

1R - 492

AGWMR

08/10/2009

IR 491 / IR 492



TETRA TECH

**E.C. HILL B. FEDERAL #7 AND B-D TANK BATTERY
ANNUAL GROUNDWATER SAMPLING REPORT**

**LOCATED IN
LEA COUNTY, NEW MEXICO**

Prepared for:

**GLENN SPRINGS HOLDINGS
(A wholly owned subsidiary of Occidental Petroleum)**

Prepared by:

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

Tetra Tech Project No. 115-6402942
AUGUST 10, 2009

complex world

CLEAR SOLUTIONS™



TETRA TECH

August 10, 2009

Mr. Glenn von Gonten
New Mexico Energy, Minerals, & Natural Resources
Oil Conservation Division, Environmental Bureau
1220 S. St. Francis Drive
Santa Fe, New Mexico 87504

Re: October 2008 through June 2009 Annual Groundwater Sampling Report for the OXY USA, Inc., E.C. Hill Federal B-D Tank Battery and E.C. Hill Federal #7 Tank Battery, Located in Sections 34 and 35, Township 23 South, Range 37 East, Lea County, New Mexico, OCD Case Numbers 1R491 and 1R492, respectively.

Mr. Von Gonten:

This report details the results of the quarterly sampling events, which began in the third quarter of 2008, performed at the OXY USA, Inc. (OXY) E. C. Hill Federal B-D and E.C. Hill Federal #7 Tank battery (Site). The two sites are located adjacent to one another approximately 9 miles north/northeast of Jal, Lea County, New Mexico. Due to the close proximity to one another, the two sites are included in one annual report. The site locations are shown on Figure 1.

FACILITY BACKGROUND

The facilities are old tank batteries, which have had numerous spills from previous operators. Prior to OXY, the facilities were operated by Plains Exploration (PXP), Pogo Producing Company, and Latigo Petroleum, Inc. In March 2008, OXY acquired operating responsibility for this site from PXP.

E.C. Hill Federal B-D Tank Battery

In 2006, as part of a due diligence investigation, a soils investigation was performed at the site. The soil investigation consisted of placement of ten (10) auger holes (AH) and three (3) boreholes (BH) in and around the tank battery, to assess the subsurface soils. The auger hole soil samples were found to be impacted with hydrocarbons to depths of 1 to 6 feet below ground surface (bgs),

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with several auger holes not defined. In order to complete delineation, three soil borings (BH-1 through BH-3) were drilled in these areas. Based on the results of the investigation, TPH was defined at depths of 25 feet bgs, 15 feet bgs, and 60 feet bgs in boreholes BH-1 through BH-3, respectively. Borehole BH-3, which had hydrocarbons extending to 60 feet bgs, was converted to a monitor well (MW-1) to assess the groundwater quality at the site.

In September 2006 and May 2007, the well was purged and sampled per NMOCD guidelines for analysis of chlorides and BTEX. BTEX was not detected at or above reporting limits for either sampling event. Chloride concentrations exceeded the New Mexico Water Quality Control Commission (NMWQCC) standards for both sampling events with concentrations of 1,150 mg/L and 729 mg/L, respectively.

E.C. Hill Federal #7 Tank Battery

In 2006, as part of a due diligence investigation, a soils investigation was performed at the site. The soil investigation consisted of placement of seven (7) auger holes (AH) and one (1) borehole (BH) in an impacted area south of the tank battery, to assess the subsurface soils. Borehole BH-1, which had hydrocarbons extending to 40 feet bgs, was converted to a monitor well (MW-7) to assess the groundwater quality at the site.

In September 2006 and May 2007, the well was purged and sampled per NMOCD guidelines for analysis of chlorides and BTEX. For the September 2006 sampling event, the chloride and BTEX concentrations did not exceed the NMWQCC standards. During the May 2007 sampling event, the BTEX concentration was below the NMWQCC standards, however, the chloride exceeded the NMWQCC standard with a concentration of 1,220 mg/L.

In order to complete delineation of the groundwater at the two sites, an additional five monitor wells (MW-2 through MW-6) were installed at the sites between December 4 and December 11, 2007. The newly installed monitor wells were sampled in October 2008. The site monitor well locations are shown on Figure 2.

Gauging and Monitor Well Sampling

On October 22, December 11, 2008, and March 11 and June 10, 2009, Tetra Tech, Inc. was onsite to gauge, purge, and sample all monitor wells. Utilizing the water level elevation calculations, groundwater gradient maps were generated for each of the sampling events. The hydraulic gradient was to the east in October and southeast in December 2008, March and June 2009. The groundwater gradient maps for the four sampling events are included as Figures



3 through 6. Gauging data is summarized in Table 1. No Phase Separated Hydrocarbons (PSH) were measured in any of the monitor wells throughout the year.

During the sampling events, each of the wells was properly purged utilizing a submersible pump and sampled for BTEX, chlorides, and anions/cations (October sampling event). The samples were properly preserved and were submitted under proper chain-of-custody control to Trace Analysis Inc. of Lubbock, Texas, ALS Laboratory Group, or Accutest of Houston, Texas for analysis of BTEX by EPA Method SW8021B, major anions and cations utilizing EPA methods SM2320B, S6010B, SM4500-H+, SM2540C, and E 300.0 and chlorides by EPA Method 300.0. Analytical results indicate that BTEX was not detected at or above detection limits for all monitor wells during the four sampling events. Chlorides ranged from 87.4 mg/L in monitor well MW-6 to 1,360 mg/L in monitor well MW-7. Chlorides exceeded the NMWQCC standards of 250 mg/L in monitor wells MW-1, MW-4, MW-5 (down-gradient), and MW-7 for all sampling events and MW-2 in the December sampling event. Chloride concentration maps for the four sampling events are included as Figures 7 through 10. The analyses are shown in Tables 2 and 3. Copies of the laboratory analyses are enclosed in Appendix A.

CONCLUSIONS

1. No Phase Separated Hydrocarbons (PSH) was measured in any of the monitor wells throughout the year.
2. The hydraulic gradient direction was to the east in October and to the southeast in December 2008, March and June 2009.
3. BTEX concentrations were not detected at or above detection limits for any of the monitor wells during the four sampling events.
4. Chlorides ranged from 87.4 mg/L in monitor well MW-6 to 1,360 mg/L in monitor well MW-7. Chlorides exceeded the NMWQCC standards of 250 mg/L in monitor wells MW-1, MW-4, MW-5 (down-gradient), and MW-7 for all sampling events and MW-2 in the December sampling event.
5. As of this update, the chlorides have not been delineated to the east (down-gradient) of MW-5 or south (cross-gradient) of MW-4.



TETRA TECH

RECOMMENDATIONS

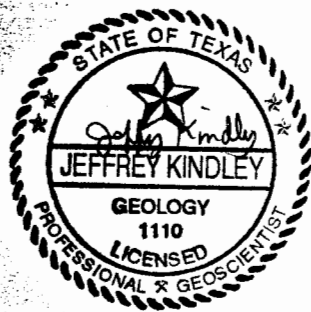
1. Quarterly groundwater monitoring and gauging will be continued throughout the year.
2. The chloride impact to groundwater will be delineated.

If you have any question or comments concerning the assessment or the activities performed at the Site, please call me at (432) 682-4559.

Respectfully submitted,
Tetra Tech, Inc.

Jeffrey Kindley
Jeffrey Kindley, P.G.
Senior Environmental Geologist

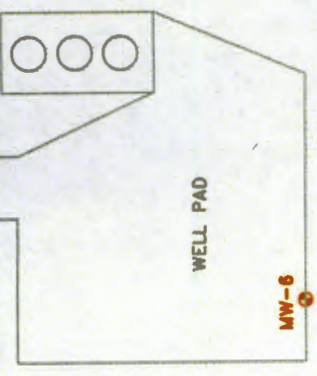
cc: Rick Passmore –Glenn Spring Holdings



FIGURES



E.C. HILL #7
TANK BATTERY



MW-6

SECTION 35
SECTION 34

MW-2

MW-1

E.C. HILL B-D
FED. TANK BATTERY

MW-7

MW-4

MW-5

PLAINS BPL

PLAINS BPL

PLAINS BPL

MW-3

EVA E. BLINEBRY #19
WELL PAD



SCALE: 1" = 50'

FIGURE NO. 2

LEA COUNTY, NEW MEXICO

OXY USA, INC.

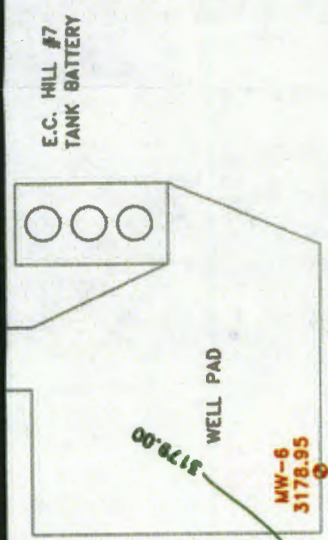
E.C. HILL FEDERAL #7 & B.D. TD
SITE MAP

TETRA TECH, INC.
MIDLAND, TEXAS

DATE: 3/5/09
BY: [Signature]
CHECKED BY: [Signature]



FIGURE NO. 3	
LEA COUNTY, NEW MEXICO	
OXY USA, INC.	
E.C. HILL FEDERAL #7 & B.D. TB	
GROUNDWATER GRADIENT MAP	
DRAUGHTED ON 10/22/08	
DATE	3/20/09
DRAWN BY	JK
CHECKED BY	JK
SCALE	1" = 60'
TERRA TECH, INC.	
HIGHLAND, TEXAS	



SECTION 35
SECTION 34

MW-2
3179.48

3179.50

MW-1
3178.99

MW-7
3178.67

MW-5
3178.24

MW-4
3178.50

MW-3
3179.82

EVA E. BLINBERRY #19
WELL PAD

PLAINS BPL

PLAINS BPL

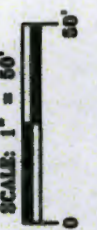
PLAINS BPL

E.C. HILL B-D
FED. TANK BATTERY

LEASE RD.

LEASE RD.

LEASE RD.



NOTES:
CONTOUR INTERVAL = 0.50 FEET

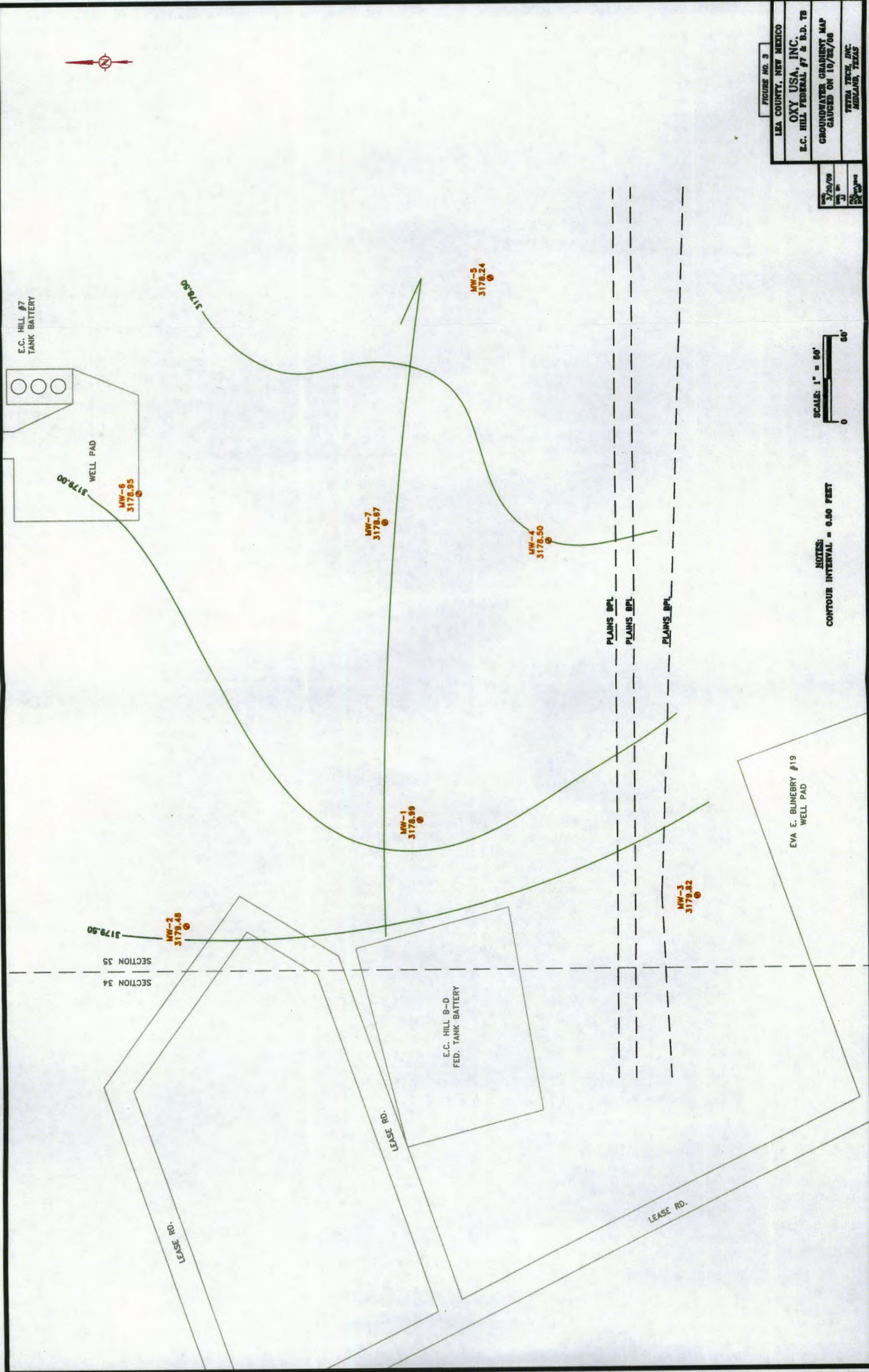
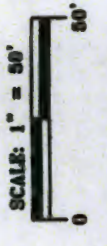


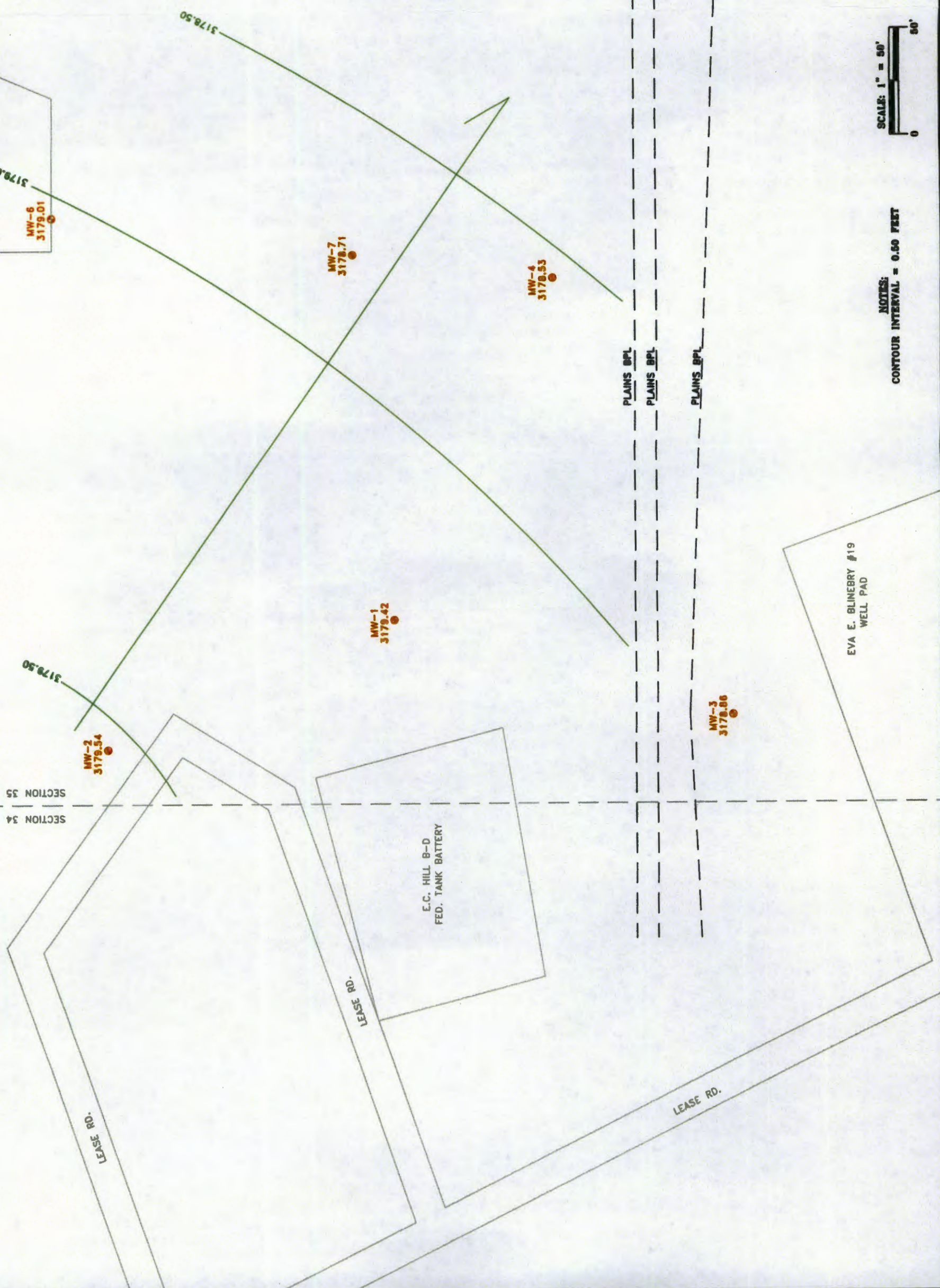
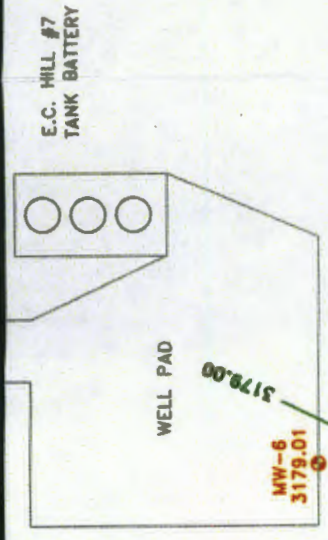


FIGURE NO. 4
 LEA COUNTY, NEW MEXICO
OXY USA, INC.
 E.C. HILL FEDERAL #7 & B.D. TB
 GROUNDWATER GRADIENT MAP
 GAUGED ON 12/12/06
 TETRA TECH, INC.
 MIDLAND, TEXAS

DATE: 3/20/08
 DRAWN BY: J
 CHECKED BY: J



NOTES:
 CONTOUR INTERVAL = 0.50 FEET



SECTION 34
 SECTION 35

LEASE RD.

LEASE RD.

LEASE RD.

PLAINS BPL
 PLAINS BPL
 PLAINS BPL

E.C. HILL #7
 TANK BATTERY

EVA E. BLINEBRY #19
 WELL PAD

E.C. HILL B-D
 FED. TANK BATTERY

MW-2
 3179.34

MW-1
 3179.42

MW-7
 3178.71

MW-4
 3178.53

MW-5
 3178.28

MW-3
 3178.86

MW-6
 3178.01

3178.50

3179.50

3178.00



FIGURE NO. 5

LEA COUNTY, NEW MEXICO

OXY USA, INC.

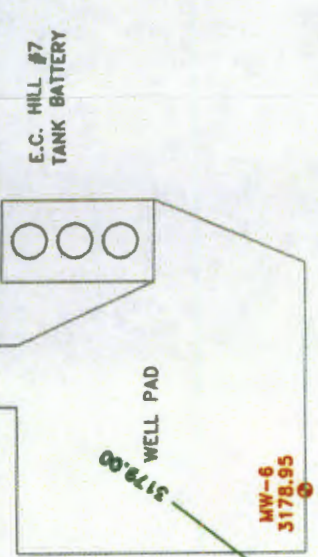
E.C. HILL FEDERAL #7 & B.D. T8

GROUNDWATER GRADIENT MAP

GAUGED ON 5/11/09

TETRA TECH, INC.
MIDLAND, TEXAS

DATE: 6/29/09
BY: JH
CHECKED: JH
SCALE: 1" = 50'



E.C. HILL #7
TANK BATTERY

WELL PAD

MW-6
3178.95

3178.50

3178.50

MW-5
3178.26

MW-7
3178.88

MW-4
3178.51

MW-1
3178.98

MW-2
3178.51

MW-3
3178.84

SECTION 35
SECTION 34

E.C. HILL B-D
FED. TANK BATTERY

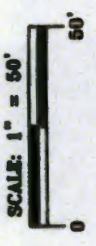
LEASE RD.

LEASE RD.

LEASE RD.

