

SITE INFORMATION

Report Type: Closure Report

General Site Information:

Site:	Jenkins Federal B #12					
Company:	COG Operating LLC					
Section, Township and Range	20	17S	30E			
Lease Number:	API-30-015-31559					
County:	Eddy County					
GPS:	32.821007° N			103.99520° W		
Surface Owner:	Federal					
Mineral Owner:						
Directions:	From the intersection of Co. Rd. 217 and Hwy 82 travel west on Hwy 82 for 0.4 miles, turn right onto lease rd. and travel 400', turn left and travel 100' to well.					

Release Data:

Date Released:	8/1/2010
Type Release:	Produced Water
Source of Contamination:	1/2" nipple on wellhead
Fluid Released:	35 bbls
Fluids Recovered:	20 bbls

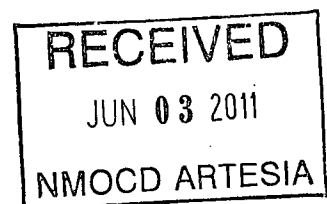
Official Communication:

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

Ranking Criteria

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

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





TETRA TECH

May 18, 2011

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

Re: Closure Report for the COG Operating LLC., Jenkins Federal B #12 Well Site, Unit F, Section 20, Township 17 South, Range 30 East, Eddy County, New Mexico.

Mr. Bratcher:

Tetra Tech, Inc. (Tetra Tech) was contacted by COG Operating LLC. (COG) to assess a spill from the Jenkins Federal B #12 Well Site located in Unit F, Section 20, Township 17 South, Range 30 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.821007°, W 103.99520°. The site location is shown on Figures 1 and 2.

Background

According to the State of New Mexico C-141 Initial Report, the leak was discovered on August 1, 2010. Approximately thirty-five (35) barrels of produced water was released when a ½" nipple on the wellhead failed. To alleviate the problem, COG personnel replaced all fittings with stainless steel. Twenty (20) barrels of standing fluids were recovered.

The spill initiated at the wellhead and migrated west on the pad and northwest off the well pad. The west spill area measured approximately 160' long, with a width of 30' to 100'. The north spill area on the pad measured approximately 30' x 80' and the impact off the pad in the pasture measured approximately 90' x 120'. The majority of the impact in the pasture appeared to be overspray. COG immediately scraped the pad and the saturated soil in the pasture. The initial C-141 form is enclosed in Appendix A.

Tetra Tech

1910 North Big Spring, Midland, TX 79705

Tel 432.682.4559

Fax 432.682.3946

www.tetrattech.com



Groundwater

No water wells were listed within Section 20. According to the NMOCD groundwater map, the average depth to groundwater in this area is greater than 200' below surface. The groundwater map is shown in Appendix B.

Regulatory

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

Soil Assessment and Analytical Results

On September 2, 2010, Tetra Tech personnel inspected and sampled the spill area. A total of eleven (11) auger holes (AH-1 through AH-11) were installed using a stainless steel hand auger to assess the impacted soils. Select samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The results of the sampling are summarized in Table 1. The auger hole locations are shown on Figure 3.

Referring to Table 1, all of the submitted samples were below the RRAL for TPH and BTEX. The chloride concentrations were not vertically defined in the areas of AH-1, AH-2, AH-3, AH-4 and AH-8. The remaining auger holes were defined and showed a shallow impact to the soils.

On February 2, 2010, Tetra Tech personnel supervised the installation of soil borings (SB-1 through SB-5) utilizing an air rotary drilling rig. The soil boring locations are shown in Figure 3. The soil borings were extended to depths from 20' to 60' below surface, with samples collected at 2 to 3 foot intervals for the first 10 feet, 5 foot intervals to 30' and 10 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, all of the soil borings installed were vertically defined. Soil boring (SB-1, SB-2 and SB-3) did show a shallow impact to the soil to a depth of 1' to 5' below surface. The deepest impact was found in the area of SB-5, with elevated chloride concentrations greater than 5,000 extending down to 7' and declining to 1,730 mg/kg at 15' below surface. Chloride concentrations of 1,500 mg/kg and 2,070 mg/kg were detected at 25' and 40', respectively. These deeper samples appear to be cross-contamination from the upper sand, which was collapsing into the soil boring.

Remedial Work and Closure Request

Tetra Tech personnel supervised the excavation of the site from March 11 through March 16, 2011. The excavation areas and depths are highlighted in Table 1 and Figure 5. The final depths of the soil remediation for the entire spill were met or exceeded the depths of the approved NMOCD work plan. The excavation area of AH-8 (SB-5) measured approximately 15' x 75' at a depth of 10' below surface and capped with a liner (40 mil) at 4' below surface. In addition, confirmation samples were requested by the BLM were collected from the excavation bottoms. The sample results are summarized in Table 2. The sample locations are shown in Figure 5.

Once excavated, the site was backfilled with clean material. Approximately 2,460 yards³ were removed and hauled to CRI Inc. for proper disposal. Photos of the excavation are attached.

