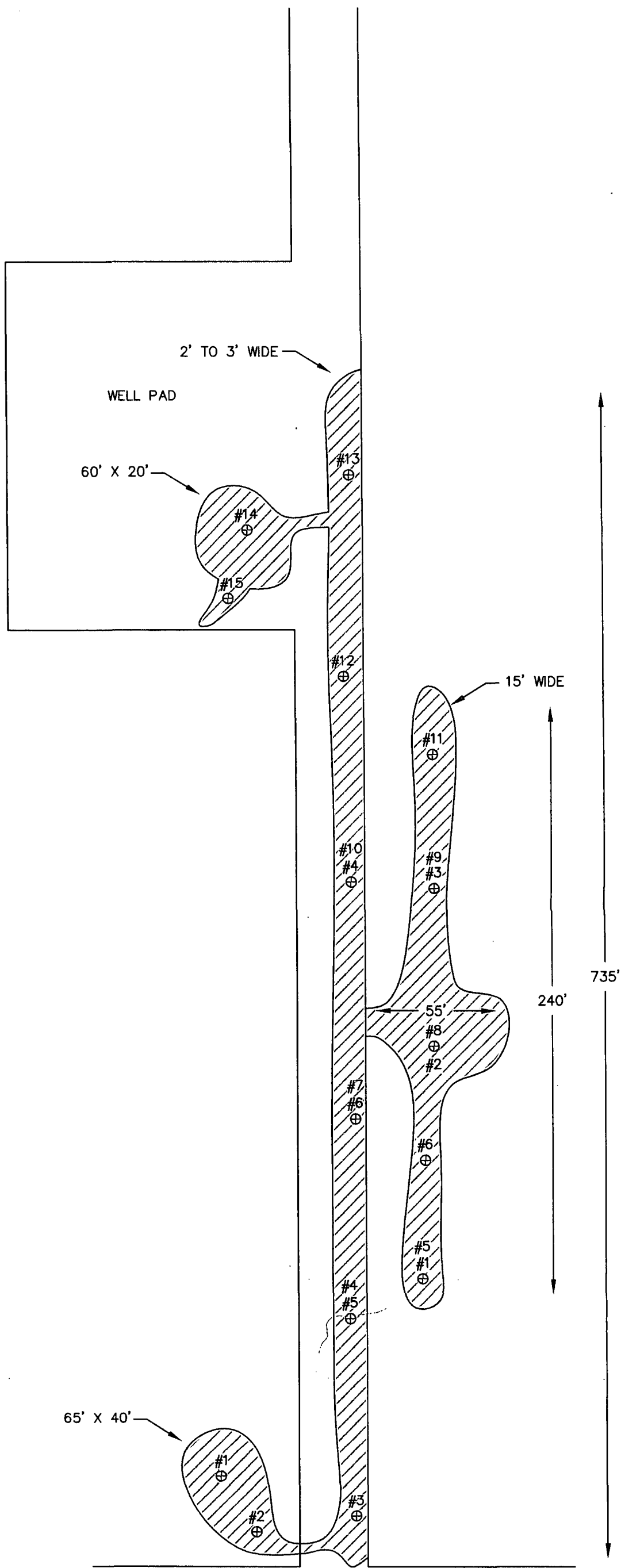
SUPEREGHO PSUA

FIGURE NO. 2

EDDY COUNTY, NEW MEXICO  
COG OPERATING LLC  
TOPOGRAPHIC MAP

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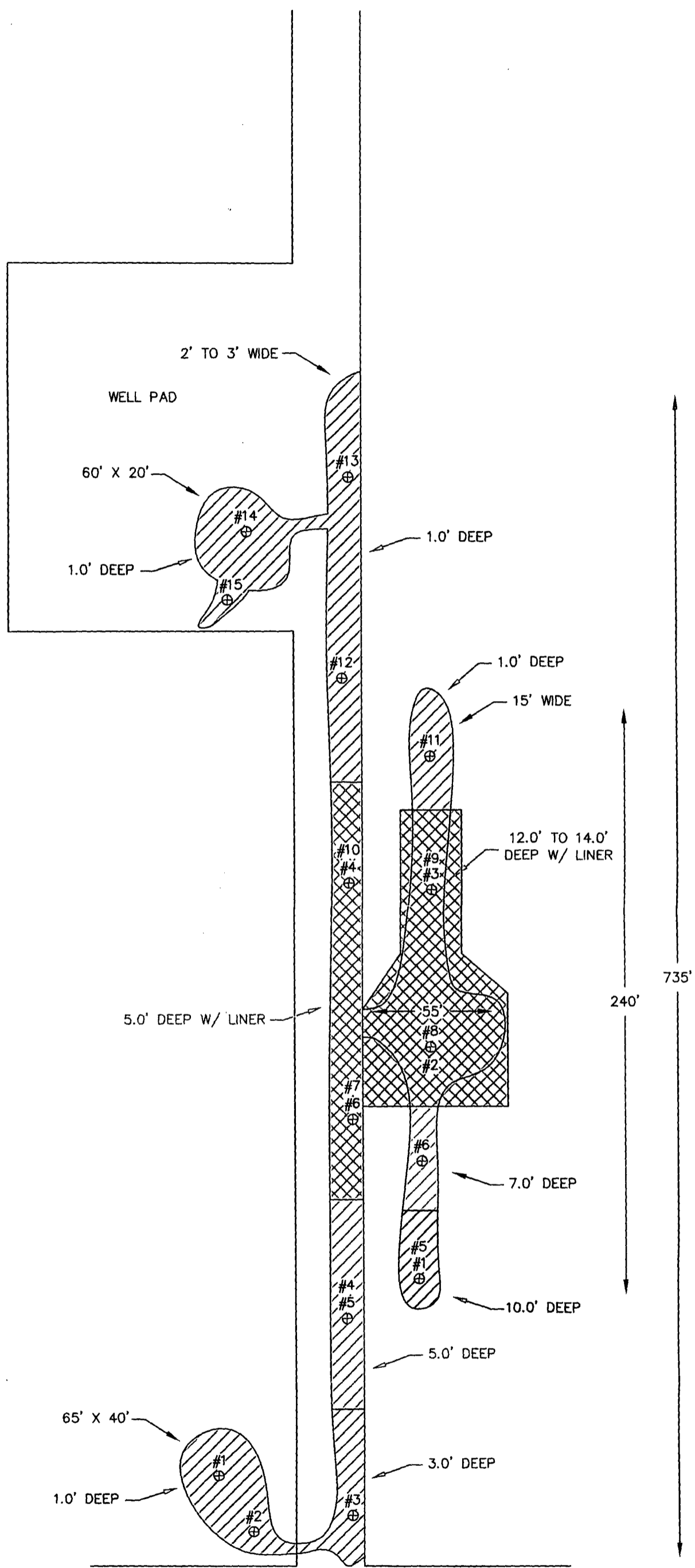
▨ SPILL AREA  
⊕ SAMPLE LOCATIONS  
⊕ SOIL BORING LOCATIONS

NOT TO SCALE

DATE: 5/5/10  
DWL BY: JJ  
FILE: H:\COY\8420490 COYOTE STATE #5

FIGURE NO. 3
EDDY COUNTY, NEW MEXICO
COG OPERATING LLC
COYOTE STATE #5
TETRA TECH, INC. MIDLAND, TEXAS





	EXCAVATION DEPTH 1.0'
	EXCAVATION DEPTH 3.0'
	EXCAVATION DEPTH 5.0'
	EXCAVATION DEPTH 7.0'
	EXCAVATION DEPTH 10.0'
	EXCAVATION DEPTH 12.0' TO 14.0'
	SAMPLE LOCATIONS
	SOIL BORING LOCATIONS

NOT TO SCALE

DATE:	5/5/10
DRAWN BY:	JJ
FILE:	W:\COG\0420499
	COYOTE STATE #5

<b>FIGURE NO. 4</b>
EDDY COUNTY, NEW MEXICO
COG OPERATING LLC
COYOTE STATE #5
TETRA TECH, INC. MIDLAND, TEXAS

## TABLES











**Table 1**  
**COG Operating LLC.**  
**Coyote State #5**  
**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)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total					
AH-7	4/22/2010	0-1'			X	<1.00	<50.0	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	7,320
		1-1.5'			X	-	-	-	-	-	-	-	682
		2-2.5'				X	-	-	-	-	-	-	826
		3-3.5'				X	-	-	-	-	-	-	1,360
		4-4.5'				X	-	-	-	-	-	-	3,620
		5-5.5'				X	-	-	-	-	-	-	3,950
		6-6.5'			X								3,910
		7-7.5'			X								4,060
		8-8.5'			X								4,370
9-9.5'			X								5,200		
SB-6	8/11/2010	1'			X	<2.00	<50.0	<50.0	-	-	-	-	5,600
		3'			X	-	-	-	-	-	-	-	1,180
		5'				X	-	-	-	-	-	-	1,930
		7'			X								4,030
		10'			X								2,720
		15'			X		-	-	-	-	-	-	1,540
		20'			X		-	-	-	-	-	-	734
		25'			X		-	-	-	-	-	-	540
		30'			X		-	-	-	-	-	-	320
40'			X		-	-	-	-	-	-	619		
50'			X		-	-	-	-	-	-	530		










**Table 1  
COG Operating LLC.  
Coyote State #5  
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)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total					
AH-11	4/22/2010	0-1'			X	<1.00	<50.0	<50.0	-	-	-	-	3,200
		1-1.5'		X		-	-	-	-	-	-	-	<200
		2-2.5'		X		-	-	-	-	-	-	-	213
		3-3.5'		X		-	-	-	-	-	-	-	<200
		4-4.5'		X		-	-	-	-	-	-	-	<200
AH-12	4/22/2010	0-1'			X	<1.00	<50.0	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	873
		1-1.5'		X		-	-	-	-	-	-	-	<200
		2-2.5'		X		-	-	-	-	-	-	-	<200
		3-3.5'		X		-	-	-	-	-	-	-	247
		4-4.5'		X		-	-	-	-	-	-	-	<200
AH-13	4/22/2010	0-1'			X	<1.00	<50.0	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	5,780
		1-1.5'		X		-	-	-	-	-	-	-	<200
		2-2.5'		X		-	-	-	-	-	-	-	<200
		3-3.5'		X		-	-	-	-	-	-	-	<200
AH-14	4/22/2010	0-1'			X	<1.00	<50.0	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	2,040
		1-1.5'		X		-	-	-	-	-	-	-	208
		2-2.5'		X		-	-	-	-	-	-	-	<200
		3-3.5'		X		-	-	-	-	-	-	-	<200
AH-15	4/22/2010	0-1'			X	<1.00	<50.0	<50.0	-	-	-	-	811
		1-1.5'		X		-	-	-	-	-	-	-	<200
		2-2.5'		X		-	-	-	-	-	-	-	<200
		3-3.5'		X		-	-	-	-	-	-	-	<200

BEB Below Excavation Bottom

(-) Not Analyzed

 Removed soils

 Proposed excavation depths - Not achieved due to sandy formation

 Liner

**APPENDIX A  
INITIAL/FINAL C-141**

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

0499

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	COYOTE STATE #5	Facility Type	Well

Surface Owner	State	Mineral Owner	Lease No. V-6248 / (API#) 30-015-32563
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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
I	36	17S	31E	2310	South	400	East	EDDY

Latitude 32.78846 Longitude 103.81546

**NATURE OF RELEASE**

Type of Release	Produced Water	Volume of Release	150bbls	Volume Recovered	140bbls
Source of Release	Produced water trunk-line	Date and Hour of Occurrence	03/27/2010	Date and Hour of Discovery	03/27/2010 8:30 a.m.
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom	Mike Bratcher- OCD		
By Whom?	Rick Wright	Date and Hour	03/27/2010		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted. Describe Fully.\*

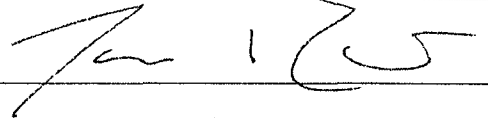
Describe Cause of Problem and Remedial Action Taken.\*

The cause of the problem was due to a broken tee on a produced water trunk-line. The broken tee has been repaired.

