SITE INFORMATION

2RP-390 Report Type: Closure

General Site Information:	
Site:	**Jenkins B Federal #7**
Company:	**COG Operating LLC**
Section, Township and Range	**Section 20, T17S, R30 E Unit Letter - E**
Lease Number:	**(API#) 30-015-29451**
County:	**Eddy County**
GPS:	**32 .822824° N, 103.999198° W**
Surface Owner:	Federal
Mineral Owner:	
Directions:	From the intersection of Hwy 82 and Hwy 217 go north on 217 for 0.6m, turn left and go 0.5m to site on left side of lease road.

Release Data:	
Date Released:	2/5/2010
Type Release:	Produced water
Source of Contamination:	Split in flowline
Fluid Released:	100 barrels
Fluids Recovered:	80 barrels

Official Communication:			
Name:	Pat Ellis		Ike Tavarez
Company:	COG Operating, LLC		Tetra Tech
Address:	550 W. Texas Ave. Ste. 1300		1910 N. Big Spring
P.O. Box			
City:	Midland Texas, 79701		Midland, Texas
Phone number:	(432) 686-3023		(432) 425-3878
Fax:	(432) 684-7137		
Email:	pellis@conchoresources.com		ike.tavarez@tetratech.com

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

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

RECEIVED
SEP 22 2011
NMOCD ARTESIA

TETRA TECH

August 22, 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 B Federal #7, Unit E, 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 B Federal #7 located in Unit E, Section 20, Township 17 South, Range 30 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.82282°, W 103.99919°. 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 February 5, 2010, and released approximately one hundred (100) barrels of produced water from a flow line. To alleviate the problem, COG personnel replaced the flow line. Eighty (80) barrels of standing fluids were recovered. The spill originated from a split flow line affecting a 150' by 40' wide (tapering to 20') area that migrated west parallel to the lease road. The initial C-141 form is enclosed in Appendix C.

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

Groundwater

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

Regulatory

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

Soil Assessment and Analytical Results

On March 10, 2010, Tetra Tech personnel inspected and sampled the spill area. A total of three (3) auger holes (AH-1 through AH-3) 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 the submitted samples were below the RRAL for TPH and BTEX. Elevated chloride concentrations were detected for AH-2 and AH-3 of 10,600 mg/kg (1-1.5') and 10,100 mg/kg (0-.5') respectively.

In order to delineate the impact of the spill, on March 18, 2010, Tetra Tech personnel supervised the installation of three soil borings (SB-1 through SB-3) utilizing an air rotary drilling rig. SB-3 was re-drilled on April 12, 2010 to confirm delineation. Samples were collected for laboratory analysis. All elevated chloride concentrations declined <200 mg/kg.

TETRA TECH

Remediation Activities and Closure Request

Based on the approved work plan, Tetra Tech personnel supervised the excavation of the site. The excavation measured approximately 40' X 100' tapering to 20', with depths ranging from 3.0' to 10.0' below surface. The proposed depths of the soil remediation for the entire spill met or exceeded the depths of the approved work plan. In the area of SB-2, a 40 mil liner was installed at 4.0' bgs. The excavation depths are highlighted in Table 1 and shown on Figure 4. Once excavated, the site was backfilled with clean material.

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

Respectfully submitted,
TETRA TECH

Ike Tavarez
Tetra Tech

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

FIGURES

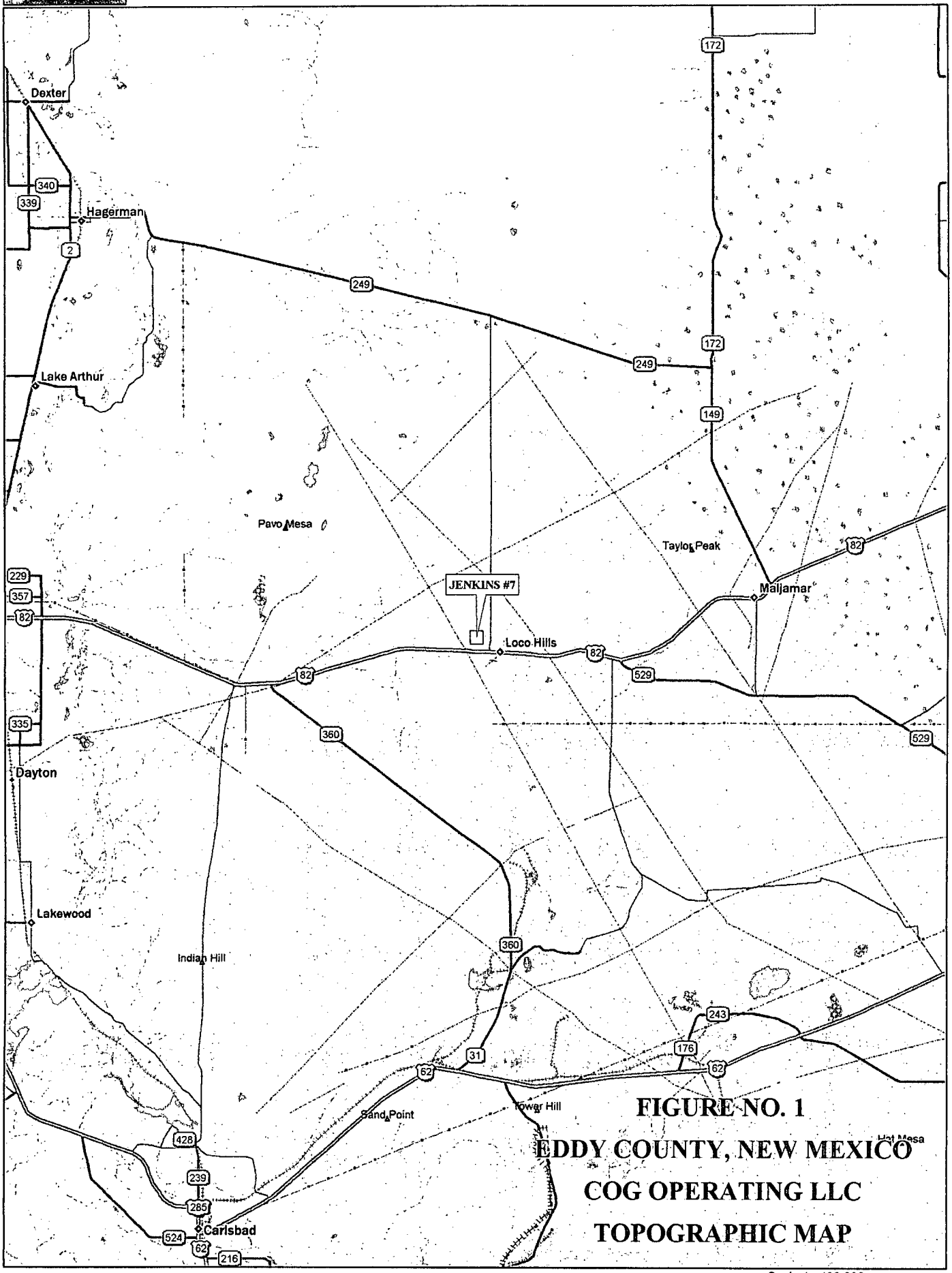


FIGURE NO. 1

EDDY COUNTY, NEW MEXICO

COG OPERATING LLC

TOPOGRAPHIC MAP

TN
MN (8.0°E)

