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# REPORTS

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**ANNUAL GROUNDWATER MONITORING and  
PLUME DELINEATION REPORT**

**G. L. ERWIN "A&B" FEDERAL NCT-2 TANK BATTERY  
LEA COUNTY, NEW MEXICO**

Prepared for:

**ChevronTexaco Exploration and Production Company  
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Prepared by:

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April 26, 2004

  
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**G. L. Erwin "A&B" Federal NCT-2 Tank Battery**  
**Lea County, New Mexico**

**1.0 INTRODUCTION**

ChevronTexaco Exploration and Production Company (ChevronTexaco) has retained Larson and Associates, Inc. (LA) to conduct chloride plume delineation, groundwater remediation and monitoring activities at the former location of the G. L. Erwin "A&B" Federal NCT-2 Tank Battery (Site). The Site is located approximately three (3) miles northeast of Jal, New Mexico, and is situated in the southwest quarter (SW/4) of the southeast quarter (SE/4), Section 35, Township 24 South, Range 37 East, Lea County, New Mexico. Figure 1 presents a Site location and topographic map.

**2.0 BACKGROUND**

Two monitoring wells (WMW and SWMW) were installed in 1997 by Environmental Spill Control, Inc., and five additional monitoring wells (MW-1 through MW-5) were installed by Highlander Environmental, Corp., in February 1998, in order to investigate soil and groundwater impacts at the Site. Details of the investigations were submitted to the New Mexico Oil Conservation Division (NMOCD) in a Subsurface Environmental Assessment Report dated March 1998.

In that report, Texaco proposed to implement a groundwater recovery program by installing a groundwater recovery well in the area of highest chloride impact, and sending the recovered fluid from this well to the G. L. Erwin Federal NCT-2 "A&B" Tank Battery. Groundwater monitoring, on a quarterly basis, was also proposed, with an annual report to be prepared and submitted yearly to the NMOCD.

The proposed activities were approved by the NMOCD in a letter dated June 19, 1998. In that letter, the NMOCD requested submittal of a work plan to delineate the downgradient extent of chloride impact. On November 18, 1998, a "Work Plan for Plume Delineation and Modification to Proposed Groundwater Monitoring Schedule" was submitted to the NMOCD. In addition to the previously

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proposed Recovery Well, the work plan included installation of additional monitoring wells, in order to delineate the chloride plume at the Site. As requested by the NMOCD, the previously submitted groundwater-monitoring schedule was expanded to include the yearly sampling of all monitoring wells for benzene, toluene, ethylbenzene, and xylene (collectively referred to as BTEX). The proposed activities were approved by the NMOCD in a letter dated February 2, 1999.

An Annual Groundwater Monitoring and Plume Delineation Report was submitted to the NMOCD on March 26, 2003, that included details of the installation of three monitoring wells (MW-6, MW-7, and MW-8) and one recovery well (RW-1) by Highlander Environmental, and five monitoring wells (MW-9 through MW-13) by Larson and Associates, Inc. (LA).

### **3.0 CURRENT ACTIVITIES**

#### **3.1 Monitoring Wells**

On October 6 and 7, 2003, four monitoring wells (MW-14 MW-15, MW-16 and MW-17) were installed at the Site by LA. Scarborough Drilling, Inc., located in Lamesa, Texas, drilled the four wells from 75 to 90 feet below ground surface (bgs), using a truck mounted air rotary drilling rig. The monitoring wells were constructed with 2-inch diameter schedule 40 PVC casing and screen. The well screen, approximately 15 feet in length, was placed in the borings with approximately 3 to 5 feet extending above the groundwater surface observed during drilling, and approximately 10 to 12 feet of the well screen was placed into groundwater. In each well, graded silica sand was placed in the annular space between the boring and screen to approximately two (2) feet above the screen. A layer of bentonite chips, approximately three (3) feet thick, was placed above the sand, and hydrated with potable water. The remainder of the annulus was filled with cement and bentonite grout to approximately 1-foot bgs. The monitoring wells were secured with locking above-grade covers that were anchored in concrete pads measuring approximately 3' x 3' x 1'. Table 1 presents a summary of well drilling and installation details. Appendix A presents the well logs and well construction

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diagrams. Figure 2 presents the well locations.

### **3.2 Groundwater Monitoring**

#### **3.2.1 Groundwater Assessment**

LA completed monitoring at the Site for the period of May 2003 through February 2004. Depth to groundwater measurements were collected from all monitoring wells (MW-1 through MW-13, WMW and SWMW), the recovery well (RW-1) and the water well (WW-1) at the western edge of the Site, on May 29, 2003, August 22, 2003, November 5, 2003, and February 3, 2004. Depth to groundwater measurements were also collected from the new monitoring wells (MW-14 through MW-17) during the November 2003 and February 2004 monitoring events. Depth to groundwater ranged from 60.33 feet (MW-5) to 72.77 feet (MW-12) below top of casing (TOC) on the May 29 event, from 60.24 feet (MW-5) to 72.81 feet (MW-12) below TOC on August 22, from 60.24 feet (MW-5) to 72.81 feet (MW-12) below TOC on November 5, and from 60.20 feet (MW-5) to 72.83 feet (MW-12) below TOC on the February 3, 2004 event. Monitoring well MW-11 was consistently dry during each monitoring event, and new monitoring well MW-15 has been dry since installation of the well. The groundwater gradient was approximately 0.017 feet per foot during the August 2003 monitoring event, and approximately 0.033 feet per foot during the February 2004 monitoring event. Groundwater flow at the Site has remained consistent, and flows primarily to the southeast. Table 2 provides a summary of depth to groundwater measurements. Figure 3 shows the groundwater gradient on August 22, 2003. Figure 4 shows the groundwater gradient on February 3, 2004.

Groundwater samples were collected on May 30 and June 2, 2002, from monitoring wells MW-1 through MW-10, MW-12, MW-13, WMW, SWMW, recovery well RW-1, and water well WW-1. A duplicate sample was collected from monitoring well SWMW. The groundwater samples were submitted under chain-of-custody control to TraceAnalysis, Inc. (Trace), and analyzed for BTEX, anions, cations, and total dissolved solids (TDS). Prior to sample collection, the wells were purged

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of a minimum of three (3) casing volumes of groundwater. The groundwater samples were collected using dedicated disposable PVC bailers. Table 3 presents a summary of the general chemistry analysis. Table 4 presents a summary of the BTEX analysis. Appendix B presents the laboratory report.

Referring to Table 3, chloride was above the WQCC standard of 250 milligrams per liter (mg/L) in groundwater from all sampled wells, except MW-10 (55.7 mg/L) and WW-1 (127 mg/L). Fluoride was above the WQCC standard of 1.6 mg/L in groundwater from all wells except MW-4, MW-5, MW-10, MW-12, and WMW. The reported TDS concentrations in groundwater exceeded the WQCC standard of 1,000 mg/L in all sampled wells, except MW-10 and WW-1.

Referring to Table 4, benzene, toluene, ethylbenzene and xylene, were all below the test method detection limit for each well sampled.

On August 25 and 26, 2003, groundwater samples were collected from monitoring wells MW-1 through MW-10, MW-12, MW-13, WMW and SWMW, recovery well RW-1, and water well WW-1. A duplicate sample was obtained from monitoring well SWMW. Monitoring well MW-11 was dry. The groundwater samples were submitted under chain-of-custody control to Trace, and analyzed for anions, cations and TDS. Prior to sample collection, the wells were purged a minimum of three (3) casing volumes of groundwater. The groundwater samples were collected using dedicated disposable PVC bailers. Table 3 presents a summary of the general chemistry analysis. Appendix B presents the laboratory report.

Referring to Table 3, chloride concentrations exceeded the WQCC standard of 250 mg/L in all wells, except MW-10 (56.1 mg/L) and WW-1 (136 mg/L). Fluoride was above the WQCC standard of 1.6 mg/L in groundwater from all wells except MW-4, MW-5, MW-9, MW-10, MW-12 , and WMW.

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The reported TDS concentrations in groundwater exceeded the WQCC standard of 1,000 mg/L in all sampled wells, except MW-1, MW-10, and WW-1. Figure 5 presents an isopleth map of chloride concentrations during the August 2003 sampling event.

On November 5–7, 2003, groundwater samples were collected from monitoring wells MW-1 through MW-10, MW-12 through MW-14, MW-16, MW-17, WMW and SWMW, recovery well RW-1, and water well WW-1. A duplicate sample was obtained from MW-7 on November 5, and from MW-3 on November 6, 2003. Monitoring wells MW-11 and MW-15 were dry. The groundwater samples were submitted under chain-of-custody control to Trace, and analyzed for anions, cations and TDS. Prior to sample collection, the wells were purged a minimum of three (3) casing volumes of groundwater. The groundwater samples were collected using dedicated disposable PVC bailers. Table 3 presents a summary of the general chemistry analysis. Appendix B presents the laboratory report.

Referring to Table 3, chloride was above the WQCC standard of 250 mg/L in groundwater from all sampled wells except MW-10 (70.9 mg/L), and WW-1 (149 mg/L). Fluoride was above the WQCC standard of 1.6 mg/L in groundwater from all wells except MW-4, MW-5, and MW-14. TDS concentrations in groundwater were above the WQCC standard (1,000 mg/L) in all sampled wells except MW-1, MW-10, and WW-1.

On February 4 and 5, 2004, groundwater samples were collected from monitoring wells MW-1 through MW-10, MW-12 through MW-14, MW-16, MW-17, WMW and SWMW, recovery well RW-1, and water well WW-1. A duplicate sample was obtained from MW-17 on February 4, and from MW-9 on February 5, 2004. Monitoring wells MW-11 and MW-15 were dry. The groundwater samples were submitted under chain-of-custody control to Trace, and analyzed for BTEX, anions, cations and TDS. Prior to sample collection, the wells were purged a minimum of

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three (3) casing volumes of groundwater. The groundwater samples were collected using dedicated disposable PVC bailers. Table 3 presents a summary of the general chemistry analysis. Appendix B presents the laboratory report.

Referring to Table 3, chloride was above the WQCC standard of 250 mg/L in groundwater from all sampled wells except MW-10 (101 mg/L) and WW-1 (185 mg/L). Fluoride was above the WQCC standard of 1.6 mg/L in groundwater from all wells except MW-4, MW-5, and MW-14. TDS concentrations in groundwater were above the WQCC standard (1,000 mg/L) in all sampled wells except MW-1, MW-10, and WW-1. Figure 6 presents an isopleth map of chloride concentrations during the February 2004 sampling event.

Referring to Table 4, benzene, toluene, ethylbenzene and xylene, were all below the test method detection limit for each well sampled.

### **3.2.2 Waste Management and Disposition**

Purged groundwater from the sampling activities was disposed at an NMOCD permitted salt water disposal facility operated by Chapparel Services, Inc., located in Eunice, New Mexico. Approximately 51 gallons of purged groundwater was disposed following each sampling event, for a total of approximately 204 gallons.

### **3.3 Remediation System Installation and Start-up**

Texaco submitted an application to the State of New Mexico, Office of the State Engineer (NMSE) for allocating water resources for remediation of the chlorides, subject to conditions. Upon approval of that application, ChevronTexaco will initiate chloride remediation in accordance with the conditions stipulated by the NMSE.

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#### **4.0 CONCLUSIONS**

1. Depth to groundwater ranged from 60.33 feet (MW-5) to 72.77 feet (MW-12) below top of casing (TOC) on May 29, 2003.
2. Depth to groundwater ranged from 60.24 feet (MW-5) to 72.81 feet (MW-12) below TOC on August 22, 2003.
3. Depth to groundwater ranged from 60.24 feet (MW-5) to 72.81 feet (MW-12) below TOC on November 5, 2003.
4. Depth to groundwater ranged from 60.20 feet (MW-5) to 72.83 feet (MW-12) below TOC on February 3, 2004.
5. Monitoring well MW-11 was consistently dry during each monitoring event, and new monitoring well MW-15 has been dry since installation of the well.
6. The groundwater gradient was approximately 0.017 feet per foot during the August 2003 monitoring event, and approximately 0.033 feet per foot during the February 2004 monitoring event.
7. Groundwater flow at the Site has remained consistent, and flows primarily to the southeast.
8. From the May 2003 sampling event, chloride concentrations were above the WQCC standard of 250 mg/L in groundwater from all sampled wells, except MW-10 and WW-1. Fluoride was above the WQCC standard of 1.6 mg/L in groundwater from all wells except MW-4, MW-5, MW-10, MW-12, and WMW. The reported TDS concentrations exceeded the WQCC standard of 1,000 mg/L in all sampled wells, except MW-10 and WW-1.
9. From the May 2003 sampling event, BTEX concentrations in groundwater were below the test method detection limit for each well sampled.
10. From the August 2003 sampling event, chloride concentrations exceeded the WQCC standard of 250 mg/L in all wells, except MW-10 and WW-1. Fluoride was above the WQCC standard of 1.6 mg/L in groundwater from all wells except MW-4, MW-5, MW-9, MW-10, MW-12 , and WMW. The reported TDS concentrations exceeded the WQCC

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- standard of 1,000 mg/L in all sampled wells, except MW-1, MW-10, and WW-1.
11. From the November 2003 sampling event, chloride was above the WQCC standard of 250 mg/L in groundwater from all sampled wells except MW-10 and WW-1. Fluoride was above the WQCC standard of 1.6 mg/L in groundwater from all wells except MW-4, MW-5, and MW-14. TDS was above the WQCC standard (1,000 mg/L) in all sampled wells except MW-1, MW-10, and WW-1.
  12. From the February 2004 sampling event, chloride was above the WQCC standard of 250 mg/L in groundwater from all sampled wells except MW-10 and WW-1. Fluoride was above the WQCC standard of 1.6 mg/L in groundwater from all wells except MW-4, MW-5, and MW-14. TDS was above the WQCC standard (1,000 mg/L) in all sampled wells except MW-1, MW-10, and WW-1.
  13. From the February 2004 sampling event, BTEX constituents were below the test method detection limit for each well sampled.

## **5.0 RECOMMENDATIONS**

ChevronTexaco proposes an adjustment to the groundwater monitoring schedule from quarterly to semi-annual (twice yearly), analyzing groundwater samples for anions, cations and TDS. Since no BTEX constituents have been observed in groundwater samples from the Site, BTEX analysis will be omitted from the required laboratory analysis. ChevronTexaco also proposes to install at least one additional monitoring well, downgradient of well MW-14, in order to delineate the extent of the chloride plume. A report will be submitted to the NMOCDD annually, detailing results of groundwater monitoring activities.