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

Respectfully submitted,
TETRA TECH



Ike Tavaréz
Project Manager

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

FIGURES

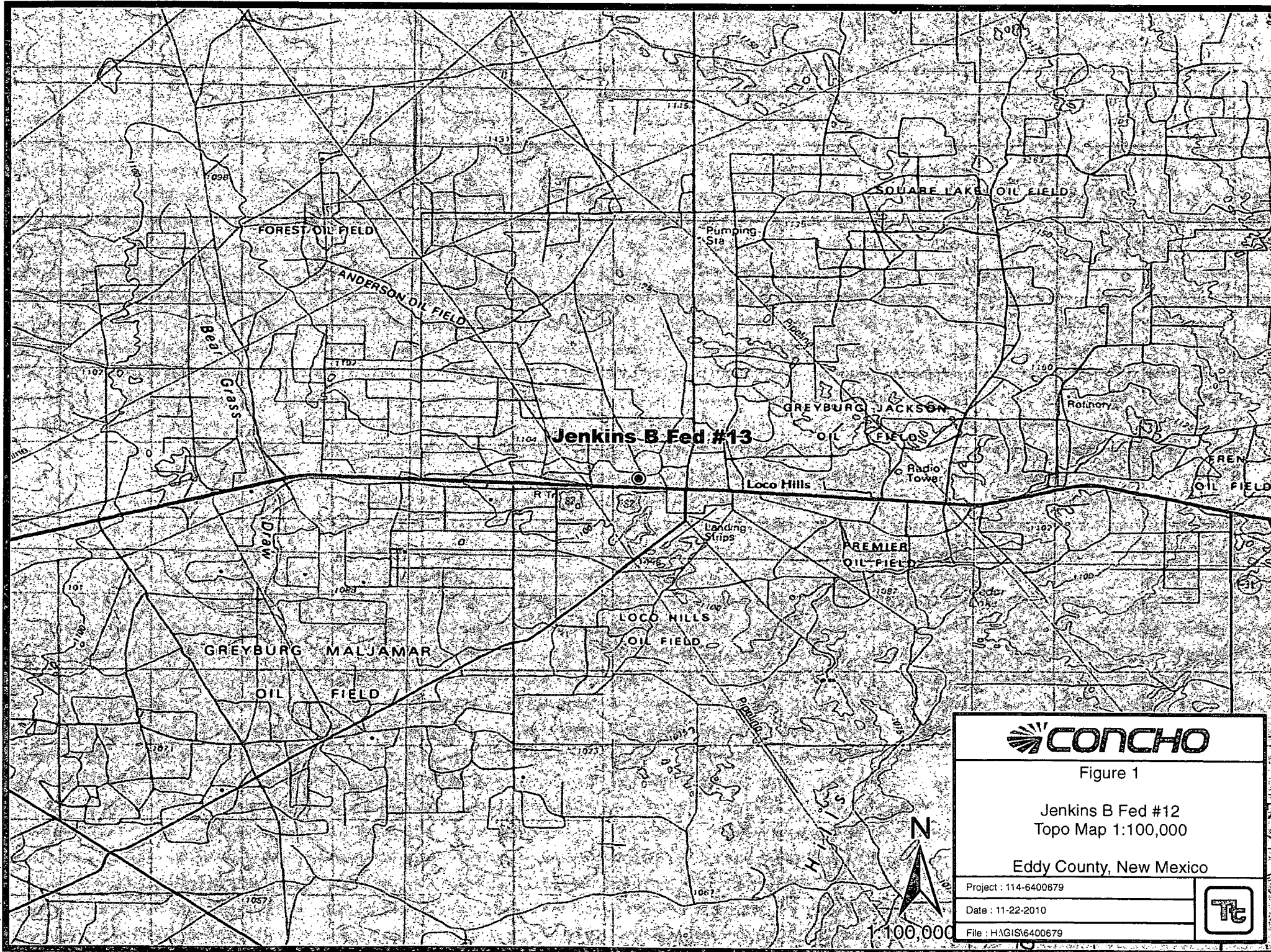


Figure 1

Jenkins B Fed #12
Topo Map 1:100,000

Eddy County, New Mexico

Project : 114-6400679

Date : 11-22-2010

File : H:\GIS\6400679



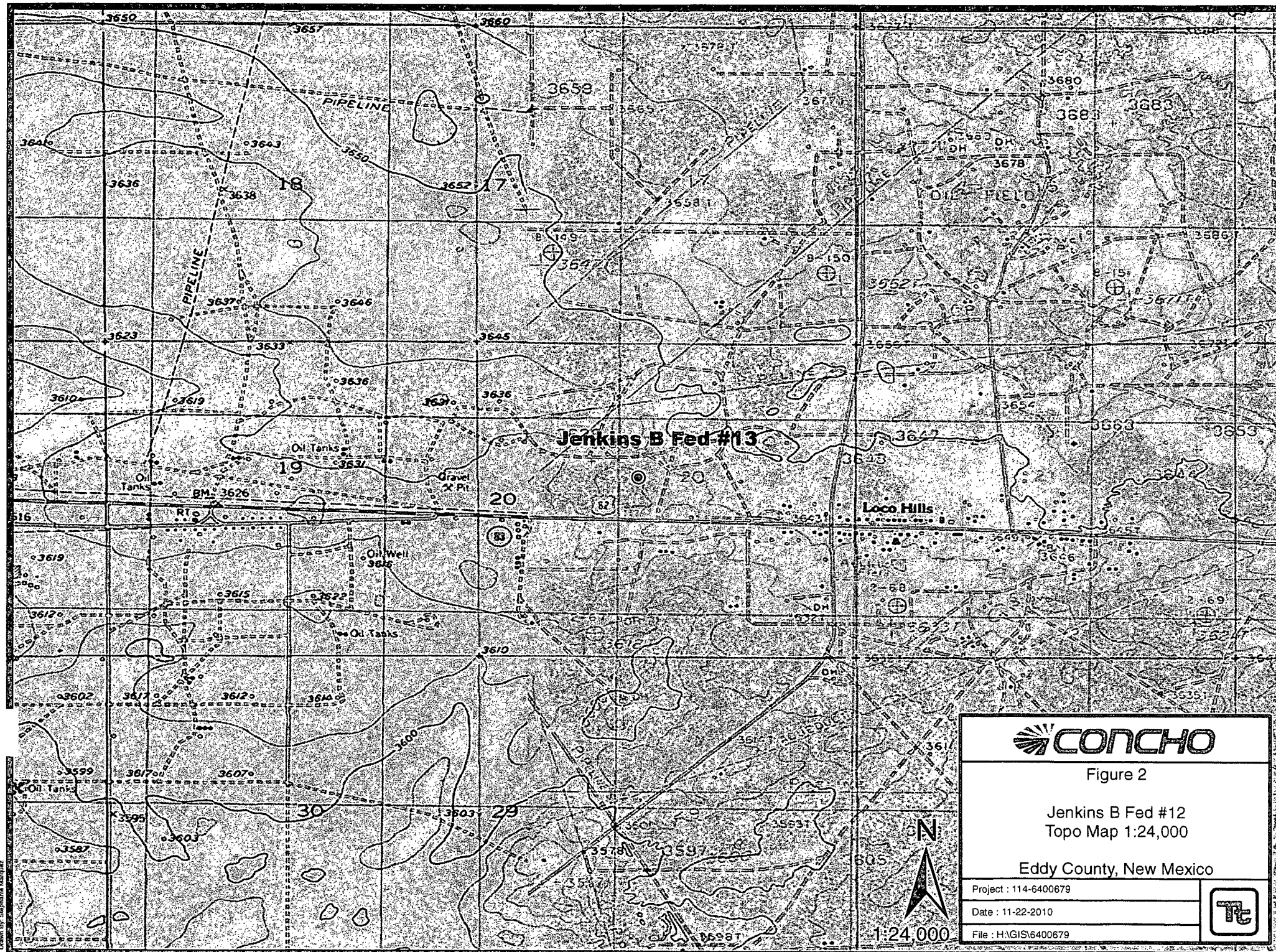


Figure 2

Jenkins B Fed #12
Topo Map 1:24,000

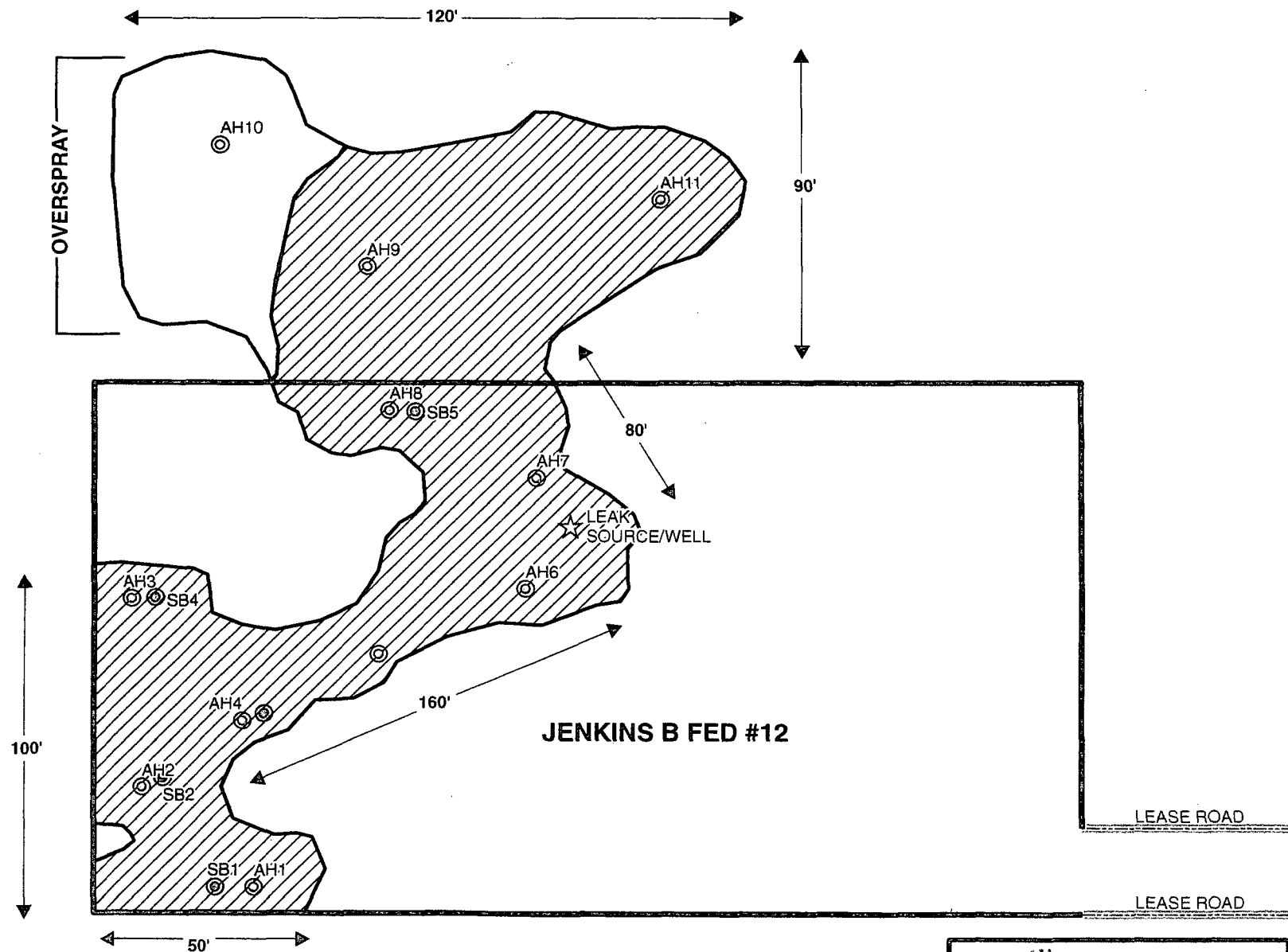
Eddy County, New Mexico

Project : 114-6400679

Date : 11-22-2010

File : H:\GIS\6400679





EXPLANATION

- ☆ INJECTION WELL/ LEAK
- ⊙ AUGER HOLE SAMPLE
- ⊙ SOIL BORE SAMPLE
- ▨ SPILL



NOT TO SCALE



Figure 3

Jenkins B Fed #12

Spill Assessment Map

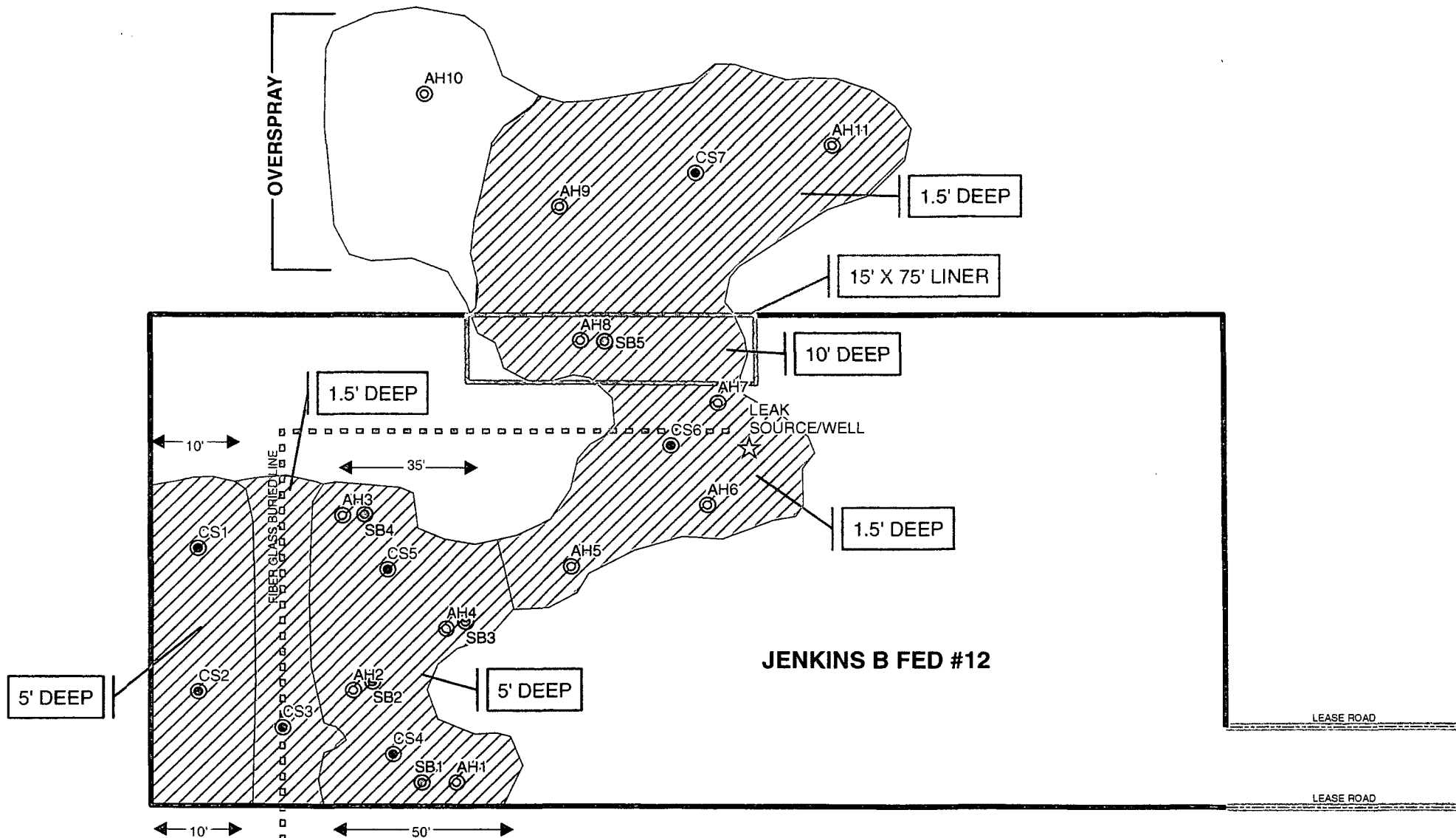
Eddy County, New Mexico

Project : 114-6400679

Date : 11-22-2010

File : HAGIS6400679





EXPLANATION

- ☆ INJECTION WELL/ LEAK
- ⊙ AUGER HOLE SAMPLE
- CONFIRMATION SAMPLE
- ⊙ SOIL BORE SAMPLE
- ▨ SPILL



Figure 4

Jenkins B Fed #12

Excavation Depths

Eddy County, New Mexico

Project : 114-6400679

Date : 11-22-2010

File : H:\GIS\6400679



NOT TO SCALE

TABLES

Table 1
COG Operating LLC.
JENKINS FEDERAL B #12
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-1	9/2/2010	0-1'			X	<2.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	3,710
	"	1-1.5'			X	-	-	-	-	-	-	-	12,300
	"	1.5-2'			X	-	-	-	-	-	-	-	7,640
SB-1	2/2/2010	0-1'			X	-	-	-					10,000
	"	3'			X	-	-	-					4,730
	"	5'			X	-	-	-					4,390
	"	7'		X		-	-	-					<200
	"	10'		X		-	-	-					<200
	"	15'		X		-	-	-					<200
	"	20'		X		-	-	-					<200
AH-2	9/2/2010	0-1'			X	<2.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	14,100
	"	1-1.5'			X	-	-	-	-	-	-	-	13,400
SB-2	12/2/2010	0-1'			X	-	-	-					<200
	"	3'			X	-	-	-					<200
	"	5'			X	-	-	-					743
	"	7'		X		-	-	-					<200
	"	10'		X		-	-	-					<200
	"	15'		X		-	-	-					<200
	"	20'		X		-	-	-					<200

Table 1
COG Operating LLC.
JENKINS FEDERAL B #12
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-3	9/2/2010	0-1'			X	<2.00	<50.0	<50.0	-	-	-	-	12,300
	"	1-1.5'			X	-	-	-	-	-	-	-	3,300
	"	1.5'-2'			X	-	-	-	-	-	-	-	3,930
SB-4	12/2/2010	0-1'			X	-	-	-					7,950
	"	3'			X	-	-	-					3,040
	"	5'			X	-	-	-					<200
	"	7'		X		-	-	-					261
	"	10'		X		-	-	-					<200
	"	15'		X		-	-	-					<200
	"	20'		X		-	-	-					<200
AH-4	9/2/2010	0-1'			X	<2.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	12,300
	"	1-1.5'			X	-	-	-	-	-	-	-	867
	"	2-2.5'			X	-	-	-	-	-	-	-	2,760
	"	2.5'-3'			X	-	-	-	-	-	-	-	3,100
SB-3	12/2/2010	0-1'			X	-	-	-					8,730
	"	3'			X	-	-	-					11,400
	"	5'			X	-	-	-					876
	"	7'		X		-	-	-					1,170
	"	10'		X		-	-	-					456
	"	15'		X		-	-	-					<200
	"	20'		X		-	-	-					<200

Table 1
COG Operating LLC.
JENKINS FEDERAL B #12
Eddy County, New Mexico

[illegible]

Table 1
COG Operating LLC.
JENKINS FEDERAL B #12
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-8	9/2/2010	0-1'			X	<2.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	10,000
	"	1-1.5'			X	-	-	-	-	-	-	-	1,840
	"	2-2.5'			X	-	-	-	-	-	-	-	912
	"	3-3.5'			X	-	-	-	-	-	-	-	701
	"	4-4.5'			X	-	-	-	-	-	-	-	4,280
	"	4.5'-5'			X	-	-	-	-	-	-	-	6,850
SB-5	12/2/2010	0-1'			X	-	-	-					19,700
	"	3'			X	-	-	-					8,640
	"	5'			X	-	-	-					1,830
	"	7'			X	-	-	-					8,590
	"	15'		X		-	-	-					1,730
	"	20'		X		-	-	-					850
	"	25'		X		-	-	-					1,500
	"	30'		X		-	-	-					352
	"	40'		X		-	-	-					2,070
	"	50'		X		-	-	-					394
	"	60'		X		-	-	-					<200

Table 1
COG Operating LLC.
JENKINS FEDERAL B #12
Eddy County, New Mexico

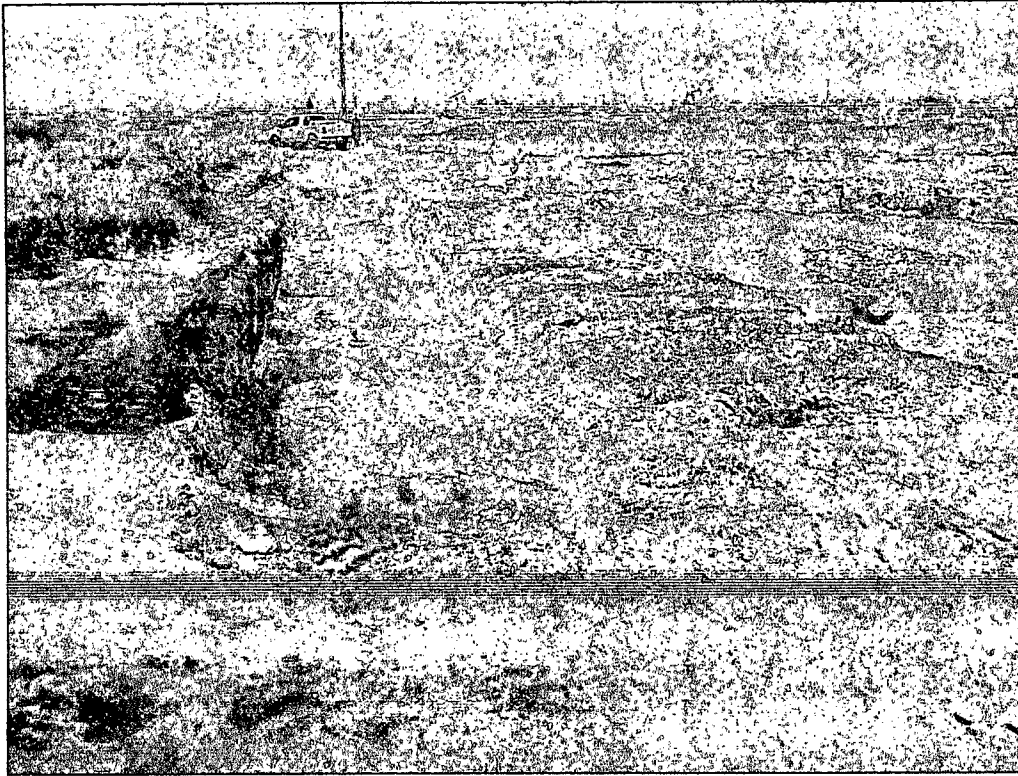
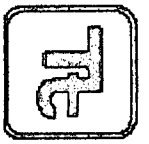
Sample ID	Sample Date	Sample Depth (ft)	Depth (BEB)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total					
AH-9	9/2/2010	0-1'			X	<2.00	<50.0	<50.0	-	-	-	-	1,260
	"	1-1.5'			X	-	-	-	-	-	-	-	<200
	"	2-2.5'		X		-	-	-	-	-	-	-	<200
	"	3-3.5'		X		-	-	-	-	-	-	-	<200
	"	4-4.5'		X		-	-	-	-	-	-	-	<200
AH-10	9/2/2010	0-1'		X		<2.00	<50.0	<50.0	-	-	-	-	293
	"	1-1.5'		X		-	-	-	-	-	-	-	<200
	"	2-2.5'		X		-	-	-	-	-	-	-	<200
AH-11	9/2/2010	0-1'			X	<2.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	2,660
	"	1-1.5'			X	-	-	-	-	-	-	-	<200
	"	2-2.5'		X		-	-	-	-	-	-	-	<200

— Installed 40 mil Liner

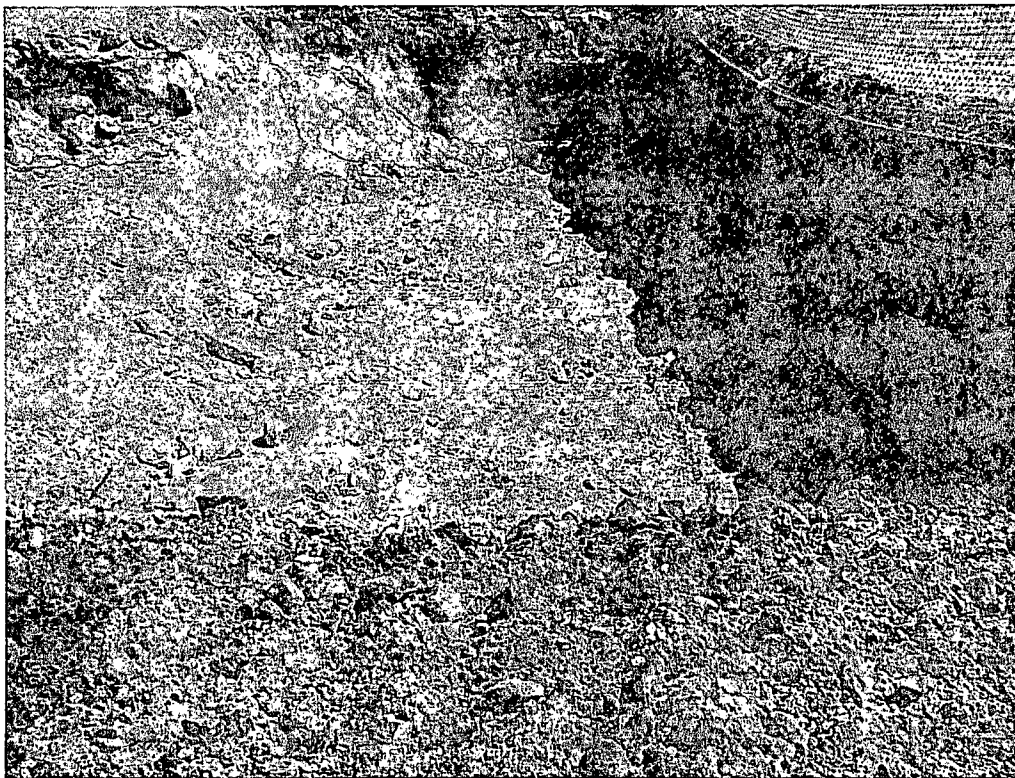
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Excavation Depths

PHOTOGRAPHS



View North – CS-1,2,3,5

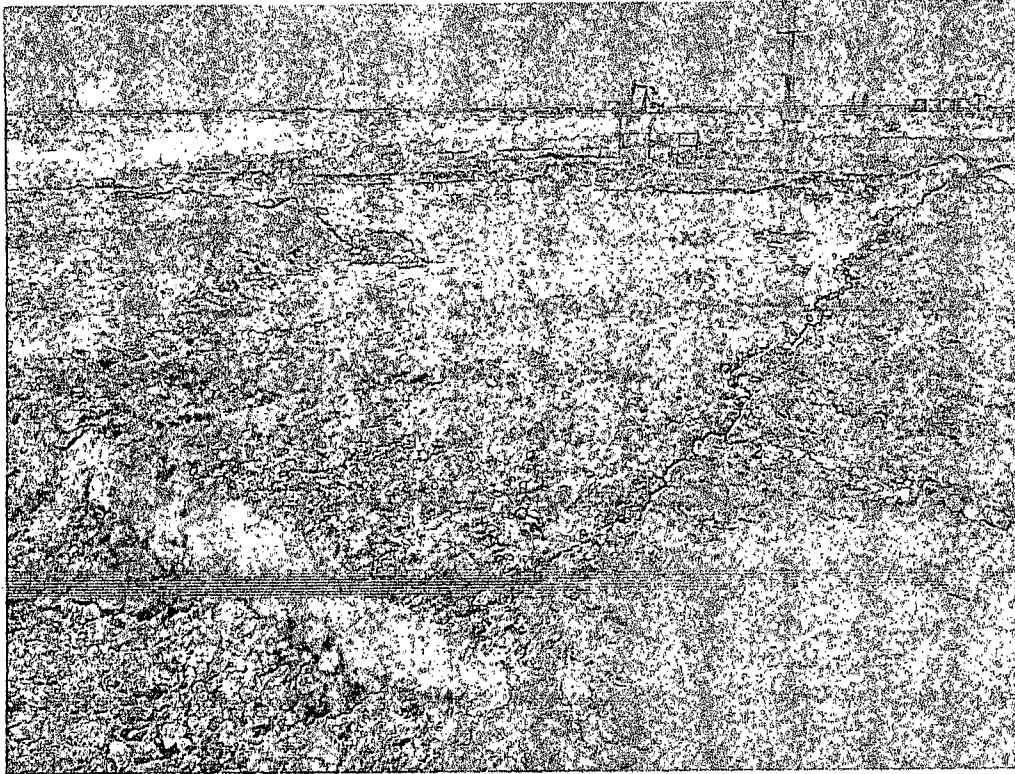


View East – CS-4

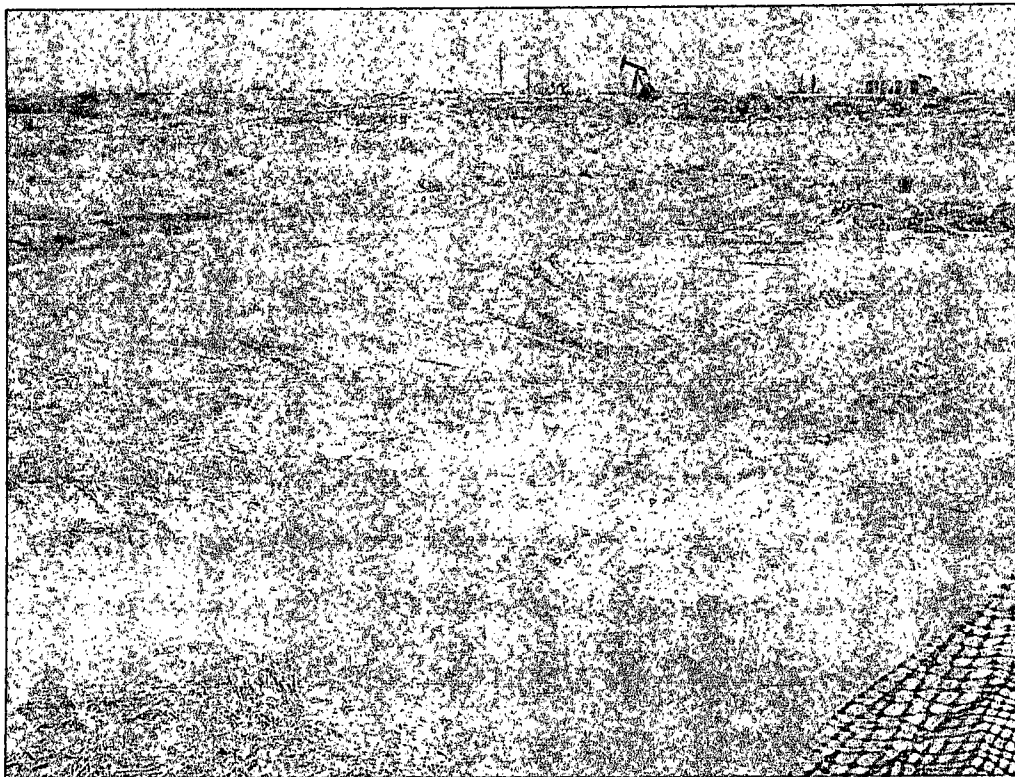
COG Operating LLC
Jenkins B Federal #12
Eddy County, New Mexico



