SITE INFORMATION

2RP-476

Report Type: Work Plan

General Site Information:						
Site:	Red Lake Sand Unit #45 Flow line					
Company:	COG Operating LLC					
Section, Township and Range	Unit O	Sec 20	T17S	R28E		
Lease Number:	API-30-015-33198					
County:	Eddy County					
GPS:	32.81127			104.19493		
Surface Owner:	State					
Mineral Owner:						
Directions:	From the intersection of Hwy 82 and CR217, travel west on Hwy 82 for 13.1 miles, turn right (north) onto lease road and travel 0.3 miles, turn right and travel 1 mile to location.					

Release Data:	
Date Released:	8/29/2010
Type Release:	Produced Fluid
Source of Contamination:	Flowline failure
Fluid Released:	10 bbls
Fluids Recovered:	0 bbls

Official Communication:			
Name:	Pat Ellis		Ike Tavarez
Company:	COG Operating, LLC		Tetra Tech
Address:	550 W. Texas Ave. Ste. 1300		1910 N. Big Spring
P.O. Box			
City:	Midland Texas, 79701		Midland, Texas
Phone number:	(432) 686-3023		(432) 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:	**0**	

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

TETRA TECH

June 16, 2011

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

Re: Work Plan for the COG Operating LLC., Red Lake Sand Unit #45 Flow Line, Unit O, Section 20, Township 17 South, Range 28 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 Red Lake Sand Unit #45 flow line located in Unit O, Section 20, Township 17 South, Range 28 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.81127°, W 104.19473°. The site location is shown on Figures 1 and 2.

Background

According to the State of New Mexico C-141 Initial Report, the leak was discovered on August 29, 2010, and released approximately ten (10) barrels of produced fluid from a steel flow line and none of the fluids were recovered. To alleviate the problem, COG personnel repaired the flow line. The spill initiated north of a lease road migrating 185'.0' north into the pasture, with a width ranging to 2.0' to 20.0'. The initial C-141 form is enclosed in Appendix A.

Groundwater

No water wells were listed within Section 20. According to the NMOCD groundwater map, a well is located in Section 19 with a depth to water of 191' below surface. The USGS shows a well in Section 22 will a depth to water of 79' below surface. Based on the site location and NMOCD groundwater map, the average depth to groundwater in this area is greater than 100' below surface. The well reports are shown in Appendix B.

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

Regulatory

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

Soil Assessment and Analytical Results

On September 1, 2010, Tetra Tech personnel inspected and sampled the spill area. Five (5) auger holes (AH-1 through AH-5) were installed using a stainless steel hand auger to assess the impacted soils. Select samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The results of the sampling are summarized in Table 1. The auger hole locations are shown on Figure 3.

Referring to Table 1, all of the samples were below the RRAL for TPH and BTEX. Chloride impacted soils were detected in all of the auger holes. Auger holes (AH-4 and AH-5) were vertically defined at 4.0' (220 mg/kg) and 6.0' (<200 mg/kg), respectively. The remaining auger holes (AH-1, AH-2 and AH-3) were not vertically defined.

In order to delineate the chloride concentrations, soil borings were installed utilizing an air rotary drilling rig. On February 22, 2011, Tetra Tech personnel supervised the installation of soil borings (SB-1 through SB-3). The soil borings were installed to total depths of 40.0' to 50.0' below surface. Referring to Table 1, the chloride impact was vertically defined and declined with depth. The area of SB-1 (AH-1) had the deepest chloride impact, with chloride concentrations significantly declining at 30.0 to 1,250 mg/kg. Soil borings SB-2 (AH-2) and SB-3 (AH-3) did show a shallow impact to the soils to a depth of approximately 3.0' and 7.0', respectively. The soil boring locations are shown on Figure 3.

TETRA TECH

Work Plan

COG proposes the removal of impacted material to the appropriate depth as highlighted in Table 1 and shown on Figure 4. The proposed excavation depths range from 3.0' to 10.0' below surface. In the area of SB-1 (AH-1), the excavation will be performed to a depth of 10.0' below surface and capped with a liner (40 mil) at 4.0' below surface. Due to the proximity of the flow line and lease road, deeper excavation will not be performed for safety concerns. The excavated soil will be transported to proper disposal. Once excavated to the appropriate depths, the excavations will be backfilled with clean soil.

Based on the geology and location of spill, the proposed excavation depths may not be reached due to wall cave- ins and safety concerns for onsite personnel. In addition, impacted soil around oil and gas equipment, structures or lines may not be feasible or practicable to be removed due to safely concerns. As such, Tetra Tech will excavate the soils to the maximum extent practicable. If the depths are not reached, a 40 mil liner will be installed at depth of 4.0' below surface to cap the impacted area.

If you have any questions or comments concerning the assessment or the proposed remediation activities for this site, please call me at (432) 682-4559.

Respectfully submitted,
TETRA TECH

Ike Tavarez
Project Manager, PG

cc: Pat Ellis – COG
cc:

Figures

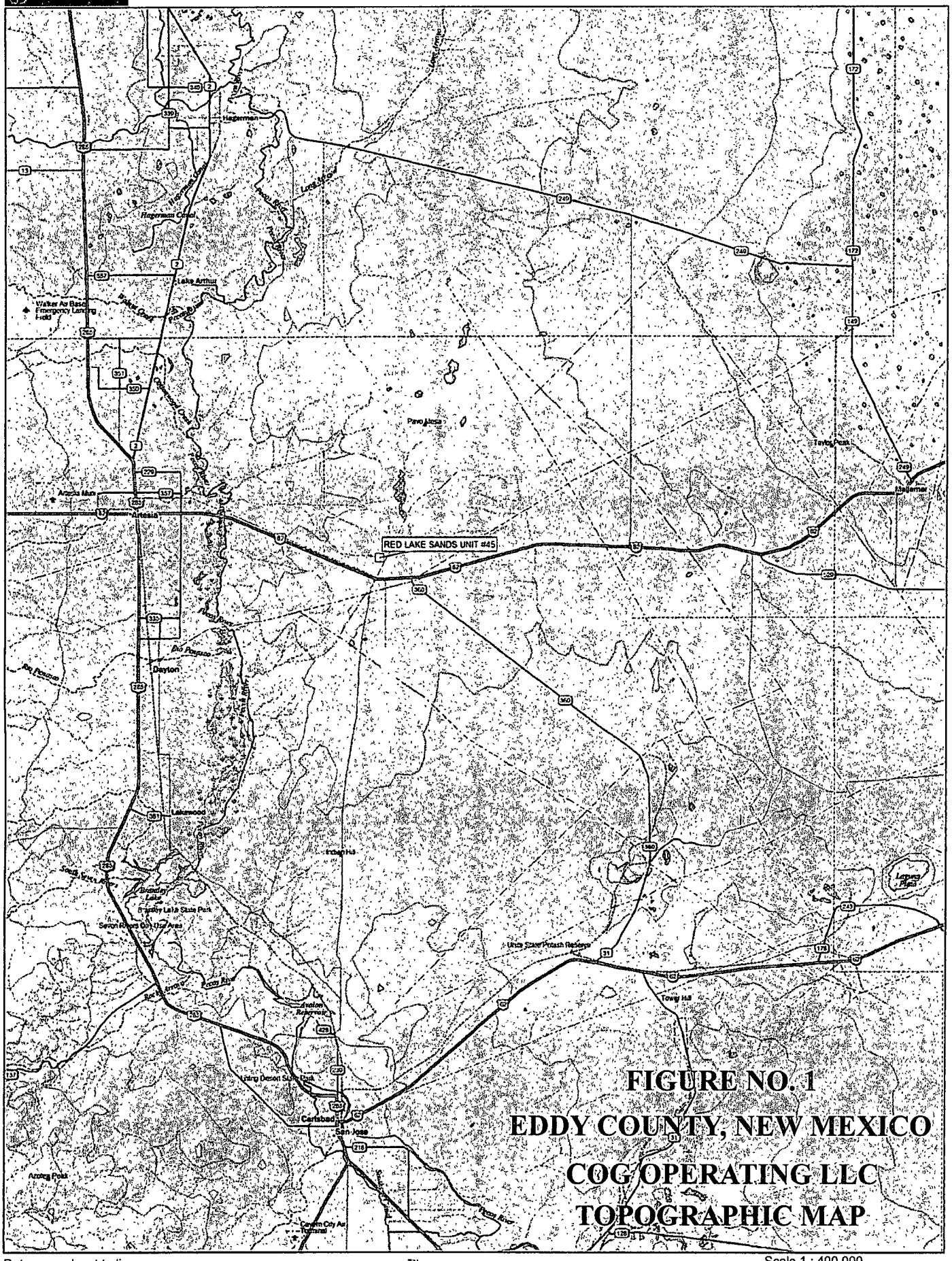


FIGURE NO. 1
EDDY COUNTY, NEW MEXICO
COG OPERATING LLC
TOPOGRAPHIC MAP

TN

MN (7.9°E)