EVA E. BLINEBRY #19
WELL PAD

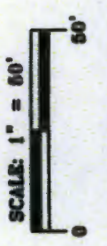
PLAINS BPL
PLAINS BPL
PLAINS BPL



NOTES:
CONTOUR INTERVAL = 0.50 FEET

FIGURE NO. 6
 LEA COUNTY, NEW MEXICO
OXY USA, INC.
 E.C. HILL FEDERAL #7 & B.D. TB
 GROUNDWATER GRADIENT MAP
 GAUGED ON 9/10/06
 TETRA TECH, INC.
 MIDLAND, TEXAS

DATE: 6/29/09
 BY: JH
 CHECKED: JH
 APPROVED: JH



NOTES:
 CONTOUR INTERVAL = 0.50 FEET

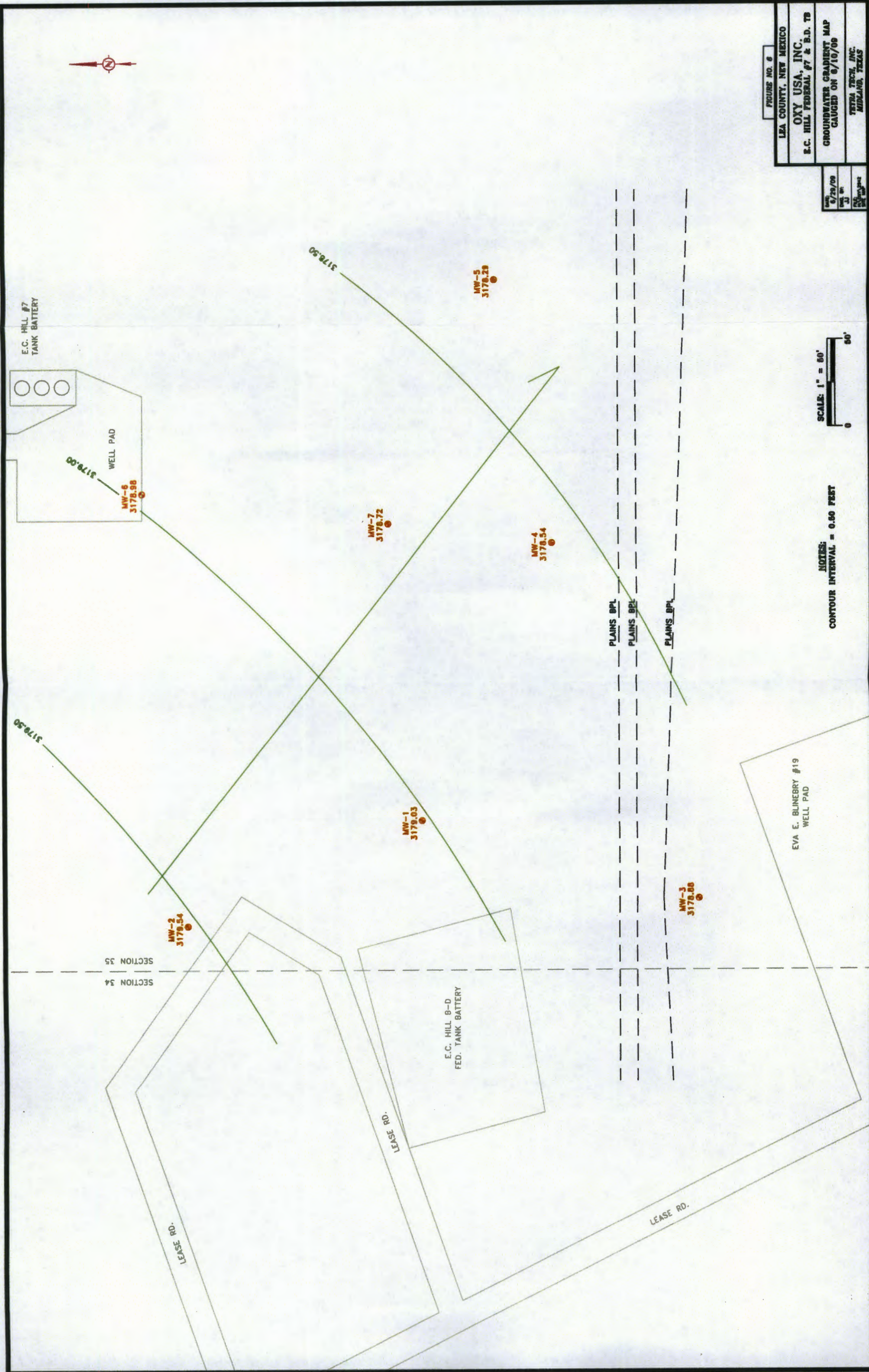




FIGURE NO. 7

LEA COUNTY, NEW MEXICO

OXY USA, INC.
E.C. HILL FEDERAL #7 & B.D. TB

CHLORIDE CONCENTRATION MAP
SAMPLED ON 10/22/08

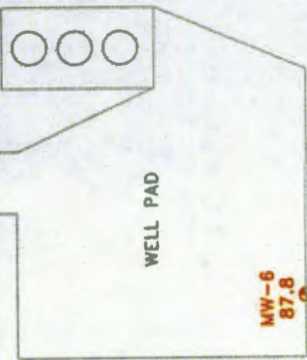
TETRA TECH, INC.
MIDLAND, TEXAS

DATE 3/20/09

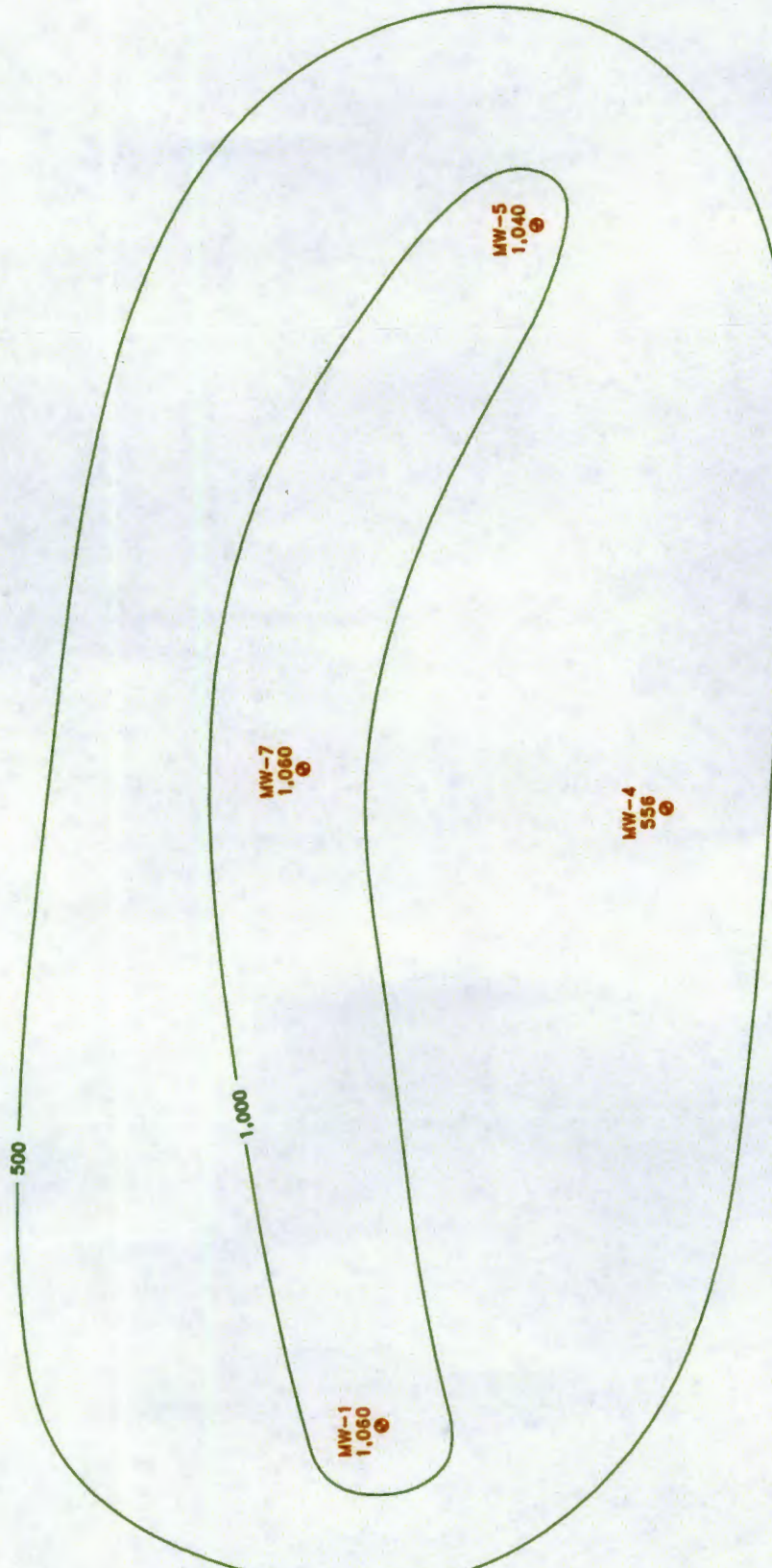
BY J

REV 00

E.C. HILL #7
TANK BATTERY



MW-6
87.8



PLAINS BPL

PLAINS BPL

PLAINS BPL

EVA E. BLINEBRY #19
WELL PAD

MW-3
237

E.C. HILL B-D
FED. TANK BATTERY

SECTION 35
SECTION 34

MW-2
132

LEASE RD.

LEASE RD.

LEASE RD.

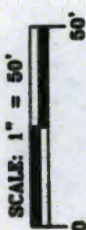
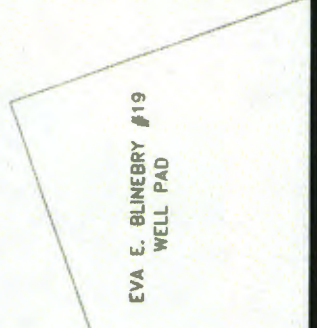
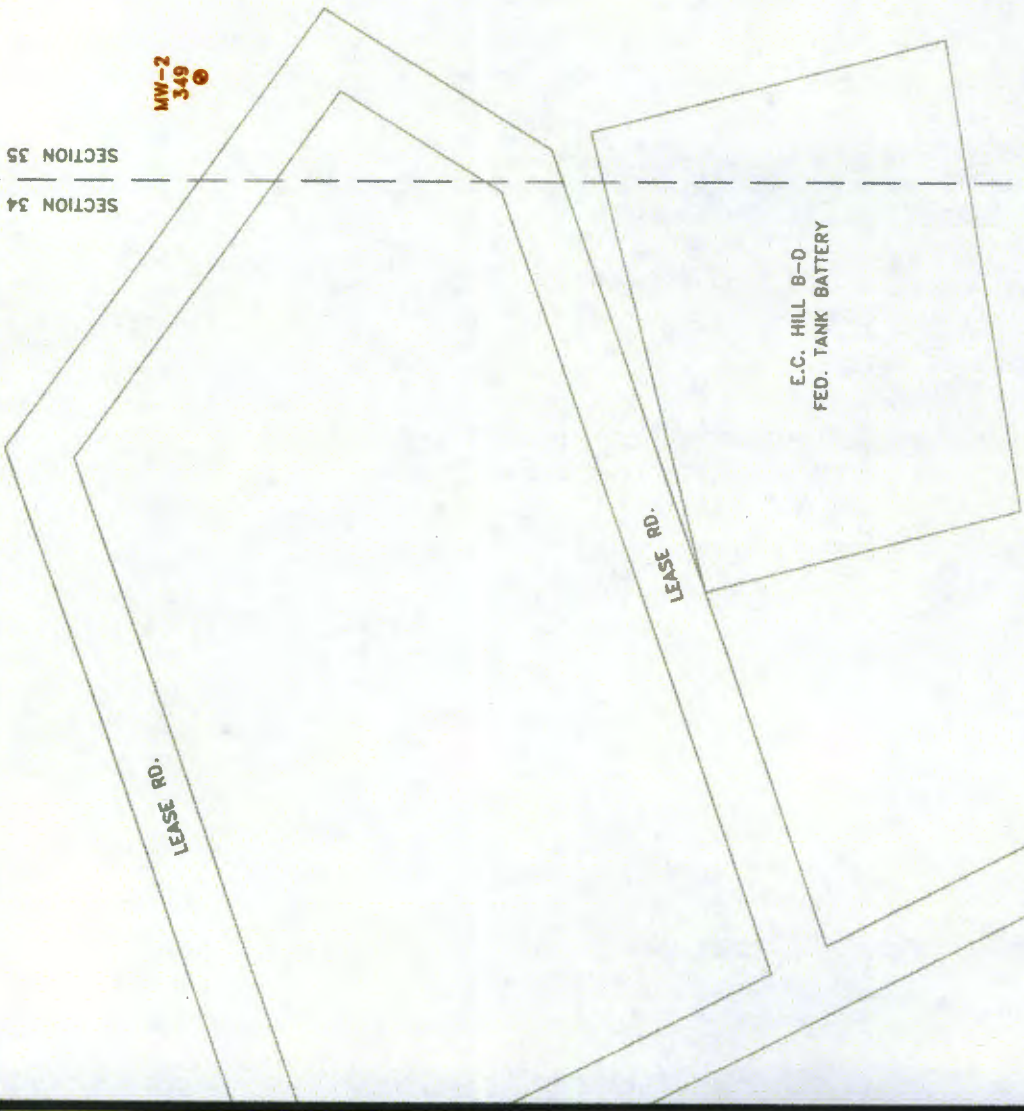
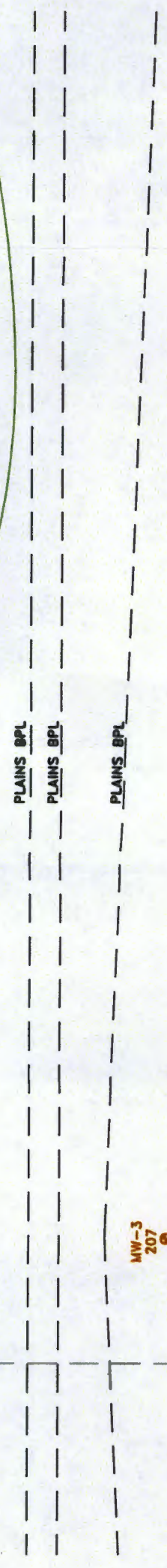
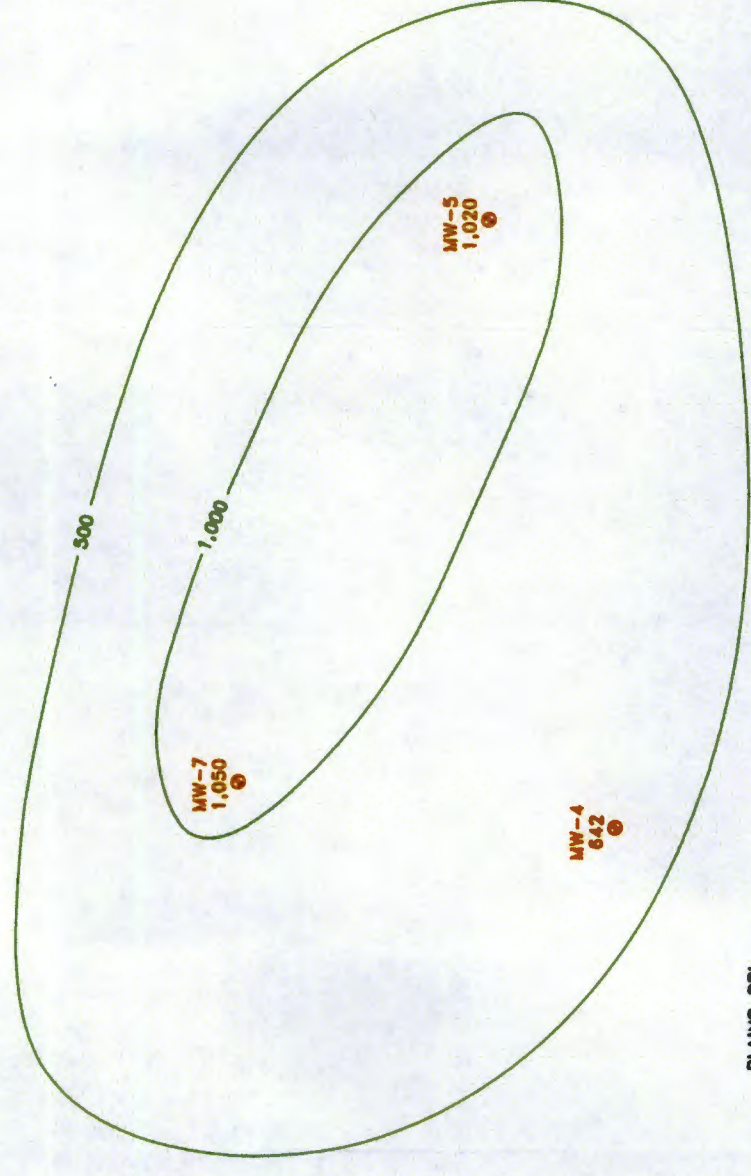
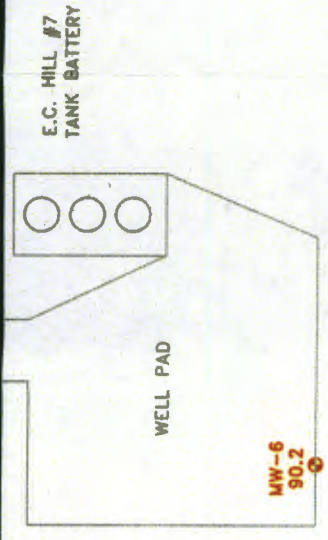
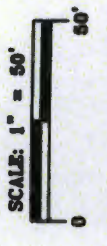




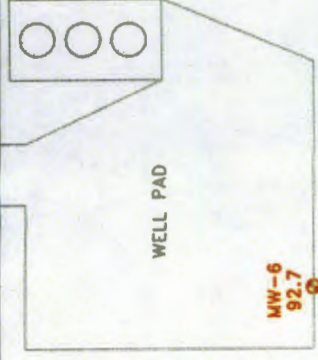
FIGURE NO. 8
 LEA COUNTY, NEW MEXICO
OXY USA, INC.
 E.C. HILL FEDERAL #7 & B.D. TB
 CHLORIDE CONCENTRATION MAP
 SAMPLED ON 12/10/06
 PETRA TECH, INC.
 MIDLAND, TEXAS

DATE: 3/20/09
 BY: JJ
 CHECKED: [Signature]





E.C. HILL #7
TANK BATTERY



SECTION 35
SECTION 34

MW-2
140

500

1,000

MW-7
1,360

MW-1
922

E.C. HILL B-D
FED. TANK BATTERY

LEASE RD.

MW-5
879

MW-4
573

PLAINS BPL

PLAINS BPL

PLAINS BPL

MW-3
226

LEASE RD.

EVA E. BLINBERY #19
WELL PAD



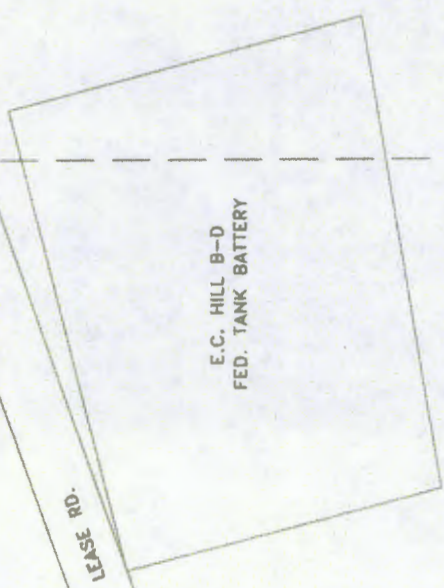
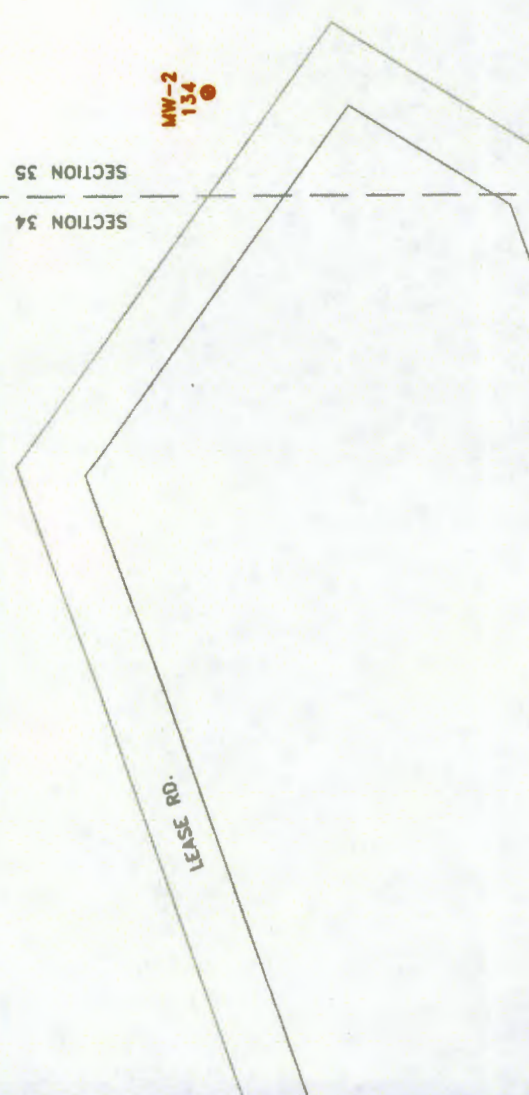
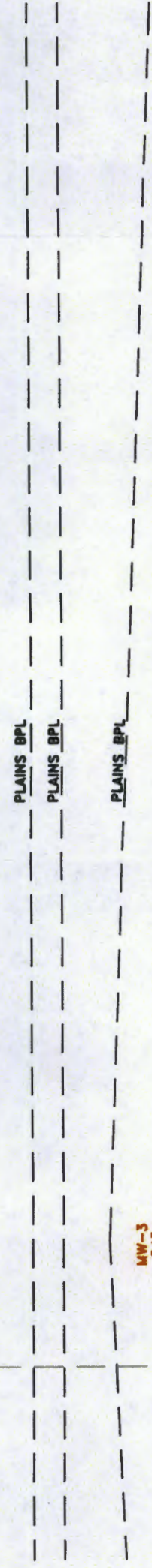
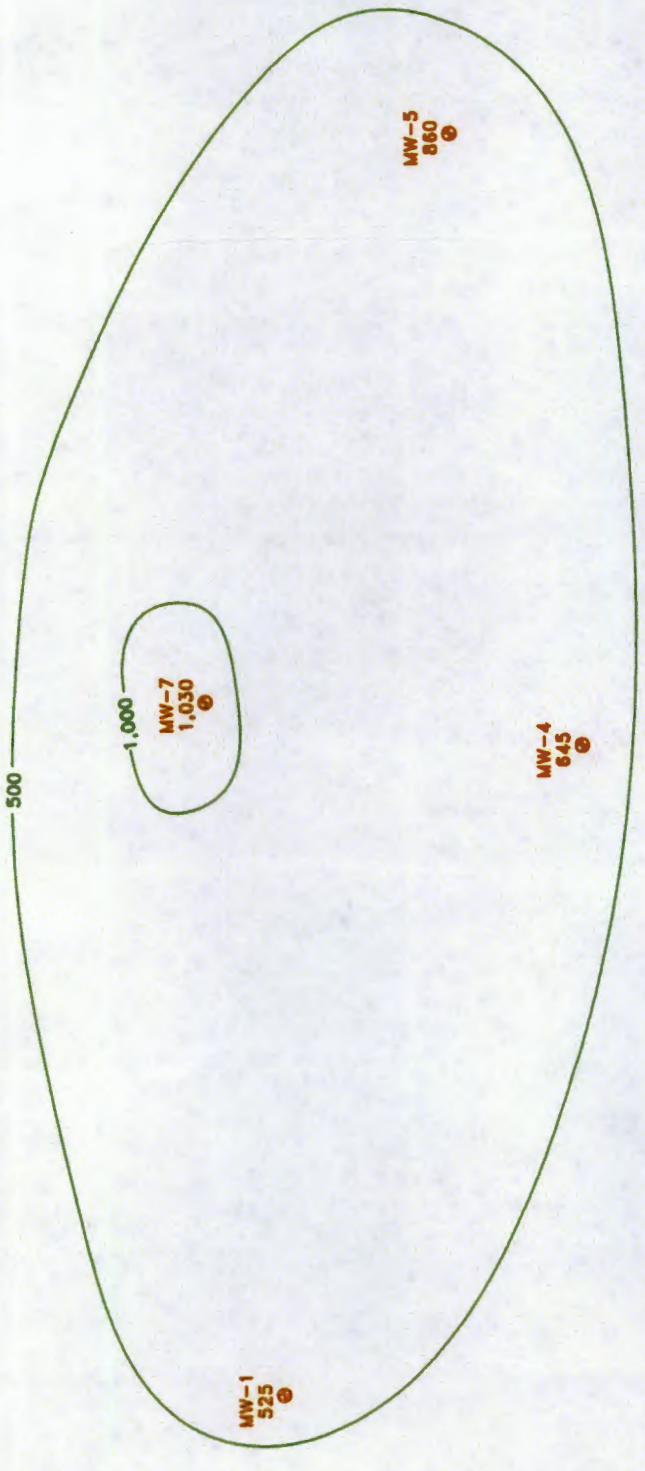
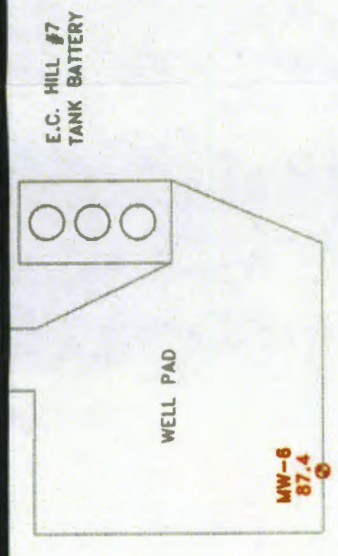
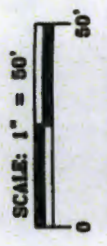
FIGURE NO. 9
LEA COUNTY, NEW MEXICO
OXY USA, INC.
E.C. HILL FEDERAL #7 & B.D. TB
CHLORIDE CONCENTRATION MAP
SAMPLED ON 3/11/09
TETRA TECH, INC.
MIDLAND, TEXAS