## **TABLES**

**Table 1: Summary of Monitoring and Recovery Well Drilling and Completion Details,**  
**Texaco Exploration and Production, Inc., G.L. Erwin Federal "A & B" NCT-2 Tank Battery**  
**SW1/4, SE1/4, Section 35, Township 24 South, Range 37 East**  
**Lea County, New Mexico**

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Well Number	Date Drilled	Drilled Depth Feet BGS	Well Diameter (Inches)	Ground Elevation Feet AMSL	Top-of-Casing Elevation, Feet AMSL	Well Depth Feet TOC	Screen Interval, Feet BGS
MW-1	02/02/98	87.05	2	3159.40	3161.69	87.70	55.07 - 84.68
MW-2	02/02/98	70.50	2	3157.40	3159.89	72.94	50.30 - 69.90
MW-3	02/02/98	71.00	2	3161.30	3164.08	73.26	50.48 - 70.08
MW-4	02/03/98	70.70	2	3162.90	3165.65	73.31	50.63 - 70.23
MW-5	02/03/98	70.41	2	3158.30	3160.75	73.10	50.34 - 69.94
MW-6	07/09/98	75.00	2	3161.88	3164.18	77.24	59.24 - 73.64
MW-7	07/10/98	70.20	2	3158.88	3162.06	73.45	55.04 - 69.6
MW-8	01/14/99	71.00	2	3157.04	3159.66	70.66	50.47 - 70.16
MW-9	09/11/01	73.00	2	3164.17	3167.07	70.39	55.42 - 70.00
MW-10	09/12/01	75.00	2	3168.04	3170.99	69.16	54.19 - 68.77
MW-11	09/12/01	76.00	2	3165.59	3168.24	72.78	57.81 - 72.39
MW-12	09/13/01	80.00	2	3149.44	3152.44	74.37	59.40 - 73.98
MW-13	09/13/01	72.00	2	3152.00	3154.92	67.90	52.93 - 67.51
MW-14	10/06/03	90.00	2	3149.48	3151.91	92.43	79.48 - 89.48
MW-15	10/06/03	85.00	2	3150.03	3152.48	87.45	64.48 - 84.48
MW-16	10/07/03	75.00	2	3155.03	3157.25	77.22	59.48 - 74.48
MW-17	10/07/03	77.00	2	3156.00	3158.37	79.37	56.98 - 76.48
West	-	-	2	3162.00	3164.44	70.43	-
Southwest	-	-	2	3161.50	3164.54	70.45	-
RW-1	07/10/98	73.40	4	3161.08	3163.44	76.30	52.88 - 67.48

Notes: All wells constructed with schedule 40 PVC screen and casing.

1. BGS: Depth in feet below ground surface
2. AMSL: Elevation in feet above mean sea level
3. TOC: Depth in feet from top-of-casing
4. -: No data available
5. RW: Recovery well

**Table 1: Summary of Monitoring and Recovery Well Drilling and Completion Details,**  
**Texaco Exploration and Production, Inc., G.L. Erwin Federal "A & B" NCT-2 Tank Battery**  
**SW1/4, SE1/4, Section 35, Township 24 South, Range 37 East**  
**Lea County, New Mexico**

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Well Number	Date Drilled	Drilled Depth Feet BGS	Well Diameter (Inches)	Ground Elevation Feet AMSL	Top-of-Casing Elevation, Feet AMSL	Well Depth Feet TOC	Screen Interval, Feet BGS
MW-1	02/02/98	87.05	2	3159.40	3161.69	87.70	55.07 - 84.68
MW-2	02/02/98	70.50	2	3157.40	3159.89	72.94	50.30 - 69.90
MW-3	02/02/98	71.00	2	3161.30	3164.08	73.26	50.48 - 70.08
MW-4	02/03/98	70.70	2	3162.90	3165.65	73.31	50.63 - 70.23
MW-5	02/03/98	70.41	2	3158.30	3160.75	73.10	50.34 - 69.94
MW-6	07/09/98	75.00	2	3161.88	3164.18	77.24	59.24 - 73.64
MW-7	07/10/98	70.20	2	3158.88	3162.06	73.45	55.04 - 69.6
MW-8	01/14/99	71.00	2	3157.04	3159.66	70.66	50.47 - 70.16
MW-9	09/11/01	73.00	2	3164.17	3167.07	70.39	55.42 - 70.00
MW-10	09/12/01	75.00	2	3168.04	3170.99	69.16	54.19 - 68.77
MW-11	09/12/01	76.00	2	3165.59	3168.24	72.78	57.81 - 72.39
MW-12	09/13/01	80.00	2	3149.44	3152.44	74.37	59.40 - 73.98
MW-13	09/13/01	72.00	2	3152.00	3154.92	67.90	52.93 - 67.51
MW-14	10/06/03	90.00	2	3149.48	3151.91	92.43	79.48 - 89.48
MW-15	10/06/03	85.00	2	3150.03	3152.48	87.45	64.48 - 84.48
MW-16	10/07/03	75.00	2	3155.03	3157.25	77.22	59.48 - 74.48
MW-17	10/07/03	77.00	2	3156.00	3158.37	79.37	56.98 - 76.48
West	-	-	2	3162.00	3164.44	70.43	-
Southwest	-	-	2	3161.50	3164.54	70.45	-
RW-1	07/10/98	73.40	4	3161.08	3163.44	76.30	52.88 - 67.48

Notes: All wells constructed with schedule 40 PVC screen and casing.

1. BGS: Depth in feet below ground surface
2. AMSL: Elevation in feet above mean sea level
3. TOC: Depth in feet from top-of-casing
4. -: No data available
5. RW: Recovery well

**Table 2: Summary of Depth-to-Groundwater Measurements from Monitoring and Recovery Wells**  
**Texaco Exploration and Production, Inc., G.I. Erwin Federal "A & B" NCT-2 Tank Battery**  
**SW/4, SE/4, Section 35, Township 24 South, Range 37 East**  
**Lea County, New Mexico**

Date	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13
08/22/97	--	--	--	--	--	--	--	--	--	--	--	--	--
02/04/98	64.15	61.33	65.18	63.94	60.33	--	--	--	--	--	--	--	--
01/14/99	--	--	--	--	--	--	--	--	--	--	--	--	--
02/03/99	--	--	--	--	--	--	--	--	--	--	--	--	--
10/19/00	--	--	--	63.80	60.25	--	--	--	68.21	--	--	--	--
02/07/01	61.40	61.45	65.22	63.78	60.58	68.00	67.25	68.30	--	--	--	--	--
04/30/02	61.43	61.47	65.11	63.72	62.27	68.10	67.50	68.42	63.65	70.35	DRY	72.80	66.97
10/11/02	61.43	61.46	65.14	63.74	60.29	68.04	67.53	68.30	63.59	70.49	DRY	72.81	66.38
12/26/02	61.43	61.52	65.15	63.74	60.29	68.03	67.53	68.30	63.59	70.50	DRY	72.82	66.37
02/17/03	61.42	61.53	65.15	63.74	60.30	68.03	67.53	68.30	63.60	70.50	DRY	72.82	66.37
05/29/03	61.58	61.48	65.19	63.83	60.33	68.38	67.61	68.36	63.73	70.37	DRY	72.77	66.68
08/22/03	61.37	61.41	65.09	63.71	60.24	67.99	67.49	68.26	63.56	70.47	DRY	72.81	67.06
11/05/03	61.35	61.38	65.09	63.68	60.24	67.99	67.47	68.26	63.55	70.49	DRY	72.81	67.36
02/03/04	61.34	61.35	65.06	63.64	60.20	67.92	67.46	68.24	63.47	70.43	DRY	72.83	67.11

Date	MW-14	MW-15	MW-16	MW-17	West	Southwest	RW-1	WW-1
08/22/97	--	--	--	--	62.58	63.25	--	--
02/04/98	--	--	--	--	62.50	63.21	--	--
01/14/99	--	--	--	--	--	--	50.85	--
02/03/99	--	--	--	--	--	--	--	--
10/19/00	--	--	--	--	62.37	63.06	62.33	--
02/07/01	--	--	--	--	62.43	63.10	--	--
04/30/02	--	--	--	--	62.37	63.06	62.28	70.21
10/11/02	--	--	--	--	62.35	62.72	62.27	69.71
12/26/02	--	--	--	--	62.34	62.70	62.26	69.70
02/17/03	--	--	--	--	62.34	62.70	62.26	69.70
05/29/03	--	--	--	--	62.22	62.92	62.34	67.37
08/22/03	--	--	--	--	62.35	63.04	62.25	70.27
11/05/03	71.6	DRY	65.68	69.51	62.31	63.03	62.25	70.23
02/03/04	71.62	DRY	68.67	69.53	62.27	62.99	62.2	70.31

Notes: All measurements are in feet from top-of-casing

1. --: No data available

Table 3:

Summary of General Chemistry Analysis of Groundwater Samples from Monitoring Wells

Tenaco Exploration and Production Inc., G.L. Erwin Federal "A & B" NCT-2 Tank Battery  
SW/4, SE/4, Section 35, Township 24 South, Range 37 East

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Well Number	Sample Date	Carbonate mg/L	Bicarbonate mg/L	Chloride mg/L	Fluoride mg/L	Nitrate - N mg/L	Sulfate mg/L	Calcium mg/L	Magnesium mg/L	Potassium mg/L	Sodium mg/L	TDS mg/L	Hardness mg/L	Hydrogen sulfide mg/L
MW-1	08/22/97	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/17/98	<2.0	220	233	--	--	92.0	--	--	--	81.2	276	--	--
	02/07/01	<1.0	136	440	2.10	2.80	70.0	15.7	55.80	11.40	115.0	1,200	--	--
	05/03/02	<1.0	144	478	1.60	3.06	72.5	103.0	38.70	8.68	105.0	--	--	<1.00
	10/11/02	<0.1	155	250	--	--	109.0	69.3	24.80	7.45	125.0	737	--	<0.10
	12/27/02	<0.1	149	248	--	--	109.0	76.6	27.40	5.16	129.0	728	--	<0.10
	02/18/03	<0.1	147	213	--	--	114.0	59.1	21.40	5.06	116.0	713	--	<0.10
	06/02/03	<1.0	132	434	1.77	2.99	73.3	135.0	47.80	8.62	118.0	1,320	--	<1.00
	08/25/03	<1.0	144	279	1.76	3.39	73.3	92.7	31.30	7.17	118.0	856	--	<1.00
	11/05/03	<1.0	162	350	1.94	3.42	78.9	110.0	37.70	9.03	114.0	994	--	<1.00
MW-2	02/04/04	<1.0	142	390	1.92	3.25	71.1	117.0	43.20	10.20	113.0	940	--	<1.00
	08/22/97	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/17/98	<2.0	360	423	--	--	141.0	--	--	--	--	1,257	124	--
	05/03/02	<1.0	234	570	2.70	5.00	130.0	124.0	40.70	10.90	359.0	1,500	--	--
	10/11/02	10.0	262	349	2.28	5.36	148.0	21.0	6.18	8.52	315.0	--	--	<1.00
	12/27/02	12.0	238	319	--	--	142.0	17.8	5.16	6.10	339.0	1,110	--	<0.10
	02/18/03	<0.1	228	310	--	--	178.0	19.4	6.02	6.30	331.0	1,070	--	<0.10
	06/02/03	<1.0	206	769	2.05	4.43	115.0	176.0	52.60	9.94	383.0	1,955	--	<1.00
	08/25/03	<1.0	242	374	2.07	5.14	142.0	36.1	10.80	8.49	333.0	1,240	--	<1.00
	11/05/03	<1.0	232	498	2.21	5.15	145.0	68.7	21.10	10.10	327.0	1,354	--	<1.00
MW-3	02/04/04	<1.0	230	450	2.06	4.97	131.0	76.1	25.20	10.70	324.0	1,424	--	<1.00
	08/22/97	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/17/98	<2.0	410	983	--	--	173.0	--	--	--	--	2,261	232	--
	02/07/01	8.0	278	890	3.40	7.30	200.0	56.7	18.70	20.40	648.0	2,100	--	<1.00
	05/02/02	<1.0	298	735	2.84	7.57	213.0	27.5	8.39	24.70	47.8	--	--	<1.00
	05/03/02	<1.0	146	767	2.90	7.39	207.0	37.9	11.50	21.50	28.2	--	--	<1.00
	10/11/02	<0.1	288	733	--	--	272.0	29.0	9.18	20.60	627.0	1,960	--	<0.10
	12/27/02	<0.1	288	727	--	--	231.0	27.0	7.34	19.90	698.0	1,950	--	<0.10
	02/18/03	<0.1	277	763	--	--	180.0	25.2	7.84	16.40	580.0	1,960	--	<0.10
	06/02/03	<1.0	270	802	3.07	8.06	203.0	64.9	20.90	18.50	728.0	2,720	--	<1.00
	08/26/03	<1.0	282	799	3.00	7.99	198.0	54.9	18.00	16.40	597.0	2,320	--	<1.00
	11/06/03	<1.0	286	746	2.92	7.26	214.0	37.4	11.10	24.90	577.0	2,092	--	<1.00
	02/04/04	<1.0	296	755	2.74	7.36	205.0	42.7	13.10	27.10	546.0	2,275	--	<1.00

Table 3:

Summary of General Chemistry Analysis of Groundwater Samples from Monitoring Wells

Traco Exploration and Production Inc., G.L. Erwin Federal "A & B" NCT-2 Tank Battery  
SW1/4, SE1/4, Section 25, Township 24 South, Range 37 East