Scale 1 : 400,000

1" = 6.31 mi

Data Zoom 9-6

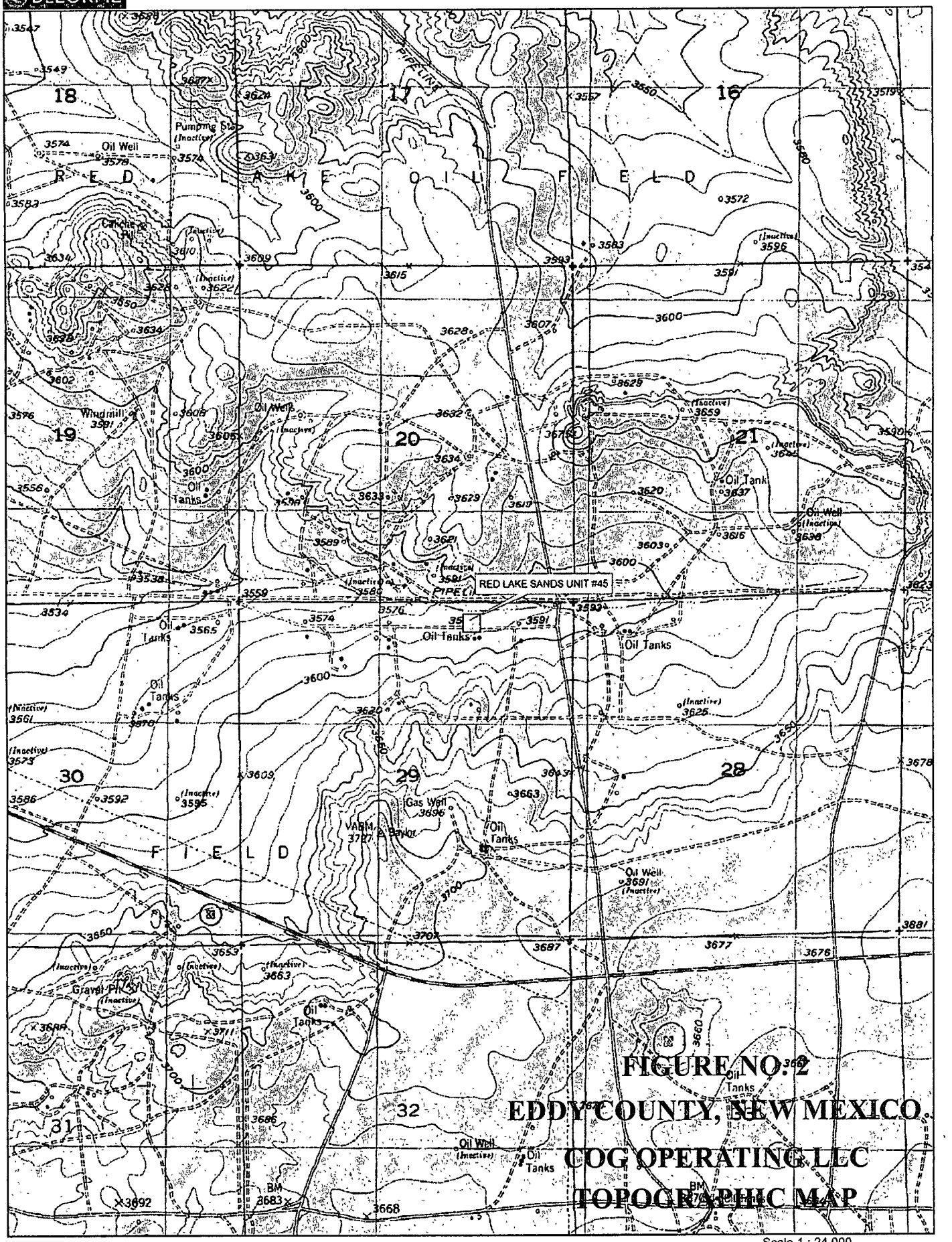


FIGURE NO. 2

EDDY COUNTY, NEW MEXICO

COG OPERATING LLC

TOPOGRAPHIC MAP

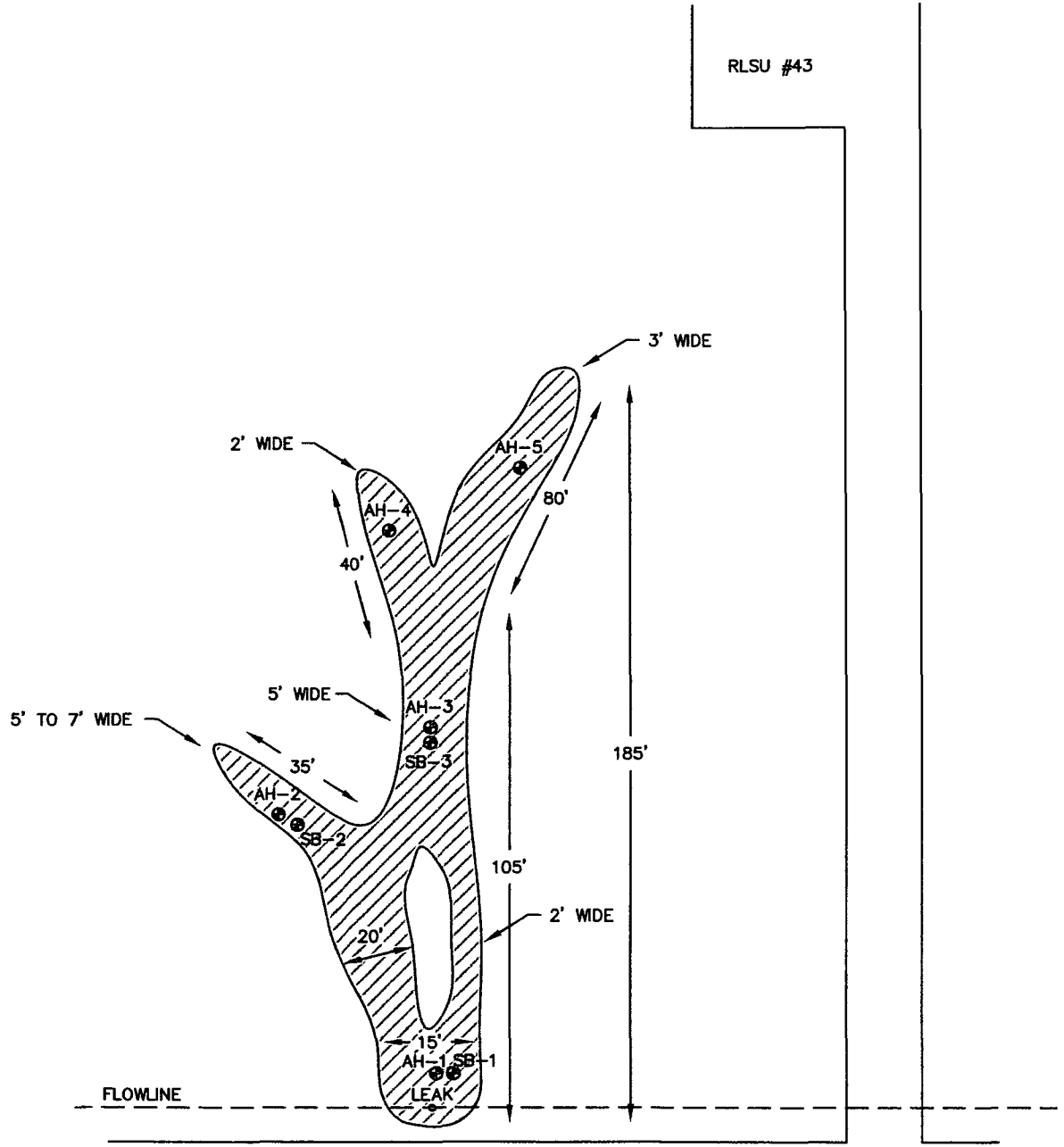
TN

MN (7 9°E)