Scale 1 : 400,000
0 2 4 6 8 10 mi
0 3 6 9 12 15 km
1" = 6.31 mi Data Zoom 9-0

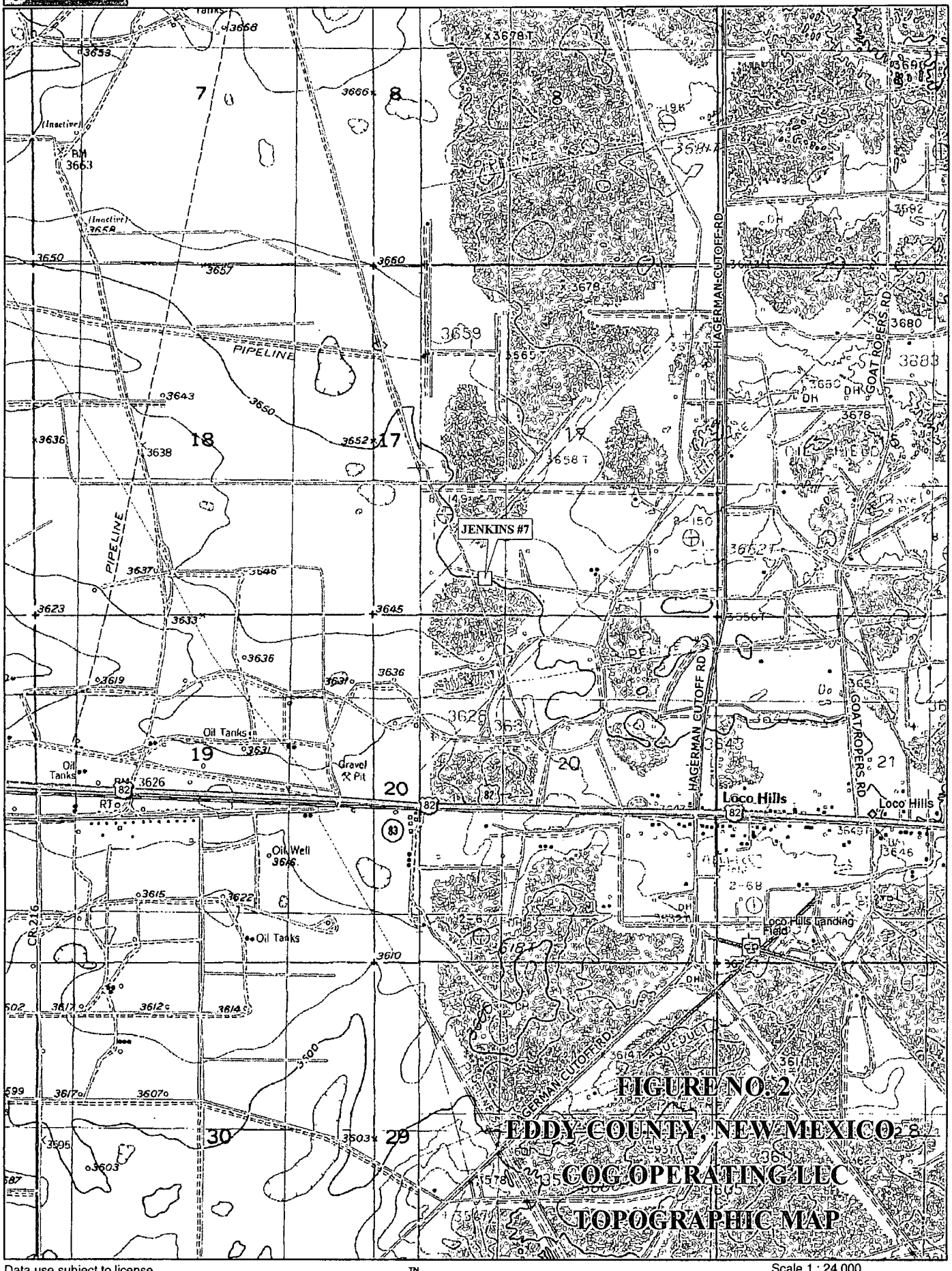


FIGURE NO. 2

EDDY COUNTY, NEW MEXICO

COG OPERATING LLC

TOPOGRAPHIC MAP

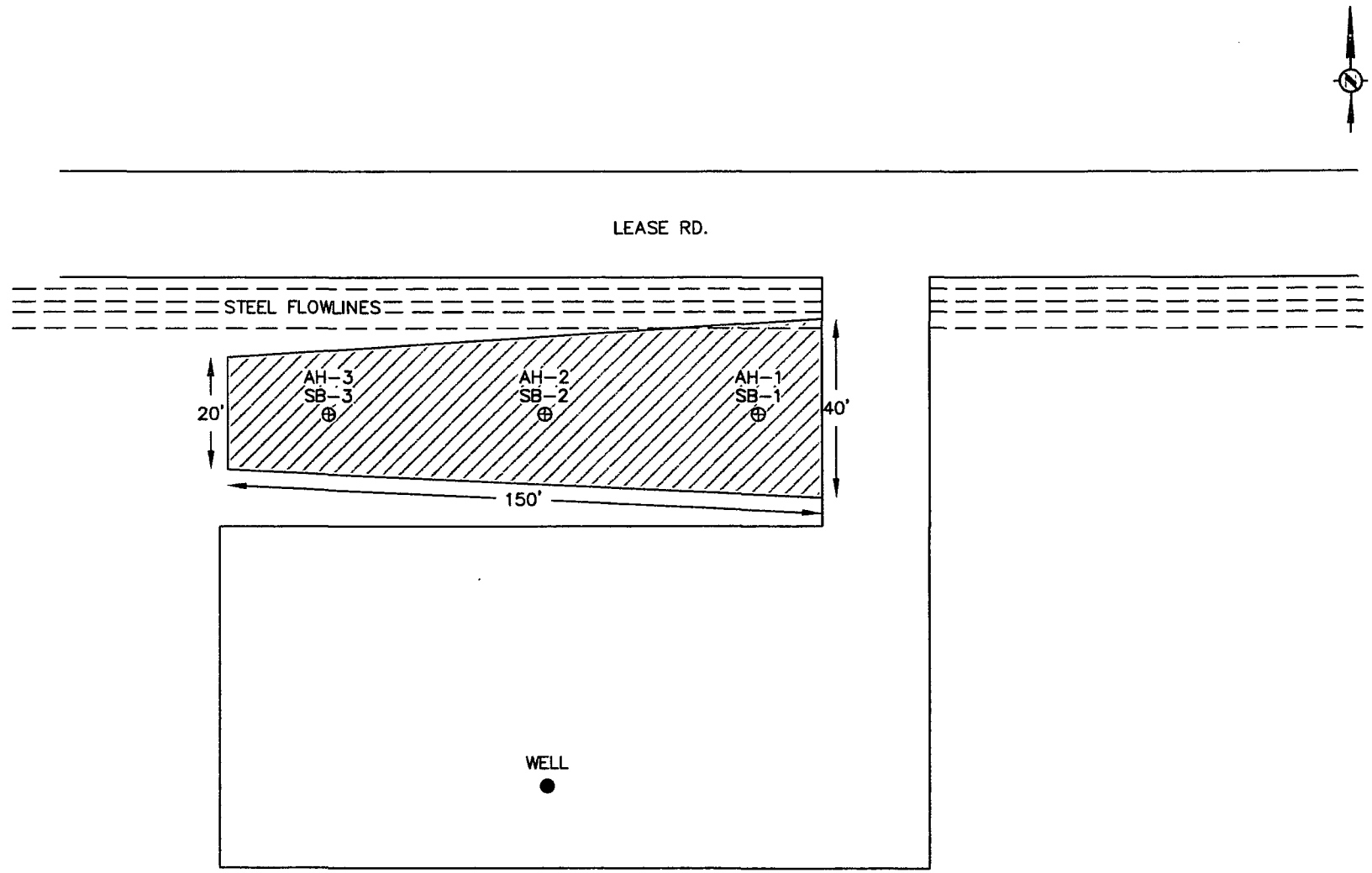
TN

MN (8.0°E)

Scale 1 : 24,000

1" = 2,000.0 ft

Data Zoom 13-0



SPILL AREA
AUGER HOLE SAMPLE LOCATIONS
SOIL BORING LOCATIONS

NOT TO SCALE

FIGURE NO. 3

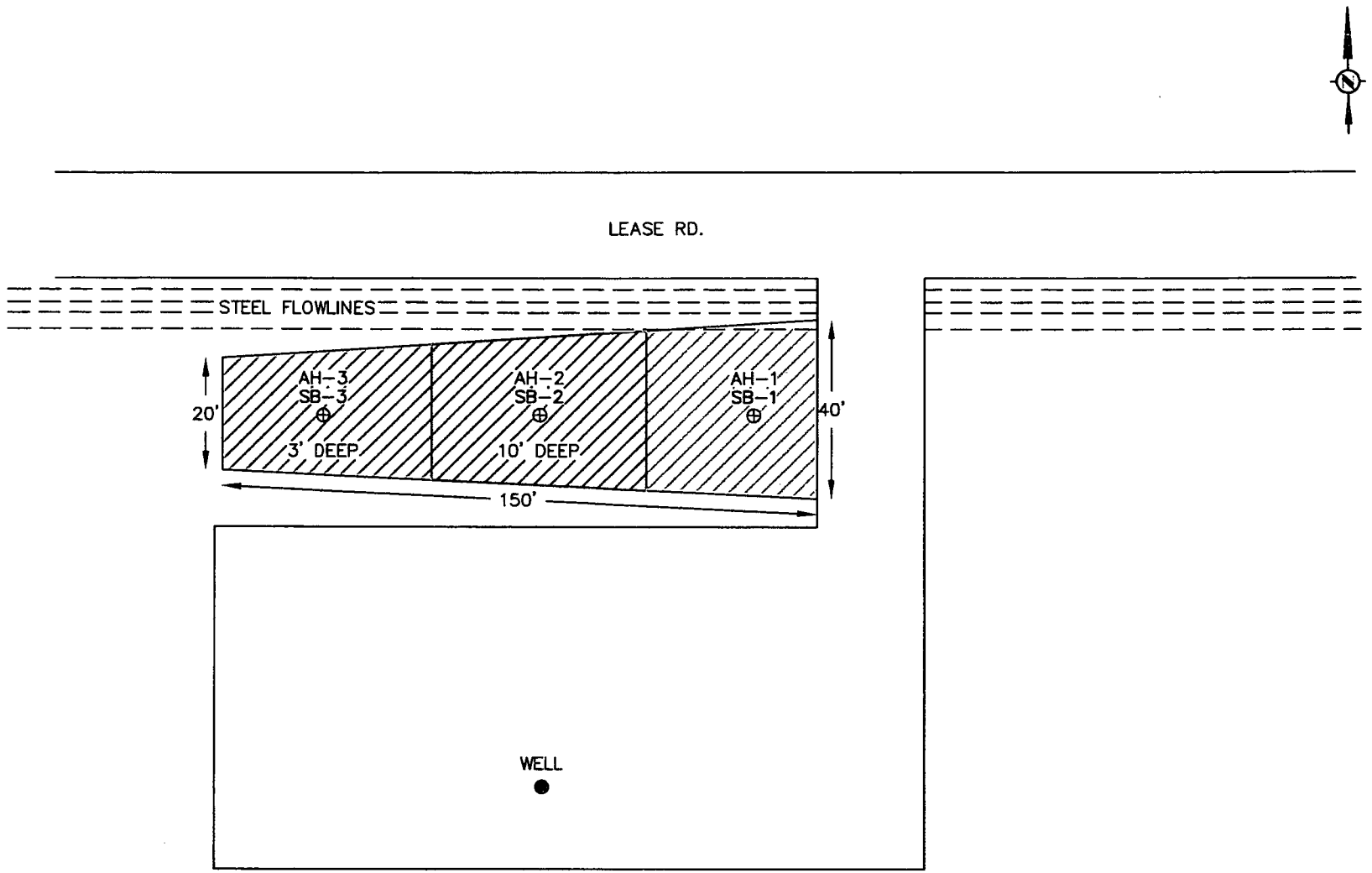
EDDY COUNTY, NEW MEXICO

COG OPERATING LLC

JENKINS #7

DATE: 4/30/10
DWN. BY: JJ
FILE: M:\COG\6400435 JENKINS #7

TETRA TECH, INC.
MIDLAND, TEXAS



SPILL AREA
EXCAVATION AREA
40 MIL LINER INSTALLED
⊕ AUGER HOLE SAMPLE LOCATIONS
⊕ SOIL BORING LOCATIONS

NOT TO SCALE

FIGURE NO. 4

EDDY COUNTY, NEW MEXICO

COG OPERATING LLC

JENKINS #7

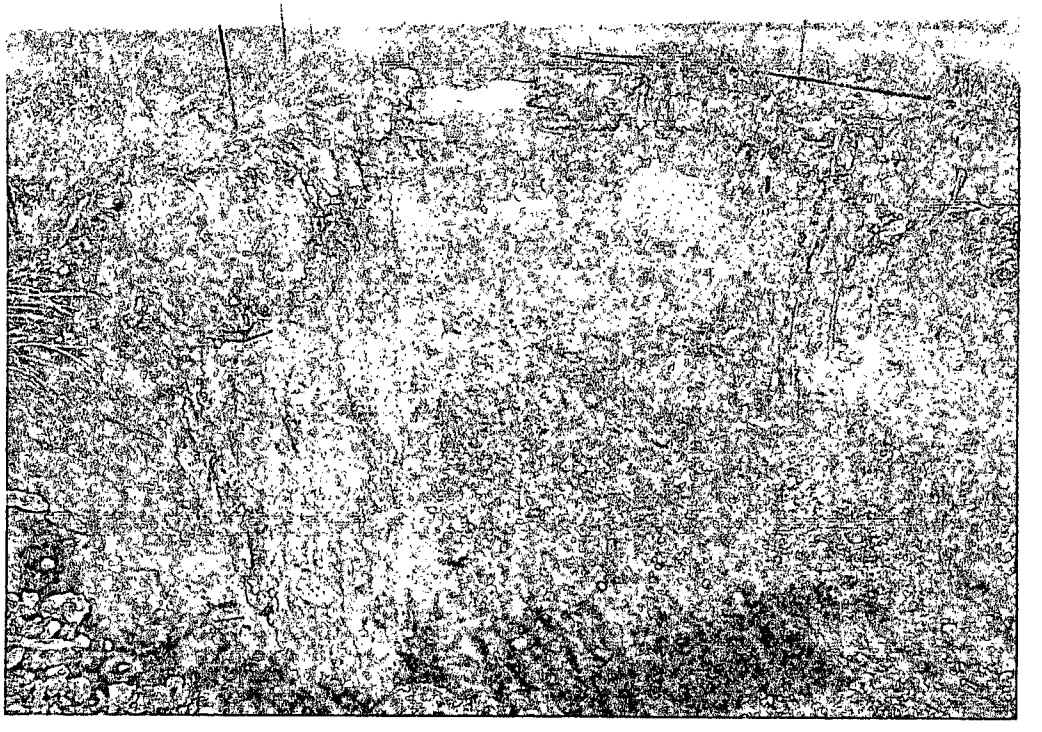
DATE: 8/22/2011
DWN. BY: IM
FILE: H:\COG\64C0435 JENKINS #7

