RECEIVED OCT 0 1 2009

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

30-015-32365

Release Notification and Corrective Action

nSEB0900254386

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company COG OPERATING LLC	Contact Kanicia Carrillo
Address 550 W. Texas, Suite 1300 Midland, TX 79701	Telephone No. 432-685-4332
Facility Name – Aoudad State #1	Facility Type - Battery

Surface Owner BLM	Mineral Owner	Lease No. API# 30-015-32365

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
E	36	17S	31E	2310	North	330	West	Eddy

Latitude_____ **Longitude**_____

NATURE OF RELEASE

Type of Release Water	Volume of Release 60 bbls	Volume Recovered 55 bbls
Source of Release – 3" poly line	Date and Hour of Occurrence See Below 12/08/08 – 2:30pm	Date and Hour of Discovery- See Below 12/08/08 – 2:30pm
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher w/OCD	
By Whom? Kanicia Carillo	Date and Hour – December 8, 2008, 4:56pm	
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.*
Leak on the 3" poly line. Repaired poly line with new connections.

Describe Area Affected and Cleanup Action Taken.*
Two areas were affected with dimensions of 30' x 90' and 30' x 145'. The areas were excavated to a depth of 12' and the impacted soils were hauled off the location for disposal. The sites were then backfilled with clean fill material.

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: Tim Reed

Printed Name: Tim Reed (Agent for COG)

Title: Senior Project Manager

E-mail Address: timothy.reed@tetratech.com

Date: 08/24/09 Phone:(432)682-4559

OIL CONSERVATION DIVISION

Approved by Signed By: Mike Bratcher

Approval Date: OCT 0 1 2009 Expiration Date: N/A

Conditions of Approval: N/A Attached ☐

* Attach Additional Sheets If Necessary

2RP-287

RECEIVED OCT 0 1 2009

TETRA TECH

30-015-32365
2RP-287

August 21, 2009

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

Re: Closure Report for the COG Operating LLC., Aoudad State #1 Tank Battery, Unit E, Section 36, Township 17 South, Range 31 East, Eddy County, New Mexico.

Mr. Bratcher:

Tetra Tech Inc. (Tetra Tech) was contacted by COG Operating LLC. (COG) to assess a spill from the Aoudad State #1 Tank Battery located in Unit E, Section 36, Township 17 South, Range 31 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32°47.496, W 103°49.662. 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 December 8, 2008. Approximately 60 barrels of produced water was released from a 3-inch poly line leak. The 3 inch poly line was repaired with new connections. Vacuum trucks were utilized to recover 55 barrels of standing fluids. The initial C-141 is enclosed in Appendix A.

Groundwater

No water wells were listed within or surrounding Section 36. However, the New Mexico Office of the State Engineer reports water database listed one well in Section 34 with a reported depth to water of 271' below ground surface (bgs) and one in Section 12 of Township 18 South and Range 31 East, with a reported depth to water of 400' bgs. The State Engineer Report 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

Tetra Tech
1910 North Big Spring, Midland,TX 79705
Tel 432 682 4559 Fax 432 682 3946 www.tetratech.com

hydrocarbons (TPH) in soil. The proposed RRAL for benzene was determined to be 10 parts per million (ppm) or milligrams per kilogram (mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene, and xylene). Based upon the depth to groundwater, the proposed RRAL for TPH is 5,000 mg/kg.

Soil Assessment and Results

On December 23, 2008, Tetra Tech personnel inspected the spill area which measured approximately 35' by 145' on the south side of the lease road. During the initial assessment a total of four (4) auger holes (AH-1 through AH-4) were installed using a stainless steel hand auger to assess the impacted soils on the south side of the road. Select samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. All of the samples analyzed were below the RRAL for both BTEX and TPH. The chloride concentrations ranged from 853 mg/kg (AH-3 at 1-1.5') to 14,700 mg/kg (AH-1 at 7.5-8.0') with no chlorides delineated in any of the auger holes. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The results of the sampling are summarized in Table 1.

During the initial assessment a second release area measuring 30' by 90' was noted north of the lease road. It was decided to assess this release area at a later date utilizing a drill rig.

In order to complete delineation of the chlorides at the sites, on January 15, 2009, Tetra Tech personnel were onsite to install six (6) boreholes (SB-1 through SB-3 on the south side of lease road and SB-4 through SB-6 on the north side of the lease road) utilizing an air rotary rig. The borings were installed in the vicinity of the auger holes on the south side of the road, while the boreholes on the north side were evenly spaced. The boreholes were extended to a maximum depth of 20 to 35 feet bgs with samples collected at five foot intervals on the south side and at 2 to 3 feet intervals for the first 20 feet and 5 feet intervals thereafter on the north side of the lease road and submitted to the laboratory for analysis of chlorides. Analytical results indicate the maximum extent of chloride impact greater than 1,000 mg/kg extended from 13 feet (SB-3) to 25 feet (SB-4) bgs. All samples had chloride concentrations that decreased with depth. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The results of the sampling are summarized in Table 2. The location of the borehole and auger hole locations are shown on Figure 3.

Remedial Work and Closure Request

Based upon discussion with the NMOCD in Artesia, Tetra Tech personnel supervised the removal of impacted soils in the two spill areas from July 20-29, 2009. The excavations measured approximately 30' x 90' and 30' x 145'. Both areas were excavated to a depth of 12' below ground surface and the excavated soils were hauled to disposal. The sites were backfilled with clean fill material. A copy of the C-141 (Final) is included in Appendix A. Based upon the work performed at this site, COG requests closure of this site.

TETRA TECH

If you require any additional information or have any questions or comments concerning this report, please call at (432) 682-4559.

Respectfully submitted,
TETRA TECH

Tim Reed, P.G.
Senior Project Manager

cc: Pat Ellis – COG

FIGURES

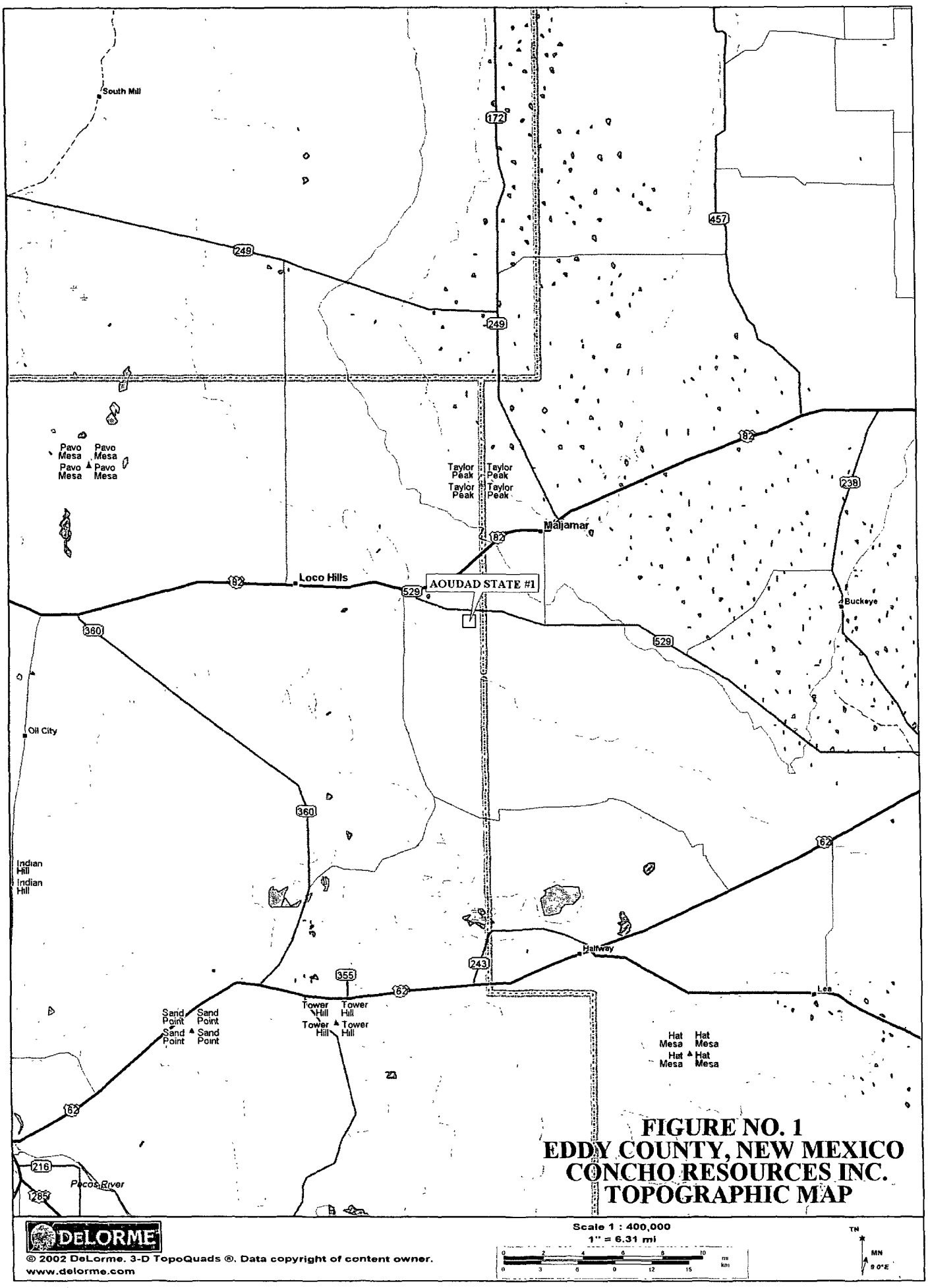


FIGURE NO. 1
EDDY COUNTY, NEW MEXICO
CONCHO RESOURCES INC.
TOPOGRAPHIC MAP

Scale 1 : 400,000
1" = 6.31 mi

TN
MN
9.0°E

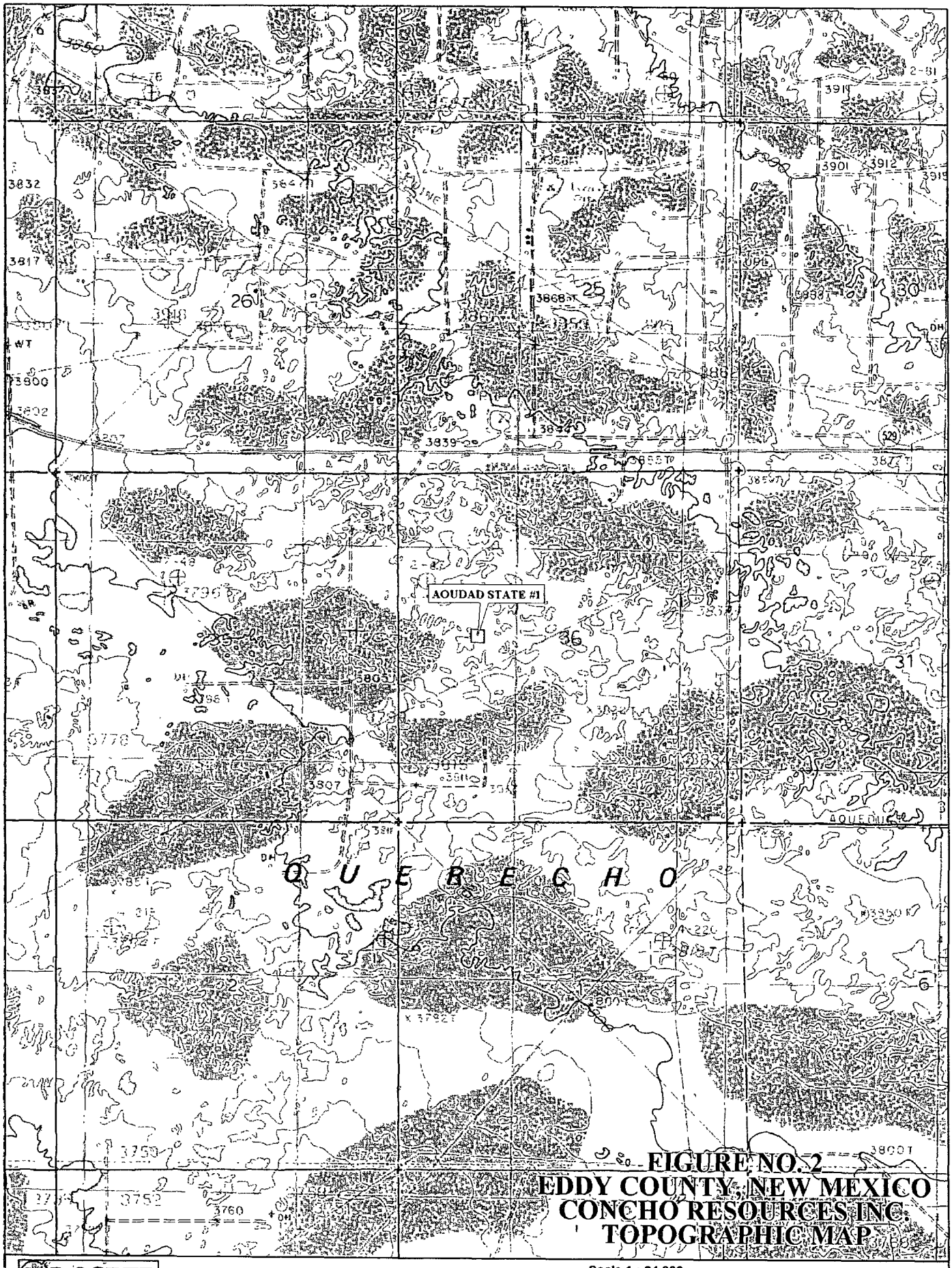
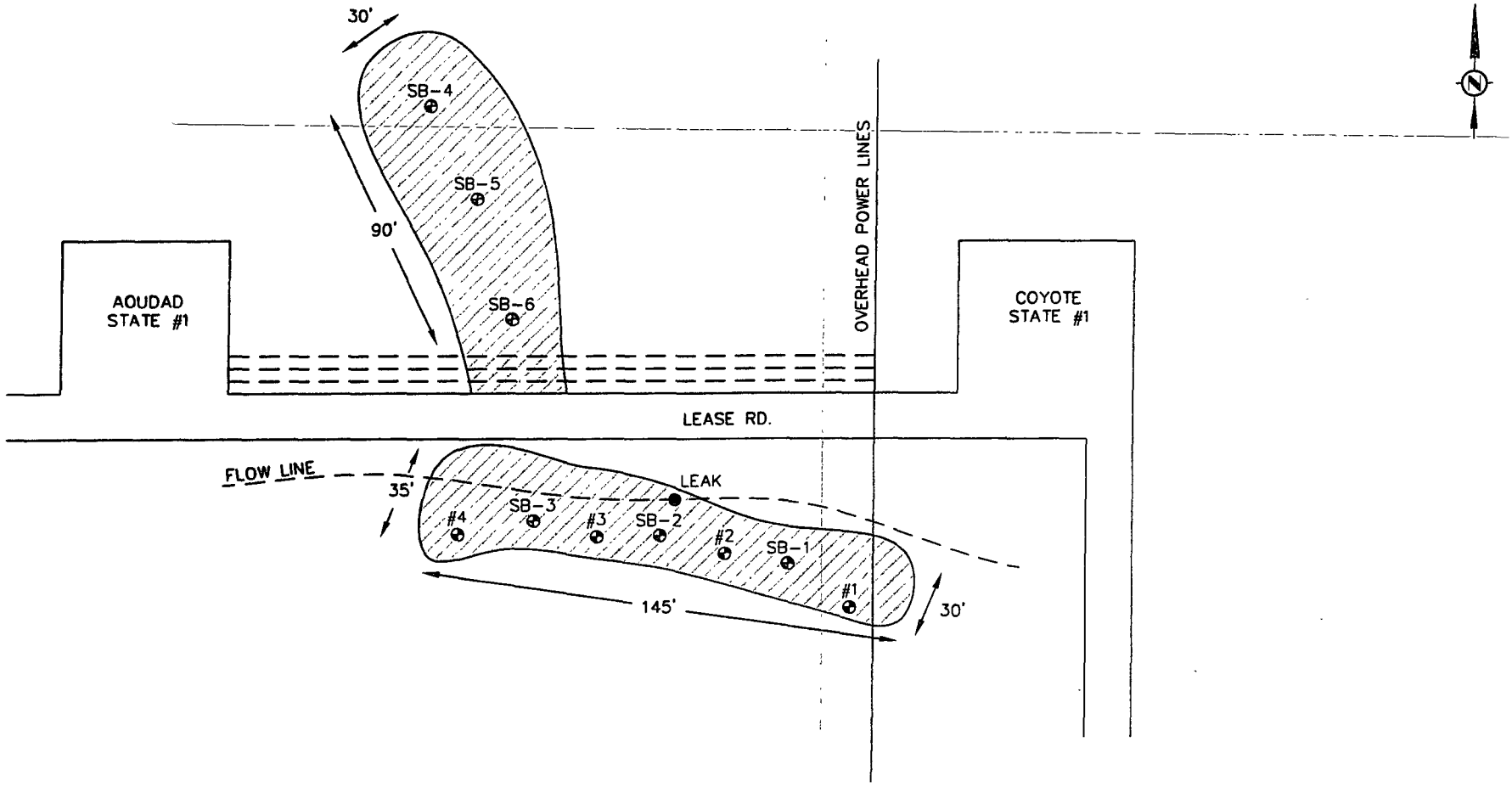


FIGURE NO. 2
EDDY COUNTY, NEW MEXICO
CONCHO RESOURCES INC.
TOPOGRAPHIC MAP



SPILL AREA
AUGER HOLE LOCATIONS
SOIL BORING LOCATIONS

NOT TO SCALE

FIGURE NO. 3

EDDY COUNTY, NEW MEXICO

CONCHO RESOURCES INC.