Describe Area Affected and Cleanup Action Taken.\*

Approximately 150bbls of produced water was initially released from the trunk-line between the Fox and Weasel Tank Batteries. A vacuum truck was called and recovered 140bbls. One-call protocol will be made by dirt contractor who will then remove the saturated soil prior to sampling by Tetra Tech. (The spill was from a trunk line from the Fox and Weasel Batteries and originated 450' south of the Coyote State #5 well) Tetra Tech will sample the spill site area to delineate any possible contamination from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation.

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:		<b>OIL CONSERVATION DIVISION</b>	
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:	04/05/2010	Phone:	432-212-2399
			Attached <input type="checkbox"/>

\* 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

Form C-141  
Revised October 10, 2003

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

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 <b>COG Operating LLC</b>	Contact <b>Pat Ellis</b>
Address <b>550 W. Texas, Suite 1300 Midland, Texas 79701</b>	Telephone No. <b>(432) 685-4332</b>
Facility Name <b>Coyote State #5</b>	Facility Type <b>Water Trunk Line</b>

Surface Owner: State	Mineral Owner	Lease No. API # 30-015-32563
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**LOCATION OF RELEASE**

Unit Letter I	Section 36	Township 17S	Range 31E	Feet from the 2310	North/South Line S	Feet from the 400	East/West Line E	County Eddy
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Latitude N 32.78846° Longitude W 103.81546°

**NATURE OF RELEASE**

Type of Release: Produced Water	Volume of Release 150 bbls	Volume Recovered 140 bbls
Source of Release: Produced Water Trunk Line	Date and Hour of Occurrence 03/27/10 1:16 p.m.	Date and Hour of Discovery 03/27/10 8:30 a.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Bratcher - NMOCD	
By Whom? Rick Wright	Date and Hour 03/27/10	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.\*

N/A

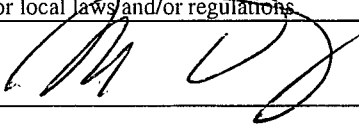
Describe Cause of Problem and Remedial Action Taken.\*

Broken tee on a produced water trunk line. The broken tee has been repaired.

Describe Area Affected and Cleanup Action Taken.\*

Approximately 150 bbls of produced water was initially released from the trunk line between the Fox and the Weasel tank batteries. A vacuum truck recovered 140 bbls of fluid. The saturated soil was removed and hauled to proper disposal. Tetra Tech inspected site and collected samples to define spills extent. An approved work plan was prepared and implemented. Removed soil was hauled away for proper disposal. Liner was installed in 2 areas. Site was then brought up to surface grade with clean backfill material. Tetra Tech prepared closure report and submitted to NMOCD for review.

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

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

\* Attach Additional Sheets If Necessary

**APPENDIX B  
WATER WELL REPORT**



**Water Well Data  
Average Depth to Groundwater (ft)  
Coyote State #5 Trunk Line Leak**

**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

**16 South 32 East**

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

**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

**17 South 32 East**

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

**18 South 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

**18 South 32 East**

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

- 88 New Mexico State Engineers Well Reports
- 105 USGS Well Reports
- 90 Geology and Groundwater Conditions in Southern Lea, County, NM (Report 6)  
Geology and Groundwater Resources of Eddy County, NM (Report 3)
- 34 NMOCD - Groundwater Data

GROUND WATER REPORT 3 PLATE 4

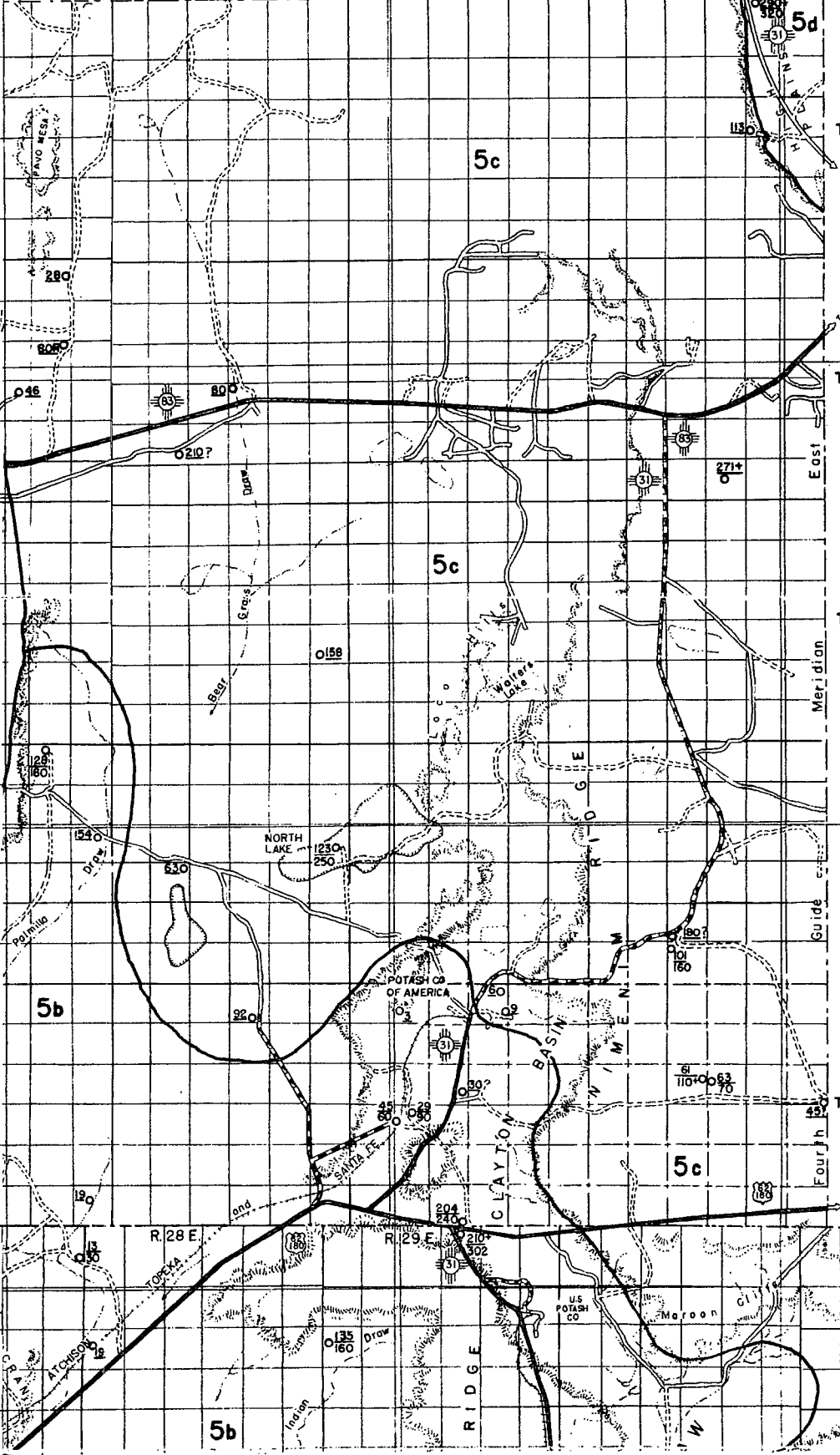
104°00'

103°50'

33°00'

U N T Y

E. Parallel R.29 E. R.30 E. South R.31 E.



T.16S.

T.17S.

T.18S.

T.19S.

T.20S.

T.21S.

TO MALAMAR

TO LEWINGTON

East

Meridian

Guide

Fourth

TO HOBBS

R.31E.

WAVO MESA

280

0.46

0.20?

0.58

5b

0.13

0.13

5b

5c

5c

5c

5c

NORTH LAKE

POTASH CO. OF AMERICA

SANTA FE

CLAYTON BASIN

RIDGE

Waters' Lake

U.S. POTASH CO.

MARION GU.

CLAYTON BASIN

CLAYTON BASIN

RIDGE

RIDGE

TO MALAMAR

TO LEWINGTON

East

Meridian

Guide

Fourth

TO HOBBS

R.31E.

TABLE 1. RECORDS OF WELLS IN EDDY COUNTY, NEW MEXICO. (Continued)

LOCATION NUMBER	OWNER OR NAME	DATE COMPLETED	TOPOGRAPHIC SITUATION	ALTITUDE ABOVE SEA LEVEL (feet)	DEPTH OF WELL (feet)	DIAMETER OF WELL (inches)	PRINCIPAL WATER-BEARING BED	
							CHARACTER OF MATERIAL	GEOLOGIC UNIT
17.28.2.240	Hal Bogle	-	Flat between mesas	-	-	6 (?)	Redbeds (?)	Dockum (?)
14.220	do.	-	Rolling	-	-	7	do.	do.
19.200	do.	-	do.	-	-	8	Redbeds, gypsum (?)	Chalk Bluff or Rustler
22.230	-	-	Flat between mesas	-	-	6	Redbeds (?)	Rustler or Dockum (?)
17.29.22.110	-	-	Bear Grass draw	3,550	-	6	do.	Dockum (?)
29.400	Bishop (?)	-	Flat	-	-	7	do.	do.
17.31.34.000	-	-	Rolling	-	-	6 (?)	Redbeds	Dockum
18.21.13.310	Andy Teel	1915	-	4,100	520	8	Limestone	San Andres
27.440	do.	1947	Broad valley	4,200	667	10	do.	do.
32.430	George Teel	1946	Rolling	4,300	815	6	do.	do.
18.23.6.140	Couhape Bros.	1941	S. of Rio Penasco	4,060	500	10	do.	do.
18.25.23.111	G. M. Phelps	-	Blackdom Terrace	-	-	-	Alluvium (?)	Quaternary (?)

See explanation at beginning of table.

See explanation at beginning of table.