Scale 1 : 24,000

1" = 2,000.0 ft

Data Zoom 12-5



SPILL AREA
SAMPLE LOCATIONS

NOT TO SCALE

FIGURE NO. 3

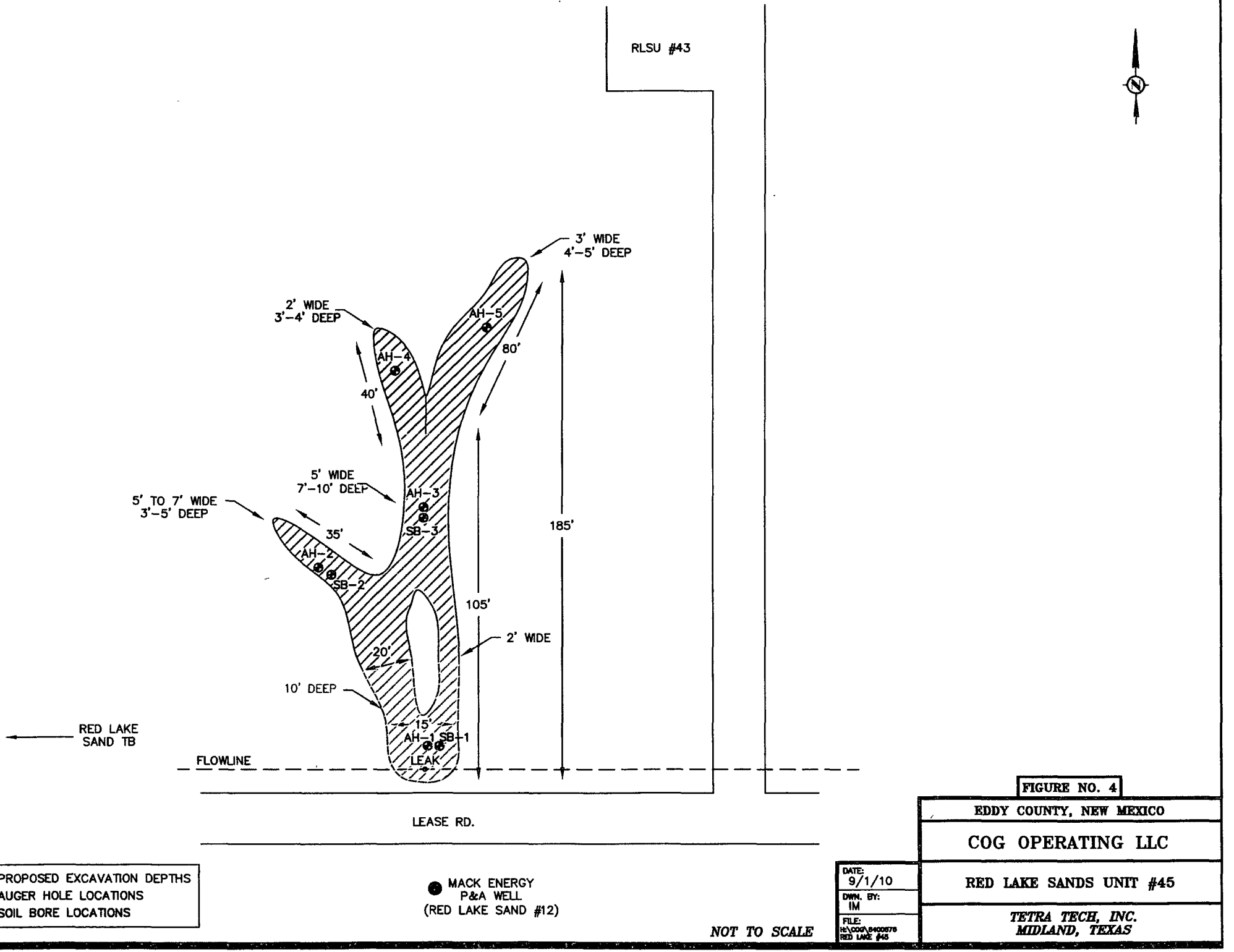
EDDY COUNTY, NEW MEXICO

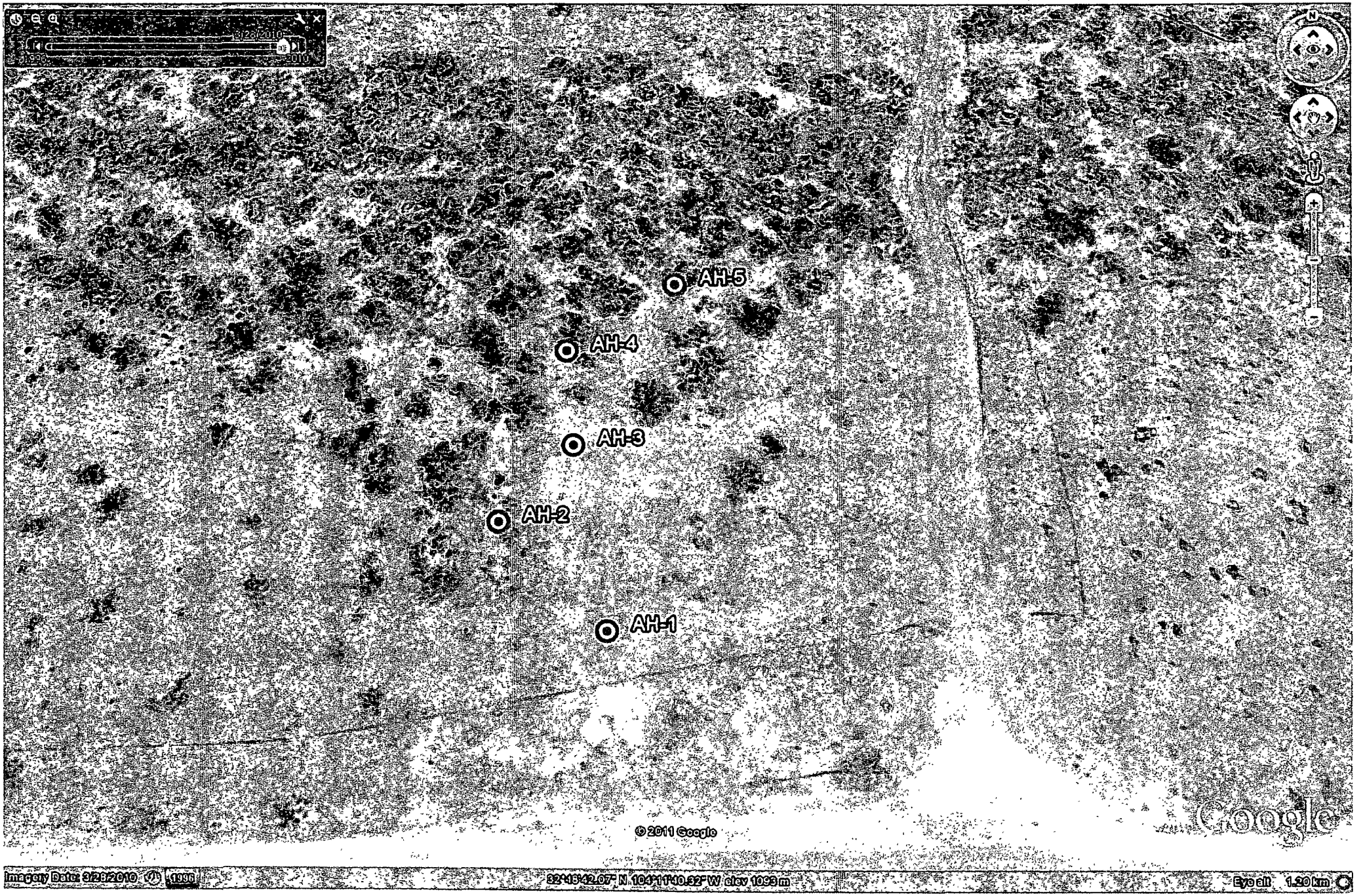
COG OPERATING LLC

RED LAKE SANDS UNIT #45

TETRA TECH, INC.
MIDLAND, TEXAS

DATE: 9/1/10
DWN. BY: JJ
FILE: H:\COG\6400878 RED LAKE #45


RLSU #43
3' WIDE
4'-5' DEEP
2' WIDE
3'-4' DEEP
AH-5
AH-4
80'
40'
5' WIDE
7'-10' DEEP
AH-3
5' TO 7' WIDE
3'-5' DEEP
SB-3
35'
AH-2
SB-2
185'
105'
2' WIDE
20'
10' DEEP
15'
AH-1
SB-1
LEAK
RED LAKE
SAND TB
FLOWLINE
LEASE RD.
PROPOSED EXCAVATION DEPTHS
AUGER HOLE LOCATIONS
SOIL BORE LOCATIONS
MACK ENERGY
P&A WELL
(RED LAKE SAND #12)
NOT TO SCALE
DATE: 9/1/10
DWN. BY: IM
FILE: H:\COG\8400878 RED LAKE #45
FIGURE NO. 4
EDDY COUNTY, NEW MEXICO
COG OPERATING LLC
RED LAKE SANDS UNIT #45
TETRA TECH, INC.
MIDLAND, TEXAS


AH-5
AH-4
AH-3
AH-2
AH-1
© 2011 Google
Google
Imagery Date: 3/28/2010
32°13'42.07" N 104°11'40.32" W elev 1093 m
Eye alt 1.20 km

Tables

Table 1
COG Operating LLC.
SAND LAKE UNIT #45
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Depth (BEB)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total					
AH-1	9/9/2010	0-1'		X		<2.00	<50.0	<50.0	-	-	-	-	15,600
		1-1.5'		X		-	-	-	-	-	-	-	14,200
SB-1	2/22/2011	0-1'		X		-	-	-	-	-	-	-	15,200
		3'		X		-	-	-	-	-	-	-	8,230
		5'		X		-	-	-	-	-	-	-	4,160
		7'		X		-	-	-	-	-	-	-	3,500
		10'		X		-	-	-	-	-	-	-	7,130
		15'		X		-	-	-	-	-	-	-	7,530
		20'		X		-	-	-	-	-	-	-	4,710
		25'		X		-	-	-	-	-	-	-	6,680
		30'		X		-	-	-	-	-	-	-	1,250
		40'		X		-	-	-	-	-	-	-	247
		50'		X		-	-	-	-	-	-	-	<200

Table 1
COG Operating LLC.
SAND LAKE UNIT #45
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	9/9/2010	0-1'		X		464	4,140	4,604	<0.100	0.341	2.87	5.81	6,020
		1-1.5'		X		<10.0	52.2	52.2	-	-	-	-	7,360
		2-2.5'		X		-	-	-	-	-	-	-	4,230
		3-3.5'		X		-	-	-	-	-	-	-	220
		4-4.5'		X		-	-	-	-	-	-	-	378
		5-5.5'		X		-	-	-	-	-	-	-	444
		6-6.5'		X		-	-	-	-	-	-	-	516
		7-7.5'		X		-	-	-	-	-	-	-	552
		8-8.5'		X		-	-	-	-	-	-	-	832
		9-9.5'		X		-	-	-	-	-	-	-	1,180
SB-2	2/22/2011	0-1'		X		-	-	-	-	-	-	-	1,200
		3'		X		-	-	-	-	-	-	-	3,760
		5'		X		-	-	-	-	-	-	-	458
		7'		X		-	-	-	-	-	-	-	832
		10'		X		-	-	-	-	-	-	-	611
		15'		X		-	-	-	-	-	-	-	1,030
		20'		X		-	-	-	-	-	-	-	516
		25'		X		-	-	-	-	-	-	-	511
		30'		X		-	-	-	-	-	-	-	<200
		40'		X		-	-	-	-	-	-	-	205

Table 1
COG Operating LLC.
SAND LAKE UNIT #45
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Depth (BEB)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total					
AH-3	9/9/2010	0-1'		X		231	5,960	**6,191**	<0.100	<0.100	0.317	1.53	1,640
		1-1.5'		X		<2.00	<50.0	<50.0	-	-	-	-	5,440
		2-2.5'		X		<2.00	<50.0	<50.0	-	-	-	-	5,060
		3-3.5'		X		-	-	-	-	-	-	-	8,770
		4-4.5'		X		-	-	-	-	-	-	-	12,300
		5-5.5'		X		-	-	-	-	-	-	-	10,500
		6-6.5'		X		-	-	-	-	-	-	-	7,170
		7-7.5'		X		-	-	-	-	-	-	-	808
		8-8.5'		X		-	-	-	-	-	-	-	1,060
		9-9.5'		X		-	-	-	-	-	-	-	874
SB-3	2/22/2011	0-1'		X		-	-	-	-	-	-	-	4,200
		3'		X		-	-	-	-	-	-	-	4,180
		5'		X		-	-	-	-	-	-	-	9,640
		7'		X		-	-	-	-	-	-	-	9,500
		10'		X		-	-	-	-	-	-	-	1,290
		15'		X		-	-	-	-	-	-	-	1,160
		20'		X		-	-	-	-	-	-	-	780
		25'		X		-	-	-	-	-	-	-	251
		30'		X		-	-	-	-	-	-	-	298
		40'		X		-	-	-	-	-	-	-	416

Table 1
COG Operating LLC.
SAND LAKE UNIT #45
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-4	9/9/2010	0-1'		X		47.6	<50.0	47.6	<0.0200	0.111	0.191	0.522	9,460
		1-1.5'		X		-	-	-	-	-	-	-	9,860
		2-2.5'		X		-	-	-	-	-	-	-	10,200
		3-3.5'		X		-	-	-	-	-	-	-	4,960
		4-4.5'		X		-	-	-	-	-	-	-	220
		5-5.5'		X		-	-	-	-	-	-	-	<200
AH-5	9/9/2010	0-1'		X		6.04	55.6	61.64	-	-	-	-	7,560
		1-1.5'		X		-	-	-	-	-	-	-	13,200
		2-2.5'		X		-	-	-	-	-	-	-	12,800
		3-3.5'		X		-	-	-	-	-	-	-	13,500
		4-4.5'		X		-	-	-	-	-	-	-	10,900
		5-5.5'		X		-	-	-	-	-	-	-	772
		6-6.5'		X		-	-	-	-	-	-	-	<200
		7-7.5'		X		-	-	-	-	-	-	-	<200

BEB Below Excavation Bottom

(-) Not Analyzed

Proposed Excavated Depths

Appendix A

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	COG OPERATING LLC	Contact	Pat Ellis
Address	550 W. Texas, Suite 100, Midland, TX 79701	Telephone No.	432-230-0077
Facility Name	Red Lake Sand Unit #45	Facility Type	Steel flowline

Surface Owner: State	Mineral Owner	Lease No. (API#) 30-015-33198

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
O	20	17S	28E					Eddy

Latitude 32 48.688 **Longitude** 104 11.678

NATURE OF RELEASE

Type of Release: Produced fluid	Volume of Release: 10bbls	Volume Recovered: 0bbls
Source of Release: Steel flowline	Date and Hour of Occurrence: 08/29/2010	Date and Hour of Discovery: 08/29/2010 11:30 a.m.
Was Immediate Notice Given? ☐ Yes ☒ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

RECEIVED
JUL 05 2011
NMOCD ARTESIA

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

A hole developed in the Red Lake Sand Unit #45 steel flowline due to corrosion. The steel flowline has been repaired and we are in the process of replacing all steel flowlines to poly flowlines.

Describe Area Affected and Cleanup Action Taken.*

Initially 10bbls of produced fluid was released from the flowline and we were unable to recover any fluid with a vacuum truck. The dimensions of the spill area are 20' x 120' in the pasture directly adjacent to the ruptured flowline. (The closest well location to the release is the Red Lake Sand Unit #43, 330' FSL 1650' FNL, Unit O, Sec. 20-T17S-R28E, Eddy Co., NM, B-8435, API# 30-015-33196). 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 prior to any significant remediation work.