AOUDAD STATE #1

DATE: 2/3/09
DWN. BY: JJ
FILE: H:\CON\3638 AOUDAD STATE #1

TETRA TECH, INC.
MIDLAND, TEXAS

TABLES

Table 1
COG
Aoudad State #1 Tank Battery
Eddy County, New Mexico

Sample ID	Date Sampled	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	DRO	GRO	Total					
South Side of Road												
AH-1	12/23/2008	0-1		X	65.1	14.4	79.5	<0.0100	0.0148	0.0226	0.0828	4,680
		1-1.5		X	-	-	-	-	-	-	-	4,010
		2-2.5		X	-	-	-	-	-	-	-	4,310
		4-4.5		X	-	-	-	-	-	-	-	9,110
		6-6.5		X	-	-	-	-	-	-	-	10,600
		7.5-8.0		X	-	-	-	-	-	-	-	14,700
AH-2	12/23/2008	0-1		X	<50.0	3.04	3.04	<0.0100	<0.0100	<0.0100	<0.0100	4,350
		1-1.5		X	-	-	-	-	-	-	-	5,600
		2-2.5		X	-	-	-	-	-	-	-	5,570
		4-4.5		X	-	-	-	-	-	-	-	6,240
		6-6.5		X	-	-	-	-	-	-	-	1,920
		7.5-8.0		X	-	-	-	-	-	-	-	4,810
AH-3	12/23/2008	0-1		X	<50.0	1.19	1.19	-	-	-	-	4,640
		1-1.5		X	-	-	-	-	-	-	-	853
		2-2.5		X	-	-	-	-	-	-	-	868
		4-4.5		X	-	-	-	-	-	-	-	2,170
		6-6.5		X	-	-	-	-	-	-	-	4,040
		7.5-8.0		X	-	-	-	-	-	-	-	8,090
AH-4	12/23/2008	0-1		X	<50.0	1.06	1.06	-	-	-	-	5,380
		1-1.5		X	-	-	-	-	-	-	-	5,680
		2-2.5		X	-	-	-	-	-	-	-	7,300
		4-4.5		X	-	-	-	-	-	-	-	2,960
		6-6.5		X	-	-	-	-	-	-	-	2,240
		7.5-8.0		X	-	-	-	-	-	-	-	2,650

(-) Not Analyzed

Table 2
COG
Aoudad State #1 Tank Battery
Eddy County, New Mexico

Sample ID	Date Sampled	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	DRO	GRO	Total					
South Side of Road												
SB-1	1/15/2009	5'		X	-	-	-	-	-	-	-	6,760
		10'		X	-	-	-	-	-	-	-	5,430
		13'		X	-	-	-	-	-	-	-	5,950
		17'	X		-	-	-	-	-	-	-	7,310
		20'	X		-	-	-	-	-	-	-	8,680
		25'	X		-	-	-	-	-	-	-	704
		30'	X		-	-	-	-	-	-	-	342
		35'	X		-	-	-	-	-	-	-	279
SB-2	1/15/2009	5'		X	-	-	-	-	-	-	-	4,980
		10'		X	-	-	-	-	-	-	-	4,840
		13'		X	-	-	-	-	-	-	-	7,220
		17'	X		-	-	-	-	-	-	-	8,730
		20'	X		-	-	-	-	-	-	-	2,920
		25'	X		-	-	-	-	-	-	-	809
		30'	X		-	-	-	-	-	-	-	387
		35'	X		-	-	-	-	-	-	-	211
SB-3	1/15/2009	5'		X	-	-	-	-	-	-	-	3,920
		10'		X	-	-	-	-	-	-	-	4,300
		13'		X	-	-	-	-	-	-	-	7,070
		17'	X		-	-	-	-	-	-	-	865
		20'	X		-	-	-	-	-	-	-	450

(-) Not Analyzed

Table 2
COG
Aoudad State #1 Tank Battery
Eddy County, New Mexico

Sample ID	Date Sampled	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	DRO	GRO	Total					
North Side of Road												
SB-4	1/15/2009	0-1		X	7,020	3.57	7,023.57	<0.0100	0.130	<0.0100	0.317	5,060
		2'		X	255	<1.00	255	-	-	-	-	3,540
		4'		X	-	-	-	-	-	-	-	5,290
		6'		X	-	-	-	-	-	-	-	8,690
		8'		X	-	-	-	-	-	-	-	11,100
		10'		X	-	-	-	-	-	-	-	12,000
		13'		X	-	-	-	-	-	-	-	7,400
		17'	X		-	-	-	-	-	-	-	3,890
		20'	X		-	-	-	-	-	-	-	6,300
		25'	X		-	-	-	-	-	-	-	4,550
		30'	X		-	-	-	-	-	-	-	436
		35'	X		-	-	-	-	-	-	-	292
SB-5	1/15/2009	0-1		X	3,110	<5.00	3,110	<0.0500	<0.0500	<0.0500	<0.0500	3,270
		2'		X	-	-	-	-	-	-	-	6,420
		4'		X	-	-	-	-	-	-	-	7,100
		6'		X	-	-	-	-	-	-	-	4,770
		8'		X	-	-	-	-	-	-	-	13,200
		10'		X	-	-	-	-	-	-	-	10,600
		13'		X	-	-	-	-	-	-	-	11,200
		17'	X		-	-	-	-	-	-	-	8,860
		20'	X		-	-	-	-	-	-	-	2,040
		25'	X		-	-	-	-	-	-	-	742
		30'	X		-	-	-	-	-	-	-	496
SB-6	1/15/2009	0-1		X	9,530	51.1	9,581.1	<0.0500	0.660	<0.0500	2.71	5,920
		2'		X	445	11.8	456.8	-	-	-	-	4,020
		4'		X	-	-	-	-	-	-	-	7,000
		6'		X	-	-	-	-	-	-	-	6,960
		8'		X	-	-	-	-	-	-	-	6,380
		10'		X	-	-	-	-	-	-	-	15,100
		13'		X	-	-	-	-	-	-	-	13,500
		17'	X		-	-	-	-	-	-	-	8,370
		20'	X		-	-	-	-	-	-	-	2,370
		25'	X		-	-	-	-	-	-	-	893
		30'	X		-	-	-	-	-	-	-	927

(-) Not Analyzed

APPENDIX A

District I
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Form C-141
Revised October 10, 2003

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Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company COG OPERATING LLC	Contact Kanicia Carrillo
Address 550 W. Texas, Suite 1300 Midland, TX 79701	Telephone No. 432-685-4332
Facility Name – Aoudad State #1	Facility Type- Battery

Surface Owner BLM	Mineral Owner	Lease No.API# 30-015-32365

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
E	36	17S	31E	2310	North	330	West	Eddy

Latitude_____ **Longitude**_____

NATURE OF RELEASE

Type of Release- Water	Volume of Release-60 bbls	Volume Recovered- 55bbls
Source of Release- 3" poly line	Date and Hour of Occurrence- 12/08/08- 2:30pm	Date and Hour of Discovery 12/08/08-2:30 pm
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher w/OCD.	
By Whom? Kanicia Carrillo	Date and Hour December 8,2008, 4:56pm.	
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.*
Leak on the 3" poly line. Repaired poly line with new connections.

Describe Area Affected and Cleanup Action Taken.*
The area affected was 20' x 100' in the pasture. 200 yards SE of the #1 well. We have a vacuum truck on location and will remove any contaminated soil. Tetra Tech will turn in soil samples and final report.

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: Kanicia Carrillo	Approved by District Supervisor:
Title: Regulatory Analyst	Approval Date: / Expiration Date:
E-mail Address: kandicarrillo@conchoresources.com	Conditions of Approval: / Attached ☐
Date: 12/09/08 Phone: 432-685-4332	

Attach Additional Sheets If Necessary

APPENDIX B

Water Well Data
Average Depth to Groundwater (ft)
COG - Aoudad State #1 - Eddy County, New Mexico

16 South 30 East

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

16 South 31 East

6	5	4	3	2	1
7	8	9	10	11	12 **288**
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

16 South 32 East

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

17 South 30 East

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

17 South 31 East

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

17 South 32 East

6	5	4 **82**	3 **175**	2 **60**	1 **225**
7	8	9	10	11 **70** **88**	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

18 South 30 East

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

18 South 31 East

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

18 South 32 East

6	5	4 **65**	3	2	1
7 **460** **82**	8	9	10	11	12
18	17	16 **84**	15	14	13
19	20 **164**	21	22 **429**	23	24
30	29	28	27	26	25
31	32	33	34 **117**	35	36

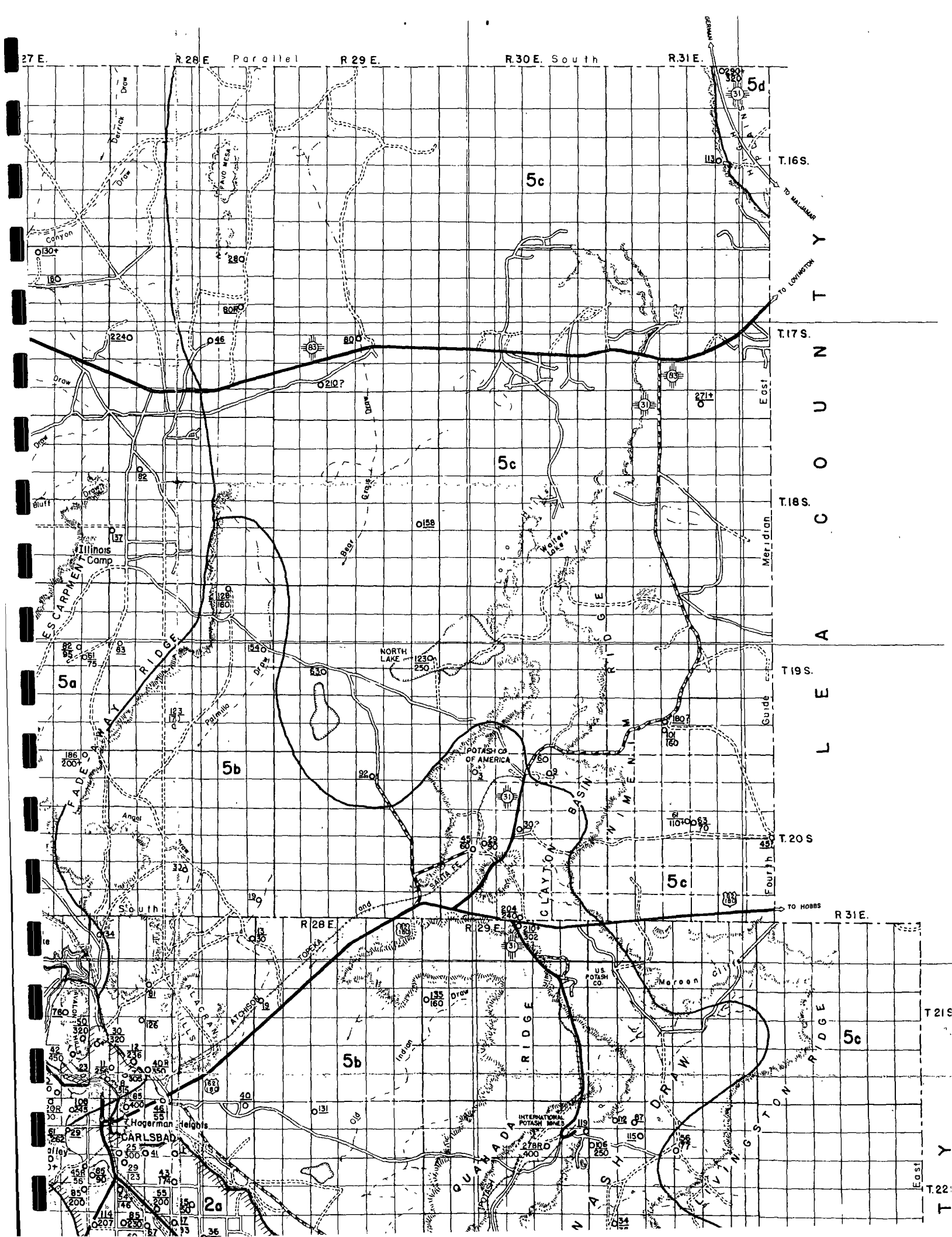
88 New Mexico State Engineers Well Reports

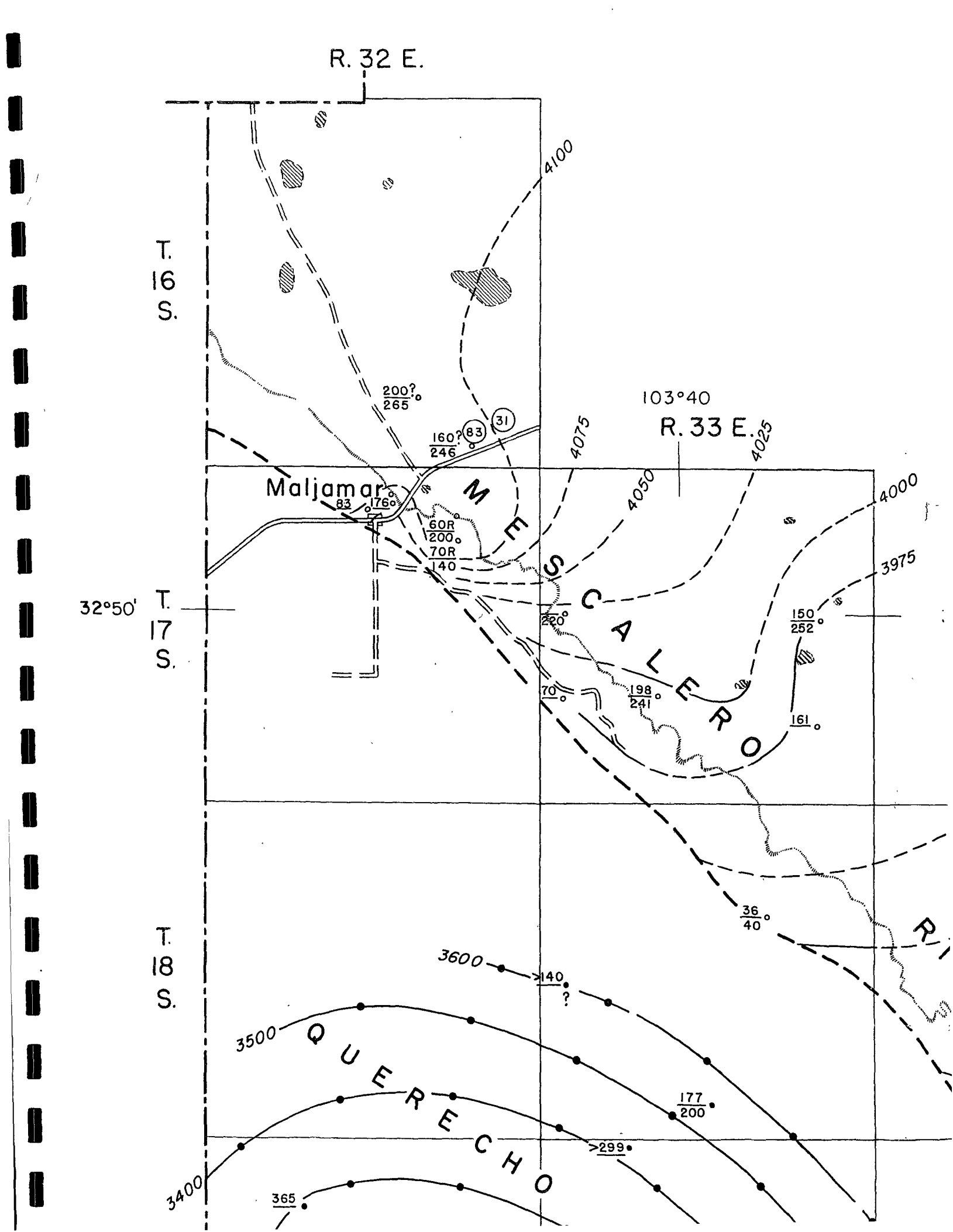
105 USGS Well Reports

90 Geology and Groundwater Conditions in Southern Lea, County, NM (Report 6)

Geology and Groundwater Resources of Eddy County, NM (Report 3)

34 NMOCD - Groundwater Data


R.27 E.
R.28 E.
Parallel
R 29 E.
R.30 E. South
R.31 E.
T.16 S.
T.17 S.
T.18 S.
T.19 S.
T.20 S
T 21 S
T.22 S
LEA COUNTY
New Mexico
Principal Meridian
East
Fourth
5a
5b
5c
5d
2a
ESCARPMENT
FADE-AWAY RIDGE
Illinois Camp
Bear Grass
Draw
Bluff
Canyon
Derrick
PAVO MESA
Walters Lake
NORTH LAKE
POTASH CO OF AMERICA
CLAYTON BASIN
MALJAMAR
TO LOVINGTON
TO HOBBS
GERMAN
SNAKE
Maroon Cliffs
U.S. POTASH CO.
INTERNATIONAL POTASH MINES
QUAHADA RIDGE
LIVINGSTON RIDGE
DOGIE DRAW
Hagerman Heights
CARLSBAD
SANTA FE
TOPEKA and SANTA FE
ATCHISON
Indian
Old
Angel
Palmillo


R. 32 E.
R. 33 E.
103°40
32°50'
T. 16 S.
T. 17 S.
T. 18 S.
Maljamar
MESCALERO
QUERECHO
4100
4075
4050
4025
4000
3975
3600
3500
3400
200?/265°
160?/246°
83
31
176°
60R/200°
70R/140
220°
150/252°
198/241°
70°
161°
36/40°
140
177/200
299
365

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 17S Range: 31E Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

Owner Name: (First) (Last) Non-Domestic Domestic All

POD / Surface Data Report | Avg Depth to Water Report | Water Column Report

Clear Form | iWATERS Menu | Help

AVERAGE DEPTH OF WATER REPORT 02/16/2009

Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	(Depth Water in Feet) Min	Max	Avg

No Records found, try again

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 18S Range: 32E Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

Owner Name: (First) (Last) Non-Domestic Domestic All

POD / Surface Data Report | Avg Depth to Water Report | Water Column Report

Clear Form | iWATERS Menu | Help

AVERAGE DEPTH OF WATER REPORT 02/16/2009

							(Depth Water in Feet)		
Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max	Avg
CP	18S	32E	04				1	65	65	65
CP	18S	32E	07				1	460	460	460