## GROUND WATER

## EDDY COUNTY

LOCATION NUMBER	WATER LEVEL		YIELD (g.p.m.)	METHOD OF LIFT	USE OF WATER	REMARKS
	BELOW LAND SURFACE (feet)	DATE OF MEASUREMENT				
17.28.2.240	27.6	Dec. 1, 1948	3	W	S	Depth to water measured while pump- ing.
14.220	80	-	61	W	S & D	Driller: Cy Hinshaw. See analysis, Table 3.
19.200	224.3	Dec. 2, 1948	1.2	W	S	Depth to water measured while pump- ing.
22.230	45.5	Dec. 1, 1948	-	N	N	Abandoned stock well.
17.29.22.110	79.7	Nov. 29, 1948	3 E.	W	S	Depth to water measured while pump- ing.
29.400	210	Dec. 3, 1948	1.1	W	S	do.
17.31.34.000	271+	Dec. 6, 1948	3.5	W	S	do. See analysis, Table 3.
18.21.13.310	505	-	10 R.	W	S & D	Formerly C.C.C. well. Cased to 30 ft.
27.440	530	-	-	W	S	Cased to 120 ft.
32.430	800 (?)	-	12 R.	W	S & D	Lowered cylinder 5 ft. in 1948 because water level declined. Cased to 380 ft.
18.23.6.140	440	Jan. 12, 1950	-	W	S & D	
18.25.23.111	117.8	Jan. 1950	-	W	S	

See explanation at beginning of table.

1 Measured Dec. 3, 1948.

**APPENDIX C  
LABORATORY ANALYSIS**

## Summary Report

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

Report Date: August 24, 2010

Work Order: 10081645



Project Location: Eddy County, NM  
Project Name: COG/Coyote State #5  
Project Number: 114-6400499

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
241262	SB-1 1'	soil	2010-08-11	00:00	2010-08-13
241263	SB-1 3'	soil	2010-08-11	00:00	2010-08-13
241264	SB-1 5'	soil	2010-08-11	00:00	2010-08-13
241265	SB-1 7'	soil	2010-08-11	00:00	2010-08-13
241266	SB-1 10'	soil	2010-08-11	00:00	2010-08-13
241267	SB-1 15'	soil	2010-08-11	00:00	2010-08-13
241268	SB-1 20'	soil	2010-08-11	00:00	2010-08-13
241269	SB-1 25'	soil	2010-08-11	00:00	2010-08-13
241273	SB-2 1'	soil	2010-08-11	00:00	2010-08-13
241274	SB-2 3'	soil	2010-08-11	00:00	2010-08-13
241275	SB-2 5'	soil	2010-08-11	00:00	2010-08-13
241276	SB-2 7'	soil	2010-08-11	00:00	2010-08-13
241277	SB-2 10'	soil	2010-08-11	00:00	2010-08-13
241278	SB-2 15'	soil	2010-08-11	00:00	2010-08-13
241279	SB-2 20'	soil	2010-08-11	00:00	2010-08-13
241280	SB-2 25'	soil	2010-08-11	00:00	2010-08-13
241281	SB-2 30'	soil	2010-08-11	00:00	2010-08-13
241283	SB-3 1'	soil	2010-08-11	00:00	2010-08-13
241284	SB-3 3'	soil	2010-08-11	00:00	2010-08-13
241285	SB-3 5'	soil	2010-08-11	00:00	2010-08-13
241286	SB-3 7'	soil	2010-08-11	00:00	2010-08-13
241287	SB-3 10'	soil	2010-08-11	00:00	2010-08-13
241288	SB-3 15'	soil	2010-08-11	00:00	2010-08-13
241289	SB-3 20'	soil	2010-08-11	00:00	2010-08-13
241290	SB-3 25'	soil	2010-08-11	00:00	2010-08-13
241291	SB-4 1'	soil	2010-08-11	00:00	2010-08-13
241292	SB-4 3'	soil	2010-08-11	00:00	2010-08-13
241293	SB-4 5'	soil	2010-08-11	00:00	2010-08-13
241294	SB-4 7'	soil	2010-08-11	00:00	2010-08-13
241295	SB-4 10'	soil	2010-08-11	00:00	2010-08-13

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*This is only a summary. Please, refer to the complete report package for quality control data.*

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
241296	SB-4 15'	soil	2010-08-11	00:00	2010-08-13
241297	SB-4 20'	soil	2010-08-11	00:00	2010-08-13
241298	SB-4 25'	soil	2010-08-11	00:00	2010-08-13
241299	SB-5 1'	soil	2010-08-11	00:00	2010-08-13
241300	SB-5 3'	soil	2010-08-11	00:00	2010-08-13
241301	SB-5 5'	soil	2010-08-11	00:00	2010-08-13
241302	SB-5 7'	soil	2010-08-11	00:00	2010-08-13
241303	SB-5 10'	soil	2010-08-11	00:00	2010-08-13
241304	SB-5 15'	soil	2010-08-11	00:00	2010-08-13
241305	SB-5 20'	soil	2010-08-11	00:00	2010-08-13
241307	SB-6 1'	soil	2010-08-11	00:00	2010-08-13
241308	SB-6 3'	soil	2010-08-11	00:00	2010-08-13
241309	SB-6 5'	soil	2010-08-11	00:00	2010-08-13
241310	SB-6 7'	soil	2010-08-11	00:00	2010-08-13
241311	SB-6 10'	soil	2010-08-11	00:00	2010-08-13
241312	SB-6 15'	soil	2010-08-11	00:00	2010-08-13
241313	SB-6 20'	soil	2010-08-11	00:00	2010-08-13
241314	SB-6 25'	soil	2010-08-11	00:00	2010-08-13
241315	SB-6 30'	soil	2010-08-11	00:00	2010-08-13
241316	SB-6 40'	soil	2010-08-11	00:00	2010-08-13
241317	SB-6 50'	soil	2010-08-11	00:00	2010-08-13
241320	SB-3 30'	soil	2010-08-11	00:00	2010-08-13

Sample - Field Code	BTEX				TPH DRO - NEW DRO (mg/Kg)	TPH GRO GRO (mg/Kg)
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)		
241262 - SB-1 1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
241273 - SB-2 1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
241283 - SB-3 1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
241291 - SB-4 1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
241299 - SB-5 1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
241307 - SB-6 1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00

## Sample: 241262 - SB-1 1'

Param	Flag	Result	Units	RL
Chloride		808	mg/Kg	4.00

## Sample: 241263 - SB-1 3'

Param	Flag	Result	Units	RL
Chloride		3920	mg/Kg	4.00

## Sample: 241264 - SB-1 5'

---

Param	Flag	Result	Units	RL
Chloride		4710	mg/Kg	4.00

---

**Sample: 241265 - SB-1 7'**

---

Param	Flag	Result	Units	RL
Chloride		3670	mg/Kg	4.00

---

**Sample: 241266 - SB-1 10'**

---

Param	Flag	Result	Units	RL
Chloride		8120	mg/Kg	4.00

---

**Sample: 241267 - SB-1 15'**

---

Param	Flag	Result	Units	RL
Chloride		295	mg/Kg	4.00

---

**Sample: 241268 - SB-1 20'**

---

Param	Flag	Result	Units	RL
Chloride		553	mg/Kg	4.00

---

**Sample: 241269 - SB-1 25'**

---

Param	Flag	Result	Units	RL
Chloride		284	mg/Kg	4.00

---

**Sample: 241273 - SB-2 1'**

---

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

---

**Sample: 241274 - SB-2 3'**

---

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

---



**Sample: 241275 - SB-2 5'**

Param	Flag	Result	Units	RL
Chloride		247	mg/Kg	4.00

**Sample: 241276 - SB-2 7'**

Param	Flag	Result	Units	RL
Chloride		4970	mg/Kg	4.00

**Sample: 241277 - SB-2 10'**

Param	Flag	Result	Units	RL
Chloride		11200	mg/Kg	4.00

**Sample: 241278 - SB-2 15'**

Param	Flag	Result	Units	RL
Chloride		4290	mg/Kg	4.00

**Sample: 241279 - SB-2 20'**

Param	Flag	Result	Units	RL
Chloride		4020	mg/Kg	4.00

**Sample: 241280 - SB-2 25'**

Param	Flag	Result	Units	RL
Chloride		2840	mg/Kg	4.00

**Sample: 241281 - SB-2 30'**

Param	Flag	Result	Units	RL
Chloride		369	mg/Kg	4.00

**Sample: 241283 - SB-3 1'**

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

**Sample: 241284 - SB-3 3'**

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

**Sample: 241285 - SB-3 5'**

Param	Flag	Result	Units	RL
Chloride		1630	mg/Kg	4.00

**Sample: 241286 - SB-3 7'**

Param	Flag	Result	Units	RL
Chloride		4650	mg/Kg	4.00

**Sample: 241287 - SB-3 10'**

Param	Flag	Result	Units	RL
Chloride		9960	mg/Kg	4.00

**Sample: 241288 - SB-3 15'**

Param	Flag	Result	Units	RL
Chloride		4500	mg/Kg	4.00

**Sample: 241289 - SB-3 20'**

Param	Flag	Result	Units	RL
Chloride		4090	mg/Kg	4.00

**Sample: 241290 - SB-3 25'**

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

**Sample: 241291 - SB-4 1'**

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

**Sample: 241292 - SB-4 3'**

Param	Flag	Result	Units	RL
Chloride		416	mg/Kg	4.00

**Sample: 241293 - SB-4 5'**

Param	Flag	Result	Units	RL
Chloride		4740	mg/Kg	4.00

**Sample: 241294 - SB-4 7'**

Param	Flag	Result	Units	RL
Chloride		6610	mg/Kg	4.00

**Sample: 241295 - SB-4 10'**

Param	Flag	Result	Units	RL
Chloride		3940	mg/Kg	4.00

**Sample: 241296 - SB-4 15'**

Param	Flag	Result	Units	RL
Chloride		610	mg/Kg	4.00

**Sample: 241297 - SB-4 20'**

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

**Sample: 241298 - SB-4 25'**

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

**Sample: 241299 - SB-5 1'**

Param	Flag	Result	Units	RL
Chloride		2060	mg/Kg	4.00

**Sample: 241300 - SB-5 3'**

Param	Flag	Result	Units	RL
Chloride		760	mg/Kg	4.00

**Sample: 241301 - SB-5 5'**

Param	Flag	Result	Units	RL
Chloride		687	mg/Kg	4.00

**Sample: 241302 - SB-5 7'**

Param	Flag	Result	Units	RL
Chloride		636	mg/Kg	4.00

**Sample: 241303 - SB-5 10'**

Param	Flag	Result	Units	RL
Chloride		837	mg/Kg	4.00

**Sample: 241304 - SB-5 15'**

Param	Flag	Result	Units	RL
Chloride		1020	mg/Kg	4.00

**Sample: 241305 - SB-5 20'**

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

**Sample: 241307 - SB-6 1'**

Param	Flag	Result	Units	RL
Chloride		5600	mg/Kg	4.00

**Sample: 241308 - SB-6 3'**

Param	Flag	Result	Units	RL
Chloride		1180	mg/Kg	4.00

**Sample: 241309 - SB-6 5'**

Param	Flag	Result	Units	RL
Chloride		1930	mg/Kg	4.00

**Sample: 241310 - SB-6 7'**

Param	Flag	Result	Units	RL
Chloride		4030	mg/Kg	4.00

**Sample: 241311 - SB-6 10'**

Param	Flag	Result	Units	RL
Chloride		2720	mg/Kg	4.00

**Sample: 241312 - SB-6 15'**

Param	Flag	Result	Units	RL
Chloride		1540	mg/Kg	4.00

**Sample: 241313 - SB-6 20'**

Param	Flag	Result	Units	RL
Chloride		734	mg/Kg	4.00

**Sample: 241314 - SB-6 25'**

Param	Flag	Result	Units	RL
Chloride		540	mg/Kg	4.00

**Sample: 241315 - SB-6 30'**

Param	Flag	Result	Units	RL
Chloride		320	mg/Kg	4.00

**Sample: 241316 - SB-6 40'**

Param	Flag	Result	Units	RL
Chloride		619	mg/Kg	4.00

**Sample: 241317 - SB-6 50'**

Param	Flag	Result	Units	RL
Chloride		530	mg/Kg	4.00

**Sample: 241320 - SB-3 30'**

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



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 5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313  
 6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260  
 E-Mail: lab@traceanalysis.com