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

Signature:	OIL CONSERVATION DIVISION
Printed Name: Josh Russo	Approved by District Supervisor:
Title: HSE Coordinator	Approval Date: / Expiration Date:
E-mail Address: jrusso@conchoresources.com	Conditions of Approval: / Attached ☐
Date: 08/31/2010 Phone: 432-212-2399	

* Attach Additional Sheets If Necessary

Appendix B

Water Well Data
Average Depth to Groundwater (ft)
COG - Red Lake Sand Unit #45
Eddy County, New Mexico

16 South 27 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 **70**	26	25
31	32	33	34	35	36

16 South 28 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21 **61**	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

16 South 29 East

6	5	4	3	2
7	8	9	10	11
18	17	16	15	14
19 **110**	20	21	22	23
30	29	28	27	26
31	32	33	34	35

17 South 27 East

6	5 **30**	4	3	2	1
7 **14**	8	9	10	11 **54** **50**	12
18 **86**	17 **283**	16 **194**	15	14	13
19	20	21	22	23 **40**	24
30	29	28	27	26	25
31	32 **120**	33	34	35	36

17 South 28 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19 **191'**	20 SITE	21	22 **79**	23	24
30	29	28	27	26	25
31	32	33	34 **53**	35	36

17 South 29 East

6	5	4	3	2
7	8	9	10	11
18	17	16	15	14
19	20	21	22 **80**	23
30	29 **210** **208'**	28	27	26
31	32	33	34	35 153

18 South 27 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 28 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 **65**	36

18 South 29 East

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

- New Mexico State Engineers Well Reports
- USGS Well Reports
- Geology and Groundwater Conditions in Southern Eddy, County, NM
- NMOCD - Groundwater Data

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	Sub basin	Use	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
L 07643		DOM	LE	4	4	2	34	17S	28E	578979	3628574*	120	53	67

Average Depth to Water: **53 feet**

Minimum Depth: **53 feet**

Maximum Depth: **53 feet**

Record Count: 1

PLSS Search:

Township: 17S **Range:** 28E

***UTM location was derived from PLSS - see Help**

USGS Home
Contact USGS
Search USGS

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater | Geographic Area: New Mexico | GO

News updated April, 2011

Groundwater levels for New Mexico

Search Results -- 1 sites found

Search Criteria

Agency code = usgs
site_no list =
- 324855104093101

Minimum number of levels = 1

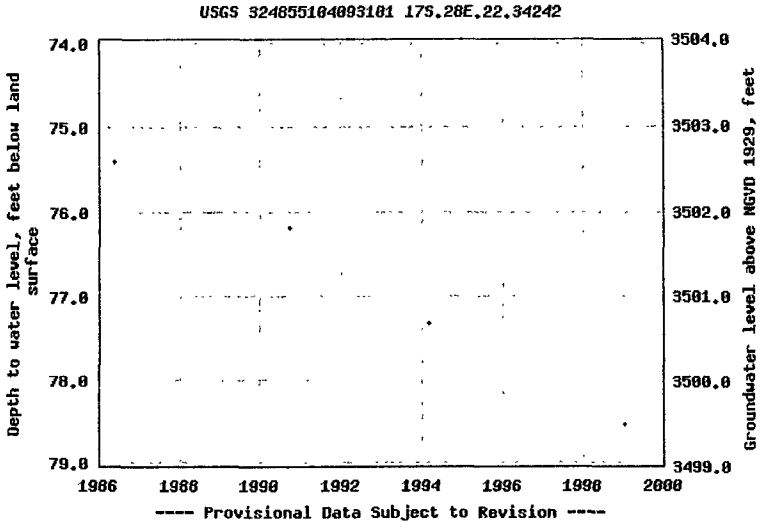
Save file of selected sites to local disk for future upload

USGS 324855104093101 17S.28E.22.34242

Available data for this site Groundwater: Field measurements | GO

Eddy County, New Mexico
Hydrologic Unit Code 13060011
Latitude 32°48'55", Longitude 104°09'31" NAD27
Land-surface elevation 3,578 feet above NGVD29
The depth of the well is 95.00 feet below land surface.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats
- Table of data
- Tab-separated data
- Graph of data
- Reselect period



Breaks in the plot represent a gap of at least one year between field measurements.
Download a presentation-quality graph

Questions about sites/data?
Feedback on this web site
Automated retrievals
Help

Data Tips
Explanation of terms
Subscribe for system changes
News

Accessibility Plug-Ins FOIA Privacy Policies and Notices

U.S. Department of the Interior | U.S. Geological Survey
Title: Groundwater for New Mexico: Water Levels
URL: http://waterdata.usgs.gov/nm/nwis/gwlevels?

Page Contact Information: New Mexico Water Data Maintainer

USA.gov

Appendix C

Summary Report

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

Report Date: September 24, 2010

Work Order: 10091321

Project Location: Eddy County, NM
Project Name: COG/Red Lake Sand Unit #45
Project Number: 114-6400676

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
244359	AH-1 0-1'	soil	2010-09-09	00:00	2010-09-10
244360	AH-1 1-1.5'	soil	2010-09-09	00:00	2010-09-10
244361	AH-2 0-1'	soil	2010-09-09	00:00	2010-09-10
244362	AH-2 1-1.5'	soil	2010-09-09	00:00	2010-09-10
244363	AH-2 2-2.5'	soil	2010-09-09	00:00	2010-09-10
244364	AH-2 3-3.5'	soil	2010-09-09	00:00	2010-09-10
244365	AH-2 4-4.5'	soil	2010-09-09	00:00	2010-09-10
244366	AH-2 5-5.5'	soil	2010-09-09	00:00	2010-09-10
244367	AH-2 6-6.5'	soil	2010-09-09	00:00	2010-09-10
244368	AH-2 7-7.5'	soil	2010-09-09	00:00	2010-09-10
244369	AH-2 8-8.5'	soil	2010-09-09	00:00	2010-09-10
244370	AH-2 9-9.5'	soil	2010-09-09	00:00	2010-09-10
244371	AH-3 0-1'	soil	2010-09-09	00:00	2010-09-10
244372	AH-3 1-1.5'	soil	2010-09-09	00:00	2010-09-10
244373	AH-3 2-2.5'	soil	2010-09-09	00:00	2010-09-10
244374	AH-3 3-3.5'	soil	2010-09-09	00:00	2010-09-10
244375	AH-3 4-4.5'	soil	2010-09-09	00:00	2010-09-10
244376	AH-3 5-5.5'	soil	2010-09-09	00:00	2010-09-10
244377	AH-3 6-6.5'	soil	2010-09-09	00:00	2010-09-10
244378	AH-3 7-7.5'	soil	2010-09-09	00:00	2010-09-10
244379	AH-3 8-8.5'	soil	2010-09-09	00:00	2010-09-10
244380	AH-3 9-9.5'	soil	2010-09-09	00:00	2010-09-10
244381	AH-4 0-1'	soil	2010-09-09	00:00	2010-09-10
244382	AH-4 1-1.5'	soil	2010-09-09	00:00	2010-09-10
244383	AH-4 2-2.5'	soil	2010-09-09	00:00	2010-09-10
244384	AH-4 3-3.5'	soil	2010-09-09	00:00	2010-09-10
244385	AH-4 4-4.5'	soil	2010-09-09	00:00	2010-09-10
244386	AH-4 5-5.5'	soil	2010-09-09	00:00	2010-09-10
244387	AH-5 0-1'	soil	2010-09-09	00:00	2010-09-10
244388	AH-5 1-1.5'	soil	2010-09-09	00:00	2010-09-10

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
244389	AH-5 2-2.5'	soil	2010-09-09	00:00	2010-09-10
244390	AH-5 3-3.5'	soil	2010-09-09	00:00	2010-09-10
244391	AH-5 4-4.5'	soil	2010-09-09	00:00	2010-09-10
244392	AH-5 5-5.5'	soil	2010-09-09	00:00	2010-09-10
244393	AH-5 6-6.5'	soil	2010-09-09	00:00	2010-09-10
244394	AH-5 7-7.5'	soil	2010-09-09	00:00	2010-09-10

Sample - Field Code	BTEX Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	TPH DRO - NEW DRO (mg/Kg)	TPH GRO GRO (mg/Kg)
244359 - AH-1 0-1'					<50.0	<2.00
244361 - AH-2 0-1'	<0.100	**0.341**	**2.87**	**5.81**	**4140**	**464**
244362 - AH-2 1-1.5'					**52.2**	<10.0
244371 - AH-3 0-1'	<0.100	<0.100	**0.317**	**1.53**	**5960**	**231**
244372 - AH-3 1-1.5'					<50.0	<2.00
244373 - AH-3 2-2.5'					<50.0	<2.00
244381 - AH-4 0-1'	<0.0200	**0.111**	**0.191**	**0.522**	<50.0	**47.6**
244387 - AH-5 0-1'					**55.6**	**6.04**

Sample: 244359 - AH-1 0-1'

Param	Flag	Result	Units	RL
Chloride		**15500**	mg/Kg	4.00

Sample: 244360 - AH-1 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**14100**	mg/Kg	4.00

Sample: 244361 - AH-2 0-1'

Param	Flag	Result	Units	RL
Chloride		**6050**	mg/Kg	4.00

Sample: 244362 - AH-2 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**7380**	mg/Kg	4.00

Sample: 244363 - AH-2 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**4260**	mg/Kg	4.00

Sample: 244364 - AH-2 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**249**	mg/Kg	4.00

Sample: 244365 - AH-2 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**406**	mg/Kg	4.00

Sample: 244366 - AH-2 5-5.5'

Param	Flag	Result	Units	RL
Chloride		**472**	mg/Kg	4.00

Sample: 244367 - AH-2 6-6.5'

Param	Flag	Result	Units	RL
Chloride		**543**	mg/Kg	4.00

Sample: 244368 - AH-2 7-7.5'

Param	Flag	Result	Units	RL
Chloride		**579**	mg/Kg	4.00

Sample: 244369 - AH-2 8-8.5'

Param	Flag	Result	Units	RL
Chloride		**858**	mg/Kg	4.00

Sample: 244370 - AH-2 9-9.5'

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

Sample: 244371 - AH-3 0-1'

Param	Flag	Result	Units	RL
Chloride		**1700**	mg/Kg	4.00

Sample: 244372 - AH-3 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**5470**	mg/Kg	4.00

Sample: 244373 - AH-3 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**5090**	mg/Kg	4.00

Sample: 244374 - AH-3 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**8780**	mg/Kg	4.00

Sample: 244375 - AH-3 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**12300**	mg/Kg	4.00

Sample: 244376 - AH-3 5-5.5'

Param	Flag	Result	Units	RL
Chloride		**10500**	mg/Kg	4.00

Sample: 244377 - AH-3 6-6.5'

Param	Flag	Result	Units	RL
Chloride		**7180**	mg/Kg	4.00

Sample: 244378 - AH-3 7-7.5'

Param	Flag	Result	Units	RL
Chloride		**833**	mg/Kg	4.00

Sample: 244379 - AH-3 8-8.5'

Param	Flag	Result	Units	RL
Chloride		**1090**	mg/Kg	4.00

Sample: 244380 - AH-3 9-9.5'

Param	Flag	Result	Units	RL
Chloride		**899**	mg/Kg	4.00

Sample: 244381 - AH-4 0-1'

Param	Flag	Result	Units	RL
Chloride		**9490**	mg/Kg	4.00

Sample: 244382 - AH-4 1-1.5'

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

Sample: 244383 - AH-4 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**10200**	mg/Kg	4.00

Sample: 244384 - AH-4 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**4990**	mg/Kg	4.00

Sample: 244385 - AH-4 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**249**	mg/Kg	4.00

Sample: 244386 - AH-4 5-5.5'

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

Sample: 244387 - AH-5 0-1'

Param	Flag	Result	Units	RL
Chloride		**7570**	mg/Kg	4.00

Sample: 244388 - AH-5 1-1.5'

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

Sample: 244389 - AH-5 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**12800**	mg/Kg	4.00