TETRA TECH, INC.
MIDLAND, TEXAS

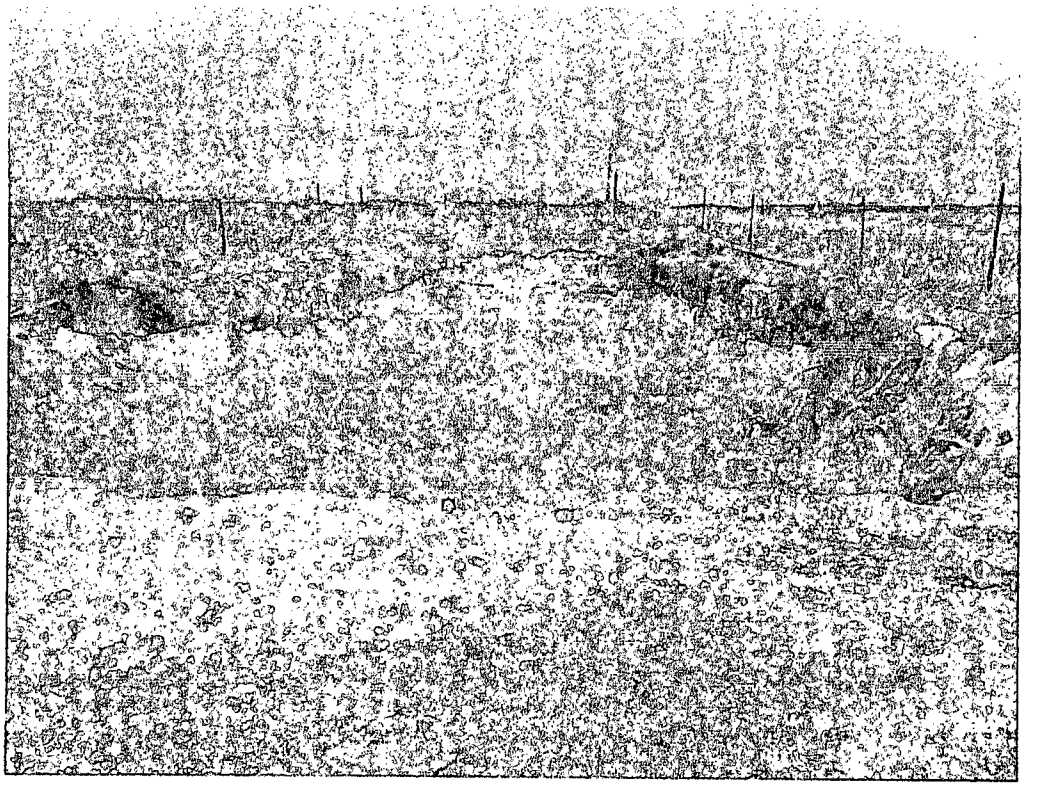
PHOTOGRAPHS

COG Operating LLC
Jenkins B Federal #7
Eddy County, New Mexico

TETRA TECH



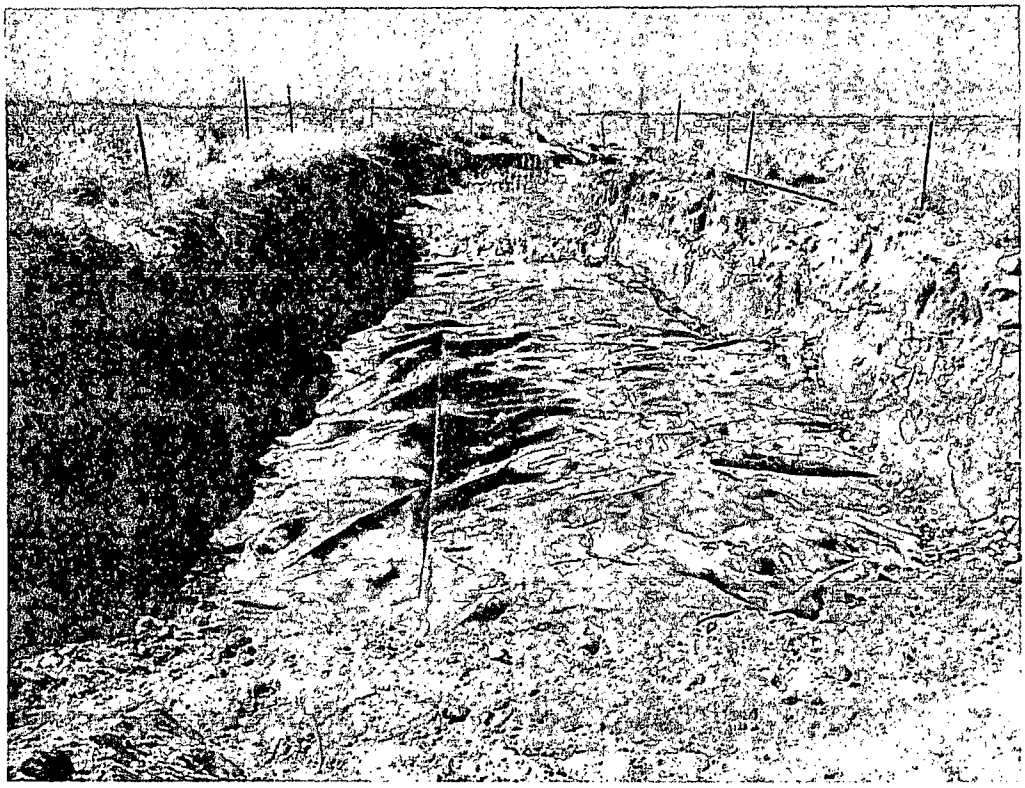
View West – SB-2,1



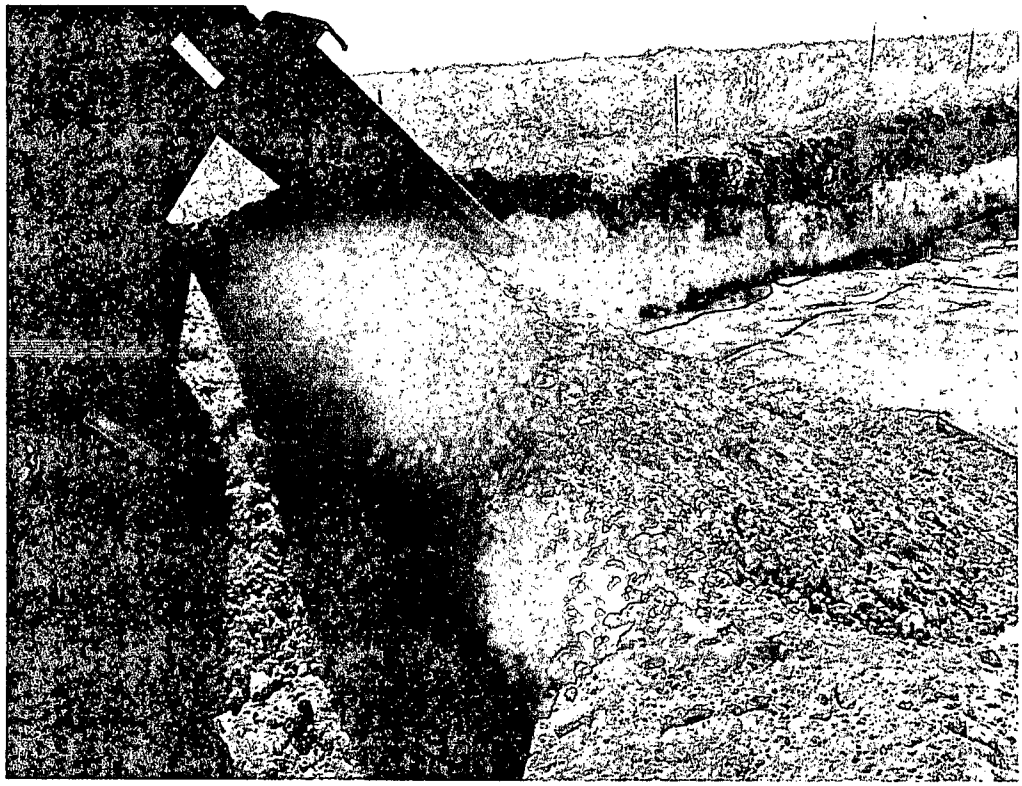
View West – Backfill for liner

COG Operating LLC
Jenkins B Federal #7
Eddy County, New Mexico

TETRA TECH



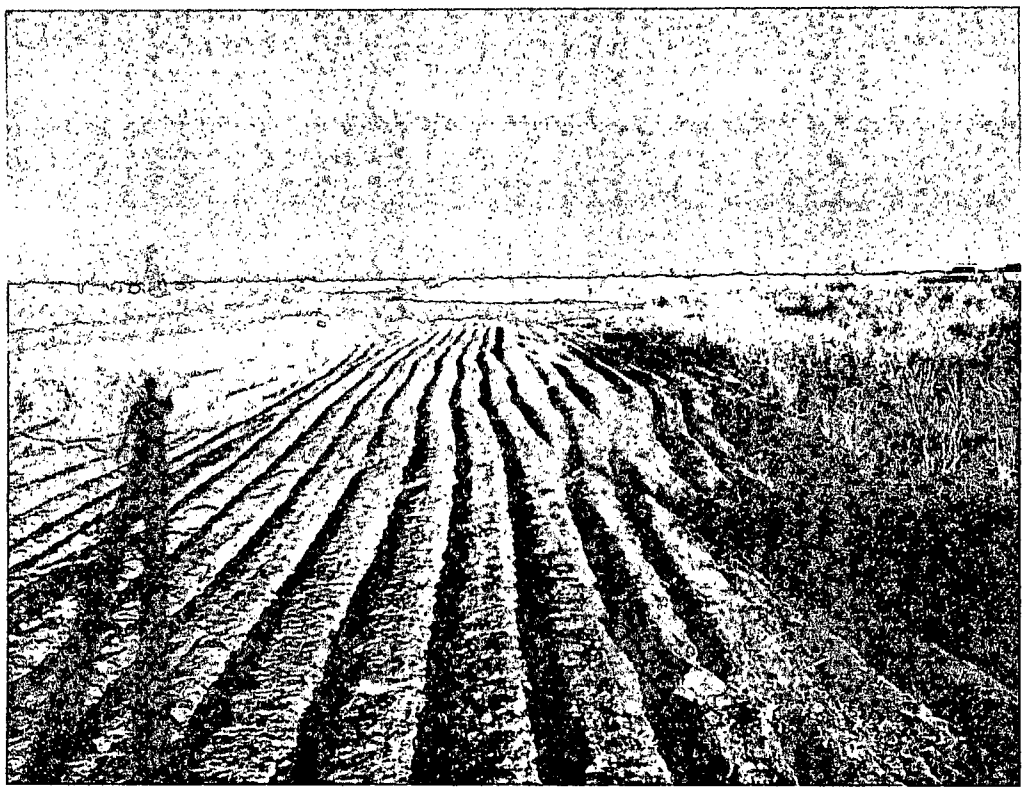
View West - Liner



View South West – Backfill on liner

COG Operating LLC
Jenkins B Federal #7
Eddy County, New Mexico

TETRA TECH



View East - Backfill

Site info and picture details

TABLES

Table 1
COG Operating LLC.
Jenkins B Federal #7
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	3/10/2010	0-1'	1'	X		<1.00	<50.0	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	<200
		1-1.5'	1'	X		-	-	-	-	-	-	-	<200
SB-1	3/18/2010	0-1'	-	X		<1.00	<50.0	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	<200
		2'-3'	-	X		-	-	-	-	-	-	-	<200
		4'-5'	-	X		-	-	-	-	-	-	-	1,020
		6'-7'	-	X		-	-	-	-	-	-	-	525
		10'-11'	-	X		-	-	-	-	-	-	-	<200
		15'-16'	-	X		-	-	-	-	-	-	-	<200
		20'-21'	-	X		-	-	-	-	-	-	-	<200
		30'-31'	-	X		-	-	-	-	-	-	-	363

Table 1
COG Operating LLC.
Jenkins B Federal #7
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-2	3/10/2010	0-1'	1'	X		<1.00	<50.0	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	9,500
		1-1.5'	1'	X		-	-	-	-	-	-	-	10,600
SB-2	3/18/2010	0-1'	-		X	<1.00	<50.0	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	9,860
		2'-3'	-		X	-	-	-	-	-	-	-	12,200
		4'-5'	-		X	-	-	-	-	-	-	-	15,400
		6'-7'	-		X	-	-	-	-	-	-	-	15,800
		10'-11'	-		X	-	-	-	-	-	-	-	8,570
		15'-16'	-	X		-	-	-	-	-	-	-	1,210
		20'-21'	-	X		-	-	-	-	-	-	-	2,030
	4/12/2010	10'	-	X		-	-	-	-	-	-	-	466
		15'	-	X		-	-	-	-	-	-	-	<200
		20'	-	X		-	-	-	-	-	-	-	<200
		25'	-	X		-	-	-	-	-	-	-	<200
		30'	-	X		-	-	-	-	-	-	-	<200
		35'	-	X		-	-	-	-	-	-	-	<200
		40'	-	X		-	-	-	-	-	-	-	<200

Table 1
COG Operating LLC.
Jenkins B Federal #7
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	3/10/2010	0-.5'	1.5'	X		<1.00	<50.0	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	10,100
SB-3	3/18/2010	0-1'	-		X	<1.00	<50.0	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	10,000
		2'-3'	-		X	-	-	-	-	-	-	-	13,200
		4'-5'	-	X		-	-	-	-	-	-	-	<200
		6'-7'	-	X		-	-	-	-	-	-	-	<200
		10'-11'	-	X		-	-	-	-	-	-	-	<200
		15'-16'	-	X		-	-	-	-	-	-	-	<200
		20'-21'	-	X		-	-	-	-	-	-	-	<200
		30'-31'	-	X		-	-	-	-	-	-	-	<200

BEB Below Excavation Bottom

(--) Not Analyzed

Excavated material

40 mil liner

APPENDIX A

RECEIVED FEB 12 2010

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

pMCB1004831009

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	COG Operating, LLC 229137	Contact	Pat Ellis
Address	550 W. Texas, Suite 100 Midland TX, 79701	Telephone No.	432-230-0077
Facility Name	Jenkins B Federal #7	Facility Type	Well

Surface Owner Federal	Mineral Owner	Lease No. (API#) 30-015-29451

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
E	20	17S	30E	1650	NORTH	1090	WEST	EDDY

Latitude 32.822824 **Longitude** 103.999198

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 100bbl	Volume Recovered 80bbl
Source of Release Flowline	Date and Hour of Occurrence 02/05/2010 1:00 p.m.	Date and Hour of Discovery 02/05/2010 2:00 p.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Jim Amos – BLM, Mike Bratcher - OCD	
By Whom? Josh Russo	Date and Hour 02/05/2010 2:30 p.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

RECEIVED SEP 22 2011 NMOCD ARTESIA

Describe Cause of Problem and Remedial Action Taken.*

There was a split in the flowline. The flowline has been repaired.