### Certifications

**WBENC:** 237019      **HUB:** 1752439743100-86536      **DBE:** VN 20657  
**NCTRCA** WFWB38444Y0909

### NELAP Certifications

**Lubbock:** T104704219-08-TX      **El Paso:** T104704221-08-TX      **Midland:** T104704392-08-TX  
 LELAP-02003      LELAP-02002  
 Kansas E-10317

## Analytical and Quality Control Report

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

Report Date: August 24, 2010

Work Order: 10081645



Project Location: Eddy County, NM  
 Project Name: COG/Coyote State #5  
 Project Number: 114-6400499

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
241262	SB-1 1'	soil	2010-08-11	00:00	2010-08-13
241263	SB-1 3'	soil	2010-08-11	00:00	2010-08-13
241264	SB-1 5'	soil	2010-08-11	00:00	2010-08-13
241265	SB-1 7'	soil	2010-08-11	00:00	2010-08-13
241266	SB-1 10'	soil	2010-08-11	00:00	2010-08-13
241267	SB-1 15'	soil	2010-08-11	00:00	2010-08-13
241268	SB-1 20'	soil	2010-08-11	00:00	2010-08-13
241269	SB-1 25'	soil	2010-08-11	00:00	2010-08-13
241273	SB-2 1'	soil	2010-08-11	00:00	2010-08-13
241274	SB-2 3'	soil	2010-08-11	00:00	2010-08-13

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
241275	SB-2 5'	soil	2010-08-11	00:00	2010-08-13
241276	SB-2 7'	soil	2010-08-11	00:00	2010-08-13
241277	SB-2 10'	soil	2010-08-11	00:00	2010-08-13
241278	SB-2 15'	soil	2010-08-11	00:00	2010-08-13
241279	SB-2 20'	soil	2010-08-11	00:00	2010-08-13
241280	SB-2 25'	soil	2010-08-11	00:00	2010-08-13
241281	SB-2 30'	soil	2010-08-11	00:00	2010-08-13
241283	SB-3 1'	soil	2010-08-11	00:00	2010-08-13
241284	SB-3 3'	soil	2010-08-11	00:00	2010-08-13
241285	SB-3 5'	soil	2010-08-11	00:00	2010-08-13
241286	SB-3 7'	soil	2010-08-11	00:00	2010-08-13
241287	SB-3 10'	soil	2010-08-11	00:00	2010-08-13
241288	SB-3 15'	soil	2010-08-11	00:00	2010-08-13
241289	SB-3 20'	soil	2010-08-11	00:00	2010-08-13
241290	SB-3 25'	soil	2010-08-11	00:00	2010-08-13
241291	SB-4 1'	soil	2010-08-11	00:00	2010-08-13
241292	SB-4 3'	soil	2010-08-11	00:00	2010-08-13
241293	SB-4 5'	soil	2010-08-11	00:00	2010-08-13
241294	SB-4 7'	soil	2010-08-11	00:00	2010-08-13
241295	SB-4 10'	soil	2010-08-11	00:00	2010-08-13
241296	SB-4 15'	soil	2010-08-11	00:00	2010-08-13
241297	SB-4 20'	soil	2010-08-11	00:00	2010-08-13
241298	SB-4 25'	soil	2010-08-11	00:00	2010-08-13
241299	SB-5 1'	soil	2010-08-11	00:00	2010-08-13
241300	SB-5 3'	soil	2010-08-11	00:00	2010-08-13
241301	SB-5 5'	soil	2010-08-11	00:00	2010-08-13
241302	SB-5 7'	soil	2010-08-11	00:00	2010-08-13
241303	SB-5 10'	soil	2010-08-11	00:00	2010-08-13
241304	SB-5 15'	soil	2010-08-11	00:00	2010-08-13
241305	SB-5 20'	soil	2010-08-11	00:00	2010-08-13
241307	SB-6 1'	soil	2010-08-11	00:00	2010-08-13
241308	SB-6 3'	soil	2010-08-11	00:00	2010-08-13
241309	SB-6 5'	soil	2010-08-11	00:00	2010-08-13
241310	SB-6 7'	soil	2010-08-11	00:00	2010-08-13
241311	SB-6 10'	soil	2010-08-11	00:00	2010-08-13
241312	SB-6 15'	soil	2010-08-11	00:00	2010-08-13
241313	SB-6 20'	soil	2010-08-11	00:00	2010-08-13
241314	SB-6 25'	soil	2010-08-11	00:00	2010-08-13
241315	SB-6 30'	soil	2010-08-11	00:00	2010-08-13
241316	SB-6 40'	soil	2010-08-11	00:00	2010-08-13
241317	SB-6 50'	soil	2010-08-11	00:00	2010-08-13
241320	SB-3 30'	soil	2010-08-11	00:00	2010-08-13

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

This report consists of a total of 42 pages and shall not be reproduced except in its entirety, without written approval of  
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TraceAnalysis, Inc.



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

**Standard Flags**

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

## Case Narrative

Samples for project COG/Coyote State #5 were received by TraceAnalysis, Inc. on 2010-08-13 and assigned to work order 10081645. Samples for work order 10081645 were received intact at a temperature of 18.0 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	62330	2010-08-18 at 09:15	72769	2010-08-18 at 11:58
Chloride (Titration)	SM 4500-Cl B	62314	2010-08-17 at 12:05	72700	2010-08-17 at 16:20
Chloride (Titration)	SM 4500-Cl B	62315	2010-08-17 at 12:05	72701	2010-08-17 at 16:21
Chloride (Titration)	SM 4500-Cl B	62316	2010-08-17 at 12:05	72702	2010-08-17 at 16:21
Chloride (Titration)	SM 4500-Cl B	62317	2010-08-17 at 12:06	72703	2010-08-17 at 16:22
Chloride (Titration)	SM 4500-Cl B	62318	2010-08-17 at 12:08	72723	2010-08-18 at 14:50
Chloride (Titration)	SM 4500-Cl B	62334	2010-08-18 at 08:49	72724	2010-08-18 at 14:51
Chloride (Titration)	SM 4500-Cl B	62335	2010-08-18 at 08:49	72725	2010-08-18 at 14:52
TPH DRO - NEW	S 8015 D	62397	2010-08-19 at 10:46	72774	2010-08-19 at 10:46
TPH DRO - NEW	S 8015 D	62398	2010-08-19 at 10:46	72775	2010-08-19 at 10:46
TPH GRO	S 8015 D	62330	2010-08-18 at 09:15	72770	2010-08-18 at 12:25
TPH GRO	S 8015 D	62422	2010-08-20 at 12:00	72808	2010-08-21 at 17:46

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 10081645 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.

Samples received on ice.

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: 241262 - SB-1 1'

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 72769  
Prep Batch: 62330  
Analytical Method: S 8021B  
Date Analyzed: 2010-08-18  
Sample Preparation: 2010-08-18  
Prep Method: S 5035  
Analyzed By: AG  
Prepared By: AG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.76	mg/Kg	1	2.00	88	52.8 - 137
4-Bromofluorobenzene (4-BFB)		1.52	mg/Kg	1	2.00	76	38.4 - 157

Sample: 241262 - SB-1 1'

Laboratory: Midland  
Analysis: Chloride (Titration)  
QC Batch: 72700  
Prep Batch: 62314  
Analytical Method: SM 4500-Cl B  
Date Analyzed: 2010-08-17  
Sample Preparation: 2010-08-17  
Prep Method: N/A  
Analyzed By: AR  
Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		808	mg/Kg	50	4.00

Sample: 241262 - SB-1 1'

Laboratory: Midland  
Analysis: TPH DRO - NEW  
QC Batch: 72774  
Prep Batch: 62397  
Analytical Method: S 8015 D  
Date Analyzed: 2010-08-19  
Sample Preparation: 2010-08-19  
Prep Method: N/A  
Analyzed By: kg  
Prepared By: kg

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

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

**Sample: 241262 - SB-1 1'**

Laboratory: Midland  
Analysis: TPH GRO  
QC Batch: 72770  
Prep Batch: 62330

Analytical Method: S 8015 D  
Date Analyzed: 2010-08-18  
Sample Preparation: 2010-08-18

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

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.07	mg/Kg	1	2.00	104	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.71	mg/Kg	1	2.00	86	42 - 159

**Sample: 241263 - SB-1 3'**

Laboratory: Midland  
Analysis: Chloride (Titration)  
QC Batch: 72700  
Prep Batch: 62314

Analytical Method: SM 4500-Cl B  
Date Analyzed: 2010-08-17  
Sample Preparation: 2010-08-17

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		3920	mg/Kg	100	4.00

**Sample: 241264 - SB-1 5'**

Laboratory: Midland  
Analysis: Chloride (Titration)  
QC Batch: 72701  
Prep Batch: 62315

Analytical Method: SM 4500-Cl B  
Date Analyzed: 2010-08-17  
Sample Preparation: 2010-08-17

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		4710	mg/Kg	100	4.00

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**Sample: 241265 - SB-1 7'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 72701      Date Analyzed: 2010-08-17      Analyzed By: AR  
Prep Batch: 62315      Sample Preparation: 2010-08-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>3670</b>	mg/Kg	100	4.00

**Sample: 241266 - SB-1 10'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 72701      Date Analyzed: 2010-08-17      Analyzed By: AR  
Prep Batch: 62315      Sample Preparation: 2010-08-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>8120</b>	mg/Kg	100	4.00

**Sample: 241267 - SB-1 15'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 72701      Date Analyzed: 2010-08-17      Analyzed By: AR  
Prep Batch: 62315      Sample Preparation: 2010-08-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>295</b>	mg/Kg	50	4.00

**Sample: 241268 - SB-1 20'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 72701      Date Analyzed: 2010-08-17      Analyzed By: AR  
Prep Batch: 62315      Sample Preparation: 2010-08-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>553</b>	mg/Kg	50	4.00

**Sample: 241269 - SB-1 25'**

Laboratory: Midland  
 Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
 QC Batch: 72701      Date Analyzed: 2010-08-17      Analyzed By: AR  
 Prep Batch: 62315      Sample Preparation: 2010-08-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		284	mg/Kg	50	4.00