DATE	3/20/09
REV. NO.	01
REV. BY	...
REV. DATE	...



FIGURE NO. 10
 LEA COUNTY, NEW MEXICO
OXY USA, INC.
 E.C. HILL FEDERAL #7 & B.D. TB
 CHLORIDE CONCENTRATION MAP
 SAMPLED ON 8/10/09
 TETRA TECH, INC.
 MIDLAND, TEXAS

DATE: 3/20/09
 BY: JJJ
 CHECKED: JJJ



SECTION 35
 SECTION 34

LEASE RD.

LEASE RD.

LEASE RD.

Table 1
OXY USA, Inc.
E.C. Hill B-D & Federal #7 TB
Summary of Groundwater Elevations and PSH Thickness
Lea County, New Mexico

MW-1	10/22/08	3257.81	93.00	--	78.82	--	3178.99
	12/11/08			--	78.39	--	3179.42
	03/11/09			--	78.83	--	3178.98
	06/10/09			--	78.78	--	3179.03
MW-2	10/23/08	3258.87	91.30	--	79.39	--	3179.48
	12/12/08			--	79.33	--	3179.54
	03/11/09			--	79.36	--	3179.51
	06/10/09			--	79.33	--	3179.54
MW-3	10/23/08	3259.24	92.75	--	79.42	--	3179.82
	12/12/08			--	80.38	--	3178.86
	03/11/09			--	80.40	--	3178.84
	06/10/09			--	80.36	--	3178.88
MW-4	10/23/08	3258.53	91.00	--	80.03	--	3178.50
	12/12/08			--	80.00	--	3178.53
	03/11/09			--	80.02	--	3178.51
	06/10/09			--	79.99	--	3178.54
MW-5	10/23/08	3255.69	92.50	--	77.45	--	3178.24
	12/12/08			--	77.41	--	3178.28
	03/11/09			--	77.43	--	3178.26
	06/10/09			--	77.4	--	3178.29
MW-6	10/23/08	3257.98	93.00	--	79.03	--	3178.95
	12/12/08			--	78.97	--	3179.01
	03/11/09			--	79.03	--	3178.95
	06/10/09			--	79.00	--	3178.98
MW-7	10/23/08	3256.95	93.00	--	78.28	--	3178.67
	12/12/08			--	78.24	--	3178.71

Table 2
OXY USA, Inc.
E.C. Hill B-D & Federal #7 TB
Summary of Analysis of Groundwater Samples
Lea County, New Mexico

MW-1	09/22/06	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	1,150
	05/16/07	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	729
	10/22/08	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	1060
	12/10/08	<0.005	<0.005	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	373
	03/11/09	<0.001	<0.001	<0.001	<0.001	<0.003	<0.003	<0.003	-	-	922
	06/10/09	<0.001	<0.001	<0.001	<0.001	<0.003	<0.003	<0.003	-	-	610
MW-1 DUP	06/10/09	<0.001	<0.001	<0.001	<0.001	<0.003	<0.003	<0.003	-	-	525
MW-2	10/22/08	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	132
	12/10/08	<0.005	<0.005	<0.005	<0.005	<0.015	<0.015	<0.015	-	-	349
	03/11/09	<0.001	<0.001	<0.001	<0.001	<0.003	<0.003	<0.003	-	-	140
	06/10/09	<0.001	<0.001	<0.001	<0.001	<0.003	<0.003	<0.003	-	-	134
MW-3	10/22/08	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	237
	12/10/08	<0.005	<0.005	<0.005	<0.015	<0.015	<0.015	<0.015	-	-	207
	03/11/09	<0.001	0.00052	<0.001	<0.001	<0.003	<0.003	<0.003	-	-	229
	06/10/09	<0.001	<0.001	<0.001	<0.001	<0.003	<0.003	<0.003	-	-	243
MW-4	10/22/08	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	556
	12/10/08	<0.005	<0.005	<0.005	<0.015	<0.015	<0.015	<0.015	-	-	642
	03/11/09	<0.001	<0.001	<0.001	<0.001	<0.003	<0.003	<0.003	-	-	573
	06/10/09	<0.001	<0.001	<0.001	<0.001	<0.003	<0.003	<0.003	-	-	645

APPENDIX A
LABORATORY ANALYTICAL



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

Analytical and Quality Control Report

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

Report Date: November 5, 2008

Work Order: 8102411



Project Location: Lea Co.
 Project Name: Oxy/E.C. Hill, B-D & Fed. #7 TB
 Project Number: 115-6402943

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
177241	MW-1 (BD)	water	2008-10-22	00:00	2008-10-24
177242	MW-2	water	2008-10-22	00:00	2008-10-24
177243	MW-3	water	2008-10-22	00:00	2008-10-24
177244	MW-4	water	2008-10-22	00:00	2008-10-24
177245	MW-5	water	2008-10-22	00:00	2008-10-24
177246	MW-6	water	2008-10-22	00:00	2008-10-24
177247	MW-7 (Fed #7 TB)	water	2008-10-22	00:00	2008-10-24

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.

This report consists of a total of 42 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 Oxy/E.C. Hill, B-D & Fed. #7 TB were received by TraceAnalysis, Inc. on 2008-10-24 and assigned to work order 8102411. Samples for work order 8102411 were received intact without headspace and at a temperature of 3.0 deg. C.

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

Test	Method
Alkalinity	SM 2320B
BTEX	S 8021B
Ca, Dissolved	S 6010B
Chloride (IC)	E 300.0
Hardness	S 6010B
K, Dissolved	S 6010B
Mg, Dissolved	S 6010B
Na, Dissolved	S 6010B
pH	SM 4500-H+
SO4 (IC)	E 300.0
TDS	SM 2540C

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 8102411 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: 177241 - MW-1 (BD)

Laboratory: Midland	Analytical Method: SM 2320B	Prep Method: N/A
Analysis: Alkalinity	Date Analyzed: 2008-10-28	Analyzed By: AR
QC Batch: 53708	Sample Preparation: 2008-10-28	Prepared By: AR
Prep Batch: 45973		

Parameter	Flag	RL Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Bicarbonate Alkalinity		349	mg/L as CaCo3	1	4.00
Total Alkalinity		349	mg/L as CaCo3	1	4.00

Sample: 177241 - MW-1 (BD)

Laboratory: Midland	Analytical Method: S 8021B	Prep Method: S 5030B
Analysis: BTEX	Date Analyzed: 2008-10-24	Analyzed By: AG
QC Batch: 53629	Sample Preparation: 2008-10-24	Prepared By: AG
Prep Batch: 45915		

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0914	mg/L	1	0.100	91	77.8 - 121.1
4-Bromofluorobenzene (4-BFB)		0.0910	mg/L	1	0.100	91	40.1 - 136

Sample: 177241 - MW-1 (BD)

Laboratory: Lubbock	Analytical Method: S 6010B	Prep Method: S 3005A
Analysis: Ca, Dissolved	Date Analyzed: 2008-10-31	Analyzed By: TP
QC Batch: 53920	Sample Preparation: 2008-10-30	Prepared By: KV
Prep Batch: 46006		

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Calcium		404	mg/L	10	1.00

Report Date: November 5, 2008
115-6402943

Work Order: 8102411
Oxy/E.C. Hill, B-D & Fed. #7 TB

Page Number: 5 of 42
Lea Co.

Sample: 177241 - MW-1 (BD)

Laboratory: Midland
Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 53709 Date Analyzed: 2008-10-28 Analyzed By: AR
Prep Batch: 45928 Sample Preparation: 2008-10-27 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1060	mg/L	100	0.500

Sample: 177241 - MW-1 (BD)

Laboratory: Lubbock
Analysis: Hardness Analytical Method: S 6010B Prep Method: N/A
QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
Prep Batch: 46006 Sample Preparation: 2008-10-30 Prepared By: KV

Parameter	Flag	RL Result	Units	Dilution	RL
Hardness (by ICP)		1260	mg eq CaCO3/L	1	0.00

Sample: 177241 - MW-1 (BD)

Laboratory: Lubbock
Analysis: K, Dissolved Analytical Method: S 6010B Prep Method: S 3005A
QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
Prep Batch: 46006 Sample Preparation: 2008-10-30 Prepared By: KV

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Potassium		15.0	mg/L	1	1.00

Sample: 177241 - MW-1 (BD)

Laboratory: Lubbock
Analysis: Mg, Dissolved Analytical Method: S 6010B Prep Method: S 3005A
QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
Prep Batch: 46006 Sample Preparation: 2008-10-30 Prepared By: KV

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Magnesium		62.4	mg/L	1	1.00

Report Date: November 5, 2008
115-6402943

Work Order: 8102411
Oxy/E.C. Hill, B-D & Fed. #7 TB

Page Number: 6 of 42
Lea Co.

Sample: 177241 - MW-1 (BD)

Laboratory: Lubbock
Analysis: Na, Dissolved Analytical Method: S 6010B Prep Method: S 3005A
QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
Prep Batch: 46006 Sample Preparation: 2008-10-30 Prepared By: KV

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Sodium		384	mg/L	10	1.00

Sample: 177241 - MW-1 (BD)

Laboratory: Midland
Analysis: pH Analytical Method: SM 4500-H+ Prep Method: N/A
QC Batch: 53609 Date Analyzed: 2008-10-24 Analyzed By: AR
Prep Batch: 45899 Sample Preparation: 2008-10-24 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
pH		6.68	s.u.	1	0.00

Sample: 177241 - MW-1 (BD)

Laboratory: Midland
Analysis: SO4 (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 53709 Date Analyzed: 2008-10-28 Analyzed By: AR
Prep Batch: 45928 Sample Preparation: 2008-10-27 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Sulfate		260	mg/L	5	0.500

Sample: 177241 - MW-1 (BD)

Laboratory: Midland
Analysis: TDS Analytical Method: SM 2540C Prep Method: N/A
QC Batch: 53827 Date Analyzed: 2008-10-31 Analyzed By: AR
Prep Batch: 45981 Sample Preparation: 2008-10-29 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		2420	mg/L	5	10.0

Report Date: November 5, 2008
115-6402943

Work Order: 8102411
Oxy/E.C. Hill, B-D & Fed. #7 TB

Page Number: 7 of 42
Lea Co.

Sample: 177242 - MW-2

Laboratory: Midland
Analysis: Alkalinity Analytical Method: SM 2320B Prep Method: N/A
QC Batch: 53708 Date Analyzed: 2008-10-28 Analyzed By: AR
Prep Batch: 45973 Sample Preparation: 2008-10-28 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Bicarbonate Alkalinity		221	mg/L as CaCo3	1	4.00
Total Alkalinity		221	mg/L as CaCo3	1	4.00

Sample: 177242 - MW-2

Laboratory: Midland
Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5030B
QC Batch: 53629 Date Analyzed: 2008-10-24 Analyzed By: AG
Prep Batch: 45915 Sample Preparation: 2008-10-24 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0924	mg/L	1	0.100	92	77.8 - 121.1
4-Bromofluorobenzene (4-BFB)		0.0895	mg/L	1	0.100	90	40.1 - 136

Sample: 177242 - MW-2

Laboratory: Lubbock
Analysis: Ca, Dissolved Analytical Method: S 6010B Prep Method: S 3005A
QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
Prep Batch: 46006 Sample Preparation: 2008-10-30 Prepared By: KV

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Calcium		154	mg/L	1	1.00

Sample: 177242 - MW-2

Laboratory: Midland
Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 53709 Date Analyzed: 2008-10-28 Analyzed By: AR
Prep Batch: 45928 Sample Preparation: 2008-10-27 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		132	mg/L	5	0.500

Sample: 177242 - MW-2

Laboratory: Lubbock
Analysis: Hardness Analytical Method: S 6010B Prep Method: N/A
QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
Prep Batch: 46006 Sample Preparation: 2008-10-30 Prepared By: KV

Parameter	Flag	RL Result	Units	Dilution	RL
Hardness (by ICP)		510	mg eq CaCO3/L	1	0.00

Sample: 177242 - MW-2

Laboratory: Lubbock
Analysis: K, Dissolved Analytical Method: S 6010B Prep Method: S 3005A
QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
Prep Batch: 46006 Sample Preparation: 2008-10-30 Prepared By: KV

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Potassium		6.01	mg/L	1	1.00

Sample: 177242 - MW-2

Laboratory: Lubbock
Analysis: Mg, Dissolved Analytical Method: S 6010B Prep Method: S 3005A
QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
Prep Batch: 46006 Sample Preparation: 2008-10-30 Prepared By: KV

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Magnesium		30.5	mg/L	1	1.00

Report Date: November 5, 2008
115-6402943

Work Order: 8102411
Oxy/E.C. Hill, B-D & Fed. #7 TB

Page Number: 9 of 42
Lea Co.

Sample: 177242 - MW-2

Laboratory: Lubbock
Analysis: Na, Dissolved Analytical Method: S 6010B Prep Method: S 3005A
QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
Prep Batch: 46006 Sample Preparation: 2008-10-30 Prepared By: KV

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Sodium		94.5	mg/L	1	1.00

Sample: 177242 - MW-2

Laboratory: Midland
Analysis: pH Analytical Method: SM 4500-H+ Prep Method: N/A
QC Batch: 53609 Date Analyzed: 2008-10-24 Analyzed By: AR
Prep Batch: 45899 Sample Preparation: 2008-10-24 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
pH		7.45	s.u.	1	0.00

Sample: 177242 - MW-2

Laboratory: Midland
Analysis: SO4 (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 53709 Date Analyzed: 2008-10-28 Analyzed By: AR
Prep Batch: 45928 Sample Preparation: 2008-10-27 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Sulfate		256	mg/L	5	0.500

Sample: 177242 - MW-2

Laboratory: Midland
Analysis: TDS Analytical Method: SM 2540C Prep Method: N/A
QC Batch: 53827 Date Analyzed: 2008-10-31 Analyzed By: AR
Prep Batch: 45981 Sample Preparation: 2008-10-29 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		858	mg/L	2	10.0

Report Date: November 5, 2008
115-6402943

Work Order: 8102411
Oxy/E.C. Hill, B-D & Fed. #7 TB

Page Number: 10 of 42
Lea Co.

Sample: 177243 - MW-3

Laboratory: Midland
Analysis: Alkalinity
QC Batch: 53708
Prep Batch: 45973

Analytical Method: SM 2320B
Date Analyzed: 2008-10-28
Sample Preparation: 2008-10-28

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

Parameter	Flag	RL Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Bicarbonate Alkalinity		288	mg/L as CaCo3	1	4.00
Total Alkalinity		288	mg/L as CaCo3	1	4.00

Sample: 177243 - MW-3

Laboratory: Midland
Analysis: BTEX
QC Batch: 53629
Prep Batch: 45915

Analytical Method: S 8021B
Date Analyzed: 2008-10-24
Sample Preparation: 2008-10-24

Prep Method: S 5030B
Analyzed By: AG
Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0933	mg/L	1	0.100	93	77.8 - 121.1
4-Bromofluorobenzene (4-BFB)		0.0912	mg/L	1	0.100	91	40.1 - 136

Sample: 177243 - MW-3

Laboratory: Lubbock
Analysis: Ca, Dissolved
QC Batch: 53920
Prep Batch: 46006

Analytical Method: S 6010B
Date Analyzed: 2008-10-31
Sample Preparation: 2008-10-30

Prep Method: S 3005A
Analyzed By: TP
Prepared By: KV

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Calcium		216	mg/L	1	1.00

Report Date: November 5, 2008
115-6402943

Work Order: 8102411
Oxy/E.C. Hill, B-D & Fed. #7 TB

Page Number: 11 of 42
Lea Co.

Sample: 177243 - MW-3

Laboratory: Midland
Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 53709 Date Analyzed: 2008-10-28 Analyzed By: AR
Prep Batch: 45928 Sample Preparation: 2008-10-27 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		237	mg/L	10	0.500

Sample: 177243 - MW-3

Laboratory: Lubbock
Analysis: Hardness Analytical Method: S 6010B Prep Method: N/A
QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
Prep Batch: 46006 Sample Preparation: 2008-10-30 Prepared By: KV

Parameter	Flag	RL Result	Units	Dilution	RL
Hardness (by ICP)		679	mg eq CaCO3/L	1	0.00

Sample: 177243 - MW-3

Laboratory: Lubbock
Analysis: K, Dissolved Analytical Method: S 6010B Prep Method: S 3005A
QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
Prep Batch: 46006 Sample Preparation: 2008-10-30 Prepared By: KV

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Potassium		6.03	mg/L	1	1.00

Sample: 177243 - MW-3

Laboratory: Lubbock
Analysis: Mg, Dissolved Analytical Method: S 6010B Prep Method: S 3005A
QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
Prep Batch: 46006 Sample Preparation: 2008-10-30 Prepared By: KV

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Magnesium		34.0	mg/L	1	1.00

Report Date: November 5, 2008
115-6402943

Work Order: 8102411
Oxy/E.C. Hill, B-D & Fed. #7 TB

Page Number: 12 of 42
Lea Co.