Sample: 244390 - AH-5 3-3.5'

Param	Flag	Result	Units	RL
Chloride		**13500**	mg/Kg	4.00

Sample: 244391 - AH-5 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**10900**	mg/Kg	4.00

Sample: 244392 - AH-5 5-5.5'

Param	Flag	Result	Units	RL
Chloride		**798**	mg/Kg	4.00

Sample: 244393 - AH-5 6-6.5'

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

Sample: 244394 - AH-5 7-7.5'

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

Summary Report

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

Report Date: March 1, 2011

Work Order: 11022415

Project Location: Eddy County, NM
Project Name: COG/Red Lake Sand Unit #45
Project Number: 114-6400676

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
258579	SB-1 0-1'	soil	2011-02-22	00:00	2011-02-23
258580	SB-1 3'	soil	2011-02-22	00:00	2011-02-23
258581	SB-1 5'	soil	2011-02-22	00:00	2011-02-23
258582	SB-1 7'	soil	2011-02-22	00:00	2011-02-23
258583	SB-1 10'	soil	2011-02-22	00:00	2011-02-23
258584	SB-1 15'	soil	2011-02-22	00:00	2011-02-23
258585	SB-1 20'	soil	2011-02-22	00:00	2011-02-23
258586	SB-1 25'	soil	2011-02-22	00:00	2011-02-23
258587	SB-1 30'	soil	2011-02-22	00:00	2011-02-23
258588	SB-1 40'	soil	2011-02-22	00:00	2011-02-23
258589	SB-1 50'	soil	2011-02-22	00:00	2011-02-23
258590	SB-2 0-1'	soil	2011-02-22	00:00	2011-02-23
258591	SB-2 3'	soil	2011-02-22	00:00	2011-02-23
258592	SB-2 5'	soil	2011-02-22	00:00	2011-02-23
258593	SB-2 7'	soil	2011-02-22	00:00	2011-02-23
258594	SB-2 10'	soil	2011-02-22	00:00	2011-02-23
258595	SB-2 15'	soil	2011-02-22	00:00	2011-02-23
258596	SB-2 20'	soil	2011-02-22	00:00	2011-02-23
258597	SB-2 25'	soil	2011-02-22	00:00	2011-02-23
258598	SB-2 30'	soil	2011-02-22	00:00	2011-02-23
258599	SB-2 40'	soil	2011-02-22	00:00	2011-02-23
258600	SB-3 0-1'	soil	2011-02-22	00:00	2011-02-23
258601	SB-3 3'	soil	2011-02-22	00:00	2011-02-23
258602	SB-3 5'	soil	2011-02-22	00:00	2011-02-23
258603	SB-3 7'	soil	2011-02-22	00:00	2011-02-23
258604	SB-3 10'	soil	2011-02-22	00:00	2011-02-23
258605	SB-3 15'	soil	2011-02-22	00:00	2011-02-23
258606	SB-3 20'	soil	2011-02-22	00:00	2011-02-23
258607	SB-3 25'	soil	2011-02-22	00:00	2011-02-23
258608	SB-3 30'	soil	2011-02-22	00:00	2011-02-23

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
258609	SB-3 40'	soil	2011-02-22	00:00	2011-02-23

Sample: 258579 - SB-1 0-1'

Param	Flag	Result	Units	RL
Chloride		**15200**	mg/Kg	4.00

Sample: 258580 - SB-1 3'

Param	Flag	Result	Units	RL
Chloride		**8230**	mg/Kg	4.00

Sample: 258581 - SB-1 5'

Param	Flag	Result	Units	RL
Chloride		**4160**	mg/Kg	4.00

Sample: 258582 - SB-1 7'

Param	Flag	Result	Units	RL
Chloride		**3500**	mg/Kg	4.00

Sample: 258583 - SB-1 10'

Param	Flag	Result	Units	RL
Chloride		**7130**	mg/Kg	4.00

Sample: 258584 - SB-1 15'

Param	Flag	Result	Units	RL
Chloride		**7530**	mg/Kg	4.00

Sample: 258585 - SB-1 20'

Param	Flag	Result	Units	RL
Chloride		**4710**	mg/Kg	4.00

Sample: 258586 - SB-1 25'

Param	Flag	Result	Units	RL
Chloride		**6680**	mg/Kg	4.00

Sample: 258587 - SB-1 30'

Param	Flag	Result	Units	RL
Chloride		**1250**	mg/Kg	4.00

Sample: 258588 - SB-1 40'

Param	Flag	Result	Units	RL
Chloride		**247**	mg/Kg	4.00

Sample: 258589 - SB-1 50'

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

Sample: 258590 - SB-2 0-1'

Param	Flag	Result	Units	RL
Chloride		**1200**	mg/Kg	4.00

Sample: 258591 - SB-2 3'

Param	Flag	Result	Units	RL
Chloride		**3760**	mg/Kg	4.00

Sample: 258592 - SB-2 5'

Param	Flag	Result	Units	RL
Chloride		**458**	mg/Kg	4.00

Sample: 258593 - SB-2 7'

Param	Flag	Result	Units	RL
Chloride		**832**	mg/Kg	4.00

Sample: 258594 - SB-2 10'

Param	Flag	Result	Units	RL
Chloride		**611**	mg/Kg	4.00

Sample: 258595 - SB-2 15'

Param	Flag	Result	Units	RL
Chloride		**1030**	mg/Kg	4.00

Sample: 258596 - SB-2 20'

Param	Flag	Result	Units	RL
Chloride		**516**	mg/Kg	4.00

Sample: 258597 - SB-2 25'

Param	Flag	Result	Units	RL
Chloride		**511**	mg/Kg	4.00

Sample: 258598 - SB-2 30'

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

Sample: 258599 - SB-2 40'

Param	Flag	Result	Units	RL
Chloride		**205**	mg/Kg	4.00

Sample: 258600 - SB-3 0-1'

Param	Flag	Result	Units	RL
Chloride		**4200**	mg/Kg	4.00

Sample: 258601 - SB-3 3'

Param	Flag	Result	Units	RL
Chloride		**4180**	mg/Kg	4.00

Sample: 258602 - SB-3 5'

Param	Flag	Result	Units	RL
Chloride		**9640**	mg/Kg	4.00

Sample: 258603 - SB-3 7'

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

Sample: 258604 - SB-3 10'

Param	Flag	Result	Units	RL
Chloride		**1290**	mg/Kg	4.00

Sample: 258605 - SB-3 15'

Param	Flag	Result	Units	RL
Chloride		**1160**	mg/Kg	4.00

Sample: 258606 - SB-3 20'

Param	Flag	Result	Units	RL
Chloride		**780**	mg/Kg	4.00

Sample: 258607 - SB-3 25'

Param	Flag	Result	Units	RL
Chloride		**251**	mg/Kg	4.00

Sample: 258608 - SB-3 30'

Param	Flag	Result	Units	RL
Chloride		**298**	mg/Kg	4.00

Sample: 258609 - SB-3 40'

Param	Flag	Result	Units	RL
Chloride		**416**	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: September 27, 2010

Work Order: 10091321

Project Location: Eddy County, NM
Project Name: COG/Red Lake Sand Unit #45
Project Number: 114-6400676

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
244359	AH-1 0-1'	soil	2010-09-09	00:00	2010-09-10
244360	AH-1 1-1.5'	soil	2010-09-09	00:00	2010-09-10
244361	AH-2 0-1'	soil	2010-09-09	00:00	2010-09-10
244362	AH-2 1-1.5'	soil	2010-09-09	00:00	2010-09-10
244363	AH-2 2-2.5'	soil	2010-09-09	00:00	2010-09-10
244364	AH-2 3-3.5'	soil	2010-09-09	00:00	2010-09-10
244365	AH-2 4-4.5'	soil	2010-09-09	00:00	2010-09-10
244366	AH-2 5-5.5'	soil	2010-09-09	00:00	2010-09-10
244367	AH-2 6-6.5'	soil	2010-09-09	00:00	2010-09-10
244368	AH-2 7-7.5'	soil	2010-09-09	00:00	2010-09-10

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
244369	AH-2 8-8.5'	soil	2010-09-09	00:00	2010-09-10
244370	AH-2 9-9.5'	soil	2010-09-09	00:00	2010-09-10
244371	AH-3 0-1'	soil	2010-09-09	00:00	2010-09-10
244372	AH-3 1-1.5'	soil	2010-09-09	00:00	2010-09-10
244373	AH-3 2-2.5'	soil	2010-09-09	00:00	2010-09-10
244374	AH-3 3-3.5'	soil	2010-09-09	00:00	2010-09-10
244375	AH-3 4-4.5'	soil	2010-09-09	00:00	2010-09-10
244376	AH-3 5-5.5'	soil	2010-09-09	00:00	2010-09-10
244377	AH-3 6-6.5'	soil	2010-09-09	00:00	2010-09-10
244378	AH-3 7-7.5'	soil	2010-09-09	00:00	2010-09-10
244379	AH-3 8-8.5'	soil	2010-09-09	00:00	2010-09-10
244380	AH-3 9-9.5'	soil	2010-09-09	00:00	2010-09-10
244381	AH-4 0-1'	soil	2010-09-09	00:00	2010-09-10
244382	AH-4 1-1.5'	soil	2010-09-09	00:00	2010-09-10
244383	AH-4 2-2.5'	soil	2010-09-09	00:00	2010-09-10
244384	AH-4 3-3.5'	soil	2010-09-09	00:00	2010-09-10
244385	AH-4 4-4.5'	soil	2010-09-09	00:00	2010-09-10
244386	AH-4 5-5.5'	soil	2010-09-09	00:00	2010-09-10
244387	AH-5 0-1'	soil	2010-09-09	00:00	2010-09-10
244388	AH-5 1-1.5'	soil	2010-09-09	00:00	2010-09-10
244389	AH-5 2-2.5'	soil	2010-09-09	00:00	2010-09-10
244390	AH-5 3-3.5'	soil	2010-09-09	00:00	2010-09-10
244391	AH-5 4-4.5'	soil	2010-09-09	00:00	2010-09-10
244392	AH-5 5-5.5'	soil	2010-09-09	00:00	2010-09-10
244393	AH-5 6-6.5'	soil	2010-09-09	00:00	2010-09-10
244394	AH-5 7-7.5'	soil	2010-09-09	00:00	2010-09-10

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.