Describe Area Affected and Cleanup Action Taken.*

Produced water was released into the area immediately next to the split flowline. A total of 100bbls of fluid was released. 80bbls of fluid was recovered by a vacuum truck. One-call protocol will be made by dirt contractor who will then wait for archeological/wildlife sensitivity clearance from BLM before removing any saturated soils prior to soil sampling by Tetra Tech (The closest well to the leak is the MCINTYRE DK FEDERAL #8 M-20-17S-30E 990 FSL 990 FWL 32 81558379 : 103 99955142) Tetra Tech will sample the spill site area to delineate any possible contamination from the release and we will present a remediation work plan to the NMOCD/BLM for your approval prior to any significant remediation.

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

Signature	OIL CONSERVATION DIVISION
Printed Name: Josh Russo	Approved by District Supervisor: Signed By Mike Bratcher
Title: HSE Coordinator	Approval Date: FEB 17 2010 Expiration Date:
E-mail Address: jrusso@conchoresources.com	Conditions of Approval: Attached ☒
Date: 02/12/2010 Phone: 432-212-239	

* Attach Additional Sheets If Necessary

REMEDIATION per OCD Rules and Guidelines. SUBMIT REMEDIATION PROPOSAL BY: 3/17/10

2RP-390

pMCB1004831375

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 #7**	Facility Type **Well**

Surface Owner: Federal	Mineral Owner	Lease No. (API#) 30-015-29451

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
E	20	17S	30E	1650	NORTH	1090	WEST	EDDY

Latitude N 32.822824° **Longitude** W 103.999198°

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release 100 bbls	Volume Recovered 80 bbls
Source of Release: Flowline	Date and Hour of Occurrence 02/05/2010 1:00p.m.	Date and Hour of Discovery 02/05/2010 2:00p.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Jim Amos—BLM Mike Bratcher--OCD	
By Whom? Josh Russo	Date and Hour 02/05/2010 2:30p.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*

N/A

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SEP 22 2011
NMOCD ARTESIA

Describe Cause of Problem and Remedial Action Taken.*

There was a split in the flowline. The flowline has been repaired.

Describe Area Affected and Cleanup Action Taken.*

Tetra Tech inspected site and collected samples to define spills extent. Soil that exceeded RRAL 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: 8-22-11 Phone: (432) 682-4559		

* Attach Additional Sheets If Necessary

APPENDIX B

Water Well Data
Average Depth to Groundwater (ft)
COG - Jenkins B Federal #7
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 **110**	20	21	22	23	24
30	29	28	27	26	25
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 **288**
18	17	16	15	14	13 **113**
19	20	21	22	23	24
30	29	28	27	26	25
31 **290**	32	33	34	35	36

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	24
30	29 **210** **208'**	28	27	26	25
31	32	33	34	35 153	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 SITE	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

17 South 31 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34 **271**	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 **400**
18	17	16	15	14 **317**	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35 **261**	36

- 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: March 22, 2010

Work Order: 10031509

Project Location: Eddy County, NM
Project Name: COG/Jenkins B Federal #7
Project Number: 114-6400435

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
225641	AH-1 0-1' 1' BEB	soil	2010-03-10	00:00	2010-03-12
225642	AH-1 1-1.5' 1' BEB	soil	2010-03-10	00:00	2010-03-12
225643	AH-2 0-1' 1' BEB	soil	2010-03-10	00:00	2010-03-12
225644	AH-2 1-1.5' 1' BEB	soil	2010-03-10	00:00	2010-03-12
225645	AH-3 0-.5' 1.5' BEB	soil	2010-03-10	00:00	2010-03-12

	BTEX				TPH DRO - NEW	TPH GRO
	Benzene	Toluene	Ethylbenzene	Xylene	DRO	GRO
Sample - Field Code	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
225641 - AH-1 0-1' 1' BEB	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
225643 - AH-2 0-1' 1' BEB	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
225645 - AH-3 0-.5' 1.5' BEB	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00

Sample: 225641 - AH-1 0-1' 1' BEB

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

Sample: 225642 - AH-1 1-1.5' 1' BEB

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

Sample: 225643 - AH-2 0-1' 1' BEB

Param	Flag	Result	Units	RL
Chloride		**9500**	mg/Kg	4.00

Sample: 225644 - AH-2 1-1.5' 1' BEB

Param	Flag	Result	Units	RL
Chloride		**10600**	mg/Kg	4.00

Sample: 225645 - AH-3 0-.5' 1.5' BEB

Param	Flag	Result	Units	RL
Chloride		**10100**	mg/Kg	4.00

TRACEANALYSIS, INC.

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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

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

Report Date: March 22, 2010

Work Order: 10031509

Project Location: Eddy County, NM
Project Name: COG/Jenkins B Federal #7
Project Number: 114-6400435

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
225641	AH-1 0-1' 1' BEB	soil	2010-03-10	00:00	2010-03-12
225642	AH-1 1-1.5' 1' BEB	soil	2010-03-10	00:00	2010-03-12
225643	AH-2 0-1' 1' BEB	soil	2010-03-10	00:00	2010-03-12
225644	AH-2 1-1.5' 1' BEB	soil	2010-03-10	00:00	2010-03-12
225645	AH-3 0-.5' 1.5' BEB	soil	2010-03-10	00:00	2010-03-12

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.

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 #7 were received by TraceAnalysis, Inc. on 2010-03-12 and assigned to work order 10031509. Samples for work order 10031509 were received intact at a temperature of 6.0 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	58507	2010-03-17 at 11:00	68370	2010-03-17 at 13:22
Chloride (Titration)	SM 4500-Cl B	58451	2010-03-16 at 12:46	68375	2010-03-18 at 15:19
TPH DRO - NEW	Mod. 8015B	58454	2010-03-16 at 15:15	68314	2010-03-16 at 15:15
TPH DRO - NEW	Mod. 8015B	58487	2010-03-17 at 14:37	68350	2010-03-17 at 14:37
TPH GRO	S 8015B	58507	2010-03-17 at 11:00	68371	2010-03-17 at 13:51

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 10031509 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

Analytical Report

Sample: 225641 - AH-1 0-1' 1' BEB

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	68370	Date Analyzed:	2010-03-17	Analyzed By:	AG
Prep Batch:	58507	Sample Preparation:	2010-03-17	Prepared By:	AG

Parameter	Flag	Result	RL Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.87	mg/Kg	1	2.00	94	60.4 - 141.2
4-Bromofluorobenzene (4-BFB)		2.04	mg/Kg	1	2.00	102	43.1 - 158.4

Sample: 225641 - AH-1 0-1' 1' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68375	Date Analyzed:	2010-03-18	Analyzed By:	AR
Prep Batch:	58451	Sample Preparation:	2010-03-16	Prepared By:	AR

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

Sample: 225641 - AH-1 0-1' 1' BEB

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	68314	Date Analyzed:	2010-03-16	Analyzed By:	kg
Prep Batch:	58454	Sample Preparation:	2010-03-16	Prepared By:	kg

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		87.0	mg/Kg	1	100	87	70 - 130

Sample: 225641 - AH-1 0-1' 1' BEB

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	68371	Date Analyzed:	2010-03-17	Analyzed By:	AG
Prep Batch:	58507	Sample Preparation:	2010-03-17	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.80	mg/Kg	1	2.00	140	65.3 - 155
4-Bromofluorobenzene (4-BFB)		2.57	mg/Kg	1	2.00	128	61.7 - 131.1

Sample: 225642 - AH-1 1-1.5' 1' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68375	Date Analyzed:	2010-03-18	Analyzed By:	AR
Prep Batch:	58451	Sample Preparation:	2010-03-16	Prepared By:	AR

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

Sample: 225643 - AH-2 0-1' 1' BEB

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	68370	Date Analyzed:	2010-03-17	Analyzed By:	AG
Prep Batch:	58507	Sample Preparation:	2010-03-17	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.84	mg/Kg	1	2.00	92	60.4 - 141.2
4-Bromofluorobenzene (4-BFB)		1.98	mg/Kg	1	2.00	99	43.1 - 158.4

Sample: 225643 - AH-2 0-1' 1' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68375	Date Analyzed:	2010-03-18	Analyzed By:	AR
Prep Batch:	58451	Sample Preparation:	2010-03-16	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**9500**	mg/Kg	100	4.00

Sample: 225643 - AH-2 0-1' 1' BEB

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	68350	Date Analyzed:	2010-03-17	Analyzed By:	kg
Prep Batch:	58487	Sample Preparation:	2010-03-17	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		91.6	mg/Kg	1	100	92	70 - 130

Sample: 225643 - AH-2 0-1' 1' BEB

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	68371	Date Analyzed:	2010-03-17	Analyzed By:	AG
Prep Batch:	58507	Sample Preparation:	2010-03-17	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.75	mg/Kg	1	2.00	138	65.3 - 155
4-Bromofluorobenzene (4-BFB)		2.51	mg/Kg	1	2.00	126	61.7 - 131.1

Sample: 225644 - AH-2 1-1.5' 1' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68375	Date Analyzed:	2010-03-18	Analyzed By:	AR
Prep Batch:	58451	Sample Preparation:	2010-03-16	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**10600**	mg/Kg	100	4.00

Sample: 225645 - AH-3 0-.5' 1.5' BEB

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	68370	Date Analyzed:	2010-03-17	Analyzed By:	AG
Prep Batch:	58507	Sample Preparation:	2010-03-17	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.33	mg/Kg	1	2.00	66	60.4 - 141.2
4-Bromofluorobenzene (4-BFB)		1.45	mg/Kg	1	2.00	72	43.1 - 158.4

Sample: 225645 - AH-3 0-.5' 1.5' BEB

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68375	Date Analyzed:	2010-03-18	Analyzed By:	AR
Prep Batch:	58451	Sample Preparation:	2010-03-16	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**10100**	mg/Kg	100	4.00

Sample: 225645 - AH-3 0-.5' 1.5' BEB

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	68314	Date Analyzed:	2010-03-16	Analyzed By:	kg
Prep Batch:	58454	Sample Preparation:	2010-03-16	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: 225645 - AH-3 0-.5' 1.5' BEB

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	68371	Date Analyzed:	2010-03-17	Analyzed By:	AG
Prep Batch:	58507	Sample Preparation:	2010-03-17	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.00	mg/Kg	1	2.00	100	65.3 - 155
4-Bromofluorobenzene (4-BFB)		1.86	mg/Kg	1	2.00	93	61.7 - 131.1

Method Blank (1) QC Batch: 68314

QC Batch:	68314	Date Analyzed:	2010-03-16	Analyzed By:	kg
Prep Batch:	58454	QC Preparation:	2010-03-16	Prepared By:	kg

Parameter	Flag	MDL Result	Units	RL
DRO		<5.86	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		71.9	mg/Kg	1	100	72	70 - 130

Method Blank (1) QC Batch: 68350

QC Batch: 68350 Date Analyzed: 2010-03-17 Analyzed By: kg
Prep Batch: 58487 QC Preparation: 2010-03-17 Prepared By: kg

Parameter	Flag	MDL Result	Units	RL
DRO		<5.86	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		77.7	mg/Kg	1	100	78	70 - 130

Method Blank (1) QC Batch: 68370

QC Batch: 68370 Date Analyzed: 2010-03-17 Analyzed By: AG
Prep Batch: 58507 QC Preparation: 2010-03-17 Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.00410	mg/Kg	0.01
Toluene		<0.00310	mg/Kg	0.01
Ethylbenzene		<0.00240	mg/Kg	0.01
Xylene		<0.00650	mg/Kg	0.01

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.79	mg/Kg	1	2.00	90	64.9 - 142.7
4-Bromofluorobenzene (4-BFB)		1.74	mg/Kg	1	2.00	87	43.9 - 141.9

Method Blank (1) QC Batch: 68371

QC Batch: 68371 Date Analyzed: 2010-03-17 Analyzed By: AG
Prep Batch: 58507 QC Preparation: 2010-03-17 Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
GRO		<0.396	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.67	mg/Kg	1	2.00	134	66.2 - 145
4-Bromofluorobenzene (4-BFB)		2.22	mg/Kg	1	2.00	111	62 - 120.5

Method Blank (1) QC Batch: 68375

QC Batch: 68375 Date Analyzed: 2010-03-18 Analyzed By: AR
Prep Batch: 58451 QC Preparation: 2010-03-16 Prepared By: AR