Sample: 177243 - MW-3

Laboratory: Lubbock
Analysis: Na, Dissolved Analytical Method: S 6010B Prep Method: S 3005A
QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
Prep Batch: 46006 Sample Preparation: 2008-10-30 Prepared By: KV

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Sodium		128	mg/L	1	1.00

Sample: 177243 - MW-3

Laboratory: Midland
Analysis: pH Analytical Method: SM 4500-H+ Prep Method: N/A
QC Batch: 53609 Date Analyzed: 2008-10-24 Analyzed By: AR
Prep Batch: 45899 Sample Preparation: 2008-10-24 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
pH		7.34	s.u.	1	0.00

Sample: 177243 - MW-3

Laboratory: Midland
Analysis: SO4 (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 53709 Date Analyzed: 2008-10-28 Analyzed By: AR
Prep Batch: 45928 Sample Preparation: 2008-10-27 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Sulfate		289	mg/L	5	0.500

Sample: 177243 - MW-3

Laboratory: Midland
Analysis: TDS Analytical Method: SM 2540C Prep Method: N/A
QC Batch: 53827 Date Analyzed: 2008-10-31 Analyzed By: AR
Prep Batch: 45981 Sample Preparation: 2008-10-29 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		1110	mg/L	2	10.0

Sample: 177244 - MW-4

Laboratory: Midland
 Analysis: Alkalinity Analytical Method: SM 2320B Prep Method: N/A
 QC Batch: 53708 Date Analyzed: 2008-10-28 Analyzed By: AR
 Prep Batch: 45973 Sample Preparation: 2008-10-28 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Bicarbonate Alkalinity		289	mg/L as CaCo3	1	4.00
Total Alkalinity		289	mg/L as CaCo3	1	4.00

Sample: 177244 - MW-4

Laboratory: Midland
 Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5030B
 QC Batch: 53629 Date Analyzed: 2008-10-24 Analyzed By: AG
 Prep Batch: 45915 Sample Preparation: 2008-10-24 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0931	mg/L	1	0.100	93	77.8 - 121.1
4-Bromofluorobenzene (4-BFB)		0.0917	mg/L	1	0.100	92	40.1 - 136

Sample: 177244 - MW-4

Laboratory: Lubbock
 Analysis: Ca, Dissolved Analytical Method: S 6010B Prep Method: S 3005A
 QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
 Prep Batch: 46006 Sample Preparation: 2008-10-30 Prepared By: KV

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Calcium		178	mg/L	1	1.00

Sample: 177244 - MW-4

Laboratory: Midland
Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 53709 Date Analyzed: 2008-10-28 Analyzed By: AR
Prep Batch: 45928 Sample Preparation: 2008-10-27 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		556	mg/L	50	0.500

Sample: 177244 - MW-4

Laboratory: Lubbock
Analysis: Hardness Analytical Method: S 6010B Prep Method: N/A
QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
Prep Batch: 46006 Sample Preparation: 2008-10-30 Prepared By: KV

Parameter	Flag	RL Result	Units	Dilution	RL
Hardness (by ICP)		562	mg eq CaCO3/L	1	0.00

Sample: 177244 - MW-4

Laboratory: Lubbock
Analysis: K, Dissolved Analytical Method: S 6010B Prep Method: S 3005A
QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
Prep Batch: 46006 Sample Preparation: 2008-10-30 Prepared By: KV

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Potassium		9.28	mg/L	1	1.00

Sample: 177244 - MW-4

Laboratory: Lubbock
Analysis: Mg, Dissolved Analytical Method: S 6010B Prep Method: S 3005A
QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
Prep Batch: 46006 Sample Preparation: 2008-10-30 Prepared By: KV

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Magnesium		28.6	mg/L	1	1.00

Sample: 177244 - MW-4

Laboratory: Lubbock
Analysis: Na, Dissolved Analytical Method: S 6010B Prep Method: S 3005A
QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
Prep Batch: 46006 Sample Preparation: 2008-10-30 Prepared By: KV

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Sodium		398	mg/L	10	1.00

Sample: 177244 - MW-4

Laboratory: Midland
Analysis: pH Analytical Method: SM 4500-H+ Prep Method: N/A
QC Batch: 53609 Date Analyzed: 2008-10-24 Analyzed By: AR
Prep Batch: 45899 Sample Preparation: 2008-10-24 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
pH		7.67	s.u.	1	0.00

Sample: 177244 - MW-4

Laboratory: Midland
Analysis: SO4 (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 53709 Date Analyzed: 2008-10-28 Analyzed By: AR
Prep Batch: 45928 Sample Preparation: 2008-10-27 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Sulfate		346	mg/L	50	0.500

Sample: 177244 - MW-4

Laboratory: Midland
Analysis: TDS Analytical Method: SM 2540C Prep Method: N/A
QC Batch: 53827 Date Analyzed: 2008-10-31 Analyzed By: AR
Prep Batch: 45981 Sample Preparation: 2008-10-29 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		1680	mg/L	2	10.0

Report Date: November 5, 2008
115-6402943

Work Order: 8102411
Oxy/E.C. Hill, B-D & Fed. #7 TB

Page Number: 16 of 42
Lea Co.

Sample: 177245 - MW-5

Laboratory: Midland
Analysis: Alkalinity
QC Batch: 53708
Prep Batch: 45973
Analytical Method: SM 2320B
Date Analyzed: 2008-10-28
Sample Preparation: 2008-10-28
Prep Method: N/A
Analyzed By: AR
Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Bicarbonate Alkalinity		229	mg/L as CaCo3	1	4.00
Total Alkalinity		229	mg/L as CaCo3	1	4.00

Sample: 177245 - MW-5

Laboratory: Midland
Analysis: BTEX
QC Batch: 53629
Prep Batch: 45915
Analytical Method: S 8021B
Date Analyzed: 2008-10-24
Sample Preparation: 2008-10-24
Prep Method: S 5030B
Analyzed By: AG
Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0928	mg/L	1	0.100	93	77.8 - 121.1
4-Bromofluorobenzene (4-BFB)		0.0893	mg/L	1	0.100	89	40.1 - 136

Sample: 177245 - MW-5

Laboratory: Lubbock
Analysis: Ca, Dissolved
QC Batch: 53920
Prep Batch: 46006
Analytical Method: S 6010B
Date Analyzed: 2008-10-31
Sample Preparation: 2008-10-30
Prep Method: S 3005A
Analyzed By: TP
Prepared By: KV

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Calcium		232	mg/L	1	1.00

Report Date: November 5, 2008
115-6402943

Work Order: 8102411
Oxy/E.C. Hill, B-D & Fed. #7 TB

Page Number: 17 of 42
Lea Co.

Sample: 177245 - MW-5

Laboratory: Midland
Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 53709 Date Analyzed: 2008-10-28 Analyzed By: AR
Prep Batch: 45928 Sample Preparation: 2008-10-27 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1040	mg/L	100	0.500

Sample: 177245 - MW-5

Laboratory: Lubbock
Analysis: Hardness Analytical Method: S 6010B Prep Method: N/A
QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
Prep Batch: 46006 Sample Preparation: 2008-10-30 Prepared By: KV

Parameter	Flag	RL Result	Units	Dilution	RL
Hardness (by ICP)		709	mg eq CaCO3/L	1	0.00

Sample: 177245 - MW-5

Laboratory: Lubbock
Analysis: K, Dissolved Analytical Method: S 6010B Prep Method: S 3005A
QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
Prep Batch: 46006 Sample Preparation: 2008-10-30 Prepared By: KV

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Potassium		11.0	mg/L	1	1.00

Sample: 177245 - MW-5

Laboratory: Lubbock
Analysis: Mg, Dissolved Analytical Method: S 6010B Prep Method: S 3005A
QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
Prep Batch: 46006 Sample Preparation: 2008-10-30 Prepared By: KV

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Magnesium		31.5	mg/L	1	1.00

Report Date: November 5, 2008
115-6402943

Work Order: 8102411
Oxy/E.C. Hill, B-D & Fed. #7 TB

Page Number: 18 of 42
Lea Co.

Sample: 177245 - MW-5

Laboratory: Lubbock
Analysis: Na, Dissolved Analytical Method: S 6010B Prep Method: S 3005A
QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
Prep Batch: 46006 Sample Preparation: 2008-10-30 Prepared By: KV

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Sodium		564	mg/L	10	1.00

Sample: 177245 - MW-5

Laboratory: Midland
Analysis: pH Analytical Method: SM 4500-H+ Prep Method: N/A
QC Batch: 53609 Date Analyzed: 2008-10-24 Analyzed By: AR
Prep Batch: 45899 Sample Preparation: 2008-10-24 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
pH		7.72	s.u.	1	0.00

Sample: 177245 - MW-5

Laboratory: Midland
Analysis: SO4 (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 53709 Date Analyzed: 2008-10-28 Analyzed By: AR
Prep Batch: 45928 Sample Preparation: 2008-10-27 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Sulfate		246	mg/L	5	0.500

Sample: 177245 - MW-5

Laboratory: Midland
Analysis: TDS Analytical Method: SM 2540C Prep Method: N/A
QC Batch: 53827 Date Analyzed: 2008-10-31 Analyzed By: AR
Prep Batch: 45981 Sample Preparation: 2008-10-29 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		2120	mg/L	5	10.0

Sample: 177246 - MW-6

Laboratory: Midland	Analytical Method: SM 2320B	Prep Method: N/A
Analysis: Alkalinity	Date Analyzed: 2008-10-28	Analyzed By: AR
QC Batch: 53708	Sample Preparation: 2008-10-28	Prepared By: AR
Prep Batch: 45973		

Parameter	Flag	RL Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Bicarbonate Alkalinity		208	mg/L as CaCo3	1	4.00
Total Alkalinity		208	mg/L as CaCo3	1	4.00

Sample: 177246 - MW-6

Laboratory: Midland	Analytical Method: S 8021B	Prep Method: S 5030B
Analysis: BTEX	Date Analyzed: 2008-10-25	Analyzed By: AG
QC Batch: 53630	Sample Preparation: 2008-10-24	Prepared By: AG
Prep Batch: 45915		

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0898	mg/L	1	0.100	90	77.8 - 121.1
4-Bromofluorobenzene (4-BFB)		0.0867	mg/L	1	0.100	87	40.1 - 136

Sample: 177246 - MW-6

Laboratory: Lubbock	Analytical Method: S 6010B	Prep Method: S 3005A
Analysis: Ca, Dissolved	Date Analyzed: 2008-10-31	Analyzed By: TP
QC Batch: 53920	Sample Preparation: 2008-10-30	Prepared By: KV
Prep Batch: 46006		

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Calcium		101	mg/L	1	1.00

Sample: 177246 - MW-6

Laboratory: Midland
Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 53710 Date Analyzed: 2008-10-28 Analyzed By: AR
Prep Batch: 45929 Sample Preparation: 2008-10-27 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		87.8	mg/L	5	0.500

Sample: 177246 - MW-6

Laboratory: Lubbock
Analysis: Hardness Analytical Method: S 6010B Prep Method: N/A
QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
Prep Batch: 46006 Sample Preparation: 2008-10-30 Prepared By: KV

Parameter	Flag	RL Result	Units	Dilution	RL
Hardness (by ICP)		340	mg eq CaCO3/L	1	0.00

Sample: 177246 - MW-6

Laboratory: Lubbock
Analysis: K, Dissolved Analytical Method: S 6010B Prep Method: S 3005A
QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
Prep Batch: 46006 Sample Preparation: 2008-10-30 Prepared By: KV

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Potassium		5.78	mg/L	1	1.00

Sample: 177246 - MW-6

Laboratory: Lubbock
Analysis: Mg, Dissolved Analytical Method: S 6010B Prep Method: S 3005A
QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
Prep Batch: 46006 Sample Preparation: 2008-10-30 Prepared By: KV

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Magnesium		21.3	mg/L	1	1.00

Sample: 177246 - MW-6

Laboratory: Lubbock
Analysis: Na, Dissolved Analytical Method: S 6010B Prep Method: S 3005A
QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
Prep Batch: 46006 Sample Preparation: 2008-10-30 Prepared By: KV

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Sodium		107	mg/L	1	1.00

Sample: 177246 - MW-6

Laboratory: Midland
Analysis: pH Analytical Method: SM 4500-H+ Prep Method: N/A
QC Batch: 53609 Date Analyzed: 2008-10-24 Analyzed By: AR
Prep Batch: 45899 Sample Preparation: 2008-10-24 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
pH		8.18	s.u.	1	0.00

Sample: 177246 - MW-6

Laboratory: Midland
Analysis: SO4 (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 53710 Date Analyzed: 2008-10-28 Analyzed By: AR
Prep Batch: 45929 Sample Preparation: 2008-10-27 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Sulfate		230	mg/L	5	0.500

Sample: 177246 - MW-6

Laboratory: Midland
Analysis: TDS Analytical Method: SM 2540C Prep Method: N/A
QC Batch: 53827 Date Analyzed: 2008-10-31 Analyzed By: AR
Prep Batch: 45981 Sample Preparation: 2008-10-29 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		732	mg/L	1	10.0

Report Date: November 5, 2008
115-6402943

Work Order: 8102411
Oxy/E.C. Hill, B-D & Fed. #7 TB

Page Number: 22 of 42
Lea Co.

Sample: 177247 - MW-7 (Fed #7 TB)

Laboratory: Midland
Analysis: Alkalinity Analytical Method: SM 2320B Prep Method: N/A
QC Batch: 53708 Date Analyzed: 2008-10-28 Analyzed By: AR
Prep Batch: 45973 Sample Preparation: 2008-10-28 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Bicarbonate Alkalinity		405	mg/L as CaCo3	1	4.00
Total Alkalinity		405	mg/L as CaCo3	1	4.00

Sample: 177247 - MW-7 (Fed #7 TB)

Laboratory: Midland
Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5030B
QC Batch: 53630 Date Analyzed: 2008-10-25 Analyzed By: AG
Prep Batch: 45915 Sample Preparation: 2008-10-24 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0925	mg/L	1	0.100	92	77.8 - 121.1
4-Bromofluorobenzene (4-BFB)		0.0796	mg/L	1	0.100	80	40.1 - 136

Sample: 177247 - MW-7 (Fed #7 TB)

Laboratory: Lubbock
Analysis: Ca, Dissolved Analytical Method: S 6010B Prep Method: S 3005A
QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
Prep Batch: 46006 Sample Preparation: 2008-10-30 Prepared By: KV

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Calcium		160	mg/L	1	1.00

Report Date: November 5, 2008
115-6402943

Work Order: 8102411
Oxy/E.C. Hill, B-D & Fed. #7 TB

Page Number: 23 of 42
Lea Co.

Sample: 177247 - MW-7 (Fed #7 TB)

Laboratory: Midland
Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 53710 Date Analyzed: 2008-10-28 Analyzed By: AR
Prep Batch: 45929 Sample Preparation: 2008-10-27 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1200	mg/L	100	0.500

Sample: 177247 - MW-7 (Fed #7 TB)

Laboratory: Lubbock
Analysis: Hardness Analytical Method: S 6010B Prep Method: N/A
QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
Prep Batch: 46006 Sample Preparation: 2008-10-30 Prepared By: KV

Parameter	Flag	RL Result	Units	Dilution	RL
Hardness (by ICP)		547	mg eq CaCO3/L	1	0.00

Sample: 177247 - MW-7 (Fed #7 TB)

Laboratory: Lubbock
Analysis: K, Dissolved Analytical Method: S 6010B Prep Method: S 3005A
QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
Prep Batch: 46006 Sample Preparation: 2008-10-30 Prepared By: KV

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Potassium		13.1	mg/L	1	1.00

Sample: 177247 - MW-7 (Fed #7 TB)

Laboratory: Lubbock
Analysis: Mg, Dissolved Analytical Method: S 6010B Prep Method: S 3005A
QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
Prep Batch: 46006 Sample Preparation: 2008-10-30 Prepared By: KV

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Magnesium		35.9	mg/L	1	1.00

Report Date: November 5, 2008
115-6402943

Work Order: 8102411
Oxy/E.C. Hill, B-D & Fed. #7 TB

Page Number: 24 of 42
Lea Co.

Sample: 177247 - MW-7 (Fed #7 TB)

Laboratory: Lubbock
Analysis: Na, Dissolved Analytical Method: S 6010B Prep Method: S 3005A
QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
Prep Batch: 46006 Sample Preparation: 2008-10-30 Prepared By: KV

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Sodium		798	mg/L	10	1.00

Sample: 177247 - MW-7 (Fed #7 TB)

Laboratory: Midland
Analysis: pH Analytical Method: SM 4500-H+ Prep Method: N/A
QC Batch: 53609 Date Analyzed: 2008-10-24 Analyzed By: AR
Prep Batch: 45899 Sample Preparation: 2008-10-24 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
pH		7.41	s.u.	1	0.00

Sample: 177247 - MW-7 (Fed #7 TB)

Laboratory: Midland
Analysis: SO4 (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 53710 Date Analyzed: 2008-10-28 Analyzed By: AR
Prep Batch: 45929 Sample Preparation: 2008-10-27 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Sulfate		282	mg/L	5	0.500

Sample: 177247 - MW-7 (Fed #7 TB)

Laboratory: Midland
Analysis: TDS Analytical Method: SM 2540C Prep Method: N/A
QC Batch: 53827 Date Analyzed: 2008-10-31 Analyzed By: AR
Prep Batch: 45981 Sample Preparation: 2008-10-29 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		2600	mg/L	5	10.0

method blank continued ...

Parameter	Flag	MDL Result	Units	RL
Total Alkalinity		<4.00	mg/L as CaCo3	4

Method Blank (1) QC Batch: 53709

QC Batch: 53709 Date Analyzed: 2008-10-28 Analyzed By: AR
Prep Batch: 45928 QC Preparation: 2008-10-27 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<0.172	mg/L	0.5

Method Blank (1) QC Batch: 53709

QC Batch: 53709 Date Analyzed: 2008-10-28 Analyzed By: AR
Prep Batch: 45928 QC Preparation: 2008-10-27 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Sulfate		<0.0320	mg/L	0.5

Method Blank (1) QC Batch: 53710

QC Batch: 53710 Date Analyzed: 2008-10-28 Analyzed By: AR
Prep Batch: 45929 QC Preparation: 2008-10-27 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		1.16	mg/L	0.5

Method Blank (1) QC Batch: 53710

QC Batch: 53710 Date Analyzed: 2008-10-28 Analyzed By: AR
Prep Batch: 45929 QC Preparation: 2008-10-27 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Sulfate		<0.0320	mg/L	0.5

Report Date: November 5, 2008
115-6402943

Work Order: 8102411
Oxy/E.C. Hill, B-D & Fed. #7 TB

Page Number: 27 of 42
Lea Co.

Method Blank (1) QC Batch: 53827

QC Batch: 53827 Date Analyzed: 2008-10-31 Analyzed By: AR
Prep Batch: 45981 QC Preparation: 2008-10-29 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Total Dissolved Solids		<5.00	mg/L	10

Method Blank (1) QC Batch: 53920

QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
Prep Batch: 46006 QC Preparation: 2008-10-30 Prepared By: KV

Parameter	Flag	MDL Result	Units	RL
Dissolved Calcium		<0.175	mg/L	1

Method Blank (1) QC Batch: 53920

QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
Prep Batch: 46006 QC Preparation: 2008-10-30 Prepared By: KV

Parameter	Flag	MDL Result	Units	RL
Dissolved Potassium		<0.327	mg/L	1

Method Blank (1) QC Batch: 53920

QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
Prep Batch: 46006 QC Preparation: 2008-10-30 Prepared By: KV

Parameter	Flag	MDL Result	Units	RL
Dissolved Magnesium		<0.148	mg/L	1

Method Blank (1) QC Batch: 53920

QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
Prep Batch: 46006 QC Preparation: 2008-10-30 Prepared By: KV

Report Date: November 5, 2008
115-6402943

Work Order: 8102411
Oxy/E.C. Hill, B-D & Fed. #7 TB

Page Number: 28 of 42
Lea Co.

Parameter	Flag	MDL Result	Units	RL
Dissolved Sodium		<0.244	mg/L	1

Duplicates (1) Duplicated Sample: 177258

QC Batch: 53609 Date Analyzed: 2008-10-24 Analyzed By: AR
Prep Batch: 45899 QC Preparation: 2008-10-24 Prepared By: AR

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
pH	7.86	7.84	s.u.	1	0	1.5

Duplicates (1) Duplicated Sample: 177258

QC Batch: 53708 Date Analyzed: 2008-10-28 Analyzed By: AR
Prep Batch: 45973 QC Preparation: 2008-10-28 Prepared By: AR

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Hydroxide Alkalinity	<1.00	<1.00	mg/L as CaCo3	1	0	20
Carbonate Alkalinity	<1.00	<1.00	mg/L as CaCo3	1	0	20
Bicarbonate Alkalinity	175	168	mg/L as CaCo3	1	4	20
Total Alkalinity	175	168	mg/L as CaCo3	1	4	20

Duplicates (1) Duplicated Sample: 177258

QC Batch: 53827 Date Analyzed: 2008-10-31 Analyzed By: AR
Prep Batch: 45981 QC Preparation: 2008-10-29 Prepared By: AR

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	743	780	mg/L	1	5	20

Laboratory Control Spike (LCS-1)

QC Batch: 53629 Date Analyzed: 2008-10-24 Analyzed By: AG
Prep Batch: 45915 QC Preparation: 2008-10-24 Prepared By: AG

continued ...

control spikes continued ...

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.109	mg/L	1	0.100	<0.00110	109	84 - 119.7
Toluene	0.110	mg/L	1	0.100	<0.00100	110	84.9 - 118.2
Ethylbenzene	0.111	mg/L	1	0.100	<0.00100	111	84.4 - 118.6
Xylene	0.320	mg/L	1	0.300	<0.00290	107	84.8 - 117.8

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	0.110	mg/L	1	0.100	<0.00110	110	84 - 119.7	1	20
Toluene	0.110	mg/L	1	0.100	<0.00100	110	84.9 - 118.2	0	20
Ethylbenzene	0.110	mg/L	1	0.100	<0.00100	110	84.4 - 118.6	1	20
Xylene	0.318	mg/L	1	0.300	<0.00290	106	84.8 - 117.8	1	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0954	0.0953	mg/L	1	0.100	95	95	80 - 128.3
4-Bromofluorobenzene (4-BFB)	0.0965	0.0960	mg/L	1	0.100	96	96	67.7 - 126.3

Laboratory Control Spike (LCS-1)

QC Batch: 53630
Prep Batch: 45915

Date Analyzed: 2008-10-25
QC Preparation: 2008-10-24

Analyzed By: AG
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.103	mg/L	1	0.100	<0.00110	103	84 - 119.7
Toluene	0.103	mg/L	1	0.100	<0.00100	103	84.9 - 118.2
Ethylbenzene	0.104	mg/L	1	0.100	<0.00100	104	84.4 - 118.6
Xylene	0.296	mg/L	1	0.300	<0.00290	99	84.8 - 117.8

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
Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	0.0971	mg/L	1	0.100	<0.00110	97	84 - 119.7	6	20
Toluene	0.0978	mg/L	1	0.100	<0.00100	98	84.9 - 118.2	5	20
Ethylbenzene	0.0987	mg/L	1	0.100	<0.00100	99	84.4 - 118.6	5	20
Xylene	0.283	mg/L	1	0.300	<0.00290	94	84.8 - 117.8	4	20

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

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	2.26	mg/L	10	1.00	1.1915	107	77.5 - 121.1
Toluene	3.01	mg/L	10	1.00	1.9645	104	78.8 - 119.6
Ethylbenzene	1.82	mg/L	10	1.00	0.8231	100	77.9 - 120.5
Xylene	5.36	mg/L	10	3.00	2.2655	103	78.3 - 119.4

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	2.29	mg/L	10	1.00	1.1915	110	77.5 - 121.1	1	20
Toluene	3.03	mg/L	10	1.00	1.9645	106	78.8 - 119.6	1	20
Ethylbenzene	1.86	mg/L	10	1.00	0.8231	104	77.9 - 120.5	2	20
Xylene	5.49	mg/L	10	3.00	2.2655	107	78.3 - 119.4	2	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.956	0.999	mg/L	10	1	96	100	86.6 - 118.9
4-Bromofluorobenzene (4-BFB)	0.911	0.898	mg/L	10	1	91	90	59.4 - 127.3

Matrix Spike (MS-1) Spiked Sample: 177263

QC Batch: 53630
Prep Batch: 45915

Date Analyzed: 2008-10-25
QC Preparation: 2008-10-24

Analyzed By: AG
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.520	mg/L	5	0.500	<0.00550	104	77.5 - 121.1
Toluene	0.519	mg/L	5	0.500	<0.00500	104	78.8 - 119.6
Ethylbenzene	0.520	mg/L	5	0.500	<0.00500	104	77.9 - 120.5
Xylene	1.48	mg/L	5	1.50	<0.0145	99	78.3 - 119.4

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	0.511	mg/L	5	0.500	<0.00550	102	77.5 - 121.1	2	20
Toluene	0.510	mg/L	5	0.500	<0.00500	102	78.8 - 119.6	2	20
Ethylbenzene	0.514	mg/L	5	0.500	<0.00500	103	77.9 - 120.5	1	20
Xylene	1.46	mg/L	5	1.50	<0.0145	97	78.3 - 119.4	1	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)	0.464	0.459	mg/L	5	0.5	93	92	86.6 - 118.9

continued ...

matrix spikes continued ...