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/Red Lake Sand Unit #45 were received by TraceAnalysis, Inc. on 2010-09-10 and assigned to work order 10091321. Samples for work order 10091321 were received intact at a temperature of 3.7 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	63055	2010-09-15 at 08:15	73591	2010-09-15 at 09:19
Chloride (Titration)	SM 4500-Cl B	63077	2010-09-15 at 08:11	73690	2010-09-21 at 14:59
Chloride (Titration)	SM 4500-Cl B	63078	2010-09-15 at 12:12	73691	2010-09-21 at 15:00
Chloride (Titration)	SM 4500-Cl B	63079	2010-09-15 at 12:13	73692	2010-09-21 at 15:01
Chloride (Titration)	SM 4500-Cl B	63187	2010-09-20 at 12:40	73693	2010-09-21 at 15:02
Chloride (Titration)	SM 4500-Cl B	63188	2010-09-20 at 12:41	73694	2010-09-21 at 15:03
TPH DRO - NEW	S 8015 D	63015	2010-09-13 at 14:45	73458	2010-09-13 at 14:45
TPH DRO - NEW	S 8015 D	63150	2010-09-17 at 11:25	73617	2010-09-17 at 11:25
TPH GRO	S 8015 D	63055	2010-09-15 at 08:15	73583	2010-09-15 at 09:46
TPH GRO	S 8015 D	63249	2010-09-21 at 16:00	73737	2010-09-21 at 23:20

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 10091321 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: 244359 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73690	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63077	Sample Preparation:	2010-09-15	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**15600**	mg/Kg	100	4.00

Sample: 244359 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	73458	Date Analyzed:	2010-09-13	Analyzed By:	kg
Prep Batch:	63015	Sample Preparation:	2010-09-13	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		91.4	mg/Kg	1	100	91	70 - 130

Sample: 244359 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	73583	Date Analyzed:	2010-09-15	Analyzed By:	AG
Prep Batch:	63055	Sample Preparation:	2010-09-15	Prepared By:	AG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.76	mg/Kg	1	2.00	138	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.19	mg/Kg	1	2.00	110	42 - 159

Sample: 244360 - AH-1 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73690	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63077	Sample Preparation:	2010-09-15	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**14200**		mg/Kg	100	4.00

Sample: 244361 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	73591	Date Analyzed:	2010-09-15	Analyzed By:	AG
Prep Batch:	63055	Sample Preparation:	2010-09-15	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
Benzene		<0.100		mg/Kg	5	0.0200
Toluene		**0.341**		mg/Kg	5	0.0200
Ethylbenzene		**2.87**		mg/Kg	5	0.0200
Xylene		**5.81**		mg/Kg	5	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5.78	mg/Kg	5	5.00	116	52.8 - 137
4-Bromofluorobenzene (4-BFB)	[1]	10.4	mg/Kg	5	5.00	208	38.4 - 157

Sample: 244361 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73690	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63077	Sample Preparation:	2010-09-15	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**6020**		mg/Kg	100	4.00

[1] High surrogate recovery due to peak interference.

Sample: 244361 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	73458	Date Analyzed:	2010-09-13	Analyzed By:	kg
Prep Batch:	63015	Sample Preparation:	2010-09-13	Prepared By:	kg

Parameter	Flag	Result	RL	Units	Dilution	RL
DRO		**4140**		mg/Kg	10	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	[2]	280	mg/Kg	10	100	280	70 - 130

Sample: 244361 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	73583	Date Analyzed:	2010-09-15	Analyzed By:	AG
Prep Batch:	63055	Sample Preparation:	2010-09-15	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
GRO		**464**		mg/Kg	5	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5.73	mg/Kg	5	5.00	115	48.5 - 152
4-Bromofluorobenzene (4-BFB)	[3]	10.6	mg/Kg	5	5.00	212	42 - 159

Sample: 244362 - AH-2 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73690	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63077	Sample Preparation:	2010-09-15	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**7360**		mg/Kg	100	4.00

[2]High surrogate recovery due to peak interference.
[3]High surrogate recovery due to peak interference.

Sample: 244362 - AH-2 1-1.5'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	73617	Date Analyzed:	2010-09-17	Analyzed By:	kg
Prep Batch:	63150	Sample Preparation:	2010-09-17	Prepared By:	kg

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		**52.2**	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		122	mg/Kg	1	100	122	70 - 130

Sample: 244362 - AH-2 1-1.5'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	73737	Date Analyzed:	2010-09-21	Analyzed By:	AG
Prep Batch:	63249	Sample Preparation:	2010-09-21	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<10.0	mg/Kg	5	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5.13	mg/Kg	5	5.00	103	48.5 - 152
4-Bromofluorobenzene (4-BFB)		6.68	mg/Kg	5	5.00	134	42 - 159

Sample: 244363 - AH-2 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73690	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63077	Sample Preparation:	2010-09-15	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**4230**	mg/Kg	100	4.00

Sample: 244364 - AH-2 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73691	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63078	Sample Preparation:	2010-09-15	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**220**	mg/Kg	50	4.00

Sample: 244365 - AH-2 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73691	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63078	Sample Preparation:	2010-09-15	Prepared By:	AR

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

Sample: 244366 - AH-2 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73691	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63078	Sample Preparation:	2010-09-15	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**444**	mg/Kg	50	4.00

Sample: 244367 - AH-2 6-6.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73691	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63078	Sample Preparation:	2010-09-15	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**516**	mg/Kg	50	4.00

Sample: 244368 - AH-2 7-7.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73691	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63078	Sample Preparation:	2010-09-15	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**552**	mg/Kg	50	4.00

Sample: 244369 - AH-2 8-8.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73691	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63078	Sample Preparation:	2010-09-15	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**832**	mg/Kg	50	4.00

Sample: 244370 - AH-2 9-9.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73691	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63078	Sample Preparation:	2010-09-15	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**1180**	mg/Kg	50	4.00

Sample: 244371 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	73591	Date Analyzed:	2010-09-15	Analyzed By:	AG
Prep Batch:	63055	Sample Preparation:	2010-09-15	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.100	mg/Kg	5	0.0200
Toluene		<0.100	mg/Kg	5	0.0200

continued ...

sample 244371 continued ...

Parameter	Flag	Result	RL	Units	Dilution	RL
Ethylbenzene		**0.317**		mg/Kg	5	0.0200
Xylene		**1.53**		mg/Kg	5	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		6.35	mg/Kg	5	5.00	127	52.8 - 137
4-Bromofluorobenzene (4-BFB)		7.67	mg/Kg	5	5.00	153	38.4 - 157

Sample: 244371 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73691	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63078	Sample Preparation:	2010-09-15	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**1640**		mg/Kg	100	4.00

Sample: 244371 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	73458	Date Analyzed:	2010-09-13	Analyzed By:	kg
Prep Batch:	63015	Sample Preparation:	2010-09-13	Prepared By:	kg

Parameter	Flag	Result	RL	Units	Dilution	RL
DRO		**5960**		mg/Kg	5	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	[4]	427	mg/Kg	5	100	427	70 - 130

Sample: 244371 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	73583	Date Analyzed:	2010-09-15	Analyzed By:	AG
Prep Batch:	63055	Sample Preparation:	2010-09-15	Prepared By:	AG

[4]High surrogate recovery due to peak interference.

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		**231**	mg/Kg	5	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		6.25	mg/Kg	5	5.00	125	48.5 - 152
4-Bromofluorobenzene (4-BFB)		7.33	mg/Kg	5	5.00	147	42 - 159

Sample: 244372 - AH-3 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73691	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63078	Sample Preparation:	2010-09-15	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**5440**	mg/Kg	100	4.00

Sample: 244372 - AH-3 1-1.5'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	73617	Date Analyzed:	2010-09-17	Analyzed By:	kg
Prep Batch:	63150	Sample Preparation:	2010-09-17	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		111	mg/Kg	1	100	111	70 - 130

Sample: 244372 - AH-3 1-1.5'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	73737	Date Analyzed:	2010-09-21	Analyzed By:	AG
Prep Batch:	63249	Sample Preparation:	2010-09-21	Prepared By:	AG

continued ...

sample 244372 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.99	mg/Kg	1	2.00	100	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.46	mg/Kg	1	2.00	73	42 - 159

Sample: 244373 - AH-3 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73691	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63078	Sample Preparation:	2010-09-15	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**5060**	mg/Kg	100	4.00

Sample: 244373 - AH-3 2-2.5'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	73617	Date Analyzed:	2010-09-17	Analyzed By:	kg
Prep Batch:	63150	Sample Preparation:	2010-09-17	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		110	mg/Kg	1	100	110	70 - 130

Sample: 244373 - AH-3 2-2.5'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	73737	Date Analyzed:	2010-09-21	Analyzed By:	AG
Prep Batch:	63249	Sample Preparation:	2010-09-21	Prepared By:	AG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.43	mg/Kg	1	2.00	122	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.96	mg/Kg	1	2.00	98	42 - 159

Sample: 244374 - AH-3 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73692	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63079	Sample Preparation:	2010-09-20	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**8770**	mg/Kg	100	4.00

Sample: 244375 - AH-3 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73692	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63079	Sample Preparation:	2010-09-20	Prepared By:	AR

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

Sample: 244376 - AH-3 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73692	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63079	Sample Preparation:	2010-09-20	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**10500**	mg/Kg	100	4.00

Sample: 244377 - AH-3 6-6.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73692	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63079	Sample Preparation:	2010-09-20	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**7170**	mg/Kg	100	4.00

Sample: 244378 - AH-3 7-7.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73692	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63079	Sample Preparation:	2010-09-20	Prepared By:	AR

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

Sample: 244379 - AH-3 8-8.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73692	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63079	Sample Preparation:	2010-09-20	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**1060**	mg/Kg	50	4.00

Sample: 244380 - AH-3 9-9.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73692	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63079	Sample Preparation:	2010-09-20	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**874**		mg/Kg	50	4.00

Sample: 244381 - AH-4 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	73591	Date Analyzed:	2010-09-15	Analyzed By:	AG
Prep Batch:	63055	Sample Preparation:	2010-09-15	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
Benzene		<0.0200		mg/Kg	1	0.0200
Toluene		**0.111**		mg/Kg	1	0.0200
Ethylbenzene		**0.191**		mg/Kg	1	0.0200
Xylene		**0.522**		mg/Kg	1	0.0200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.36	mg/Kg	1	2.00	118	52.8 - 137
4-Bromofluorobenzene (4-BFB)		2.31	mg/Kg	1	2.00	116	38.4 - 157

Sample: 244381 - AH-4 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73692	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63079	Sample Preparation:	2010-09-20	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**9490**		mg/Kg	100	4.00

Sample: 244381 - AH-4 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	73458	Date Analyzed:	2010-09-13	Analyzed By:	kg
Prep Batch:	63015	Sample Preparation:	2010-09-13	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		92.6	mg/Kg	1	100	93	70 - 130

Sample: 244381 - AH-4 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	73583	Date Analyzed:	2010-09-15	Analyzed By:	AG
Prep Batch:	63055	Sample Preparation:	2010-09-15	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		**47.6**	mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.41	mg/Kg	1	2.00	120	48.5 - 152
4-Bromofluorobenzene (4-BFB)		2.16	mg/Kg	1	2.00	108	42 - 159

Sample: 244382 - AH-4 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73692	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63079	Sample Preparation:	2010-09-20	Prepared By:	AR

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

Sample: 244383 - AH-4 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73692	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63079	Sample Preparation:	2010-09-20	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**10200**	mg/Kg	100	4.00

Sample: 244384 - AH-4 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73693	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63187	Sample Preparation:	2010-09-20	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**4960**	mg/Kg	100	4.00

Sample: 244385 - AH-4 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73693	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63187	Sample Preparation:	2010-09-20	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**220**	mg/Kg	50	4.00

Sample: 244386 - AH-4 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73693	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63187	Sample Preparation:	2010-09-20	Prepared By:	AR

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

Sample: 244387 - AH-5 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73693	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63187	Sample Preparation:	2010-09-20	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**7560**	mg/Kg	100	4.00