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

Laboratory Control Spike (LCS-1)

QC Batch: 68314 Date Analyzed: 2010-03-16 Analyzed By: kg
Prep Batch: 58454 QC Preparation: 2010-03-16 Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	239	mg/Kg	1	250	<5.86	96	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	221	mg/Kg	1	250	<5.86	88	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	108	100	mg/Kg	1	100	108	100	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 68350 Date Analyzed: 2010-03-17 Analyzed By: kg
Prep Batch: 58487 QC Preparation: 2010-03-17 Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	186	mg/Kg	1	250	<5.86	74	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	207	mg/Kg	1	250	<5.86	83	57.4 - 133.4	11	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	81.7	91.6	mg/Kg	1	100	82	92	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 68370 | Date Analyzed: 2010-03-17 | Analyzed By: AG
Prep Batch: 58507 | QC Preparation: 2010-03-17 | Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.87	mg/Kg	1	2.00	<0.00410	94	75.4 - 115.7
Toluene	1.88	mg/Kg	1	2.00	<0.00310	94	78.4 - 113.6
Ethylbenzene	1.89	mg/Kg	1	2.00	<0.00240	94	76 - 114.2
Xylene	5.67	mg/Kg	1	6.00	<0.00650	94	76.9 - 113.6

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	1.88	mg/Kg	1	2.00	<0.00410	94	75.4 - 115.7	0	20
Toluene	1.88	mg/Kg	1	2.00	<0.00310	94	78.4 - 113.6	0	20
Ethylbenzene	1.87	mg/Kg	1	2.00	<0.00240	94	76 - 114.2	1	20
Xylene	5.66	mg/Kg	1	6.00	<0.00650	94	76.9 - 113.6	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)	1.73	1.77	mg/Kg	1	2.00	86	88	65 - 142.9
4-Bromofluorobenzene (4-BFB)	2.00	2.05	mg/Kg	1	2.00	100	102	43.8 - 144.9

Laboratory Control Spike (LCS-1)

QC Batch: 68371 | Date Analyzed: 2010-03-17 | Analyzed By: AG
Prep Batch: 58507 | QC Preparation: 2010-03-17 | Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	18.0	mg/Kg	1	20.0	<0.396	90	52.5 - 114.3

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	17.6	mg/Kg	1	20.0	<0.396	88	52.5 - 114.3	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)	2.45	2.36	mg/Kg	1	2.00	122	118	66.2 - 148.7
4-Bromofluorobenzene (4-BFB)	2.30	2.20	mg/Kg	1	2.00	115	110	64.1 - 127.4

Laboratory Control Spike (LCS-1)

QC Batch: 68375 | Date Analyzed: 2010-03-18 | Analyzed By: AR
Prep Batch: 58451 | QC Preparation: 2010-03-16 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.8	mg/Kg	1	100	<2.18	99	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	100	mg/Kg	1	100	<2.18	100	85 - 115	1	20

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

Matrix Spike (MS-1) Spiked Sample: 225699

QC Batch: 68314 | Date Analyzed: 2010-03-16 | Analyzed By: kg
Prep Batch: 58454 | QC Preparation: 2010-03-16 | Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	203	mg/Kg	1	250	<5.86	81	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	200	mg/Kg	1	250	<5.86	80	35.2 - 167.1	2	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	103	105	mg/Kg	1	100	103	105	70 - 130

Matrix Spike (MS-1) Spiked Sample: 225164

QC Batch: 68350 | Date Analyzed: 2010-03-17 | Analyzed By: kg
Prep Batch: 58487 | QC Preparation: 2010-03-17 | Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	163	mg/Kg	1	250	<5.86	65	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	167	mg/Kg	1	250	<5.86	67	35.2 - 167.1	2	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	87.1	88.6	mg/Kg	1	100	87	89	70 - 130

Matrix Spike (MS-1) Spiked Sample: 225641

QC Batch: 68370 | Date Analyzed: 2010-03-17 | Analyzed By: AG
Prep Batch: 58507 | QC Preparation: 2010-03-17 | Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.84	mg/Kg	1	2.00	<0.00410	92	57.7 - 140.7
Toluene	1.87	mg/Kg	1	2.00	<0.00310	94	53.4 - 146.6
Ethylbenzene	1.89	mg/Kg	1	2.00	<0.00240	94	62.1 - 141.6
Xylene	5.65	mg/Kg	1	6.00	<0.00650	94	61.2 - 142.7

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	1.86	mg/Kg	1	2.00	<0.00410	93	57.7 - 140.7	1	20
Toluene	1.90	mg/Kg	1	2.00	<0.00310	95	53.4 - 146.6	2	20
Ethylbenzene	1.92	mg/Kg	1	2.00	<0.00240	96	62.1 - 141.6	2	20
Xylene	5.76	mg/Kg	1	6.00	<0.00650	96	61.2 - 142.7	2	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.47	1.40	mg/Kg	1	2	74	70	61.7 - 139.6
4-Bromofluorobenzene (4-BFB)	1.62	1.56	mg/Kg	1	2	81	78	49.6 - 146.7

Matrix Spike (MS-1) Spiked Sample: 225701

QC Batch: 68371 | Date Analyzed: 2010-03-17 | Analyzed By: AG
Prep Batch: 58507 | QC Preparation: 2010-03-17 | Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	19.1	mg/Kg	1	20.0	<0.396	96	10 - 198.3

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	19.4	mg/Kg	1	20.0	<0.396	97	10 - 198.3	2	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.00	2.05	mg/Kg	1	2	100	102	65.5 - 143
4-Bromofluorobenzene (4-BFB)	2.07	2.15	mg/Kg	1	2	104	108	58.6 - 140

Matrix Spike (MS-1) Spiked Sample: 225660

QC Batch: 68375 | Date Analyzed: 2010-03-18 | Analyzed By: AR
Prep Batch: 58451 | QC Preparation: 2010-03-16 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	12700	mg/Kg	100	10000	2680	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	12800	mg/Kg	100	10000	2680	101	85 - 115	1	20

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

Standard (CCV-1)

QC Batch: 68314 | Date Analyzed: 2010-03-16 | Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	249	100	80 - 120	2010-03-16

Standard (CCV-2)

QC Batch: 68314 Date Analyzed: 2010-03-16 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	206	82	80 - 120	2010-03-16

Standard (CCV-2)

QC Batch: 68350 Date Analyzed: 2010-03-17 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	219	88	80 - 120	2010-03-17

Standard (CCV-3)

QC Batch: 68350 Date Analyzed: 2010-03-17 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	204	82	80 - 120	2010-03-17

Standard (CCV-1)

QC Batch: 68370 Date Analyzed: 2010-03-17 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	0.0911	91	80 - 120	2010-03-17
Toluene		mg/Kg	0.100	0.0920	92	80 - 120	2010-03-17
Ethylbenzene		mg/Kg	0.100	0.0913	91	80 - 120	2010-03-17
Xylene		mg/Kg	0.300	0.276	92	80 - 120	2010-03-17

Standard (CCV-2)

QC Batch: 68370 Date Analyzed: 2010-03-17 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	0.0925	92	80 - 120	2010-03-17
Toluene		mg/Kg	0.100	0.0919	92	80 - 120	2010-03-17
Ethylbenzene		mg/Kg	0.100	0.0902	90	80 - 120	2010-03-17
Xylene		mg/Kg	0.300	0.272	91	80 - 120	2010-03-17

Standard (CCV-1)

QC Batch: 68371 Date Analyzed: 2010-03-17 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	1.12	112	80 - 120	2010-03-17

Standard (CCV-2)

QC Batch: 68371 Date Analyzed: 2010-03-17 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	1.10	110	80 - 120	2010-03-17

Standard (ICV-1)

QC Batch: 68375 Date Analyzed: 2010-03-18 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.4	99	85 - 115	2010-03-18

Standard (CCV-1)

QC Batch: 68375 Date Analyzed: 2010-03-18 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	2010-03-18

Order #: 100315O9

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

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-6400435

PROJECT NAME: COG / Jenkins B Federal #7 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	BTEX 80218	TPH 8015 MOD	TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
205641	2010 3/10		S		X	AH-1 0-1' 1' BEB	1				X		X	X												X				
642						AH-1 1-1.5' 1' BEB																				X				
643						AH-2 0-1' 1' BEB							X	X												X				
644						AH-2 1'-1.5' 1' BEB																				X				
645	↓		↓		↓	AH-3 0-.5' 1.5' BEB	↓				↓		X	X												X				

RELINQUISHED BY: (Signature) Date: 3-12-10 Time: 15:25
RECEIVED BY: (Signature) Date: 3/10/10 Time: 15:25
SAMPLED BY: (Print & Initial) Thomas K Franklin TKF Date: 3/10/10 Time:

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

RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: Time:
TETRA TECH CONTACT PERSON: Ike Tavarez
Results by:
RUSH Charges Authorized: Yes No

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: Tx ZIP:
CONTACT: Mondo PHONE:
RECEIVED BY: (Signature)
DATE: TIME:

SAMPLE CONDITION WHEN RECEIVED: 6.0°C intact

REMARKS: Run deeper sample of TPH if exceeds 5,000 mg/kg

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

Summary Report

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

Report Date: March 26, 2010

Work Order: 10032225

Project Location: Eddy County, NM
Project Name: COG/Jenkins B Federal #7
Project Number: 114-6400435

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
226228	SB-1 0-1' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226229	SB-1 2-3' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226230	SB-1 4-5' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226231	SB-1 6-7' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226232	SB-1 10-11' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226233	SB-1 15-16' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226234	SB-1 20-21' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226235	SB-1 30-31' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226236	SB-2 0-1' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226237	SB-2 2-3' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226238	SB-2 4-5' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226239	SB-2 6-7' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226240	SB-2 10-11' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226241	SB-2 15-16' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226242	SB-2 20-21' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226243	SB-3 0-1' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226244	SB-3 2-3' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226245	SB-3 4-5' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226246	SB-3 6-7' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226247	SB-3 10-11' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226248	SB-3 15-16' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226249	SB-3 20-21' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226250	SB-3 30-31' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22

	BTEX				TPH DRO - NEW	TPH GRO
Sample - Field Code	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
226228 - SB-1 0-1' (6 in. BEB)	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00

continued ...

... continued

Sample - Field Code	BTEX Benzene (mg/Kg)	BTEX Toluene (mg/Kg)	BTEX Ethylbenzene (mg/Kg)	BTEX Xylene (mg/Kg)	TPH DRO - NEW DRO (mg/Kg)	TPH GRO GRO (mg/Kg)
226236 - SB-2 0-1' (6 in. BEB)	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
226243 - SB-3 0-1' (6 in. BEB)	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00

Sample: 226228 - SB-1 0-1' (6 in. BEB)

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

Sample: 226229 - SB-1 2-3' (6 in. BEB)

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

Sample: 226230 - SB-1 4-5' (6 in. BEB)

Param	Flag	Result	Units	RL
Chloride		**1020**	mg/Kg	4.00

Sample: 226231 - SB-1 6-7' (6 in. BEB)

Param	Flag	Result	Units	RL
Chloride		**525**	mg/Kg	4.00

Sample: 226232 - SB-1 10-11' (6 in. BEB)

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

Sample: 226233 - SB-1 15-16' (6 in. BEB)

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

Sample: 226234 - SB-1 20-21' (6 in. BEB)

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

Sample: 226235 - SB-1 30-31' (6 in. BEB)

Param	Flag	Result	Units	RL
Chloride		**363**	mg/Kg	4.00

Sample: 226236 - SB-2 0-1' (6 in. BEB)

Param	Flag	Result	Units	RL
Chloride		**9860**	mg/Kg	4.00

Sample: 226237 - SB-2 2-3' (6 in. BEB)

Param	Flag	Result	Units	RL
Chloride		**12200**	mg/Kg	4.00

Sample: 226238 - SB-2 4-5' (6 in. BEB)

Param	Flag	Result	Units	RL
Chloride		**15400**	mg/Kg	4.00

Sample: 226239 - SB-2 6-7' (6 in. BEB)

Param	Flag	Result	Units	RL
Chloride		**15800**	mg/Kg	4.00

Sample: 226240 - SB-2 10-11' (6 in. BEB)

Param	Flag	Result	Units	RL
Chloride		**8570**	mg/Kg	4.00

Sample: 226241 - SB-2 15-16' (6 in. BEB)

Param	Flag	Result	Units	RL
Chloride		**1210**	mg/Kg	4.00

Sample: 226242 - SB-2 20-21' (6 in. BEB)