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
4-Bromofluorobenzene (4-BFB)	0.401	0.404	mg/L	5	0.5	80	81	59.4 - 127.3

Matrix Spike (MS-1) Spiked Sample: 177245

QC Batch: 53709 Date Analyzed: 2008-10-28 Analyzed By: AR
Prep Batch: 45928 QC Preparation: 2008-10-27 Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	¹ 1180	mg/L	5	62.5	1126	86	90 - 110

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	² 1170	mg/L	5	62.5	1126	70	90 - 110	1	

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

Matrix Spike (MS-1) Spiked Sample: 177245

QC Batch: 53709 Date Analyzed: 2008-10-28 Analyzed By: AR
Prep Batch: 45928 QC Preparation: 2008-10-27 Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Sulfate	³ 316	mg/L	5	62.5	246	112	90 - 110

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
Sulfate	⁴ 316	mg/L	5	62.5	246	112	90 - 110	0	

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

Matrix Spike (MS-1) Spiked Sample: 177263

QC Batch: 53710 Date Analyzed: 2008-10-28 Analyzed By: AR
Prep Batch: 45929 QC Preparation: 2008-10-27 Prepared By: AR

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

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

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

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

Matrix Spike (MS-1) Spiked Sample: 177241

QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
Prep Batch: 46006 QC Preparation: 2008-10-30 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Dissolved Potassium	58.7	mg/L	1	50.0	15	87	75 - 125

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
Dissolved Potassium	58.4	mg/L	1	50.0	15	87	75 - 125	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: 177241

QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
Prep Batch: 46006 QC Preparation: 2008-10-30 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Dissolved Magnesium	108	mg/L	1	50.0	62.4	91	75 - 125

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
Dissolved Magnesium	110	mg/L	1	50.0	62.4	95	75 - 125	2	20

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

Matrix Spike (MS-1) Spiked Sample: 177241

QC Batch: 53920 Date Analyzed: 2008-10-31 Analyzed By: TP
Prep Batch: 46006 QC Preparation: 2008-10-30 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Dissolved Sodium	431	mg/L	10	50.0	384	94	75 - 125

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
Dissolved Sodium	432	mg/L	10	50.0	384	96	75 - 125	0	20

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

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0996	100	85 - 115	2008-10-25
Toluene		mg/L	0.100	0.0998	100	85 - 115	2008-10-25
Ethylbenzene		mg/L	0.100	0.100	100	85 - 115	2008-10-25
Xylene		mg/L	0.300	0.286	95	85 - 115	2008-10-25

Standard (CCV-1)

QC Batch: 53630

Date Analyzed: 2008-10-25

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0957	96	85 - 115	2008-10-25
Toluene		mg/L	0.100	0.0968	97	85 - 115	2008-10-25
Ethylbenzene		mg/L	0.100	0.0975	98	85 - 115	2008-10-25
Xylene		mg/L	0.300	0.278	93	85 - 115	2008-10-25

Standard (ICV-1)

QC Batch: 53708

Date Analyzed: 2008-10-28

Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0.00	<1.00		0 - 200	2008-10-28
Carbonate Alkalinity		mg/L as CaCo3	0.00	250		0 - 200	2008-10-28
Bicarbonate Alkalinity		mg/L as CaCo3	0.00	<4.00		0 - 200	2008-10-28
Total Alkalinity		mg/L as CaCo3	250	253	101	90 - 110	2008-10-28

Standard (CCV-1)

QC Batch: 53708

Date Analyzed: 2008-10-28

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0.00	<1.00		0 - 200	2008-10-28
Carbonate Alkalinity		mg/L as CaCo3	0.00	244		0 - 200	2008-10-28
Bicarbonate Alkalinity		mg/L as CaCo3	0.00	<4.00		0 - 200	2008-10-28
Total Alkalinity		mg/L as CaCo3	250	247	99	90 - 110	2008-10-28

Standard (CCV-1)

QC Batch: 53920

Date Analyzed: 2008-10-31

Analyzed By: TP

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Potassium		mg/L	50.0	47.8	96	90 - 110	2008-10-31

Standard (CCV-1)

QC Batch: 53920

Date Analyzed: 2008-10-31

Analyzed By: TP

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Magnesium		mg/L	50.0	50.5	101	90 - 110	2008-10-31

Standard (CCV-1)

QC Batch: 53920

Date Analyzed: 2008-10-31

Analyzed By: TP

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Sodium		mg/L	50.0	49.7	99	90 - 110	2008-10-31

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES



Environmental Division

22-Dec-08

Tim Reed
Tetra Tech
1910 N. Big Spring St
Midland, TX 79705

Tel: (432) 682-4559
Fax:

Re: BD and Well #7

Work Order : 0812311

Dear Tim,

ALS Laboratory Group received 8 samples on 12/13/2008 09:25 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Laboratory Group and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 24.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Electronically approved by: Glenda H. Ramos

Lora Terrill
VP Lab Operations



Certificate No: T104704231-08-TX

ALS Group USA, Corp.
Part of the **ALS Laboratory Group**
10450 Stancliff Rd, Suite 210 Houston, Texas 77099-4338
Phone: (281) 530-5656 Fax: (281) 530-5887
www.alsglobal.com www.elabi.com
A Campbell Brothers Limited Company

Client: Tetra Tech
Project: BD and Well #7
Work Order: 0812311

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
0812311-01	MW-1 'BD'	Water		12/10/2008 12:58	12/13/2008 09:25	<input type="checkbox"/>
0812311-02	MW-2	Water		12/10/2008 12:52	12/13/2008 09:25	<input type="checkbox"/>
0812311-03	MW-3	Water		12/10/2008 12:46	12/13/2008 09:25	<input type="checkbox"/>
0812311-04	MW-4	Water		12/10/2008 12:20	12/13/2008 09:25	<input type="checkbox"/>
0812311-05	MW-5	Water		12/10/2008 12:15	12/13/2008 09:25	<input type="checkbox"/>
0812311-06	MW-6	Water		12/10/2008 12:37	12/13/2008 09:25	<input type="checkbox"/>
0812311-07	MW-7 (MW-1 Fed #7)	Water		12/10/2008 12:33	12/13/2008 09:25	<input type="checkbox"/>

ALS Laboratory Group

Date: 22-Dec-08

Client: Tetra Tech
Project: BD and Well #7
Work Order: 0812311

Case Narrative

Batch R71273 Volatiles MS/MSD is an unrelated sample.

ALS Laboratory Group

Date: 22-Dec-08

Client: Tetra Tech
Project: BD and Well #7
Sample ID: MW-1 'BD'
Collection Date: 12/10/2008 12:58 PM

Work Order: 0812311
Lab ID: 0812311-01
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCL VOLATILES			SW8260			Analyst: PC
Benzene	U		5.0	µg/L	1	12/16/2008 04:02 PM
Ethylbenzene	U		5.0	µg/L	1	12/16/2008 04:02 PM
Toluene	U		5.0	µg/L	1	12/16/2008 04:02 PM
Xylenes, Total	U		15	µg/L	1	12/16/2008 04:02 PM
Surr: 1,2-Dichloroethane-d4	97.7		70-125	%REC	1	12/16/2008 04:02 PM
Surr: 4-Bromofluorobenzene	102		72-125	%REC	1	12/16/2008 04:02 PM
Surr: Dibromofluoromethane	99.6		71-125	%REC	1	12/16/2008 04:02 PM
Surr: Toluene-d8	107		75-125	%REC	1	12/16/2008 04:02 PM
ANIONS			E300			Analyst: IGF
Chloride	373		10.0	mg/L	20	12/19/2008 04:40 PM
Surr: Selenate (surr)	95.1		85-115	%REC	20	12/19/2008 04:40 PM

Qualifiers:
 U - Analyzed for but Not Detected
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level
 a - Not accredited

S - Spike Recovery outside accepted recovery limits
 P - Dual Column results percent difference > 40%
 E - Value above quantitation range
 H - Analyzed outside of Hold Time
 n - Not offered for accreditation

ALS Laboratory Group

Date: 22-Dec-08

Client: Tetra Tech
 Project: BD and Well #7
 Sample ID: MW-2
 Collection Date: 12/10/2008 12:52 PM

Work Order: 0812311
 Lab ID: 0812311-02
 Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCL VOLATILES			SW8260			Analyst: PC
Benzene	U		5.0	µg/L	1	12/15/2008 06:27 PM
Ethylbenzene	U		5.0	µg/L	1	12/15/2008 06:27 PM
Toluene	U		5.0	µg/L	1	12/15/2008 06:27 PM
Xylenes, Total	U		15	µg/L	1	12/15/2008 06:27 PM
Surr: 1,2-Dichloroethane-d4	104		70-125	%REC	1	12/15/2008 06:27 PM
Surr: 4-Bromofluorobenzene	88.0		72-125	%REC	1	12/15/2008 06:27 PM
Surr: Dibromofluoromethane	105		71-125	%REC	1	12/15/2008 06:27 PM
Surr: Toluene-d8	95.5		75-125	%REC	1	12/15/2008 06:27 PM
ANIONS			E300			Analyst: IGF
Chloride	349		25.0	mg/L	50	12/19/2008 05:03 PM
Surr: Selenate (surr)	95.1		85-115	%REC	50	12/19/2008 05:03 PM

Qualifiers:
 U - Analyzed for but Not Detected
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level
 a - Not accredited

S - Spike Recovery outside accepted recovery limits
 P - Dual Column results percent difference > 40%
 E - Value above quantitation range
 H - Analyzed outside of Hold Time
 n - Not offered for accreditation

ALS Laboratory Group

Date: 22-Dec-08

Client: Tetra Tech
 Project: BD and Well #7
 Sample ID: MW-3
 Collection Date: 12/10/2008 12:46 PM

Work Order: 0812311
 Lab ID: 0812311-03
 Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCL VOLATILES			SW8260			Analyst: PC
Benzene	U		5.0	µg/L	1	12/15/2008 06:53 PM
Ethylbenzene	U		5.0	µg/L	1	12/15/2008 06:53 PM
Toluene	U		5.0	µg/L	1	12/15/2008 06:53 PM
Xylenes, Total	U		15	µg/L	1	12/15/2008 06:53 PM
Surr: 1,2-Dichloroethane-d4	94.9		70-125	%REC	1	12/15/2008 06:53 PM
Surr: 4-Bromofluorobenzene	98.9		72-125	%REC	1	12/15/2008 06:53 PM
Surr: Dibromofluoromethane	96.6		71-125	%REC	1	12/15/2008 06:53 PM
Surr: Toluene-d8	106		75-125	%REC	1	12/15/2008 06:53 PM
ANIONS			E300			Analyst: IGF
Chloride	207		10.0	mg/L	20	12/19/2008 07:39 PM
Surr: Selenate (surr)	94.4		85-115	%REC	20	12/19/2008 07:39 PM

Qualifiers: U - Analyzed for but Not Detected
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level
 a - Not accredited

S - Spike Recovery outside accepted recovery limits
 P - Dual Column results percent difference > 40%
 E - Value above quantitation range
 H - Analyzed outside of Hold Time
 n - Not offered for accreditation

ALS Laboratory Group

Date: 22-Dec-08

Client: Tetra Tech
Project: BD and Well #7
Sample ID: MW-4
Collection Date: 12/10/2008 12:20 PM

Work Order: 0812311
Lab ID: 0812311-04
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCL VOLATILES			SW8260			Analyst: PC
Benzene	U		5.0	µg/L	1	12/16/2008 12:40 PM
Ethylbenzene	U		5.0	µg/L	1	12/16/2008 12:40 PM
Toluene	U		5.0	µg/L	1	12/16/2008 12:40 PM
Xylenes, Total	U		15	µg/L	1	12/16/2008 12:40 PM
Surr: 1,2-Dichloroethane-d4	94.2		70-125	%REC	1	12/16/2008 12:40 PM
Surr: 4-Bromofluorobenzene	95.2		72-125	%REC	1	12/16/2008 12:40 PM
Surr: Dibromofluoromethane	96.3		71-125	%REC	1	12/16/2008 12:40 PM
Surr: Toluene-d8	98.3		75-125	%REC	1	12/16/2008 12:40 PM
ANIONS			E300			Analyst: IGF
Chloride	642		10.0	mg/L	20	12/19/2008 05:27 PM
Surr: Selenate (surr)	94.4		85-115	%REC	20	12/19/2008 05:27 PM

Qualifiers:
 U - Analyzed for but Not Detected
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level
 a - Not accredited

S - Spike Recovery outside accepted recovery limits
 P - Dual Column results percent difference > 40%
 E - Value above quantitation range
 H - Analyzed outside of Hold Time
 n - Not offered for accreditation

ALS Laboratory Group

Date: 22-Dec-08

Client: Tetra Tech
 Project: BD and Well #7
 Sample ID: MW-5
 Collection Date: 12/10/2008 12:15 PM

Work Order: 0812311
 Lab ID: 0812311-05
 Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCL VOLATILES			SW8260			Analyst: PC
Benzene	U		5.0	µg/L	1	12/16/2008 01:06 PM
Ethylbenzene	U		5.0	µg/L	1	12/16/2008 01:06 PM
Toluene	U		5.0	µg/L	1	12/16/2008 01:06 PM
Xylenes, Total	U		15	µg/L	1	12/16/2008 01:06 PM
Surr: 1,2-Dichloroethane-d4	95.0		70-125	%REC	1	12/16/2008 01:06 PM
Surr: 4-Bromofluorobenzene	96.7		72-125	%REC	1	12/16/2008 01:06 PM
Surr: Dibromofluoromethane	97.3		71-125	%REC	1	12/16/2008 01:06 PM
Surr: Toluene-d8	104		75-125	%REC	1	12/16/2008 01:06 PM
ANIONS			E300			Analyst: IGF
Chloride	1,020		50.0	mg/L	100	12/19/2008 08:02 PM
Surr: Selenate (surr)	90.0		85-115	%REC	100	12/19/2008 08:02 PM

Qualifiers:
 U - Analyzed for but Not Detected
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level
 a - Not accredited

S - Spike Recovery outside accepted recovery limits
 P - Dual Column results percent difference > 40%
 E - Value above quantitation range
 H - Analyzed outside of Hold Time
 n - Not offered for accreditation

ALS Laboratory Group

Date: 22-Dec-08

Client: Tetra Tech
 Project: BD and Well #7
 Sample ID: MW-6
 Collection Date: 12/10/2008 12:37 PM

Work Order: 0812311
 Lab ID: 0812311-06
 Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCL VOLATILES			SW8260			Analyst: PC
Benzene	U		5.0	µg/L	1	12/18/2008 05:15 PM
Ethylbenzene	U		5.0	µg/L	1	12/18/2008 05:15 PM
Toluene	U		5.0	µg/L	1	12/18/2008 05:15 PM
Xylenes, Total	U		15	µg/L	1	12/18/2008 05:15 PM
Surr: 1,2-Dichloroethane-d4	98.4		70-125	%REC	1	12/18/2008 05:15 PM
Surr: 4-Bromofluorobenzene	84.9		72-125	%REC	1	12/18/2008 05:15 PM
Surr: Dibromofluoromethane	98.8		71-125	%REC	1	12/18/2008 05:15 PM
Surr: Toluene-d8	89.9		75-125	%REC	1	12/18/2008 05:15 PM
ANIONS			E300			Analyst: IGF
Chloride	90.2		5.00	mg/L	10	12/19/2008 08:25 PM
Surr: Selenate (surr)	92.4		85-115	%REC	10	12/19/2008 08:25 PM

Qualifiers:
 U - Analyzed for but Not Detected
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level
 a - Not accredited

S - Spike Recovery outside accepted recovery limits
 P - Dual Column results percent difference > 40%
 E - Value above quantitation range
 H - Analyzed outside of Hold Time
 n - Not offered for accreditation

ALS Laboratory Group

Date: 22-Dec-08

Client: Tetra Tech
 Project: BD and Well #7
 Sample ID: MW-7 (MW-1 Fed #7)
 Collection Date: 12/10/2008 12:33 PM

Work Order: 0812311
 Lab ID: 0812311-07
 Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCL VOLATILES			SW8260		Analyst: PC	
Benzene	U		5.0	µg/L	1	12/18/2008 05:39 PM
Ethylbenzene	U		5.0	µg/L	1	12/18/2008 05:39 PM
Toluene	U		5.0	µg/L	1	12/18/2008 05:39 PM
Xylenes, Total	U		15	µg/L	1	12/18/2008 05:39 PM
Surr: 1,2-Dichloroethane-d4	115		70-125	%REC	1	12/18/2008 05:39 PM
Surr: 4-Bromofluorobenzene	97.3		72-125	%REC	1	12/18/2008 05:39 PM
Surr: Dibromofluoromethane	117		71-125	%REC	1	12/18/2008 05:39 PM
Surr: Toluene-d8	103		75-125	%REC	1	12/18/2008 05:39 PM
ANIONS			E300		Analyst: IGF	
Chloride	1,050		50.0	mg/L	100	12/19/2008 08:48 PM
Surr: Selenate (surr)	90.6		85-115	%REC	100	12/19/2008 08:48 PM

Qualifiers:
 U - Analyzed for but Not Detected
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level
 a - Not accredited

S - Spike Recovery outside accepted recovery limits
 P - Dual Column results percent difference > 40%
 E - Value above quantitation range
 H - Analyzed outside of Hold Time
 n - Not offered for accreditation

ALS Laboratory Group

Date: 22-Dec-08

Client: Tetra Tech
 Work Order: 0812311
 Project: BD and Well #7

QC BATCH REPORT

Batch ID: R71249 Instrument ID VOA1 Method: SW8260

MBLK		Sample ID: VBLKW-121508-R71249				Units: µg/L		Analysis Date: 12/15/2008 12:33 PM			
Client ID:		Run ID: VOA1_081215A				SeqNo: 1560063		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	U	5.0									
Ethylbenzene	U	5.0									
Toluene	U	5.0									
Xylenes, Total	U	15									
Surr: 1,2-Dichloroethane-d4	49.53	5.0	50	0	99.1	70-125	0				
Surr: 4-Bromofluorobenzene	50.5	5.0	50	0	101	72-125	0				
Surr: Dibromofluoromethane	49.71	5.0	50	0	99.4	71-125	0				
Surr: Toluene-d8	52.89	5.0	50	0	106	75-125	0				

LCS		Sample ID: VLCSW-121508-R71249				Units: µg/L		Analysis Date: 12/15/2008 12:58 PM			
Client ID:		Run ID: VOA1_081215A				SeqNo: 1560064		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	49.96	5.0	50	0	99.9	73-121	0				
Ethylbenzene	50.59	5.0	50	0	101	80-120	0				
Toluene	50.13	5.0	50	0	100	80-120	0				
Xylenes, Total	147.4	15	150	0	98.3	80-120	0				
Surr: 1,2-Dichloroethane-d4	50.14	5.0	50	0	100	70-125	0				
Surr: 4-Bromofluorobenzene	50.71	5.0	50	0	101	72-125	0				
Surr: Dibromofluoromethane	50.44	5.0	50	0	101	71-125	0				
Surr: Toluene-d8	50.74	5.0	50	0	101	75-125	0				

MS		Sample ID: 0812245-04AMS				Units: µg/L		Analysis Date: 12/15/2008 03:05 PM			
Client ID:		Run ID: VOA1_081215A				SeqNo: 1560066		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	50.14	5.0	50	0	100	73-121	0				
Ethylbenzene	47.63	5.0	50	0	95.3	80-120	0				
Toluene	47.31	5.0	50	0	94.6	80-120	0				
Xylenes, Total	141.3	15	150	0	94.2	80-120	0				
Surr: 1,2-Dichloroethane-d4	48.15	5.0	50	0	96.3	70-125	0				
Surr: 4-Bromofluorobenzene	49.8	5.0	50	0	99.6	72-125	0				
Surr: Dibromofluoromethane	49.14	5.0	50	0	98.3	71-125	0				
Surr: Toluene-d8	50.24	5.0	50	0	100	75-125	0				

ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 O - Referenced analyte value is > 4 times amount spiked
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 P - Dual Column results percent difference > 40%
 B - Analyte detected in assoc. Method Blank
 U - Analyzed for but not detected
 E - Value above quantitation range

Client: Tetra Tech
 Work Order: 0812311
 Project: BD and Well #7

QC BATCH REPORT

Batch ID: R71273 Instrument ID VOA2 Method: SW8260

MBLK		Sample ID: VBLKW-121508-R71273		Units: µg/L		Analysis Date: 12/15/2008 11:57 AM				
Client ID:		Run ID: VOA2_081215A		SeqNo: 1560456		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	U	5.0								
Ethylbenzene	U	5.0								
Toluene	U	5.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	47.9	5.0	50	0	95.8	70-125	0			
Surr: 4-Bromofluorobenzene	43.38	5.0	50	0	86.8	72-125	0			
Surr: Dibromofluoromethane	48.37	5.0	50	0	96.7	71-125	0			
Surr: Toluene-d8	45.65	5.0	50	0	91.3	75-125	0			