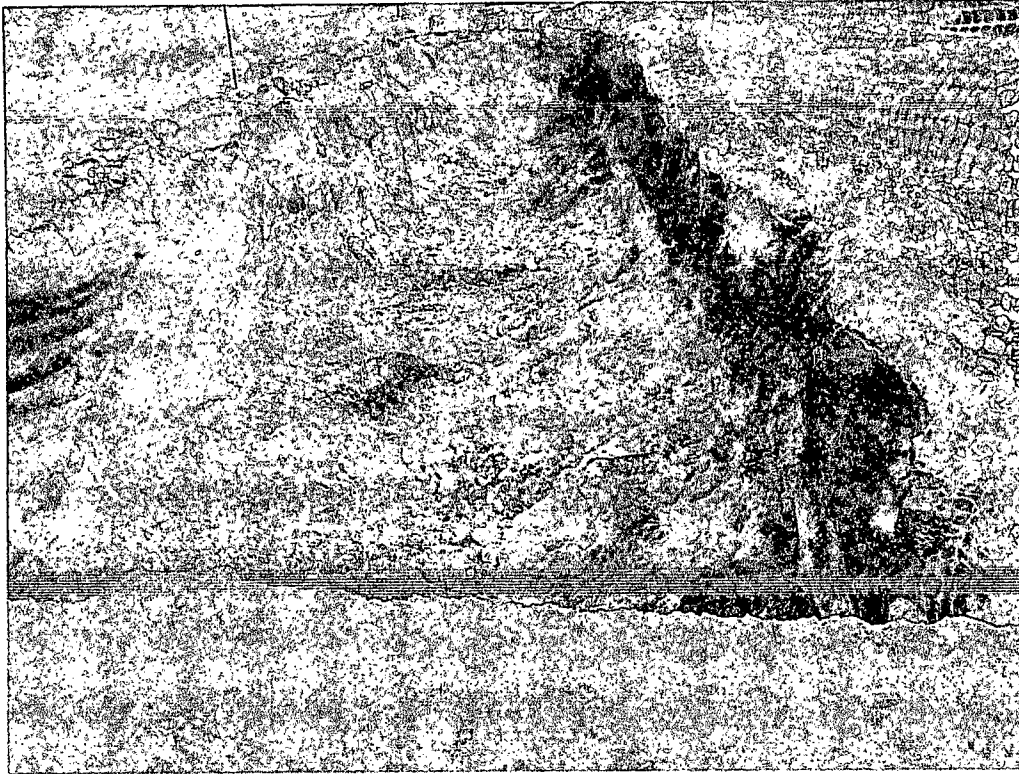
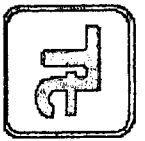
TETRA TECH



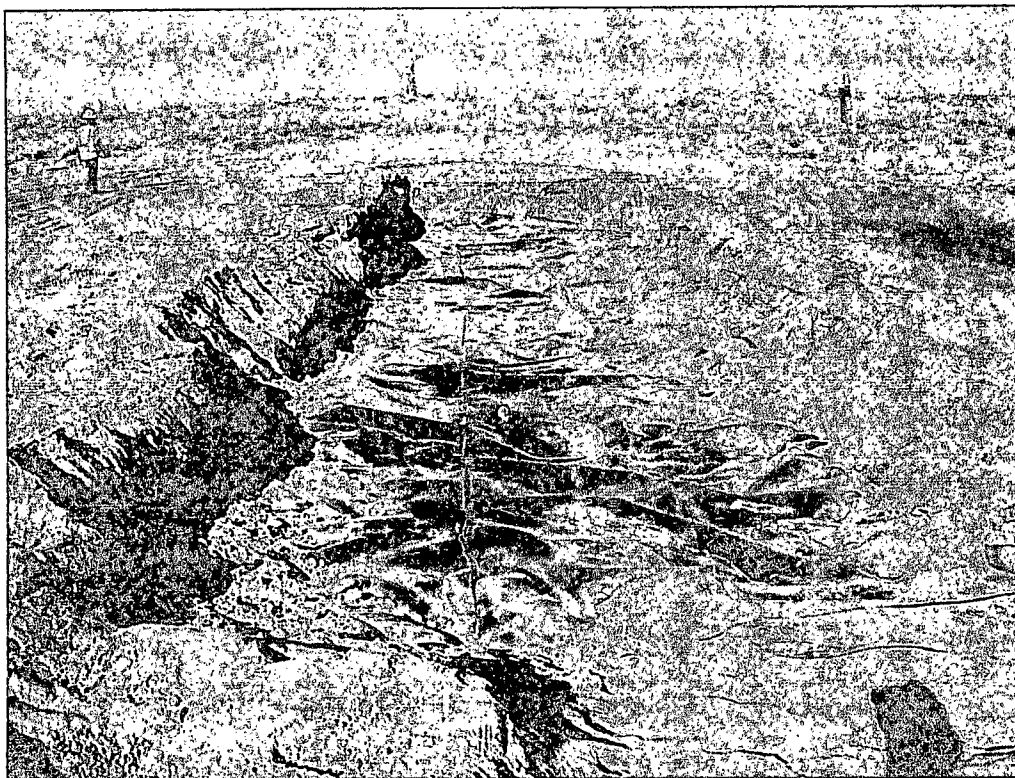
View East – CS-6



View North – CS-7



View East – SB-5

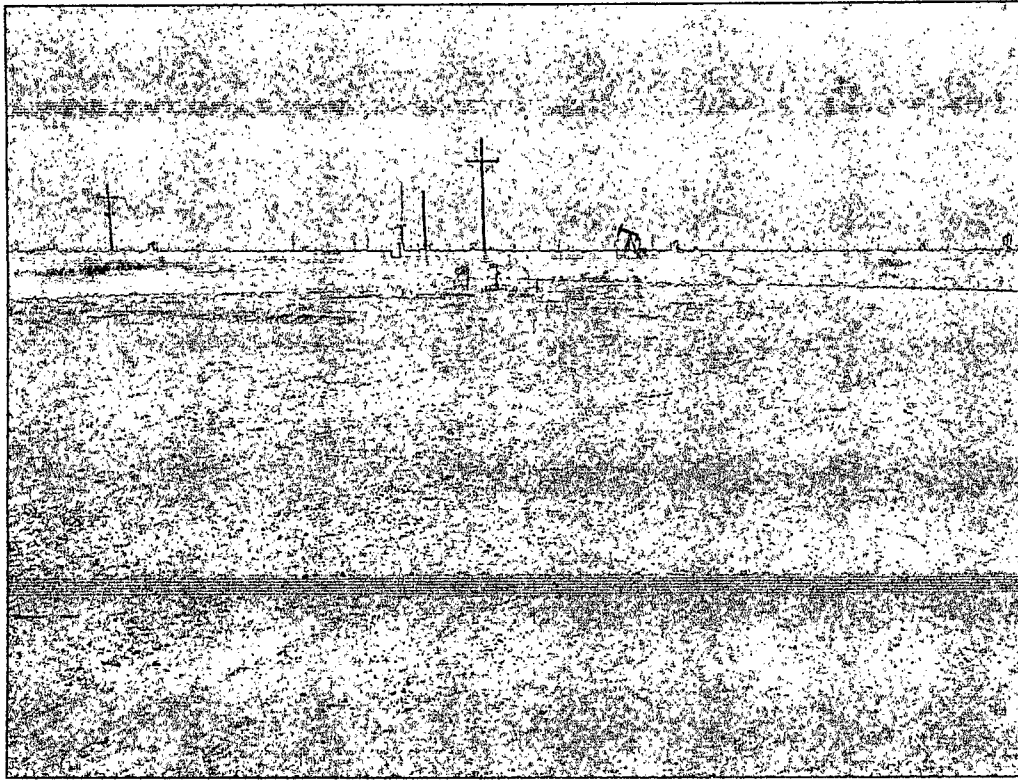


View West – SB-5

COG Operating LLC
Jenkins B Federal #12
Eddy County, New Mexico



TETRA TECH



View North West - Backfill

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	COG OPERATING LLC	Contact	Pat Ellis
Address	550 W. Texas, Suite 100, Midland, TX 79701	Telephone No.	432-230-0077
Facility Name	Jenkins B Federal # 12	Facility Type	Well
Surface Owner	Federal	Mineral Owner	
		Lease No.	NMLC-054988-B (AP#) 30-015-31559

LOCATION OF RELEASE

Unit Letter 1'	Section 20	Township 17S	Range 30E	Feet from the 2310'	North/South Line North	Feet from the 2310'	East/West Line West	County Eddy
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Latitude 32.821007 Longitude 103.99520

NATURE OF RELEASE

Type of Release	Produced Water	Volume of Release	35bbls	Volume Recovered	20bbls
Source of Release	1/2" nipple on wellhead	Date and Hour of Occurrence	08/01/2010	Date and Hour of Discovery	08/01/2010 8:00 a.m.
Was Immediate Notice Given?	☒ Yes ☐ No ☐ Not Required	If YES, To Whom?	Mike Bratcher—OCD		
By Whom?	Josh Russo	Date and Hour	08/02/2010 1:36 p.m.		
Was a Watercourse Reached?	☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

A 1/2" nipple on the wellhead failed causing the release. Replaced all fittings with stainless steel.

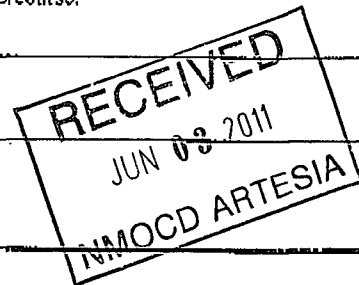
Describe Area Affected and Cleanup Action Taken.*

Initially we released 35bbls of produced water from the wellhead and were able to recover 20bbls with a vacuum truck. The dimensions of the spill areas are 2' x 60' to the north and 10' x 100' to the west, along with an overspray of 20' x 200' to the north. The pad area has been scraped and returned to its original condition. 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 NMOCDBLM for approval prior to any significant remediation work.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCDBLM 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 NMOCDBLM 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, NMOCDBLM 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:			
Printed Name:	Josh Russo	Approved by District Supervisor:	
Title:	HSE Coordinator	Approval Date:	Expiration Date:
E-mail Address:	jrusso@conchoresources.com	Conditions of Approval:	Attached ☐
Date:	08/09/2010	Phone:	432-212-2399

* Attach Additional Sheets If Necessary



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

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

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company COG Operating LLC	Contact Pat Ellis
Address 550 W. Texas, Suite 1300 Midland, Texas 79701	Telephone No. (432) 230-0077
Facility Name Jenkins B Federal #12	Facility Type Well

Surface Owner: Federal	Mineral Owner	Lease No. NMLC-054988-B (API#) 30-015-31559
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LOCATION OF RELEASE

Unit Letter F	Section 20	Township 17S	Range 30E	Feet from the 2310'	North/South Line North	Feet from the 2310'	East/West Line West	County Eddy
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Latitude N 32.853001° Longitude W 103.959150°

NATURE OF RELEASE

Type of Release: Oil	Volume of Release 160 bbls	Volume Recovered 145 bbls
Source of Release: Equalizer	Date and Hour of Occurrence 3/13/10	Date and Hour of Discovery 3/13/2010
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher--OCD	
By Whom? Josh Russo	Date and Hour 08-02-2010 1:36 p.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*

N/A

Describe Cause of Problem and Remedial Action Taken.*

A 1/2" nipple on the wellhead failed causing the release. Replaced all fittings with stainless steel.

Describe Area Affected and Cleanup Action Taken.*

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

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

Signature: 	OIL CONSERVATION DIVISION		
Printed Name: Ike Tavarez (Agent for COG)	Approved by District Supervisor:		
Title: Project Manager	Approval Date:	Expiration Date:	
E-mail Address: Ike.Tavarez@TetraTech.com	Conditions of Approval:		Attached ☐
Date: 5/24/11 Phone: (432) 682-4559			

* Attach Additional Sheets If Necessary

APPENDIX B

Water Well Data
Average Depth to Groundwater (ft)
COG - Jenkins B Federal #12
Eddy County, New Mexico

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

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

17 South			29 East		
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	80	23
30	29	210	28	27	26
31	32	208'	33	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	SITE	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

18 South			29 East		
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	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

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

APPENDIX C

Summary Report

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

Report Date: September 14, 2010

Work Order: 10090706



Project Location: Eddy County, NM
Project Name: COG/Jenkins Federal #12
Project Number: 114-6400679

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
243660	AH-1 0-1'	soil	2010-09-02	00:00	2010-09-03
243661	AH-1 1-1.5'	soil	2010-09-02	00:00	2010-09-03
243662	AH-1 1.5-2'	soil	2010-09-02	00:00	2010-09-03
243663	AH-2 0-1'	soil	2010-09-02	00:00	2010-09-03
243664	AH-2 1-1.5'	soil	2010-09-02	00:00	2010-09-03
243665	AH-3 0-1'	soil	2010-09-02	00:00	2010-09-03
243666	AH-3 1-1.5'	soil	2010-09-02	00:00	2010-09-03
243667	AH-3 1.5-2'	soil	2010-09-02	00:00	2010-09-03
243668	AH-4 0-1'	soil	2010-09-02	00:00	2010-09-03
243669	AH-4 1-1.5'	soil	2010-09-02	00:00	2010-09-03
243670	AH-4 2-2.5'	soil	2010-09-02	00:00	2010-09-03
243671	AH-4 2.5-3'	soil	2010-09-02	00:00	2010-09-03
243672	AH-5 0-1'	soil	2010-09-02	00:00	2010-09-03
243673	AH-5 1-1.5'	soil	2010-09-02	00:00	2010-09-03
243674	AH-5 2-2.5'	soil	2010-09-02	00:00	2010-09-03
243675	AH-5 3-3.5'	soil	2010-09-02	00:00	2010-09-03
243676	AH-5 4-4.5'	soil	2010-09-02	00:00	2010-09-03
243677	AH-6 0-1'	soil	2010-09-02	00:00	2010-09-03
243678	AH-6 1-1.5'	soil	2010-09-02	00:00	2010-09-03
243679	AH-6 2-2.5'	soil	2010-09-02	00:00	2010-09-03
243680	AH-6 3-3.5'	soil	2010-09-02	00:00	2010-09-03
243681	AH-6 4-4.5'	soil	2010-09-02	00:00	2010-09-03
243682	AH-7 0-1'	soil	2010-09-02	00:00	2010-09-03
243683	AH-7 1-1.5'	soil	2010-09-02	00:00	2010-09-03
243684	AH-7 2-2.5'	soil	2010-09-02	00:00	2010-09-03
243685	AH-7 3-3.5'	soil	2010-09-02	00:00	2010-09-03
243686	AH-8 0-1'	soil	2010-09-02	00:00	2010-09-03
243687	AH-8 1-1.5'	soil	2010-09-02	00:00	2010-09-03
243688	AH-8 2-2.5'	soil	2010-09-02	00:00	2010-09-03
243689	AH-8 3-3.5'	soil	2010-09-02	00:00	2010-09-03

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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
243690	AH-8 4-4.5'	soil	2010-09-02	00:00	2010-09-03
243691	AH-8 4.5-5'	soil	2010-09-02	00:00	2010-09-03
243692	AH-9 0-1'	soil	2010-09-02	00:00	2010-09-03
243693	AH-9 1-1.5'	soil	2010-09-02	00:00	2010-09-03
243694	AH-9 2-2.5'	soil	2010-09-02	00:00	2010-09-03
243695	AH-9 3-3.5'	soil	2010-09-02	00:00	2010-09-03
243696	AH-9 4-4.5'	soil	2010-09-02	00:00	2010-09-03
243697	AH-10 0-1'	soil	2010-09-02	00:00	2010-09-03
243698	AH-10 1-1.5'	soil	2010-09-02	00:00	2010-09-03
243699	AH-10 2-2.5'	soil	2010-09-02	00:00	2010-09-03
243700	AH-11 0-1'	soil	2010-09-02	00:00	2010-09-03
243701	AH-11 1-1.5'	soil	2010-09-02	00:00	2010-09-03
243702	AH-11 2-2.5'	soil	2010-09-02	00:00	2010-09-03

Sample - Field Code	BTEX				TPH DRO - NEW	TPH GRO
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
243660 - AH-1 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
243663 - AH-2 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
243665 - AH-3 0-1'					<50.0	<2.00
243668 - AH-4 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
243672 - AH-5 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
243677 - AH-6 0-1'					<50.0	<2.00
243682 - AH-7 0-1'					<50.0	<2.00
243686 - AH-8 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00
243692 - AH-9 0-1'					<50.0	<2.00
243697 - AH-10 0-1'					<50.0	<2.00
243700 - AH-11 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	<50.0	<2.00

Sample: 243660 - AH-1 0-1'

Param	Flag	Result	Units	RL
Chloride		3710	mg/Kg	4.00

Sample: 243661 - AH-1 1-1.5'

Param	Flag	Result	Units	RL
Chloride		12300	mg/Kg	4.00

Sample: 243662 - AH-1 1.5-2'