Lea County, New Mexico

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Well Number	Sample Date	Carbonate mg/L	Bicarbonate mg/L	Chloride mg/L	Fluoride mg/L	Nitrate - N mg/L	Sulfate mg/L	Calcium mg/L	Magnesium mg/L	Potassium mg/L	Sodium mg/L	TDS mg/L	Hardness mg/L	Hydroxide mg/L
MW-4	08/22/97	-	--	--	--	--	--	--	--	--	--	--	--	--
	02/17/98	<1.0	510	372	--	--	156.0	--	--	--	--	1,268	--	--
	02/07/01	<1.0	286	1,000	1.70	4.70	100.0	248.0	84.70	24.00	506.0	2,600	--	--
	05/03/02	<1.0	250	868	1.00	4.72	163.0	137.0	48.40	40.70	441.0	--	--	<1.00
	10/14/02	<0.1	342	381	--	--	124.0	9.4	2.48	38.40	405.0	1,210	--	<0.10
	12/27/02	<0.1	288	505	--	--	114.0	21.2	4.42	50.60	461.0	1,450	--	<0.10
	02/18/03	<0.1	264	691	--	--	118.0	32.2	7.50	59.00	474.0	1,610	--	<0.10
	05/30/03	<1.0	236	1,020	<2.00	5.53	79.6	113.0	29.70	59.80	664.0	2,670	--	<1.00
	08/25/03	<1.0	192	1,170	<2.00	5.43	72.9	143.0	35.00	82.10	616.0	2,935	--	<1.00
	11/07/03	<1.0	194	1,020	<2.00	5.48	76.5	228.0	61.40	83.50	629.0	3,035	--	<1.00
MW-5	02/05/04	<1.0	170	1,710	<2.00	5.93	79.0	277.0	75.90	108.00	630.0	3,380	--	<1.00
	08/22/97	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/17/98	<1.0	360	408	--	--	151.0	--	--	--	--	--	--	--
	02/07/01	<1.0	214	570	1.60	4.80	140.0	123.0	40.80	20.50	331.0	1,500	--	--
	05/03/02	<1.0	238	395	0.96	5.36	162.0	37.3	11.10	21.30	287.0	--	--	<1.00
	10/1/02	<0.1	232	397	--	--	173.0	31.8	10.00	20.70	305.0	1,100	--	<0.10
	12/27/02	<0.1	212	317	--	--	171.0	31.3	8.55	20.60	319.0	1,210	--	<0.10
	02/18/03	<0.1	210	319	--	--	176.0	27.2	8.48	16.50	231.0	1,110	--	<0.10
	06/02/03	<1.0	196	588	1.23	4.86	142.0	132.0	40.50	21.20	364.0	1,564	--	<0.10
	08/26/03	<1.0	210	447	1.32	4.85	141.0	94.1	29.00	21.40	291.0	1,480	--	<1.00
MW-6	11/06/03	<1.0	214	456	1.43	5.11	152.0	94.0	29.30	24.80	282.0	1,430	--	<1.00
	02/04/04	<1.0	206	504	1.38	5.31	147.0	93.1	31.40	21.30	289.0	1,410	--	<1.00
	02/07/01	<1.0	200	1800	3.3	5.4	140	323	1.08	18.8	637	3,890	--	--
	05/02/02	<1.0	264	503	3.68	7.04	183.0	24.9	7.29	17.40	417.0	--	--	<1.00
	10/14/02	<0.1	262	630	--	--	206.0	18.6	5.34	17.50	556.0	1,670	--	<0.10
	12/27/02	36.00	218	620	--	--	192.0	21.2	6.08	13.60	584.0	1,650	--	<0.10
	02/18/03	16.00	238	638	--	--	298.0	22.1	6.43	11.80	524.0	1,700	--	<0.10
MW-7	06/02/03	<1.0	244	772	3.24	6.62	181.0	68.7	21.30	14.40	614.0	2,040	--	<1.00
	08/26/03	<1.0	246	607	2.95	6.65	179.0	35.9	11.60	12.20	525.0	2,370	--	<1.00
	11/06/03	<1.0	250	649	3.28	6.89	191.0	46.0	13.90	18.10	503.0	1,932	--	<1.00
	02/04/04	<1.0	266	713	3.15	7.20	189.0	48.9	15.40	19.90	517.0	2,210	--	<1.00

Table 3:

Summary of General Chemistry Analysis of Groundwater Samples from Monitoring Wells

Texaco Exploration and Production Inc., G.L. Erwin Federal "A & B" NCT-2 Tank Battery  
SW 1/4, SE 1/4, Section 35, Township 24 South, Range 37 East

Lea County, New Mexico

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Well Number	Sample Date	Carbonate mg/L	Bicarbonate mg/L	Chloride mg/L	Fluoride mg/L	Nitrate - N mg/L	Sulfate mg/L	Calcium mg/L	Magnesium mg/L	Potassium mg/L	Sodium mg/L	TDS mg/L	Hardness mg/L	Hydroxide mg/L
MW-7	02/07/01	<1.0	238	500	3.20	4.10	100.0	80.3	27.30	10.40	526.0	1,300	--	--
	05/02/02	<1.0	244	466	2.94	4.18	106.0	46.6	17.00	8.42	307.0	--	--	<1.00
	10/11/02	<0.1	242	408	--	--	128.0	39.7	13.50	6.70	316.0	1,120	--	<0.10
	12/27/02	<0.1	232	452	--	--	109.0	56.2	19.20	5.82	353.0	1,220	--	<0.10
	02/17/03	<0.1	200	603	--	--	134.0	90.6	30.90	5.86	339.0	1,440	--	<0.10
	06/02/03	<1.0	242	388	3.23	4.33	115.0	39.5	12.50	6.16	370.0	1,216	--	<1.00
	08/25/03	<1.0	232	367	2.77	4.07	105.0	39.3	12.30	7.14	309.0	1,244	--	<1.00
	11/05/03	<1.0	240	343	3.08	4.16	117.0	36.6	11.40	7.67	304.0	1,186	--	<1.00
	02/04/04	<1.0	262	320	3.10	4.25	112.0	30.7	9.87	7.95	298.0	1,138	--	<1.00
MW-8	02/07/01	20	240	900	3.20	6.60	160.0	79.4	24.50	12.70	604.0	2,100	--	--
	05/02/02	<1.0	236	818	2.65	6.68	168.0	94.5	29.20	13.00	527.0	--	--	<1.00
	10/14/02	<0.1	250	842	--	--	194.0	52.4	20.40	10.80	597.0	1,920	--	<0.10
	12/27/02	<0.1	233	833	--	--	173.0	59.8	20.00	8.64	627.0	2,000	--	<0.10
	02/18/03	<0.1	213	833	--	--	185.0	53.0	17.60	7.13	489.0	1,910	--	<0.10
	06/02/03	<1.0	244	777	3.29	6.82	173.0	60.0	18.90	9.47	650.0	1,968	--	<1.00
	08/25/03	<1.0	244	738	2.85	6.42	159.0	59.4	17.30	11.40	534.0	1,996	--	<1.00
	11/07/03	<1.0	248	722	3.27	6.65	171.0	58.1	17.90	12.20	525.0	1,972	--	<1.00
	02/04/04	<1.0	254	764	3.77	7.85	161.0	55.2	18.20	13.20	522.0	2,038	--	<1.00
MW-9	05/01/02	<1.0	142	459	1.88	3.26	106.0	98.8	35.80	9.93	188.0	--	--	<1.00
	10/14/02	<0.1	137	443	--	--	119.0	88.4	33.10	10.40	216.0	1,240	--	<0.10
	12/27/02	<0.1	124	434	--	--	120.0	93.8	33.80	6.22	192.0	1,080	--	<0.10
	02/18/03	<0.1	105	461	--	--	126.0	99.3	34.10	5.62	200.0	1,190	--	<0.10
	05/30/03	<1.0	122	514	1.82	3.01	107.0	113.0	37.90	7.98	240.0	1,324	--	<1.00
	08/25/03	<1.0	114	562	1.58	2.98	95.2	120.0	39.20	9.45	219.0	1,428	--	<1.00
	11/07/03	<1.0	132	468	1.68	2.86	96.2	119.0	39.00	9.18	200.0	1,250	--	<1.00
	02/05/04	<1.0	124	610	2.32	4.18	97.7	125.0	41.10	10.30	221.0	1,345	--	<1.00
MW-10	10/14/02	<0.1	204	71.0	--	--	145.0	42.3	22.80	7.77	87.3	593	--	<0.10
	12/27/02	<0.1	196	70.0	--	--	146.0	68.4	21.10	7.69	92.8	529	--	<0.10
	02/18/03	<0.1	184	65.0	--	--	159.0	67.1	22.80	3.04	90.7	552	--	<0.10
	06/02/03	<1.0	198	55.7	1.60	4.31	134.0	75.7	22.40	4.95	80.4	624	--	<1.00
	08/26/03	<1.0	188	56.1	1.58	4.10	125.0	70.6	23.40	6.29	72.3	688	--	<1.00
	11/07/03	<1.0	200	70.9	1.69	4.19	131.0	70.2	23.50	5.80	69.3	638	--	<1.00
	02/05/04	<1.0	196	101.0	1.68	4.22	121.0	75.8	23.70	6.29	73.6	674	--	<1.00

Table 3:

Summary of General Chemistry Analysis of Groundwater Samples from Monitoring Wells

Taco Exploration and Production Inc., G.L. Ervin Federal "A" & "B" NCF-2 Tank Battery  
SW4, SE4A, Section 35, Township 24 South, Range 37 East.

Lea County, New Mexico

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Well Number	Sample Date	Carbonate mg/L	Bicarbonate mg/L	Chloride mg/L	Fluoride mg/L	Nitrate - N mg/L	Sulfate mg/L	Calcium mg/L	Magnesium mg/L	Potassium mg/L	Sodium mg/L	TDS mg/L	Hardness mg/L	Hydrogen sulfide mg/L
MW-12	05/02/02	<1.0	88	1120	1.37	4.09	45.3	431.0	153.00	17.70	123.0	—	—	<1.00
	10/11/02	<0.1	93	1370	—	—	47.5	438.0	161.00	15.40	127.0	2,860	—	<0.10
	12/27/02	<0.1	78	1,520	—	—	49.3	507.0	181.00	14.10	151.0	3,460	—	<0.10
	02/17/03	<0.1	68	1,530	—	—	52.4	461.0	170.00	13.30	136.0	3,980	—	<0.10
	06/02/03	<1.0	72	1,380	<2.00	5.06	45.8	491.0	157.00	15.30	151.0	3,240	—	<1.00
	08/26/03	<1.0	66	1,550	<1.00	4.94	45.9	523.0	178.00	14.80	156.0	3,855	—	<1.00
	11/06/03	<1.0	80	1,610	2.25	4.81	50.3	568.0	189.00	20.10	159.0	3,860	—	<1.00
	02/05/04	<1.0	74	1,680	2.19	5.13	46.0	523.0	181.00	21.60	160.0	2,910	—	<1.00
MW-13	05/02/02	<1.0	122	277	2.31	4.38	131.0	125.0	44.30	10.20	65.6	—	—	<1.00
	10/11/02	<0.1	115	337	—	—	124.0	135.0	46.50	9.47	88.6	1,210	—	<0.10
	12/27/02	<0.1	104	408	—	—	132.0	160.0	55.20	9.71	84.5	1,260	—	<0.10
	02/17/03	<0.1	80	443	—	—	144.0	152.0	54.90	8.88	108.0	1,370	—	<0.10
	06/02/03	<1.0	102	421	2.27	4.43	122.0	155.0	56.00	11.00	90.9	1,260	—	<1.00
	08/26/03	<1.0	92	500	2.10	4.23	115.0	179.0	66.00	12.00	95.6	1,360	—	<1.00
	11/06/03	<1.0	98	492	2.25	4.42	125.0	193.0	68.60	14.30	91.5	1,434	—	<1.00
	02/05/04	<1.0	96	543	2.30	4.56	120.0	179.0	65.60	15.40	98.3	1,220	—	<1.00
MW-14	11/05/03	<1.0	100	3460	<4.00	6.38	525.0	951.0	324.00	45.30	732.0	7,315	—	<1.00
	02/04/04	<1.0	74	3910	<1.00	6.01	559.0	966.0	320.00	46.10	840.0	7,720	—	<1.0
MW-15	11/05/03	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
	02/03/04	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
MW-16	11/06/03	<1.0	188	863	1.79	5.65	150.0	183.0	55.60	14.20	372.0	2,100	—	<1.00
	02/04/04	<1.0	174	937	2.19	6.59	123.0	234.0	76.80	15.20	299.0	2,200	—	<1.00
MW-17	11/05/03	<1.0	154	587	2.06	3.85	104.0	177.0	58.20	12.50	184.0	1,556	—	<1.00
	02/04/04	<1.0	158	650	2.01	3.93	93.1	158.0	52.50	12.20	205.0	1,416	—	<1.00
West	08/22/97	—	—	250	—	—	—	—	—	—	—	—	—	—
	02/17/98	<2.0	370	237	—	—	134.0	—	—	—	—	975	96	—
	02/07/01	<1.0	236	340	2.00	4.50	120.0	39.7	12.50	33.20	264.0	1,000	—	—
	05/01/02	<1.0	214	329	1.39	4.36	116.0	41.9	11.90	40.90	234.0	—	—	<1.00
	10/14/02	<0.1	210	337	—	—	127.0	39.3	9.37	35.60	290.0	9865	—	<0.10
	12/27/02	<0.1	198	337	—	—	134.0	43.1	12.50	33.20	263.0	997	—	<0.10
	02/18/03	<0.1	190	354	—	—	141.0	33.6	9.78	23.90	152.0	1,010	—	<0.10
	05/30/03	<1.0	202	353	1.54	4.16	116.0	48.4	13.30	33.10	283.0	1,050	—	<1.00
	08/25/03	<1.0	194	351	1.50	4.08	112.0	49.4	13.20	38.40	265.0	1,066	—	<1.00
	11/07/03	<1.0	204	327	1.65	3.98	115.0	51.3	13.80	38.80	235.0	1,100	—	<1.00
	02/05/04	<1.0	196	345	1.66	4.09	112.0	51.6	14.60	41.40	235.0	1,074	—	<1.00

Table 3:

Summary of General Chemistry Analysis of Groundwater Samples from Monitoring Wells

Taco Exploration and Production Inc., G.L. Erwin Federal "A & B" NCT-2 Tank Battery  
SW4, SE4, Section 35, Township 24 South, Range 37 East