**Sample: 241273 - SB-2 1'**

Laboratory: Midland  
 Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
 QC Batch: 72701      Date Analyzed: 2010-08-17      Analyzed By: AR  
 Prep Batch: 62315      Sample Preparation: 2010-08-17      Prepared By: AR

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

**Sample: 241273 - SB-2 1'**

Laboratory: Midland  
 Analysis: TPH DRO - NEW      Analytical Method: S 8015 D      Prep Method: N/A  
 QC Batch: 72774      Date Analyzed: 2010-08-19      Analyzed By: kg  
 Prep Batch: 62397      Sample Preparation: 2010-08-19      Prepared By: kg

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

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

**Sample: 241273 - SB-2 1'**

Laboratory: Midland  
 Analysis: TPH GRO      Analytical Method: S 8015 D      Prep Method: S 5035  
 QC Batch: 72770      Date Analyzed: 2010-08-18      Analyzed By: AG  
 Prep Batch: 62330      Sample Preparation: 2010-08-18      Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.01	mg/Kg	1	2.00	50	48.5 - 152
4-Bromofluorobenzene (4-BFB)		0.938	mg/Kg	1	2.00	47	42 - 159

**Sample: 241274 - SB-2 3'**

Laboratory: Midland  
 Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
 QC Batch: 72701      Date Analyzed: 2010-08-17      Analyzed By: AR  
 Prep Batch: 62315      Sample Preparation: 2010-08-17      Prepared By: AR

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

**Sample: 241275 - SB-2 5'**

Laboratory: Midland  
 Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
 QC Batch: 72701      Date Analyzed: 2010-08-17      Analyzed By: AR  
 Prep Batch: 62315      Sample Preparation: 2010-08-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		247	mg/Kg	50	4.00

**Sample: 241276 - SB-2 7'**

Laboratory: Midland  
 Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
 QC Batch: 72701      Date Analyzed: 2010-08-17      Analyzed By: AR  
 Prep Batch: 62315      Sample Preparation: 2010-08-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		4970	mg/Kg	100	4.00

**Sample: 241277 - SB-2 10'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 72702      Date Analyzed: 2010-08-17      Analyzed By: AR  
Prep Batch: 62316      Sample Preparation: 2010-08-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>11200</b>	mg/Kg	100	4.00

**Sample: 241278 - SB-2 15'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 72702      Date Analyzed: 2010-08-17      Analyzed By: AR  
Prep Batch: 62316      Sample Preparation: 2010-08-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>4290</b>	mg/Kg	100	4.00

**Sample: 241279 - SB-2 20'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 72702      Date Analyzed: 2010-08-17      Analyzed By: AR  
Prep Batch: 62316      Sample Preparation: 2010-08-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>4020</b>	mg/Kg	100	4.00

**Sample: 241280 - SB-2 25'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 72702      Date Analyzed: 2010-08-17      Analyzed By: AR  
Prep Batch: 62316      Sample Preparation: 2010-08-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>2840</b>	mg/Kg	100	4.00



**Sample: 241281 - SB-2 30'**

Laboratory: Midland  
 Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
 QC Batch: 72702      Date Analyzed: 2010-08-17      Analyzed By: AR  
 Prep Batch: 62316      Sample Preparation: 2010-08-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		369	mg/Kg	50	4.00

**Sample: 241283 - SB-3 1'**

Laboratory: Midland  
 Analysis: BTEX      Analytical Method: S 8021B      Prep Method: S 5035  
 QC Batch: 72769      Date Analyzed: 2010-08-18      Analyzed By: AG  
 Prep Batch: 62330      Sample Preparation: 2010-08-18      Prepared By: AG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.51	mg/Kg	1	2.00	76	52.8 - 137
4-Bromofluorobenzene (4-BFB)		1.44	mg/Kg	1	2.00	72	38.4 - 157

**Sample: 241283 - SB-3 1'**

Laboratory: Midland  
 Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
 QC Batch: 72702      Date Analyzed: 2010-08-17      Analyzed By: AR  
 Prep Batch: 62316      Sample Preparation: 2010-08-17      Prepared By: AR

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

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**Sample: 241283 - SB-3 1'**

Laboratory: Midland  
Analysis: TPH DRO - NEW      Analytical Method: S 8015 D      Prep Method: N/A  
QC Batch: 72774      Date Analyzed: 2010-08-19      Analyzed By: kg  
Prep Batch: 62397      Sample Preparation: 2010-08-19      Prepared By: kg

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		102	mg/Kg	1	100	102	70 - 130

**Sample: 241283 - SB-3 1'**

Laboratory: Midland  
Analysis: TPH GRO      Analytical Method: S 8015 D      Prep Method: S 5035  
QC Batch: 72770      Date Analyzed: 2010-08-18      Analyzed By: AG  
Prep Batch: 62330      Sample Preparation: 2010-08-18      Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.68	mg/Kg	1	2.00	84	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.54	mg/Kg	1	2.00	77	42 - 159

**Sample: 241284 - SB-3 3'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 72702      Date Analyzed: 2010-08-17      Analyzed By: AR  
Prep Batch: 62316      Sample Preparation: 2010-08-17      Prepared By: AR

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

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**Sample: 241285 - SB-3 5'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 72702      Date Analyzed: 2010-08-17      Analyzed By: AR  
Prep Batch: 62316      Sample Preparation: 2010-08-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>1630</b>	mg/Kg	100	4.00

**Sample: 241286 - SB-3 7'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 72702      Date Analyzed: 2010-08-17      Analyzed By: AR  
Prep Batch: 62316      Sample Preparation: 2010-08-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>4650</b>	mg/Kg	100	4.00

**Sample: 241287 - SB-3 10'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 72702      Date Analyzed: 2010-08-17      Analyzed By: AR  
Prep Batch: 62316      Sample Preparation: 2010-08-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>9960</b>	mg/Kg	100	4.00

**Sample: 241288 - SB-3 15'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 72703      Date Analyzed: 2010-08-17      Analyzed By: AR  
Prep Batch: 62317      Sample Preparation: 2010-08-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>4500</b>	mg/Kg	100	4.00

**Sample: 241289 - SB-3 20'**

Laboratory: Midland  
 Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
 QC Batch: 72703      Date Analyzed: 2010-08-17      Analyzed By: AR  
 Prep Batch: 62317      Sample Preparation: 2010-08-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		4090	mg/Kg	100	4.00

**Sample: 241290 - SB-3 25'**

Laboratory: Midland  
 Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
 QC Batch: 72703      Date Analyzed: 2010-08-17      Analyzed By: AR  
 Prep Batch: 62317      Sample Preparation: 2010-08-17      Prepared By: AR

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

**Sample: 241291 - SB-4 1'**

Laboratory: Midland  
 Analysis: BTEX      Analytical Method: S 8021B      Prep Method: S 5035  
 QC Batch: 72769      Date Analyzed: 2010-08-18      Analyzed By: AG  
 Prep Batch: 62330      Sample Preparation: 2010-08-18      Prepared By: AG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.18	mg/Kg	1	2.00	59	52.8 - 137
4-Bromofluorobenzene (4-BFB)		1.10	mg/Kg	1	2.00	55	38.4 - 157

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**Sample: 241291 - SB-4 1'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 72703      Date Analyzed: 2010-08-17      Analyzed By: AR  
Prep Batch: 62317      Sample Preparation: 2010-08-17      Prepared By: AR

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

**Sample: 241291 - SB-4 1'**

Laboratory: Midland  
Analysis: TPH DRO - NEW      Analytical Method: S 8015 D      Prep Method: N/A  
QC Batch: 72774      Date Analyzed: 2010-08-19      Analyzed By: kg  
Prep Batch: 62397      Sample Preparation: 2010-08-19      Prepared By: kg

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

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

**Sample: 241291 - SB-4 1'**

Laboratory: Midland  
Analysis: TPH GRO      Analytical Method: S 8015 D      Prep Method: S 5035  
QC Batch: 72770      Date Analyzed: 2010-08-18      Analyzed By: AG  
Prep Batch: 62330      Sample Preparation: 2010-08-18      Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.30	mg/Kg	1	2.00	65	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.18	mg/Kg	1	2.00	59	42 - 159

**Sample: 241292 - SB-4 3'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 72703      Date Analyzed: 2010-08-17      Analyzed By: AR  
Prep Batch: 62317      Sample Preparation: 2010-08-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		416	mg/Kg	50	4.00

**Sample: 241293 - SB-4 5'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 72703      Date Analyzed: 2010-08-17      Analyzed By: AR  
Prep Batch: 62317      Sample Preparation: 2010-08-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		4740	mg/Kg	100	4.00

**Sample: 241294 - SB-4 7'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 72703      Date Analyzed: 2010-08-17      Analyzed By: AR  
Prep Batch: 62317      Sample Preparation: 2010-08-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		6610	mg/Kg	100	4.00

**Sample: 241295 - SB-4 10'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 72703      Date Analyzed: 2010-08-17      Analyzed By: AR  
Prep Batch: 62317      Sample Preparation: 2010-08-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		3940	mg/Kg	100	4.00

**Sample: 241296 - SB-4 15'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 72703      Date Analyzed: 2010-08-17      Analyzed By: AR  
Prep Batch: 62317      Sample Preparation: 2010-08-17      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		610	mg/Kg	50	4.00

**Sample: 241297 - SB-4 20'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 72703      Date Analyzed: 2010-08-17      Analyzed By: AR  
Prep Batch: 62317      Sample Preparation: 2010-08-17      Prepared By: AR

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

**Sample: 241298 - SB-4 25'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 72723      Date Analyzed: 2010-08-18      Analyzed By: AR  
Prep Batch: 62318      Sample Preparation: 2010-08-18      Prepared By: AR

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

**Sample: 241299 - SB-5 1'**

Laboratory: Midland  
Analysis: BTEX      Analytical Method: S 8021B      Prep Method: S 5035  
QC Batch: 72769      Date Analyzed: 2010-08-18      Analyzed By: AG  
Prep Batch: 62330      Sample Preparation: 2010-08-18      Prepared By: AG

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

*continued ...*

sample 241299 continued ...