Param	Flag	Result	Units	RL
Chloride		**2030**	mg/Kg	4.00

Sample: 226243 - SB-3 0-1' (6 in. BEB)

Param	Flag	Result	Units	RL
Chloride		**10000**	mg/Kg	4.00

Sample: 226244 - SB-3 2-3' (6 in. BEB)

Param	Flag	Result	Units	RL
Chloride		**13200**	mg/Kg	4.00

Sample: 226245 - SB-3 4-5' (6 in. BEB)

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

Sample: 226246 - SB-3 6-7' (6 in. BEB)

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

Sample: 226247 - SB-3 10-11' (6 in. BEB)

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

Sample: 226248 - SB-3 15-16' (6 in. BEB)

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

Sample: 226249 - SB-3 20-21' (6 in. BEB)

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

Sample: 226250 - SB-3 30-31' (6 in. BEB)

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

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
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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

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

Report Date: March 26, 2010

Work Order: 10032225

Project Location: Eddy County, NM
Project Name: COG/Jenkins B Federal #7
Project Number: 114-6400435

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
226228	SB-1 0-1' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226229	SB-1 2-3' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226230	SB-1 4-5' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226231	SB-1 6-7' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226232	SB-1 10-11' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226233	SB-1 15-16' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226234	SB-1 20-21' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226235	SB-1 30-31' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226236	SB-2 0-1' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226237	SB-2 2-3' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
226238	SB-2 4-5' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226239	SB-2 6-7' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226240	SB-2 10-11' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226241	SB-2 15-16' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226242	SB-2 20-21' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226243	SB-3 0-1' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226244	SB-3 2-3' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226245	SB-3 4-5' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226246	SB-3 6-7' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226247	SB-3 10-11' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226248	SB-3 15-16' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226249	SB-3 20-21' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22
226250	SB-3 30-31' (6 in. BEB)	soil	2010-03-18	00:00	2010-03-22

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.

Blair Leftwich

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 #7 were received by TraceAnalysis, Inc. on 2010-03-22 and assigned to work order 10032225. Samples for work order 10032225 were received intact at a temperature of 3.4 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	58601	2010-03-22 at 17:00	68489	2010-03-22 at 17:51
Chloride (Titration)	SM 4500-Cl B	58644	2010-03-24 at 08:56	68622	2010-03-26 at 14:57
Chloride (Titration)	SM 4500-Cl B	58645	2010-03-24 at 08:56	68623	2010-03-26 at 14:58
Chloride (Titration)	SM 4500-Cl B	58646	2010-03-24 at 08:57	68624	2010-03-26 at 14:59
TPH DRO - NEW	Mod. 8015B	58574	2010-03-22 at 10:12	68458	2010-03-22 at 10:12
TPH GRO	S 8015B	58601	2010-03-22 at 17:00	68490	2010-03-22 at 18:19

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 10032225 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

Analytical Report

Sample: 226228 - SB-1 0-1' (6 in. BEB)

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	68489	Date Analyzed:	2010-03-22	Analyzed By:	AG
Prep Batch:	58601	Sample Preparation:	2010-03-22	Prepared By:	AG

Parameter	Flag	Result	RL Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.64	mg/Kg	1	2.00	82	60.4 - 141.2
4-Bromofluorobenzene (4-BFB)		1.65	mg/Kg	1	2.00	82	43.1 - 158.4

Sample: 226228 - SB-1 0-1' (6 in. BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68622	Date Analyzed:	2010-03-26	Analyzed By:	AR
Prep Batch:	58644	Sample Preparation:	2010-03-24	Prepared By:	AR

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

Sample: 226228 - SB-1 0-1' (6 in. BEB)

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	68458	Date Analyzed:	2010-03-22	Analyzed By:	kg
Prep Batch:	58574	Sample Preparation:	2010-03-22	Prepared By:	kg

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		92.7	mg/Kg	1	100	93	70 - 130

Sample: 226228 - SB-1 0-1' (6 in. BEB)

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	68490	Date Analyzed:	2010-03-22	Analyzed By:	AG
Prep Batch:	58601	Sample Preparation:	2010-03-22	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.00	mg/Kg	1	2.00	100	65.3 - 155
4-Bromofluorobenzene (4-BFB)		1.84	mg/Kg	1	2.00	92	61.7 - 131.1

Sample: 226229 - SB-1 2-3' (6 in. BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68622	Date Analyzed:	2010-03-26	Analyzed By:	AR
Prep Batch:	58644	Sample Preparation:	2010-03-24	Prepared By:	AR

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

Sample: 226230 - SB-1 4-5' (6 in. BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68622	Date Analyzed:	2010-03-26	Analyzed By:	AR
Prep Batch:	58644	Sample Preparation:	2010-03-24	Prepared By:	AR

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

Sample: 226231 - SB-1 6-7' (6 in. BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68622	Date Analyzed:	2010-03-26	Analyzed By:	AR
Prep Batch:	58644	Sample Preparation:	2010-03-24	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**525**		mg/Kg	50	4.00

Sample: 226232 - SB-1 10-11' (6 in. BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68622	Date Analyzed:	2010-03-26	Analyzed By:	AR
Prep Batch:	58644	Sample Preparation:	2010-03-24	Prepared By:	AR

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

Sample: 226233 - SB-1 15-16' (6 in. BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68622	Date Analyzed:	2010-03-26	Analyzed By:	AR
Prep Batch:	58644	Sample Preparation:	2010-03-24	Prepared By:	AR

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

Sample: 226234 - SB-1 20-21' (6 in. BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68622	Date Analyzed:	2010-03-26	Analyzed By:	AR
Prep Batch:	58644	Sample Preparation:	2010-03-24	Prepared By:	AR

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

Sample: 226235 - SB-1 30-31' (6 in. BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68622	Date Analyzed:	2010-03-26	Analyzed By:	AR
Prep Batch:	58644	Sample Preparation:	2010-03-24	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**363**	mg/Kg	50	4.00

Sample: 226236 - SB-2 0-1' (6 in. BEB)

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	68489	Date Analyzed:	2010-03-22	Analyzed By:	AG
Prep Batch:	58601	Sample Preparation:	2010-03-22	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.24	mg/Kg	1	2.00	112	60.4 - 141.2
4-Bromofluorobenzene (4-BFB)		2.27	mg/Kg	1	2.00	114	43.1 - 158.4

Sample: 226236 - SB-2 0-1' (6 in. BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68622	Date Analyzed:	2010-03-26	Analyzed By:	AR
Prep Batch:	58644	Sample Preparation:	2010-03-24	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**9860**	mg/Kg	100	4.00

Sample: 226236 - SB-2 0-1' (6 in. BEB)

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	68458	Date Analyzed:	2010-03-22	Analyzed By:	kg
Prep Batch:	58574	Sample Preparation:	2010-03-22	Prepared By:	kg

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		77.6	mg/Kg	1	100	78	70 - 130

Sample: 226236 - SB-2 0-1' (6 in. BEB)

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	68490	Date Analyzed:	2010-03-22	Analyzed By:	AG
Prep Batch:	58601	Sample Preparation:	2010-03-22	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
GRO		<1.00		mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.73	mg/Kg	1	2.00	136	65.3 - 155
4-Bromofluorobenzene (4-BFB)		2.49	mg/Kg	1	2.00	124	61.7 - 131.1

Sample: 226237 - SB-2 2-3' (6 in. BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68622	Date Analyzed:	2010-03-26	Analyzed By:	AR
Prep Batch:	58644	Sample Preparation:	2010-03-24	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**12200**		mg/Kg	100	4.00

Sample: 226238 - SB-2 4-5' (6 in. BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68623	Date Analyzed:	2010-03-26	Analyzed By:	AR
Prep Batch:	58645	Sample Preparation:	2010-03-24	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**15400**	mg/Kg	100	4.00

Sample: 226239 - SB-2 6-7' (6 in. BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68623	Date Analyzed:	2010-03-26	Analyzed By:	AR
Prep Batch:	58645	Sample Preparation:	2010-03-24	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**15800**	mg/Kg	100	4.00

Sample: 226240 - SB-2 10-11' (6 in. BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68623	Date Analyzed:	2010-03-26	Analyzed By:	AR
Prep Batch:	58645	Sample Preparation:	2010-03-24	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**8570**	mg/Kg	100	4.00

Sample: 226241 - SB-2 15-16' (6 in. BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68623	Date Analyzed:	2010-03-26	Analyzed By:	AR
Prep Batch:	58645	Sample Preparation:	2010-03-24	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**1210**	mg/Kg	50	4.00

Sample: 226242 - SB-2 20-21' (6 in. BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68623	Date Analyzed:	2010-03-26	Analyzed By:	AR
Prep Batch:	58645	Sample Preparation:	2010-03-24	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**2030**	mg/Kg	100	4.00

Sample: 226243 - SB-3 0-1' (6 in. BEB)

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	68489	Date Analyzed:	2010-03-22	Analyzed By:	AG
Prep Batch:	58601	Sample Preparation:	2010-03-22	Prepared By:	AG

Parameter	Flag	Result	RL Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.30	mg/Kg	1	2.00	115	60.4 - 141.2
4-Bromofluorobenzene (4-BFB)		2.35	mg/Kg	1	2.00	118	43.1 - 158.4

Sample: 226243 - SB-3 0-1' (6 in. BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68623	Date Analyzed:	2010-03-26	Analyzed By:	AR
Prep Batch:	58645	Sample Preparation:	2010-03-24	Prepared By:	AR

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

Sample: 226243 - SB-3 0-1' (6 in. BEB)

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	68458	Date Analyzed:	2010-03-22	Analyzed By:	kg
Prep Batch:	58574	Sample Preparation:	2010-03-22	Prepared By:	kg

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		82.7	mg/Kg	1	100	83	70 - 130

Sample: 226243 - SB-3 0-1' (6 in. BEB)

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	68490	Date Analyzed:	2010-03-22	Analyzed By:	AG
Prep Batch:	58601	Sample Preparation:	2010-03-22	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
GRO		<1.00		mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.76	mg/Kg	1	2.00	138	65.3 - 155
4-Bromofluorobenzene (4-BFB)		2.56	mg/Kg	1	2.00	128	61.7 - 131.1

Sample: 226244 - SB-3 2-3' (6 in. BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68623	Date Analyzed:	2010-03-26	Analyzed By:	AR
Prep Batch:	58645	Sample Preparation:	2010-03-24	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**13200**		mg/Kg	100	4.00

Sample: 226245 - SB-3 4-5' (6 in. BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68623	Date Analyzed:	2010-03-26	Analyzed By:	AR
Prep Batch:	58645	Sample Preparation:	2010-03-24	Prepared By:	AR

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

Sample: 226246 - SB-3 6-7' (6 in. BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68623	Date Analyzed:	2010-03-26	Analyzed By:	AR
Prep Batch:	58645	Sample Preparation:	2010-03-24	Prepared By:	AR

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

Sample: 226247 - SB-3 10-11' (6 in. BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68623	Date Analyzed:	2010-03-26	Analyzed By:	AR
Prep Batch:	58645	Sample Preparation:	2010-03-24	Prepared By:	AR

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

Sample: 226248 - SB-3 15-16' (6 in. BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68624	Date Analyzed:	2010-03-26	Analyzed By:	AR
Prep Batch:	58646	Sample Preparation:	2010-03-26	Prepared By:	AR

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

Sample: 226249 - SB-3 20-21' (6 in. BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68624	Date Analyzed:	2010-03-26	Analyzed By:	AR
Prep Batch:	58646	Sample Preparation:	2010-03-26	Prepared By:	AR

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

Sample: 226250 - SB-3 30-31' (6 in. BEB)

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	68624	Date Analyzed:	2010-03-26	Analyzed By:	AR
Prep Batch:	58646	Sample Preparation:	2010-03-26	Prepared By:	AR

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

Method Blank (1) QC Batch: 68458

QC Batch:	68458	Date Analyzed:	2010-03-22	Analyzed By:	kg
Prep Batch:	58574	QC Preparation:	2010-03-22	Prepared By:	kg

Parameter	Flag	MDL Result	Units	RL
DRO		<5.86	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		72.8	mg/Kg	1	100	73	70 - 130

Method Blank (1) QC Batch: 68489

QC Batch:	68489	Date Analyzed:	2010-03-22	Analyzed By:	AG
Prep Batch:	58601	QC Preparation:	2010-03-22	Prepared By:	AG

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.00410	mg/Kg	0.01

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method blank continued ...