Lea County, New Mexico

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Well Number	Sample Date	Carbonate mg/L	Bicarbonate mg/L	Chloride mg/L	Fluoride mg/L	Nitrate - N mg/L	Sulfate mg/L	Calcium mg/L	Magnesium mg/L	Potassium mg/L	Sodium mg/L	TDS mg/L	Hardness mg/L	Hydrogenide mg/L	
Southwest	08/23/97	-	-	3,900	-	-	-	-	-	-	-	-	-	-	
	02/17/98	<1.0	420	2,170	-	-	255.0	-	-	-	-	4,719	712	-	
	02/07/01	<1.0	326	1,900	2.20	5.00	350.0	197.0	39.10	---	1,078.0	4,100	-	-	
	05/03/02	<1.0	272	1,490	1.38	4.51	301.0	200.0	65.00	46.40	744.0	-	-	<1.00	
	10/14/02	<0.1	310	1,310	-	-	360.0	110.0	32.50	61.50	929.0	3,020	-	<0.10	
	12/27/02	<0.1	308	1,280	-	-	319.0	107.0	31.90	66.80	980.0	3,040	-	<0.10	
	02/18/03	<0.1	289	1,290	-	-	300.0	104.0	31.30	63.00	918.0	2,910	-	<0.10	
	06/02/03	<1.0	304	1,420	2.34	5.83	282.0	161.0	45.70	49.10	935.0	4,070	-	<1.00	
	08/25/03	<1.0	310	1,190	2.25	6.10	272.0	117.0	33.60	49.70	774.0	3,205	-	<1.00	
	11/07/03	<1.0	300	1,240	2.29	5.77	255.0	129.0	35.40	48.50	772.0	3,275	-	<1.00	
	02/05/04	<1.0	300	1,240	2.37	6.17	238.0	109.0	33.10	52.20	716.0	2,860	-	<1.00	
RW-1	10/20/00	<1.0	310	1,500	1.70	5.20	350.0	107.0	29.60	50.00	843.0	3,200	-	-	
	10/14/02	<0.1	327	1,150	-	-	340.0	60.3	25.50	64.30	820.0	2,720	-	<0.10	
	12/27/02	<0.1	294	1,300	-	-	330.0	123.0	40.30	56.80	933.0	3,190	-	<0.10	
	02/18/03	<0.1	300	1,150	-	-	316.0	79.7	25.70	53.00	721.0	2,690	-	<0.10	
	06/02/03	<1.0	276	1,500	2.05	5.34	275.0	194.0	67.21	40.80	923.0	4,070	-	<1.00	
	08/25/03	<1.0	298	1,190	2.01	6.15	278.0	117.0	32.70	46.10	705.0	2,940	-	<1.00	
	11/07/03	<1.0	298	1,300	2.13	5.56	266.0	166.0	48.10	51.70	1,06.0	3,240	-	<1.00	
	02/05/04	<1.0	292	1,270	2.22	5.92	246.0	148.0	44.70	53.80	704.0	2,780	-	<1.00	
Duplicates															
MW-4	02/07/01	<1.0	290	890	3.30	7.00	190.0	61.0	21.10	20.50	665.0	2,200	-	-	
	10/14/02	<0.1	358	372	-	-	116.0	8.8	2.38	37.40	409.0	1,260	-	<0.10	
	12/27/02	<0.1	158	115	-	-	139.0	55.5	23.00	4.94	94.4	594	-	<0.10	
	02/18/03	<0.1	298	1,310	-	-	299.0	108.0	32.20	58.30	812.0	3,040	-	<0.10	
	06/02/03	<1.0	290	1,370	2.12	5.65	287.0	169.0	54.50	45.00	889.0	3,420	-	<1.00	
	08/25/03	<1.0	290	1,260	<2.00	5.61	159.0	41.80	79.00	591.0	3,270	-	<1.00		
	MW-7	11/05/03	<1.0	238	355	3.04	4.19	117.0	34.7	10.80	7.63	298.0	1,170	-	<1.00
	MW-3	11/06/03	<1.0	132	521	1.85	2.92	98.1	120.0	39.50	9.15	200.0	1,392	-	<1.00
	MW-17	02/04/04	<1.0	172	557	2.08	4.03	95.7	162.0	52.60	12.10	204.0	1,496	-	<1.00
	MW-9	02/05/04	<1.0	120	581	1.23	2.19	53.6	132.0	43.90	10.10	203.0	1,325	-	<1.00

Table 3:

Summary of General Chemistry Analysis of Groundwater Samples from Monitoring Wells  
 Texaco Exploration and Production Inc., G.L. Erwin Federal "A & B" NCT-2 Tank Battery  
 SW4, SE4, Section 35, Township 24 South, Range 37 East  
 Lea County, New Mexico

Page 6 of 6

Well Number	Sample Date	Carbonate mg/L	Bicarbonate mg/L	Chloride mg/L	Fluoride mg/L	Nitrate - N mg/L	Sulfate mg/L	Calcium mg/L	Magnesium mg/L	Potassium mg/L	Sodium mg/L	TDS mg/L	Hardness mg/L	Hydroxide mg/L
WW-1	05/01/02	<1.0	172	97.2	1.64	4.05	137.0	51.4	23.40	8.23	84.9	—	—	<1.00
	10/10/02	<0.1	168	106	—	—	124.0	52.7	22.20	9.99	106.0	605	—	<0.10
	12/27/02	<0.1	157	111	—	—	134.0	55.0	22.50	5.10	96.0	572	—	<0.10
	02/18/03	<0.1	152	115	—	—	137.0	53.8	22.10	6.38	93.5	601	—	<0.10
	06/02/03	<1.0	154	127	1.69	3.77	119.0	59.5	24.10	7.14	118.0	621	—	<1.00
	08/25/03	<1.0	148	136	1.70	3.72	111.0	63.0	24.00	8.43	104.0	652	—	<1.00
	11/07/03	<1.0	156	149	1.80	3.62	111.0	62.3	24.40	8.30	95.5	669	—	<1.00
	02/04/04	<1.0	156	185	1.81	3.79	102.0	68.2	25.50	8.70	92.4	709	—	<1.00

## Notes:

1. mg/L

2. <  
Concentration below test method detection limit3. —  
No data available4. RW:  
Recovery well

5. All analyses prior to 10/14/02 conducted by TraceAnalysis, Inc., Lubbock, TX  
 6. Analyses from 10/14/02 conducted by Environmental Lab of Texas, Odessa, TX  
 7. Analyses from 5/30/03 and following, conducted by Trace Analysis Inc., Lubbock, Texas

**Table 4: Summary of BTEX Analysis of Groundwater Samples**  
**Texaco Exploration and Production, Inc., G.L. Erwin Federal "A & B" NCT-2 Tank Battery**  
**SW/4, SE/4, Section 35, Township 24 South, Range 37 East**  
**Lea County, New Mexico**

Page 1 of 2

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethyl benzene (mg/L)	m/p/o Xylene (mg/L)	Total BTEX (mg/L)
MW-1	05/03/02	<0.001	<0.001	<0.001	<0.001	<0.004
	12/27/02	<0.001	<0.001	<0.001	<0.002	<0.005
	06/02/03	<0.001	<0.001	<0.001	<0.001	<0.004
	02/04/04	<0.001	<0.001	<0.001	<0.001	<0.004
MW-2	05/03/02	<0.001	<0.001	<0.001	<0.001	<0.004
	12/27/02	<0.001	<0.001	<0.001	<0.002	<0.005
	06/02/03	<0.001	<0.001	<0.001	<0.001	<0.004
	02/04/04	<0.001	<0.001	<0.001	<0.001	<0.004
MW-3	05/02/02	<0.001	<0.001	<0.001	<0.001	<0.004
	12/27/02	<0.001	<0.001	<0.001	<0.002	<0.005
	06/02/03	<0.001	<0.001	<0.001	<0.001	<0.004
	02/04/04	<0.001	<0.001	<0.001	<0.001	<0.004
MW-4	05/03/02	<0.001	<0.001	<0.001	<0.001	<0.004
	12/27/02	<0.001	<0.001	<0.001	<0.002	<0.005
	05/30/03	<0.001	<0.001	<0.001	<0.001	<0.004
	02/05/05	<0.001	<0.001	<0.001	<0.001	<0.004
MW-5	05/03/02	<0.001	<0.001	<0.001	<0.001	<0.004
	12/27/02	<0.001	<0.001	<0.001	<0.002	<0.005
	06/02/03	<0.001	<0.001	<0.001	<0.001	<0.004
	02/04/04	<0.001	<0.001	<0.001	<0.001	<0.004
MW-6	05/02/02	<0.001	<0.001	<0.001	<0.001	<0.004
	12/27/02	<0.001	<0.001	<0.001	<0.002	<0.005
	06/02/03	<0.001	<0.001	<0.001	<0.001	<0.004
	02/04/04	<0.001	<0.001	<0.001	<0.001	<0.004
MW-7	05/02/02	<0.001	<0.001	<0.001	<0.001	<0.004
	12/27/02	<0.001	<0.001	<0.001	<0.002	<0.005
	06/02/03	<0.001	<0.001	<0.001	<0.001	<0.004
	02/04/04	<0.001	<0.001	<0.001	<0.001	<0.004
MW-8	05/02/02	<0.001	<0.001	<0.001	<0.001	<0.004
	12/27/02	<0.001	<0.001	<0.001	<0.002	<0.005
	06/02/03	<0.001	<0.001	<0.001	<0.001	<0.004
	02/04/04	<0.001	<0.001	<0.001	<0.001	<0.004
MW-9	05/01/02	<0.001	<0.001	<0.001	<0.001	<0.004
	12/27/02	<0.001	<0.001	<0.001	<0.002	<0.005
	05/30/03	<0.001	<0.001	<0.001	<0.001	<0.004
	02/05/04	<0.001	<0.001	<0.001	<0.001	<0.004

**Table 4: Summary of BTEX Analysis of Groundwater Samples**

**Texaco Exploration and Production, Inc., G.L. Erwin Federal "A & B" NCT-2 Tank Battery  
SW/4, SE/4, Section 35, Township 24 South, Range 37 East  
Lea County, New Mexico**

**Page 2 of 2**

Well Number	Sample Date	Benzene (mg/L)	Toluene (mg/L)	Ethyl benzene (mg/L)	m/p/o Xylene (mg/L)	Total BTEX (mg/L)
MW-10	6/2/2003	<0.001	<0.001	<0.001	<0.001	<0.004
	2/5/2004	<0.001	<0.001	<0.001	<0.001	<0.004
MW-12	05/02/02	<0.001	<0.001	<0.001	<0.001	<0.004
	12/27/02	<0.001	<0.001	<0.001	<0.002	<0.005
	06/02/03	<0.001	<0.001	<0.001	<0.001	<0.004
	02/05/04	<0.001	<0.001	<0.001	<0.001	<0.004
MW-13	05/02/02	<0.001	<0.001	<0.001	<0.001	<0.004
	12/27/02	<0.001	<0.001	<0.001	<0.002	<0.005
	06/02/03	<0.001	<0.001	<0.001	<0.001	<0.004
	02/05/04	<0.001	<0.001	<0.001	<0.001	<0.004
MW-14	11/05/03	<0.001	<0.001	<0.001	<0.001	<0.004
	02/04/04	<0.001	<0.001	<0.001	<0.001	<0.004
MW-16	11/06/03	<0.001	<0.001	<0.001	<0.001	<0.004
	02/04/04	<0.001	<0.001	<0.001	<0.001	<0.004
MW-17	11/05/03	<0.001	<0.001	<0.001	<0.001	<0.004
	02/04/04	<0.001	<0.001	<0.001	<0.001	<0.004
West WW	05/03/02	<0.001	<0.001	<0.001	<0.001	<0.004
	12/27/02	<0.001	<0.001	<0.001	<0.002	<0.005
	05/30/03	<0.001	<0.001	<0.001	<0.001	<0.004
	02/05/04	<0.001	<0.001	<0.001	<0.001	<0.004
SW WW	05/03/02	<0.001	<0.001	<0.001	<0.001	<0.004
	12/27/02	<0.001	<0.001	<0.001	<0.002	<0.005
	06/02/03	<0.001	<0.001	<0.001	<0.001	<0.004
	02/05/04	<0.001	<0.001	<0.001	<0.001	<0.004
RW-1	12/27/02	<0.001	<0.001	<0.001	<0.002	<0.005
	06/02/03	<0.001	<0.001	<0.001	<0.001	<0.004
	02/05/04	<0.001	<0.001	<0.001	<0.001	<0.004
WW-1	05/01/02	<0.001	<0.001	<0.001	<0.001	<0.004
	12/27/02	<0.001	<0.001	<0.001	<0.002	<0.005
	06/02/03	<0.001	<0.001	<0.001	<0.001	<0.004
	02/04/04	<0.001	<0.001	<0.001	<0.001	<0.004
Duplicates						
MW-8	05/02/02	<0.001	<0.001	<0.001	<0.001	<0.004
WW-1	12/27/02	<0.001	<0.001	<0.001	<0.002	<0.005
RW-1	06/02/03	<0.001	<0.001	<0.001	<0.001	<0.004
MW-17	02/04/04	<0.001	<0.001	<0.001	<0.001	<0.004
MW-9	02/05/04	<0.001	<0.001	<0.001	<0.001	<0.004

Notes: 5/02 and 6/03 analyses performed by Trace Analysis, Inc., Lubbock, TX

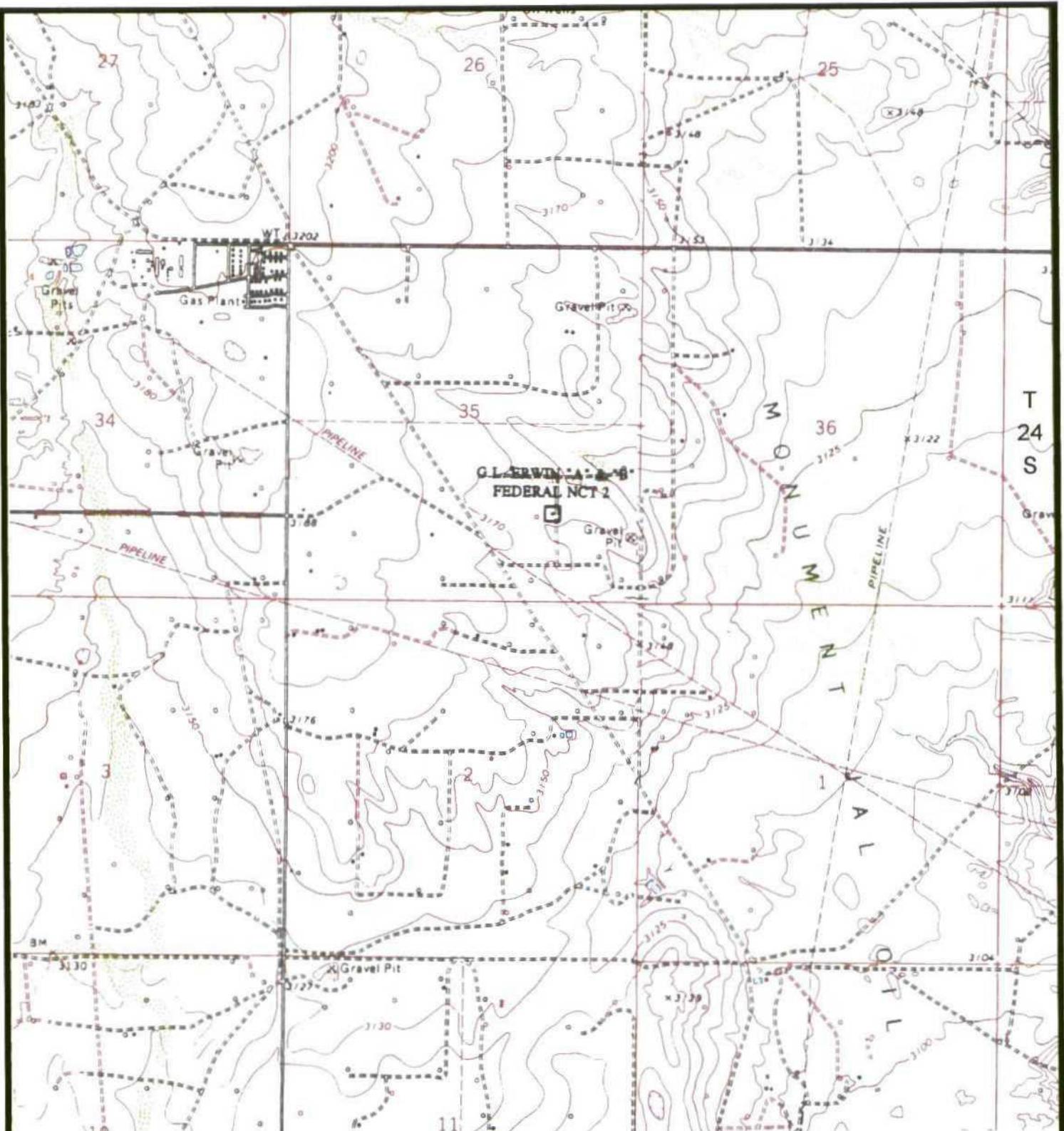
12/02 analyses performed by Environmental Lab of Texas I, Ltd., Odessa, Texas