Record Count: 2

USGS Home
Contact USGS
Search USGS

National Water Information System: Web Interface

USGS Water Resources

Data Category: Ground Water | Geographic Area: United States | GO

News: Recent changes

Ground-water levels for the Nation

Search Results -- 1 sites found

Search Criteria

site_no list = • 325100103435701
Minimum number of levels = 1

Save file of selected sites to local disk for future upload

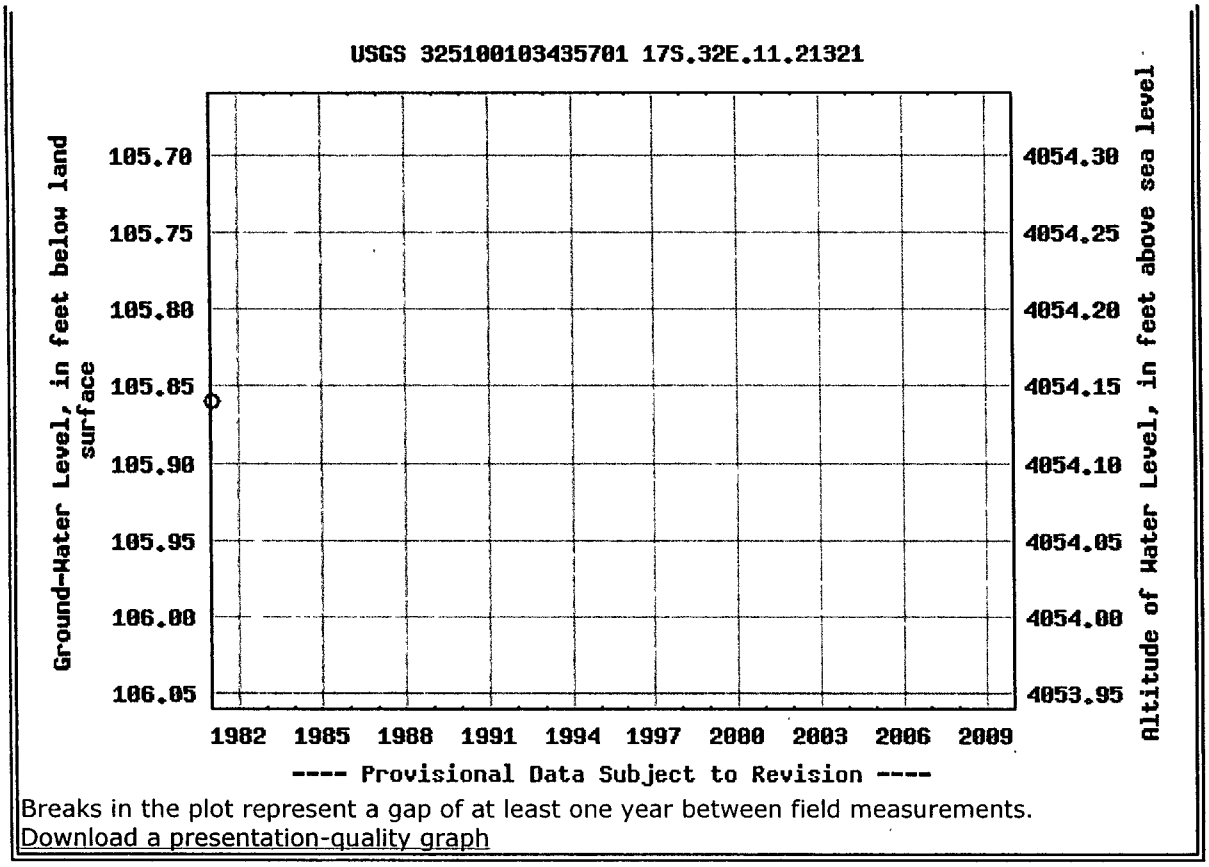
USGS 325100103435701 17S.32E.11.21321

Available data for this site Ground-water: Field measurements | GO

Lea County, New Mexico
Hydrologic Unit Code
Latitude 32°51'15", Longitude 103°44'07" NAD27
Land-surface elevation 4,160.00 feet above sea level NGVD29
This well is completed in the OGALLALA FORMATION (121OGLL) 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?
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U.S. Department of the Interior | U.S. Geological Survey
Title: Ground water for USA: Water Levels
URL: http://waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: NWISWeb Support Team
Page Last Modified: 2009-02-16 14:58:37 EST
3.69 1.84 nadww01

National Water Information System: Web Interface

USGS Water Resources

Data Category: Ground Water | Geographic Area: United States | GO

News: Recent changes

Ground-water levels for the Nation

Search Results -- 1 sites found

Search Criteria

site_no list = • 324519103474501
Minimum number of levels = 1

Save file of selected sites to local disk for future upload

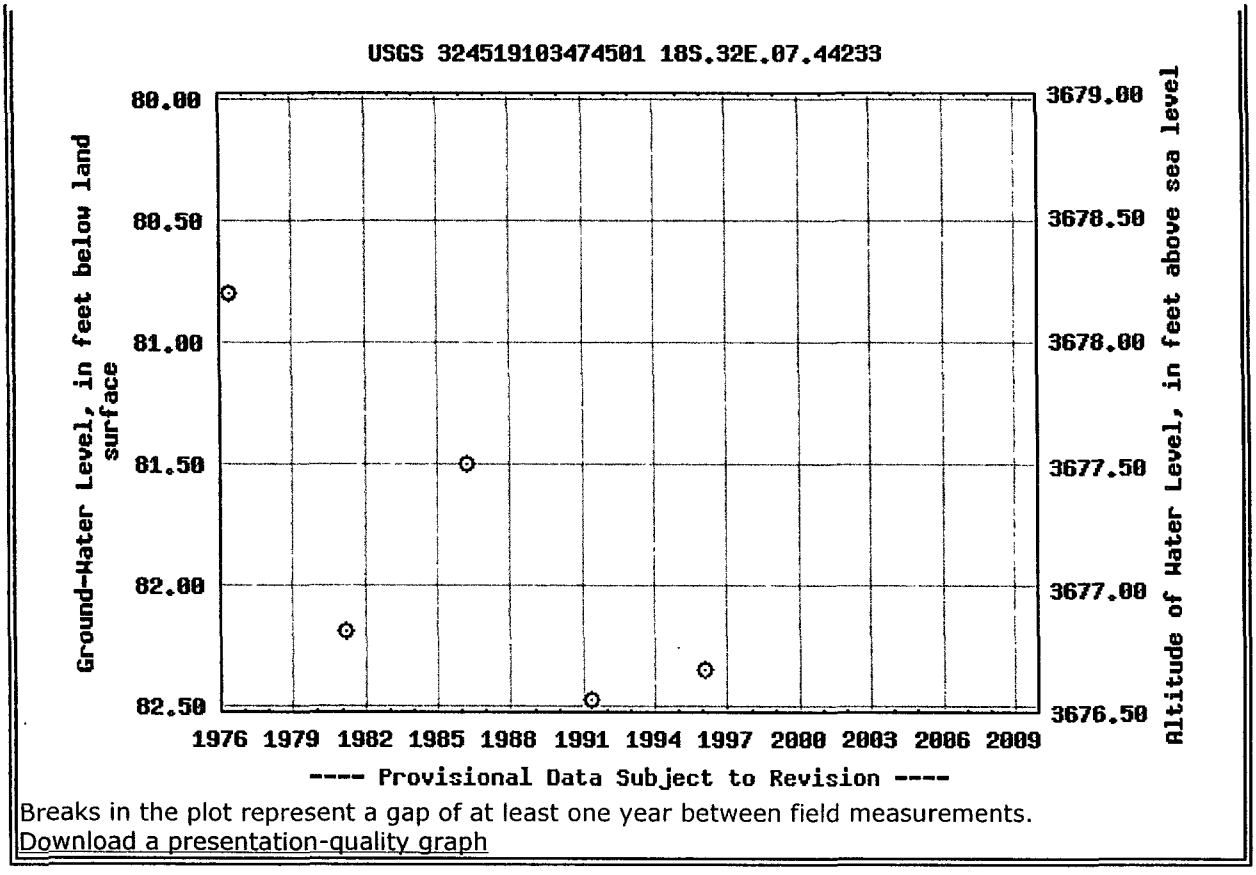
USGS 324519103474501 18S.32E.07.44233

Available data for this site Ground-water: Field measurements | GO

Lea County, New Mexico
Hydrologic Unit Code 13060011
Latitude 32°45'24", Longitude 103°47'55" NAD27
Land-surface elevation 3,759.00 feet above sea level NGVD29
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.
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U.S. Department of the Interior | U.S. Geological Survey
Title: Ground water for USA: Water Levels
URL: http://waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: NWISWeb Support Team
Page Last Modified: 2009-02-16 16:09:27 EST
7.11 1.85 nadww01

NM WAIDS

DATA MAPS HOME SCALE CORROSION

General Information About: Sample 2392			
Section/ Township/Range	34 / 17 S / 31 E	Lat/Long	32.7908 / -103.8566
Elevation	3799	Depth	362
Date Collected	12/6/1948	Chlorides	54
Collector / Point of Collection	USG / DP	Use	Stock
Formation	SANTA ROSA	TDS	0

New Mexico Tech

NM WAIDS

DATA MAPS HOME SCALE CORROSION

General Information About: Sample 6082			
Section/ Township/Range	01 / 17 S / 32 E	Lat/Long	32.8633 / -103.7193
Elevation	4225	Depth	225
Date Collected	11/16/1979	Chlorides	4
Collector / Point of Collection	SEO / DP	Use	Secondary Recovery of Oil
Formation	OGALLALA	TDS	0

New Mexico Tech

NM WAIDS

DATA MAPS HOME SCALE CORROSION

General Information About: Sample 7710			
Section/ Township/Range	03 / 17 S / 32 E	Lat/Long	32.8633 / -103 7536
Elevation	4238	Depth	0
Date Collected	7/21/1954	Chlorides	17
Collector / Point of Collection	USG / DP	Use	
Formation	OGALLALA	TDS	0

New Mexico Tech

RRC

NM WAIDS

DATA MAPS HOME SCALE CORROSION

General Information About: Sample 3522			
Section/ Township/Range	07 / 18 S / 32 E	Lat/Long	32.7618 / -103.8051
Elevation	3759	Depth	0
Date Collected	9/24/1981	Chlorides	6
Collector / Point of Collection	SEO / DP	Use	Stock
Formation	CHINLE	TDS	0

New Mexico Tech

NM WAIDS

DATA MAPS HOME SCALE CORROSION

General Information About: Sample 3517			
Section/ Township/Range	07 / 18 S / 32 E	Lat/Long	32 7618 / -103.8051
Elevation	3759	Depth	0
Date Collected	12/8/1965	Chlorides	19
Collector / Point of Collection	SEO / DP	Use	Stock
Formation	CHINLE	TDS	0

New Mexico Tech PRRC

NM WAIDS

DATA MAPS HOME SCALE CORROSION

General Information About: Sample 14118			
Section/ Township/Range	16 / 18 S / 32 E	Lat/Long	32.7473 / -103.7708
Elevation	0	Depth	0
Date Collected	9/20/1991	Chlorides	147
Collector / Point of Collection	SEO / TS@80'	Use	
Formation		TDS	0

New Mexico Tech

NM WAIDS

DATA MAPS HOME SCALE CORROSION

General Information About: Sample 13719			
Section/ Township/Range	16 / 18 S / 32 E	Lat/Long	32.7473 / -103.7708
Elevation	0	Depth	0
Date Collected	9/20/1991	Chlorides	150
Collector / Point of Collection	SEO / TS@90'	Use	
Formation		TDS	0

New Mexico Tech

PRRC

NM WAIDS

DATA MAPS HOME SCALE CORROSION

General Information About: Sample 3474			
Section/ Township/Range	20 / 18 S / 32 E	Lat/Long	32.7328 / -103.7879
Elevation	3740	Depth	270
Date Collected	10/14/1981	Chlorides	226
Collector / Point of Collection	SEO / TS@202	Use	Well presently not in use
Formation	CHINLE	TDS	0

New Mexico Tech PRRC

NM WAIDS

DATA MAPS HOME SCALE CORROSION

General Information About: Sample 3502			
Section/ Township/Range	20 / 18 S / 32 E	Lat/Long	32.7328 / -103 7879
Elevation	3740	Depth	270
Date Collected	9/24/1981	Chlorides	253
Collector / Point of Collection	SEO / TS@180	Use	Domestic
Formation	CHINLE	TDS	0

New Mexico Tech PRRC

NM WAIDS

DATA | MAPS | HOME | SCALE | CORROSION

General Information About: Sample 3083			
Section/ Township/Range	12 / 18 S / 31 E	Lat/Long	32.7618 / -103.8222
Elevation	3761	Depth	485
Date Collected	12/8/1965	Chlorides	18
Collector / Point of Collection	SEO / YT	Use	Domestic
Formation	CHINLE	TDS	0

New Mexico Tech

APPRC

NM WAIDS

DATA MAPS HOME SCALE CORROSION

General Information About: Sample 3433			
Section/ Township/Range	12 / 18 S / 31 E	Lat/Long	32.7618 / -103.8222
Elevation	3770	Depth	520
Date Collected	12/18/1965	Chlorides	24
Collector / Point of Collection	SEO /	Use	Secondary Recovery of Oil
Formation	CHINLE	TDS	0

New Mexico Tech

NM WAIDS

DATA MAPS HOME SCALE CORROSION

General Information About: Sample 2526			
Section/ Township/Range	12 / 18 S / 31 E	Lat/Long	32.7618 / -103.8222
Elevation	3778	Depth	690
Date Collected	1/26/1987	Chlorides	222
Collector / Point of Collection	SEO / TS@689	Use	Secondary Recovery of Oil
Formation	SANTA ROSA	TDS	0

New Mexico Tech

NM WAIDS

DATA MAPS HOME SCALE CORROSION

General Information About: Sample 3495			
Section/ Township/Range	14 / 18 S / 31 E	Lat/Long	32.7473 / -103 8394
Elevation	3731	Depth	400
Date Collected	4/10/1985	Chlorides	33
Collector / Point of Collection	SEO / TS@398	Use	Well presently not in use
Formation	CHINLE	TDS	0

New Mexico Tech

NM WAIDS

DATA MAPS HOME SCALE CORROSION

General Information About: Sample 1927			
Section/ Township/Range	12 / 18 S / 31 E	Lat/Long	32.7618 / -103.8222
Elevation	3778	Depth	690
Date Collected	9/25/1990	Chlorides	505
Collector / Point of Collection	SEO / TS@600	Use	Secondary Recovery of Oil
Formation	SANTA ROSA	TDS	0

New Mexico Tech

NM WAIDS

DATA MAPS HOME SCALE CORROSION

General Information About: Sample 2158			
Section/ Township/Range	12 / 18 S / 31 E	Lat/Long	32.7618 / -103.8222
Elevation	3778	Depth	690
Date Collected		Chlorides	505
Collector / Point of Collection	SEO / TS@600	Use	Secondary Recovery of Oil
Formation	SANTA ROSA	TDS	0

New Mexico Tech

PRRC

APPENDIX C

SAMPLE LOG

Boring/Well: SB-1
Project Number: 3647
Client: COG Resources
Site Location: Aoudad State #1
Location: Eddy County, New Mexico
Total Depth 35
Date Installed: 01/15/09

DEPTH (in feet)	OVM	CHLORIDES (Field) (in mg/Kg)	SAMPLE DESCRIPTION
5	--	--	Tan/brown fine to medium grain sand
10	--	--	Tan/brown fine to medium grain sand with limestone intermixed
13	--	--	Tan fine grain fine to medium grain sand
17	--	--	Tan fine grain fine to medium grain sand
20	--	--	Tan fine grain fine to medium grain sand
25	--	--	Red sandy clay
30	--	--	Red sandy clay
35	--	--	Red clayey medium grain sand

Boring completed at 35 feet bgs No groundwater encountered during drilling activities

SAMPLE LOG

Boring/Well: SB-2
Project Number: 3647
Client: COG Resources
Site Location: Aoudad State #1
Location: Eddy County, New Mexico
Total Depth 35
Date Installed: 01/15/09

DEPTH (in feet)	OVM	CHLORIDES (Field) (in mg/Kg)	SAMPLE DESCRIPTION
5	--	--	Tan/brown fine to medium grain sand
10	--	--	Tan/brown fine to medium grain sand with limestone intermixed
13	--	--	Tan fine grain sand
17	--	--	Tan fine grain sand
20	--	--	Tan fine grain sand
25	--	--	Red sandy clay
30	--	--	Red sandy clay
35	--	--	Red to tan clayey sand

Boring completed at 35 feet bgs No groundwater encountered during drilling activities

SAMPLE LOG

Boring/Well: SB-3
Project Number: 3647
Client: COG Resources
Site Location: Aoudad State #1
Location: Eddy County, New Mexico
Total Depth 35
Date Installed: 01/15/09

DEPTH (in feet)	OVM	CHLORIDES (Field) (in mg/Kg)	SAMPLE DESCRIPTION
5	--	--	Tan/brown fine to medium grain sand
10	--	--	Tan to buff fine grain calcareous sand
13	--	--	Tan fine grain sand
17	--	--	Tan fine grain sand
20	--	--	Red clayey sand

Boring completed at 20 feet bgs No groundwater encountered during drilling activities

SAMPLE LOG

Boring/Well: SB-4
Project Number: 3647
Client: COG Resources
Site Location: Aoudad State #1
Location: Eddy County, New Mexico
Total Depth 35
Date Installed: 01/15/09

DEPTH (in feet)	OVM	CHLORIDES (Field) (in mg/Kg)	SAMPLE DESCRIPTION
Surface	--	--	Tan/brown fine grain sand
2	--	--	Tan/brown fine grain sand
4	--	--	Tan/brown fine grain sand
6	--	--	Tan/brown fine grain sand
8	--	--	Tan/buff calcareous sand
10	--	--	Tan/buff calcareous sand
13	--	--	Tan/buff calcareous sand
17	--	--	Tan fine grain sand
20	--	--	Tan fine grain sand
25	--	--	Red fine grain clayey sand
30	--	--	Red fine grain clayey sand
35	--	--	Red fine grain clayey sand

Boring completed at 35 feet bgs No groundwater encountered during drilling activities

SAMPLE LOG

Boring/Well: SB-5
Project Number: 3647
Client: COG Resources
Site Location: Aoudad State #1
Location: Eddy County, New Mexico
Total Depth 30
Date Installed: 01/15/09

DEPTH (in feet)	OVM	CHLORIDES (Field) (in mg/Kg)	SAMPLE DESCRIPTION
Surface	--	--	Tan/brown fine grain sand
2	--	--	Tan/brown fine grain sand
4	--	--	Tan/brown fine grain sand
6	--	--	Tan/brown fine grain sand
8	--	--	Tan/buff calcareous sand
10	--	--	Tan/buff calcareous sand
13	--	--	Tan/buff calcareous sand
17	--	--	Tan fine grain sand
20	--	--	Tan fine grain sand
25	--	--	Red fine grain clayey sand
30	--	--	Red fine grain clayey sand

Boring completed at 30 feet bgs No groundwater encountered during drilling activities

SAMPLE LOG

Boring/Well: SB-6
Project Number: 3647
Client: COG Resources
Site Location: Aoudad State #1
Location: Eddy County, New Mexico
Total Depth 30
Date Installed: 01/15/09

DEPTH (in feet)	OVM	CHLORIDES (Field) (in mg/Kg)	SAMPLE DESCRIPTION
Surface	--	--	Dark brown to tan fine grain sand
2	--	--	Tan/brown fine grain sand
4	--	--	Tan/brown fine grain sand
6	--	--	Tan/brown fine grain sand
8	--	--	Tan/brown fine grain sand
10	--	--	Tan/buff calcareous sand
13	--	--	Tan/buff calcareous sand
17	--	--	Tan/buff calcareous sand
20	--	--	Tan fine grain sand
25	--	--	Red fine grain clayey sand
30	--	--	Red fine grain clayey sand

Boring completed at 30 feet bgs No groundwater encountered during drilling activities