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.21	mg/Kg	1	2.00	60	52.8 - 137
4-Bromofluorobenzene (4-BFB)		1.15	mg/Kg	1	2.00	58	38.4 - 157

**Sample: 241299 - SB-5 1'**

Laboratory: Midland  
 Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
 QC Batch: 72723      Date Analyzed: 2010-08-18      Analyzed By: AR  
 Prep Batch: 62318      Sample Preparation: 2010-08-18      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		2060	mg/Kg	100	4.00

**Sample: 241299 - SB-5 1'**

Laboratory: Midland  
 Analysis: TPH DRO - NEW      Analytical Method: S 8015 D      Prep Method: N/A  
 QC Batch: 72775      Date Analyzed: 2010-08-19      Analyzed By: kg  
 Prep Batch: 62398      Sample Preparation: 2010-08-19      Prepared By: kg

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		97.7	mg/Kg	1	100	98	70 - 130

**Sample: 241299 - SB-5 1'**

Laboratory: Midland  
 Analysis: TPH GRO      Analytical Method: S 8015 D      Prep Method: S 5035  
 QC Batch: 72770      Date Analyzed: 2010-08-18      Analyzed By: AG  
 Prep Batch: 62330      Sample Preparation: 2010-08-18      Prepared By: AG



Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.36	mg/Kg	1	2.00	68	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.24	mg/Kg	1	2.00	62	42 - 159

**Sample: 241300 - SB-5 3'**

Laboratory: Midland  
 Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
 QC Batch: 72723      Date Analyzed: 2010-08-18      Analyzed By: AR  
 Prep Batch: 62318      Sample Preparation: 2010-08-18      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>760</b>	mg/Kg	50	4.00

**Sample: 241301 - SB-5 5'**

Laboratory: Midland  
 Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
 QC Batch: 72723      Date Analyzed: 2010-08-18      Analyzed By: AR  
 Prep Batch: 62318      Sample Preparation: 2010-08-18      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>687</b>	mg/Kg	50	4.00

**Sample: 241302 - SB-5 7'**

Laboratory: Midland  
 Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
 QC Batch: 72723      Date Analyzed: 2010-08-18      Analyzed By: AR  
 Prep Batch: 62318      Sample Preparation: 2010-08-18      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>636</b>	mg/Kg	50	4.00

**Sample: 241303 - SB-5 10'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 72723      Date Analyzed: 2010-08-18      Analyzed By: AR  
Prep Batch: 62318      Sample Preparation: 2010-08-18      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>837</b>	mg/Kg	50	4.00

**Sample: 241304 - SB-5 15'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 72723      Date Analyzed: 2010-08-18      Analyzed By: AR  
Prep Batch: 62318      Sample Preparation: 2010-08-18      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>1020</b>	mg/Kg	100	4.00

**Sample: 241305 - SB-5 20'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 72723      Date Analyzed: 2010-08-18      Analyzed By: AR  
Prep Batch: 62318      Sample Preparation: 2010-08-18      Prepared By: AR

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

**Sample: 241307 - SB-6 1'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 72723      Date Analyzed: 2010-08-18      Analyzed By: AR  
Prep Batch: 62318      Sample Preparation: 2010-08-18      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>5600</b>	mg/Kg	100	4.00

**Sample: 241307 - SB-6 1'**

Laboratory: Midland	Analytical Method: S 8015 D	Prep Method: N/A
Analysis: TPH DRO - NEW	Date Analyzed: 2010-08-19	Analyzed By: kg
QC Batch: 72775	Sample Preparation: 2010-08-19	Prepared By: kg
Prep Batch: 62398		

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		104	mg/Kg	1	100	104	70 - 130

**Sample: 241307 - SB-6 1'**

Laboratory: Midland	Analytical Method: S 8015 D	Prep Method: S 5035
Analysis: TPH GRO	Date Analyzed: 2010-08-21	Analyzed By: AG
QC Batch: 72808	Sample Preparation: 2010-08-20	Prepared By: AG
Prep Batch: 62422		

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<2.00	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.98	mg/Kg	1	2.00	99	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.79	mg/Kg	1	2.00	90	42 - 159

**Sample: 241308 - SB-6 3'**

Laboratory: Midland	Analytical Method: SM 4500-Cl B	Prep Method: N/A
Analysis: Chloride (Titration)	Date Analyzed: 2010-08-18	Analyzed By: AR
QC Batch: 72724	Sample Preparation: 2010-08-18	Prepared By: AR
Prep Batch: 62334		

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1180	mg/Kg	100	4.00

**Sample: 241309 - SB-6 5'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 72724      Date Analyzed: 2010-08-18      Analyzed By: AR  
Prep Batch: 62334      Sample Preparation: 2010-08-18      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>1930</b>	mg/Kg	100	4.00

**Sample: 241310 - SB-6 7'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 72724      Date Analyzed: 2010-08-18      Analyzed By: AR  
Prep Batch: 62334      Sample Preparation: 2010-08-18      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>4030</b>	mg/Kg	100	4.00

**Sample: 241311 - SB-6 10'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 72724      Date Analyzed: 2010-08-18      Analyzed By: AR  
Prep Batch: 62334      Sample Preparation: 2010-08-18      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>2720</b>	mg/Kg	100	4.00

**Sample: 241312 - SB-6 15'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 72724      Date Analyzed: 2010-08-18      Analyzed By: AR  
Prep Batch: 62334      Sample Preparation: 2010-08-18      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>1540</b>	mg/Kg	100	4.00

**Sample: 241313 - SB-6 20'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 72724      Date Analyzed: 2010-08-18      Analyzed By: AR  
Prep Batch: 62334      Sample Preparation: 2010-08-18      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>734</b>	mg/Kg	50	4.00

**Sample: 241314 - SB-6 25'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 72724      Date Analyzed: 2010-08-18      Analyzed By: AR  
Prep Batch: 62334      Sample Preparation: 2010-08-18      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>540</b>	mg/Kg	50	4.00

**Sample: 241315 - SB-6 30'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 72724      Date Analyzed: 2010-08-18      Analyzed By: AR  
Prep Batch: 62334      Sample Preparation: 2010-08-18      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>320</b>	mg/Kg	50	4.00

**Sample: 241316 - SB-6 40'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 72724      Date Analyzed: 2010-08-18      Analyzed By: AR  
Prep Batch: 62334      Sample Preparation: 2010-08-18      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<b>619</b>	mg/Kg	50	4.00

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**Sample: 241317 - SB-6 50'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 72724      Date Analyzed: 2010-08-18      Analyzed By: AR  
Prep Batch: 62334      Sample Preparation: 2010-08-18      Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		530	mg/Kg	50	4.00

**Sample: 241320 - SB-3 30'**

Laboratory: Midland  
Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 72725      Date Analyzed: 2010-08-18      Analyzed By: AR  
Prep Batch: 62335      Sample Preparation: 2010-08-18      Prepared By: AR

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

**Method Blank (1)      QC Batch: 72700**

QC Batch: 72700      Date Analyzed: 2010-08-17      Analyzed By: AR  
Prep Batch: 62314      QC Preparation: 2010-08-17      Prepared By: AR

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

**Method Blank (1)      QC Batch: 72701**

QC Batch: 72701      Date Analyzed: 2010-08-17      Analyzed By: AR  
Prep Batch: 62315      QC Preparation: 2010-08-17      Prepared By: AR

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

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**Method Blank (1)**      QC Batch: 72702

QC Batch:   72702                              Date Analyzed:   2010-08-17                              Analyzed By:   AR  
Prep Batch: 62316                              QC Preparation:   2010-08-17                              Prepared By:   AR

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

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**Method Blank (1)**      QC Batch: 72703

QC Batch:   72703                              Date Analyzed:   2010-08-17                              Analyzed By:   AR  
Prep Batch: 62317                              QC Preparation:   2010-08-17                              Prepared By:   AR

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

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**Method Blank (1)**      QC Batch: 72723

QC Batch:   72723                              Date Analyzed:   2010-08-18                              Analyzed By:   AR  
Prep Batch: 62318                              QC Preparation:   2010-08-17                              Prepared By:   AR

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

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**Method Blank (1)**      QC Batch: 72724

QC Batch:   72724                              Date Analyzed:   2010-08-18                              Analyzed By:   AR  
Prep Batch: 62334                              QC Preparation:   2010-08-18                              Prepared By:   AR

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

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**Method Blank (1)**      QC Batch: 72725

QC Batch: 72725                                      Date Analyzed: 2010-08-18                                      Analyzed By: AR  
Prep Batch: 62335                                      QC Preparation: 2010-08-18                                      Prepared By: AR

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

**Method Blank (1)**      QC Batch: 72769

QC Batch: 72769                                      Date Analyzed: 2010-08-18                                      Analyzed By: AG  
Prep Batch: 62330                                      QC Preparation: 2010-08-18                                      Prepared By: AG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.78	mg/Kg	1	2.00	89	66.6 - 122
4-Bromofluorobenzene (4-BFB)		1.48	mg/Kg	1	2.00	74	55.4 - 132

**Method Blank (1)**      QC Batch: 72770

QC Batch: 72770                                      Date Analyzed: 2010-08-18                                      Analyzed By: AG  
Prep Batch: 62330                                      QC Preparation: 2010-08-18                                      Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
GRO		<1.65	mg/Kg	2

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.99	mg/Kg	1	2.00	100	67.6 - 150
4-Bromofluorobenzene (4-BFB)		1.60	mg/Kg	1	2.00	80	52.4 - 130



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**Method Blank (1)**      QC Batch: 72774

QC Batch: 72774      Date Analyzed: 2010-08-19      Analyzed By: kg  
Prep Batch: 62397      QC Preparation: 2010-08-19      Prepared By: kg

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		91.6	mg/Kg	1	100	92	70 - 130

**Method Blank (1)**      QC Batch: 72775

QC Batch: 72775      Date Analyzed: 2010-08-19      Analyzed By: kg  
Prep Batch: 62398      QC Preparation: 2010-08-19      Prepared By: kg

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		96.4	mg/Kg	1	100	96	70 - 130

**Method Blank (1)**      QC Batch: 72808

QC Batch: 72808      Date Analyzed: 2010-08-21      Analyzed By: AG  
Prep Batch: 62422      QC Preparation: 2010-08-20      Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
GRO		<1.65	mg/Kg	2

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.00	mg/Kg	1	2.00	100	67.6 - 150
4-Bromofluorobenzene (4-BFB)		1.70	mg/Kg	1	2.00	85	52.4 - 130

**Laboratory Control Spike (LCS-1)**

QC Batch: 72700      Date Analyzed: 2010-08-17      Analyzed By: AR  
Prep Batch: 62314      QC Preparation: 2010-08-17      Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	96.7	mg/Kg	1	100	<2.18	97	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	103	mg/Kg	1	100	<2.18	103	85 - 115	6	20

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

**Laboratory Control Spike (LCS-1)**

QC Batch: 72701  
Prep Batch: 62315

Date Analyzed: 2010-08-17  
QC Preparation: 2010-08-17

Analyzed By: AR  
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	96.9	mg/Kg	1	100	<2.18	97	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	103	mg/Kg	1	100	<2.18	103	85 - 115	6	20

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

**Laboratory Control Spike (LCS-1)**

QC Batch: 72702  
Prep Batch: 62316

Date Analyzed: 2010-08-17  
QC Preparation: 2010-08-17

Analyzed By: AR  
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	97.1	mg/Kg	1	100	<2.18	97	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	103	mg/Kg	1	100	<2.18	103	85 - 115	6	20

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

**Laboratory Control Spike (LCS-1)**

QC Batch: 72703  
Prep Batch: 62317

Date Analyzed: 2010-08-17  
QC Preparation: 2010-08-17

Analyzed By: AR  
Prepared By: AR

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

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	102	mg/Kg	1	100	<2.18	102	85 - 115	5	20