1. mg/L: Concentration in milligrams per liter

2. <: Concentration below test method detection limit

3. ---: No data available

## **FIGURES**



R-37-E

FIGURE #1

LEA COUNTY, NEW MEXICO

**TEXACO EXPLORATION AND  
PRODUCTION, INC.**  
G.L. ERWIN WATER STATION  
and TANK BATTERY  
SECTION 35, T24S, R37E

TOPOGRAPHIC MAP

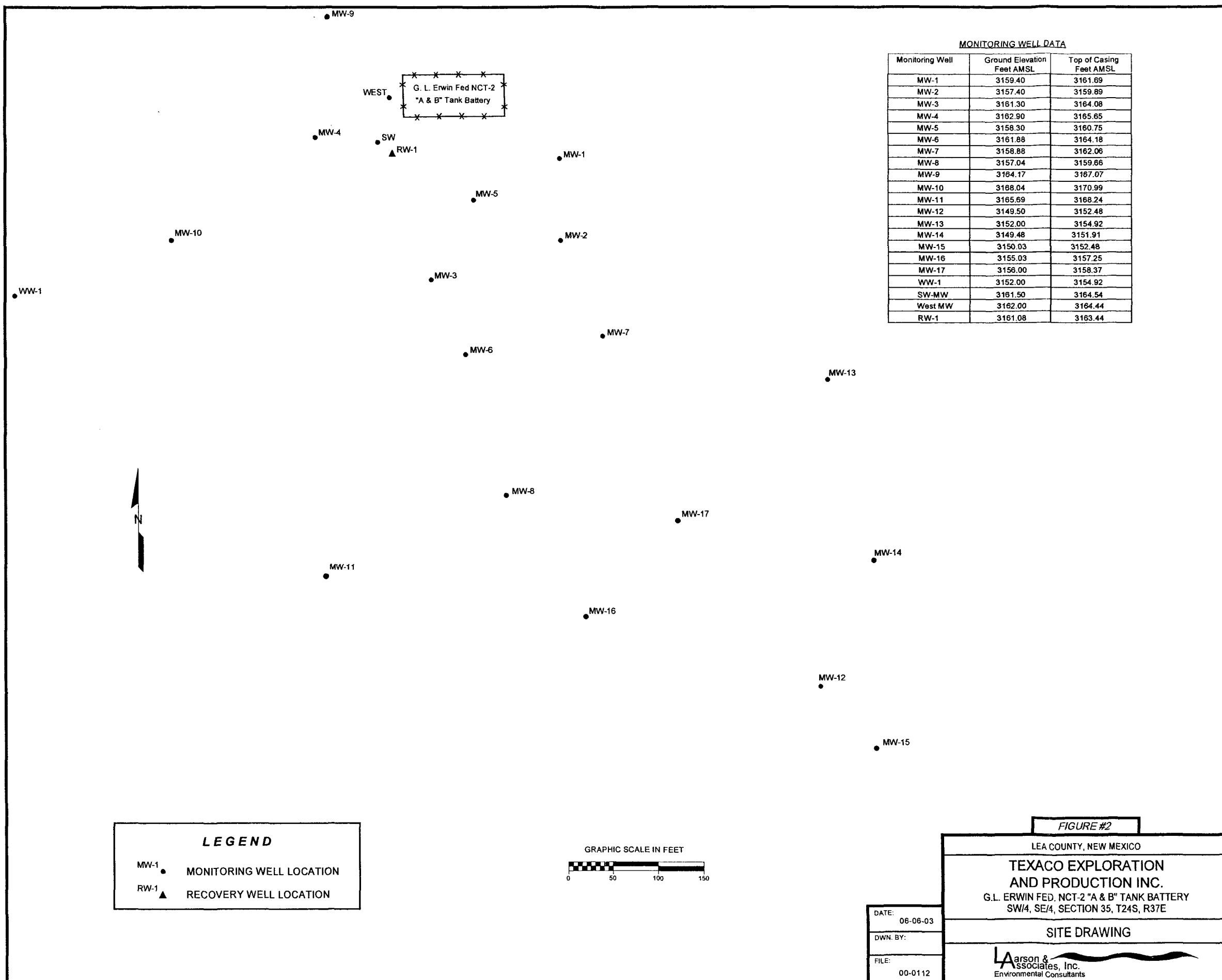


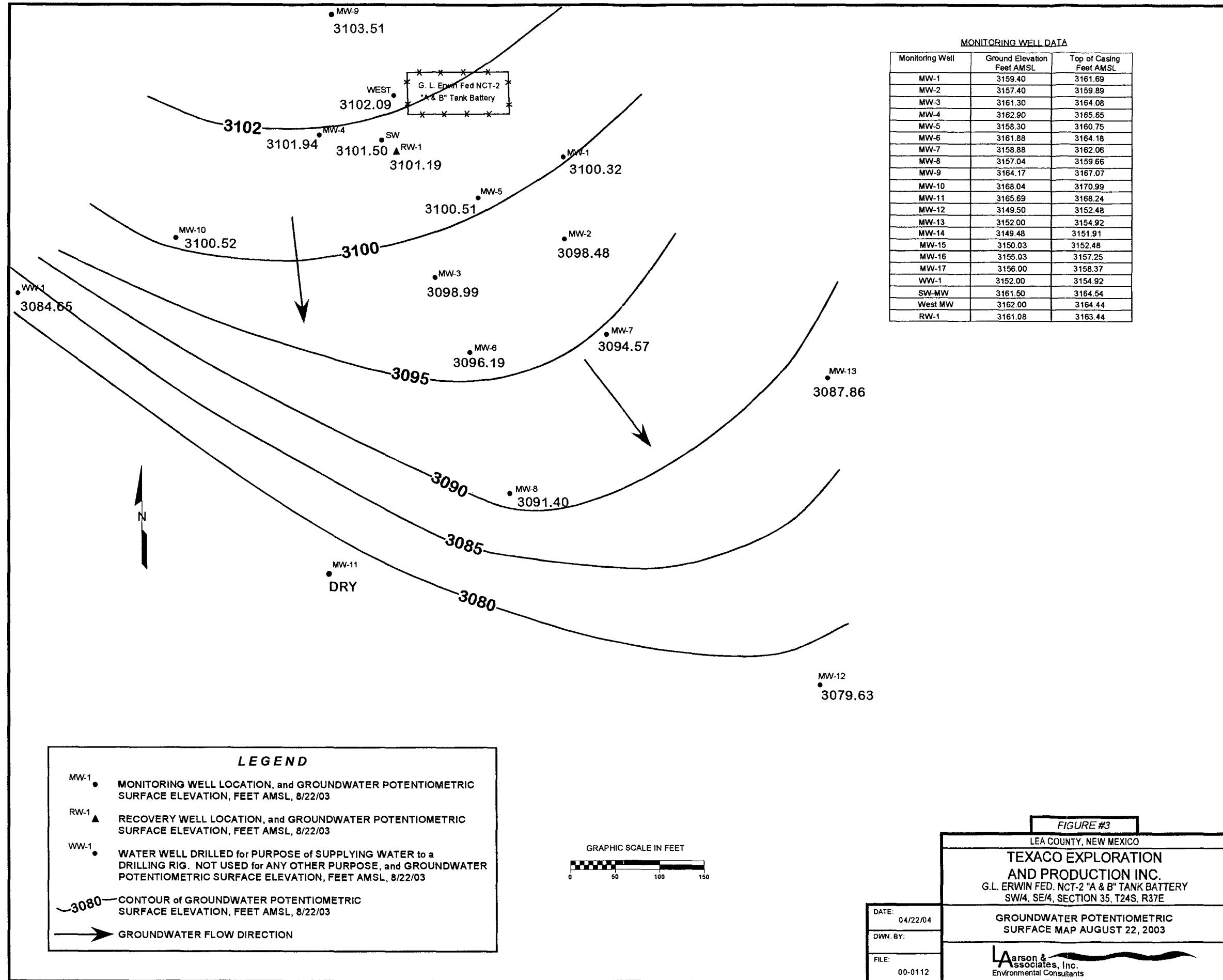
TAKEN FROM U.S.G.S.  
JAL NW and JAL NE, NM  
7.5' QUADRANGLES