APPENDIX D

Summary Report

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

Report Date: December 31, 2008

Work Order: 8122411

Project Location: Eddy Co., NM
Project Name: COG/Aoudad State #1 Flowline
Project Number: 115-6403647

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
183581	AH-1 0-1'	soil	2008-12-23	00:00	2008-12-24
183582	AH-1 1-1.5'	soil	2008-12-23	00:00	2008-12-24
183583	AH-1 2-2.5'	soil	2008-12-23	00:00	2008-12-24
183584	AH-1 4-4.5'	soil	2008-12-23	00:00	2008-12-24
183585	AH-1 6-6.5'	soil	2008-12-23	00:00	2008-12-24
183586	AH-1 7.5-8.0'	soil	2008-12-23	00:00	2008-12-24
183587	AH-2 0-1'	soil	2008-12-23	00:00	2008-12-24
183588	AH-2 1-1.5'	soil	2008-12-23	00:00	2008-12-24
183589	AH-2 2-2.5'	soil	2008-12-23	00:00	2008-12-24
183590	AH-2 4-4.5'	soil	2008-12-23	00:00	2008-12-24
183591	AH-2 6-6.5'	soil	2008-12-23	00:00	2008-12-24
183592	AH-2 7.5-8.0'	soil	2008-12-23	00:00	2008-12-24
183593	AH-3 0-1'	soil	2008-12-23	00:00	2008-12-24
183594	AH-3 1-1.5	soil	2008-12-23	00:00	2008-12-24
183595	AH-3 2-2.5'	soil	2008-12-23	00:00	2008-12-24
183596	AH-3 4-4.5'	soil	2008-12-23	00:00	2008-12-24
183597	AH-3 6-6.5'	soil	2008-12-23	00:00	2008-12-24
183598	AH-3 7.5-8'	soil	2008-12-23	00:00	2008-12-24
183599	AH-4 0-1'	soil	2008-12-23	00:00	2008-12-24
183600	AH-4 1-1.5'	soil	2008-12-23	00:00	2008-12-24
183601	AH-4 2-2.5'	soil	2008-12-23	00:00	2008-12-24
183602	AH-4 4-4.5'	soil	2008-12-23	00:00	2008-12-24
183603	AH-4 6-6.5'	soil	2008-12-23	00:00	2008-12-24
183604	AH-4 7.5-8.0'	soil	2008-12-23	00:00	2008-12-24

Sample - Field Code	BTEX Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	TPH DRO DRO (mg/Kg)	TPH GRO GRO (mg/Kg)
183581 - AH-1 0-1'	<0.0100	**0.0148**	**0.0226**	**0.0828**	**65.1**	**14.4**
183587 - AH-2 0-1'	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	**3.04**
183593 - AH-3 0-1'					<50.0	**1.19**
183599 - AH-4 0-1'					<50.0	**1.06**

Sample: 183581 - AH-1 0-1'

Param	Flag	Result	Units	RL
Chloride		**4680**	mg/Kg	4.00

Sample: 183582 - AH-1 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**4010**	mg/Kg	4.00

Sample: 183583 - AH-1 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**4310**	mg/Kg	4.00

Sample: 183584 - AH-1 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**9110**	mg/Kg	4.00

Sample: 183585 - AH-1 6-6.5'

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

Sample: 183586 - AH-1 7.5-8.0'

Param	Flag	Result	Units	RL
Chloride		**14700**	mg/Kg	4.00

Sample: 183587 - AH-2 0-1'

Param	Flag	Result	Units	RL
Chloride		**4350**	mg/Kg	4.00

Sample: 183588 - AH-2 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**5600**	mg/Kg	4.00

Sample: 183589 - AH-2 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**5570**	mg/Kg	4.00

Sample: 183590 - AH-2 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**6240**	mg/Kg	4.00

Sample: 183591 - AH-2 6-6.5'

Param	Flag	Result	Units	RL
Chloride		**1920**	mg/Kg	4.00

Sample: 183592 - AH-2 7.5-8.0'

Param	Flag	Result	Units	RL
Chloride		**4810**	mg/Kg	4.00

Sample: 183593 - AH-3 0-1'

Param	Flag	Result	Units	RL
Chloride		**4640**	mg/Kg	4.00

Sample: 183594 - AH-3 1-1.5

Param	Flag	Result	Units	RL
Chloride		**853**	mg/Kg	4.00

Sample: 183595 - AH-3 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**868**	mg/Kg	4.00

Sample: 183596 - AH-3 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**2170**	mg/Kg	4.00

Sample: 183597 - AH-3 6-6.5'

Param	Flag	Result	Units	RL
Chloride		**4040**	mg/Kg	4.00

Sample: 183598 - AH-3 7.5-8'

Param	Flag	Result	Units	RL
Chloride		**8090**	mg/Kg	4.00

Sample: 183599 - AH-4 0-1'

Param	Flag	Result	Units	RL
Chloride		**5380**	mg/Kg	4.00

Sample: 183600 - AH-4 1-1.5'

Param	Flag	Result	Units	RL
Chloride		**5680**	mg/Kg	4.00

Sample: 183601 - AH-4 2-2.5'

Param	Flag	Result	Units	RL
Chloride		**7300**	mg/Kg	4.00

Sample: 183602 - AH-4 4-4.5'

Param	Flag	Result	Units	RL
Chloride		**2960**	mg/Kg	4.00

Sample: 183603 - AH-4 6-6.5'

Param	Flag	Result	Units	RL
Chloride		**2240**	mg/Kg	4.00

Sample: 183604 - AH-4 7.5-8.0'

Param	Flag	Result	Units	RL
Chloride		**2650**	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: December 31, 2008

Work Order: 8122411

Project Location: Eddy Co., NM
Project Name: COG/Aoudad State #1 Flowline
Project Number: 115-6403647

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
183581	AH-1 0-1'	soil	2008-12-23	00:00	2008-12-24
183582	AH-1 1-1.5'	soil	2008-12-23	00:00	2008-12-24
183583	AH-1 2-2.5'	soil	2008-12-23	00:00	2008-12-24
183584	AH-1 4-4.5'	soil	2008-12-23	00:00	2008-12-24
183585	AH-1 6-6.5'	soil	2008-12-23	00:00	2008-12-24
183586	AH-1 7.5-8.0'	soil	2008-12-23	00:00	2008-12-24
183587	AH-2 0-1'	soil	2008-12-23	00:00	2008-12-24
183588	AH-2 1-1.5'	soil	2008-12-23	00:00	2008-12-24
183589	AH-2 2-2.5'	soil	2008-12-23	00:00	2008-12-24
183590	AH-2 4-4.5'	soil	2008-12-23	00:00	2008-12-24

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
183591	AH-2 6-6.5'	soil	2008-12-23	00:00	2008-12-24
183592	AH-2 7.5-8.0'	soil	2008-12-23	00:00	2008-12-24
183593	AH-3 0-1'	soil	2008-12-23	00:00	2008-12-24
183594	AH-3 1-1.5	soil	2008-12-23	00:00	2008-12-24
183595	AH-3 2-2.5'	soil	2008-12-23	00:00	2008-12-24
183596	AH-3 4-4.5'	soil	2008-12-23	00:00	2008-12-24
183597	AH-3 6-6.5'	soil	2008-12-23	00:00	2008-12-24
183598	AH-3 7.5-8'	soil	2008-12-23	00:00	2008-12-24
183599	AH-4 0-1'	soil	2008-12-23	00:00	2008-12-24
183600	AH-4 1-1.5'	soil	2008-12-23	00:00	2008-12-24
183601	AH-4 2-2.5'	soil	2008-12-23	00:00	2008-12-24
183602	AH-4 4-4.5'	soil	2008-12-23	00:00	2008-12-24
183603	AH-4 6-6.5'	soil	2008-12-23	00:00	2008-12-24
183604	AH-4 7.5-8.0'	soil	2008-12-23	00:00	2008-12-24

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

Standard Flags

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

Case Narrative

Samples for project COG/Aoudad State #1 Flowline were received by TraceAnalysis, Inc. on 2008-12-24 and assigned to work order 8122411. Samples for work order 8122411 were received intact at a temperature of 3.4 deg. C.

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

Test	Method
BTEX	S 8021B
Chloride (Titration)	SM 4500-Cl B
TPH DRO	Mod. 8015B
TPH GRO	S 8015B

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 8122411 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: 183581 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	55611	Date Analyzed:	2008-12-29	Analyzed By:	AG
Prep Batch:	47531	Sample Preparation:	2008-12-29	Prepared By:	ME

Parameter	Flag	Result	RL	Units	Dilution	RL
Benzene		<0.0100		mg/Kg	1	0.0100
Toluene		**0.0148**		mg/Kg	1	0.0100
Ethylbenzene		**0.0226**		mg/Kg	1	0.0100
Xylene		**0.0828**		mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.974	mg/Kg	1	1.00	97	68 - 136.9
4-Bromofluorobenzene (4-BFB)		1.08	mg/Kg	1	1.00	108	48.2 - 155

Sample: 183581 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	55616	Date Analyzed:	2008-12-30	Analyzed By:	AR
Prep Batch:	47513	Sample Preparation:	2008-12-29	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**4680**		mg/Kg	50	4.00

Sample: 183581 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	55596	Date Analyzed:	2008-12-30	Analyzed By:	AG
Prep Batch:	47507	Sample Preparation:	2008-12-30	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
DRO		**65.1**		mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		79.1	mg/Kg	1	100	79	10 - 250.4

Sample: 183581 - AH-1 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	55612	Date Analyzed:	2008-12-29	Analyzed By:	AG
Prep Batch:	47531	Sample Preparation:	2008-12-29	Prepared By:	ME

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		**14.4**	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.842	mg/Kg	1	1.00	84	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		0.879	mg/Kg	1	1.00	88	63.8 - 141

Sample: 183582 - AH-1 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	55616	Date Analyzed:	2008-12-30	Analyzed By:	AR
Prep Batch:	47513	Sample Preparation:	2008-12-29	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**4010**	mg/Kg	50	4.00

Sample: 183583 - AH-1 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	55616	Date Analyzed:	2008-12-30	Analyzed By:	AR
Prep Batch:	47513	Sample Preparation:	2008-12-29	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**4310**	mg/Kg	50	4.00

Sample: 183584 - AH-1 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	55616	Date Analyzed:	2008-12-30	Analyzed By:	AR
Prep Batch:	47513	Sample Preparation:	2008-12-29	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**9110**	mg/Kg	50	4.00

Sample: 183585 - AH-1 6-6.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	55616	Date Analyzed:	2008-12-30	Analyzed By:	AR
Prep Batch:	47513	Sample Preparation:	2008-12-29	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**10600**	mg/Kg	50	4.00

Sample: 183586 - AH-1 7.5-8.0'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	55616	Date Analyzed:	2008-12-30	Analyzed By:	AR
Prep Batch:	47513	Sample Preparation:	2008-12-29	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**14700**	mg/Kg	50	4.00

Sample: 183587 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	55611	Date Analyzed:	2008-12-29	Analyzed By:	AG
Prep Batch:	47531	Sample Preparation:	2008-12-29	Prepared By:	ME

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

continued ...

sample 183587 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
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)		1.00	mg/Kg	1	1.00	100	68 - 136.9
4-Bromofluorobenzene (4-BFB)		1.10	mg/Kg	1	1.00	110	48.2 - 155

Sample: 183587 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	55616	Date Analyzed:	2008-12-30	Analyzed By:	AR
Prep Batch:	47513	Sample Preparation:	2008-12-29	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**4350**	mg/Kg	50	4.00

Sample: 183587 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	55596	Date Analyzed:	2008-12-30	Analyzed By:	AG
Prep Batch:	47507	Sample Preparation:	2008-12-30	Prepared By:	AG

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-Triacontane		76.9	mg/Kg	1	100	77	10 - 250.4

Sample: 183587 - AH-2 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	55612	Date Analyzed:	2008-12-29	Analyzed By:	AG
Prep Batch:	47531	Sample Preparation:	2008-12-29	Prepared By:	ME

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		**3.04**	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.859	mg/Kg	1	1.00	86	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		0.924	mg/Kg	1	1.00	92	63.8 - 141

Sample: 183588 - AH-2 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	55616	Date Analyzed:	2008-12-30	Analyzed By:	AR
Prep Batch:	47513	Sample Preparation:	2008-12-29	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**5600**	mg/Kg	50	4.00

Sample: 183589 - AH-2 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	55616	Date Analyzed:	2008-12-30	Analyzed By:	AR
Prep Batch:	47513	Sample Preparation:	2008-12-29	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**5570**	mg/Kg	50	4.00

Sample: 183590 - AH-2 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	55617	Date Analyzed:	2008-12-30	Analyzed By:	AR
Prep Batch:	47514	Sample Preparation:	2008-12-29	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**6240**	mg/Kg	50	4.00

Sample: 183591 - AH-2 6-6.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	55617	Date Analyzed:	2008-12-30	Analyzed By:	AR
Prep Batch:	47514	Sample Preparation:	2008-12-29	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**1920**		mg/Kg	50	4.00

Sample: 183592 - AH-2 7.5-8.0'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	55617	Date Analyzed:	2008-12-30	Analyzed By:	AR
Prep Batch:	47514	Sample Preparation:	2008-12-29	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**4810**		mg/Kg	50	4.00

Sample: 183593 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	55617	Date Analyzed:	2008-12-30	Analyzed By:	AR
Prep Batch:	47514	Sample Preparation:	2008-12-29	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**4640**		mg/Kg	50	4.00

Sample: 183593 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	55596	Date Analyzed:	2008-12-30	Analyzed By:	AG
Prep Batch:	47507	Sample Preparation:	2008-12-30	Prepared By:	AG

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-Triacontane		79.7	mg/Kg	1	100	80	10 - 250.4

Sample: 183593 - AH-3 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	55612	Date Analyzed:	2008-12-29	Analyzed By:	AG
Prep Batch:	47531	Sample Preparation:	2008-12-29	Prepared By:	ME

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		**1.19**	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.838	mg/Kg	1	1.00	84	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		0.911	mg/Kg	1	1.00	91	63.8 - 141

Sample: 183594 - AH-3 1-1.5

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	55617	Date Analyzed:	2008-12-30	Analyzed By:	AR
Prep Batch:	47514	Sample Preparation:	2008-12-29	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**853**	mg/Kg	50	4.00

Sample: 183595 - AH-3 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	55617	Date Analyzed:	2008-12-30	Analyzed By:	AR
Prep Batch:	47514	Sample Preparation:	2008-12-29	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**868**	mg/Kg	50	4.00

Sample: 183596 - AH-3 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	55617	Date Analyzed:	2008-12-30	Analyzed By:	AR
Prep Batch:	47514	Sample Preparation:	2008-12-29	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**2170**		mg/Kg	50	4.00

Sample: 183597 - AH-3 6-6.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	55617	Date Analyzed:	2008-12-30	Analyzed By:	AR
Prep Batch:	47514	Sample Preparation:	2008-12-29	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**4040**		mg/Kg	50	4.00

Sample: 183598 - AH-3 7.5-8'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	55617	Date Analyzed:	2008-12-30	Analyzed By:	AR
Prep Batch:	47514	Sample Preparation:	2008-12-29	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**8090**		mg/Kg	50	4.00

Sample: 183599 - AH-4 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	55617	Date Analyzed:	2008-12-30	Analyzed By:	AR
Prep Batch:	47514	Sample Preparation:	2008-12-29	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**5380**		mg/Kg	50	4.00

Sample: 183599 - AH-4 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	55596	Date Analyzed:	2008-12-30	Analyzed By:	AG
Prep Batch:	47507	Sample Preparation:	2008-12-30	Prepared By:	AG

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-Triacontane		77.6	mg/Kg	1	100	78	10 - 250.4

Sample: 183599 - AH-4 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	55612	Date Analyzed:	2008-12-29	Analyzed By:	AG
Prep Batch:	47531	Sample Preparation:	2008-12-29	Prepared By:	ME

Parameter	Flag	Result	RL	Units	Dilution	RL
GRO			**1.06**	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.896	mg/Kg	1	1.00	90	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		0.969	mg/Kg	1	1.00	97	63.8 - 141

Sample: 183600 - AH-4 1-1.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	55618	Date Analyzed:	2008-12-30	Analyzed By:	AR
Prep Batch:	47515	Sample Preparation:	2008-12-29	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride			**5680**	mg/Kg	50	4.00

Sample: 183601 - AH-4 2-2.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	55618	Date Analyzed:	2008-12-30	Analyzed By:	AR
Prep Batch:	47515	Sample Preparation:	2008-12-29	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**7300**	mg/Kg	50	4.00

Sample: 183602 - AH-4 4-4.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	55618	Date Analyzed:	2008-12-30	Analyzed By:	AR
Prep Batch:	47515	Sample Preparation:	2008-12-29	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**2960**	mg/Kg	50	4.00

Sample: 183603 - AH-4 6-6.5'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	55618	Date Analyzed:	2008-12-30	Analyzed By:	AR
Prep Batch:	47515	Sample Preparation:	2008-12-29	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**2240**	mg/Kg	50	4.00

Sample: 183604 - AH-4 7.5-8.0'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	55618	Date Analyzed:	2008-12-30	Analyzed By:	AR
Prep Batch:	47515	Sample Preparation:	2008-12-29	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**2650**	mg/Kg	50	4.00

Method Blank (1) QC Batch: 55596

QC Batch: 55596 | Date Analyzed: 2008-12-30 | Analyzed By: AG
Prep Batch: 47507 | QC Preparation: 2008-12-30 | Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
DRO		<15.8	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		59.9	mg/Kg	1	100	60	30.9 - 146.4

Method Blank (1) QC Batch: 55611

QC Batch: 55611 | Date Analyzed: 2008-12-29 | Analyzed By: AG
Prep Batch: 47531 | QC Preparation: 2008-12-29 | Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.00580	mg/Kg	0.01
Toluene		<0.00470	mg/Kg	0.01
Ethylbenzene		<0.00530	mg/Kg	0.01
Xylene		<0.0136	mg/Kg	0.01

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.988	mg/Kg	1	1.00	99	48.3 - 132.5
4-Bromofluorobenzene (4-BFB)		1.04	mg/Kg	1	1.00	104	37.7 - 128.9

Method Blank (1) QC Batch: 55612

QC Batch: 55612 | Date Analyzed: 2008-12-29 | Analyzed By: AG
Prep Batch: 47531 | QC Preparation: 2008-12-29 | Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
GRO		0.814	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.839	mg/Kg	1	1.00	84	39.2 - 135.2
4-Bromofluorobenzene (4-BFB)		0.865	mg/Kg	1	1.00	86	16.8 - 138.1

Method Blank (1) QC Batch: 55616

QC Batch:	55616	Date Analyzed:	2008-12-30	Analyzed By:	AR
Prep Batch:	47513	QC Preparation:	2008-12-29	Prepared By:	AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.01	mg/Kg	4