Parameter	Flag	MDL Result	Units	RL
Toluene		<0.00310	mg/Kg	0.01
Ethylbenzene		<0.00240	mg/Kg	0.01
Xylene		<0.00650	mg/Kg	0.01

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.30	mg/Kg	1	2.00	115	64.9 - 142.7
4-Bromofluorobenzene (4-BFB)		1.84	mg/Kg	1	2.00	92	43.9 - 141.9

Method Blank (1) QC Batch: 68490

QC Batch: 68490 Date Analyzed: 2010-03-22 Analyzed By: AG
Prep Batch: 58601 QC Preparation: 2010-03-22 Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
GRO		<0.396	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.82	mg/Kg	1	2.00	141	66.2 - 145
4-Bromofluorobenzene (4-BFB)		2.04	mg/Kg	1	2.00	102	62 - 120.5

Method Blank (1) QC Batch: 68622

QC Batch: 68622 Date Analyzed: 2010-03-26 Analyzed By: AR
Prep Batch: 58644 QC Preparation: 2010-03-24 Prepared By: AR

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

Method Blank (1) QC Batch: 68623

QC Batch: 68623 Date Analyzed: 2010-03-26 Analyzed By: AR
Prep Batch: 58645 QC Preparation: 2010-03-24 Prepared By: AR

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

Method Blank (1) QC Batch: 68624

QC Batch:	68624	Date Analyzed:	2010-03-26	Analyzed By:	AR
Prep Batch:	58646	QC Preparation:	2010-03-24	Prepared By:	AR

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

Laboratory Control Spike (LCS-1)

QC Batch:	68458	Date Analyzed:	2010-03-22	Analyzed By:	kg
Prep Batch:	58574	QC Preparation:	2010-03-22	Prepared By:	kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	198	mg/Kg	1	250	<5.86	79	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	178	mg/Kg	1	250	<5.86	71	57.4 - 133.4	11	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	86.4	78.0	mg/Kg	1	100	86	78	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch:	68489	Date Analyzed:	2010-03-22	Analyzed By:	AG
Prep Batch:	58601	QC Preparation:	2010-03-22	Prepared By:	AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.79	mg/Kg	1	2.00	<0.00410	90	75.4 - 115.7
Toluene	1.80	mg/Kg	1	2.00	<0.00310	90	78.4 - 113.6
Ethylbenzene	1.80	mg/Kg	1	2.00	<0.00240	90	76 - 114.2
Xylene	5.38	mg/Kg	1	6.00	<0.00650	90	76.9 - 113.6

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	1.77	mg/Kg	1	2.00	<0.00410	88	75.4 - 115.7	1	20

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control spikes continued ...

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Toluene	1.77	mg/Kg	1	2.00	<0.00310	88	78.4 - 113.6	2	20
Ethylbenzene	1.78	mg/Kg	1	2.00	<0.00240	89	76 - 114.2	1	20
Xylene	5.33	mg/Kg	1	6.00	<0.00650	89	76.9 - 113.6	1	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.21	1.96	mg/Kg	1	2.00	110	98	65 - 142.9
4-Bromofluorobenzene (4-BFB)	2.30	2.06	mg/Kg	1	2.00	115	103	43.8 - 144.9

Laboratory Control Spike (LCS-1)

QC Batch: 68490 | Date Analyzed: 2010-03-22 | Analyzed By: AG
Prep Batch: 58601 | QC Preparation: 2010-03-22 | Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	16.6	mg/Kg	1	20.0	<0.396	83	52.5 - 114.3

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	17.6	mg/Kg	1	20.0	<0.396	88	52.5 - 114.3	6	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.65	2.44	mg/Kg	1	2.00	132	122	66.2 - 148.7
4-Bromofluorobenzene (4-BFB)	2.39	2.19	mg/Kg	1	2.00	120	110	64.1 - 127.4

Laboratory Control Spike (LCS-1)

QC Batch: 68622 | Date Analyzed: 2010-03-26 | Analyzed By: AR
Prep Batch: 58644 | QC Preparation: 2010-03-24 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.8	mg/Kg	1	100	<2.18	99	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	100	mg/Kg	1	100	<2.18	100	85 - 115	1	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: 68623 | Date Analyzed: 2010-03-26 | Analyzed By: AR
Prep Batch: 58645 | QC Preparation: 2010-03-24 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	99.1	mg/Kg	1	100	<2.18	99	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	100	mg/Kg	1	100	<2.18	100	85 - 115	1	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: 68624 | Date Analyzed: 2010-03-26 | Analyzed By: AR
Prep Batch: 58646 | QC Preparation: 2010-03-24 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	100	mg/Kg	1	100	<2.18	100	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	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: 226243

QC Batch: 68489 | Date Analyzed: 2010-03-22 | Analyzed By: AG
Prep Batch: 58601 | QC Preparation: 2010-03-22 | Prepared By: AG

continued ...

matrix spikes continued ...

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	2.00	mg/Kg	1	2.00	<0.00410	100	57.7 - 140.7
Toluene	2.03	mg/Kg	1	2.00	<0.00310	102	53.4 - 146.6
Ethylbenzene	2.06	mg/Kg	1	2.00	<0.00240	103	62.1 - 141.6
Xylene	6.16	mg/Kg	1	6.00	<0.00650	103	61.2 - 142.7

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	1.80	mg/Kg	1	2.00	<0.00410	90	57.7 - 140.7	10	20
Toluene	1.83	mg/Kg	1	2.00	<0.00310	92	53.4 - 146.6	10	20
Ethylbenzene	1.86	mg/Kg	1	2.00	<0.00240	93	62.1 - 141.6	10	20
Xylene	5.60	mg/Kg	1	6.00	<0.00650	93	61.2 - 142.7	10	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.48	2.02	mg/Kg	1	2	74	101	61.7 - 139.6
4-Bromofluorobenzene (4-BFB)	1.55	2.09	mg/Kg	1	2	78	104	49.6 - 146.7

Matrix Spike (MS-1) Spiked Sample: 226243

QC Batch: 68490 | Date Analyzed: 2010-03-22 | Analyzed By: AG
Prep Batch: 58601 | QC Preparation: 2010-03-22 | Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	18.1	mg/Kg	1	20.0	<0.396	90	10 - 198.3

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	18.6	mg/Kg	1	20.0	<0.396	93	10 - 198.3	3	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.58	2.76	mg/Kg	1	2	129	138	65.5 - 143
4-Bromofluorobenzene (4-BFB)	2.48	2.65	mg/Kg	1	2	124	132	58.6 - 140

Matrix Spike (MS-1) Spiked Sample: 226237

QC Batch: 68622 | Date Analyzed: 2010-03-26 | Analyzed By: AR
Prep Batch: 58644 | QC Preparation: 2010-03-24 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	22300	mg/Kg	100	10000	12200	101	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	22500	mg/Kg	100	10000	12200	103	85 - 115	1	20

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

Matrix Spike (MS-1) Spiked Sample: 226247

QC Batch: 68623 | Date Analyzed: 2010-03-26 | Analyzed By: AR
Prep Batch: 58645 | QC Preparation: 2010-03-24 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10200	mg/Kg	100	10000	<218	102	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	10400	mg/Kg	100	10000	<218	104	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: 226250

QC Batch: 68624 | Date Analyzed: 2010-03-26 | Analyzed By: AR
Prep Batch: 58646 | QC Preparation: 2010-03-24 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	9990	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	10100	mg/Kg	100	10000	<218	101	85 - 115	1	20

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

Standard (CCV-3)

QC Batch: 68458 Date Analyzed: 2010-03-22 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	249	100	80 - 120	2010-03-22

Standard (CCV-4)

QC Batch: 68458 Date Analyzed: 2010-03-22 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	247	99	80 - 120	2010-03-22

Standard (CCV-1)

QC Batch: 68489 Date Analyzed: 2010-03-22 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	0.0868	87	80 - 120	2010-03-22
Toluene		mg/Kg	0.100	0.0870	87	80 - 120	2010-03-22
Ethylbenzene		mg/Kg	0.100	0.0841	84	80 - 120	2010-03-22
Xylene		mg/Kg	0.300	0.254	85	80 - 120	2010-03-22

Standard (CCV-2)

QC Batch: 68489 Date Analyzed: 2010-03-22 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	0.0893	89	80 - 120	2010-03-22
Toluene		mg/Kg	0.100	0.0889	89	80 - 120	2010-03-22
Ethylbenzene		mg/Kg	0.100	0.0875	88	80 - 120	2010-03-22
Xylene		mg/Kg	0.300	0.264	88	80 - 120	2010-03-22

Standard (CCV-1)

QC Batch: 68490 Date Analyzed: 2010-03-22 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	1.05	105	80 - 120	2010-03-22

Standard (CCV-2)

QC Batch: 68490 Date Analyzed: 2010-03-22 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	1.16	116	80 - 120	2010-03-22

Standard (ICV-1)

QC Batch: 68622 Date Analyzed: 2010-03-26 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	98.3	98	85 - 115	2010-03-26

Standard (CCV-1)

QC Batch: 68622 Date Analyzed: 2010-03-26 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	2010-03-26

Standard (ICV-1)

QC Batch: 68623 Date Analyzed: 2010-03-26 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	2010-03-26

Standard (CCV-1)

QC Batch: 68623 Date Analyzed: 2010-03-26 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	97.8	98	85 - 115	2010-03-26

Standard (ICV-1)

QC Batch: 68624 Date Analyzed: 2010-03-26 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	98.3	98	85 - 115	2010-03-26

Standard (CCV-1)

QC Batch: 68624 Date Analyzed: 2010-03-26 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	2010-03-26

Order #: 100322225

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 3

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 0435 114-640 ~~Billing~~ KD

PROJECT NAME: COG / Jenkins #7 Eddy Co., NM

LAB I.D. NUMBER	DATE 2010	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
216228	3/18		S		X	SB-1 0-1' (6" BEB)	1				X		X	X											X				
229						SB-1 2-3' (6" BEB)	1				X														X				
230						SB-1 4-5' (6" BEB)	1				X														X				
231						SB-1 6-7' (6" BEB)	1				X														X				
232						SB-1 10-11' (6" BEB)	1				X														X				
233						SB-1 15-16' (6" BEB)	1				X														X				
234						SB-1 20-21' (6" BEB)	1				X														X				
235						SB-1 30-31' (6" BEB)	1				X														X				
236						SB-2 0-1' (6" BEB)	1				X		X	X											X				
237						SB-2 2-3' (6" BEB)	1				X														X				

RELINQUISHED BY: (Signature)	Date: 3/22/10 Time: 1350	RECEIVED BY: (Signature)	Date: 3/22/10 Time: 15:50
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:

SAMPLED BY: (Print & Initial) Kim — Date: 3/18/10 Time:

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

TETRA TECH CONTACT PERSON: Ike Tavarez — Results by:

RUSH Charges Authorized: Yes No

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

SAMPLE CONDITION WHEN RECEIVED: 3.4°C intact

REMARKS: If TPH >5,000 mg/kg run deeper samples

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

Order #: 10032225

Analysis Request of Chain of Custody Record

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG
SITE MANAGER: Ike Tavarez
PROJECT NO.: 114-6400435
PROJECT NAME: COG / Jenkins #7
Eddy Co., NM

LAB I.D. NUMBER	DATE 2010	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD / TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
238	3/18		S		X	SB-2 4-5' (6" BEB)	1				X													X				
239						SB-2 6-7' (6" BEB)	1				X													X				
240						SB-2 10-11' (6" BEB)	1				X													X				
241						SB-2 15-16 (6" BEB)	1				X													X				
242						SB-2 20-21' (6" BEB)	1				X													X				
243						SB-3 0-1' (6" BEB)	1				X		X	X										X				
244						SB-3 2-3' (6" BEB)	1				X													X				
245						SB-3 4-5' (6" BEB)	1				X													X				
246						SB-3 6-7' (6" BEB)	1				X													X				
247						SB-3 10-11' (6" BEB)	1				X													X				

RELINQUISHED BY: (Signature) Date: 3/22/10 Time: 1350
RECEIVED BY: (Signature) Date: 3/22/10 Time: 1350
SAMPLED BY: (Print & Initial) Kim Date: 3/18/10 Time:

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

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

RECEIVING LABORATORY: TRACE
ADDRESS:
CITY: Midland STATE: TX ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: TIME:
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 3.4°c intact
REMARKS: IF TPH >5,000 mg/kg run deeper samples