LCS		Sample ID: VLCSW-121508-R71273		Units: µg/L		Analysis Date: 12/15/2008 10:44 AM				
Client ID:		Run ID: VOA2_081215A		SeqNo: 1560455		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	45.55	5.0	50	0	91.1	73-121	0			
Ethylbenzene	46.4	5.0	50	0	92.8	80-120	0			
Toluene	43.97	5.0	50	0	87.9	80-120	0			
Xylenes, Total	140.2	15	150	0	93.5	80-120	0			
Surr: 1,2-Dichloroethane-d4	47.57	5.0	50	0	95.1	70-125	0			
Surr: 4-Bromofluorobenzene	47.36	5.0	50	0	94.7	72-125	0			
Surr: Dibromofluoromethane	49.22	5.0	50	0	98.4	71-125	0			
Surr: Toluene-d8	47.04	5.0	50	0	94.1	75-125	0			

MS		Sample ID: 0812309-08AMS		Units: µg/L		Analysis Date: 12/15/2008 02:47 PM				
Client ID:		Run ID: VOA2_081215A		SeqNo: 1560462		Prep Date:		DF: 10		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1518	50	500	1302	43.2	73-121	0			S
Ethylbenzene	1367	50	500	1035	66.4	80-120	0			S
Toluene	605.1	50	500	210.9	78.8	80-120	0			S
Xylenes, Total	1946	150	1500	702.2	82.9	80-120	0			
Surr: 1,2-Dichloroethane-d4	332.1	50	500	0	66.4	70-125	0			S
Surr: 4-Bromofluorobenzene	417	50	500	0	83.4	72-125	0			
Surr: Dibromofluoromethane	426.8	50	500	0	85.4	71-125	0			
Surr: Toluene-d8	455.5	50	500	0	91.1	75-125	0			

ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 O - Referenced analyte value is > 4 times amount spiked
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 P - Dual Column-results percent difference > 40%
 B - Analyte detected in assoc. Method Blank
 U - Analyzed for but not detected
 E - Value above quantitation range

Client: Tetra Tech
 Work Order: 0812311
 Project: BD and Well #7

QC BATCH REPORT

Batch ID: R71273 Instrument ID VOA2 Method: SW8260

MBLK		Sample ID: VBLKW-121508-R71273				Units: µg/L		Analysis Date: 12/15/2008 11:57 AM			
Client ID:		Run ID: VOA2_081215A				SeqNo: 1560456		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	U	5.0									
Ethylbenzene	U	5.0									
Toluene	U	5.0									
Xylenes, Total	U	15									
Surr: 1,2-Dichloroethane-d4	47.9	5.0	50	0	95.8	70-125	0				
Surr: 4-Bromofluorobenzene	43.38	5.0	50	0	86.8	72-125	0				
Surr: Dibromofluoromethane	48.37	5.0	50	0	96.7	71-125	0				
Surr: Toluene-d8	45.65	5.0	50	0	91.3	75-125	0				

LCS		Sample ID: VLCSW-121508-R71273				Units: µg/L		Analysis Date: 12/15/2008 10:44 AM			
Client ID:		Run ID: VOA2_081215A				SeqNo: 1560455		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	45.55	5.0	50	0	91.1	73-121	0				
Ethylbenzene	46.4	5.0	50	0	92.8	80-120	0				
Toluene	43.97	5.0	50	0	87.9	80-120	0				
Xylenes, Total	140.2	15	150	0	93.5	80-120	0				
Surr: 1,2-Dichloroethane-d4	47.57	5.0	50	0	95.1	70-125	0				
Surr: 4-Bromofluorobenzene	47.36	5.0	50	0	94.7	72-125	0				
Surr: Dibromofluoromethane	49.22	5.0	50	0	98.4	71-125	0				
Surr: Toluene-d8	47.04	5.0	50	0	94.1	75-125	0				

MS		Sample ID: 0812309-08AMS				Units: µg/L		Analysis Date: 12/15/2008 02:47 PM			
Client ID:		Run ID: VOA2_081215A				SeqNo: 1560462		Prep Date:		DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	1518	50	500	1302	43.2	73-121	0			S	
Ethylbenzene	1367	50	500	1035	66.4	80-120	0			S	
Toluene	605.1	50	500	210.9	78.8	80-120	0			S	
Xylenes, Total	1946	150	1500	702.2	82.9	80-120	0				
Surr: 1,2-Dichloroethane-d4	332.1	50	500	0	66.4	70-125	0			S	
Surr: 4-Bromofluorobenzene	417	50	500	0	83.4	72-125	0				
Surr: Dibromofluoromethane	426.8	50	500	0	85.4	71-125	0				
Surr: Toluene-d8	455.5	50	500	0	91.1	75-125	0				

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

O - Referenced analyte value is > 4 times amount spiked

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

U - Analyzed for but not detected

E - Value above quantitation range

Client: Tetra Tech
 Work Order: 0812311
 Project: BD and Well #7

QC BATCH REPORT

Batch ID: R71249 Instrument ID VOA1 Method: SW8260

MSD		Sample ID: 0812245-04AMSD			Units: µg/L			Analysis Date: 12/15/2008 03:30 PM			
Client ID:		Run ID: VOA1_081215A			SeqNo: 1560067		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	50.09	5.0	50	0	100	73-121	50.14	0.115	20		
Ethylbenzene	51.39	5.0	50	0	103	80-120	47.63	7.59	20		
Toluene	50.54	5.0	50	0	101	80-120	47.31	6.59	20		
Xylenes, Total	145.6	15	150	0	97.1	80-120	141.3	3.02	20		
<i>Surr: 1,2-Dichloroethane-d4</i>	46.98	5.0	50	0	94	70-125	48.15	2.46	20		
<i>Surr: 4-Bromofluorobenzene</i>	52.12	5.0	50	0	104	72-125	49.8	4.57	20		
<i>Surr: Dibromofluoromethane</i>	49.18	5.0	50	0	98.4	71-125	49.14	0.0693	20		
<i>Surr: Toluene-d8</i>	54.88	5.0	50	0	110	75-125	50.24	8.83	20		

The following samples were analyzed in this batch:

0812311-03A

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

O - Referenced analyte value is > 4 times amount spiked

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

U - Analyzed for but not detected

E - Value above quantitation range

Client: Tetra Tech
 Work Order: 0812311
 Project: BD and Well #7

QC BATCH REPORT

Batch ID: R71249 Instrument ID VOA1 Method: SW8260

MSD	Sample ID: 0812245-04AMSD	Units: µg/L					Analysis Date: 12/15/2008 03:30 PM				
Client ID:	Run ID: VOA1_081215A	SeqNo: 1560067			Prep Date:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	50.09	5.0	50	0	100	73-121	50.14	0.115	20		
Ethylbenzene	51.39	5.0	50	0	103	80-120	47.63	7.59	20		
Toluene	50.54	5.0	50	0	101	80-120	47.31	6.59	20		
Xylenes, Total	145.6	15	150	0	97.1	80-120	141.3	3.02	20		
<i>Surr: 1,2-Dichloroethane-d4</i>	46.98	5.0	50	0	94	70-125	48.15	2.46	20		
<i>Surr: 4-Bromofluorobenzene</i>	52.12	5.0	50	0	104	72-125	49.8	4.57	20		
<i>Surr: Dibromofluoromethane</i>	49.18	5.0	50	0	98.4	71-125	49.14	0.0693	20		
<i>Surr: Toluene-d8</i>	54.88	5.0	50	0	110	75-125	50.24	8.83	20		

The following samples were analyzed in this batch:

0812311-03A

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

O - Referenced analyte value is > 4 times amount spiked

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

U - Analyzed for but not detected

E - Value above quantitation range

Client: Tetra Tech
 Work Order: 0812311
 Project: BD and Well #7

QC BATCH REPORT

Batch ID: R71249 Instrument ID VOA1 Method: SW8260

MSD		Sample ID: 0812245-04AMSD				Units: µg/L		Analysis Date: 12/15/2008 03:30 PM			
Client ID:		Run ID: VOA1_081215A				SeqNo: 1560067		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	50.09	5.0	50	0	100	73-121	50.14	0.115	20		
Ethylbenzene	51.39	5.0	50	0	103	80-120	47.63	7.59	20		
Toluene	50.54	5.0	50	0	101	80-120	47.31	6.59	20		
Xylenes, Total	145.6	15	150	0	97.1	80-120	141.3	3.02	20		
<i>Surr: 1,2-Dichloroethane-d4</i>	46.98	5.0	50	0	94	70-125	48.15	2.46	20		
<i>Surr: 4-Bromofluorobenzene</i>	52.12	5.0	50	0	104	72-125	49.8	4.57	20		
<i>Surr: Dibromofluoromethane</i>	49.18	5.0	50	0	98.4	71-125	49.14	0.0693	20		
<i>Surr: Toluene-d8</i>	54.88	5.0	50	0	110	75-125	50.24	8.83	20		

The following samples were analyzed in this batch:

0812311-03A

ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 O - Referenced analyte value is > 4 times amount spiked

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank
 U - Analyzed for but not detected
 E - Value above quantitation range

Client: Tetra Tech
 Work Order: 0812311
 Project: BD and Well #7

QC BATCH REPORT

Batch ID: R71273 Instrument ID VOA2 Method: SW8260

MBLK		Sample ID: VBLKW-121508-R71273				Units: µg/L		Analysis Date: 12/15/2008 11:57 AM			
Client ID:		Run ID: VOA2_081215A				SeqNo: 1560456		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	U	5.0									
Ethylbenzene	U	5.0									
Toluene	U	5.0									
Xylenes, Total	U	15									
Surr: 1,2-Dichloroethane-d4	47.9	5.0	50	0	95.8	70-125	0				
Surr: 4-Bromofluorobenzene	43.38	5.0	50	0	86.8	72-125	0				
Surr: Dibromofluoromethane	48.37	5.0	50	0	96.7	71-125	0				
Surr: Toluene-d8	45.65	5.0	50	0	91.3	75-125	0				

LCS		Sample ID: VLCSW-121508-R71273				Units: µg/L		Analysis Date: 12/15/2008 10:44 AM			
Client ID:		Run ID: VOA2_081215A				SeqNo: 1560455		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	45.55	5.0	50	0	91.1	73-121	0				
Ethylbenzene	46.4	5.0	50	0	92.8	80-120	0				
Toluene	43.97	5.0	50	0	87.9	80-120	0				
Xylenes, Total	140.2	15	150	0	93.5	80-120	0				
Surr: 1,2-Dichloroethane-d4	47.57	5.0	50	0	95.1	70-125	0				
Surr: 4-Bromofluorobenzene	47.36	5.0	50	0	94.7	72-125	0				
Surr: Dibromofluoromethane	49.22	5.0	50	0	98.4	71-125	0				
Surr: Toluene-d8	47.04	5.0	50	0	94.1	75-125	0				

MS		Sample ID: 0812309-08AMS				Units: µg/L		Analysis Date: 12/15/2008 02:47 PM			
Client ID:		Run ID: VOA2_081215A				SeqNo: 1560462		Prep Date:		DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	1518	50	500	1302	43.2	73-121	0			S	
Ethylbenzene	1367	50	500	1035	66.4	80-120	0			S	
Toluene	605.1	50	500	210.9	78.8	80-120	0			S	
Xylenes, Total	1946	150	1500	702.2	82.9	80-120	0				
Surr: 1,2-Dichloroethane-d4	332.1	50	500	0	66.4	70-125	0			S	
Surr: 4-Bromofluorobenzene	417	50	500	0	83.4	72-125	0				
Surr: Dibromofluoromethane	426.8	50	500	0	85.4	71-125	0				
Surr: Toluene-d8	455.5	50	500	0	91.1	75-125	0				

ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 O - Referenced analyte value is > 4 times amount spiked
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 P - Dual Column results percent difference > 40%
 B - Analyte detected in assoc. Method Blank
 U - Analyzed for but not detected
 E - Value above quantitation range

Client: Tetra Tech
 Work Order: 0812311
 Project: BD and Well #7

QC BATCH REPORT

Batch ID: R71273 Instrument ID VOA2 Method: SW8260

MSD	Sample ID: 0812309-08AMSD	Units: µg/L					Analysis Date: 12/15/2008 03:11 PM				
Client ID:	Run ID: VOA2_081215A	SeqNo: 1560463	Prep Date:	DF: 10							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	1650	50	500	1302	69.5	73-121	1518	8.32	20	S	
Ethylbenzene	1432	50	500	1035	79.5	80-120	1367	4.7	20	S	
Toluene	633.8	50	500	210.9	84.6	80-120	605.1	4.64	20		
Xylenes, Total	2024	150	1500	702.2	88.1	80-120	1946	3.94	20		
<i>Surr: 1,2-Dichloroethane-d4</i>	496.9	50	500	0	99.4	70-125	332.1	39.8	20	R	
<i>Surr: 4-Bromofluorobenzene</i>	498.6	50	500	0	99.7	72-125	417	17.8	20		
<i>Surr: Dibromofluoromethane</i>	520.9	50	500	0	104	71-125	426.8	19.9	20		
<i>Surr: Toluene-d8</i>	494.9	50	500	0	99	75-125	455.5	8.31	20		

The following samples were analyzed in this batch:

0812311-02A

ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 O - Referenced analyte value is > 4 times amount spiked
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 P - Dual Column results percent difference > 40%
 B - Analyte detected in assoc. Method Blank
 U - Analyzed for but not detected
 E - Value above quantitation range

Client: Tetra Tech
 Work Order: 0812311
 Project: BD and Well #7

QC BATCH REPORT

Batch ID: R71321 Instrument ID VOA1 Method: SW8260

MBLK		Sample ID: VBLKW-121608-R71321			Units: µg/L			Analysis Date: 12/16/2008 11:50 AM			
Client ID:		Run ID: VOA1_081216A			SeqNo: 1561600		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	U	5.0									
Ethylbenzene	U	5.0									
Toluene	U	5.0									
Xylenes, Total	U	15									
Surr: 1,2-Dichloroethane-d4	47.19	5.0	50	0	94.4	70-125	0				
Surr: 4-Bromofluorobenzene	48.75	5.0	50	0	97.5	72-125	0				
Surr: Dibromofluoromethane	48.47	5.0	50	0	96.9	71-125	0				
Surr: Toluene-d8	51.19	5.0	50	0	102	75-125	0				

LCS		Sample ID: VLCSW-121608-R71321			Units: µg/L			Analysis Date: 12/16/2008 11:00 AM			
Client ID:		Run ID: VOA1_081216A			SeqNo: 1561599		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	47.86	5.0	50	0	95.7	73-121	0				
Ethylbenzene	49.16	5.0	50	0	98.3	80-120	0				
Toluene	48.24	5.0	50	0	96.5	80-120	0				
Xylenes, Total	146.8	15	150	0	97.8	80-120	0				
Surr: 1,2-Dichloroethane-d4	49.11	5.0	50	0	98.2	70-125	0				
Surr: 4-Bromofluorobenzene	49.1	5.0	50	0	98.2	72-125	0				
Surr: Dibromofluoromethane	49	5.0	50	0	98	71-125	0				
Surr: Toluene-d8	50.23	5.0	50	0	100	75-125	0				

MS		Sample ID: 0812311-05AMS			Units: µg/L			Analysis Date: 12/16/2008 03:11 PM			
Client ID: MW-5		Run ID: VOA1_081216A			SeqNo: 1561602		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	47.92	5.0	50	0	95.8	73-121	0				
Ethylbenzene	49.49	5.0	50	0	99	80-120	0				
Toluene	50.41	5.0	50	0	101	80-120	0				
Xylenes, Total	152.5	15	150	0	102	80-120	0				
Surr: 1,2-Dichloroethane-d4	48.89	5.0	50	0	97.8	70-125	0				
Surr: 4-Bromofluorobenzene	51.88	5.0	50	0	104	72-125	0				
Surr: Dibromofluoromethane	49.76	5.0	50	0	99.5	71-125	0				
Surr: Toluene-d8	51.08	5.0	50	0	102	75-125	0				

ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 O - Referenced analyte value is > 4 times amount spiked
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 P - Dual Column results percent difference > 40%
 B - Analyte detected in assoc. Method Blank
 U - Analyzed for but not detected
 E - Value above quantitation range

Client: Tetra Tech
 Work Order: 0812311
 Project: BD and Well #7

QC BATCH REPORT

Batch ID: **R71321** Instrument ID **VOA1** Method: **SW8260**

MSD	Sample ID: 0812311-05AMSD	Units: µg/L					Analysis Date: 12/16/2008 03:36 PM				
Client ID: MW-5	Run ID: VOA1_081216A	SeqNo: 1561603			Prep Date:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	50.23	5.0	50	0	100	73-121	47.92	4.71	20		
Ethylbenzene	48.14	5.0	50	0	96.3	80-120	49.49	2.76	20		
Toluene	49.23	5.0	50	0	98.5	80-120	50.41	2.37	20		
Xylenes, Total	139.3	15	150	0	92.9	80-120	152.5	9.07	20		
<i>Surr: 1,2-Dichloroethane-d4</i>	50.8	5.0	50	0	102	70-125	48.89	3.81	20		
<i>Surr: 4-Bromofluorobenzene</i>	50.11	5.0	50	0	100	72-125	51.88	3.46	20		
<i>Surr: Dibromofluoromethane</i>	52.19	5.0	50	0	104	71-125	49.76	4.77	20		
<i>Surr: Toluene-d8</i>	51.59	5.0	50	0	103	75-125	51.08	0.991	20		

The following samples were analyzed in this batch:

0812311-01A	0812311-04A	0812311-05A
-------------	-------------	-------------

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

O - Referenced analyte value is > 4 times amount spiked

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

U - Analyzed for but not detected

E - Value above quantitation range

Client: Tetra Tech
 Work Order: 0812311
 Project: BD and Well #7

QC BATCH REPORT

Batch ID: R71400 Instrument ID VOA2 Method: SW8260

MBLK		Sample ID: VBLKW-121808-R71400			Units: µg/L			Analysis Date: 12/18/2008 11:10 AM			
Client ID:		Run ID: VOA2_081218A			SeqNo: 1563052			Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	U	5.0									
Ethylbenzene	U	5.0									
Toluene	U	5.0									
Xylenes, Total	U	15									
Surr: 1,2-Dichloroethane-d4	46.83	5.0	50	0	93.7	70-125	0				
Surr: 4-Bromofluorobenzene	46.97	5.0	50	0	93.9	72-125	0				
Surr: Dibromofluoromethane	49.52	5.0	50	0	99	71-125	0				
Surr: Toluene-d8	49.7	5.0	50	0	99.4	75-125	0				

MBLK		Sample ID: MBLKV1-120808-R71400			Units: µg/L			Analysis Date: 12/18/2008 07:16 PM			
Client ID:		Run ID: VOA2_081218A			SeqNo: 1563882			Prep Date: 12/15/2008		DF: 20	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	U	100									
Ethylbenzene	U	100									
Toluene	U	100									
Xylenes, Total	U	300									
Surr: 1,2-Dichloroethane-d4	1040	100	1000	0	104	70-125	0				
Surr: 4-Bromofluorobenzene	863.7	100	1000	0	86.4	72-125	0				
Surr: Dibromofluoromethane	1039	100	1000	0	104	71-125	0				
Surr: Toluene-d8	934.4	100	1000	0	93.4	75-125	0				

LCS		Sample ID: VLCSW-121808-R71400			Units: µg/L			Analysis Date: 12/18/2008 11:34 AM			
Client ID:		Run ID: VOA2_081218A			SeqNo: 1563053			Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	44.59	5.0	50	0	89.2	73-121	0				
Ethylbenzene	45.07	5.0	50	0	90.1	80-120	0				
Toluene	43.58	5.0	50	0	87.2	80-120	0				
Xylenes, Total	135.7	15	150	0	90.4	80-120	0				
Surr: 1,2-Dichloroethane-d4	41.76	5.0	50	0	83.5	70-125	0				
Surr: 4-Bromofluorobenzene	45.67	5.0	50	0	91.3	72-125	0				
Surr: Dibromofluoromethane	45.26	5.0	50	0	90.5	71-125	0				
Surr: Toluene-d8	45.83	5.0	50	0	91.7	75-125	0				

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

O - Referenced analyte value is > 4 times amount spiked

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

U - Analyzed for but not detected

E - Value above quantitation range

Client: Tetra Tech
 Work Order: 0812311
 Project: BD and Well #7

QC BATCH REPORT

Batch ID: R71400 Instrument ID VOA2 Method: SW8260

MS		Sample ID: 0812295-05AMS				Units: µg/L		Analysis Date: 12/18/2008 01:11 PM			
Client ID:		Run ID: VOA2_081218A				SeqNo: 1563055		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	49.45	5.0	50	0	98.9	73-121	0				
Ethylbenzene	48.82	5.0	50	0	97.6	80-120	0				
Toluene	48.11	5.0	50	0	96.2	80-120	0				
Xylenes, Total	148.4	15	150	0	98.9	80-120	0				
Surr: 1,2-Dichloroethane-d4	46.17	5.0	50	0	92.3	70-125	0				
Surr: 4-Bromofluorobenzene	48.72	5.0	50	0	97.4	72-125	0				
Surr: Dibromofluoromethane	49.04	5.0	50	0	98.1	71-125	0				
Surr: Toluene-d8	48.44	5.0	50	0	96.9	75-125	0				