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

**Laboratory Control Spike (LCS-1)**

QC Batch: 72723                          Date Analyzed: 2010-08-18                          Analyzed By: AR  
Prep Batch: 62318                          QC Preparation: 2010-08-17                          Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	97.8	mg/Kg	1	100	<2.18	98	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	102	mg/Kg	1	100	<2.18	102	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: 72724                          Date Analyzed: 2010-08-18                          Analyzed By: AR  
Prep Batch: 62334                          QC Preparation: 2010-08-18                          Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	97.9	mg/Kg	1	100	<2.18	98	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	102	mg/Kg	1	100	<2.18	102	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: 72725                          Date Analyzed: 2010-08-18                          Analyzed By: AR  
Prep Batch: 62335                          QC Preparation: 2010-08-18                          Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	96.0	mg/Kg	1	100	<2.18	96	85 - 115

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

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

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

**Laboratory Control Spike (LCS-1)**

QC Batch: 72769  
Prep Batch: 62330

Date Analyzed: 2010-08-18  
QC Preparation: 2010-08-18

Analyzed By: AG  
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.96	mg/Kg	1	2.00	<0.0150	98	81.9 - 108
Toluene	1.89	mg/Kg	1	2.00	<0.00950	94	81.9 - 107
Ethylbenzene	1.76	mg/Kg	1	2.00	<0.0106	88	78.4 - 107
Xylene	5.34	mg/Kg	1	6.00	<0.00930	89	79.1 - 107

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

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	1.97	mg/Kg	1	2.00	<0.0150	98	81.9 - 108	0	20
Toluene	1.91	mg/Kg	1	2.00	<0.00950	96	81.9 - 107	1	20
Ethylbenzene	1.77	mg/Kg	1	2.00	<0.0106	88	78.4 - 107	1	20
Xylene	5.38	mg/Kg	1	6.00	<0.00930	90	79.1 - 107	1	20

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

Surrogate	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.76	1.73	mg/Kg	1	2.00	88	86	70.2 - 114
4-Bromofluorobenzene (4-BFB)	1.65	1.64	mg/Kg	1	2.00	82	82	69.8 - 121

**Laboratory Control Spike (LCS-1)**

QC Batch: 72770  
Prep Batch: 62330

Date Analyzed: 2010-08-18  
QC Preparation: 2010-08-18

Analyzed By: AG  
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	15.2	mg/Kg	1	20.0	<1.65	76	69.9 - 95.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	14.4	mg/Kg	1	20.0	<1.65	72	69.9 - 95.4	5	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.00	1.64	mg/Kg	1	2.00	100	82	61.9 - 142
4-Bromofluorobenzene (4-BFB)	1.78	1.59	mg/Kg	1	2.00	89	80	68.2 - 132

**Laboratory Control Spike (LCS-1)**

QC Batch: 72774  
Prep Batch: 62397

Date Analyzed: 2010-08-19  
QC Preparation: 2010-08-19

Analyzed By: kg  
Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	204	mg/Kg	1	250	<14.5	82	57.4 - 133.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	215	mg/Kg	1	250	<14.5	86	57.4 - 133.4	5	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	116	103	mg/Kg	1	100	116	103	70 - 130

**Laboratory Control Spike (LCS-1)**

QC Batch: 72775  
Prep Batch: 62398

Date Analyzed: 2010-08-19  
QC Preparation: 2010-08-19

Analyzed By: kg  
Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	261	mg/Kg	1	250	<14.5	104	57.4 - 133.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	281	mg/Kg	1	250	<14.5	112	57.4 - 133.4	7	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	116	125	mg/Kg	1	100	116	125	70 - 130

**Laboratory Control Spike (LCS-1)**

QC Batch: 72808  
Prep Batch: 62422

Date Analyzed: 2010-08-21  
QC Preparation: 2010-08-20

Analyzed By: AG  
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	16.0	mg/Kg	1	20.0	<1.65	80	69.9 - 95.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	16.7	mg/Kg	1	20.0	<1.65	84	69.9 - 95.4	4	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.05	2.01	mg/Kg	1	2.00	102	100	61.9 - 142
4-Bromofluorobenzene (4-BFB)	1.80	1.75	mg/Kg	1	2.00	90	88	68.2 - 132

**Matrix Spike (MS-1) Spiked Sample: 241263**

QC Batch: 72700  
Prep Batch: 62314

Date Analyzed: 2010-08-17  
QC Preparation: 2010-08-17

Analyzed By: AR  
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	13900	mg/Kg	100	10000	3920	100	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	14600	mg/Kg	100	10000	3920	107	85 - 115	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: 241276**

QC Batch: 72701  
Prep Batch: 62315

Date Analyzed: 2010-08-17  
QC Preparation: 2010-08-17

Analyzed By: AR  
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	15500	mg/Kg	100	10000	4970	105	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	15900	mg/Kg	100	10000	4970	109	85 - 115	2	20

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

**Matrix Spike (MS-1) Spiked Sample: 241287**

QC Batch: 72702 Date Analyzed: 2010-08-17 Analyzed By: AR  
Prep Batch: 62316 QC Preparation: 2010-08-17 Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	20200	mg/Kg	100	10000	9960	102	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	20800	mg/Kg	100	10000	9960	108	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: 241297**

QC Batch: 72703 Date Analyzed: 2010-08-17 Analyzed By: AR  
Prep Batch: 62317 QC Preparation: 2010-08-17 Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	9880	mg/Kg	100	10000	<218	97	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	10300	mg/Kg	100	10000	<218	101	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: 241307**

QC Batch: 72723 Date Analyzed: 2010-08-18 Analyzed By: AR  
Prep Batch: 62318 QC Preparation: 2010-08-17 Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	15300	mg/Kg	100	10000	5600	97	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	15600	mg/Kg	100	10000	5600	100	85 - 115	2	20

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

**Matrix Spike (MS-1)** Spiked Sample: 241317

QC Batch: 72724 Date Analyzed: 2010-08-18 Analyzed By: AR  
Prep Batch: 62334 QC Preparation: 2010-08-18 Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10300	mg/Kg	100	10000	530	98	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	10400	mg/Kg	100	10000	530	99	85 - 115	1	20

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

**Matrix Spike (MS-1)** Spiked Sample: 241329

QC Batch: 72725 Date Analyzed: 2010-08-18 Analyzed By: AR  
Prep Batch: 62335 QC Preparation: 2010-08-18 Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	16900	mg/Kg	100	10000	7010	99	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	17500	mg/Kg	100	10000	7010	105	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: 241219

QC Batch: 72769 Date Analyzed: 2010-08-18 Analyzed By: AG  
Prep Batch: 62330 QC Preparation: 2010-08-18 Prepared By: AG



Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	2.15	mg/Kg	1	2.00	<0.0150	108	80.5 - 112
Toluene	2.13	mg/Kg	1	2.00	<0.00950	106	82.4 - 113
Ethylbenzene	2.15	mg/Kg	1	2.00	<0.0106	108	83.9 - 114
Xylene	6.47	mg/Kg	1	6.00	<0.00930	108	84 - 114

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

Param		MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	<sup>1</sup>	1.52	mg/Kg	1	2.00	<0.0150	76	80.5 - 112	34	20
Toluene	<sup>2</sup>	1.50	mg/Kg	1	2.00	<0.00950	75	82.4 - 113	35	20
Ethylbenzene	<sup>3</sup>	1.51	mg/Kg	1	2.00	<0.0106	76	83.9 - 114	35	20
Xylene	<sup>4</sup>	4.57	mg/Kg	1	6.00	<0.00930	76	84 - 114	34	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.74	1.18	mg/Kg	1	2	87	59	41.3 - 117
4-Bromofluorobenzene (4-BFB)	1.67	1.14	mg/Kg	1	2	84	57	35.5 - 129

**Matrix Spike (MS-1) Spiked Sample: 241299**

QC Batch: 72770  
Prep Batch: 62330

Date Analyzed: 2010-08-18  
QC Preparation: 2010-08-18

Analyzed By: AG  
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	14.6	mg/Kg	1	20.0	<1.65	73	61.8 - 114

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

Param		MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		15.7	mg/Kg	1	20.0	<1.65	78	61.8 - 114	7	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.12	1.23	mg/Kg	1	2	56	62	50 - 162
4-Bromofluorobenzene (4-BFB)	1.16	1.27	mg/Kg	1	2	58	64	50 - 162

<sup>1</sup> Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>2</sup> Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>3</sup> Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>4</sup> Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.



Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	<sup>5</sup> 50.3	mg/Kg	1	20.0	6.92	217	61.8 - 114

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	<sup>6</sup> 35.9	mg/Kg	1	20.0	6.92	145	61.8 - 114	33	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)	1.70	1.86	mg/Kg	1	2	85	93	50 - 162
4-Bromofluorobenzene (4-BFB)	1.69	1.72	mg/Kg	1	2	84	86	50 - 162

**Standard (ICV-1)**

QC Batch: 72700 Date Analyzed: 2010-08-17 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	100	100	85 - 115	2010-08-17

**Standard (CCV-1)**

QC Batch: 72700 Date Analyzed: 2010-08-17 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.7	100	85 - 115	2010-08-17

**Standard (ICV-1)**

QC Batch: 72701 Date Analyzed: 2010-08-17 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2010-08-17

<sup>5</sup>Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>6</sup>Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.









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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	232	93	80 - 120	2010-08-19

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**Standard (CCV-1)**

QC Batch: 72808

Date Analyzed: 2010-08-21

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.03	103	80 - 120	2010-08-21

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**Standard (CCV-2)**

QC Batch: 72808

Date Analyzed: 2010-08-21

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.988	99	80 - 120	2010-08-21

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WO# 10081645

# Analysis Request of Chain of Custody Record

PAGE: 1 OF: 6



**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 Tavoraz

PROJECT NO.: 114-6400499 PROJECT NAME: COG / Coyote State #5

LAB I.D. NUMBER: DATE: TIME: MATRIX: COMP: GRAB: SAMPLE IDENTIFICATION: Eddy G., NM

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	PRESERVATIVE METHOD						
								FILTERED (Y/N)	HCL	HNO3	ICE	NONE		
24262	8/11		S	X		SB-1 1'	1				X			
263						SB-1 3'	1				X			
264						SB-1 5'	1				X			
265						SB-1 7'	1				X			
266						SB-1 10'	1				X			
267						SB-1 15'	1				X			
268						SB-1 20'	1				X			
269						SB-1 25'	1				X			
270						SB-1 30'	1				X			
271						SB-1 40'	1				X			

<input checked="" type="checkbox"/> BTEX 8021B	<input checked="" type="checkbox"/> TPH 8075 MOD	<input type="checkbox"/> TX1005 (Ext. to C36)	<input type="checkbox"/> PAH 8270	<input type="checkbox"/> RCRA Metals Ag As Ba Cd Cr Pb Hg Se	<input type="checkbox"/> TCLP Metals Ag As Ba Cd Vr Pd Hg Se	<input type="checkbox"/> TCLP Volatiles	<input type="checkbox"/> TCLP Semi Volatiles	<input type="checkbox"/> FC1	<input type="checkbox"/> GC.MS Vol. 8240/8260/824	<input type="checkbox"/> GC.MS Semi. Vol. 8270/825	<input type="checkbox"/> PCB's 8080/808	<input type="checkbox"/> Pest. 809/808	<input checked="" type="checkbox"/> Chloride	<input type="checkbox"/> Gamma Spec.	<input type="checkbox"/> Alpha Beta (Air)	<input type="checkbox"/> PLM (Asbestos)	<input type="checkbox"/> Major Anions/Cations, pH, TDS
--	--	---	-----------------------------------	--	--	---	--	------------------------------	---	--	---	--	--	--------------------------------------	---	---	--