Method Blank (1) QC Batch: 55617

QC Batch:	55617	Date Analyzed:	2008-12-30	Analyzed By:	AR
Prep Batch:	47514	QC Preparation:	2008-12-29	Prepared By:	AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.01	mg/Kg	4

Method Blank (1) QC Batch: 55618

QC Batch:	55618	Date Analyzed:	2008-12-30	Analyzed By:	AR
Prep Batch:	47515	QC Preparation:	2008-12-29	Prepared By:	AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.01	mg/Kg	4

Laboratory Control Spike (LCS-1)

QC Batch:	55596	Date Analyzed:	2008-12-30	Analyzed By:	AG
Prep Batch:	47507	QC Preparation:	2008-12-30	Prepared By:	AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	260	mg/Kg	1	250	<15.8	104	27.8 - 152.1

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	256	mg/Kg	1	250	<15.8	102	27.8 - 152.1	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
n-Triacontane	69.7	72.5	mg/Kg	1	100	70	72	38 - 130.4

Laboratory Control Spike (LCS-1)

QC Batch: 55611 | Date Analyzed: 2008-12-29 | Analyzed By: AG
Prep Batch: 47531 | QC Preparation: 2008-12-29 | Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.993	mg/Kg	1	1.00	<0.00580	99	73.3 - 116.6
Toluene	0.971	mg/Kg	1	1.00	<0.00470	97	78.6 - 115.1
Ethylbenzene	0.961	mg/Kg	1	1.00	<0.00530	96	77.4 - 114.9
Xylene	2.89	mg/Kg	1	3.00	<0.0136	96	78.2 - 114.7

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	0.989	mg/Kg	1	1.00	<0.00580	99	73.3 - 116.6	0	20
Toluene	0.972	mg/Kg	1	1.00	<0.00470	97	78.6 - 115.1	0	20
Ethylbenzene	0.953	mg/Kg	1	1.00	<0.00530	95	77.4 - 114.9	1	20
Xylene	2.88	mg/Kg	1	3.00	<0.0136	96	78.2 - 114.7	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)	0.974	0.966	mg/Kg	1	1.00	97	97	45 - 124.2
4-Bromofluorobenzene (4-BFB)	1.05	1.04	mg/Kg	1	1.00	105	104	47.2 - 130.4

Laboratory Control Spike (LCS-1)

QC Batch: 55612 | Date Analyzed: 2008-12-29 | Analyzed By: AG
Prep Batch: 47531 | QC Preparation: 2008-12-29 | Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	7.71	mg/Kg	1	10.0	<0.442	77	57.5 - 106.4

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	7.47	mg/Kg	1	10.0	<0.442	75	57.5 - 106.4	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
Trifluorotoluene (TFT)	0.862	0.831	mg/Kg	1	1.00	86	83	63.8 - 134.3
4-Bromofluorobenzene (4-BFB)	0.894	0.896	mg/Kg	1	1.00	89	90	53.3 - 123.6

Laboratory Control Spike (LCS-1)

QC Batch: 55616 | Date Analyzed: 2008-12-30 | Analyzed By: AR
Prep Batch: 47513 | QC Preparation: 2008-12-29 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.2	mg/Kg	1	100	<2.01	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	100	mg/Kg	1	100	<2.01	100	85 - 115	2	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: 55617 | Date Analyzed: 2008-12-30 | Analyzed By: AR
Prep Batch: 47514 | QC Preparation: 2008-12-29 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.6	mg/Kg	1	100	<2.01	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	<2.01	100	85 - 115	2	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: 55618 | Date Analyzed: 2008-12-30 | Analyzed By: AR
Prep Batch: 47515 | QC Preparation: 2008-12-29 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.5	mg/Kg	1	100	<2.01	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	101	mg/Kg	1	100	<2.01	101	85 - 115	3	20

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

Matrix Spike (MS-1) Spiked Sample: 183599

QC Batch: 55596 | Date Analyzed: 2008-12-30 | Analyzed By: AG
Prep Batch: 47507 | QC Preparation: 2008-12-30 | Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	242	mg/Kg	1	250	<15.8	97	18 - 179.5

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	215	mg/Kg	1	250	<15.8	86	18 - 179.5	12	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-Triacontane	78.1	74.7	mg/Kg	1	100	78	75	34.1 - 158

Matrix Spike (MS-1) Spiked Sample: 182894

QC Batch: 55611 | Date Analyzed: 2008-12-29 | Analyzed By: AG
Prep Batch: 47531 | QC Preparation: 2008-12-29 | Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.942	mg/Kg	1	1.00	<0.00580	94	62.2 - 134.3
Toluene	0.945	mg/Kg	1	1.00	<0.00470	94	62.6 - 145.4
Ethylbenzene	0.962	mg/Kg	1	1.00	<0.00530	96	64.6 - 146.4
Xylene	2.92	mg/Kg	1	3.00	0.0522	96	64.3 - 148.8

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	1.00	mg/Kg	1	1.00	<0.00580	100	62.2 - 134.3	6	20
Toluene	0.984	mg/Kg	1	1.00	<0.00470	98	62.6 - 145.4	4	20
Ethylbenzene	1.01	mg/Kg	1	1.00	<0.00530	101	64.6 - 146.4	5	20

continued ...

matrix spikes continued ...

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Xylene	3.08	mg/Kg	1	3.00	0.0522	101	64.3 - 148.8	5	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.946	0.984	mg/Kg	1	1	95	98	38.8 - 127.5
4-Bromofluorobenzene (4-BFB)	1.07	1.10	mg/Kg	1	1	107	110	49.3 - 142.4

Matrix Spike (MS-1) Spiked Sample: 183599

QC Batch: 55612 | Date Analyzed: 2008-12-29 | Analyzed By: AG
Prep Batch: 47531 | QC Preparation: 2008-12-29 | Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	9.90	mg/Kg	1	10.0	1.06	88	10 - 139.3

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	9.02	mg/Kg	1	10.0	1.06	80	10 - 139.3	9	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)	0.854	0.833	mg/Kg	1	1	85	83	21.3 - 119
4-Bromofluorobenzene (4-BFB)	0.965	0.952	mg/Kg	1	1	96	95	52.5 - 154

Matrix Spike (MS-1) Spiked Sample: 183589

QC Batch: 55616 | Date Analyzed: 2008-12-30 | Analyzed By: AR
Prep Batch: 47513 | QC Preparation: 2008-12-29 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10000	mg/Kg	50	5000	5570	89	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	50	5000	5570	91	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: 183599

QC Batch: 55617 | Date Analyzed: 2008-12-30 | Analyzed By: AR
Prep Batch: 47514 | QC Preparation: 2008-12-29 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	9620	mg/Kg	50	5000	5380	85	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	9650	mg/Kg	50	5000	5380	85	85 - 115	0	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: 183604

QC Batch: 55618 | Date Analyzed: 2008-12-30 | Analyzed By: AR
Prep Batch: 47515 | QC Preparation: 2008-12-29 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	7470	mg/Kg	50	5000	2650	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	7550	mg/Kg	50	5000	2650	98	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: 55596 | Date Analyzed: 2008-12-30 | Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	235	94	85 - 115	2008-12-30

Standard (CCV-2)

QC Batch: 55596 | Date Analyzed: 2008-12-30 | Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	259	104	85 - 115	2008-12-30

Standard (CCV-3)

QC Batch: 55596 Date Analyzed: 2008-12-30 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	264	106	85 - 115	2008-12-30

Standard (ICV-1)

QC Batch: 55611 Date Analyzed: 2008-12-29 Analyzed By: AG

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0963	96	85 - 115	2008-12-29
Toluene		mg/Kg	0.100	0.0952	95	85 - 115	2008-12-29
Ethylbenzene		mg/Kg	0.100	0.0939	94	85 - 115	2008-12-29
Xylene		mg/Kg	0.300	0.284	95	85 - 115	2008-12-29

Standard (CCV-1)

QC Batch: 55611 Date Analyzed: 2008-12-29 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.102	102	85 - 115	2008-12-29
Toluene		mg/Kg	0.100	0.0996	100	85 - 115	2008-12-29
Ethylbenzene		mg/Kg	0.100	0.0964	96	85 - 115	2008-12-29
Xylene		mg/Kg	0.300	0.291	97	85 - 115	2008-12-29

Standard (ICV-1)

QC Batch: 55612 Date Analyzed: 2008-12-29 Analyzed By: AG

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.942	94	85 - 115	2008-12-29

Standard (CCV-1)

QC Batch: 55612 Date Analyzed: 2008-12-29 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	1.00	100	85 - 115	2008-12-29

Standard (ICV-1)

QC Batch: 55616 Date Analyzed: 2008-12-30 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	104	104	85 - 115	2008-12-30

Standard (CCV-1)

QC Batch: 55616 Date Analyzed: 2008-12-30 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	95.9	96	85 - 115	2008-12-30

Standard (ICV-1)

QC Batch: 55617 Date Analyzed: 2008-12-30 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	2008-12-30

Standard (CCV-1)

QC Batch: 55617 Date Analyzed: 2008-12-30 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	2008-12-30

Standard (ICV-1)

QC Batch: 55618 Date Analyzed: 2008-12-30 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	2008-12-30

Standard (CCV-1)

QC Batch: 55618 Date Analyzed: 2008-12-30 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.6	100	85 - 115	2008-12-30

Work Order # 010011

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.: 115-6403647

PROJECT NAME: COG / Rowland State #1 Flowline 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
183581	12/23/08		S		X	AH-1 0-1	1				X	
582						AH-1 1-1.5'						
583						AH-1 2-2.5'						
584						AH-1 4-4.5'						
585						AH-1 6-6.5'						
586						AH-2 7.5-8.0						
587						AH-2 0-1						
588						AH-2 ~~1.5~~ RC 1-1.5						
589						AH-2 2-2.5'						
590	↓		↓		↓	AH-2 4-4.5	↓				↓	

ANALYSIS REQUEST (Circle or Specify Method No.)

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. 8081/608	Chlorides	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
RC	X											X				
RC	X										RC	X				
↓												↓				

RELINQUISHED BY: (Signature) Robert Gamble Jr. Date: 12/24/08 Time: 940

RECEIVED BY: (Signature) Date: 2-01-08 Time: 10:41

SAMPLED BY: (Print & Initial) Robert Gamble Jr. Date: 12/24/08 Time: 940

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: Cool. 3.4°C

REMARKS: If total TPH exceeds 5000 mg/kg run deeper interval
Run 2 BTEX on highest TPH

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.

Work Order # 012011

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.: 115-64036647

PROJECT NAME: COG / Avalon State #1 Flowline Eddy CO. NM

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd 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
183591	12/23/08		S		X	AH-2 6-6.5'	1				X													X				
592						AH-2 7.5-8.0'																							
593						AH-3 0-1							RA	X											X				
594						AH-3 1-1.5'																							
595						AH-3 2-2.5'																							
596						AH-3 4-4.5'																							
597						AH-3 6-6.5'																							
598						AH-3 7.5-8.0																							
599						AH-4 0-1							RA	X											X				
600						AH-4 1-1.5																							

RELINQUISHED BY: (Signature) Date: 12-24-08 Time: 5:30

RECEIVED BY: (Signature) Date: 12-24-08 Time: 10:41

SAMPLED BY: (Print & Initial) Date: 12-23-08 Time: 5:30

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: Good. 7.4°C

REMARKS: If total TPH exceeds 5000 mg/kg run deeper interval

Run 2 BTEX on highest TPH

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.

Work Order # 8100111

Analysis Request of Chain of Custody Record

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

PAGE: 3 OF: 3

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG

SITE MANAGER: Ike Tavarez

PROJECT NO.: 115-6403647

PROJECT NAME: COG/Haverdad State #1 Flowline Eddy, Co.

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
183601	12/23/08		S		X	AH-4 2-2.5	1				X	
602	↓		↓		↓	AH-4 4-4.5	↓				↓	
603						AH-4 6-6.5						
604	↓		↓		↓	AH-4 7.5-8.0	↓				↓	

ANALYSIS REQUEST (Circle or Specify Method No.): 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 (X); Gamma Spec.; Alpha Beta (Air); PLM (Asbestos); Major Anions/Cations, pH, TDS

RELINQUISHED BY: (Signature) Robert Allen Jr	Date: 12/24/08 Time: 1000	RECEIVED BY: (Signature)	Date: 12-24-08 Time: 10:41
SAMPLED BY: (Print & Initial) Robert Allen Jr	Date: 12/23/08 Time: 1000		
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 Analysis	RECEIVED BY: (Signature)		
ADDRESS: CITY: Midland STATE: TX ZIP: CONTACT: PHONE:	DATE: TIME:		RUSH Charges Authorized: Yes (No)

SAMPLE CONDITION WHEN RECEIVED: Good 3.4°C

REMARKS: If total TPH exceeds 5200 mg/kg run deeper interval
Run 2 BTEX on highest TPH
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.

Summary Report

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

Report Date: January 28, 2009

Work Order: 9011625

Project Location: Eddy Co., NM
Project Name: COG/Aoudad State #1 Flowline
Project Number: 115-6403647

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
185081	SB-1 (5')	soil	2009-01-15	00:00	2009-01-16
185082	SB-1 (10')	soil	2009-01-15	00:00	2009-01-16
185083	SB-1 (13')	soil	2009-01-15	00:00	2009-01-16
185084	SB-1 (17')	soil	2009-01-15	00:00	2009-01-16
185085	SB-1 (20')	soil	2009-01-15	00:00	2009-01-16
185086	SB-1 (25')	soil	2009-01-15	00:00	2009-01-16
185087	SB-1 (30')	soil	2009-01-15	00:00	2009-01-16
185088	SB-1 (35')	soil	2009-01-15	00:00	2009-01-16
185089	SB-2 (5')	soil	2009-01-15	00:00	2009-01-16
185090	SB-2 (10')	soil	2009-01-15	00:00	2009-01-16
185091	SB-2 (13')	soil	2009-01-15	00:00	2009-01-16
185092	SB-2 (17')	soil	2009-01-15	00:00	2009-01-16
185093	SB-2 (20')	soil	2009-01-15	00:00	2009-01-16
185094	SB-2 (25')	soil	2009-01-15	00:00	2009-01-16
185095	SB-2 (30')	soil	2009-01-15	00:00	2009-01-16
185096	SB-2 (35')	soil	2009-01-15	00:00	2009-01-16
185097	SB-3 (5')	soil	2009-01-15	00:00	2009-01-16
185098	SB-3 (10')	soil	2009-01-15	00:00	2009-01-16
185099	SB-3 (13')	soil	2009-01-15	00:00	2009-01-16
185100	SB-3 (17')	soil	2009-01-15	00:00	2009-01-16
185101	SB-3 (20')	soil	2009-01-15	00:00	2009-01-16
185102	SB-4 (Surface to 1')	soil	2009-01-15	00:00	2009-01-16
185103	SB-4 (2')	soil	2009-01-15	00:00	2009-01-16
185104	SB-4 (4')	soil	2009-01-15	00:00	2009-01-16
185105	SB-4 (6')	soil	2009-01-15	00:00	2009-01-16
185106	SB-4 (8')	soil	2009-01-15	00:00	2009-01-16
185107	SB-4 (10')	soil	2009-01-15	00:00	2009-01-16
185108	SB-4 (13')	soil	2009-01-15	00:00	2009-01-16
185109	SB-4 (17')	soil	2009-01-15	00:00	2009-01-16
185110	SB-4 (20')	soil	2009-01-15	00:00	2009-01-16

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
185111	SB-4 (25')	soil	2009-01-15	00:00	2009-01-16
185112	SB-4 (30')	soil	2009-01-15	00:00	2009-01-16
185113	SB-4 (35')	soil	2009-01-15	00:00	2009-01-16
185114	SB-5 (Surface to 1')	soil	2009-01-15	00:00	2009-01-16
185115	SB-5 (2')	soil	2009-01-15	00:00	2009-01-16
185116	SB-5 (4')	soil	2009-01-15	00:00	2009-01-16
185117	SB-5 (6')	soil	2009-01-15	00:00	2009-01-16
185118	SB-5 (8')	soil	2009-01-15	00:00	2009-01-16
185119	SB-5 (10')	soil	2009-01-15	00:00	2009-01-16
185120	SB-5 (13')	soil	2009-01-15	00:00	2009-01-16
185121	SB-5 (17')	soil	2009-01-15	00:00	2009-01-16
185122	SB-5 (20')	soil	2009-01-15	00:00	2009-01-16
185123	SB-5 (25')	soil	2009-01-15	00:00	2009-01-16
185124	SB-5 (30')	soil	2009-01-15	00:00	2009-01-16
185125	SB-6 (Suface to 1')	soil	2009-01-15	00:00	2009-01-16
185126	SB-6 (2')	soil	2009-01-15	00:00	2009-01-16
185127	SB-6 (4')	soil	2009-01-15	00:00	2009-01-16
185128	SB-6 (6')	soil	2009-01-15	00:00	2009-01-16
185129	SB-6 (8')	soil	2009-01-15	00:00	2009-01-16
185130	SB-6 (10')	soil	2009-01-15	00:00	2009-01-16
185131	SB-6 (13')	soil	2009-01-15	00:00	2009-01-16
185132	SB-6 (17')	soil	2009-01-15	00:00	2009-01-16
185133	SB-6 (20')	soil	2009-01-15	00:00	2009-01-16
185134	SB-6 (25')	soil	2009-01-15	00:00	2009-01-16
185135	SB-6 (30')	soil	2009-01-15	00:00	2009-01-16

Sample - Field Code	BTEX Benzene (mg/Kg)	BTEX Toluene (mg/Kg)	BTEX Ethylbenzene (mg/Kg)	BTEX Xylene (mg/Kg)	TPH DRO DRO (mg/Kg)	TPH GRO GRO (mg/Kg)
185102 - SB-4 (Surface to 1')	<0.0100	**0.130**	<0.0100	**0.317**	**7020**	**3.57**
185103 - SB-4 (2')					**255**	<1.00
185114 - SB-5 (Surface to 1')	<0.0500	<0.0500	<0.0500	<0.0500	**3110**	<5.00
185125 - SB-6 (Suface to 1')	<0.0500	**0.660**	<0.0500	**2.71**	**9530**	**51.1**
185126 - SB-6 (2')					**445**	**11.8**

Sample: 185081 - SB-1 (5')

Param	Flag	Result	Units	RL
Chloride		**6760**	mg/Kg	4.00

Sample: 185082 - SB-1 (10')

Param	Flag	Result	Units	RL
Chloride		**5430**	mg/Kg	4.00

Sample: 185083 - SB-1 (13')

Param	Flag	Result	Units	RL
Chloride		**5950**	mg/Kg	4.00

Sample: 185084 - SB-1 (17')