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

Order #: 10032225

Analysis Request of Chain of Custody Record

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

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-6400435

PROJECT NAME: COG / Jenkins #7
Eddy Co, NM

LAB I.D. NUMBER	DATE 2010	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
248	3/18		S		X	SB-3 15-16' (6" BED)	1				X													X				
249	3/18		S		X	SB-3 20-21' (6" BED)	1				X													X				
250	3/18		S		X	SB-3 30-31' (6" BED)	1				X													X				

RELINQUISHED BY: (Signature) Date: 3/22/10 Time: 1350
RECEIVED BY: (Signature) Date: 3/22/10 Time: 16:50
SAMPLED BY: (Print & Initial) KIM Date: 3/18/10 Time:

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

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

RECEIVING LABORATORY: TRACE
ADDRESS:
CITY: Midland STATE: TX ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: TIME:
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 3.4°C intact

REMARKS: If TPH > 5,000 mg/kg run deeper samples

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

Order #: 100322225

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 3

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

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 0435 114-640 KD

PROJECT NAME: COG / Jenkins #7

Eddy Co., NM

LAB I.D. NUMBER	DATE 2010	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
226228	3/18		S		X	SB-1 0-1' (6" BEB)	1				X		X	X											X				
229						SB-1 2-3' (6" BEB)	1				X														X				
230						SB-1 4-5' (6" BEB)	1				X														X				
231						SB-1 6-7' (6" BEB)	1				X														X				
232						SB-1 10-11' (6" BEB)	1				X														X				
233						SB-1 15-16' (6" BEB)	1				X														X				
234						SB-1 20-21' (6" BEB)	1				X														X				
235						SB-1 30-31' (6" BEB)	1				X														X				
236						SB-2 0-1' (6" BEB)	1				X		X	X											X				
237						SB-2 2-3' (6" BEB)	1				X														X				

RELINQUISHED BY: (Signature) Date: 3/22/10 Time: 1350

RECEIVED BY: (Signature) Date: 3/22/10 Time: 13:50

SAMPLED BY: (Print & Initial) Kim Date: 3/18/10 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:

RECEIVING LABORATORY: TRACE

ADDRESS:

CITY: Midland STATE: TX ZIP:

CONTACT: PHONE:

RECEIVED BY: (Signature)

DATE: TIME:

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 3.4°C intact

REMARKS: If TPH >5,000 mg/kg run deeper samples

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

Order #: 10032225

Analysis Request of Chain of Custody Record

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

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-6400435

PROJECT NAME: COG / Jenkins #7

Eddy Co., NM

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	DATE 2010	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
238	3/18		S		X	SB-2 4-5' (6" BEB)	1				X													X				
239						SB-2 6-7' (6" BEB)	1				X													X				
240						SB-2 10-11' (6" BEB)	1				X													X				
241						SB-2 15-16 (6" BEB)	1				X													X				
242						SB-2 20-21' (6" BEB)	1				X													X				
243						SB-3 0-1' (6" BEB)	1				X		X	X										X				
244						SB-3 2-3' (6" BEB)	1				X													X				
245						SB-3 4-5' (6" BEB)	1				X													X				
246						SB-3 6-7' (6" BEB)	1				X													X				
247						SB-3 10-11' (6" BEB)	1				X													X				

RELINQUISHED BY: (Signature) Date: 3/22/10 Time: 1350

RECEIVED BY: (Signature) Date: 3/22/10 Time: 1350

SAMPLED BY: (Print & Initial) Kim Date: 3/18/10 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:

RECEIVING LABORATORY: TRACE

ADDRESS:

CITY: Midland STATE: TX ZIP:

CONTACT: PHONE:

RECEIVED BY: (Signature)

DATE: TIME:

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 3.4°c intact

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

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

Order #: 10032225

Analysis Request of Chain of Custody Record

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

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-6400435

PROJECT NAME: COG / Jenkins #7
Eddy Co, NM

LAB I.D. NUMBER	DATE 2010	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
226248	3/18		S		X	SB-3 15-16' (6" BED)	1				X													X				
249	3/18		S		X	SB-3 20-21' (6" BED)	1				X													X				
250	3/18		S		X	SB-3 30-31' (6" BED)	1				X													X				

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature) Date: 3/18/10 Time: 1350

RECEIVED BY: (Signature) Date: 3/22/10 Time: 10:50

SAMPLED BY: (Print & Initial) KIM Date: 3/18/10 Time:

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

SAMPLE SHIPPED BY: (Circle) FEDEX HAND DELIVERED BUS UPS

AIRBILL #:

OTHER:

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

RECEIVING LABORATORY: TRACE

ADDRESS:

CITY: Midland STATE: TX ZIP:

CONTACT: PHONE:

RECEIVED BY: (Signature)

DATE: TIME:

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 3.4°c intact

REMARKS: If TPH > 5,000 mg/kg run deeper samples

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

Summary Report

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

Report Date: April 21, 2010

Work Order: 10041409

Project Location: Eddy County, NM
Project Name: COG/Jenkins B Federal #7
Project Number: 114-6400435

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
228467	SB-2 10'	soil	2010-04-12	00:00	2010-04-13
228468	SB-2 15'	soil	2010-04-12	00:00	2010-04-13
228469	SB-2 20'	soil	2010-04-12	00:00	2010-04-13
228470	SB-2 25'	soil	2010-04-12	00:00	2010-04-13
228471	SB-2 30'	soil	2010-04-12	00:00	2010-04-13
228472	SB-2 35'	soil	2010-04-12	00:00	2010-04-13
228473	SB-2 40'	soil	2010-04-12	00:00	2010-04-13

Sample: 228467 - SB-2 10'

Param	Flag	Result	Units	RL
Chloride		**466**	mg/Kg	4.00

Sample: 228468 - SB-2 15'

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

Sample: 228469 - SB-2 20'

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

Sample: 228470 - SB-2 25'

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

Sample: 228471 - SB-2 30'

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

Sample: 228472 - SB-2 35'

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

Sample: 228473 - SB-2 40'

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

TRACEANALYSIS, INC.

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

Certifications

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

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

Report Date: April 21, 2010

Work Order: 10041409

Project Location: Eddy County, NM
Project Name: COG/Jenkins B Federal #7
Project Number: 114-6400435

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
228467	SB-2 10'	soil	2010-04-12	00:00	2010-04-13
228468	SB-2 15'	soil	2010-04-12	00:00	2010-04-13
228469	SB-2 20'	soil	2010-04-12	00:00	2010-04-13
228470	SB-2 25'	soil	2010-04-12	00:00	2010-04-13
228471	SB-2 30'	soil	2010-04-12	00:00	2010-04-13
228472	SB-2 35'	soil	2010-04-12	00:00	2010-04-13
228473	SB-2 40'	soil	2010-04-12	00:00	2010-04-13

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

This report consists of a total of 7 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 #7 were received by TraceAnalysis, Inc. on 2010-04-13 and assigned to work order 10041409. Samples for work order 10041409 were received intact at a temperature of 7.5 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	59238	2010-04-19 at 11:46	69269	2010-04-20 at 15:22

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 10041409 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

Analytical Report

Sample: 228467 - SB-2 10'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	69269	Date Analyzed:	2010-04-20	Analyzed By:	AR
Prep Batch:	59238	Sample Preparation:	2010-04-19	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**466**	mg/Kg	50	4.00

Sample: 228468 - SB-2 15'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	69269	Date Analyzed:	2010-04-20	Analyzed By:	AR
Prep Batch:	59238	Sample Preparation:	2010-04-19	Prepared By:	AR

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

Sample: 228469 - SB-2 20'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	69269	Date Analyzed:	2010-04-20	Analyzed By:	AR
Prep Batch:	59238	Sample Preparation:	2010-04-19	Prepared By:	AR

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

Sample: 228470 - SB-2 25'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	69269	Date Analyzed:	2010-04-20	Analyzed By:	AR
Prep Batch:	59238	Sample Preparation:	2010-04-19	Prepared By:	AR

continued ...

sample 228470 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL

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

Sample: 228471 - SB-2 30'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	69269	Date Analyzed:	2010-04-20	Analyzed By:	AR
Prep Batch:	59238	Sample Preparation:	2010-04-19	Prepared By:	AR

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

Sample: 228472 - SB-2 35'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	69269	Date Analyzed:	2010-04-20	Analyzed By:	AR
Prep Batch:	59238	Sample Preparation:	2010-04-19	Prepared By:	AR

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

Sample: 228473 - SB-2 40'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	69269	Date Analyzed:	2010-04-20	Analyzed By:	AR
Prep Batch:	59238	Sample Preparation:	2010-04-19	Prepared By:	AR

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

Method Blank (1) QC Batch: 69269

QC Batch: 69269 | Date Analyzed: 2010-04-20 | Analyzed By: AR
Prep Batch: 59238 | QC Preparation: 2010-04-19 | Prepared By: AR

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

Laboratory Control Spike (LCS-1)

QC Batch: 69269 | Date Analyzed: 2010-04-20 | Analyzed By: AR
Prep Batch: 59238 | QC Preparation: 2010-04-19 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.6	mg/Kg	1	100	<2.18	99	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	99.9	mg/Kg	1	100	<2.18	100	85 - 115	1	20

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

Matrix Spike (MS-1) Spiked Sample: 228498

QC Batch: 69269 | Date Analyzed: 2010-04-20 | Analyzed By: AR
Prep Batch: 59238 | QC Preparation: 2010-04-19 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	24700	mg/Kg	100	10000	15100	96	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	25200	mg/Kg	100	10000	15100	101	85 - 115	2	20

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

Standard (ICV-1)

QC Batch: 69269 | Date Analyzed: 2010-04-20 | 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	2010-04-20

Standard (CCV-1)

QC Batch: 69269 | Date Analyzed: 2010-04-20 | 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	2010-04-20

Order #: 10041409

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

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-640435

PROJECT NAME: COG - Jenkins Federal #7 Flowline Eddy Co, NM

LAB I.D. NUMBER	DATE 2010	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/824	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
228467	4/12		S		X	SB-2 10'	1																	X				
468	4/12		S		X	SB-2 15'	1																	X				
469	4/12		S		X	SB-2 20'	1																	X				
470	4/12		S		X	SB-2 25'	1																	X				
471	4/12		S		X	SB-2 30'	1																	X				
472	4/12		S		X	SB-2 35'	1																	X				
473	4/12		S		X	SB-2 40'	1																	X				

RELINQUISHED BY: (Signature) Date: 4/13/10 Time: 1645

RECEIVED BY: (Signature) Date: 4/13/10 Time: 1645

SAMPLED BY: (Print & Initial) Kim Date: 4/12/10 Time:

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS

AIRBILL #:

OTHER:

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RECEIVING LABORATORY: TRACE

ADDRESS:

CITY: Midland STATE: TX ZIP:

CONTACT: PHONE: DATE: TIME:

RECEIVED BY: (Signature)

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 7.5°c intact

REMARKS: All tests - Midland

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

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 #7	Facility Type	Well

Surface Owner Federal	Mineral Owner	Lease No. (API#) 30-015-29451

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
E	20	17S	30E	1650	NORTH	1090	WEST	EDDY

Latitude 32.822824 **Longitude** 103.999198

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 100bbl	Volume Recovered 80bbl
Source of Release Flowline	Date and Hour of Occurrence 02/05/2010 1:00 p.m.	Date and Hour of Discovery 02/05/2010 2:00 p.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Jim Amos – BLM Mike Bratcher - OCD	
By Whom? Josh Russo	Date and Hour 02/05/2010 2:30 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.*

There was a split in the flowline. The flowline has been repaired.

Describe Area Affected and Cleanup Action Taken.*

Produced water was released into the area immediately next to the split flowline. A total of 100bbls of fluid was released. 80bbls of fluid was recovered by a vacuum truck. One-call protocol will be made by dirt contractor who will then wait for archeological/wildlife sensitivity clearance from BLM before removing any saturated soils prior to soil sampling by Tetra Tech. (The closest well to the leak is the MCINTYRE DK FEDERAL #8 M-20-17S-30E 990 FSL 990 FWL 32.81558379 : 103.99955142). Tetra Tech will sample the spill site area to delineate any possible contamination from the release and we will present a remediation work plan to the NMOCD/BLM for your approval prior to any significant remediation.

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

Signature:	OIL CONSERVATION DIVISION
Printed Name: Josh Russo	Approved by District Supervisor:
Title: HSE Coordinator	Approval Date: / Expiration Date:
E-mail Address: jrusso@conchoresources.com	Conditions of Approval: / Attached ☐
Date: 02/12/2010 Phone: 432-212-2399	

* Attach Additional Sheets If Necessary