MSD		Sample ID: 0812295-05AMSD				Units: µg/L		Analysis Date: 12/18/2008 01:36 PM			
Client ID:		Run ID: VOA2_081218A				SeqNo: 1563056		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	46.59	5.0	50	0	93.2	73-121	49.45	5.96	20		
Ethylbenzene	47.97	5.0	50	0	95.9	80-120	48.82	1.75	20		
Toluene	45.92	5.0	50	0	91.8	80-120	48.11	4.67	20		
Xylenes, Total	143.7	15	150	0	95.8	80-120	148.4	3.22	20		
Surr: 1,2-Dichloroethane-d4	43.7	5.0	50	0	87.4	70-125	46.17	5.49	20		
Surr: 4-Bromofluorobenzene	46.98	5.0	50	0	94	72-125	48.72	3.65	20		
Surr: Dibromofluoromethane	46.82	5.0	50	0	93.6	71-125	49.04	4.62	20		
Surr: Toluene-d8	46.12	5.0	50	0	92.2	75-125	48.44	4.91	20		

The following samples were analyzed in this batch:

0812311-06A 0812311-07A

ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 O - Referenced analyte value is > 4 times amount spiked
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 P - Dual Column results percent difference > 40%
 B - Analyte detected in assoc. Method Blank
 U - Analyzed for but not detected
 E - Value above quantitation range

Client: Tetra Tech
 Work Order: 0812311
 Project: BD and Well #7

QC BATCH REPORT

Batch ID: R71470 Instrument ID ICS3000 Method: E300

MBLK	Sample ID: WBLKW1-121908-R71470	Units: mg/L					Analysis Date: 12/19/2008 10:26 AM				
Client ID:	Run ID: ICS3000_081219A	SeqNo: 1564298			Prep Date:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Chloride	U	0.50									
Surr: Selenate (surr)	4.782	0.10	5	0	95.6	85-115	0				

LCS	Sample ID: WLCSW2-121908-R71470	Units: mg/L					Analysis Date: 12/19/2008 10:49 AM				
Client ID:	Run ID: ICS3000_081219A	SeqNo: 1564299			Prep Date:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Chloride	19.66	0.50	20	0	98.3	90-110	0				
Surr: Selenate (surr)	4.851	0.10	5	0	97	85-115	0				

MSD	Sample ID: 0812310-03BMS	Units: mg/L					Analysis Date: 12/19/2008 04:16 PM				
Client ID:	Run ID: ICS3000_081219A	SeqNo: 1564313			Prep Date:		DF: 20				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Chloride	298.5	10	200	107.7	95.4	80-120	0				
Surr: Selenate (surr)	93.83	2.0	100	0	93.8	85-115	0				

DUP	Sample ID: 0812310-03BDUP	Units: mg/L					Analysis Date: 12/19/2008 03:53 PM				
Client ID:	Run ID: ICS3000_081219A	SeqNo: 1564312			Prep Date:		DF: 20				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Chloride	107.8	10	0	0	0	0-0	107.7	0.143	20		
Surr: Selenate (surr)	95.82	2.0	100	0	95.8	85-115	95.48	0.358	20		

The following samples were analyzed in this batch:

0812311-01B	0812311-02B	0812311-04B
-------------	-------------	-------------

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

O - Referenced analyte value is > 4 times amount spiked

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

U - Analyzed for but not detected

E - Value above quantitation range

Client: Tetra Tech
 Work Order: 0812311
 Project: BD and Well #7

QC BATCH REPORT

Batch ID: R71472 Instrument ID ICS3000 Method: E300

MBLK	Sample ID: WBLKW2-121908-R71472	Units: mg/L					Analysis Date: 12/19/2008 10:11 AM				
Client ID:	Run ID: ICS3000_081219C	SeqNo: 1564357	Prep Date:	DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Chloride	U	0.50									
Surr: Selenate (surr)	4.753	0.10	5	0	95.1	85-115	0				

LCS	Sample ID: WLCSW2-121908-R71472	Units: mg/L					Analysis Date: 12/19/2008 10:34 AM				
Client ID:	Run ID: ICS3000_081219C	SeqNo: 1564358	Prep Date:	DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Chloride	19.7	0.50	20	0	98.5	90-110	0				
Surr: Selenate (surr)	4.753	0.10	5	0	95.1	85-115	0				

MS	Sample ID: 0812349-28BMS	Units: mg/L					Analysis Date: 12/19/2008 07:16 PM				
Client ID:	Run ID: ICS3000_081219C	SeqNo: 1564371	Prep Date:	DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Chloride	10.13	0.50	10	0.615	95.2	80-120	0				
Surr: Selenate (surr)	4.656	0.10	5	0	93.1	85-115	0				

DUP	Sample ID: 0812349-28BDUP	Units: mg/L					Analysis Date: 12/19/2008 06:53 PM				
Client ID:	Run ID: ICS3000_081219C	SeqNo: 1564370	Prep Date:	DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Chloride	0.488	0.50	0	0	0	0-0	0.615	0	20	J	
Surr: Selenate (surr)	4.597	0.10	5	0	91.9	85-115	4.613	0.347	20		

The following samples were analyzed in this batch:

0812311-03B	0812311-05B	0812311-06B
0812311-07B		

ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 O - Referenced analyte value is > 4 times amount spiked
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 P - Dual Column results percent difference > 40%
 B - Analyte detected in assoc. Method Blank
 U - Analyzed for but not detected
 E - Value above quantitation range

ALS Laboratory Group

Sample Receipt Checklist

Client Name: TETRA TECH MIDLAND

Date/Time Received: 12/13/2008 09:25

Work Order Number 0812311

Received by: ECD

Checklist completed by

Signature 

Date 12/13/08

Reviewed by

Initials LT Date 12/15/08

Matrix: WATER

Carrier name: FedEx

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on shipping container/cooler? Yes No Not Present
- Custody seals intact on sample bottles? Yes No Not Present
- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No
- Samples in proper container/bottle? Yes No
- Sample containers intact? Yes No
- Sufficient sample volume for indicated test? Yes No
- All samples received within holding time? Yes No
- Container/Temp Blank temperature in compliance? Yes No
- Temperature(s)/Thermometer(s): 1.0 004
- Cooler(s)/Kil(s): 166
- Water - VOA vials have zero headspace? Yes No No VOA vials submitted
- Water - pH acceptable upon receipt? Yes No N/A

Adjusted?

Checked by

Login Notes: Trip blank logged in without analysis!

Client contacted:

Date contacted:

Person contacted

Contacted by:

Regarding:

Comments:

Corrective Action

 **ALS Laboratory**
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Group	CUSTODY SEAL		Seal Broken By:
	Date: <u>12-12-08</u>	Time: <u>14:20</u>	<u>JML</u>
	Name: <u>Paul Hunt</u>		Date: <u>12/13/08</u>
	Company: <u>Team Tech</u>		



03/25/09

Technical Report for

CRA West Chester

GHSI-PXP Quarterly Groundwater Sampling

GSHI PXP Hill, E.C. Federal #7 TB / 55627DM (ENV749A008)

Accutest Job Number: T26039

Sampling Date: 03/11/09



Report to:

Conestoga Rover & Associates
9033 Meridian Way
West Chester, OH 45069
abown@croworld.com

ATTN: Angela Bown

Total number of pages in report: 41



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Paul K Canevaro

Paul Canevaro
Laboratory Director

Client Service contact: William Reeves 713-271-4700

Certifications: TX (T104704220-06-TX) AR (88-0756) FL (E87628) KS (E-10366) LA (85695/04004)
OK (9103) UT(7132714700)

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Test results relate only to samples analyzed.

Table of Contents

Sections:



Section 1: Sample Summary	3
Section 2: Sample Results	4
2.1: T26039-1: MW-1 (BD)	5
2.2: T26039-2: MW-1 (WELL #7)	7
2.3: T26039-3: MW-2	9
2.4: T26039-4: MW-3	11
2.5: T26039-5: MW-4	13
2.6: T26039-6: MW-5	15
2.7: T26039-7: MW-6	17
2.8: T26039-8: DUPLICATE	19
2.9: T26039-9: TRIP BLANK	21
Chain of Custody	23
Section 4: GC/MS Volatiles - QC Data Summaries	26
4.1: Method Blank Summary	27
4.2: Blank Spike Summary	30
4.3: Blank Spike/Blank Spike Duplicate Summary	32
4.4: Matrix Spike/Matrix Spike Duplicate Summary	33
Chain of Custody	35
Section 6: General Chemistry - QC Data (Accutest New Jersey)	38
6.1: Method Blank and Spike Results Summary	39
6.2: Duplicate Results Summary	40
6.3: Matrix Spike Results Summary	41



Sample Summary

CRA West Chester

Job No: T26039

GHSI-PXP Quarterly Groundwater Sampling
 Project No: GSHI PXP Hill, E.C. Federal #7 TB / 55627DM (ENV749A008)

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
T26039-1	03/11/09	13:40 JT	03/14/09	AQ	Ground Water	MW-1 (BD)
T26039-2	03/11/09	13:20 JT	03/14/09	AQ	Ground Water	MW-1 (WELL #7)
T26039-3	03/11/09	13:35 JT	03/14/09	AQ	Ground Water	MW-2
T26039-4	03/11/09	13:50 JT	03/14/09	AQ	Ground Water	MW-3
T26039-5	03/11/09	13:00 JT	03/14/09	AQ	Ground Water	MW-4
T26039-6	03/11/09	13:10 JT	03/14/09	AQ	Ground Water	MW-5
T26039-7	03/11/09	13:25 JT	03/14/09	AQ	Ground Water	MW-6
T26039-8	03/11/09	00:00 JT	03/14/09	AQ	Ground Water	DUPLICATE
T26039-9	03/11/09	10:30 JT	03/14/09	AQ	Trip Blank Water	TRIP BLANK



IT'S ALL IN THE CHEMISTRY

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: MW-1 (BD)		Date Sampled: 03/11/09
Lab Sample ID: T26039-1		Date Received: 03/14/09
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260B		
Project: GHSI-PXP Quarterly Groundwater Sampling		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F015027.D	1	03/22/09	RR	n/a	n/a	VF3330
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.46	ug/l	
108-88-3	Toluene	ND	1.0	0.48	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.45	ug/l	
1330-20-7	Xylene (total)	ND	3.0	1.4	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		79-122%
17060-07-0	1,2-Dichloroethane-D4	99%		75-121%
2037-26-5	Toluene-D8	108%		87-119%
460-00-4	4-Bromofluorobenzene	121%		80-133%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-1 (BD)	Date Sampled: 03/11/09
Lab Sample ID: T26039-1	Date Received: 03/14/09
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: GHSI-PXP Quarterly Groundwater Sampling	

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chloride ^a	922	10	0.59	mg/l	5	03/23/09 13:56	ANJ	EPA 300/SW846 9056

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result >= MDL but < RL

Report of Analysis

Client Sample ID: MW-1 (WELL #7)	Date Sampled: 03/11/09
Lab Sample ID: T26039-2	Date Received: 03/14/09
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260B	
Project: GHSI-PXP Quarterly Groundwater Sampling	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F015028.D	1	03/22/09	RR	n/a	n/a	VF3330
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.46	ug/l	
108-88-3	Toluene	ND	1.0	0.48	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.45	ug/l	
1330-20-7	Xylene (total)	ND	3.0	1.4	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		79-122%
17060-07-0	1,2-Dichloroethane-D4	102%		75-121%
2037-26-5	Toluene-D8	109%		87-119%
460-00-4	4-Bromofluorobenzene	122%		80-133%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-1 (WELL #7)	Date Sampled: 03/11/09
Lab Sample ID: T26039-2	Date Received: 03/14/09
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: GHSI-PXP Quarterly Groundwater Sampling	

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chloride ^a	1360	16	0.94	mg/l	8	03/23/09 14:18	ANJ	EPA 300/SW846 9056

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

RL = Reporting Limit
 MDL = Method Detection Limit

U = Indicates a result < MDL
 J = Indicates a result >= MDL but < RL

Report of Analysis

Client Sample ID: MW-2		Date Sampled: 03/11/09
Lab Sample ID: T26039-3		Date Received: 03/14/09
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260B		
Project: GHSI-PXP Quarterly Groundwater Sampling		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F015029.D	1	03/22/09	RR	n/a	n/a	VF3330
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.46	ug/l	
108-88-3	Toluene	ND	1.0	0.48	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.45	ug/l	
1330-20-7	Xylene (total)	ND	3.0	1.4	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		79-122%
17060-07-0	1,2-Dichloroethane-D4	102%		75-121%
2037-26-5	Toluene-D8	107%		87-119%
460-00-4	4-Bromofluorobenzene	121%		80-133%

ND = Not detected MDL - Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-2	Date Sampled: 03/11/09
Lab Sample ID: T26039-3	Date Received: 03/14/09
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: GHSI-PXP Quarterly Groundwater Sampling	

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chloride ^a	140	2.0	0.12	mg/l	1	03/20/09 22:57	ANJ	EPA 300/SW846 9056

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: MW-3		Date Sampled: 03/11/09
Lab Sample ID: T26039-4		Date Received: 03/14/09
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260B		
Project: GHSI-PXP Quarterly Groundwater Sampling		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F015094.D	1	03/24/09	RR	n/a	n/a	VF3334
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.46	ug/l	
108-88-3	Toluene	0.52	1.0	0.48	ug/l	J
100-41-4	Ethylbenzene	ND	1.0	0.45	ug/l	
1330-20-7	Xylene (total)	ND	3.0	1.4	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		79-122%
17060-07-0	1,2-Dichloroethane-D4	97%		75-121%
2037-26-5	Toluene-D8	111%		87-119%
460-00-4	4-Bromofluorobenzene	125%		80-133%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-3	Date Sampled: 03/11/09
Lab Sample ID: T26039-4	Date Received: 03/14/09
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: GHSI-PXP Quarterly Groundwater Sampling	

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chloride ^a	229	2.0	0.12	mg/l	1	03/20/09 23:20	ANJ	EPA 300/SW846 9056

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: MW-4		Date Sampled: 03/11/09
Lab Sample ID: T26039-5		Date Received: 03/14/09
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260B		
Project: GHSI-PXP Quarterly Groundwater Sampling		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F015039.D	1	03/22/09	RR	n/a	n/a	VF3331
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.46	ug/l	
108-88-3	Toluene	ND	1.0	0.48	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.45	ug/l	
1330-20-7	Xylene (total)	ND	3.0	1.4	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		79-122%
17060-07-0	1,2-Dichloroethane-D4	100%		75-121%
2037-26-5	Toluene-D8	109%		87-119%
460-00-4	4-Bromofluorobenzene	121%		80-133%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-4	Date Sampled: 03/11/09
Lab Sample ID: T26039-5	Date Received: 03/14/09
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: GHSI-PXP Quarterly Groundwater Sampling	

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chloride ^a	573	6.0	0.35	mg/l	3	03/23/09 14:41	ANJ	EPA 300/SW846 9056

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result >= MDL but < RL

Report of Analysis

Client Sample ID: MW-5		Date Sampled: 03/11/09
Lab Sample ID: T26039-6		Date Received: 03/14/09
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260B		
Project: GHSI-PXP Quarterly Groundwater Sampling		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F015042.D	1	03/22/09	RR	n/a	n/a	VF3331
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.46	ug/l	
108-88-3	Toluene	ND	1.0	0.48	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.45	ug/l	
1330-20-7	Xylene (total)	ND	3.0	1.4	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		79-122%
17060-07-0	1,2-Dichloroethane-D4	103%		75-121%
2037-26-5	Toluene-D8	108%		87-119%
460-00-4	4-Bromofluorobenzene	118%		80-133%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-5	Date Sampled: 03/11/09
Lab Sample ID: T26039-6	Date Received: 03/14/09
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: GHSI-PXP Quarterly Groundwater Sampling	

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chloride ^a	879	10	0.59	mg/l	5	03/23/09 15:03	ANJ	EPA 300/SW846 9056

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

RL = Reporting Limit
 MDL = Method Detection Limit

U = Indicates a result < MDL
 J = Indicates a result >= MDL but < RL

Report of Analysis

2.7
2

Client Sample ID: MW-6		Date Sampled: 03/11/09
Lab Sample ID: T26039-7		Date Received: 03/14/09
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260B		
Project: GHSI-PXP Quarterly Groundwater Sampling		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F015043.D	1	03/22/09	RR	n/a	n/a	VF3331
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.46	ug/l	
108-88-3	Toluene	ND	1.0	0.48	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.45	ug/l	
1330-20-7	Xylene (total)	ND	3.0	1.4	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%		79-122%
17060-07-0	1,2-Dichloroethane-D4	105%		75-121%
2037-26-5	Toluene-D8	110%		87-119%
460-00-4	4-Bromofluorobenzene	121%		80-133%

ND = Not detected MDL - Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-6	Date Sampled: 03/11/09
Lab Sample ID: T26039-7	Date Received: 03/14/09
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: GHSI-PXP Quarterly Groundwater Sampling	

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chloride ^a	92.7	2.0	0.12	mg/l	1	03/21/09 01:12	ANJ	EPA 300/SW846 9056

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

RL = Reporting Limit
 MDL = Method Detection Limit

U = Indicates a result < MDL
 J = Indicates a result >= MDL but < RL

Report of Analysis

Client Sample ID: DUPLICATE		Date Sampled: 03/11/09
Lab Sample ID: T26039-8		Date Received: 03/14/09
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260B		
Project: GHSI-PXP Quarterly Groundwater Sampling		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F015044.D	1	03/22/09	RR	n/a	n/a	VF3331
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.46	ug/l	
108-88-3	Toluene	ND	1.0	0.48	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.45	ug/l	
1330-20-7	Xylene (total)	ND	3.0	1.4	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		79-122%
17060-07-0	1,2-Dichloroethane-D4	103%		75-121%
2037-26-5	Toluene-D8	108%		87-119%
460-00-4	4-Bromofluorobenzene	119%		80-133%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DUPLICATE	Date Sampled:	03/11/09
Lab Sample ID:	T26039-8	Date Received:	03/14/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	GHSI-PXP Quarterly Groundwater Sampling		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chloride ^a	930	10	0.59	mg/l	5	03/24/09 10:46	ANJ	EPA 300/SW846 9056

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

RL = Reporting Limit
 MDL = Method Detection Limit

U = Indicates a result < MDL
 J = Indicates a result >= MDL but < RL

Report of Analysis

Client Sample ID:	TRIP BLANK	Date Sampled:	03/11/09
Lab Sample ID:	T26039-9	Date Received:	03/14/09
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	GHSI-PXP Quarterly Groundwater Sampling		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F015037.D	1	03/22/09	RR	n/a	n/a	VF3331
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.46	ug/l	
108-88-3	Toluene	ND	1.0	0.48	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.45	ug/l	
1330-20-7	Xylene (total)	ND	3.0	1.4	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%		79-122%
17060-07-0	1,2-Dichloroethane-D4	106%		75-121%
2037-26-5	Toluene-D8	108%		87-119%
460-00-4	4-Bromofluorobenzene	120%		80-133%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound



IT'S ALL IN THE CHEMISTRY

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

SAMPLE INSPECTION FORM

Accutest Job Number: T26039 Client: CEUA Date/Time Received: 3.14.09 1000

of Coolers Received: 1 Thermometer #: 121 Temperature Adjustment Factor: -.4

Cooler Temps: #1: 1.2 #2: _____ #3: _____ #4: _____ #5: _____ #6: _____ #7: _____ #8: _____

Method of Delivery: FEDEX UPS Accutest Courier Greyhound Delivery Other

Airbill Numbers: 868932820403

- COOLER INFORMATION**
- Custody seal missing or not intact
 - Temperature criteria not met
 - Wet ice received in cooler

- CHAIN OF CUSTODY**
- Chain of Custody not received
 - Sample D/T unclear or missing
 - Analyses unclear or missing
 - COC not properly executed

- SAMPLE INFORMATION**
- Sample containers received broken
 - VOC vials have headspace
 - Sample labels missing or illegible
 - ID on COC does not match label(s)
 - D/T on COC does not match label(s)
 - Sample/Bottles recvd but no analysis on COC
 - Sample listed on COC, but not received
 - Bottles missing for requested analysis
 - Insufficient volume for analysis
 - Sample received improperly preserved

- TRIP BLANK INFORMATION**
- Trip Blank on COC but not received
 - Trip Blank received but not on COC
 - Trip Blank not intact
 - Received Water Trip Blank
 - Received Soil TB

Number of Encores? _____
 Number of 5035 kits? _____
 Number of lab-filtered metals? _____

Summary of Discrepancies:
Did not receive sample MV-7

TECHNICIAN SIGNATURE/DATE: [Signature] 3.14.09

INFORMATION AND SAMPLE LABELING VERIFIED BY: _____

♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ **CORRECTIVE ACTIONS** ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦

Client Representative Notified: _____ Date: _____

By Accutest Representative: _____ Via: Phone Email

Client Instructions:

1:\nw\er\forms\sample\management



SAMPLE RECEIPT LOG

JOB #: T26039 DATE/TIME RECEIVED: 3-14-09 1000
 CLIENT: CRA INITIALS: IT

COOLER#	SAMPLE ID	FIELD ID	DATE	MATRIX	VOL	BOTTLE #	LOCATION	PRESERV	PH
1	1	MW-1 (RD)	3-11-09 1340	GW	500ml	1	2J	1 2 3 4 5 6 7 8	<2 >12
	↓	↓	↓		400ml	2-4	VR	1 2 3 4 5 6 7 8	<2 >12
	2	MW-1 (WELL #7)	3-11-09 1330		500ml	1	2J	1 2 3 4 5 6 7 8	<2 >12
	↓	↓	↓		400ml	2-4	VR	1 2 3 4 5 6 7 8	<2 >12
	3	MW-2	3-11-09 1335		500ml	1	2J	1 2 3 4 5 6 7 8	<2 >12
	↓	↓	↓		400ml	2-4	VR	1 2 3 4 5 6 7 8	<2 >12
	4	MW-3	3-11-09 1350		500ml	1	2J	1 2 3 4 5 6 7 8	<2 >12
	↓	↓	↓		400ml	2-4	VR	1 2 3 4 5 6 7 8	<2 >12
	5	MW-4	3-11-09 1320		500ml	1	2J	1 2 3 4 5 6 7 8	<2 >12
	↓	↓	↓		400ml	2-4	VR	1 2 3 4 5 6 7 8	<2 >12
	6	MW-5	3-11-09 1310		500ml	1	2J	1 2 3 4 5 6 7 8	<2 >12
	↓	↓	↓		400ml	2-4	VR	1 2 3 4 5 6 7 8	<2 >12
	7	MW-6	3-11-09 1325		500ml	1	2J	1 2 3 4 5 6 7 8	<2 >12
	↓	↓	↓		400ml	2-4	VR	1 2 3 4 5 6 7 8	<2 >12
	8	Duplicate	3-11-09		500ml	1	2J	1 2 3 4 5 6 7 8	<2 >12
	↓	↓	↓		400ml	2-4	VR	1 2 3 4 5 6 7 8	<2 >12
	9	TriO Blank	—	DI	↓	1-2	↓	1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12