Param	Flag	Result	Units	RL
Chloride		**7310**	mg/Kg	4.00

Sample: 185085 - SB-1 (20')

Param	Flag	Result	Units	RL
Chloride		**8680**	mg/Kg	4.00

Sample: 185086 - SB-1 (25')

Param	Flag	Result	Units	RL
Chloride		**704**	mg/Kg	4.00

Sample: 185087 - SB-1 (30')

Param	Flag	Result	Units	RL
Chloride		**342**	mg/Kg	4.00

Sample: 185088 - SB-1 (35')

Param	Flag	Result	Units	RL
Chloride		**279**	mg/Kg	4.00

Sample: 185089 - SB-2 (5')

Param	Flag	Result	Units	RL
Chloride		**4980**	mg/Kg	4.00

Sample: 185090 - SB-2 (10')

Param	Flag	Result	Units	RL
Chloride		**4840**	mg/Kg	4.00

Sample: 185091 - SB-2 (13')

Param	Flag	Result	Units	RL
Chloride		**7220**	mg/Kg	4.00

Sample: 185092 - SB-2 (17')

Param	Flag	Result	Units	RL
Chloride		**8730**	mg/Kg	4.00

Sample: 185093 - SB-2 (20')

Param	Flag	Result	Units	RL
Chloride		**2920**	mg/Kg	4.00

Sample: 185094 - SB-2 (25')

Param	Flag	Result	Units	RL
Chloride		**809**	mg/Kg	4.00

Sample: 185095 - SB-2 (30')

Param	Flag	Result	Units	RL
Chloride		**387**	mg/Kg	4.00

Sample: 185096 - SB-2 (35')

Param	Flag	Result	Units	RL
Chloride		**211**	mg/Kg	4.00

Sample: 185097 - SB-3 (5')

Param	Flag	Result	Units	RL
Chloride		**3920**	mg/Kg	4.00

Sample: 185098 - SB-3 (10')

Param	Flag	Result	Units	RL
Chloride		**4300**	mg/Kg	4.00

Sample: 185099 - SB-3 (13')

Param	Flag	Result	Units	RL
Chloride		**7070**	mg/Kg	4.00

Sample: 185100 - SB-3 (17')

Param	Flag	Result	Units	RL
Chloride		**865**	mg/Kg	4.00

Sample: 185101 - SB-3 (20')

Param	Flag	Result	Units	RL
Chloride		**450**	mg/Kg	4.00

Sample: 185102 - SB-4 (Surface to 1')

Param	Flag	Result	Units	RL
Chloride		**5060**	mg/Kg	4.00

Sample: 185103 - SB-4 (2')

Param	Flag	Result	Units	RL
Chloride		**3540**	mg/Kg	4.00

Sample: 185104 - SB-4 (4')

Param	Flag	Result	Units	RL
Chloride		**5290**	mg/Kg	4.00

Sample: 185105 - SB-4 (6')

Param	Flag	Result	Units	RL
Chloride		**8690**	mg/Kg	4.00

Sample: 185106 - SB-4 (8')

Param	Flag	Result	Units	RL
Chloride		**11100**	mg/Kg	4.00

Sample: 185107 - SB-4 (10')

Param	Flag	Result	Units	RL
Chloride		**12000**	mg/Kg	4.00

Sample: 185108 - SB-4 (13')

Param	Flag	Result	Units	RL
Chloride		**7400**	mg/Kg	4.00

Sample: 185109 - SB-4 (17')

Param	Flag	Result	Units	RL
Chloride		**3890**	mg/Kg	4.00

Sample: 185110 - SB-4 (20')

Param	Flag	Result	Units	RL
Chloride		**6300**	mg/Kg	4.00

Sample: 185111 - SB-4 (25')

Param	Flag	Result	Units	RL
Chloride		**4550**	mg/Kg	4.00

Sample: 185112 - SB-4 (30')

Param	Flag	Result	Units	RL
Chloride		**436**	mg/Kg	4.00

Sample: 185113 - SB-4 (35')

Param	Flag	Result	Units	RL
Chloride		**292**	mg/Kg	4.00

Sample: 185114 - SB-5 (Surface to 1')

Param	Flag	Result	Units	RL
Chloride		**3270**	mg/Kg	4.00

Sample: 185115 - SB-5 (2')

Param	Flag	Result	Units	RL
Chloride		**6420**	mg/Kg	4.00

Sample: 185116 - SB-5 (4')

Param	Flag	Result	Units	RL
Chloride		**7100**	mg/Kg	4.00

Sample: 185117 - SB-5 (6')

Param	Flag	Result	Units	RL
Chloride		**4770**	mg/Kg	4.00

Sample: 185118 - SB-5 (8')

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

Sample: 185119 - SB-5 (10')

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

Sample: 185120 - SB-5 (13')

Param	Flag	Result	Units	RL
Chloride		**11200**	mg/Kg	4.00

Sample: 185121 - SB-5 (17')

Param	Flag	Result	Units	RL
Chloride		**8860**	mg/Kg	4.00

Sample: 185122 - SB-5 (20')

Param	Flag	Result	Units	RL
Chloride		**2040**	mg/Kg	4.00

Sample: 185123 - SB-5 (25')

Param	Flag	Result	Units	RL
Chloride		**742**	mg/Kg	4.00

Sample: 185124 - SB-5 (30')

Param	Flag	Result	Units	RL
Chloride		**496**	mg/Kg	4.00

Sample: 185125 - SB-6 (Suface to 1')

Param	Flag	Result	Units	RL
Chloride		**5910**	mg/Kg	4.00

Sample: 185126 - SB-6 (2')

Param	Flag	Result	Units	RL
Chloride		**4020**	mg/Kg	4.00

Sample: 185127 - SB-6 (4')

Param	Flag	Result	Units	RL
Chloride		**7000**	mg/Kg	4.00

Sample: 185128 - SB-6 (6')

Param	Flag	Result	Units	RL
Chloride		**6960**	mg/Kg	4.00

Sample: 185129 - SB-6 (8')

Param	Flag	Result	Units	RL
Chloride		**6380**	mg/Kg	4.00

Sample: 185130 - SB-6 (10')

Param	Flag	Result	Units	RL
Chloride		**15100**	mg/Kg	4.00

Sample: 185131 - SB-6 (13')

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

Sample: 185132 - SB-6 (17')

Param	Flag	Result	Units	RL
Chloride		**8370**	mg/Kg	4.00

Sample: 185133 - SB-6 (20')

Param	Flag	Result	Units	RL
Chloride		**2370**	mg/Kg	4.00

Sample: 185134 - SB-6 (25')

Param	Flag	Result	Units	RL
Chloride		**893**	mg/Kg	4.00

Sample: 185135 - SB-6 (30')

Param	Flag	Result	Units	RL
Chloride		**927**	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: January 28, 2009

Work Order: 9011625

Project Location: Eddy Co., NM
Project Name: COG/Aoudad State #1 Flowline
Project Number: 115-6403647

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
185081	SB-1 (5')	soil	2009-01-15	00:00	2009-01-16
185082	SB-1 (10')	soil	2009-01-15	00:00	2009-01-16
185083	SB-1 (13')	soil	2009-01-15	00:00	2009-01-16
185084	SB-1 (17')	soil	2009-01-15	00:00	2009-01-16
185085	SB-1 (20')	soil	2009-01-15	00:00	2009-01-16
185086	SB-1 (25')	soil	2009-01-15	00:00	2009-01-16
185087	SB-1 (30')	soil	2009-01-15	00:00	2009-01-16
185088	SB-1 (35')	soil	2009-01-15	00:00	2009-01-16
185089	SB-2 (5')	soil	2009-01-15	00:00	2009-01-16
185090	SB-2 (10')	soil	2009-01-15	00:00	2009-01-16

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
185091	SB-2 (13')	soil	2009-01-15	00:00	2009-01-16
185092	SB-2 (17')	soil	2009-01-15	00:00	2009-01-16
185093	SB-2 (20')	soil	2009-01-15	00:00	2009-01-16
185094	SB-2 (25')	soil	2009-01-15	00:00	2009-01-16
185095	SB-2 (30')	soil	2009-01-15	00:00	2009-01-16
185096	SB-2 (35')	soil	2009-01-15	00:00	2009-01-16
185097	SB-3 (5')	soil	2009-01-15	00:00	2009-01-16
185098	SB-3 (10')	soil	2009-01-15	00:00	2009-01-16
185099	SB-3 (13')	soil	2009-01-15	00:00	2009-01-16
185100	SB-3 (17')	soil	2009-01-15	00:00	2009-01-16
185101	SB-3 (20')	soil	2009-01-15	00:00	2009-01-16
185102	SB-4 (Surface to 1')	soil	2009-01-15	00:00	2009-01-16
185103	SB-4 (2')	soil	2009-01-15	00:00	2009-01-16
185104	SB-4 (4')	soil	2009-01-15	00:00	2009-01-16
185105	SB-4 (6')	soil	2009-01-15	00:00	2009-01-16
185106	SB-4 (8')	soil	2009-01-15	00:00	2009-01-16
185107	SB-4 (10')	soil	2009-01-15	00:00	2009-01-16
185108	SB-4 (13')	soil	2009-01-15	00:00	2009-01-16
185109	SB-4 (17')	soil	2009-01-15	00:00	2009-01-16
185110	SB-4 (20')	soil	2009-01-15	00:00	2009-01-16
185111	SB-4 (25')	soil	2009-01-15	00:00	2009-01-16
185112	SB-4 (30')	soil	2009-01-15	00:00	2009-01-16
185113	SB-4 (35')	soil	2009-01-15	00:00	2009-01-16
185114	SB-5 (Surface to 1')	soil	2009-01-15	00:00	2009-01-16
185115	SB-5 (2')	soil	2009-01-15	00:00	2009-01-16
185116	SB-5 (4')	soil	2009-01-15	00:00	2009-01-16
185117	SB-5 (6')	soil	2009-01-15	00:00	2009-01-16
185118	SB-5 (8')	soil	2009-01-15	00:00	2009-01-16
185119	SB-5 (10')	soil	2009-01-15	00:00	2009-01-16
185120	SB-5 (13')	soil	2009-01-15	00:00	2009-01-16
185121	SB-5 (17')	soil	2009-01-15	00:00	2009-01-16
185122	SB-5 (20')	soil	2009-01-15	00:00	2009-01-16
185123	SB-5 (25')	soil	2009-01-15	00:00	2009-01-16
185124	SB-5 (30')	soil	2009-01-15	00:00	2009-01-16
185125	SB-6 (Suface to 1')	soil	2009-01-15	00:00	2009-01-16
185126	SB-6 (2')	soil	2009-01-15	00:00	2009-01-16
185127	SB-6 (4')	soil	2009-01-15	00:00	2009-01-16
185128	SB-6 (6')	soil	2009-01-15	00:00	2009-01-16
185129	SB-6 (8')	soil	2009-01-15	00:00	2009-01-16
185130	SB-6 (10')	soil	2009-01-15	00:00	2009-01-16
185131	SB-6 (13')	soil	2009-01-15	00:00	2009-01-16
185132	SB-6 (17')	soil	2009-01-15	00:00	2009-01-16
185133	SB-6 (20')	soil	2009-01-15	00:00	2009-01-16
185134	SB-6 (25')	soil	2009-01-15	00:00	2009-01-16
185135	SB-6 (30')	soil	2009-01-15	00:00	2009-01-16

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

Dr. Blair Leftwich, Director

Standard Flags

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

Case Narrative

Samples for project COG/Aoudad State #1 Flowline were received by TraceAnalysis, Inc. on 2009-01-16 and assigned to work order 9011625. Samples for work order 9011625 were received intact at a temperature of 2.7 deg. 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	47928	2009-01-16 at 08:45	56078	2009-01-16 at 08:45
Chloride (Titration)	SM 4500-Cl B	47989	2009-01-20 at 10:50	56205	2009-01-21 at 15:40
Chloride (Titration)	SM 4500-Cl B	47990	2009-01-20 at 10:52	56206	2009-01-21 at 15:42
Chloride (Titration)	SM 4500-Cl B	47991	2009-01-20 at 10:52	56207	2009-01-21 at 15:43
Chloride (Titration)	SM 4500-Cl B	47992	2009-01-20 at 10:53	56229	2009-01-22 at 16:48
Chloride (Titration)	SM 4500-Cl B	47993	2009-01-20 at 10:54	56231	2009-01-22 at 16:49
Chloride (Titration)	SM 4500-Cl B	47994	2009-01-20 at 10:55	56165	2009-01-21 at 11:01
TPH DRO	Mod. 8015B	47905	2009-01-16 at 13:00	56083	2009-01-16 at 17:10
TPH DRO	Mod. 8015B	48142	2009-01-26 at 14:30	56332	2009-01-26 at 15:27
TPH GRO	S 8015B	47928	2009-01-16 at 08:45	56079	2009-01-16 at 08:45
TPH GRO	S 8015B	48031	2009-01-26 at 14:38	56193	2009-01-26 at 14:38

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 9011625 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: 185081 - SB-1 (5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56205	Date Analyzed:	2009-01-21	Analyzed By:	AR
Prep Batch:	47989	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**6760**		mg/Kg	50	4.00

Sample: 185082 - SB-1 (10')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56205	Date Analyzed:	2009-01-21	Analyzed By:	AR
Prep Batch:	47989	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**5430**		mg/Kg	50	4.00

Sample: 185083 - SB-1 (13')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56205	Date Analyzed:	2009-01-21	Analyzed By:	AR
Prep Batch:	47989	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**5950**		mg/Kg	50	4.00

Sample: 185084 - SB-1 (17')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56205	Date Analyzed:	2009-01-21	Analyzed By:	AR
Prep Batch:	47989	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**7310**	mg/Kg	50	4.00

Sample: 185085 - SB-1 (20')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56205	Date Analyzed:	2009-01-21	Analyzed By:	AR
Prep Batch:	47989	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**8680**	mg/Kg	50	4.00

Sample: 185086 - SB-1 (25')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56205	Date Analyzed:	2009-01-21	Analyzed By:	AR
Prep Batch:	47989	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**704**	mg/Kg	50	4.00

Sample: 185087 - SB-1 (30')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56205	Date Analyzed:	2009-01-21	Analyzed By:	AR
Prep Batch:	47989	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**342**	mg/Kg	50	4.00

Sample: 185088 - SB-1 (35')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56206	Date Analyzed:	2009-01-21	Analyzed By:	AR
Prep Batch:	47990	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**279**	mg/Kg	50	4.00

Sample: 185089 - SB-2 (5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56206	Date Analyzed:	2009-01-21	Analyzed By:	AR
Prep Batch:	47990	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**4980**	mg/Kg	50	4.00

Sample: 185090 - SB-2 (10')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56206	Date Analyzed:	2009-01-21	Analyzed By:	AR
Prep Batch:	47990	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**4840**	mg/Kg	50	4.00

Sample: 185091 - SB-2 (13')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56206	Date Analyzed:	2009-01-21	Analyzed By:	AR
Prep Batch:	47990	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**7220**	mg/Kg	50	4.00

Sample: 185092 - SB-2 (17')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56206	Date Analyzed:	2009-01-21	Analyzed By:	AR
Prep Batch:	47990	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**8730**	mg/Kg	50	4.00

Sample: 185093 - SB-2 (20')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56206	Date Analyzed:	2009-01-21	Analyzed By:	AR
Prep Batch:	47990	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**2920**	mg/Kg	50	4.00

Sample: 185094 - SB-2 (25')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56206	Date Analyzed:	2009-01-21	Analyzed By:	AR
Prep Batch:	47990	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**809**	mg/Kg	50	4.00

Sample: 185095 - SB-2 (30')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56206	Date Analyzed:	2009-01-21	Analyzed By:	AR
Prep Batch:	47990	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**387**	mg/Kg	50	4.00

Sample: 185096 - SB-2 (35')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56206	Date Analyzed:	2009-01-21	Analyzed By:	AR
Prep Batch:	47990	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**211**	mg/Kg	50	4.00

Sample: 185097 - SB-3 (5')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56206	Date Analyzed:	2009-01-21	Analyzed By:	AR
Prep Batch:	47990	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**3920**	mg/Kg	50	4.00

Sample: 185098 - SB-3 (10')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56207	Date Analyzed:	2009-01-21	Analyzed By:	AR
Prep Batch:	47991	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**4300**	mg/Kg	50	4.00

Sample: 185099 - SB-3 (13')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56207	Date Analyzed:	2009-01-21	Analyzed By:	AR
Prep Batch:	47991	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**7070**	mg/Kg	50	4.00

Sample: 185100 - SB-3 (17')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56207	Date Analyzed:	2009-01-21	Analyzed By:	AR
Prep Batch:	47991	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**865**	mg/Kg	50	4.00

Sample: 185101 - SB-3 (20')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56207	Date Analyzed:	2009-01-21	Analyzed By:	AR
Prep Batch:	47991	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**450**	mg/Kg	50	4.00

Sample: 185102 - SB-4 (Surface to 1')

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	56078	Date Analyzed:	2009-01-16	Analyzed By:	ME
Prep Batch:	47928	Sample Preparation:	2009-01-16	Prepared By:	ME

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		**0.130**	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		**0.317**	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.930	mg/Kg	1	1.00	93	68 - 136.9
4-Bromofluorobenzene (4-BFB)		0.984	mg/Kg	1	1.00	98	48.2 - 155

Sample: 185102 - SB-4 (Surface to 1')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56207	Date Analyzed:	2009-01-21	Analyzed By:	AR
Prep Batch:	47991	Sample Preparation:	2009-01-20	Prepared By:	AR

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sample 185102 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**5060**	mg/Kg	50	4.00

Sample: 185102 - SB-4 (Surface to 1')

Laboratory:	Midland				
Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	56083	Date Analyzed:	2009-01-16	Analyzed By:	LD
Prep Batch:	47905	Sample Preparation:	2009-01-16	Prepared By:	LD

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		**7020**	mg/Kg	5	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	[1]	939	mg/Kg	5	100	939	10 - 250.4

Sample: 185102 - SB-4 (Surface to 1')

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	56079	Date Analyzed:	2009-01-16	Analyzed By:	ME
Prep Batch:	47928	Sample Preparation:	2009-01-16	Prepared By:	ME

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		**3.57**	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.986	mg/Kg	1	1.00	99	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		1.10	mg/Kg	1	1.00	110	63.8 - 141

[1]High surrogate recovery due to peak interference.