Sample: 244387 - AH-5 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	73458	Date Analyzed:	2010-09-13	Analyzed By:	kg
Prep Batch:	63015	Sample Preparation:	2010-09-13	Prepared By:	kg

Parameter	Flag	Result	RL	Units	Dilution	RL
DRO		**55.6**		mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		93.0	mg/Kg	1	100	93	70 - 130

Sample: 244387 - AH-5 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	73583	Date Analyzed:	2010-09-15	Analyzed By:	AG
Prep Batch:	63055	Sample Preparation:	2010-09-15	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
GRO		**6.04**		mg/Kg	1	2.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.44	mg/Kg	1	2.00	122	48.5 - 152
4-Bromofluorobenzene (4-BFB)		1.71	mg/Kg	1	2.00	86	42 - 159

Sample: 244388 - AH-5 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73693	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63187	Sample Preparation:	2010-09-20	Prepared By:	AR

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

Sample: 244389 - AH-5 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73693	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63187	Sample Preparation:	2010-09-20	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**12800**	mg/Kg	100	4.00

Sample: 244390 - AH-5 3-3.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73693	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63187	Sample Preparation:	2010-09-20	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**13500**	mg/Kg	100	4.00

Sample: 244391 - AH-5 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73693	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63187	Sample Preparation:	2010-09-20	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**10900**	mg/Kg	100	4.00

Sample: 244392 - AH-5 5-5.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73693	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63187	Sample Preparation:	2010-09-20	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**772**	mg/Kg	50	4.00

Sample: 244393 - AH-5 6-6.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73693	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63187	Sample Preparation:	2010-09-20	Prepared By:	AR

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

Sample: 244394 - AH-5 7-7.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	73694	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63188	Sample Preparation:	2010-09-20	Prepared By:	AR

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

Method Blank (1) QC Batch: 73458

QC Batch:	73458	Date Analyzed:	2010-09-13	Analyzed By:	kg
Prep Batch:	63015	QC Preparation:	2010-09-13	Prepared By:	kg

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		99.6	mg/Kg	1	100	100	70 - 130

Method Blank (1) QC Batch: 73583

QC Batch:	73583	Date Analyzed:	2010-09-15	Analyzed By:	AG
Prep Batch:	63055	QC Preparation:	2010-09-15	Prepared By:	AG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.42	mg/Kg	1	2.00	121	67.6 - 150
4-Bromofluorobenzene (4-BFB)		2.19	mg/Kg	1	2.00	110	52.4 - 130

Method Blank (1) QC Batch: 73591

QC Batch: 73591 | Date Analyzed: 2010-09-15 | Analyzed By: AG
Prep Batch: 63055 | QC Preparation: 2010-09-15 | Prepared By: AG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.31	mg/Kg	1	2.00	116	66.6 - 122
4-Bromofluorobenzene (4-BFB)		2.63	mg/Kg	1	2.00	132	55.4 - 132

Method Blank (1) QC Batch: 73617

QC Batch: 73617 | Date Analyzed: 2010-09-17 | Analyzed By: kg
Prep Batch: 63150 | QC Preparation: 2010-09-17 | Prepared By: kg

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		106	mg/Kg	1	100	106	70 - 130

Method Blank (1) QC Batch: 73690

QC Batch: 73690 | Date Analyzed: 2010-09-21 | Analyzed By: AR
Prep Batch: 63077 | QC Preparation: 2010-09-15 | Prepared By: AR

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

Method Blank (1) QC Batch: 73691

QC Batch:	73691	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63078	QC Preparation:	2010-09-15	Prepared By:	AR

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

Method Blank (1) QC Batch: 73692

QC Batch:	73692	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63079	QC Preparation:	2010-09-15	Prepared By:	AR

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

Method Blank (1) QC Batch: 73693

QC Batch:	73693	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63187	QC Preparation:	2010-09-20	Prepared By:	AR

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

Method Blank (1) QC Batch: 73694

QC Batch:	73694	Date Analyzed:	2010-09-21	Analyzed By:	AR
Prep Batch:	63188	QC Preparation:	2010-09-20	Prepared By:	AR

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

Method Blank (1) QC Batch: 73737

QC Batch:	73737	Date Analyzed:	2010-09-21	Analyzed By:	AG
Prep Batch:	63249	QC Preparation:	2010-09-21	Prepared By:	AG

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.80	mg/Kg	1	2.00	90	67.6 - 150
4-Bromofluorobenzene (4-BFB)		1.07	mg/Kg	1	2.00	54	52.4 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 73458 | Date Analyzed: 2010-09-13 | Analyzed By: kg
Prep Batch: 63015 | QC Preparation: 2010-09-13 | Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	232	mg/Kg	1	250	<14.5	93	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	247	mg/Kg	1	250	<14.5	99	57.4 - 133.4	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
n-Tricosane	92.9	92.8	mg/Kg	1	100	93	93	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 73583 | Date Analyzed: 2010-09-15 | Analyzed By: AG
Prep Batch: 63055 | QC Preparation: 2010-09-15 | Prepared By: AG

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

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	16.4	mg/Kg	1	20.0	<1.65	82	69.9 - 95.4	13	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.00	2.11	mg/Kg	1	2.00	100	106	61.9 - 142
4-Bromofluorobenzene (4-BFB)	1.42	1.34	mg/Kg	1	2.00	71	67	65.2 - 132

Laboratory Control Spike (LCS-1)

QC Batch: 73591 | Date Analyzed: 2010-09-15 | Analyzed By: AG
Prep Batch: 63055 | QC Preparation: 2010-09-15 | Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	2.00	mg/Kg	1	2.00	<0.0150	100	81.9 - 108
Toluene	1.94	mg/Kg	1	2.00	<0.00950	97	81.9 - 107
Ethylbenzene	1.85	mg/Kg	1	2.00	<0.0106	92	78.4 - 107
Xylene	5.35	mg/Kg	1	6.00	<0.00930	89	79.1 - 107

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	2.12	mg/Kg	1	2.00	<0.0150	106	81.9 - 108	6	20
Toluene	2.05	mg/Kg	1	2.00	<0.00950	102	81.9 - 107	6	20
Ethylbenzene	1.98	mg/Kg	1	2.00	<0.0106	99	78.4 - 107	7	20
Xylene	5.74	mg/Kg	1	6.00	<0.00930	96	79.1 - 107	7	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.04	2.13	mg/Kg	1	2.00	102	106	70.2 - 114
4-Bromofluorobenzene (4-BFB)	1.50	1.61	mg/Kg	1	2.00	75	80	69.8 - 121

Laboratory Control Spike (LCS-1)

QC Batch: 73617 | Date Analyzed: 2010-09-17 | Analyzed By: kg
Prep Batch: 63150 | QC Preparation: 2010-09-17 | Prepared By: kg

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	258	mg/Kg	1	250	<14.5	103	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	265	mg/Kg	1	250	<14.5	106	57.4 - 133.4	3	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	113	114	mg/Kg	1	100	113	114	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 73690 | Date Analyzed: 2010-09-21 | Analyzed By: AR
Prep Batch: 63077 | QC Preparation: 2010-09-15 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	97.5	mg/Kg	1	100	<2.18	98	85 - 115

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

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

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

Laboratory Control Spike (LCS-1)

QC Batch: 73691 | Date Analyzed: 2010-09-21 | Analyzed By: AR
Prep Batch: 63078 | QC Preparation: 2010-09-15 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	96.6	mg/Kg	1	100	<2.18	97	85 - 115

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

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

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

Laboratory Control Spike (LCS-1)

QC Batch: 73692 | Date Analyzed: 2010-09-21 | Analyzed By: AR
Prep Batch: 63079 | QC Preparation: 2010-09-15 | Prepared By: AR

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

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	101	mg/Kg	1	100	<2.18	101	85 - 115	4	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 73693 Date Analyzed: 2010-09-21 Analyzed By: AR
Prep Batch: 63187 QC Preparation: 2010-09-20 Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	97.3	mg/Kg	1	100	<2.18	97	85 - 115

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

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

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

Laboratory Control Spike (LCS-1)

QC Batch: 73694 Date Analyzed: 2010-09-21 Analyzed By: AR
Prep Batch: 63188 QC Preparation: 2010-09-20 Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	94.5	mg/Kg	1	100	<2.18	94	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	6	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 73737 Date Analyzed: 2010-09-21 Analyzed By: AG
Prep Batch: 63249 QC Preparation: 2010-09-21 Prepared By: AG

continued ...

control spikes continued ...

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	15.4	mg/Kg	1	20.0	<1.65	77	69.9 - 95.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	14.7	mg/Kg	1	20.0	<1.65	74	69.9 - 95.4	5	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.94	1.85	mg/Kg	1	2.00	97	92	61.9 - 142
4-Bromofluorobenzene (4-BFB)	1.70	1.64	mg/Kg	1	2.00	85	82	65.2 - 132

Matrix Spike (MS-1) Spiked Sample: 244435

QC Batch: 73458 | Date Analyzed: 2010-09-13 | Analyzed By: kg
Prep Batch: 63015 | QC Preparation: 2010-09-13 | Prepared By: kg

Param		MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	[5]	726	mg/Kg	1	250	726	0	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	[6]	1120	mg/Kg	1	250	726	122	35.2 - 167.1	43	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	[7]	109	141	mg/Kg	1	100	109	141	70 - 130

Matrix Spike (MS-1) Spiked Sample: 244319

QC Batch: 73583 | Date Analyzed: 2010-09-15 | Analyzed By: AG
Prep Batch: 63055 | QC Preparation: 2010-09-15 | Prepared By: AG

[5]Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.
[6]MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.
[7]High surrogate recovery due to peak interference.

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	16.3	mg/Kg	1	20.0	<1.65	82	61.8 - 114

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

Param		MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	[8]	20.1	mg/Kg	1	20.0	<1.65	100	61.8 - 114	21	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)	1.96	2.31	mg/Kg	1	2	98	116	50 - 162
4-Bromofluorobenzene (4-BFB)	1.73	2.09	mg/Kg	1	2	86	104	50 - 162

Matrix Spike (MS-1) Spiked Sample: 244456

QC Batch: 73591 | Date Analyzed: 2010-09-15 | Analyzed By: AG
Prep Batch: 63055 | QC Preparation: 2010-09-15 | Prepared By: AG

Param		MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		2.16	mg/Kg	1	2.00	<0.0150	108	80.5 - 112
Toluene		2.21	mg/Kg	1	2.00	<0.00950	110	82.4 - 113
Ethylbenzene	[9]	2.34	mg/Kg	1	2.00	<0.0106	117	83.9 - 114
Xylene	[10]	6.92	mg/Kg	1	6.00	<0.00930	115	84 - 114

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

Param		MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	[11]	2.42	mg/Kg	1	2.00	<0.0150	121	80.5 - 112	11	20
Toluene	[12]	2.46	mg/Kg	1	2.00	<0.00950	123	82.4 - 113	11	20
Ethylbenzene	[13]	2.61	mg/Kg	1	2.00	<0.0106	130	83.9 - 114	11	20
Xylene	[14]	7.88	mg/Kg	1	6.00	<0.00930	131	84 - 114	13	20

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

continued ...