Param	Flag	Result	Units	RL
Chloride		7640	mg/Kg	4.00

Sample: 243663 - AH-2 0-1'

Param	Flag	Result	Units	RL
Chloride		14100	mg/Kg	4.00

Sample: 243664 - AH-2 1-1.5'

Param	Flag	Result	Units	RL
Chloride		13400	mg/Kg	4.00

Sample: 243665 - AH-3 0-1'

Param	Flag	Result	Units	RL
Chloride		12300	mg/Kg	4.00

Sample: 243666 - AH-3 1-1.5'

Param	Flag	Result	Units	RL
Chloride		3300	mg/Kg	4.00

Sample: 243667 - AH-3 1.5-2'

Param	Flag	Result	Units	RL
Chloride		3930	mg/Kg	4.00

Sample: 243668 - AH-4 0-1'

Param	Flag	Result	Units	RL
Chloride		12300	mg/Kg	4.00

Sample: 243669 - AH-4 1-1.5'

Param	Flag	Result	Units	RL
Chloride		867	mg/Kg	4.00

Sample: 243670 - AH-4 2-2.5'

Param	Flag	Result	Units	RL
Chloride		2760	mg/Kg	4.00

Sample: 243671 - AH-4 2.5-3'

Param	Flag	Result	Units	RL
Chloride		3100	mg/Kg	4.00

Sample: 243672 - AH-5 0-1'

Param	Flag	Result	Units	RL
Chloride		11300	mg/Kg	4.00

Sample: 243673 - AH-5 1-1.5'

Param	Flag	Result	Units	RL
Chloride		1130	mg/Kg	4.00

Sample: 243674 - AH-5 2-2.5'

Param	Flag	Result	Units	RL
Chloride		675	mg/Kg	4.00

Sample: 243675 - AH-5 3-3.5'

Param	Flag	Result	Units	RL
Chloride		227	mg/Kg	4.00

Sample: 243676 - AH-5 4-4.5'

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

Sample: 243677 - AH-6 0-1'

Param	Flag	Result	Units	RL
Chloride		2870	mg/Kg	4.00

Sample: 243678 - AH-6 1-1.5'

Param	Flag	Result	Units	RL
Chloride		594	mg/Kg	4.00

Sample: 243679 - AH-6 2-2.5'

Param	Flag	Result	Units	RL
Chloride		368	mg/Kg	4.00

Sample: 243680 - AH-6 3-3.5'

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

Sample: 243681 - AH-6 4-4.5'

Param	Flag	Result	Units	RL
Chloride		262	mg/Kg	4.00

Sample: 243682 - AH-7 0-1'

Param	Flag	Result	Units	RL
Chloride		3590	mg/Kg	4.00

Sample: 243683 - AH-7 1-1.5'

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

Sample: 243684 - AH-7 2-2.5'

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

Sample: 243685 - AH-7 3-3.5'

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

Sample: 243686 - AH-8 0-1'

Param	Flag	Result	Units	RL
Chloride		10000	mg/Kg	4.00

Sample: 243687 - AH-8 1-1.5'

Param	Flag	Result	Units	RL
Chloride		1840	mg/Kg	4.00

Sample: 243688 - AH-8 2-2.5'

Param	Flag	Result	Units	RL
Chloride		912	mg/Kg	4.00

Sample: 243689 - AH-8 3-3.5'

Param	Flag	Result	Units	RL
Chloride		701	mg/Kg	4.00

Sample: 243690 - AH-8 4-4.5'

Param	Flag	Result	Units	RL
Chloride		4280	mg/Kg	4.00

Sample: 243691 - AH-8 4.5-5'

Param	Flag	Result	Units	RL
Chloride		6850	mg/Kg	4.00

Sample: 243692 - AH-9 0-1'

Param	Flag	Result	Units	RL
Chloride		1260	mg/Kg	4.00

Sample: 243693 - AH-9 1-1.5'

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

Sample: 243694 - AH-9 2-2.5'

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

Sample: 243695 - AH-9 3-3.5'

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

Sample: 243696 - AH-9 4-4.5'

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

Sample: 243697 - AH-10 0-1'

Param	Flag	Result	Units	RL
Chloride		293	mg/Kg	4.00

Sample: 243698 - AH-10 1-1.5'

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

Sample: 243699 - AH-10 2-2.5'

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

Sample: 243700 - AH-11 0-1'

Param	Flag	Result	Units	RL
Chloride		2660	mg/Kg	4.00

Sample: 243701 - AH-11 1-1.5'

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

Sample: 243702 - AH-11 2-2.5'

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



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

Certifications

WBENC: 237019

HUB: 1752439743100-86536
NCTRCA WFWB38444Y0909

DBE: VN 20657

NELAP Certifications

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

El Paso: T104704221-08-TX
LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

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

Report Date: September 14, 2010

Work Order: 10090706



Project Location: Eddy County, NM
Project Name: COG/Jenkins Federal #12
Project Number: 114-6400679

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
243660	AH-1 0-1'	soil	2010-09-02	00:00	2010-09-03
243661	AH-1 1-1.5'	soil	2010-09-02	00:00	2010-09-03
243662	AH-1 1.5-2'	soil	2010-09-02	00:00	2010-09-03
243663	AH-2 0-1'	soil	2010-09-02	00:00	2010-09-03
243664	AH-2 1-1.5'	soil	2010-09-02	00:00	2010-09-03
243665	AH-3 0-1'	soil	2010-09-02	00:00	2010-09-03
243666	AH-3 1-1.5'	soil	2010-09-02	00:00	2010-09-03
243667	AH-3 1.5-2'	soil	2010-09-02	00:00	2010-09-03
243668	AH-4 0-1'	soil	2010-09-02	00:00	2010-09-03
243669	AH-4 1-1.5'	soil	2010-09-02	00:00	2010-09-03

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
243670	AH-4 2-2.5'	soil	2010-09-02	00:00	2010-09-03
243671	AH-4 2.5-3'	soil	2010-09-02	00:00	2010-09-03
243672	AH-5 0-1'	soil	2010-09-02	00:00	2010-09-03
243673	AH-5 1-1.5'	soil	2010-09-02	00:00	2010-09-03
243674	AH-5 2-2.5'	soil	2010-09-02	00:00	2010-09-03
243675	AH-5 3-3.5'	soil	2010-09-02	00:00	2010-09-03
243676	AH-5 4-4.5'	soil	2010-09-02	00:00	2010-09-03
243677	AH-6 0-1'	soil	2010-09-02	00:00	2010-09-03
243678	AH-6 1-1.5'	soil	2010-09-02	00:00	2010-09-03
243679	AH-6 2-2.5'	soil	2010-09-02	00:00	2010-09-03
243680	AH-6 3-3.5'	soil	2010-09-02	00:00	2010-09-03
243681	AH-6 4-4.5'	soil	2010-09-02	00:00	2010-09-03
243682	AH-7 0-1'	soil	2010-09-02	00:00	2010-09-03
243683	AH-7 1-1.5'	soil	2010-09-02	00:00	2010-09-03
243684	AH-7 2-2.5'	soil	2010-09-02	00:00	2010-09-03
243685	AH-7 3-3.5'	soil	2010-09-02	00:00	2010-09-03
243686	AH-8 0-1'	soil	2010-09-02	00:00	2010-09-03
243687	AH-8 1-1.5'	soil	2010-09-02	00:00	2010-09-03
243688	AH-8 2-2.5'	soil	2010-09-02	00:00	2010-09-03
243689	AH-8 3-3.5'	soil	2010-09-02	00:00	2010-09-03
243690	AH-8 4-4.5'	soil	2010-09-02	00:00	2010-09-03
243691	AH-8 4.5-5'	soil	2010-09-02	00:00	2010-09-03
243692	AH-9 0-1'	soil	2010-09-02	00:00	2010-09-03
243693	AH-9 1-1.5'	soil	2010-09-02	00:00	2010-09-03
243694	AH-9 2-2.5'	soil	2010-09-02	00:00	2010-09-03
243695	AH-9 3-3.5'	soil	2010-09-02	00:00	2010-09-03
243696	AH-9 4-4.5'	soil	2010-09-02	00:00	2010-09-03
243697	AH-10 0-1'	soil	2010-09-02	00:00	2010-09-03
243698	AH-10 1-1.5'	soil	2010-09-02	00:00	2010-09-03
243699	AH-10 2-2.5'	soil	2010-09-02	00:00	2010-09-03
243700	AH-11 0-1'	soil	2010-09-02	00:00	2010-09-03
243701	AH-11 1-1.5'	soil	2010-09-02	00:00	2010-09-03
243702	AH-11 2-2.5'	soil	2010-09-02	00:00	2010-09-03

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

This report consists of a total of 38 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



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

Standard Flags

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

Case Narrative

Samples for project COG/Jenkins Federal #12 were received by TraceAnalysis, Inc. on 2010-09-03 and assigned to work order 10090706. Samples for work order 10090706 were received intact at a temperature of 4.0 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	62914	2010-09-08 at 09:00	73353	2010-09-08 at 10:17
Chloride (Titration)	SM 4500-Cl B	62930	2010-09-09 at 09:22	73395	2010-09-10 at 11:23
Chloride (Titration)	SM 4500-Cl B	62932	2010-09-09 at 09:23	73397	2010-09-10 at 11:25
Chloride (Titration)	SM 4500-Cl B	62933	2010-09-09 at 09:23	73398	2010-09-10 at 11:25
Chloride (Titration)	SM 4500-Cl B	62935	2010-09-09 at 09:24	73399	2010-09-10 at 11:26
Chloride (Titration)	SM 4500-Cl B	62936	2010-09-09 at 09:24	73400	2010-09-10 at 11:27
TPH DRO - NEW	S 8015 D	62877	2010-09-07 at 14:30	73300	2010-09-07 at 14:30
TPH GRO	S 8015 D	62914	2010-09-08 at 09:00	73350	2010-09-08 at 10:45

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 10090706 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

Report Date: September 14, 2010
114-6400679

Work Order: 10090706
COG/Jenkins Federal #12

Page Number: 5 of 38
Eddy County, NM

Analytical Report

Sample: 243660 - AH-1 0-1'

Laboratory: Midland
Analysis: BTEX
QC Batch: 73353
Prep Batch: 62914

Analytical Method: S 8021B
Date Analyzed: 2010-09-08
Sample Preparation: 2010-09-08

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

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.15	mg/Kg	1	2.00	108	52.8 - 137
4-Bromofluorobenzene (4-BFB)		2.13	mg/Kg	1	2.00	106	38.4 - 157

Sample: 243660 - AH-1 0-1'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73395
Prep Batch: 62930

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-10
Sample Preparation: 2010-09-09

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		3710	mg/Kg	100	4.00

Sample: 243660 - AH-1 0-1'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 73300
Prep Batch: 62877

Analytical Method: S 8015 D
Date Analyzed: 2010-09-07
Sample Preparation: 2010-09-07

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		89.0	mg/Kg	1	100	89	70 - 130

Sample: 243660 - AH-1 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 73350
Prep Batch: 62914

Analytical Method: S 8015 D
Date Analyzed: 2010-09-08
Sample Preparation: 2010-09-08

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)		2.21	mg/Kg	1	2.00	110	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.96	mg/Kg	1	2.00	98	42 - 159

Sample: 243661 - AH-1 1-1.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73395
Prep Batch: 62930

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-10
Sample Preparation: 2010-09-09

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		12300	mg/Kg	100	4.00

Sample: 243662 - AH-1 1.5-2'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73395
Prep Batch: 62930

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-10
Sample Preparation: 2010-09-09

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		7640	mg/Kg	100	4.00

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Sample: 243663 - AH-2 0-1'

Laboratory: Midland

Analysis: BTEX

QC Batch: 73353

Prep Batch: 62914

Analytical Method: S 8021B

Date Analyzed: 2010-09-08

Sample Preparation: 2010-09-08

Prep Method: S 5035

Analyzed By: AG

Prepared By: AG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.14	mg/Kg	1	2.00	107	52.8 - 137
4-Bromofluorobenzene (4-BFB)		2.11	mg/Kg	1	2.00	106	38.4 - 157

Sample: 243663 - AH-2 0-1'

Laboratory: Midland

Analysis: Chloride (Titration)

QC Batch: 73395

Prep Batch: 62930

Analytical Method: SM 4500-Cl B

Date Analyzed: 2010-09-10

Sample Preparation: 2010-09-09

Prep Method: N/A

Analyzed By: AR

Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		14100	mg/Kg	100	4.00

Sample: 243663 - AH-2 0-1'

Laboratory: Midland

Analysis: TPH DRO - NEW

QC Batch: 73300

Prep Batch: 62877

Analytical Method: S 8015 D

Date Analyzed: 2010-09-07

Sample Preparation: 2010-09-07

Prep Method: N/A

Analyzed By: kg

Prepared By: kg

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		85.9	mg/Kg	1	100	86	70 - 130

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Sample: 243663 - AH-2 0-1'

Laboratory:	Midland		
Analysis:	TPH GRO	Analytical Method:	S 8015 D
QC Batch:	73350	Date Analyzed:	2010-09-08
Prep Batch:	62914	Sample Preparation:	2010-09-08
		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)		2.21	mg/Kg	1	2.00	110	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.94	mg/Kg	1	2.00	97	42 - 159

Sample: 243664 - AH-2 1-1.5'

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	73395	Date Analyzed:	2010-09-10
Prep Batch:	62930	Sample Preparation:	2010-09-09
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		13400	mg/Kg	100	4.00

Sample: 243665 - AH-3 0-1'

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	73395	Date Analyzed:	2010-09-10
Prep Batch:	62930	Sample Preparation:	2010-09-09
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		12300	mg/Kg	100	4.00

Sample: 243665 - AH-3 0-1'

Laboratory:	Midland		
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D
QC Batch:	73300	Date Analyzed:	2010-09-07
Prep Batch:	62877	Sample Preparation:	2010-09-07
		Prep Method:	N/A
		Analyzed By:	kg
		Prepared By:	kg

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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		83.1	mg/Kg	1	100	83	70 - 130

Sample: 243665 - AH-3 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 73350
Prep Batch: 62914

Analytical Method: S 8015 D
Date Analyzed: 2010-09-08
Sample Preparation: 2010-09-08

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)		1.82	mg/Kg	1	2.00	91	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.55	mg/Kg	1	2.00	78	42 - 159

Sample: 243666 - AH-3 1-1.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73397
Prep Batch: 62932

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-10
Sample Preparation: 2010-09-09

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		3300	mg/Kg	100	4.00

Sample: 243667 - AH-3 1.5-2'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73397
Prep Batch: 62932

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-10
Sample Preparation: 2010-09-09

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

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Parameter	Flag	RL Result	Units	Dilution	RL
Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		3930	mg/Kg	100	4.00

Sample: 243668 - AH-4 0-1'

Laboratory: Midland
Analysis: BTEX
QC Batch: 73353
Prep Batch: 62914

Analytical Method: S 8021B
Date Analyzed: 2010-09-08
Sample Preparation: 2010-09-08

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

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.99	mg/Kg	1	2.00	100	52.8 - 137
4-Bromofluorobenzene (4-BFB)		1.82	mg/Kg	1	2.00	91	38.4 - 157

Sample: 243668 - AH-4 0-1'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73397
Prep Batch: 62932

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-10
Sample Preparation: 2010-09-09

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		12300	mg/Kg	100	4.00

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Sample: 243668 - AH-4 0-1'

Laboratory:	Midland		
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D
QC Batch:	73300	Date Analyzed:	2010-09-07
Prep Batch:	62877	Sample Preparation:	2010-09-07
		Prep Method:	N/A
		Analyzed By:	kg
		Prepared By:	kg

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		83.3	mg/Kg	1	100	83	70 - 130

Sample: 243668 - AH-4 0-1'

Laboratory:	Midland		
Analysis:	TPH GRO	Analytical Method:	S 8015 D
QC Batch:	73350	Date Analyzed:	2010-09-08
Prep Batch:	62914	Sample Preparation:	2010-09-08
		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)		2.02	mg/Kg	1	2.00	101	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.68	mg/Kg	1	2.00	84	42 - 159

Sample: 243669 - AH-4 1-1.5'

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	73397	Date Analyzed:	2010-09-10
Prep Batch:	62932	Sample Preparation:	2010-09-09
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		867	mg/Kg	50	4.00

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Sample: 243670 - AH-4 2-2.5'

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	73397	Date Analyzed:	2010-09-10
Prep Batch:	62932	Sample Preparation:	2010-09-09
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		2760	mg/Kg	100	4.00

Sample: 243671 - AH-4 2.5-3'

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	73397	Date Analyzed:	2010-09-10
Prep Batch:	62932	Sample Preparation:	2010-09-09
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		3100	mg/Kg	100	4.00

Sample: 243672 - AH-5 0-1'

Laboratory:	Midland		
Analysis:	BTEX	Analytical Method:	S 8021B
QC Batch:	73353	Date Analyzed:	2010-09-08
Prep Batch:	62914	Sample Preparation:	2010-09-08
		Prep Method:	S 5035
		Analyzed By:	AG
		Prepared By:	AG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.28	mg/Kg	1	2.00	114	52.8 - 137
4-Bromofluorobenzene (4-BFB)		2.06	mg/Kg	1	2.00	103	38.4 - 157

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Sample: 243672 - AH-5 0-1'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-10	Analyzed By:	AR
QC Batch:	73397	Sample Preparation:	2010-09-09	Prepared By:	AR
Prep Batch:	62932				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		11300	mg/Kg	100	4.00

Sample: 243672 - AH-5 0-1'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-09-07	Analyzed By:	kg
QC Batch:	73300	Sample Preparation:	2010-09-07	Prepared By:	kg
Prep Batch:	62877				

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		83.0	mg/Kg	1	100	83	70 - 130