Sample: 185103 - SB-4 (2')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56207	Date Analyzed:	2009-01-21	Analyzed By:	AR
Prep Batch:	47991	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**3540**		mg/Kg	50	4.00

Sample: 185103 - SB-4 (2')

Laboratory:	Midland				
Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	56332	Date Analyzed:	2009-01-26	Analyzed By:	LD
Prep Batch:	48142	Sample Preparation:	2009-01-26	Prepared By:	LD

Parameter	Flag	Result	RL	Units	Dilution	RL
DRO	B	**255**		mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		118	mg/Kg	1	100	118	10 - 250.4

Sample: 185103 - SB-4 (2')

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	56193	Date Analyzed:	2009-01-26	Analyzed By:	ME
Prep Batch:	48031	Sample Preparation:	2009-01-26	Prepared By:	ME

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)		0.928	mg/Kg	1	1.00	93	75 - 117.2
4-Bromofluorobenzene (4-BFB)		0.857	mg/Kg	1	1.00	86	56 - 142.8

Sample: 185104 - SB-4 (4')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56207	Date Analyzed:	2009-01-21	Analyzed By:	AR
Prep Batch:	47991	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**5290**	mg/Kg	50	4.00

Sample: 185105 - SB-4 (6')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56207	Date Analyzed:	2009-01-21	Analyzed By:	AR
Prep Batch:	47991	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**8690**	mg/Kg	50	4.00

Sample: 185106 - SB-4 (8')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56207	Date Analyzed:	2009-01-21	Analyzed By:	AR
Prep Batch:	47991	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**11100**	mg/Kg	50	4.00

Sample: 185107 - SB-4 (10')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56207	Date Analyzed:	2009-01-21	Analyzed By:	AR
Prep Batch:	47991	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**12000**	mg/Kg	50	4.00

Sample: 185108 - SB-4 (13')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56229	Date Analyzed:	2009-01-22	Analyzed By:	AR
Prep Batch:	47992	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**7400**	mg/Kg	50	4.00

Sample: 185109 - SB-4 (17')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56229	Date Analyzed:	2009-01-22	Analyzed By:	AR
Prep Batch:	47992	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**3890**	mg/Kg	50	4.00

Sample: 185110 - SB-4 (20')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56229	Date Analyzed:	2009-01-22	Analyzed By:	AR
Prep Batch:	47992	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**6300**	mg/Kg	50	4.00

Sample: 185111 - SB-4 (25')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56229	Date Analyzed:	2009-01-22	Analyzed By:	AR
Prep Batch:	47992	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**4550**	mg/Kg	50	4.00

Sample: 185112 - SB-4 (30')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56229	Date Analyzed:	2009-01-22	Analyzed By:	AR
Prep Batch:	47992	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**436**		mg/Kg	50	4.00

Sample: 185113 - SB-4 (35')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56229	Date Analyzed:	2009-01-22	Analyzed By:	AR
Prep Batch:	47992	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**292**		mg/Kg	50	4.00

Sample: 185114 - SB-5 (Surface to 1')

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	56078	Date Analyzed:	2009-01-16	Analyzed By:	ME
Prep Batch:	47928	Sample Preparation:	2009-01-16	Prepared By:	ME

Parameter	Flag	Result	RL	Units	Dilution	RL
Benzene		<0.0500		mg/Kg	5	0.0100
Toluene		<0.0500		mg/Kg	5	0.0100
Ethylbenzene		<0.0500		mg/Kg	5	0.0100
Xylene		<0.0500		mg/Kg	5	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4.74	mg/Kg	5	5.00	95	68 - 136.9
4-Bromofluorobenzene (4-BFB)		4.66	mg/Kg	5	5.00	93	48.2 - 155

Sample: 185114 - SB-5 (Surface to 1')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56229	Date Analyzed:	2009-01-22	Analyzed By:	AR
Prep Batch:	47992	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**3270**		mg/Kg	50	4.00

Sample: 185114 - SB-5 (Surface to 1')

Laboratory:	Midland				
Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	56083	Date Analyzed:	2009-01-16	Analyzed By:	LD
Prep Batch:	47905	Sample Preparation:	2009-01-16	Prepared By:	LD

Parameter	Flag	Result	RL	Units	Dilution	RL
DRO		**3110**		mg/Kg	5	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	[2]	714	mg/Kg	5	100	714	10 - 250.4

Sample: 185114 - SB-5 (Surface to 1')

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	56079	Date Analyzed:	2009-01-16	Analyzed By:	ME
Prep Batch:	47928	Sample Preparation:	2009-01-16	Prepared By:	ME

Parameter	Flag	Result	RL	Units	Dilution	RL
GRO		<5.00		mg/Kg	5	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4.96	mg/Kg	5	5.00	99	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		4.81	mg/Kg	5	5.00	96	63.8 - 141

[2]High surrogate recovery due to peak interference.

Sample: 185115 - SB-5 (2')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56229	Date Analyzed:	2009-01-22	Analyzed By:	AR
Prep Batch:	47992	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**6420**	mg/Kg	50	4.00

Sample: 185116 - SB-5 (4')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56229	Date Analyzed:	2009-01-22	Analyzed By:	AR
Prep Batch:	47992	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**7100**	mg/Kg	50	4.00

Sample: 185117 - SB-5 (6')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56229	Date Analyzed:	2009-01-22	Analyzed By:	AR
Prep Batch:	47992	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**4770**	mg/Kg	50	4.00

Sample: 185118 - SB-5 (8')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56231	Date Analyzed:	2009-01-22	Analyzed By:	AR
Prep Batch:	47993	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**13200**	mg/Kg	50	4.00

Sample: 185119 - SB-5 (10')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56231	Date Analyzed:	2009-01-22	Analyzed By:	AR
Prep Batch:	47993	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**10600**	mg/Kg	50	4.00

Sample: 185120 - SB-5 (13')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56231	Date Analyzed:	2009-01-22	Analyzed By:	AR
Prep Batch:	47993	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**11200**	mg/Kg	50	4.00

Sample: 185121 - SB-5 (17')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56231	Date Analyzed:	2009-01-22	Analyzed By:	AR
Prep Batch:	47993	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**8860**	mg/Kg	50	4.00

Sample: 185122 - SB-5 (20')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56231	Date Analyzed:	2009-01-22	Analyzed By:	AR
Prep Batch:	47993	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	Result	RL Units	Dilution	RL
Chloride		**2040**	mg/Kg	50	4.00

Sample: 185123 - SB-5 (25')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56231	Date Analyzed:	2009-01-22	Analyzed By:	AR
Prep Batch:	47993	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**742**		mg/Kg	50	4.00

Sample: 185124 - SB-5 (30')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56231	Date Analyzed:	2009-01-22	Analyzed By:	AR
Prep Batch:	47993	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**496**		mg/Kg	50	4.00

Sample: 185125 - SB-6 (Suface to 1')

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	56078	Date Analyzed:	2009-01-16	Analyzed By:	ME
Prep Batch:	47928	Sample Preparation:	2009-01-16	Prepared By:	ME

Parameter	Flag	Result	RL	Units	Dilution	RL
Benzene		<0.0500		mg/Kg	5	0.0100
Toluene		**0.660**		mg/Kg	5	0.0100
Ethylbenzene		<0.0500		mg/Kg	5	0.0100
Xylene		**2.71**		mg/Kg	5	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4.46	mg/Kg	5	5.00	89	68 - 136.9
4-Bromofluorobenzene (4-BFB)		4.87	mg/Kg	5	5.00	97	48.2 - 155

Sample: 185125 - SB-6 (Suface to 1')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56231	Date Analyzed:	2009-01-22	Analyzed By:	AR
Prep Batch:	47993	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**5910**		mg/Kg	50	4.00

Sample: 185125 - SB-6 (Suface to 1')

Laboratory:	Midland				
Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	56083	Date Analyzed:	2009-01-16	Analyzed By:	LD
Prep Batch:	47905	Sample Preparation:	2009-01-16	Prepared By:	LD

Parameter	Flag	Result	RL	Units	Dilution	RL
DRO		**9530**		mg/Kg	5	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	[3]	1430	mg/Kg	5	100	1430	10 - 250.4

Sample: 185125 - SB-6 (Suface to 1')

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	56079	Date Analyzed:	2009-01-16	Analyzed By:	ME
Prep Batch:	47928	Sample Preparation:	2009-01-16	Prepared By:	ME

Parameter	Flag	Result	RL	Units	Dilution	RL
GRO		**51.1**		mg/Kg	5	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4.67	mg/Kg	5	5.00	93	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		6.85	mg/Kg	5	5.00	137	63.8 - 141

[3]High surrogate recovery due to peak interference.

Sample: 185126 - SB-6 (2')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56231	Date Analyzed:	2009-01-22	Analyzed By:	AR
Prep Batch:	47993	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	Result	RL Result	Units	Dilution	RL
Chloride		**4020**		mg/Kg	50	4.00

Sample: 185126 - SB-6 (2')

Laboratory:	Midland				
Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	56332	Date Analyzed:	2009-01-26	Analyzed By:	LD
Prep Batch:	48142	Sample Preparation:	2009-01-26	Prepared By:	LD

Parameter	Flag	Result	RL Result	Units	Dilution	RL
DRO		**445**		mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		137	mg/Kg	1	100	137	10 - 250.4

Sample: 185126 - SB-6 (2')

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	56193	Date Analyzed:	2009-01-26	Analyzed By:	ME
Prep Batch:	48031	Sample Preparation:	2009-01-26	Prepared By:	ME

Parameter	Flag	Result	RL Result	Units	Dilution	RL
GRO		**11.8**		mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.934	mg/Kg	1	1.00	93	75 - 117.2
4-Bromofluorobenzene (4-BFB)		0.831	mg/Kg	1	1.00	83	56 - 142.8

Sample: 185127 - SB-6 (4')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56231	Date Analyzed:	2009-01-22	Analyzed By:	AR
Prep Batch:	47993	Sample Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**7000**		mg/Kg	50	4.00

Sample: 185128 - SB-6 (6')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56165	Date Analyzed:	2009-01-21	Analyzed By:	AR
Prep Batch:	47994	Sample Preparation:	2009-01-21	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**6960**		mg/Kg	50	4.00

Sample: 185129 - SB-6 (8')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56165	Date Analyzed:	2009-01-21	Analyzed By:	AR
Prep Batch:	47994	Sample Preparation:	2009-01-21	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**6380**		mg/Kg	50	4.00

Sample: 185130 - SB-6 (10')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56165	Date Analyzed:	2009-01-21	Analyzed By:	AR
Prep Batch:	47994	Sample Preparation:	2009-01-21	Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**15100**		mg/Kg	50	4.00

Sample: 185131 - SB-6 (13')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56165	Date Analyzed:	2009-01-21	Analyzed By:	AR
Prep Batch:	47994	Sample Preparation:	2009-01-21	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**13500**	mg/Kg	50	4.00

Sample: 185132 - SB-6 (17')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56165	Date Analyzed:	2009-01-21	Analyzed By:	AR
Prep Batch:	47994	Sample Preparation:	2009-01-21	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**8370**	mg/Kg	50	4.00

Sample: 185133 - SB-6 (20')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56165	Date Analyzed:	2009-01-21	Analyzed By:	AR
Prep Batch:	47994	Sample Preparation:	2009-01-21	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**2370**	mg/Kg	50	4.00

Sample: 185134 - SB-6 (25')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56165	Date Analyzed:	2009-01-21	Analyzed By:	AR
Prep Batch:	47994	Sample Preparation:	2009-01-21	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**893**	mg/Kg	50	4.00

Sample: 185135 - SB-6 (30')

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	56165	Date Analyzed:	2009-01-21	Analyzed By:	AR
Prep Batch:	47994	Sample Preparation:	2009-01-21	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**927**	mg/Kg	50	4.00

Method Blank (1) QC Batch: 56078

QC Batch:	56078	Date Analyzed:	2009-01-16	Analyzed By:	ME
Prep Batch:	47928	QC Preparation:	2009-01-16	Prepared By:	ME

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.00580	mg/Kg	0.01
Toluene		<0.00470	mg/Kg	0.01
Ethylbenzene		<0.00530	mg/Kg	0.01
Xylene		<0.0136	mg/Kg	0.01

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.922	mg/Kg	1	1.00	92	48.3 - 132.5
4-Bromofluorobenzene (4-BFB)		0.900	mg/Kg	1	1.00	90	37.7 - 128.9

Method Blank (1) QC Batch: 56079

QC Batch:	56079	Date Analyzed:	2009-01-16	Analyzed By:	ME
Prep Batch:	47928	QC Preparation:	2009-01-16	Prepared By:	ME

Parameter	Flag	MDL Result	Units	RL
GRO		0.462	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.970	mg/Kg	1	1.00	97	39.2 - 135.2
4-Bromofluorobenzene (4-BFB)		0.916	mg/Kg	1	1.00	92	16.8 - 138.1

Method Blank (1) QC Batch: 56083

QC Batch:	56083	Date Analyzed:	2009-01-16	Analyzed By:	LD
Prep Batch:	47905	QC Preparation:	2009-01-16	Prepared By:	LD

Parameter	Flag	MDL Result	Units	RL
DRO		<15.8	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		55.0	mg/Kg	1	100	55	30.9 - 146.4

Method Blank (1) QC Batch: 56165

QC Batch:	56165	Date Analyzed:	2009-01-21	Analyzed By:	AR
Prep Batch:	47994	QC Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.01	mg/Kg	4

Method Blank (1) QC Batch: 56193

QC Batch:	56193	Date Analyzed:	2009-01-26	Analyzed By:	ME
Prep Batch:	48031	QC Preparation:	2009-01-26	Prepared By:	ME

Parameter	Flag	MDL Result	Units	RL
GRO		<0.171	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.918	mg/Kg	1	1.00	92	58.3 - 129.3
4-Bromofluorobenzene (4-BFB)		0.912	mg/Kg	1	1.00	91	57 - 124.9

Method Blank (1) QC Batch: 56205

QC Batch:	56205	Date Analyzed:	2009-01-21	Analyzed By:	AR
Prep Batch:	47989	QC Preparation:	2009-01-20	Prepared By:	AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.01	mg/Kg	4

Method Blank (1) QC Batch: 56206

QC Batch: 56206 Date Analyzed: 2009-01-21 Analyzed By: AR
Prep Batch: 47990 QC Preparation: 2009-01-20 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.01	mg/Kg	4

Method Blank (1) QC Batch: 56207

QC Batch: 56207 Date Analyzed: 2009-01-21 Analyzed By: AR
Prep Batch: 47991 QC Preparation: 2009-01-20 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.01	mg/Kg	4

Method Blank (1) QC Batch: 56229

QC Batch: 56229 Date Analyzed: 2009-01-22 Analyzed By: AR
Prep Batch: 47992 QC Preparation: 2009-01-20 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.01	mg/Kg	4

Method Blank (1) QC Batch: 56231

QC Batch: 56231 Date Analyzed: 2009-01-22 Analyzed By: AR
Prep Batch: 47993 QC Preparation: 2009-01-20 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.01	mg/Kg	4

Method Blank (1) QC Batch: 56332

QC Batch: 56332 | Date Analyzed: 2009-01-26 | Analyzed By: LD
Prep Batch: 48142 | QC Preparation: 2009-01-26 | Prepared By: LD

Parameter	Flag	MDL Result	Units	RL
DRO		27.6	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		74.8	mg/Kg	1	100	75	30.9 - 146.4

Laboratory Control Spike (LCS-1)

QC Batch: 56078 | Date Analyzed: 2009-01-16 | Analyzed By: ME
Prep Batch: 47928 | QC Preparation: 2009-01-16 | Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.864	mg/Kg	1	1.00	<0.00580	86	73.3 - 116.6
Toluene	0.889	mg/Kg	1	1.00	<0.00470	89	78.6 - 115.1
Ethylbenzene	0.876	mg/Kg	1	1.00	<0.00530	88	77.4 - 114.9
Xylene	2.65	mg/Kg	1	3.00	<0.0136	88	78.2 - 114.7

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	0.928	mg/Kg	1	1.00	<0.00580	93	73.3 - 116.6	7	20
Toluene	0.963	mg/Kg	1	1.00	<0.00470	96	78.6 - 115.1	8	20
Ethylbenzene	0.950	mg/Kg	1	1.00	<0.00530	95	77.4 - 114.9	8	20
Xylene	2.88	mg/Kg	1	3.00	<0.0136	96	78.2 - 114.7	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
Trifluorotoluene (TFT)	0.942	0.964	mg/Kg	1	1.00	94	96	45 - 124.2
4-Bromofluorobenzene (4-BFB)	0.933	0.980	mg/Kg	1	1.00	93	98	47.2 - 130.4

Laboratory Control Spike (LCS-1)

QC Batch: 56079 | Date Analyzed: 2009-01-16 | Analyzed By: ME
Prep Batch: 47928 | QC Preparation: 2009-01-16 | Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	8.14	mg/Kg	1	10.0	<0.442	81	57.5 - 106.4

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	8.49	mg/Kg	1	10.0	<0.442	85	57.5 - 106.4	4	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.00	0.994	mg/Kg	1	1.00	100	99	63.8 - 134.3
4-Bromofluorobenzene (4-BFB)	0.972	0.969	mg/Kg	1	1.00	97	97	53.3 - 123.6

Laboratory Control Spike (LCS-1)

QC Batch: 56083 | Date Analyzed: 2009-01-16 | Analyzed By: LD
Prep Batch: 47905 | QC Preparation: 2009-01-16 | Prepared By: LD

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	245	mg/Kg	1	250	<15.8	98	27.8 - 152.1

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	233	mg/Kg	1	250	<15.8	93	27.8 - 152.1	5	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Triacontane	87.6	84.2	mg/Kg	1	100	88	84	38 - 130.4

Laboratory Control Spike (LCS-1)

QC Batch: 56165 | Date Analyzed: 2009-01-21 | Analyzed By: AR
Prep Batch: 47994 | QC Preparation: 2009-01-20 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	99.5	mg/Kg	1	100	<2.01	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	101	mg/Kg	1	100	<2.01	101	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: 56193 | Date Analyzed: 2009-01-26 | Analyzed By: ME
Prep Batch: 48031 | QC Preparation: 2009-01-26 | Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	8.36	mg/Kg	1	10.0	<0.171	84	70 - 130

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	8.80	mg/Kg	1	10.0	<0.171	88	70 - 130	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)	0.938	0.937	mg/Kg	1	1.00	94	94	70 - 130
4-Bromofluorobenzene (4-BFB)	0.936	0.937	mg/Kg	1	1.00	94	94	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 56205 | Date Analyzed: 2009-01-21 | Analyzed By: AR
Prep Batch: 47989 | QC Preparation: 2009-01-20 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	99.3	mg/Kg	1	100	<2.01	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	101	mg/Kg	1	100	<2.01	101	85 - 115	2	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: 56206 | Date Analyzed: 2009-01-21 | Analyzed By: AR
Prep Batch: 47990 | QC Preparation: 2009-01-20 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	100	mg/Kg	1	100	<2.01	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	<2.01	102	85 - 115	2	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: 56207 | Date Analyzed: 2009-01-21 | Analyzed By: AR
Prep Batch: 47991 | QC Preparation: 2009-01-20 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	99.1	mg/Kg	1	100	<2.01	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	97.8	mg/Kg	1	100	<2.01	98	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: 56229 | Date Analyzed: 2009-01-22 | Analyzed By: AR
Prep Batch: 47992 | QC Preparation: 2009-01-20 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.3	mg/Kg	1	100	<2.01	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	101	mg/Kg	1	100	<2.01	101	85 - 115	2	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: 56231 | Date Analyzed: 2009-01-22 | Analyzed By: AR
Prep Batch: 47993 | QC Preparation: 2009-01-20 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	98.4	mg/Kg	1	100	<2.01	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	100	mg/Kg	1	100	<2.01	100	85 - 115	2	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: 56332 | Date Analyzed: 2009-01-26 | Analyzed By: LD
Prep Batch: 48142 | QC Preparation: 2009-01-26 | Prepared By: LD

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	254	mg/Kg	1	250	27.6	90	27.8 - 152.1

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	290	mg/Kg	1	250	27.6	105	27.8 - 152.1	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
n-Triacontane	85.6	88.0	mg/Kg	1	100	86	88	38 - 130.4

Matrix Spike (MS-1) Spiked Sample: 185125

QC Batch: 56078 | Date Analyzed: 2009-01-16 | Analyzed By: ME
Prep Batch: 47928 | QC Preparation: 2009-01-16 | Prepared By: ME

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	4.69	mg/Kg	5	5.00	<0.0290	94	62.2 - 134.3
Toluene	4.83	mg/Kg	5	5.00	0.6597	83	62.6 - 145.4
Ethylbenzene	5.41	mg/Kg	5	5.00	<0.0265	108	64.6 - 146.4
Xylene	15.4	mg/Kg	5	15.0	2.706	85	64.3 - 148.8

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

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matrix spikes continued ...