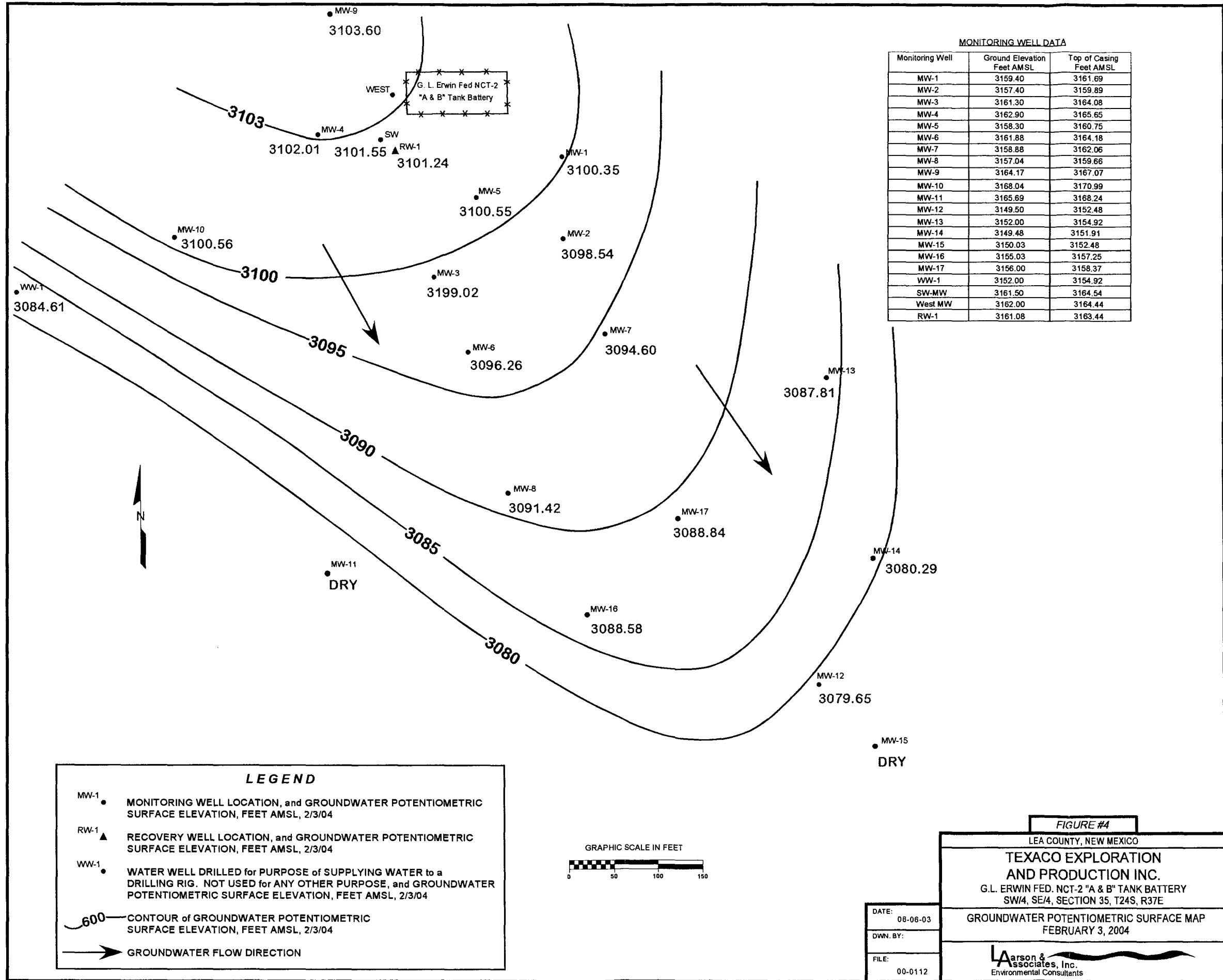


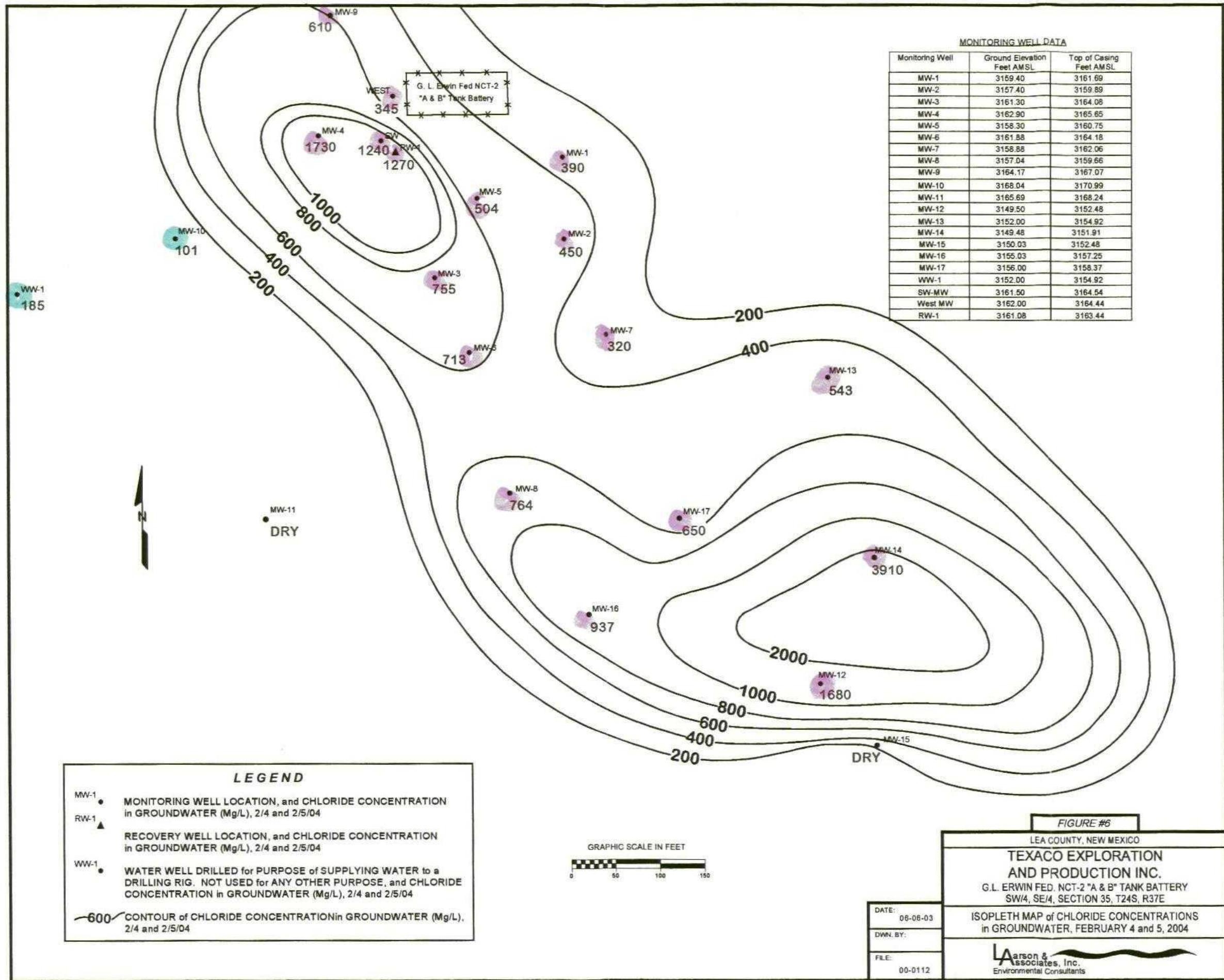
SCALE: 1"=2000'

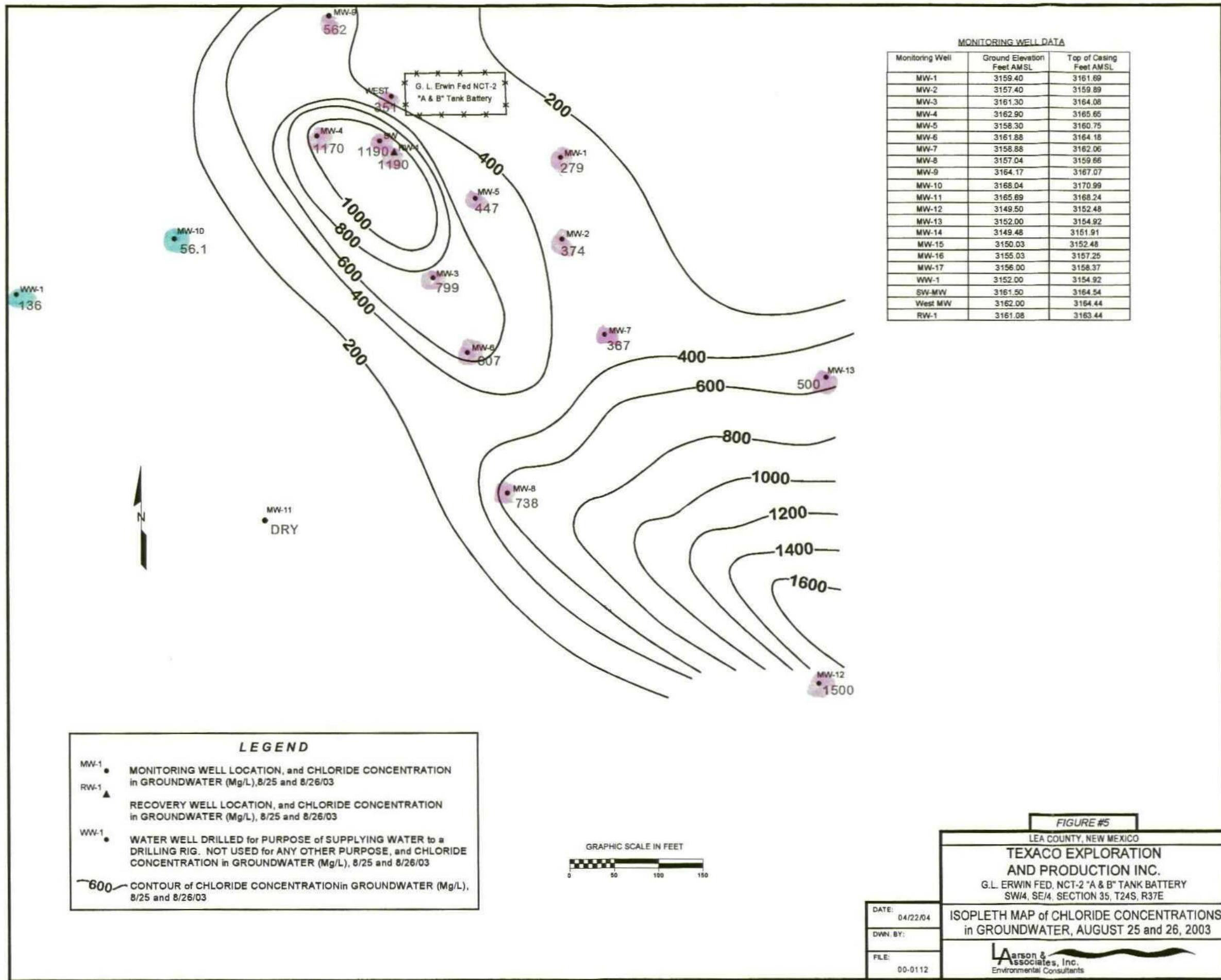
DATE:	2/06/03
NAME:	
FILE:	00-0112











**APPENDIX A**

**BORING LOGS AND WELL CONSTRUCTION RECORDS**

**Client:** Texaco Exploration and Production, Inc.

**Project:** G.L. Erwin

*Project No.:* 0-0112

**Location:** SW/SE, Sec.35, T24S, R37E, Lea Co., NM

Log: MW-14

**Geologist:** C. Crain

Page: 1 of 1

**Drilled By:** Scarborough Drilling

Larson and Associates Inc.  
507 N. Marienfeld, Suite 202  
Midland, Texas 79701  
(432) 687-0901

**Well Size: 2"**

### ***Drill Method: Air Rotary***

**TOC Elevation: 3151.91**

**Drill Date:** 10/6/03

**Client:** Texaco Exploration and Production, Inc.

## **Log: MW-15**

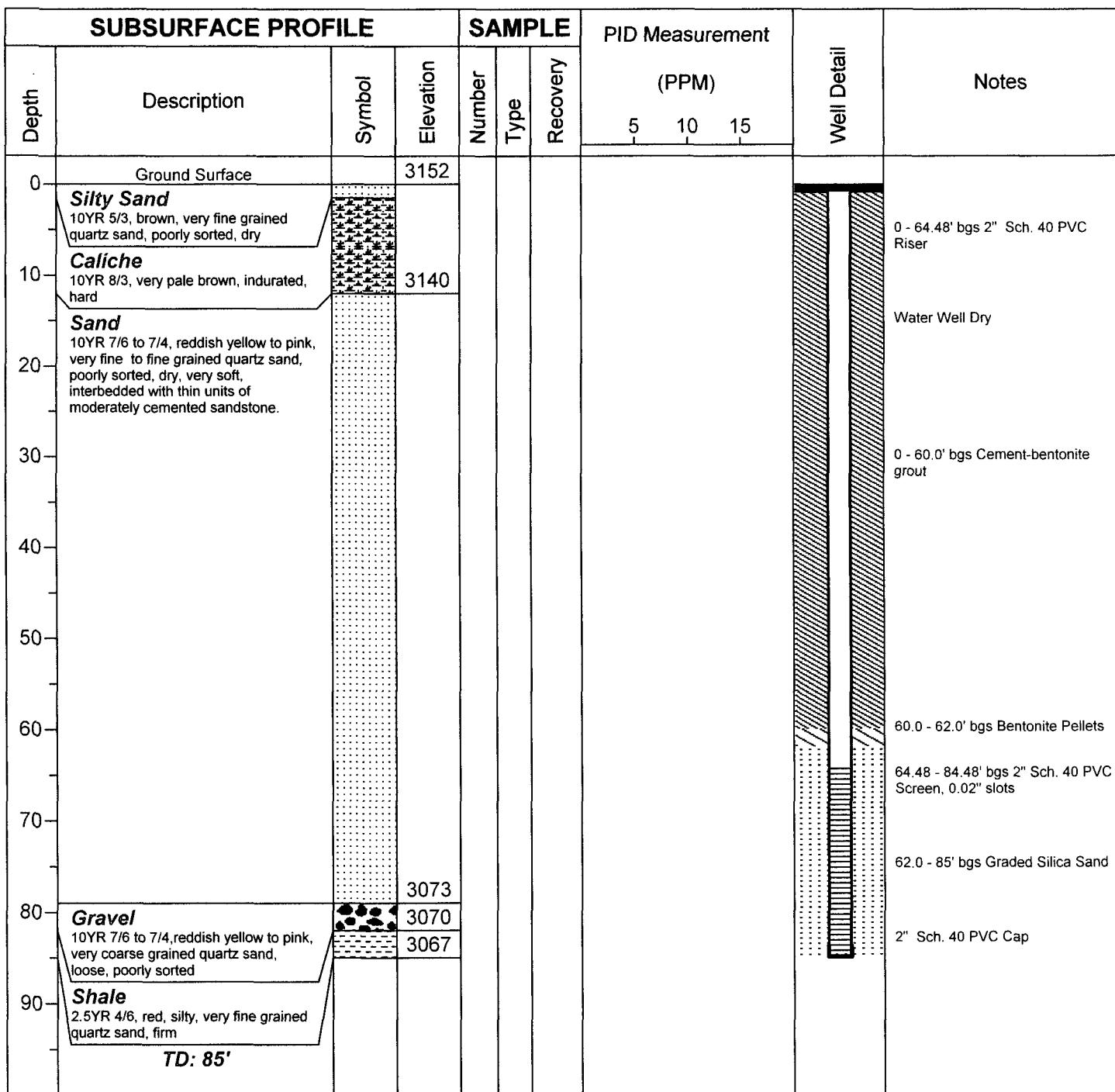
**Project:** G.L. Erwin

**Geologist:** C. Crain

**Project No.:** 0-0112

**Location:** SW/SE, Sec.35, T24S, R37E, Lea Co., NM

**Page:** 1 of 1



**Drilled By:** Scarborough Drilling

Larson and Associates Inc.

**Well Size:** 2"

**Drill Method:** Air Rotary

507 N. Marienfeld, Suite 202

**TOC Elevation:** 3152.48

**Drill Date:** 10/6/03

Midland, Texas 79701  
(432) 687-0901

**Checked By:** CC

**Client:** Texaco Exploration and Production, Inc.

## Log: MW-16

**Project:** G.L.Erwin

**Geologist:** Cindy Crain

**Project No.:** 0-0112

**Location:** SW/SE, Sec.35, T24S, R37E, Lea Co., NM

**Page:** 1 of 1

Depth	Description	Symbol	Elevation	SAMPLE			PID Measurement (PPM) 5    10    15	Well Detail	Notes
				Number	Type	Recovery			
0	Ground Surface		3157						
	<b>Silty Sand</b> 10YR 5/3, brown, very fine grained quartz sand, poorly sorted, dry								
10	<b>Caliche</b> 10YR 8/3, very pale brown, indurated, hard		3148						
10	<b>Sand</b> 10YR 7/6 to 7/4, reddish yellow to pink, very fine to fine grained quartz sand, poorly sorted, dry, very soft interbedded with thin units of moderately cemented sandstone.								
20									
30									0 - 55' bgs Cement-Bentonite Grout
40									
50									
55									
55	<b>Sandstone</b> 2.5YR 4/6 to 5/6, red, v.f. grained quartz sand, massive, hard		3104						55 - 57' bgs Bentonite Pellets
57			3102						
60									59.48 - 74.48' bgs 2" Sch. 40 PVC Screen, 0.02" slots
60	<b>Sand</b> 2.5YR 4/6, red, very fine grained quartz sand, loose		3095						
62			3092						
65									
65	<b>Gravelly Sand</b> 2.5YR 4/6, red, coarse grained quartz sand								65.68' bgs Water level 11/5/03
68									
68	<b>Clayey Shale</b> 2.5YR 4/6 red, very fine grained, soft, damp.		3082						57 - 75' bgs Graded Silica Sand
70									
70									2" Sch. 40 PVC Cap
75	<b>TD: 75'</b>								
80									

**Drilled By:** Scarborough Drilling

Larson and Associates Inc.