Sample: 243672 - AH-5 0-1'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2010-09-08	Analyzed By:	AG
QC Batch:	73350	Sample Preparation:	2010-09-08	Prepared By:	AG
Prep Batch:	62914				

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)		2.28	mg/Kg	1	2.00	114	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.88	mg/Kg	1	2.00	94	42 - 159

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Sample: 243673 - AH-5 1-1.5'

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	73397	Date Analyzed:	2010-09-10
Prep Batch:	62932	Sample Preparation:	2010-09-09
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1130	mg/Kg	100	4.00

Sample: 243674 - AH-5 2-2.5'

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	73398	Date Analyzed:	2010-09-10
Prep Batch:	62933	Sample Preparation:	2010-09-09
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		675	mg/Kg	50	4.00

Sample: 243675 - AH-5 3-3.5'

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	73398	Date Analyzed:	2010-09-10
Prep Batch:	62933	Sample Preparation:	2010-09-09
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		227	mg/Kg	50	4.00

Sample: 243676 - AH-5 4-4.5'

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	73398	Date Analyzed:	2010-09-10
Prep Batch:	62933	Sample Preparation:	2010-09-09
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

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

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Sample: 243677 - AH-6 0-1'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-10	Analyzed By:	AR
QC Batch:	73398	Sample Preparation:	2010-09-09	Prepared By:	AR
Prep Batch:	62933				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		2870	mg/Kg	100	4.00

Sample: 243677 - AH-6 0-1'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-09-07	Analyzed By:	kg
QC Batch:	73300	Sample Preparation:	2010-09-07	Prepared By:	kg
Prep Batch:	62877				

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		83.6	mg/Kg	1	100	84	70 - 130

Sample: 243677 - AH-6 0-1'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2010-09-08	Analyzed By:	AG
QC Batch:	73350	Sample Preparation:	2010-09-08	Prepared By:	AG
Prep Batch:	62914				

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)		1.96	mg/Kg	1	2.00	98	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.61	mg/Kg	1	2.00	80	42 - 159

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Sample: 243678 - AH-6 1-1.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-10	Analyzed By:	AR
QC Batch:	73398	Sample Preparation:	2010-09-09	Prepared By:	AR
Prep Batch:	62933				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		594	mg/Kg	50	4.00

Sample: 243679 - AH-6 2-2.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-10	Analyzed By:	AR
QC Batch:	73398	Sample Preparation:	2010-09-09	Prepared By:	AR
Prep Batch:	62933				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		368	mg/Kg	50	4.00

Sample: 243680 - AH-6 3-3.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-10	Analyzed By:	AR
QC Batch:	73398	Sample Preparation:	2010-09-09	Prepared By:	AR
Prep Batch:	62933				

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

Sample: 243681 - AH-6 4-4.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-10	Analyzed By:	AR
QC Batch:	73398	Sample Preparation:	2010-09-09	Prepared By:	AR
Prep Batch:	62933				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		262	mg/Kg	50	4.00

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Sample: 243682 - AH-7 0-1'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-10	Analyzed By:	AR
QC Batch:	73398	Sample Preparation:	2010-09-09	Prepared By:	AR
Prep Batch:	62933				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		3590	mg/Kg	100	4.00

Sample: 243682 - AH-7 0-1'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-09-07	Analyzed By:	kg
QC Batch:	73300	Sample Preparation:	2010-09-07	Prepared By:	kg
Prep Batch:	62877				

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		81.3	mg/Kg	1	100	81	70 - 130

Sample: 243682 - AH-7 0-1'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2010-09-08	Analyzed By:	AG
QC Batch:	73350	Sample Preparation:	2010-09-08	Prepared By:	AG
Prep Batch:	62914				

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)		1.94	mg/Kg	1	2.00	97	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.61	mg/Kg	1	2.00	80	42 - 159

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Sample: 243683 - AH-7 1-1.5'

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	73398	Date Analyzed:	2010-09-10
Prep Batch:	62933	Sample Preparation:	2010-09-09
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

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

Sample: 243684 - AH-7 2-2.5'

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	73399	Date Analyzed:	2010-09-10
Prep Batch:	62935	Sample Preparation:	2010-09-09
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

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

Sample: 243685 - AH-7 3-3.5'

Laboratory:	Midland		
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B
QC Batch:	73399	Date Analyzed:	2010-09-10
Prep Batch:	62935	Sample Preparation:	2010-09-09
		Prep Method:	N/A
		Analyzed By:	AR
		Prepared By:	AR

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

Sample: 243686 - AH-8 0-1'

Laboratory:	Midland		
Analysis:	BTEX	Analytical Method:	S 8021B
QC Batch:	73353	Date Analyzed:	2010-09-08
Prep Batch:	62914	Sample Preparation:	2010-09-08
		Prep Method:	S 5035
		Analyzed By:	AG
		Prepared By:	AG

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

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sample 243686 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)		2.12	mg/Kg	1	2.00	106	52.8 - 137
4-Bromofluorobenzene (4-BFB)		1.92	mg/Kg	1	2.00	96	38.4 - 157

Sample: 243686 - AH-8 0-1'

Laboratory: Midland			
Analysis: Chloride (Titration)	Analytical Method: SM 4500-Cl B	Prep Method: N/A	
QC Batch: 73399	Date Analyzed: 2010-09-10	Analyzed By: AR	
Prep Batch: 62935	Sample Preparation: 2010-09-09	Prepared By: AR	

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

Sample: 243686 - AH-8 0-1'

Laboratory: Midland			
Analysis: TPH DRO - NEW	Analytical Method: S 8015 D	Prep Method: N/A	
QC Batch: 73300	Date Analyzed: 2010-09-07	Analyzed By: kg	
Prep Batch: 62877	Sample Preparation: 2010-09-07	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		84.0	mg/Kg	1	100	84	70 - 130

Sample: 243686 - AH-8 0-1'

Laboratory: Midland			
Analysis: TPH GRO	Analytical Method: S 8015 D	Prep Method: S 5035	
QC Batch: 73350	Date Analyzed: 2010-09-08	Analyzed By: AG	
Prep Batch: 62914	Sample Preparation: 2010-09-08	Prepared By: AG	

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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)		2.14	mg/Kg	1	2.00	107	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.74	mg/Kg	1	2.00	87	42 - 159

Sample: 243687 - AH-8 1-1.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 73399 Date Analyzed: 2010-09-10 Analyzed By: AR
Prep Batch: 62935 Sample Preparation: 2010-09-09 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1840	mg/Kg	100	4.00

Sample: 243688 - AH-8 2-2.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 73399 Date Analyzed: 2010-09-10 Analyzed By: AR
Prep Batch: 62935 Sample Preparation: 2010-09-09 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		912	mg/Kg	100	4.00

Sample: 243689 - AH-8 3-3.5'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 73399 Date Analyzed: 2010-09-10 Analyzed By: AR
Prep Batch: 62935 Sample Preparation: 2010-09-09 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		701	mg/Kg	100	4.00

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Sample: 243690 - AH-8 4-4.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-10	Analyzed By:	AR
QC Batch:	73399	Sample Preparation:	2010-09-09	Prepared By:	AR
Prep Batch:	62935				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		4280	mg/Kg	100	4.00

Sample: 243691 - AH-8 4.5-5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-10	Analyzed By:	AR
QC Batch:	73399	Sample Preparation:	2010-09-09	Prepared By:	AR
Prep Batch:	62935				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		6850	mg/Kg	100	4.00

Sample: 243692 - AH-9 0-1'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-10	Analyzed By:	AR
QC Batch:	73399	Sample Preparation:	2010-09-09	Prepared By:	AR
Prep Batch:	62935				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1260	mg/Kg	100	4.00

Sample: 243692 - AH-9 0-1'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-09-07	Analyzed By:	kg
QC Batch:	73300	Sample Preparation:	2010-09-07	Prepared By:	kg
Prep Batch:	62877				

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		83.4	mg/Kg	1	100	83	70 - 130

Sample: 243692 - AH-9 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 73350
Prep Batch: 62914

Analytical Method: S 8015 D
Date Analyzed: 2010-09-08
Sample Preparation: 2010-09-08

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)		2.00	mg/Kg	1	2.00	100	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.59	mg/Kg	1	2.00	80	42 - 159

Sample: 243693 - AH-9 1-1.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73399
Prep Batch: 62935

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-10
Sample Preparation: 2010-09-09

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

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

Sample: 243694 - AH-9 2-2.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73400
Prep Batch: 62936

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-10
Sample Preparation: 2010-09-09

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

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

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Sample: 243695 - AH-9 3-3.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-10	Analyzed By:	AR
QC Batch:	73400	Sample Preparation:	2010-09-09	Prepared By:	AR
Prep Batch:	62936				

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

Sample: 243696 - AH-9 4-4.5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-10	Analyzed By:	AR
QC Batch:	73400	Sample Preparation:	2010-09-09	Prepared By:	AR
Prep Batch:	62936				

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

Sample: 243697 - AH-10 0-1'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-09-10	Analyzed By:	AR
QC Batch:	73400	Sample Preparation:	2010-09-09	Prepared By:	AR
Prep Batch:	62936				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		293	mg/Kg	50	4.00

Sample: 243697 - AH-10 0-1'

Laboratory:	Midland	Analytical Method:	S 8015 D	Prep Method:	N/A
Analysis:	TPH DRO - NEW	Date Analyzed:	2010-09-07	Analyzed By:	kg
QC Batch:	73300	Sample Preparation:	2010-09-07	Prepared By:	kg
Prep Batch:	62877				

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		83.4	mg/Kg	1	100	83	70 - 130

Sample: 243697 - AH-10 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 73350
Prep Batch: 62914

Analytical Method: S 8015 D
Date Analyzed: 2010-09-08
Sample Preparation: 2010-09-08

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)		1.72	mg/Kg	1	2.00	86	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.33	mg/Kg	1	2.00	66	42 - 159

Sample: 243698 - AH-10 1-1.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73400
Prep Batch: 62936

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-10
Sample Preparation: 2010-09-09

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

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

Sample: 243699 - AH-10 2-2.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73400
Prep Batch: 62936

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-10
Sample Preparation: 2010-09-09

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

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

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Sample: 243700 - AH-11 0-1'

Laboratory: Midland

Analysis: BTEX

QC Batch: 73353

Prep Batch: 62914

Analytical Method: S 8021B

Date Analyzed: 2010-09-08

Sample Preparation: 2010-09-08

Prep Method: S 5035

Analyzed By: AG

Prepared By: AG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.06	mg/Kg	1	2.00	103	52.8 - 137
4-Bromofluorobenzene (4-BFB)		1.84	mg/Kg	1	2.00	92	38.4 - 157

Sample: 243700 - AH-11 0-1'

Laboratory: Midland

Analysis: Chloride (Titration)

QC Batch: 73400

Prep Batch: 62936

Analytical Method: SM 4500-Cl B

Date Analyzed: 2010-09-10

Sample Preparation: 2010-09-09

Prep Method: N/A

Analyzed By: AR

Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		2660	mg/Kg	100	4.00

Sample: 243700 - AH-11 0-1'

Laboratory: Midland

Analysis: TPH DRO - NEW

QC Batch: 73300

Prep Batch: 62877

Analytical Method: S 8015 D

Date Analyzed: 2010-09-07

Sample Preparation: 2010-09-07

Prep Method: N/A

Analyzed By: kg

Prepared By: kg

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		86.6	mg/Kg	1	100	87	70 - 130

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Sample: 243700 - AH-11 0-1'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 73350
Prep Batch: 62914

Analytical Method: S 8015 D
Date Analyzed: 2010-09-08
Sample Preparation: 2010-09-08

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)		2.11	mg/Kg	1	2.00	106	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.69	mg/Kg	1	2.00	84	42 - 159

Sample: 243701 - AH-11 1-1.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73400
Prep Batch: 62936

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-10
Sample Preparation: 2010-09-09

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

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

Sample: 243702 - AH-11 2-2.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 73400
Prep Batch: 62936

Analytical Method: SM 4500-Cl B
Date Analyzed: 2010-09-10
Sample Preparation: 2010-09-09

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

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

Method Blank (1) QC Batch: 73300

QC Batch: 73300
Prep Batch: 62877

Date Analyzed: 2010-09-07
QC Preparation: 2010-09-07

Analyzed By: kg
Prepared By: kg

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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		83.5	mg/Kg	1	100	84	70 - 130

Method Blank (1) QC Batch: 73350

QC Batch: 73350 Date Analyzed: 2010-09-08 Analyzed By: AG
Prep Batch: 62914 QC Preparation: 2010-09-08 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)		2.05	mg/Kg	1	2.00	102	67.6 - 150
4-Bromofluorobenzene (4-BFB)		1.84	mg/Kg	1	2.00	92	52.4 - 130

Method Blank (1) QC Batch: 73353

QC Batch: 73353 Date Analyzed: 2010-09-08 Analyzed By: AG
Prep Batch: 62914 QC Preparation: 2010-09-08 Prepared By: AG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.03	mg/Kg	1	2.00	102	66.6 - 122
4-Bromofluorobenzene (4-BFB)		1.94	mg/Kg	1	2.00	97	55.4 - 132

Method Blank (1) QC Batch: 73395

QC Batch: 73395 Date Analyzed: 2010-09-10 Analyzed By: AR
Prep Batch: 62930 QC Preparation: 2010-09-09 Prepared By: AR

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

Method Blank (1) QC Batch: 73397

QC Batch: 73397 Date Analyzed: 2010-09-10 Analyzed By: AR
Prep Batch: 62932 QC Preparation: 2010-09-09 Prepared By: AR

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

Method Blank (1) QC Batch: 73398

QC Batch: 73398 Date Analyzed: 2010-09-10 Analyzed By: AR
Prep Batch: 62933 QC Preparation: 2010-09-09 Prepared By: AR

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

Method Blank (1) QC Batch: 73399

QC Batch: 73399 Date Analyzed: 2010-09-10 Analyzed By: AR
Prep Batch: 62935 QC Preparation: 2010-09-09 Prepared By: AR

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

Method Blank (1) QC Batch: 73400

QC Batch: 73400 Date Analyzed: 2010-09-10 Analyzed By: AR
Prep Batch: 62936 QC Preparation: 2010-09-09 Prepared By: AR

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

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Laboratory Control Spike (LCS-1)

QC Batch: 73300
Prep Batch: 62877

Date Analyzed: 2010-09-07
QC Preparation: 2010-09-07

Analyzed By: kg
Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	222	mg/Kg	1	250	<14.5	89	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	241	mg/Kg	1	250	<14.5	96	57.4 - 133.4	8	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	90.6	91.5	mg/Kg	1	100	91	92	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 73350
Prep Batch: 62914

Date Analyzed: 2010-09-08
QC Preparation: 2010-09-08

Analyzed By: AG
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	17.4	mg/Kg	1	20.0	<1.65	87	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	17.4	mg/Kg	1	20.0	<1.65	87	69.9 - 95.4	0	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.01	1.98	mg/Kg	1	2.00	100	99	61.9 - 142
4-Bromofluorobenzene (4-BFB)	1.80	1.74	mg/Kg	1	2.00	90	87	68.2 - 132

Laboratory Control Spike (LCS-1)

QC Batch: 73353
Prep Batch: 62914

Date Analyzed: 2010-09-08
QC Preparation: 2010-09-08

Analyzed By: AG
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	2.06	mg/Kg	1	2.00	<0.0150	103	81.9 - 108
Toluene	2.04	mg/Kg	1	2.00	<0.00950	102	81.9 - 107
Ethylbenzene	2.09	mg/Kg	1	2.00	<0.0106	104	78.4 - 107
Xylene	6.27	mg/Kg	1	6.00	<0.00930	104	79.1 - 107

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	2.12	mg/Kg	1	2.00	<0.0150	106	81.9 - 108	3	20
Toluene	2.09	mg/Kg	1	2.00	<0.00950	104	81.9 - 107	2	20
Ethylbenzene	¹ 2.15	mg/Kg	1	2.00	<0.0106	108	78.4 - 107	3	20
Xylene	6.43	mg/Kg	1	6.00	<0.00930	107	79.1 - 107	2	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.00	1.99	mg/Kg	1	2.00	100	100	70.2 - 114
4-Bromofluorobenzene (4-BFB)	2.28	2.19	mg/Kg	1	2.00	114	110	69.8 - 121

Laboratory Control Spike (LCS-1)

QC Batch: 73395
Prep Batch: 62930

Date Analyzed: 2010-09-10
QC Preparation: 2010-09-09

Analyzed By: AR
Prepared By: AR

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

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	99.8	mg/Kg	1	100	<2.18	100	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: 73397
Prep Batch: 62932

Date Analyzed: 2010-09-10
QC Preparation: 2010-09-09

Analyzed By: AR
Prepared By: AR

¹LCSD analyte out of range. LCS/LCSD has a RPD within limits. Therefore, LCS shows extraction occurred properly.