PRESERVATIVES: 1: None 2: HCL 3: HNO3 4: H2SO4 5: NAOH 6: DI 7: MeOH 8: Other

T26039: Chain of Custody

Page 3 of 3



GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: T26039
Account: CRAOHWC CRA West Chester
Project: GHSI-PXP Quarterly Groundwater Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VF3330-MB	F015011.D	1	03/21/09	RR	n/a	n/a	VF3330

4.1
4

The QC reported here applies to the following samples:

Method: SW846 8260B

T26039-1, T26039-2, T26039-3

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	2.0	0.46	ug/l	
100-41-4	Ethylbenzene	ND	2.0	0.45	ug/l	
108-88-3	Toluene	ND	2.0	0.48	ug/l	
1330-20-7	Xylene (total)	ND	6.0	1.4	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	113% 79-122%
17060-07-0	1,2-Dichloroethane-D4	107% 75-121%
2037-26-5	Toluene-D8	113% 87-119%
460-00-4	4-Bromofluorobenzene	126% 80-133%

Method Blank Summary

Job Number: T26039
Account: CRAOHWC CRA West Chester
Project: GHSI-PXP Quarterly Groundwater Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VF3331-MB	F015036.D	1	03/22/09	RR	n/a	n/a	VF3331

4.1
4

The QC reported here applies to the following samples:

Method: SW846 8260B

T26039-5, T26039-6, T26039-7, T26039-8, T26039-9

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	2.0	0.46	ug/l	
100-41-4	Ethylbenzene	ND	2.0	0.45	ug/l	
108-88-3	Toluene	ND	2.0	0.48	ug/l	
1330-20-7	Xylene (total)	ND	6.0	1.4	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	113% 79-122%
17060-07-0	1,2-Dichloroethane-D4	106% 75-121%
2037-26-5	Toluene-D8	111% 87-119%
460-00-4	4-Bromofluorobenzene	125% 80-133%

Method Blank Summary

Job Number: T26039
Account: CRAOHWC CRA West Chester
Project: GHSI-PXP Quarterly Groundwater Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VF3334-MB	F015093.D	1	03/24/09	RR	n/a	n/a	VF3334

4.1
4

The QC reported here applies to the following samples:

Method: SW846 8260B

T26039-4

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	2.0	0.46	ug/l	
100-41-4	Ethylbenzene	ND	2.0	0.45	ug/l	
108-88-3	Toluene	ND	2.0	0.48	ug/l	
1330-20-7	Xylene (total)	ND	6.0	1.4	ug/l	

CAS No.	Surrogate Recoveries	Results	Limits
1868-53-7	Dibromofluoromethane	105%	79-122%
17060-07-0	1,2-Dichloroethane-D4	93%	75-121%
2037-26-5	Toluene-D8	110%	87-119%
460-00-4	4-Bromofluorobenzene	123%	80-133%

Blank Spike Summary

Job Number: T26039
Account: CRAOHWC CRA West Chester
Project: GHSI-PXP Quarterly Groundwater Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VF3330-BS	F015009.D	1	03/21/09	RR	n/a	n/a	VF3330

4.2
4

The QC reported here applies to the following samples:

Method: SW846 8260B

T26039-1, T26039-2, T26039-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	25	22.5	90	76-118
100-41-4	Ethylbenzene	25	22.8	91	75-112
108-88-3	Toluene	25	22.6	90	77-114
1330-20-7	Xylene (total)	75	69.6	93	75-111

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	109%	79-122%
17060-07-0	1,2-Dichloroethane-D4	102%	75-121%
2037-26-5	Toluene-D8	109%	87-119%
460-00-4	4-Bromofluorobenzene	114%	80-133%

Blank Spike Summary

Job Number: T26039
 Account: CRAOHWC CRA West Chester
 Project: GHSI-PXP Quarterly Groundwater Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VF3331-BS	F015034.D	1	03/22/09	RR	n/a	n/a	VF3331

4.2
4

The QC reported here applies to the following samples:

Method: SW846 8260B

T26039-5, T26039-6, T26039-7, T26039-8, T26039-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	25	24.6	98	76-118
100-41-4	Ethylbenzene	25	23.9	96	75-112
108-88-3	Toluene	25	23.7	95	77-114
1330-20-7	Xylene (total)	75	73.4	98	75-111

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	110%	79-122%
17060-07-0	1,2-Dichloroethane-D4	104%	75-121%
2037-26-5	Toluene-D8	108%	87-119%
460-00-4	4-Bromofluorobenzene	114%	80-133%

Blank Spike/Blank Spike Duplicate Summary

Job Number: T26039
 Account: CRAOHWC CRA West Chester
 Project: GHSI-PXP Quarterly Groundwater Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VF3334-BS	F015085.D	1	03/24/09	RR	n/a	n/a	VF3334
VF3334-BSD	F015086.D	1	03/24/09	RR	n/a	n/a	VF3334

4.3
4

The QC reported here applies to the following samples:

Method: SW846 8260B

T26039-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	25	23.5	94	21.3	85	10	76-118/30
100-41-4	Ethylbenzene	25	24.6	98	22.5	90	9	75-112/30
108-88-3	Toluene	25	24.6	98	22.5	90	9	77-114/30
1330-20-7	Xylene (total)	75	76.4	102	70.2	94	8	75-111/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	108%	107%	79-122%
17060-07-0	1,2-Dichloroethane-D4	104%	104%	75-121%
2037-26-5	Toluene-D8	110%	110%	87-119%
460-00-4	4-Bromofluorobenzene	114%	113%	80-133%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T26039
 Account: CRAOHWC CRA West Chester
 Project: GHSI-PXP Quarterly Groundwater Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T26036-1MS	F015014.D	1	03/21/09	RR	n/a	n/a	VF3330
T26036-1MSD	F015015.D	1	03/21/09	RR	n/a	n/a	VF3330
T26036-1	F015013.D	1	03/21/09	RR	n/a	n/a	VF3330

4.4
4

The QC reported here applies to the following samples:

Method: SW846 8260B

T26039-1, T26039-2, T26039-3

CAS No.	Compound	T26036-1 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	25	23.4	94	23.0	92	2	76-118/16
100-41-4	Ethylbenzene	ND	25	23.3	93	22.9	92	2	75-112/12
108-88-3	Toluene	ND	25	23.1	92	22.6	90	2	77-114/12
1330-20-7	Xylene (total)	ND	75	71.4	95	70.7	94	1	75-111/12

CAS No.	Surrogate Recoveries	MS	MSD	T26036-1	Limits
1868-53-7	Dibromofluoromethane	111%	111%	108%	79-122%
17060-07-0	1,2-Dichloroethane-D4	111%	107%	103%	75-121%
2037-26-5	Toluene-D8	108%	109%	108%	87-119%
460-00-4	4-Bromofluorobenzene	112%	113%	121%	80-133%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T26039
 Account: CRAOHWC CRA West Chester
 Project: GHSI-PXP Quarterly Groundwater Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T26039-5MS	F015040.D	1	03/22/09	RR	n/a	n/a	VF3331
T26039-5MSD	F015041.D	1	03/22/09	RR	n/a	n/a	VF3331
T26039-5	F015039.D	1	03/22/09	RR	n/a	n/a	VF3331

4.4
4

The QC reported here applies to the following samples:

Method: SW846 8260B

T26039-5, T26039-6, T26039-7, T26039-8, T26039-9

CAS No.	Compound	T26039-5 ug/l	Spike Q	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	25	25.0	100	24.8	99	1	76-118/16
100-41-4	Ethylbenzene	ND	25	24.7	99	24.2	97	2	75-112/12
108-88-3	Toluene	ND	25	24.4	98	24.2	97	1	77-114/12
1330-20-7	Xylene (total)	ND	75	76.3	102	75.1	100	2	75-111/12

CAS No.	Surrogate Recoveries	MS	MSD	T26039-5	Limits
1868-53-7	Dibromofluoromethane	110%	114%	109%	79-122%
17060-07-0	1,2-Dichloroethane-D4	105%	113%	100%	75-121%
2037-26-5	Toluene-D8	107%	110%	109%	87-119%
460-00-4	4-Bromofluorobenzene	110%	114%	121%	80-133%



IT'S ALL IN THE CHEMISTRY

Misc. Forms



Custody Documents and Other Forms

(Accutest New Jersey)

Includes the following where applicable:

- Chain of Custody



SUBCONTRACT COC

10165 Harwin, Suite 150 - Houston, TX 77036 - 713-271-4700 fax: 713-271-4770

WW

Client Information		Subcontract Information		Requested Analytes												Matrix Codes			
Company Name Accutest Gulf Coast Project Contact William Reeves Email: williamr@accutest.com Address 10165 Harwin Dr, Suite 150 City Houston State TX Zip 77036 Phone No. 713-271-4700		Subcontract Laboratory Accutest New Jersey Laboratory Contact _____ Address _____ City _____ State _____ Zip _____ Phone No. _____		(Grid for Analytes)												Matrix Codes DW - Drinking Water GW - Ground Water WW - Wastewater SW - Surface Water SO - Soil SL - Sludge OL - Oil LIQ - Liquid SOL - Other Solid			
Accutest Sample Number	Collection		Metric	Number of preserved bottles												CHL by IC	LAB USE ONLY		
	Date	Time		SE	SW	SL	OL	LIQ	SOL	Other	Other	Other	Other	Other					
T26039-1	11-Mar-09		1															X	48TX
T26039-2	11-Mar-09		1															X	
T26039-3	11-Mar-09		1															X	
T26039-4	11-Mar-09		1															X	
T26039-5	11-Mar-09		1															X	
T26039-6	11-Mar-09		1															X	
T26039-7	11-Mar-09		1															X	
T26039-8	11-Mar-09		1															X	
Turnaround Time (Business days)		Approved By / Date:		Date Deliverable Information												Comments / Remarks			
<input type="checkbox"/> STANDARD <input type="checkbox"/> 7 Day <input type="checkbox"/> 4 Day RUSH <input type="checkbox"/> 3 Day EMERGENCY <input type="checkbox"/> 2 Day EMERGENCY <input type="checkbox"/> 1 Day EMERGENCY <input checked="" type="checkbox"/> Other		Approved By: _____ Date: 27-Mar-09		<input type="checkbox"/> Commercial "A" <input checked="" type="checkbox"/> Commercial "B" <input type="checkbox"/> Reduced Tier 1 <input type="checkbox"/> Full Data Package <input type="checkbox"/> TRUP-13 <input type="checkbox"/> EDO Format <input type="checkbox"/> Other												NAB TRS 3/18/09			
Real time analytical data available via Lablink SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY																			
Relinquished by: [Signature] Date/Time: 3/17/09 16:15	Received By: Fedex Date/Time: 3/18/09 09:44	Relinquished by: [Signature] Date/Time: 3/18/09 09:44	Received By: [Signature] Date/Time: 3/18/09 09:44	Relinquished by: [Signature] Date/Time: 3/18/09 09:44	Received By: [Signature] Date/Time: 3/18/09 09:44	Relinquished by: [Signature] Date/Time: 3/18/09 09:44	Received By: [Signature] Date/Time: 3/18/09 09:44	Relinquished by: [Signature] Date/Time: 3/18/09 09:44	Received By: [Signature] Date/Time: 3/18/09 09:44	Relinquished by: [Signature] Date/Time: 3/18/09 09:44	Received By: [Signature] Date/Time: 3/18/09 09:44	Relinquished by: [Signature] Date/Time: 3/18/09 09:44	Received By: [Signature] Date/Time: 3/18/09 09:44	Relinquished by: [Signature] Date/Time: 3/18/09 09:44	Received By: [Signature] Date/Time: 3/18/09 09:44				
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5				

T26039: Chain of Custody
 Page 1 of 2
 Accutest New Jersey



Accutest Laboratories Sample Receipt Summary

Accutest Job Number: T26039 Client: _____ Immediate Client Services Action Required: No
 Date / Time Received: 3/18/2009 Delivery Method: _____ Client Service Action Required at Login: No
 Project: _____ No. Coolers: 1 Airbill #'s: _____

Cooler Security Y or N Y or N
 1. Custody Seals Present: 3. COC Present:
 2. Custody Seals Intact: 4. Smpl Dates/Time OK

Cooler Temperature Y or N
 1. Temp criteria achieved:
 2. Cooler temp verification: Infrared gun
 3. Cooler media: Ice (bag)

Quality Control Preservation Y or N
 1. Trip Blank present / cooler:
 2. Trip Blank listed on COC:
 3. Samples preserved properly:
 4. VOCs headspace free:

Sample Integrity - Documentation Y or N
 1. Sample labels present on bottles:
 2. Container labeling complete:
 3. Sample container label / COC agree:

Sample Integrity - Condition Y or N
 1. Sample recvd within HT:
 2. All containers accounted for:
 3. Condition of sample: Intact

Sample Integrity - Instructions Y or N
 1. Analysis requested is clear:
 2. Bottles received for unspecified tests:
 3. Sufficient volume recvd for analysis:
 4. Compositing instructions clear:
 5. Filtering instructions clear:

Comments

Accutest Laboratories
 V: 732.329.0200

2235 US Highway 130
 F: 732.329.3499

Dayton, New Jersey
 www.accutest.com



General Chemistry

QC Data Summaries

(Accutest New Jersey)

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries



METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: T26039
Account: ALGC - Accutest Laboratories Gulf Coast, Inc.
Project: CRAOHWC: GHSI-PXP Quarterly Groundwater Sampling

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chloride	GP48349/GN24726	2.0	0.0	mg/l	80	83.8	104.8	90-110%
Chloride	GP48349/GN24784	2.0	0.0	mg/l	80	83.4	104.3	90-110%
Chloride	GP48349/GN24804	2.0	0.0	mg/l	80	82.7	103.4	90-110%

Associated Samples:

Batch GP48349: T26039-1, T26039-2, T26039-3, T26039-4, T26039-5, T26039-6, T26039-7, T26039-8

(*) Outside of QC limits



DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: T26039
Account: ALGC - Accutest Laboratories Gulf Coast, Inc.
Project: CRAOHWC: GHSI-PXP Quarterly Groundwater Sampling

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chloride	GP48349/GN24784	T26039-1	mg/l	922	922	0.0	0-20%

Associated Samples:

Batch GP48349: T26039-1, T26039-2, T26039-3, T26039-4, T26039-5, T26039-6, T26039-7, T26039-8

(*) Outside of QC limits

0.2
6

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: T26039
Account: ALGC - Accutest Laboratories Gulf Coast, Inc.
Project: CRAOHWC: GHSI-PXP Quarterly Groundwater Sampling

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chloride	GP48349/GN24726	T26039-3	mg/l	140	80	221	101.3	80-120%
Chloride	GP48349/GN24784	T26039-1	mg/l	922	800	1730	101.0	80-120%

Associated Samples:

Batch GP48349: T26039-1, T26039-2, T26039-3, T26039-4, T26039-5, T26039-6, T26039-7, T26039-8

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits



of holding time to meet the project specified limits. All compounds associated with the reanalysis were qualified as estimated (See Table 3).

Surrogate compounds were added to all samples, blanks, and QC samples prior to VOC analysis. All surrogate recoveries were acceptable, demonstrating good analytical accuracy.

Method blanks were analyzed for all parameters. Target compounds were not detected in the method blanks indicating that contamination was not an issue for this event.

Blank spike (BS) samples were prepared and analyzed for all parameters. The BS analyses demonstrated acceptable analytical accuracy.

While Matrix Spike/Matrix Spike Duplicate (MS/MSD) analyses were performed for all VOCs and chloride, the sample selected was not from this project. On this basis, the MS/MSD was not evaluated and no qualification of data was needed.

One field duplicate sample set was submitted for analysis. The data indicate that an adequate level of precision was achieved for the sampling event.

One trip blank sample was submitted for analysis. Target compounds were not detected in the trip blank indicating that contamination was not an issue for this event.

CONCLUSION

Based on the preceding assessment, the data were acceptable for use with the noted qualifications.

TABLE 1

**SAMPLE COLLECTION AND ANALYSIS SUMMARY
 QUARTERLY GROUNDWATER MONITORING
 PXP-HILL, E.C. "B" FEDERAL #7 TB
 LEA COUNTY, NEW MEXICO
 JUNE 2009**

<i>Sample I.D.</i>	<i>Collection Date (mm/dd/yy)</i>	<i>Collection Time (hr:min)</i>	<i>Analysis/Parameters</i>		<i>Comments</i>
			<i>VOCs (BTEX)</i>	<i>Chloride</i>	
MW-1 (Well #7)	06/10/09	14:30	X	X	
MW-1 (DUP)	06/10/09	14:30	X	X	Field Duplicate of MW-1
MW-2	06/10/09	15:15	X	X	
MW-3	06/10/09	14:50	X	X	
MW-4	06/10/09	15:30	X	X	
MW-5	06/10/09	15:45	X	X	
MW-6	06/10/09	16:10	X	X	
MW-7	06/10/09	16:00	X	X	
Trip Blank	06/10/09	--	X		

Notes:

BTEX - Benzene, Toluene, Ethylbenzene and Xylene.
 VOCs - Volatile Organic Compounds.

TABLE 2

ANALYTICAL RESULTS SUMMARY
 QUARTERLY GROUNDWATER MONITORING
 PXP-HILL, E.C. "B" FEDERAL #7 TB
 LEA COUNTY, NEW MEXICO
 JUNE 2009

Parameters	Units	Sample Location: MW-1							
		MW-1 (WELL #7)	MW-1 (DUP)	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7
		6/10/2009	6/10/2009	6/10/2009	6/10/2009	6/10/2009	6/10/2009	6/10/2009	6/10/2009
<i>Sample ID: MW-1 (WELL #7)</i>									
<i>Sample Date: 6/10/2009</i>									
<i>(Duplicate)</i>									
Volatile Organic Compounds - BTEX									
Benzene	µg/L	1.0U	1.0U	1.0UJ	1.0U	1.0U	1.0U	1.0U	1.0U
Ethylbenzene	µg/L	1.0U	1.0U	1.0UJ	1.0U	1.0U	1.0U	1.0U	1.0U
Toluene	µg/L	1.0U	1.0U	1.0UJ	1.0U	1.0U	1.0U	1.0U	1.0U
Xylene (total)	µg/L	3.0U	3.0U	3.0UJ	3.0U	3.0U	3.0U	3.0U	3.0U
General Chemistry									
Chloride	mg/L	610	525	134	243	645	860	87.4	1030

Notes:

- U - Not present at or above the associated value.
- UJ - Estimated reporting limit.

TABLE 3

QUALIFIED SAMPLE RESULTS DUE TO HOLDING TIME EXCEEDANCES
 QUARTERLY GROUNDWATER MONITORING
 PXP-HILL, E.C. "B" FEDERAL #7 TB
 LEA COUNTY, NEW MEXICO
 JUNE 2009

<i>Parameter</i>	<i>Sample ID</i>	<i>Holding Time (days)</i>	<i>Holding Time Criteria (days)</i>	<i>Qualified Sample Results</i>	<i>Units</i>
Ethylbenzene	MW-2	15	14	1.0 UJ	µg/L
Toluene				1.0 UJ	µg/L
Xylene (total)				3.0 UJ	µg/L
Benzene				1.0 UJ	µg/L

Notes:

UJ - The analyte was not detected above the sample quantitation limit. The reported quantitation limit is an estimated quantity.

Analysis Request of Chain of Custody Record

PAGE: 1 OF 1

TETRA TECH
 1910 N. Big Spring St.
 Midland, Texas 79705
 (432) 682-4559 • Fax (432) 682-3948



Project Contact
 Anyala Bawn
 Company Name
 CICA
 E-Mail
 abawn@tetratech.com

CLIENT NAME: CYS SITE MANAGER: Ike Louder (EAW7497098)

PROJECT NO.: 115-6402543 PROJECT NAME: Oxy/GSHL PXP Hill, FC Federal #7552-27DM

LAB I.D. NUMBER: 2009 DATE: 6/10 TIME: 15:15 W MATRIX: X GRAB: X SAMPLE IDENTIFICATION: Mw-2

RTX8021B (82609) FILTERED (Y/N) 4 PRESERVATIVE METHOD: ICE

ANALYSIS REQUEST (Circle or Specify Method No.)	DATE	TIME
TPH 8015 MOD, TK1005 (Ext to C95)		
PAH 8270		
PCRA Metals Ag As Ba Cd Cr Pb Hg Se		
TCLP Metals Ag As Ba Cd Vr Pd Hg Se		
TCLP Volatiles		
TCLP Semi Volatiles		
FCI		
GC/MS Vol. B240/B260/B24		
GC/MS Semi. Vol. B270/B25		
PCBs 8080/808		
Part. 808/808		
Gamma Spec.		
Alpha Beta (At)		
PLM (Asbestos)		
Major Anions/Cations, pH, TDS		

RECEIVED BY (Signature): [Signature] DATE: 6/10/09 TIME: 15:15

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RECEIVED BY (Signature): [Signature] DATE: 6/10/09 TIME: 15:15

RECEIVED BY (Signature): [Signature] DATE: 6/10/09 TIME: 15:15

RECEIVING LABORATORY: HOUSTON
 ADDRESS: 1500
 CITY: Houston STATE: TX ZIP: 770

REMARKS: Temp. 1.6

RECEIVED BY (Signature): [Signature] DATE: 6/10/09 TIME: 15:15

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RECEIVING LABORATORY: HOUSTON
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REMARKS: Temp. 1.6

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REMARKS: Temp. 1.6

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RECEIVING LABORATORY: HOUSTON
 ADDRESS: 1500
 CITY: Houston STATE: TX ZIP: 770

REMARKS: Temp. 1.6

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