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	4.74	mg/Kg	5	5.00	<0.0290	95	62.2 - 134.3	1	20
Toluene	4.87	mg/Kg	5	5.00	0.6597	84	62.6 - 145.4	1	20
Ethylbenzene	5.16	mg/Kg	5	5.00	<0.0265	103	64.6 - 146.4	5	20
Xylene	14.9	mg/Kg	5	15.0	2.706	81	64.3 - 148.8	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)	4.81	4.80	mg/Kg	5	5	96	96	38.8 - 127.5
4-Bromofluorobenzene (4-BFB)	5.39	5.47	mg/Kg	5	5	108	109	49.3 - 142.4

Matrix Spike (MS-1) Spiked Sample: 185114

QC Batch: 56079 | Date Analyzed: 2009-01-16 | Analyzed By: ME
Prep Batch: 47928 | QC Preparation: 2009-01-16 | Prepared By: ME

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	51.9	mg/Kg	5	50.0	2.5628	99	10 - 139.3

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	55.5	mg/Kg	5	50.0	2.5628	106	10 - 139.3	7	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	5.00	4.98	mg/Kg	5	5	100	100	21.3 - 119
4-Bromofluorobenzene (4-BFB)	4.92	4.98	mg/Kg	5	5	98	100	52.5 - 154

Matrix Spike (MS-1) Spiked Sample: 185044

QC Batch: 56083 | Date Analyzed: 2009-01-16 | Analyzed By: LD
Prep Batch: 47905 | QC Preparation: 2009-01-16 | Prepared By: LD

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matrix spikes continued ...

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	254	mg/Kg	1	250	61	77	18 - 179.5

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	291	mg/Kg	1	250	61	92	18 - 179.5	14	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-Triacontane	81.8	81.8	mg/Kg	1	100	82	82	34.1 - 158

Matrix Spike (MS-1) Spiked Sample: 185369

QC Batch: 56165 | Date Analyzed: 2009-01-21 | Analyzed By: AR
Prep Batch: 47994 | QC Preparation: 2009-01-20 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	10500	mg/Kg	50	5000	5430	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	9720	mg/Kg	50	5000	5430	86	85 - 115	8	20

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

Matrix Spike (MS-1) Spiked Sample: 185487

QC Batch: 56193 | Date Analyzed: 2009-01-26 | Analyzed By: ME
Prep Batch: 48031 | QC Preparation: 2009-01-26 | Prepared By: ME

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO [4]	379	mg/Kg	5	50.0	222.295	313	22.3 - 134.6

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

[4] Matrix spike recovery out of control limits due to peak interference. Use LCS to demonstrate analysis is under control.

Param		MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	[5]	364	mg/Kg	5	50.0	222.295	283	22.3 - 134.6	4	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)		4.33	4.97	mg/Kg	5	5	87	99	68.4 - 113.1
4-Bromofluorobenzene (4-BFB)	[6] [7]	8.03	7.98	mg/Kg	5	5	161	160	66.7 - 134.3

Matrix Spike (MS-1) Spiked Sample: 185087

QC Batch: 56205 | Date Analyzed: 2009-01-21 | Analyzed By: AR
Prep Batch: 47989 | QC Preparation: 2009-01-20 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	5340	mg/Kg	50	5000	342	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	5360	mg/Kg	50	5000	342	100	85 - 115	0	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: 185097

QC Batch: 56206 | Date Analyzed: 2009-01-21 | Analyzed By: AR
Prep Batch: 47990 | QC Preparation: 2009-01-20 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	9070	mg/Kg	50	5000	3920	103	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	9140	mg/Kg	50	5000	3920	104	85 - 115	1	20

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

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

Matrix Spike (MS-1) Spiked Sample: 185107

QC Batch: 56207 | Date Analyzed: 2009-01-21 | Analyzed By: AR
Prep Batch: 47991 | QC Preparation: 2009-01-20 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	17100	mg/Kg	50	5000	12000	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	17300	mg/Kg	50	5000	12000	106	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: 185117

QC Batch: 56229 | Date Analyzed: 2009-01-22 | Analyzed By: AR
Prep Batch: 47992 | QC Preparation: 2009-01-20 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	9900	mg/Kg	50	5000	4770	103	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	9790	mg/Kg	50	5000	4770	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: 185127

QC Batch: 56231 | Date Analyzed: 2009-01-22 | Analyzed By: AR
Prep Batch: 47993 | QC Preparation: 2009-01-20 | Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	11800	mg/Kg	50	5000	7000	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	11900	mg/Kg	50	5000	7000	98	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: 185818

QC Batch: 56332 | Date Analyzed: 2009-01-26 | Analyzed By: LD
Prep Batch: 48142 | QC Preparation: 2009-01-26 | Prepared By: LD

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	274	mg/Kg	1	250	51.06	89	18 - 179.5

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	273	mg/Kg	1	250	51.06	89	18 - 179.5	0	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-Triacontane	84.2	84.0	mg/Kg	1	100	84	84	34.1 - 158

Standard (ICV-1)

QC Batch: 56078 | Date Analyzed: 2009-01-16 | Analyzed By: ME

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0871	87	85 - 115	2009-01-16
Toluene		mg/Kg	0.100	0.0941	94	85 - 115	2009-01-16
Ethylbenzene		mg/Kg	0.100	0.0934	93	85 - 115	2009-01-16
Xylene		mg/Kg	0.300	0.282	94	85 - 115	2009-01-16

Standard (CCV-1)

QC Batch: 56078 | Date Analyzed: 2009-01-16 | Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0908	91	85 - 115	2009-01-16
Toluene		mg/Kg	0.100	0.0927	93	85 - 115	2009-01-16
Ethylbenzene		mg/Kg	0.100	0.0889	89	85 - 115	2009-01-16
Xylene		mg/Kg	0.300	0.270	90	85 - 115	2009-01-16

Standard (ICV-1)

QC Batch: 56079 | Date Analyzed: 2009-01-16 | Analyzed By: ME

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.02	102	85 - 115	2009-01-16

Standard (CCV-1)

QC Batch: 56079 Date Analyzed: 2009-01-16 Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.982	98	85 - 115	2009-01-16

Standard (CCV-1)

QC Batch: 56083 Date Analyzed: 2009-01-16 Analyzed By: LD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	252	101	85 - 115	2009-01-16

Standard (CCV-2)

QC Batch: 56083 Date Analyzed: 2009-01-16 Analyzed By: LD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	250	100	85 - 115	2009-01-16

Standard (ICV-1)

QC Batch: 56165 Date Analyzed: 2009-01-21 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	98.6	99	85 - 115	2009-01-21

Standard (CCV-1)

QC Batch: 56165 Date Analyzed: 2009-01-21 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	2009-01-21

Standard (CCV-1)

QC Batch: 56193 Date Analyzed: 2009-01-26 Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.02	102	85 - 115	2009-01-26

Standard (CCV-2)

QC Batch: 56193 Date Analyzed: 2009-01-26 Analyzed By: ME

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	85 - 115	2009-01-26

Standard (ICV-1)

QC Batch: 56205 Date Analyzed: 2009-01-21 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	102	102	85 - 115	2009-01-21

Standard (CCV-1)

QC Batch: 56205 Date Analyzed: 2009-01-21 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	97.9	98	85 - 115	2009-01-21

Standard (ICV-1)

QC Batch: 56206 Date Analyzed: 2009-01-21 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	98.1	98	85 - 115	2009-01-21

Standard (CCV-1)

QC Batch: 56206 Date Analyzed: 2009-01-21 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	102	102	85 - 115	2009-01-21

Standard (ICV-1)

QC Batch: 56207 Date Analyzed: 2009-01-21 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	103	103	85 - 115	2009-01-21

Standard (CCV-1)

QC Batch: 56207 Date Analyzed: 2009-01-21 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	97.2	97	85 - 115	2009-01-21

Standard (ICV-1)

QC Batch: 56229 Date Analyzed: 2009-01-22 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.7	100	85 - 115	2009-01-22

Standard (CCV-1)

QC Batch: 56229 Date Analyzed: 2009-01-22 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	100	100	85 - 115	2009-01-22

Standard (ICV-1)

QC Batch: 56231 Date Analyzed: 2009-01-22 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.1	99	85 - 115	2009-01-22

Standard (CCV-1)

QC Batch: 56231 Date Analyzed: 2009-01-22 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2009-01-22

Standard (ICV-1)

QC Batch: 56332 Date Analyzed: 2009-01-26 Analyzed By: LD

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	242	97	85 - 115	2009-01-26

Standard (CCV-1)

QC Batch: 56332 Date Analyzed: 2009-01-26 Analyzed By: LD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	256	102	85 - 115	2009-01-26

4011625

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 6

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG Resources

SITE MANAGER: Ike Tavarez

PROJECT NO.: 115-640 3647

PROJECT NAME: Aoudad State #1

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd 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
185081	01/15/09		S		✓	SB-1 (5')	1				✓	✓													✓				
082	01/15/09		S		✓	SB-1 (10')	1				✓	✓													✓				
083	01/15/09		S		✓	SB-1 (13')	1				✓	✓													✓				
084	01/15/09		S		✓	SB-1 (17')	1				✓	✓													✓				
085	01/15/09		S		✓	SB-1 (20')	1				✓	✓													✓				
086	01/15/09		S		✓	SB-1 (25')	1				✓	✓													✓				
087	01/15/09		S		✓	SB-1 (30')	1				✓	✓													✓				
088	01/15/09		S		✓	SB-1 (35')	1				✓	✓													✓				
089	01/15/09		S		✓	SB-2 (5')	1				✓	✓													✓				
090	01/15/09		S		✓	SB-2 (10')	1				✓	✓													✓				

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

SAMPLED BY: (Print & Initial) Jeffrey Kindley JNK Date: 01/15/09 Time: 1700

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 Analysis
ADDRESS:
CITY: Midland STATE: Tx ZIP:
CONTACT: PHONE:

RECEIVED BY: (Signature)
DATE: 1-16-09 TIME: 10:55

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 2.7°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.

9011623

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 Resources

SITE MANAGER: Ike Tavarez

PROJECT NO.: 115-640 3647

PROJECT NAME: Aquilad State #1

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. / TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd 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
185091	01/15/09		S		✓	SB-2 (13')	1				✓	✓												✓				
092	01/15/09		S		✓	SB-2 (17')	1				✓	✓												✓				
093	01/15/09		S		✓	SB-2 (20')	1				✓	✓												✓				
094	01/15/09		S		✓	SB-2 (25')	1				✓	✓												✓				
095	01/15/09		S		✓	SB-2 (30')	1				✓	✓												✓				
096	01/15/09		S		✓	SB-2 (35')	1				✓	✓												✓				
097	01/15/09		S		✓	SB-3 (5')	1				✓	✓												✓				
098	01/15/09		S		✓	SB-3 (10')	1				✓	✓												✓				
099	01/15/09		S		✓	SB-3 (13')	1				✓	✓												✓				
100	01/15/09		S		✓	SB-3 (17')	1				✓	✓												✓				

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature)	Date: / Time:	RECEIVED BY: (Signature)	Date: / Time:
RELINQUISHED BY: (Signature)	Date: / Time:	RECEIVED BY: (Signature)	Date: / Time:
RELINQUISHED BY: (Signature)	Date: / Time:	RECEIVED BY: (Signature)	Date: / Time:

SAMPLED BY: (Print & Initial) Jeffrey Kindley JWK — Date: 01/15/09 — 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 Analysis
ADDRESS:
CITY: Midland STATE: Tx ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: 1-16-09 TIME: 10:55

SAMPLE CONDITION WHEN RECEIVED: 2.7°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.

401623

Analysis Request of Chain of Custody Record

PAGE: 3 OF: 6

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: COG Resources
SITE MANAGER: Ike Tavarez
PROJECT NO.: 115-640-3647
PROJECT NAME: Arcadia State #1

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd 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
185101	01/15/09		S		✓	SB-3 (20')	1				✓	✓												✓				
102	01/15/09		S		✓	SB-4 (surface to 1')	1				✓	✓	✓	✓										✓				
103	01/15/09		S		✓	SB-4 (2')	1				✓	✓												✓				
104	01/15/09		S		✓	SB-4 (4')	1				✓	✓												✓				
105	01/15/09		S		✓	SB-4 (6')	1				✓	✓												✓				
106	01/15/09		S		✓	SB-4 (8')	1				✓	✓												✓				
107	01/15/09		S		✓	SB-4 (10')	1				✓	✓												✓				
108	01/15/09		S		✓	SB-4 (13')	1				✓	✓												✓				
109	01/15/09		S		✓	SB-4 (17')	1				✓	✓												✓				
110	01/15/09		S		✓	SB-4 (20')	1				✓	✓												✓				

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

SAMPLED BY: (Print & Initial) Jeffrey Kindley JWK Date: 01/15/09 Time: 1700
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS AIRBILL #: OTHER:

RECEIVING LABORATORY: Trace Analysis
ADDRESS:
CITY: Midland STATE: TX ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: 1-16-09 TIME: 10:55

TETRA TECH CONTACT PERSON: Ike Tavarez
Results by:
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 2.7°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.

90116 23

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 Resources

SITE MANAGER: Ike Tavarez

PROJECT NO.: 115-640-3647

PROJECT NAME: Aoudad State #1

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd 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
185111	01/15/09		S		✓	SB-4 (25')	1				✓	✓													✓				
112	01/15/09		S		✓	SB-4 (30')	1				✓	✓													✓				
113	01/15/09		S		✓	SB-4 (35')	1				✓	✓													✓				
114	01/15/09		S		✓	SB-5 (Surface to 1')	1				✓	✓	✓	✓											✓				
115	01/15/09		S		✓	SB-5 (2')	1				✓	✓													✓				
116	01/15/09		S		✓	SB-5 (4')	1				✓	✓													✓				
117	01/15/09		S		✓	SB-5 (6')	1				✓	✓													✓				
118	01/15/09		S		✓	SB-5 (8')	1				✓	✓													✓				
119	01/15/09		S		✓	SB-5 (10')	1				✓	✓													✓				
120	01/15/09		S		✓	SB-5 (13')	1				✓	✓													✓				

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

SAMPLED BY: (Print & Initial) Jeffrey Kindley JWK Date: 01/15/09 Time: 1700

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 Analysis

ADDRESS:

CITY: Midland STATE: Tx ZIP:

CONTACT: PHONE:

RECEIVED BY: (Signature)

DATE: 1-16-09 TIME: 10:55

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 2.7 - Cntnd

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.

401162

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 Resources
SITE MANAGER: IK Tavarez
PROJECT NO.: 115-640-3647
PROJECT NAME: Arnold State #1

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD	TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd 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
185121	01/15/09		S		✓	SB-5 (17')	1				✓	✓														✓				
122	01/15/09		S		✓	SB-5 (20')	1				✓	✓														✓				
123	01/15/09		S		✓	SB-5 (25')	1				✓	✓														✓				
124	01/15/09		S		✓	SB-5 (30')	1				✓	✓														✓				
125	01/15/09		S		✓	SB-6 (Surface to 1')	1				✓	✓	✓	✓												✓				
126	01/15/09		S		✓	SB-6 (2')	1				✓	✓														✓				
127	01/15/09		S		✓	SB-6 (4')	1				✓	✓														✓				
128	01/15/09		S		✓	SB-6 (6')	1				✓	✓														✓				
129	01/15/09		S		✓	SB-6 (8')	1				✓	✓														✓				
130	01/15/09		S		✓	SB-6 (10')	1				✓	✓														✓				

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

SAMPLED BY: (Print & Initial) Jeffrey Kindley JWK Date: 01/15/09 Time: 1700
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS AIRBILL #: OTHER:

RECEIVING LABORATORY: Trace Analysis
ADDRESS:
CITY: Midland STATE: TX ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: 1-16-09 TIME: 10:55

TETRA TECH CONTACT PERSON: IK Tavarez
Results by:
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 2.7 °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.

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 Resources

SITE MANAGER: Ike Tavarez

PROJECT NO.: 115-640-3647

PROJECT NAME: Accuded State #1

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd 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
85131	01/15/09		S		✓	SB-6 (13')	1				✓	✓													✓				
132	01/15/09		S		✓	SB-6 (17')	1				✓	✓													✓				
133	01/15/09		S		✓	SB-6 (20')	1				✓	✓													✓				
134	01/15/09		S		✓	SB-6 (25')	1				✓	✓													✓				
135	01/15/09		S		✓	SB-6 (30')	1				✓	✓													✓				

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

RECEIVING LABORATORY: Trace Analysis
ADDRESS:
CITY: Midland STATE: TX ZIP:
CONTACT: PHONE:

RECEIVED BY: (Signature)
DATE: 1.16.09 TIME: 10:55

SAMPLE CONDITION WHEN RECEIVED: 2.7°C intact

REMARKS: All tests Midland

SAMPLED BY: (Print & Initial) Jeffrey Kindley JWK Date: 01/15/09 Time: 1700

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

TETRA TECH CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

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