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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	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	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: 73398
Prep Batch: 62933

Date Analyzed: 2010-09-10
QC Preparation: 2010-09-09

Analyzed By: AR
Prepared By: AR

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

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	103	mg/Kg	1	100	<2.18	103	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: 73399
Prep Batch: 62935

Date Analyzed: 2010-09-10
QC Preparation: 2010-09-09

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.0	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	103	mg/Kg	1	100	<2.18	103	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: 73400
Prep Batch: 62936

Date Analyzed: 2010-09-10
QC Preparation: 2010-09-09

Analyzed By: AR
Prepared By: AR

Report Date: September 14, 2010
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Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	95.9	mg/Kg	1	100	<2.18	96	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	102	mg/Kg	1	100	<2.18	102	85 - 115	6	20

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

Matrix Spike (MS-1) Spiked Sample: 243783

QC Batch: 73300 Date Analyzed: 2010-09-07 Analyzed By: kg
Prep Batch: 62877 QC Preparation: 2010-09-07 Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	191	mg/Kg	1	250	<14.5	76	35.2 - 167.1

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	182	mg/Kg	1	250	<14.5	73	35.2 - 167.1	5	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	80.6	80.9	mg/Kg	1	100	81	81	70 - 130

Matrix Spike (MS-1) Spiked Sample: 243776

QC Batch: 73350 Date Analyzed: 2010-09-08 Analyzed By: AG
Prep Batch: 62914 QC Preparation: 2010-09-08 Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	16.4	mg/Kg	1	20.0	<1.65	82	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	17.7	mg/Kg	1	20.0	<1.65	88	61.8 - 114	8	20

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

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Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.10	2.01	mg/Kg	1	2	105	100	50 - 162
4-Bromofluorobenzene (4-BFB)	1.75	1.67	mg/Kg	1	2	88	84	50 - 162

Matrix Spike (MS-1) Spiked Sample: 243665

QC Batch: 73395
Prep Batch: 62930

Date Analyzed: 2010-09-10
QC Preparation: 2010-09-09

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	22200	mg/Kg	100	10000	12300	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	22600	mg/Kg	100	10000	12300	103	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: 243673

QC Batch: 73397
Prep Batch: 62932

Date Analyzed: 2010-09-10
QC Preparation: 2010-09-09

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10900	mg/Kg	100	10000	1130	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	11400	mg/Kg	100	10000	1130	103	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: 243683

QC Batch: 73398
Prep Batch: 62933

Date Analyzed: 2010-09-10
QC Preparation: 2010-09-09

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10100	mg/Kg	100	10000	<218	99	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	10500	mg/Kg	100	10000	<218	103	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: 243693

QC Batch: 73399 Date Analyzed: 2010-09-10 Analyzed By: AR
Prep Batch: 62935 QC Preparation: 2010-09-09 Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	9910	mg/Kg	100	10000	<218	98	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	10500	mg/Kg	100	10000	<218	104	85 - 115	6	20

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

Matrix Spike (MS-1) Spiked Sample: 243706

QC Batch: 73400 Date Analyzed: 2010-09-10 Analyzed By: AR
Prep Batch: 62936 QC Preparation: 2010-09-09 Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10100	mg/Kg	100	10000	<218	99	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	10500	mg/Kg	100	10000	<218	103	85 - 115	4	20

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

Standard (CCV-1)

QC Batch: 73300 Date Analyzed: 2010-09-07 Analyzed By: kg

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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	214	86	80 - 120	2010-09-07

Standard (CCV-2)

QC Batch: 73300

Date Analyzed: 2010-09-07

Analyzed By: kg

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	2010-09-07

Standard (CCV-3)

QC Batch: 73300

Date Analyzed: 2010-09-07

Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	209	84	80 - 120	2010-09-07

Standard (CCV-1)

QC Batch: 73350

Date Analyzed: 2010-09-08

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.19	119	80 - 120	2010-09-08

Standard (CCV-2)

QC Batch: 73350

Date Analyzed: 2010-09-08

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.898	90	80 - 120	2010-09-08

Standard (CCV-3)

QC Batch: 73350

Date Analyzed: 2010-09-08

Analyzed By: AG

Report Date: September 14, 2010
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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.886	89	80 - 120	2010-09-08

Standard (CCV-1)

QC Batch: 73353

Date Analyzed: 2010-09-08

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.102	102	80 - 120	2010-09-08
Toluene		mg/Kg	0.100	0.103	103	80 - 120	2010-09-08
Ethylbenzene		mg/Kg	0.100	0.108	108	80 - 120	2010-09-08
Xylene		mg/Kg	0.300	0.316	105	80 - 120	2010-09-08

Standard (CCV-2)

QC Batch: 73353

Date Analyzed: 2010-09-08

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.101	101	80 - 120	2010-09-08
Toluene		mg/Kg	0.100	0.0982	98	80 - 120	2010-09-08
Ethylbenzene		mg/Kg	0.100	0.0979	98	80 - 120	2010-09-08
Xylene		mg/Kg	0.300	0.284	95	80 - 120	2010-09-08

Standard (CCV-3)

QC Batch: 73353

Date Analyzed: 2010-09-08

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.103	103	80 - 120	2010-09-08
Toluene		mg/Kg	0.100	0.0999	100	80 - 120	2010-09-08
Ethylbenzene		mg/Kg	0.100	0.0968	97	80 - 120	2010-09-08
Xylene		mg/Kg	0.300	0.282	94	80 - 120	2010-09-08

Standard (ICV-1)

QC Batch: 73395

Date Analyzed: 2010-09-10

Analyzed By: AR

Report Date: September 14, 2010
114-6400679

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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	2010-09-10

Standard (CCV-1)

QC Batch: 73395

Date Analyzed: 2010-09-10

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.8	100	85 - 115	2010-09-10

Standard (ICV-1)

QC Batch: 73397

Date Analyzed: 2010-09-10

Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.5	100	85 - 115	2010-09-10

Standard (CCV-1)

QC Batch: 73397

Date Analyzed: 2010-09-10

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2010-09-10

Standard (ICV-1)

QC Batch: 73398

Date Analyzed: 2010-09-10

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	2010-09-10

Standard (CCV-1)

QC Batch: 73398

Date Analyzed: 2010-09-10

Analyzed By: AR

Report Date: September 14, 2010
114-6400679

Work Order: 10090706
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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.5	100	85 - 115	2010-09-10

Standard (ICV-1)

QC Batch: 73399

Date Analyzed: 2010-09-10

Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.0	99	85 - 115	2010-09-10

Standard (CCV-1)

QC Batch: 73399

Date Analyzed: 2010-09-10

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2010-09-10

Standard (ICV-1)

QC Batch: 73400

Date Analyzed: 2010-09-10

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	2010-09-10

Standard (CCV-1)

QC Batch: 73400

Date Analyzed: 2010-09-10

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	100	100	85 - 115	2010-09-10

Analysis Request of Chain of Custody Record



TETRA TECH

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

PAGE: 1 OF: 5

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME:

COG Energy

SITE MANAGER:

Ike Tavares

PROJECT NO.:

114-6400679

PROJECT NAME:

Jenkins Federal #12, 84 Co, NM

LAB I.D.
NUMBER

DATE

TIME

MATRIX

COMP

GRAB

SAMPLE IDENTIFICATION

NUMBER OF CONTAINERS

FILTERED (Y/N)

PRESERVATIVE
METHOD

HCL

HNO3

ICE

NONE

BTEX 8021B
TPH 8015 MOD TX1005 (Ext. to C35)

PAH 8270

RCRA Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Volatiles

TCLP Semi Volatiles

RCI

GC/MS Vol. 8240/8260/824

GC/MS Semi. Vol. 8270/825

PCB's 8080/808

Pest. 809/808

Chloride

Gamma Spec.

Alpha Beta (Air)

PLM (Asbestos)

Major Anions/Cations, pH, TDS

RELINQUISHED BY: (Signature)

Date: 9/13/10

Time: 1420

RECEIVED BY: (Signature)

Date: 9/13/10

Time: 1420

SAMPLED BY: (Print & Initial)

Date: _____

Time: _____

RELINQUISHED BY: (Signature)

Date: _____

Time: _____

RECEIVED BY: (Signature)

Date: _____

Time: _____

SAMPLE SHIPPED BY: (Circle)

AIRBILL #: _____

FEDEX

BUS

HAND DELIVERED

UPS

OTHER: _____

RECEIVING LABORATORY:

Truck

RECEIVED BY: (Signature)

ADDRESS:

CITY: Midland

STATE: TX

ZIP: _____

CONTACT:

PHONE: _____

DATE: _____

TIME: _____

SAMPLE CONDITION WHEN RECEIVED:

4.0°C in Act

REMARKS: IF TPH > 1000 mg/kg run next deepest sample for TPH
Run BTEX on 6 highest TPH

TETRA TECH CONTACT PERSON:

Results by:

RUSH Charges
Authorized:

Yes

No

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

Analysis Request of Chain of Custody Record



TETRA TECH

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

PAGE: 2 OF: 5

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME:

COG Energy

SITE MANAGER:

Dr. Taveras

PROJECT NO.:

114-6400679

PROJECT NAME:

Jenkins Federal #12, Bddy County, NM

LAB I.D.
NUMBER

DATE

TIME

MATRIX
COMPR
GRAB

SAMPLE IDENTIFICATION

NUMBER OF CONTAINERS
FILTERED (Y/N)

PRESERVATIVE
METHOD

HCL
HNO3
ICE
NONE

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
☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

RELINQUISHED BY: (Signature)

Date: 09/03/10

RECEIVED BY: (Signature)

Date: 9/3/10

SAMPLED BY: (Print & Initial)

Date: 9/3/10

RELINQUISHED BY: (Signature)

Date: 9/3/10

RECEIVED BY: (Signature)

Date: 9/3/10

SAMPLE SHIPPED BY: (Circle)

AIRBILL #: 1420

RELINQUISHED BY: (Signature)

Date: 9/3/10

RECEIVED BY: (Signature)

Date: 9/3/10

FEDEX
HAND DELIVERED
BUS
UPS

OTHER:

RECEIVING LABORATORY:

ADDRESS:

CITY: Midland

STATE: TX

ZIP:

CONTACT:

PHONE:

RECEIVED BY: (Signature)

DATE:

TIME:

TETRA TECH CONTACT PERSON:

Results by:

RUSH Charges

Authorized:

Yes

No

SAMPLE CONDITION WHEN RECEIVED:

4.0°C intact

REMARKS:

IF TPH 21000 mg/kg run next day at Sample For TPH
Run BTEX on 6 highest TPH

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

WO #: 10090706

Analysis Request of Chain of Custody Record



TETRA TECH

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

PAGE: 3 OF: 5

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME:

COG Energy

SITE MANAGER:

Ike Trevino

PROJECT NO.:

114-6400679

PROJECT NAME:

Jenkins Federal #12, Eddy Co. NM

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	PRESERVATIVE METHOD					BTEX 8021B	TPH 8016 MOD. TX1005 (Ext. to C36)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	HCl	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
								FILTERED (Y/N)	HCL	HNO3	ICE	NONE																	
243680	09/02/10		S		✓	AH-6 (3-3.5')	1				✓														✓				
681	09/02/10		S		✓	AH-6 (4-4.5')	1				✓														✓				
682	09/02/10		S		✓	AH-7 (0-1')	1				✓			✓											✓				
683	09/02/10		S		✓	AH-7 (1-1.5')	1				✓														✓				
684	09/02/10		S		✓	AH-7 (2-2.5')	1				✓														✓				
685	09/02/10		S		✓	AH-7 (3-3.5')	1				✓														✓				
686	09/02/10		S		✓	AH-8 (0-1')	1				✓			✓											✓				
687	09/02/10		S		✓	AH-8 (1-1.5')	1				✓														✓				
688	09/02/10		S		✓	AH-8 (2-2.5')	1				✓														✓				
689	09/02/10		S		✓	AH-8 (3-3.5')	1				✓														✓				

RELINQUISHED BY: (Signature)

Date: 9/10/10

RECEIVED BY: (Signature)

Date: 9/10/10

SAMPLED BY: (Print & Initial)

Date: 9/10/10

RELINQUISHED BY: (Signature)

Date:

RECEIVED BY: (Signature)

Date:

SAMPLE SHIPPED BY: (Circle)

AIRBILL #: _____

RELINQUISHED BY: (Signature)

Date:

RECEIVED BY: (Signature)

Date:

HAND DELIVERED UPS

OTHER: _____

RECEIVING LABORATORY:

Tetra

RECEIVED BY: (Signature)

ADDRESS:

CITY:

STATE:

ZIP:

CONTACT:

PHONE:

DATE:

TIME:

SAMPLE CONDITION WHEN RECEIVED:

REMARKS: IF TPH 1000 mg/kg run next day in TPH

4.0% intact

Run BTEX on 6 highest TPH

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

WO #: 100907016

Analysis Request of Chain of Custody Record



TETRA TECH

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

PAGE: 5 OF: 5

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME:

COG Energy

SITE MANAGER:

IK Taveras

PROJECT NO.:

114-6400679

PROJECT NAME:

Jen Kne Federal #12, Eddy Co, NM

LAB I.D.
NUMBER

DATE

TIME

MATRIX

COMP

GRAB

SAMPLE IDENTIFICATION

NUMBER OF CONTAINERS

FILTERED (Y/N)

PRESERVATIVE
METHOD

HCL

HNO3

ICE

NONE

ETEX 8021B

TPH 8015 MOD TX1005 (Ext to C35)

PAR 8270

RCRA Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Volatiles

TCLP Semi Volatiles

RCI

GC/MS Vol. 8240/8260/824

GC/MS Semi. Vol. 8270/825

PCB's 8080/808

Pest. 809/808

Chlorides

Gamma Spec.

Alpha Beta (Air)

PLM (Asbestos)

Major Anions/Cations, pH, TDS

RELINQUISHED BY: (Signature)

Date: 09/03/10

Time: 1420

RECEIVED BY: (Signature)

Date: 7/3/10

Time: 1420

SAMPLED BY: (Print & Initial)

Date: _____

Time: _____

RELINQUISHED BY: (Signature)

Date: _____

Time: _____

RECEIVED BY: (Signature)

Date: _____

Time: _____

SAMPLE SHIPPED BY: (Circle)

AIRBILL #:

FEDEX

BUS

HAND DELIVERED

UPS

OTHER:

RECEIVING LABORATORY:

Tetra

RECEIVED BY: (Signature)

ADDRESS:

CITY: Midland

STATE: TX

ZIP:

CONTACT:

PHONE:

DATE:

TIME:

SAMPLE CONDITION WHEN RECEIVED:

4.0°C intact

REMARKS: IF TPH 3 (1000 mg/kg) run next digest sample for TPH

Run BTEX on 6 High TPH

Results by:

RUSH Charges

Authorized:

Yes

No

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

Summary Report

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

Report Date: December 8, 2010

Work Order: 10120602



Project Location: Eddy Co., NM
Project Name: COG/Jenkins B Federal #13
Project Number: 114-6400679

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
252306	SB-1 0-1'	soil	2010-12-02	00:00	2010-12-03
252307	SB-1 3'	soil	2010-12-02	00:00	2010-12-03
252308	SB-1 5'	soil	2010-12-02	00:00	2010-12-03
252309	SB-1 7'	soil	2010-12-02	00:00	2010-12-03
252310	SB-1 10'	soil	2010-12-02	00:00	2010-12-03
252311	SB-1 15'	soil	2010-12-02	00:00	2010-12-03
252312	SB-1 20'	soil	2010-12-02	00:00	2010-12-03
252313	SB-2 0-1'	soil	2010-12-02	00:00	2010-12-03
252314	SB-2 3'	soil	2010-12-02	00:00	2010-12-03
252315	SB-2 5'	soil	2010-12-02	00:00	2010-12-03
252316	SB-2 7'	soil	2010-12-02	00:00	2010-12-03
252317	SB-2 10'	soil	2010-12-02	00:00	2010-12-03
252318	SB-2 15'	soil	2010-12-02	00:00	2010-12-03
252319	SB-2 20'	soil	2010-12-02	00:00	2010-12-03
252320	SB-3 0-1'	soil	2010-12-02	00:00	2010-12-03
252321	SB-3 3'	soil	2010-12-02	00:00	2010-12-03
252322	SB-3 5'	soil	2010-12-02	00:00	2010-12-03
252323	SB-3 7'	soil	2010-12-02	00:00	2010-12-03
252324	SB-3 10'	soil	2010-12-02	00:00	2010-12-03
252325	SB-3 15'	soil	2010-12-02	00:00	2010-12-03
252326	SB-3 20'	soil	2010-12-02	00:00	2010-12-03
252327	SB-4 0-1'	soil	2010-12-02	00:00	2010-12-03
252328	SB-4 3'	soil	2010-12-02	00:00	2010-12-03
252329	SB-4 5'	soil	2010-12-02	00:00	2010-12-03
252330	SB-4 10'	soil	2010-12-02	00:00	2010-12-03
252331	SB-4 7'	soil	2010-12-02	00:00	2010-12-03
252332	SB-4 15'	soil	2010-12-02	00:00	2010-12-03
252333	SB-4 20'	soil	2010-12-02	00:00	2010-12-03
252334	SB-5 0-1'	soil	2010-12-02	00:00	2010-12-03
252335	SB-5 3'	soil	2010-12-02	00:00	2010-12-03

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
252336	SB-5 5'	soil	2010-12-02	00:00	2010-12-03
252337	SB-5 7'	soil	2010-12-02	00:00	2010-12-03
252338	SB-5 15'	soil	2010-12-02	00:00	2010-12-03
252339	SB-5 20'	soil	2010-12-02	00:00	2010-12-03
252340	SB-5 25'	soil	2010-12-02	00:00	2010-12-03
252341	SB-5 30'	soil	2010-12-02	00:00	2010-12-03
252342	SB-5 40'	soil	2010-12-02	00:00	2010-12-03
252343	SB-5 50'	soil	2010-12-02	00:00	2010-12-03
252344	SB-5 60'	soil	2010-12-02	00:00	2010-12-03

Sample: 252306 - SB-1 0-1'

Param	Flag	Result	Units	RL
Chloride		10000	mg/Kg	4.00

Sample: 252307 - SB-1 3'

Param	Flag	Result	Units	RL
Chloride		4730	mg/Kg	4.00

Sample: 252308 - SB-1 5'

Param	Flag	Result	Units	RL
Chloride		4390	mg/Kg	4.00

Sample: 252309 - SB-1 7'

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

Sample: 252310 - SB-1 10'

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

Sample: 252311 - SB-1 15'*continued ...*

sample 252311 continued ...