**Well Size:** 2"

**Drill Method:** Air Rotary

507 N. Marienfeld, Suite 202  
Midland, Texas 79701  
(432) 687-0901

**TOC Elevation:** 3157.25

**Drill Date:** 10/7/03

**Checked By:** CC

**Client:** Texaco Exploration and Production, Inc.

**Project:** G.L. Erwin

Project No.: 0-0112

**Location:** SW/SE, Sec.35, T24S, R37E, Lea Co., NM

Log: MW-17

**Geologist:** C. Crain

Page: 1 of 1

SUBSURFACE PROFILE			SAMPLE			PID Measurement (PPM)			Well Detail	Notes	
Depth	Description	Symbol	Elevation	Number	Type	Recovery	5	10	15		
0	Ground Surface		3158								
-5	<b>Silty Sand</b> 10YR 5/3, brown, very fine grained quartz sand, poorly sorted, dry	[Hatched]									
0	<b>Caliche</b> 10YR 8/3, very pale brown, indurated, hard	[Hatched]	3148								0 - 56.98' bgs 2" Sch. 40 PVC Riser
10	<b>Sand</b> 10YR 7/6 to 7/4, reddish yellow to pink, very fine grained to fine grained quartz sand, poorly sorted, dry, very soft interbedded with thin units of moderately bedded sandstone	[Dotted]									0 - 52.0' bgs Bentonite-Cement
20											
30											
40											
50											
60	<b>Sand</b> 2.5YR 4/6, red, very fine grained quartz sand	[Dotted]	3100								52.0 - 54.0' bgs Bentonite Pellets
65											
68											
69	<b>Gravelly Sand</b> 2.5YR 4/6, red, coarse grained quartz sand	[Hatched]	3094								56.98 - 76.98' bgs 2" Sch. 40 PVC Screen, 0.02" slots
70											
71											
72	<b>Clayey Shale</b> 2.5YR 4/6, red, very fine grained, soft, damp	[Hatched]	3091								54.0 - 77.0' bgs Graded Silica Sand
77											
77	TD: 77'		3081								69.51' bgs Water level 11/5/03
80											2" Sch. 40 PVC Cap

**Drilled By:** Scarborough Drilling

Larson and Associates Inc.

**Well Size: 2"**

#### **Drill Method:** Air Rotary

507 N. Mahanfield, Suite 202  
Midland, Texas 79701  
(432) 687-0901

*TOC Elevation:* 3158.37

**Drill Date:** 10/7/03

## STATE ENGINEER OFFICE

## WELL RECORD

## Section 1. GENERAL INFORMATION

(A) Owner of well Chevron Texaco Owner's Well No. MW-14  
 Street or Post Office Address P.O. Box 3109  
 City and State Midland, Texas 79701

Well was drilled under Permit No. \_\_\_\_\_ and is located in the:

a. SW/SE Sec. 35 T24S, R37E G.L. Erwin  
1/4 1/4 1/4 1/4 of Section \_\_\_\_\_ Township \_\_\_\_\_ Range \_\_\_\_\_ N.M.P.M.

b. Tract No. \_\_\_\_\_ of Map No. \_\_\_\_\_ of the \_\_\_\_\_

c. Lot No. \_\_\_\_\_ of Block No. \_\_\_\_\_ of the \_\_\_\_\_  
 Subdivision, recorded in Lea County.

d. X= \_\_\_\_\_ feet, Y= \_\_\_\_\_ feet, N.M. Coordinate System \_\_\_\_\_ Zone in  
 the \_\_\_\_\_ Grant.

(B) Drilling Contractor Scarborough Drilling Inc. License No. WD1188

Address P.O. Box 305 Lamesa, Texas 79331

Drilling Began 10/6/03 Completed 10/14/03 Type tools air rotary Size of hole 5 in.

Elevation of land surface or \_\_\_\_\_ at well is \_\_\_\_\_ ft. Total depth of well 90 ft.

Completed well is  shallow  artesian. Depth to water upon completion of well 71.60 ft.

## Section 2. PRINCIPAL WATER-BEARING STRATA

Depth in Feet		Thickness in Feet	Description of Water-Bearing Formation	Estimated Yield (gallons per minute)	
From	To				

## Section 3. RECORD OF CASING

Diameter (inches)	Pounds per foot	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations	
			Top	Bottom			From	To
4.2	sch 40	pvc	0	79.5		.020	79.5	90

## Section 4. RECORD OF MUDDING AND CEMENTING

Depth in Feet		Hole Diameter	Sacks of Mud	Cubic Feet of Cement	Method of Placement	Perforations	
From	To					From	To
77	90	5			sand poured		
75	77	5			bentonite poured		
0	75	5			cement poured		

## Section 5. PLUGGING RECORD

Plugging Contractor \_\_\_\_\_

Address \_\_\_\_\_

Plugging Method \_\_\_\_\_

Date Well Plugged \_\_\_\_\_

Plugging approved by: \_\_\_\_\_

State Engineer Representative \_\_\_\_\_

No.	Depth in Feet		Cubic Feet of Cement
	Top	Bottom	
1			
2			
3			
4			

## FOR USE OF STATE ENGINEER ONLY

Date Received \_\_\_\_\_

Quad \_\_\_\_\_ PWL \_\_\_\_\_ FSL \_\_\_\_\_

File No. \_\_\_\_\_ Use \_\_\_\_\_ Location No. \_\_\_\_\_

## Section 6. LOG OF HOLE

## **Section 7. REMARKS AND ADDITIONAL INFORMATION**

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

See Seal on

Düller

**INSTRUCTIONS:** This form should be executed in triplicate, preferably typewritten, and submitted to the appropriate district office. All sections, except Section 5 shall be answered as completely and accurately as possible when any well is

## STATE ENGINEER OFFICE

## WELL RECORD

## Section 1. GENERAL INFORMATION

(A) Owner of well Chevron Texaco Owner's Well No. MW-15  
 Street or Post Office Address P.O. Box 3109  
 City and State Midland, Texas 79701

Well was drilled under Permit No. \_\_\_\_\_ and is located in the:

SW/SE Sec. 35 T24S, R37E G.L. Erwin Township: \_\_\_\_\_ Range: \_\_\_\_\_ N.M.P.M.  
1/4 1/4 1/4 1/4 of Section: \_\_\_\_\_

b. Tract No. \_\_\_\_\_ of Map No. \_\_\_\_\_ of the \_\_\_\_\_

c. Lot No. \_\_\_\_\_ of Block No. \_\_\_\_\_ of the \_\_\_\_\_  
 Subdivision, recorded in Lea County.

d. X= \_\_\_\_\_ feet, Y= \_\_\_\_\_ feet, N.M. Coordinate System \_\_\_\_\_ Zone in  
 the \_\_\_\_\_ Grant.

(B) Drilling Contractor Scarborough Drilling Inc. License No. WD1188

Address P.O. Box 305 Lamesa, Texas 79331

Drilling Began 10/6/03 Completed 10/14/03 Type tools air rotary Size of hole 5 in.

Elevation of land surface or \_\_\_\_\_ at well's \_\_\_\_\_ ft. Total depth of well 85 ft.

Completed well is  shallow  artesian. Depth to water upon completion of well dry ft.

## Section 2. PRINCIPAL WATER-BEARING STRATA

Depth in Feet		Thickness In Feet	Description of Water-Bearing Formation	Estimated Yield (gallons per minute)	
From	To				

## Section 3. RECORD OF CASING

Depth in Feet		Thickness In Feet	Description of Water-Bearing Formation	Estimated Yield (gallons per minute)		Perforations		
From	To					From	To	
4 1/2	sch 40 pvc		0	64.5		.020	64.5	85

## Section 4. RECORD OF MUDDING AND CEMENTING

Depth in Feet		Hole Diameter	Sacks of Mud	Cubic Feet of Cement	Method of Placement
From	To				
62	85	5			sand poured
60	62	5			bentonite poured
0	60	5			cement poured

## Section 5. PLUGGING RECORD

Plugging Contractor \_\_\_\_\_

Address \_\_\_\_\_

Plugging Method \_\_\_\_\_

Date Well Plugged \_\_\_\_\_

Plugging approved by: \_\_\_\_\_

State Engineer Representative \_\_\_\_\_

No.	Depth in Feet		Cubic Feet of Cement
	Top	Bottom	
1			
2			
3			
4			

FOR USE OF STATE ENGINEER ONLY

Date Received \_\_\_\_\_

Quad \_\_\_\_\_ FWL \_\_\_\_\_ FSL \_\_\_\_\_

File No. \_\_\_\_\_ Use \_\_\_\_\_ Location No. \_\_\_\_\_

## Section 6. LOG OF HOLE

## **Section 7. REMARKS AND ADDITIONAL INFORMATION**

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

Lee Sealby  
Driller

**INSTRUCTIONS:** This form should be executed in triplicate, preferably typewritten, and submitted to the appropriate district office. All sections except Section 5 shall be answered as completely and accurately as possible when any well is

**STATE ENGINEER OFFICE  
WELL RECORD**

Section 1. GENERAL INFORMATION

(A) Owner of well Chevron Texaco Owner's Well No. MW-16  
 Street or Post Office Address P.O. Box 3109  
 City and State Midland, Texas 79701

Well was drilled under Permit No. \_\_\_\_\_ and is located in the:

SW/SE Sec. 35 T24S, R37E G.L. Erwin  
1/4 1/4 1/4 1/4 of Section \_\_\_\_\_ Township \_\_\_\_\_ Range \_\_\_\_\_ N.M.P.M.

b. Tract No. \_\_\_\_\_ of Map No. \_\_\_\_\_ of the \_\_\_\_\_

c. Lot No. \_\_\_\_\_ of Block No. \_\_\_\_\_ of the \_\_\_\_\_  
 Subdivision, recorded in Lea County.

d. X= \_\_\_\_\_ feet, Y= \_\_\_\_\_ feet, N.M. Coordinate System \_\_\_\_\_ Zone in \_\_\_\_\_ Grant.

(B) Drilling Contractor Scarborough Drilling Inc. License No. WD1188

Address P.O. Box 305 Lamesa, Texas 79331

Drilling Began 10/6/03 Completed 10/14/03 Type tools air rotary Size of hole 5 in.

Elevation of land surface or \_\_\_\_\_ at well's \_\_\_\_\_ ft. Total depth of well 75 ft.

Completed well is  shallow  artesian. Depth to water upon completion of well 65.68 ft.

Section 2. PRINCIPAL WATER-BEARING STRATA

Depth In Feet		Thickness In Feet	Description of Water-Bearing Formation	Estimated Yield (gallons per minute)	
From	To				

Section 3. RECORD OF CASING

Diameter (inches)	Pounds per foot	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations	
			Top	Bottom			From	To
5 1/2	sch 40 pvc		0	60		.020	60	75

Section 4. RECORD OF MUDDING AND CEMENTING

Depth in Feet		Hole Diameter	Sacks of Mud	Cubic Feet of Cement	Method of Placement
From	To				
57	75	5			sand poured
55	57	5			bentonite poured
0	55	5			cement poured

Section 5. PLUGGING RECORD

Plugging Contractor \_\_\_\_\_

Address \_\_\_\_\_

Plugging Method \_\_\_\_\_

Date Well Plugged \_\_\_\_\_

Plugging approved by: \_\_\_\_\_

State Engineer Representative \_\_\_\_\_

No.	Depth in Feet		Cubic Feet of Cement
	Top	Bottom	
1			
2			
3			
4			

FOR USE OF STATE ENGINEER ONLY

Date Received \_\_\_\_\_

Quad \_\_\_\_\_ FWL \_\_\_\_\_ FSL \_\_\_\_\_

File No. \_\_\_\_\_ Use \_\_\_\_\_ Location No. \_\_\_\_\_

## Section 6. LOG OF HOLE

## **Section 7. REMARKS AND ADDITIONAL INFORMATION**

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

Lee Scarborough  
Driller

**INSTRUCTIONS:** This form should be executed in triplicate, preferably typewritten, and submitted to the appropriate district office. All sections except Section 5 shall be answered as completely and accurately as possible when any well is

## STATE ENGINEER OFFICE.

## WELL RECORD

## Section 1. GENERAL INFORMATION

(A) Owner of well Chevron Texaco Owner's Well No. MW-17  
 Street or Post Office Address P.O. Box 3109  
 City and State Midland, Texas 79701

Well was drilled under Permit No. \_\_\_\_\_ and is located in the:

SW/SE Sec. 35 T24S R37E G.L. Erwin  
1/4 1/4 1/4 1/4 of Section Township \_\_\_\_\_ Range \_\_\_\_\_ N.M.P.M.

b. Tract No. \_\_\_\_\_ of Map No. \_\_\_\_\_ of the \_\_\_\_\_

c. Lot No. \_\_\_\_\_ of Block No. \_\_\_\_\_ of the \_\_\_\_\_  
 Subdivision, recorded in Lea County.

d. X= \_\_\_\_\_ feet, Y= \_\_\_\_\_ feet, N.M. Coordinate System \_\_\_\_\_ Zone in  
 the \_\_\_\_\_ Grant.

(B) Drilling Contractor Scarborough Drilling Inc. License No. WD1188

Address P.O. Box 305 Lamesa, Texas 79331

Drilling Began 10/6/03 Completed 10/14/03 Type tools air rotary Size of hole 5 in.

Elevation of land surface or \_\_\_\_\_ at well is \_\_\_\_\_ ft. Total depth of well 77 ft.

Completed well is  shallow  artesian. Depth to water upon completion of well 69.51 ft.