[8]MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.
[9]Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.
[10]Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.
[11]MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.
[12]MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.
[13]MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.
[14]MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.

matrix spikes continued ...

Surrogate		MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Surrogate		MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	[15]	2.34	2.54	mg/Kg	1	2	117	127	41.3 - 117
4-Bromofluorobenzene (4-BFB)	[16] [17]	2.72	2.93	mg/Kg	1	2	136	146	35.5 - 129

Matrix Spike (MS-1) Spiked Sample: 244989

QC Batch: 73617 | Date Analyzed: 2010-09-17 | Analyzed By: kg
Prep Batch: 63150 | QC Preparation: 2010-09-17 | Prepared By: kg

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	280	mg/Kg	1	250	38.3	97	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	271	mg/Kg	1	250	38.3	93	35.2 - 167.1	3	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	107	105	mg/Kg	1	100	107	105	70 - 130

Matrix Spike (MS-1) Spiked Sample: 244363

QC Batch: 73690 | Date Analyzed: 2010-09-21 | Analyzed By: AR
Prep Batch: 63077 | QC Preparation: 2010-09-15 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	14200	mg/Kg	100	10000	4230	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	14800	mg/Kg	100	10000	4230	106	85 - 115	4	20

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

[15] High surrogate recovery due to peak interference.
[16] High surrogate recovery due to peak interference.
[17] High surrogate recovery due to peak interference.

Matrix Spike (MS-1) Spiked Sample: 244373

QC Batch: 73691 | Date Analyzed: 2010-09-21 | Analyzed By: AR
Prep Batch: 63078 | QC Preparation: 2010-09-15 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	15600	mg/Kg	100	10000	5060	105	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	15900	mg/Kg	100	10000	5060	108	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: 244383

QC Batch: 73692 | Date Analyzed: 2010-09-21 | Analyzed By: AR
Prep Batch: 63079 | QC Preparation: 2010-09-15 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	20400	mg/Kg	100	10000	10200	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	20700	mg/Kg	100	10000	10200	105	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: 244393

QC Batch: 73693 | Date Analyzed: 2010-09-21 | Analyzed By: AR
Prep Batch: 63187 | QC Preparation: 2010-09-20 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	9870	mg/Kg	100	10000	<218	99	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	10000	mg/Kg	100	10000	<218	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: 244421

QC Batch: 73694 | Date Analyzed: 2010-09-21 | Analyzed By: AR
Prep Batch: 63188 | QC Preparation: 2010-09-20 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10400	mg/Kg	100	10000	466	99	85 - 115

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	10600	mg/Kg	100	10000	466	101	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: 244875

QC Batch: 73737 | Date Analyzed: 2010-09-21 | Analyzed By: AG
Prep Batch: 63249 | QC Preparation: 2010-09-21 | Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	16.3	mg/Kg	1	20.0	<1.65	82	61.8 - 114

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	16.8	mg/Kg	1	20.0	<1.65	84	61.8 - 114	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)	2.09	1.96	mg/Kg	1	2	104	98	50 - 162
4-Bromofluorobenzene (4-BFB)	2.03	1.87	mg/Kg	1	2	102	94	50 - 162

Standard (CCV-1)

QC Batch: 73458 | Date Analyzed: 2010-09-13 | Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	256	102	80 - 120	2010-09-13

Standard (CCV-2)

QC Batch: 73458 | Date Analyzed: 2010-09-13 | Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	269	108	80 - 120	2010-09-13

Standard (CCV-3)

QC Batch: 73458 | Date Analyzed: 2010-09-13 | Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	290	116	80 - 120	2010-09-13

Standard (CCV-1)

QC Batch: 73583 | Date Analyzed: 2010-09-15 | Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.909	91	80 - 120	2010-09-15

Standard (CCV-2)

QC Batch: 73583 | Date Analyzed: 2010-09-15 | Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.19	119	80 - 120	2010-09-15

Standard (CCV-1)

QC Batch: 73591 | Date Analyzed: 2010-09-15 | 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	0.0986	99	80 - 120	2010-09-15
Toluene		mg/Kg	0.100	0.0954	95	80 - 120	2010-09-15

continued ...

standard continued ...

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Ethylbenzene		mg/Kg	0.100	0.0889	89	80 - 120	2010-09-15
Xylene		mg/Kg	0.300	0.257	86	80 - 120	2010-09-15

Standard (CCV-2)

QC Batch: 73591 Date Analyzed: 2010-09-15 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	0.113	113	80 - 120	2010-09-15
Toluene		mg/Kg	0.100	0.112	112	80 - 120	2010-09-15
Ethylbenzene		mg/Kg	0.100	0.112	112	80 - 120	2010-09-15
Xylene		mg/Kg	0.300	0.339	113	80 - 120	2010-09-15

Standard (CCV-1)

QC Batch: 73617 Date Analyzed: 2010-09-17 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	261	104	80 - 120	2010-09-17

Standard (CCV-2)

QC Batch: 73617 Date Analyzed: 2010-09-17 Analyzed By: kg

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	287	115	80 - 120	2010-09-17

Standard (ICV-1)

QC Batch: 73690 Date Analyzed: 2010-09-21 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2010-09-21

Standard (CCV-1)

QC Batch: 73690 | Date Analyzed: 2010-09-21 | Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.3	99	85 - 115	2010-09-21

Standard (ICV-1)

QC Batch: 73691 | Date Analyzed: 2010-09-21 | Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2010-09-21

Standard (CCV-1)

QC Batch: 73691 | Date Analyzed: 2010-09-21 | Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.0	99	85 - 115	2010-09-21

Standard (ICV-1)

QC Batch: 73692 | Date Analyzed: 2010-09-21 | Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.1	99	85 - 115	2010-09-21

Standard (CCV-1)

QC Batch: 73692 | Date Analyzed: 2010-09-21 | Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2010-09-21

Standard (ICV-1)

QC Batch: 73693 | Date Analyzed: 2010-09-21 | Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2010-09-21

Standard (CCV-1)

QC Batch: 73693 | Date Analyzed: 2010-09-21 | Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.0	99	85 - 115	2010-09-21

Standard (ICV-1)

QC Batch: 73694 | Date Analyzed: 2010-09-21 | Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.2	99	85 - 115	2010-09-21

Standard (CCV-1)

QC Batch: 73694 | Date Analyzed: 2010-09-21 | Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2010-09-21

Standard (CCV-1)

QC Batch: 73737 | Date Analyzed: 2010-09-21 | Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.968	97	80 - 120	2010-09-21

Standard (CCV-2)

QC Batch: 73737 | Date Analyzed: 2010-09-21 | Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.887	89	80 - 120	2010-09-21

WO #: 1091321

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 14

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.: 114-6400676

PROJECT NAME: COG / Red Lake Sand Unit # 45 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
244359	9/9		S		X	AH-1 0-1'	1				X			X												X				
360						AH-1 1'-1.5'																									
361						AH-2 0-1'									X																
362						AH-2 1'-1.5'																									
363						AH-2 2'-2.5'																									
364						AH-2 3'-3.5'																									
365						AH-2 4'-4.5'																									
366						AH-2 5'-5.5'																									
367						AH-2 6'-6.5'																									
368						AH-2 7'-7.5'																									

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature)	Date: 09/10/10 Time: 1530	RECEIVED BY: (Signature)	Date: 9/10/10 Time: 15:30
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
RECEIVING LABORATORY: Tetra		RECEIVED BY: (Signature)	
ADDRESS:			
CITY: Midland STATE: TX ZIP:			
CONTACT: PHONE:		DATE: TIME:	

SAMPLED BY: (Print & Initial) JT/TF Date: 9/9/10 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

SAMPLE CONDITION WHEN RECEIVED: 3.7°C iAack

REMARKS: If total TPH exceeds 1,000 mg/kg run deeper samples / Run BTEX on 3 highest TPH. If total BTEX exceeds 50 mg/kg or Benzene exceeds 10 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.

*All tests Midland

WO #: 1009132

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:	SITE MANAGER:
COG	Ike Tavarez

PROJECT NO.:	PROJECT NAME:
114-640067G	COG / Red Lake Sand Unit #45 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
24436	9/9		S		X	AH-2 8'-8.5'	1				X													X				
370						AH-2 9'-9.5'																							
371						AH-3 0-1'								X															
372						AH-3 1'-1.5'																							
373						AH-3 2'-2.5'																							
374						AH-3 3'-3.5'																							
375						AH-3 4'-4.5'																							
376						AH-3 5'-5.5'																							
377						AH-3 6'-6.5'																							
378						AH-3 7'-7.5'																							

RELINQUISHED BY: (Signature) Meg Kirby	Date: 09/16/10 Time: 1530	RECEIVED BY: (Signature)	Date: 9/15/10 Time: 15:30
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:

SAMPLED BY: (Print & Initial) JT / TF — Date: 9/9/10 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: 3.7° c iMacx

REMARKS: If total TPH exceeds 1,000 mg/kg run deeper samples. Run BTEX on 3 highest TPH. If total Benzene exceeds 50 mg/kg or Benzene exceeds 10 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.

WO #: 10091321

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.: 114-640076

PROJECT NAME: COG / Red Lake Sand Unit #45 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
244379	9/9		S		X	AH-3 8'-8.5'	1				X													X				
380						AH-3 9'-9.5'																							
381						AH-4 0-1'								X															
382						AH-4 1'-1.5'																							
383						AH-4 2'-2.5'																							
384						AH-4 3'-3.5'																							
385						AH-4 4'-4.5'																							
386						AH-4 5'-5.5'																							
387						AH-5 0-1'								X															
388						AH-5 1'-1.5'																							

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature) — Date: 09/10/10 Time: 1530
RECEIVED BY: (Signature) — Date: 9/10/10 Time: 15:30
SAMPLED BY: (Print & Initial) JT/TF — Date: 9/9/10 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: Texas
ADDRESS:
CITY: Midland STATE: TX ZIP:
CONTACT: PHONE: DATE: TIME:
RECEIVED BY: (Signature)
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: Intact

REMARKS: If total TPH exceeds 1,000 mg/kg run deeper samples / Run BTEX on 3 highest TPH. If total BTEX exceeds 50 mg/kg or BTEX exceeds 10 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.

WO #: 1009321

Analysis Request of Chain of Custody Record

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

PAGE: 4 OF: 4

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 114-1400676

PROJECT NAME: COG / Red Lake Sand Unit #45
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
244389	9/9		S		X	AH-5 2'-2.5'	1				X													X				
390						AH-5 3'-3.5'																						
391						AH-5 4'-4.5'																						
392						AH-5 5'-5.5'																						
393						AH-5 6'-6.5'																						
394						AH-5 7'-7.5'																						

RELINQUISHED BY: (Signature)	Date: 09/10/10 Time: 1530	RECEIVED BY: (Signature)	Date: 9/10/10 Time: 1530
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:

SAMPLED BY: (Print & Initial) JT / TF Date: 9/9/10 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: DATE: TIME:
RECEIVED BY: (Signature)

SAMPLE CONDITION WHEN RECEIVED: 3.7°C intact

REMARKS: If total TPH exceeds 1,000 mg/kg run deeper samples / Run BTEX on 3 highest TPH. If total BTEX exceeds 50 mg/kg or Benzene exceeds 10 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.