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

Sample: 252312 - SB-1 20'

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

Sample: 252313 - SB-2 0-1'

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

Sample: 252314 - SB-2 3'

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

Sample: 252315 - SB-2 5'

Param	Flag	Result	Units	RL
Chloride		743	mg/Kg	4.00

Sample: 252316 - SB-2 7'

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

Sample: 252317 - SB-2 10'

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

Sample: 252318 - SB-2 15'

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

Sample: 252319 - SB-2 20'

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

Sample: 252320 - SB-3 0-1'

Param	Flag	Result	Units	RL
Chloride		8730	mg/Kg	4.00

Sample: 252321 - SB-3 3'

Param	Flag	Result	Units	RL
Chloride		11400	mg/Kg	4.00

Sample: 252322 - SB-3 5'

Param	Flag	Result	Units	RL
Chloride		876	mg/Kg	4.00

Sample: 252323 - SB-3 7'

Param	Flag	Result	Units	RL
Chloride		1170	mg/Kg	4.00

Sample: 252324 - SB-3 10'

Param	Flag	Result	Units	RL
Chloride		456	mg/Kg	4.00

Sample: 252325 - SB-3 15'

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

Sample: 252326 - SB-3 20'

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

Sample: 252327 - SB-4 0-1'

Param	Flag	Result	Units	RL
Chloride		7950	mg/Kg	4.00

Sample: 252328 - SB-4 3'

Param	Flag	Result	Units	RL
Chloride		3040	mg/Kg	4.00

Sample: 252329 - SB-4 5'

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

Sample: 252330 - SB-4 10'

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

Sample: 252331 - SB-4 7'

Param	Flag	Result	Units	RL
Chloride		261	mg/Kg	4.00

Sample: 252332 - SB-4 15'

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

Sample: 252333 - SB-4 20'

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

Sample: 252334 - SB-5 0-1'

Param	Flag	Result	Units	RL
Chloride		19700	mg/Kg	4.00

Sample: 252335 - SB-5 3'

Param	Flag	Result	Units	RL
Chloride		8640	mg/Kg	4.00

Sample: 252336 - SB-5 5'

Param	Flag	Result	Units	RL
Chloride		1830	mg/Kg	4.00

Sample: 252337 - SB-5 7'

Param	Flag	Result	Units	RL
Chloride		8590	mg/Kg	4.00

Sample: 252338 - SB-5 15'

Param	Flag	Result	Units	RL
Chloride		1730	mg/Kg	4.00

Sample: 252339 - SB-5 20'

Param	Flag	Result	Units	RL
Chloride		850	mg/Kg	4.00

Sample: 252340 - SB-5 25'

Param	Flag	Result	Units	RL
Chloride		1500	mg/Kg	4.00

Sample: 252341 - SB-5 30'

Param	Flag	Result	Units	RL
Chloride		352	mg/Kg	4.00

Sample: 252342 - SB-5 40'

Param	Flag	Result	Units	RL
Chloride		2070	mg/Kg	4.00

Sample: 252343 - SB-5 50'

Param	Flag	Result	Units	RL
Chloride		394	mg/Kg	4.00

Sample: 252344 - SB-5 60'

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



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

Certifications

WBENC: 237019

HUB: 1752439743100-86536
NCTRCA WFWB38444Y0909

DBE: VN 20657

NELAP Certifications

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

El Paso: T104704221-08-TX
LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

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

Report Date: December 8, 2010

Work Order: 10120602



Project Location: Eddy Co., NM
Project Name: COG/Jenkins B Federal #13
Project Number: 114-6400679

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
252306	SB-1 0-1'	soil	2010-12-02	00:00	2010-12-03
252307	SB-1 3'	soil	2010-12-02	00:00	2010-12-03
252308	SB-1 5'	soil	2010-12-02	00:00	2010-12-03
252309	SB-1 7'	soil	2010-12-02	00:00	2010-12-03
252310	SB-1 10'	soil	2010-12-02	00:00	2010-12-03
252311	SB-1 15'	soil	2010-12-02	00:00	2010-12-03
252312	SB-1 20'	soil	2010-12-02	00:00	2010-12-03
252313	SB-2 0-1'	soil	2010-12-02	00:00	2010-12-03
252314	SB-2 3'	soil	2010-12-02	00:00	2010-12-03
252315	SB-2 5'	soil	2010-12-02	00:00	2010-12-03

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
252316	SB-2 7'	soil	2010-12-02	00:00	2010-12-03
252317	SB-2 10'	soil	2010-12-02	00:00	2010-12-03
252318	SB-2 15'	soil	2010-12-02	00:00	2010-12-03
252319	SB-2 20'	soil	2010-12-02	00:00	2010-12-03
252320	SB-3 0-1'	soil	2010-12-02	00:00	2010-12-03
252321	SB-3 3'	soil	2010-12-02	00:00	2010-12-03
252322	SB-3 5'	soil	2010-12-02	00:00	2010-12-03
252323	SB-3 7'	soil	2010-12-02	00:00	2010-12-03
252324	SB-3 10'	soil	2010-12-02	00:00	2010-12-03
252325	SB-3 15'	soil	2010-12-02	00:00	2010-12-03
252326	SB-3 20'	soil	2010-12-02	00:00	2010-12-03
252327	SB-4 0-1'	soil	2010-12-02	00:00	2010-12-03
252328	SB-4 3'	soil	2010-12-02	00:00	2010-12-03
252329	SB-4 5'	soil	2010-12-02	00:00	2010-12-03
252330	SB-4 10'	soil	2010-12-02	00:00	2010-12-03
252331	SB-4 7'	soil	2010-12-02	00:00	2010-12-03
252332	SB-4 15'	soil	2010-12-02	00:00	2010-12-03
252333	SB-4 20'	soil	2010-12-02	00:00	2010-12-03
252334	SB-5 0-1'	soil	2010-12-02	00:00	2010-12-03
252335	SB-5 3'	soil	2010-12-02	00:00	2010-12-03
252336	SB-5 5'	soil	2010-12-02	00:00	2010-12-03
252337	SB-5 7'	soil	2010-12-02	00:00	2010-12-03
252338	SB-5 15'	soil	2010-12-02	00:00	2010-12-03
252339	SB-5 20'	soil	2010-12-02	00:00	2010-12-03
252340	SB-5 25'	soil	2010-12-02	00:00	2010-12-03
252341	SB-5 30'	soil	2010-12-02	00:00	2010-12-03
252342	SB-5 40'	soil	2010-12-02	00:00	2010-12-03
252343	SB-5 50'	soil	2010-12-02	00:00	2010-12-03
252344	SB-5 60'	soil	2010-12-02	00:00	2010-12-03

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

This report consists of a total of 19 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



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

Standard Flags

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

Case Narrative

Samples for project COG/Jenkins B Federal #13 were received by TraceAnalysis, Inc. on 2010-12-03 and assigned to work order 10120602. Samples for work order 10120602 were received intact at a temperature of 3.6 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
Chloride (Titration)	SM 4500-Cl B	65131	2010-12-07 at 08:59	75951	2010-12-07 at 14:01
Chloride (Titration)	SM 4500-Cl B	65131	2010-12-07 at 08:59	75952	2010-12-07 at 14:02
Chloride (Titration)	SM 4500-Cl B	65131	2010-12-07 at 08:59	75953	2010-12-07 at 14:03
Chloride (Titration)	SM 4500-Cl B	65131	2010-12-07 at 08:59	75954	2010-12-07 at 14:04

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 10120602 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

Report Date: December 8, 2010
114-6400679

Work Order: 10120602
COG/Jenkins B Federal #13

Page Number: 4 of 19
Eddy Co., NM

Analytical Report

Sample: 252306 - SB-1 0-1'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-12-07	Analyzed By:	AR
QC Batch:	75951	Sample Preparation:	2010-12-07	Prepared By:	AR
Prep Batch:	65131				

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

Sample: 252307 - SB-1 3'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-12-07	Analyzed By:	AR
QC Batch:	75951	Sample Preparation:	2010-12-07	Prepared By:	AR
Prep Batch:	65131				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		4730	mg/Kg	100	4.00

Sample: 252308 - SB-1 5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-12-07	Analyzed By:	AR
QC Batch:	75951	Sample Preparation:	2010-12-07	Prepared By:	AR
Prep Batch:	65131				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		4390	mg/Kg	100	4.00

Sample: 252309 - SB-1 7'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-12-07	Analyzed By:	AR
QC Batch:	75951	Sample Preparation:	2010-12-07	Prepared By:	AR
Prep Batch:	65131				

continued ...

Report Date: December 8, 2010
114-6400679

Work Order: 10120602
COG/Jenkins B Federal #13

Page Number: 5 of 19
Eddy Co., NM

sample 252309 continued ...

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

Sample: 252310 - SB-1 10'

Laboratory: Midland			
Analysis: Chloride (Titration)	Analytical Method: SM 4500-Cl B	Prep Method: N/A	
QC Batch: 75951	Date Analyzed: 2010-12-07	Analyzed By: AR	
Prep Batch: 65131	Sample Preparation: 2010-12-07	Prepared By: AR	

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

Sample: 252311 - SB-1 15'

Laboratory: Midland			
Analysis: Chloride (Titration)	Analytical Method: SM 4500-Cl B	Prep Method: N/A	
QC Batch: 75951	Date Analyzed: 2010-12-07	Analyzed By: AR	
Prep Batch: 65131	Sample Preparation: 2010-12-07	Prepared By: AR	

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

Sample: 252312 - SB-1 20'

Laboratory: Midland			
Analysis: Chloride (Titration)	Analytical Method: SM 4500-Cl B	Prep Method: N/A	
QC Batch: 75951	Date Analyzed: 2010-12-07	Analyzed By: AR	
Prep Batch: 65131	Sample Preparation: 2010-12-07	Prepared By: AR	

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

Report Date: December 8, 2010
114-6400679

Work Order: 10120602
COG/Jenkins B Federal #13

Page Number: 6 of 19
Eddy Co., NM

Sample: 252313 - SB-2 0-1'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-12-07	Analyzed By:	AR
QC Batch:	75951	Sample Preparation:	2010-12-07	Prepared By:	AR
Prep Batch:	65131				

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

Sample: 252314 - SB-2 3'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-12-07	Analyzed By:	AR
QC Batch:	75951	Sample Preparation:	2010-12-07	Prepared By:	AR
Prep Batch:	65131				

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

Sample: 252315 - SB-2 5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-12-07	Analyzed By:	AR
QC Batch:	75951	Sample Preparation:	2010-12-07	Prepared By:	AR
Prep Batch:	65131				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		743	mg/Kg	50	4.00

Sample: 252316 - SB-2 7'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-12-07	Analyzed By:	AR
QC Batch:	75952	Sample Preparation:	2010-12-07	Prepared By:	AR
Prep Batch:	65131				

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

Report Date: December 8, 2010
114-6400679

Work Order: 10120602
COG/Jenkins B Federal #13

Page Number: 7 of 19
Eddy Co., NM

Sample: 252317 - SB-2 10'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-12-07	Analyzed By:	AR
QC Batch:	75952	Sample Preparation:	2010-12-07	Prepared By:	AR
Prep Batch:	65131				

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

Sample: 252318 - SB-2 15'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-12-07	Analyzed By:	AR
QC Batch:	75952	Sample Preparation:	2010-12-07	Prepared By:	AR
Prep Batch:	65131				

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

Sample: 252319 - SB-2 20'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-12-07	Analyzed By:	AR
QC Batch:	75952	Sample Preparation:	2010-12-07	Prepared By:	AR
Prep Batch:	65131				

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

Sample: 252320 - SB-3 0-1'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-12-07	Analyzed By:	AR
QC Batch:	75952	Sample Preparation:	2010-12-07	Prepared By:	AR
Prep Batch:	65131				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		8730	mg/Kg	100	4.00

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Sample: 252321 - SB-3 3'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-12-07	Analyzed By:	AR
QC Batch:	75952	Sample Preparation:	2010-12-07	Prepared By:	AR
Prep Batch:	65131				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		11400	mg/Kg	100	4.00

Sample: 252322 - SB-3 5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-12-07	Analyzed By:	AR
QC Batch:	75952	Sample Preparation:	2010-12-07	Prepared By:	AR
Prep Batch:	65131				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		876	mg/Kg	50	4.00

Sample: 252323 - SB-3 7'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-12-07	Analyzed By:	AR
QC Batch:	75952	Sample Preparation:	2010-12-07	Prepared By:	AR
Prep Batch:	65131				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1170	mg/Kg	100	4.00

Sample: 252324 - SB-3 10'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-12-07	Analyzed By:	AR
QC Batch:	75952	Sample Preparation:	2010-12-07	Prepared By:	AR
Prep Batch:	65131				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		456	mg/Kg	50	4.00

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Sample: 252325 - SB-3 15'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-12-07	Analyzed By:	AR
QC Batch:	75952	Sample Preparation:	2010-12-07	Prepared By:	AR
Prep Batch:	65131				

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

Sample: 252326 - SB-3 20'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-12-07	Analyzed By:	AR
QC Batch:	75953	Sample Preparation:	2010-12-07	Prepared By:	AR
Prep Batch:	65131				

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

Sample: 252327 - SB-4 0-1'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-12-07	Analyzed By:	AR
QC Batch:	75953	Sample Preparation:	2010-12-07	Prepared By:	AR
Prep Batch:	65131				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		7950	mg/Kg	100	4.00

Sample: 252328 - SB-4 3'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-12-07	Analyzed By:	AR
QC Batch:	75953	Sample Preparation:	2010-12-07	Prepared By:	AR
Prep Batch:	65131				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		3040	mg/Kg	100	4.00

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Sample: 252329 - SB-4 5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-12-07	Analyzed By:	AR
QC Batch:	75953	Sample Preparation:	2010-12-07	Prepared By:	AR
Prep Batch:	65131				

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

Sample: 252330 - SB-4 10'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-12-07	Analyzed By:	AR
QC Batch:	75953	Sample Preparation:	2010-12-07	Prepared By:	AR
Prep Batch:	65131				

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

Sample: 252331 - SB-4 7'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-12-07	Analyzed By:	AR
QC Batch:	75953	Sample Preparation:	2010-12-07	Prepared By:	AR
Prep Batch:	65131				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		261	mg/Kg	50	4.00

Sample: 252332 - SB-4 15'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-12-07	Analyzed By:	AR
QC Batch:	75953	Sample Preparation:	2010-12-07	Prepared By:	AR
Prep Batch:	65131				

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

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Sample: 252333 - SB-4 20'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-12-07	Analyzed By:	AR
QC Batch:	75953	Sample Preparation:	2010-12-07	Prepared By:	AR
Prep Batch:	65131				

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

Sample: 252334 - SB-5 0-1'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-12-07	Analyzed By:	AR
QC Batch:	75953	Sample Preparation:	2010-12-07	Prepared By:	AR
Prep Batch:	65131				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		19700	mg/Kg	100	4.00

Sample: 252335 - SB-5 3'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-12-07	Analyzed By:	AR
QC Batch:	75953	Sample Preparation:	2010-12-07	Prepared By:	AR
Prep Batch:	65131				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		8640	mg/Kg	100	4.00

Sample: 252336 - SB-5 5'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-12-07	Analyzed By:	AR
QC Batch:	75954	Sample Preparation:	2010-12-07	Prepared By:	AR
Prep Batch:	65131				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1830	mg/Kg	100	4.00

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Sample: 252337 - SB-5 7'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-12-07	Analyzed By:	AR
QC Batch:	75954	Sample Preparation:	2010-12-07	Prepared By:	AR
Prep Batch:	65131				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		8590	mg/Kg	100	4.00

Sample: 252338 - SB-5 15'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-12-07	Analyzed By:	AR
QC Batch:	75954	Sample Preparation:	2010-12-07	Prepared By:	AR
Prep Batch:	65131				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1730	mg/Kg	100	4.00

Sample: 252339 - SB-5 20'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-12-07	Analyzed By:	AR
QC Batch:	75954	Sample Preparation:	2010-12-07	Prepared By:	AR
Prep Batch:	65131				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		850	mg/Kg	100	4.00

Sample: 252340 - SB-5 25'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-12-07	Analyzed By:	AR
QC Batch:	75954	Sample Preparation:	2010-12-07	Prepared By:	AR
Prep Batch:	65131				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1500	mg/Kg	100	4.00

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Sample: 252341 - SB-5 30'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-12-07	Analyzed By:	AR
QC Batch:	75954	Sample Preparation:	2010-12-07	Prepared By:	AR
Prep Batch:	65131				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		352	mg/Kg	50	4.00

Sample: 252342 - SB-5 40'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-12-07	Analyzed By:	AR
QC Batch:	75954	Sample Preparation:	2010-12-07	Prepared By:	AR
Prep Batch:	65131				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		2070	mg/Kg	100	4.00

Sample: 252343 - SB-5 50'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-12-07	Analyzed By:	AR
QC Batch:	75954	Sample Preparation:	2010-12-07	Prepared By:	AR
Prep Batch:	65131				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		394	mg/Kg	50	4.00

Sample: 252344 - SB-5 60'

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2010-12-07	Analyzed By:	AR
QC Batch:	75954	Sample Preparation:	2010-12-07	Prepared By:	AR
Prep Batch:	65131				

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

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Method Blank (1) QC Batch: 75951

QC Batch: 75951 Date Analyzed: 2010-12-07 Analyzed By: AR
Prep Batch: 65131 QC Preparation: 2010-12-07 Prepared By: AR

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

Method Blank (1) QC Batch: 75952

QC Batch: 75952 Date Analyzed: 2010-12-07 Analyzed By: AR
Prep Batch: 65131 QC Preparation: 2010-12-07 Prepared By: AR

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

Method Blank (1) QC Batch: 75953

QC Batch: 75953 Date Analyzed: 2010-12-07 Analyzed By: AR
Prep Batch: 65131 QC Preparation: 2010-12-07 Prepared By: AR

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

Method Blank (1) QC Batch: 75954

QC Batch: 75954 Date Analyzed: 2010-12-07 Analyzed By: AR
Prep Batch: 65131 QC Preparation: 2010-12-07 Prepared By: AR

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

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Laboratory Control Spike (LCS-1)

QC Batch: 75951
Prep Batch: 65131

Date Analyzed: 2010-12-07
QC Preparation: 2010-12-07

Analyzed By: AR
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	103	mg/Kg	1	100	<2.18	103	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: 75952
Prep Batch: 65131

Date Analyzed: 2010-12-07
QC Preparation: 2010-12-07

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	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: 75953
Prep Batch: 65131

Date Analyzed: 2010-12-07
QC Preparation: 2010-12-07

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	97.6	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	104	mg/Kg	1	100	<2.18	104	85 - 115	6	20

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

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Laboratory Control Spike (LCS-1)

QC Batch: 75954
Prep Batch: 65131

Date Analyzed: 2010-12-07
QC Preparation: 2010-12-07

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.