RELINQUISHED BY: (Signature) [Signature] Date: 8/13/10 Time: 15:45  
 RECEIVED BY: (Signature) [Signature] Date: 8/13/10 Time: 17:45

SAMPLED BY: (Print & Initial) Kim Date: 8/11/10  
 SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS OTHER: \_\_\_\_\_  
 AIRBILL #: \_\_\_\_\_  
 TETRA TECH CONTACT PERSON: Ike Tavoraz Results by: \_\_\_\_\_

RECEIVING LABORATORY: TRACE RECEIVED BY: (Signature) \_\_\_\_\_  
 ADDRESS: \_\_\_\_\_  
 CITY: Midland STATE: TX ZIP: \_\_\_\_\_  
 CONTACT: \_\_\_\_\_ PHONE: \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 18.0' c intact

REMARKS: If TPH > 5000 Run deeper samples

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

Run BTEX on (4) Highest TPH

WO #: 10081645

# Analysis Request of Chain of Custody Record



**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 Tavaraz			NUMBER OF CONTAINERS	PRESERVATIVE METHOD				BTEX 80219 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. 8240/8260/824	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	
PROJECT NO.:	PROJECT NAME:		MATRIX	COMP	GRAB		NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HNO3																ICE
LAB I.D. NUMBER	DATE	TIME																								
1146400499	2010		COG / Coyote State #5																							
			Eddy Co., NM																							
			SAMPLE IDENTIFICATION																							
241272	8/11		S	X	SB-1 50'	1				X																
273					SB-2 1'	1				X												X				
274					SB-2 3'	1				X												X				
275					SB-2 5'	1				X												X				
276					SB-2 7'	1				X												X				
277					SB-2 10'	1				X												X				
278					SB-2 15'	1				X												X				
279					SB-2 20'	1				X												X				
280					SB-2 25'	1				X												X				
281					SB-2 30'	1				X												X				

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

Run BTEX on (4) Highest TPH

W/O # : 10087645

# Analysis Request of Chain of Custody Record

PAGE: 3 OF: 6



**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 Tavaraz			NUMBER OF CONTAINERS	PRESERVATIVE METHOD				BTEX 80219	TPH 8016 MDD, 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. 8240/8260/824	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		
PROJECT NO.:	PROJECT NAME:		MATRIX	COMP.	GRAB		NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HNO3																		ICE	NONE
LAB I.D. NUMBER	DATE	TIME																											
1146400499	2010		COG / Coyote State # 5																										
			Eddy Co., NM																										
			SAMPLE IDENTIFICATION																										
241282	8/11		S	X		SB-2	40'																						
283						SB-3	1'						X											X					
284						SB-3	3'																	X					
285						SB-3	5'																	X					
286						SB-3	7'																	X					
287						SB-3	10'																	X					
288						SB-3	15'																	X					
289						SB-3	20'																	X					
290						SB-3	25'																	X					
291						SB-4	1'						X											X					

RELINQUISHED BY: (Signature) <i>[Signature]</i>	Date: 8/13/10 Time: 1545	RECEIVED BY: (Signature) <i>[Signature]</i>	Date: 07/13/10	SAMPLED BY: (Print & Initial) Kim	Date: 8/11/10
RELINQUISHED BY: (Signature)	Date: _____ Time: _____	RECEIVED BY: (Signature)	Date: _____ Time: _____	SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS	AIRBILL #: _____
RELINQUISHED BY: (Signature)	Date: _____ Time: _____	RECEIVED BY: (Signature)	Date: _____ Time: _____	TETRA TECH CONTACT PERSON: Ike Tavaraz	OTHER: _____
RECEIVING LABORATORY: TRACE	RECEIVED BY: (Signature)			Results by:	
ADDRESS: _____				RUSH Charges Authorized:	Yes No
CITY: Midland STATE: TX ZIP: _____					
CONTACT: _____ PHONE: _____ DATE: _____ TIME: _____					

SAMPLE CONDITION WHEN RECEIVED: 18.0 c intact

REMARKS: IF TPH > 5,000 mg/kg Run deeper samples

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

Run BTEX on (4) Highest TPH

WO#: 10081645

# Analysis Request of Chain of Custody Record



**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.: 1146400499 PROJECT NAME: COG / Coyote State #5

LAB I.D. NUMBER DATE TIME MATRIX COMP GRAB Eddy Co., NM  
SAMPLE IDENTIFICATION

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP	GRAB	SAMPLE IDENTIFICATION
241292	8/11		S	X		SB-4 3'
293						SB-4 5'
294						SB-4 7'
295						SB-4 10'
296						SB-4 15'
297						SB-4 20'
298						SB-4 25'
299						SB-5 1'
300						SB-5 3'
301						SB-5 5'

NUMBER OF CONTAINERS FILTERED (Y/N)	PRESERVATIVE METHOD			
	HCL	HNO3	ICE	NONE
1			X	
1			X	
1			X	
1			X	
1			X	
1			X	
1			X	
1			X	
1			X	
1			X	
1			X	

<input checked="" type="checkbox"/> BTEX 80215	<input checked="" type="checkbox"/> TPH 8015 MDDA TX1005 (Ext. to C06)	<input type="checkbox"/> PAN 8270	<input type="checkbox"/> RCRA Metals Ag As Ba Cd Cr Pb Hg Se	<input type="checkbox"/> TCLP Metals Ag As Ba Cd Vr Pd Hg Se	<input type="checkbox"/> TCLP Volatiles	<input type="checkbox"/> TCLP Semi Volatiles	<input type="checkbox"/> RCI	<input type="checkbox"/> GC-MS Vol. 8240/8260/624	<input type="checkbox"/> GC-MS Semi. Vol. 8270/626	<input type="checkbox"/> PCB's 8080/608	<input type="checkbox"/> Pest. 808/608	<input checked="" type="checkbox"/> Chlordane	<input type="checkbox"/> Gamma Spec.	<input type="checkbox"/> Alpha Beta (Air)	<input type="checkbox"/> PLM (Asbestos)	<input type="checkbox"/> Major Anions/Cations, pH, TDS
--	--	-----------------------------------	--	--	---	--	------------------------------	---	--	---	--	---	--------------------------------------	---	---	--

RELINQUISHED BY: (Signature) [Signature] Date: 8/11/10 Time: 1545

RECEIVED BY: (Signature) [Signature] Date: 8/13/10 Time: 1545

SAMPLED BY: (Print & Initial) Kim Date: 8/11/10 Time:

RELINQUISHED BY: (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

RECEIVED BY: (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

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

RECEIVING LABORATORY: TRACE ADDRESS: \_\_\_\_\_ CITY: Midland STATE: TX ZIP: \_\_\_\_\_ CONTACT: \_\_\_\_\_ PHONE: \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

RECEIVED BY: (Signature) \_\_\_\_\_

TETRA TECH CONTACT PERSON: Ike Tavares Results by: \_\_\_\_\_ RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 18.0°C intact

REMARKS: IF TPH > 5,000 mg/kg Run deeper samples

Run BTEX on (4) Highest TPH

WO #: 10081645

# Analysis Request of Chain of Custody Record



**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 Tavaraz

PROJECT NO.: 114-6100499 PROJECT NAME: COG / Coyote State #5

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	PRESERVATIVE METHOD						
								FILTERED (Y/N)	HCL	HNO3	ICE	NONE		
241302	8/11		S	X		SB-5 7'	1			X				
303						SB-5 10'	1			X				
304						SB-5 15'	1			X				
305						SB-5 20'	1			X				
306						SB-5 25'	1			X				
307						SB-6 1'	1			X				X
308						SB-6 3'	1			X				X
309						SB-6 5'	1			X				X
310						SB-6 7'	1			X				X
311						SB-6 10'	1			X				X

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. 8240/8260/824	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
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RELINQUISHED BY: (Signature) [Signature] Date: 8/11/10 Time: 1545 RECEIVED BY: (Signature) [Signature] Date: 8/11/10 Time: 1545 SAMPLED BY: (Print & Initial) Rim Date: 8/11/10 Time: 1545

RELINQUISHED BY: (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ RECEIVED BY: (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ SAMPLE SHIPPED BY: (Circle) FEDEX  BUS  AIRBILL #: \_\_\_\_\_ HAND DELIVERED  UPS  OTHER: \_\_\_\_\_

RELINQUISHED BY: (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ RECEIVED BY: (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ TETRA TECH CONTACT PERSON: Ike Tavaraz Results by: \_\_\_\_\_

RECEIVING LABORATORY: TRALE RECEIVED BY: (Signature) \_\_\_\_\_ RUSH Charges Authorized: \_\_\_\_\_ Yes No

ADDRESS: \_\_\_\_\_ CITY: Midland STATE: TX ZIP: \_\_\_\_\_ PHONE: \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

SAMPLE CONDITION WHEN RECEIVED: 18.0°C intact REMARKS: IF TPH > 5,000 mg/kg Run deeper samples

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

Run BTEX on (4) Highest TPH

WO#: 10081645

# Analysis Request of Chain of Custody Record



**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.:  
114-6400499

PROJECT NAME:  
COG / Coyote State #5  
Eddy Co., NM  
 SAMPLE IDENTIFICATION

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP	GRAB	NUMBER OF CONTAINERS FILTERED (Y/N)	PRESERVATIVE METHOD					BTEX 80215	CPH 8015 MOA	PAH 8270	PCRA 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. 8240/8280/824	GC.MS Semi. Vol. 8270/825	PCB's 8080/808	Pest. 808/808	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS						
							HCL	HNO3	ICE	NONE																								
241312	8/11		S	X		1				X																								
313						1				X																								
314						1				X																								
315						1				X																								
316						1				X																								
317						1				X																								
318						1				X																								
319						1				X																								
320	S		S	S		1				X																								

RELINQUISHED BY: (Signature) [Signature] Date: 8/13/10 Time: 15:45

RECEIVED BY: (Signature) [Signature] Date: 8/13/10 Time: 15:45

SAMPLED BY: (Print & Initial) Kim Date: 8/13/10 Time: 15:45

RELINQUISHED BY: (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

RECEIVED BY: (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

SAMPLE SHIPPED BY: (Circle) HAND DELIVERED BUS UPS AIRBILL #: \_\_\_\_\_ OTHER: \_\_\_\_\_

RELINQUISHED BY: (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

RECEIVED BY: (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

TETRA TECH CONTACT PERSON: Ike Tavares Results by: \_\_\_\_\_

RECEIVING LABORATORY: TRACE ADDRESS: Midland STATE: TX ZIP: \_\_\_\_\_ CONTACT: \_\_\_\_\_ PHONE: \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

RECEIVED BY: (Signature) \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 18.0°c intact

REMARKS: IF TPH > 5000 mg/kg Run deeper samples

Run BTEX on (4) Highest TPH