Matrix Spike (MS-1) Spiked Sample: 252315

QC Batch: 75951
Prep Batch: 65131

Date Analyzed: 2010-12-07
QC Preparation: 2010-12-07

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10800	mg/Kg	100	10000	743	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	11600	mg/Kg	100	10000	743	108	85 - 115	7	20

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

Matrix Spike (MS-1) Spiked Sample: 252325

QC Batch: 75952
Prep Batch: 65131

Date Analyzed: 2010-12-07
QC Preparation: 2010-12-07

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10000	mg/Kg	100	10000	<218	99	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	10500	mg/Kg	100	10000	<218	104	85 - 115	5	20

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

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Matrix Spike (MS-1) Spiked Sample: 252335

QC Batch: 75953
Prep Batch: 65131

Date Analyzed: 2010-12-07
QC Preparation: 2010-12-07

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	18500	mg/Kg	100	10000	8640	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	19700	mg/Kg	100	10000	8640	111	85 - 115	6	20

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

Matrix Spike (MS-1) Spiked Sample: 252344

QC Batch: 75954
Prep Batch: 65131

Date Analyzed: 2010-12-07
QC Preparation: 2010-12-07

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10100	mg/Kg	100	10000	<218	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	10500	mg/Kg	100	10000	<218	104	85 - 115	4	20

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

Standard (ICV-1)

QC Batch: 75951

Date Analyzed: 2010-12-07

Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2010-12-07

Standard (CCV-1)

QC Batch: 75951

Date Analyzed: 2010-12-07

Analyzed By: AR

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.2	99	85 - 115	2010-12-07

Standard (ICV-1)

QC Batch: 75952

Date Analyzed: 2010-12-07

Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	98.7	99	85 - 115	2010-12-07

Standard (CCV-1)

QC Batch: 75952

Date Analyzed: 2010-12-07

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2010-12-07

Standard (ICV-1)

QC Batch: 75953

Date Analyzed: 2010-12-07

Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2010-12-07

Standard (CCV-1)

QC Batch: 75953

Date Analyzed: 2010-12-07

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.0	99	85 - 115	2010-12-07

Standard (ICV-1)

QC Batch: 75954

Date Analyzed: 2010-12-07

Analyzed By: AR

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Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.4	99	85 - 115	2010-12-07

Standard (CCV-1)

QC Batch: 75954

Date Analyzed: 2010-12-07

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2010-12-07

KAD

OF:

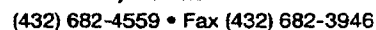


Table 1

[illegible]

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

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11AD

Analysis Request of Chain of Custody Record

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TETRA TECH

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME:

COG

SITE MANAGER:

Ike Tavaraz

PROJECT NO.:

114-6400679

PROJECT NAME:

COG / Jenkins B Federal #13

LAB I.D.
NUMBER

DATE

TIME

MATRIX

COMP.

GRAB

Eddy Co. NM
SAMPLE IDENTIFICATION

NUMBER OF CONTAINERS

FILTERED (Y/N)

HCL

HNO3

ICE

NONE

PRESERVATIVE
METHOD

BTEX 8021B

TPH 8015 MOD. TX1005 (Ext. to C36)

PAH 8270

RCRA Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Volatiles

TCLP Semi Volatiles

RCI

GC-MS Vol. 8240/8260/624

GC-MS Semi. Vol. 8270/625

PCB's 8080/608

Pest. 808/608

Chloride

Gamma Spec.

Alpha Beta (Air)

PLM (Asbestos)

Major Anions/Cations, pH, TDS

RELINQUISHED BY: (Signature)

Date: 12/13/10

Time: 16:40

RECEIVED BY: (Signature)

Date: 12/13/10

Time: 16:40

SAMPLED BY: (Print & Initial)

Kim

Date: 12/13/10

Time: 16:40

RELINQUISHED BY: (Signature)

Date: _____

Time: _____

RECEIVED BY: (Signature)

Date: _____

Time: _____

SAMPLE SHIPPED BY: (Circle)

FEDEX BUS

HAND DELIVERED UPS

AIRBILL #: _____

OTHER: _____

RECEIVING LABORATORY:

ADDRESS:

CITY:

STATE:

ZIP:

CONTACT:

PHONE:

RECEIVED BY: (Signature)

DATE: _____

TIME: _____

TETRA TECH CONTACT PERSON:

Ike Tavaraz

Results by:

RUSH Charges

Authorized:

Yes No

SAMPLE CONDITION WHEN RECEIVED:

3.6°C intact

REMARKS:

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

two #: 10120602

KAD

Analysis Request of Chain of Custody Record

PAGE: 3 OF: 4



TETRA TECH

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME:

COG

SITE MANAGER:

Ike Tavorer

PROJECT NO.:

114-6400679

PROJECT NAME:

COG / Jenkins B Federal #13

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	PRESERVATIVE METHOD				BTX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8260/824	GC/MS Semi. Vol. 8270/825	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
								HCL	HNO3	ICE	NONE																	
2523216	12/2		S	X		SB-3 20'	1			X														X				
327						SB-4 0-1'	1			X													X					
328						SB-4 3'	1			X													X					
329						SB-4 5'	1			X													X					
330						SB-4 10'	1			X													X					
331						SB-4 7'	1			X													X					
332						SB-4 15'	1			X													X					
333						SB-4 20'	1			X													X					
334						SB-5 0-1'	1			X													X					
335						SB-5 3'	1			X													X					

RELINQUISHED BY: (Signature)

Date: 12/3/10

Time: 16:40

RECEIVED BY: (Signature)

Date: 12/3/10

Time: 16:40

SAMPLED BY: (Print & Initial)

Kim

Date: 12/3/10

Time: 16:40

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 Tavorer

Results by:

RUSH Charges Authorized:

Yes No

RECEIVING LABORATORY:

ADDRESS:

CITY:

STATE:

ZIP:

CONTACT:

PHONE:

RECEIVED BY: (Signature)

DATE:

TIME:

SAMPLE CONDITION WHEN RECEIVED:

0.6c intact

REMARKS:

Xwo #: 10120602

KAD

KAD

Analysis Request of Chain of Custody Record

PAGE:

4 OF: 4

**TETRA TECH**

1910 N. Big Spring St.

Midland, Texas 79705

(432) 682-4559 • Fax (432) 682-3946

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME:

COG

SITE MANAGER:

Ike Tavares

PROJECT NO.:

114-6100679

PROJECT NAME:

COG / Jenkins B Federal #13

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP	GRAB	Eddy Co., NM SAMPLE IDENTIFICATION	NUMBER OF FILTERED (Y/N)	PRESERVATIVE METHOD				BTEX 8021B	TPH 8015	PAH 8270	RCRA Metals	TCLP Metals	TCLP Volatile	TCLP Semi V	RCI	GC/MS Vol. 8	GC/MS Semi	PCB's 8080/0/000	Pest. 808/800	Chloride	Gamma Spec	Alpha Beta (/	PLM (Asbest	Major Anions
								HCL	HNO3	ICE	NONE																	
252336	12/2		S	X		SB-5 5'	1				X												X					
337						SB-5 7'	1				X												X					
338						SB-5 15'	1				X												X					
339						SB-5 20'	1				X												X					
340						SB-5 25'	1				X												X					
341						SB-5 30'	1				X												X					
342						SB-5 40'	1				X												X					
343						SB-5 50'	1				X												X					
344	1		1	1		SB-5 60'	1				X											X						

RELINQUISHED BY: (Signature)

Date: 12/3/10

Time: 16:40

RECEIVED BY: (Signature)

Date: 12/3/10

Time: 16:40

SAMPLED BY: (Print & Initial)

Kim

Date: 12/3/10

Time:

RELINQUISHED BY: (Signature)

Date:

Time:

RECEIVED BY: (Signature)

Date:

Time:

SAMPLE SHIPPED BY: (Circle)

FEDEX
HAND DELIVEREDBUS
UPS

AIRBILL #:

OTHER:

RELINQUISHED BY: (Signature)

Date:

Time:

RECEIVED BY: (Signature)

Date:

Time:

TETRA TECH CONTACT PERSON:

Ike Tavares

Results by:

RUSH Charges
Authorized:

Yes No

RECEIVING LABORATORY:

ADDRESS:

CITY:

STATE:

ZIP:

CONTACT:

PHONE:

RECEIVED BY: (Signature)

DATE:

TIME:

SAMPLE CONDITION WHEN RECEIVED:

3.6 c intact

REMARKS:

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



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

Certifications

WBENC: 237019

HUB: 1752439743100-86536

DBE: VN 20657

NCTRCA WFWB38444Y0909

NELAP Certifications

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

El Paso: T104704221-08-TX
LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

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

Report Date: March 23, 2011

Work Order: 11031838

Project Location: Eddy County, NM
Project Name: COG/Jenkins B Federal #12
Project Number: 114-6400679

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
261104	CS-1	soil	2011-03-16	00:00	2011-03-18
261105	CS-2	soil	2011-03-16	00:00	2011-03-18
261106	CS-3	soil	2011-03-16	00:00	2011-03-18
261107	CS-4	soil	2011-03-16	00:00	2011-03-18
261108	CS-5	soil	2011-03-16	00:00	2011-03-18
261109	CS-6	soil	2011-03-16	00:00	2011-03-18
261110	CS-7	soil	2011-03-16	00:00	2011-03-18

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

A handwritten signature in black ink that reads "Michael Abel". The signature is written in a cursive style with a large, stylized 'M' and 'A'.

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/Jenkins B Federal #12 were received by TraceAnalysis, Inc. on 2011-03-18 and assigned to work order 11031838. Samples for work order 11031838 were received intact at a temperature of 8.0 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
Chloride (Titration)	SM 4500-Cl B	67557	2011-03-22 at 09:13	79664	2011-03-22 at 11:08
Chloride (Titration)	SM 4500-Cl B	67557	2011-03-22 at 09:13	79665	2011-03-22 at 11:08

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 11031838 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

Report Date: March 23, 2011
114-6400679

Work Order: 11031838
COG/Jenkins B Federal #12

Page Number: 4 of 8
Eddy County, NM

Analytical Report

Sample: 261104 - CS-1

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2011-03-22	Analyzed By:	AR
QC Batch:	79664	Sample Preparation:	2011-03-22	Prepared By:	AR
Prep Batch:	67557				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		378	mg/Kg	50	4.00

Sample: 261105 - CS-2

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2011-03-22	Analyzed By:	AR
QC Batch:	79664	Sample Preparation:	2011-03-22	Prepared By:	AR
Prep Batch:	67557				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1020	mg/Kg	50	4.00

Sample: 261106 - CS-3

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2011-03-22	Analyzed By:	AR
QC Batch:	79664	Sample Preparation:	2011-03-22	Prepared By:	AR
Prep Batch:	67557				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		452	mg/Kg	50	4.00

Sample: 261107 - CS-4

Laboratory:	Midland	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Analysis:	Chloride (Titration)	Date Analyzed:	2011-03-22	Analyzed By:	AR
QC Batch:	79664	Sample Preparation:	2011-03-22	Prepared By:	AR
Prep Batch:	67557				

continued ...

Report Date: March 23, 2011
114-6400679

Work Order: 11031838
COG/Jenkins B Federal #12

Page Number: 5 of 8
Eddy County, NM

sample 261107 continued ...

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

Sample: 261108 - CS-5

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 79664 Date Analyzed: 2011-03-22 Analyzed By: AR
Prep Batch: 67557 Sample Preparation: 2011-03-22 Prepared By: AR

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

Sample: 261109 - CS-6

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 79665 Date Analyzed: 2011-03-22 Analyzed By: AR
Prep Batch: 67557 Sample Preparation: 2011-03-22 Prepared By: AR

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

Sample: 261110 - CS-7

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 79665 Date Analyzed: 2011-03-22 Analyzed By: AR
Prep Batch: 67557 Sample Preparation: 2011-03-22 Prepared By: AR

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

Report Date: March 23, 2011
114-6400679

Work Order: 11031838
COG/Jenkins B Federal #12

Page Number: 6 of 8
Eddy County, NM

Method Blank (1) QC Batch: 79664

QC Batch: 79664
Prep Batch: 67557

Date Analyzed: 2011-03-22
QC Preparation: 2011-03-22

Analyzed By: AR
Prepared By: AR

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

Method Blank (1) QC Batch: 79665

QC Batch: 79665
Prep Batch: 67557

Date Analyzed: 2011-03-22
QC Preparation: 2011-03-22

Analyzed By: AR
Prepared By: AR

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

Laboratory Control Spike (LCS-1)

QC Batch: 79664
Prep Batch: 67557

Date Analyzed: 2011-03-22
QC Preparation: 2011-03-22

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	95.7	mg/Kg	1	100	<3.85	96	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	104	mg/Kg	1	100	<3.85	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: 79665
Prep Batch: 67557

Date Analyzed: 2011-03-22
QC Preparation: 2011-03-22

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	96.4	mg/Kg	1	100	<3.85	96	85 - 115

Report Date: March 23, 2011
114-6400679

Work Order: 11031838
COG/Jenkins B Federal #12

Page Number: 7 of 8
Eddy County, NM

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.	Rec. Limit	RPD	RPD Limit
Chloride	104	mg/Kg	1	100	<3.85	104	85 - 115	8	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: 261108

QC Batch: 79664
Prep Batch: 67557

Date Analyzed: 2011-03-22
QC Preparation: 2011-03-22

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit
Chloride	9940	mg/Kg	100	10000	<385	99	80 - 120

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.	Rec. Limit	RPD	RPD Limit
Chloride	10600	mg/Kg	100	10000	<385	106	80 - 120	6	20

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

Matrix Spike (MS-1) Spiked Sample: 261112

QC Batch: 79665
Prep Batch: 67557

Date Analyzed: 2011-03-22
QC Preparation: 2011-03-22

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit
Chloride	20900	mg/Kg	100	10000	10400	105	80 - 120

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.	Rec. Limit	RPD	RPD Limit
Chloride	21700	mg/Kg	100	10000	10400	113	80 - 120	4	20

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

Standard (ICV-1)

QC Batch: 79664

Date Analyzed: 2011-03-22

Analyzed By: AR

Report Date: March 23, 2011
114-6400679

Work Order: 11031838
COG/Jenkins B Federal #12

Page Number: 8 of 8
Eddy County, NM

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	97.6	98	85 - 115	2011-03-22

Standard (CCV-1)

QC Batch: 79664

Date Analyzed: 2011-03-22

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	102	102	85 - 115	2011-03-22

Standard (ICV-1)

QC Batch: 79665

Date Analyzed: 2011-03-22

Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	102	102	85 - 115	2011-03-22

Standard (CCV-1)

QC Batch: 79665

Date Analyzed: 2011-03-22

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	97.6	98	85 - 115	2011-03-22

W0# 11031039

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 1

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

 ANALYSIS REQUEST
 (Circle or Specify Method No.)

CLIENT NAME:

C09

SITE MANAGER:

Ike Tavaraz

PROJECT NO.:

117-6406679

PROJECT NAME:

C09 / Linkwood B Federal #12

LAB I.D.
NUMBERDATE
3/16

TIME

MATRIX

COMP.

GRAB

SAMPLE IDENTIFICATION

NUMBER OF CONTAINERS

FILTERED (Y/N)

HCL

HNO3

ICE

NONE

PRESERVATIVE
METHOD

BTEX 8021B

TPH 8015 MOD. TX1005 (Ext. to C35)

PAH 8270

RCRA Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Volatiles

TCLP Semi Volatiles

RCI

GC/MS Vol. 8240/8260/624

GC/MS Semi. Vol. 8270/825

PCB's 8080/608

Pest. 808/608

Chloride

Gamma Spec.

Alpha Beta (Air)

PLM (Asbestos)

Major Anions/Cations, pH, TDS

RELINQUISHED BY: (Signature)

Date: 3/16/11

Time: 1100

RECEIVED BY: (Signature)

Ike Tavaraz TR

Date: 3/17/11

Time: 9:00

SAMPLED BY: (Print & Initial)

IT

Date: 3/16/11

Time:

RELINQUISHED BY: (Signature)

Date:

Time:

RECEIVED BY: (Signature)

Date:

Time:

SAMPLE SHIPPED BY: (Circle)

FEDEX

BUS

HAND DELIVERED

UPS

AIRBILL #:

OTHER:

RELINQUISHED BY: (Signature)

Date:

Time:

RECEIVED BY: (Signature)

Date:

Time:

TETRA TECH CONTACT PERSON:

Ike Tavaraz

Results by:

RUSH Charges
Authorized:

Yes No

RECEIVING LABORATORY:

Tetra

RECEIVED BY: (Signature)

ADDRESS:

CITY: Midland

STATE: TX

ZIP:

CONTACT:

PHONE:

DATE:

TIME:

SAMPLE CONDITION WHEN RECEIVED:

8.0 Intact

REMARKS:

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

copy in g