## Section 2. PRINCIPAL WATER-BEARING STRATA

Depth in Feet		Thickness in Feet	Description of Water-Bearing Formation	Estimated Yield (gallons per minute)	
From	To				

## Section 3. RECORD OF CASING

Diameter (inches)	Pounds per foot	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations	
			Top	Bottom			From	To
2	sch 40 pvc		0	57		.020	57	77

## Section 4. RECORD OF MUDDING AND CEMENTING

Depth in Feet	Hole Diameter	Sacks of Mud	Cubic Feet of Cement	Method of Placement	
				From	To
54	77	5		sand poured	
52	54	5		bentonite poured	
0	52	5		cement poured	

## Section 5. PLUGGING RECORD

Plugging Contractor \_\_\_\_\_

Address \_\_\_\_\_

Plugging Method \_\_\_\_\_

Date Well Plugged \_\_\_\_\_

Plugging approved by: \_\_\_\_\_

State Engineer Representative \_\_\_\_\_

No.	Depth in Feet		Cubic Feet of Cement
	Top	Bottom	
1			
2			
3			
4			

## FOR USE OF STATE ENGINEER ONLY

Date Received \_\_\_\_\_

Quad \_\_\_\_\_ FWL \_\_\_\_\_ FSL \_\_\_\_\_

File No. \_\_\_\_\_ Use \_\_\_\_\_ Location No. \_\_\_\_\_

## Section 6. LOG OF HOLE

## **Section 7. REMARKS AND ADDITIONAL INFORMATION**

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

Joe Scanlon  
Driller

**INSTRUCTIONS:** This form should be executed in triplicate, preferably typewritten, and submitted to the appropriate district office. All sections except Section 5 shall be answered as completely and accurately as possible when any well is

**APPENDIX B**

**LABORATORY ANALYSIS AND CHAIN OF CUSTODY  
DOCUMENTATION**

# TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298  
155 McCutcheon, Suite H El Paso, Texas 79932 888•588•3443 915•585•3443 FAX 915•585•4944  
E-Mail: lab@traceanalysis.com

## Analytical and Quality Control Report

Mark Larson  
Larson and Associates, Inc.  
P. O. Box 50685  
Midland, Tx 79710

Report Date: June 10, 2003

Work Order: 3060411

Project Name: G.L. Erwin  
Project Number: 0-0112

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
8870	MW-8	water	2003-06-02	10:30	2003-06-04
8871	MW-7	water	2003-06-02	11:30	2003-06-04
8872	MW-2	water	2003-06-02	11:55	2003-06-04
8873	MW-1	water	2003-06-02	12:15	2003-06-04
8874	MW-5	water	2003-06-02	12:35	2003-06-04
8875	MW-3	water	2003-06-02	12:55	2003-06-04
8876	MW-6	water	2003-06-02	13:35	2003-06-04
8877	WW-1	water	2003-06-02	14:04	2003-06-04
8878	SW-MW	water	2003-06-02	14:35	2003-06-04
8879	RW-1	water	2003-06-02	15:00	2003-06-04
8880	MW-10	water	2003-06-02	15:10	2003-06-04
8881	MW-13	water	2003-06-02	15:30	2003-06-04
8882	MW-12	water	2003-06-02	15:45	2003-06-04
8883	MW-9	water	2003-05-30	13:24	2003-06-04
8884	W-MW	water	2003-05-30	14:00	2003-06-04
8885	MW-4	water	2003-05-30	14:30	2003-06-04
8886	Duplicate	water	2003-06-02	00:00	2003-06-04

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

This report consists of a total of 40 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director

## Analytical Report

### Sample: 8870 - MW-8

Analysis: Alkalinity	Analytical Method: SM 2320B	Prep Method: N/A
QC Batch: 2104	Date Analyzed: 2003-06-06	Analyzed By: RS
Prep Batch: 1893	Date Prepared: 2003-06-06	Prepared By: RS

Parameter	Flag	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		244	mg/L as CaCo3	1	4.00
Total Alkalinity		244	mg/L as CaCo3	1	4.00

### Sample: 8870 - MW-8

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5030B
QC Batch: 2012	Date Analyzed: 2003-06-04	Analyzed By: CG
Prep Batch: 1818	Date Prepared: 2003-06-04	Prepared By: CG

Parameter	Flag	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 (isomers)		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0978	mg/L	1	0.100	98	78.7 - 110
4-Bromofluorobenzene (4-BFB)		0.0882	mg/L	1	0.100	88	77.8 - 110

### Sample: 8870 - MW-8

Analysis: Cations	Analytical Method: S 6010B	Prep Method: S 3005A
QC Batch: 2048	Date Analyzed: 2003-06-05	Analyzed By: BC
Prep Batch: 1831	Date Prepared: 2003-06-05	Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		60.0	mg/L	1	0.500
Dissolved Potassium		9.47	mg/L	1	0.500
Dissolved Magnesium		18.9	mg/L	1	0.500
Dissolved Sodium		650	mg/L	1	0.500

### Sample: 8870 - MW-8

Analysis: Ion Chromatography	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 1994	Date Analyzed: 2003-06-05	Analyzed By: JSW
Prep Batch: 1798	Date Prepared: 2003-06-04	Prepared By: JSW

Report Date: June 10, 2003  
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Parameter	Flag	Result	Units	Dilution	RL
Chloride		777	mg/L	50	0.500
Fluoride		3.29	mg/L	5	0.200
Sulfate		173	mg/L	5	0.500

**Sample: 8870 - MW-8**

Analysis: NO<sub>3</sub> (IC)      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 1994      Date Analyzed: 2003-06-05      Analyzed By: JSW  
Prep Batch: 1798      Date Prepared: 2003-06-04      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		6.82	mg/L	5	0.200

**Sample: 8870 - MW-8**

Analysis: TDS      Analytical Method: SM 2540C      Prep Method: N/A  
QC Batch: 2030      Date Analyzed: 2003-06-06      Analyzed By: JSW  
Prep Batch: 1836      Date Prepared: 2003-06-05      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		1968	mg/L	2	10.00

**Sample: 8871 - MW-7**

Analysis: Alkalinity      Analytical Method: SM 2320B      Prep Method: N/A  
QC Batch: 2104      Date Analyzed: 2003-06-06      Analyzed By: RS  
Prep Batch: 1893      Date Prepared: 2003-06-06      Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		242	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		242	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 8871 - MW-7**

Analysis: BTEX      Analytical Method: S 8021B      Prep Method: S 5030B  
QC Batch: 2012      Date Analyzed: 2003-06-04      Analyzed By: CG  
Prep Batch: 1818      Date Prepared: 2003-06-04      Prepared By: CG

Parameter	Flag	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

*continued ...*

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*sample 8871 continued . . .*

Parameter	Flag	RL		Units	Dilution	RL
		Result				
Xylene (isomers)		<0.00100		mg/L	1	0.00100
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery
Trifluorotoluene (TFT)		0.106	mg/L	1	0.100	106
4-Bromofluorobenzene (4-BFB)		0.0953	mg/L	1	0.100	95
						77.8 - 110

Sample: 8871 - MW-7

Analysis: Cations  
QC Batch: 2048  
Prep Batch: 1831

Analytical Method: S 6010B  
Date Analyzed: 2003-06-05  
Date Prepared: 2003-06-05

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

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		39.5	mg/L	1	0.500
Dissolved Potassium		6.16	mg/L	1	0.500
Dissolved Magnesium		12.5	mg/L	1	0.500
Dissolved Sodium		370	mg/L	1	0.500

Sample: 8871 - MW-7

Analysis: Ion Chromatography  
QC Batch: 1994  
Prep Batch: 1798

Analytical Method: E 300.0  
Date Analyzed: 2003-06-05  
Date Prepared: 2003-06-04

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

Parameter	Flag	Result	Units	Dilution	RL
Chloride		388	mg/L	10	0.500
Fluoride		3.23	mg/L	5	0.200
Sulfate		115	mg/L	5	0.500

Sample: 8871 - MW-7

Analysis: NO3 (IC)  
QC Batch: 1994  
Prep Batch: 1798

Analytical Method: E 300.0  
Date Analyzed: 2003-06-05  
Date Prepared: 2003-06-04

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

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		4.33	mg/L	5	0.200

Sample: 8871 - MW-7

Analysis: TDS  
QC Batch: 2030  
Prep Batch: 1836

Analytical Method: SM 2540C  
Date Analyzed: 2003-06-06  
Date Prepared: 2003-06-05

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

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Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		1216	mg/L	4	10.00

**Sample: 8872 - MW-2**

Analysis: Alkalinity  
QC Batch: 2104  
Prep Batch: 1893

Analytical Method: SM 2320B  
Date Analyzed: 2003-06-06  
Date Prepared: 2003-06-06

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

Parameter	Flag	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		206	mg/L as CaCo3	1	4.00
Total Alkalinity		206	mg/L as CaCo3	1	4.00

**Sample: 8872 - MW-2**

Analysis: BTEX  
QC Batch: 2012  
Prep Batch: 1818

Analytical Method: S 8021B  
Date Analyzed: 2003-06-04  
Date Prepared: 2003-06-04

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

Parameter	Flag	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 (isomers)		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0961	mg/L	1	0.100	96	78.7 - 110
4-Bromofluorobenzene (4-BFB)		0.0873	mg/L	1	0.100	87	77.8 - 110

**Sample: 8872 - MW-2**

Analysis: Cations  
QC Batch: 2048  
Prep Batch: 1831

Analytical Method: S 6010B  
Date Analyzed: 2003-06-05  
Date Prepared: 2003-06-05

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

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		176	mg/L	1	0.500
Dissolved Potassium		9.94	mg/L	1	0.500
Dissolved Magnesium		52.6	mg/L	1	0.500
Dissolved Sodium		383	mg/L	1	0.500

**Sample: 8872 - MW-2**

Analysis: Ion Chromatography

Analytical Method: E 300.0

Prep Method: N/A

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QC Batch: 1994      Date Analyzed: 2003-06-05      Analyzed By: JSW  
Prep Batch: 1798      Date Prepared: 2003-06-04      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		769	mg/L	50	0.500
Fluoride		2.05	mg/L	5	0.200
Sulfate		115	mg/L	5	0.500

**Sample: 8872 - MW-2**

Analysis: NO<sub>3</sub> (IC)      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 1994      Date Analyzed: 2003-06-05      Analyzed By: JSW  
Prep Batch: 1798      Date Prepared: 2003-06-04      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		4.43	mg/L	5	0.200

**Sample: 8872 - MW-2**

Analysis: TDS      Analytical Method: SM 2540C      Prep Method: N/A  
QC Batch: 2030      Date Analyzed: 2003-06-06      Analyzed By: JSW  
Prep Batch: 1836      Date Prepared: 2003-06-05      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		1955	mg/L	5	10.00

**Sample: 8873 - MW-1**

Analysis: Alkalinity      Analytical Method: SM 2320B      Prep Method: N/A  
QC Batch: 2104      Date Analyzed: 2003-06-06      Analyzed By: RS  
Prep Batch: 1893      Date Prepared: 2003-06-06      Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		132	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		132	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 8873 - MW-1**

Analysis: BTEX      Analytical Method: S 8021B      Prep Method: S 5030B  
QC Batch: 2012      Date Analyzed: 2003-06-04      Analyzed By: CG  
Prep Batch: 1818      Date Prepared: 2003-06-04      Prepared By: CG

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

*continued ...*

Report Date: June 10, 2003  
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*sample 8873 continued . . .*

Parameter	Flag	Result	Units	Dilution	RL
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene (isomers)		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0929	mg/L	1	0.100	93	78.7 - 110
4-Bromofluorobenzene (4-BFB)		0.0865	mg/L	1	0.100	86	77.8 - 110

Sample: 8873 - MW-1

Analysis: Cations  
QC Batch: 2048  
Prep Batch: 1831

Analytical Method: S 6010B  
Date Analyzed: 2003-06-05  
Date Prepared: 2003-06-05

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

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		135	mg/L	1	0.500
Dissolved Potassium		8.62	mg/L	1	0.500
Dissolved Magnesium		47.8	mg/L	1	0.500
Dissolved Sodium		118	mg/L	1	0.500

Sample: 8873 - MW-1

Analysis: Ion Chromatography  
QC Batch: 1994  
Prep Batch: 1798

Analytical Method: E 300.0  
Date Analyzed: 2003-06-05  
Date Prepared: 2003-06-04

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

Parameter	Flag	Result	Units	Dilution	RL
Chloride		434	mg/L	10	0.500
Fluoride		1.77	mg/L	5	0.200
Sulfate		73.3	mg/L	5	0.500

Sample: 8873 - MW-1

Analysis: NO<sub>3</sub> (IC)  
QC Batch: 1994  
Prep Batch: 1798

Analytical Method: E 300.0  
Date Analyzed: 2003-06-05  
Date Prepared: 2003-06-04

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

Parameter	Flag	Result	Units	Dilution	RI
Nitrate-N		2.99	mg/L	5	0.200

Sample: 8873 - MW-1

Analysis: TDS

Analytical Method: SM 2540C

Prep Method: N/A

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QC Batch: 2030	Date Analyzed: 2003-06-06	Analyzed By: JSW
Prep Batch: 1836	Date Prepared: 2003-06-05	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		1320	mg/L	4	10.00

**Sample: 8874 - MW-5**

Analysis: Alkalinity	Analytical Method: SM 2320B	Prep Method: N/A
QC Batch: 2104	Date Analyzed: 2003-06-06	Analyzed By: RS
Prep Batch: 1893	Date Prepared: 2003-06-06	Prepared By: RS

Parameter	Flag	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		196	mg/L as CaCo3	1	4.00
Total Alkalinity		196	mg/L as CaCo3	1	4.00

**Sample: 8874 - MW-5**

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5030B
QC Batch: 2012	Date Analyzed: 2003-06-04	Analyzed By: CG
Prep Batch: 1818	Date Prepared: 2003-06-04	Prepared By: CG

Parameter	Flag	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 (isomers)		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.102	mg/L	1	0.100	102	78.7 - 110
4-Bromofluorobenzene (4-BFB)		0.0909	mg/L	1	0.100	91	77.8 - 110

**Sample: 8874 - MW-5**

Analysis: Cations	Analytical Method: S 6010B	Prep Method: S 3005A
QC Batch: 2048	Date Analyzed: 2003-06-05	Analyzed By: BC
Prep Batch: 1831	Date Prepared: 2003-06-05	Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		132	mg/L	1	0.500
Dissolved Potassium		21.2	mg/L	1	0.500
Dissolved Magnesium		40.5	mg/L	1	0.500
Dissolved Sodium		364	mg/L	1	0.500

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**Sample: 8874 - MW-5**

Analysis: Ion Chromatography  
QC Batch: 1994  
Prep Batch: 1798

Analytical Method: E 300.0  
Date Analyzed: 2003-06-05  
Date Prepared: 2003-06-04

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

Parameter	Flag	Result	Units	Dilution	RL
Chloride		588	mg/L	50	0.500
Fluoride		1.23	mg/L	5	0.200
Sulfate		142	mg/L	5	0.500

**Sample: 8874 - MW-5**

Analysis: NO3 (IC)  
QC Batch: 1994  
Prep Batch: 1798

Analytical Method: E 300.0  
Date Analyzed: 2003-06-05  
Date Prepared: 2003-06-04

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

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		4.86	mg/L	5	0.200

**Sample: 8874 - MW-5**

Analysis: TDS  
QC Batch: 2030  
Prep Batch: 1836

Analytical Method: SM 2540C  
Date Analyzed: 2003-06-06  
Date Prepared: 2003-06-05

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

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		1644	mg/L	4	10.00

**Sample: 8875 - MW-3**

Analysis: Alkalinity  
QC Batch: 2104  
Prep Batch: 1893

Analytical Method: SM 2320B  
Date Analyzed: 2003-06-06  
Date Prepared: 2003-06-06

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

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		270	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		270	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 8875 - MW-3**

Analysis: BTEX  
QC Batch: 2012  
Prep Batch: 1818

Analytical Method: S 8021B  
Date Analyzed: 2003-06-04  
Date Prepared: 2003-06-04

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

Parameter	Flag	RL		Dilution	RL
		Result	Units		
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 (isomers)		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.100	mg/L	1	0.100	100	78.7 - 110
4-Bromofluorobenzene (4-BFB)		0.0888	mg/L	1	0.100	89	77.8 - 110

Sample: 8875 - MW-3

Analysis: Cations Analytical Method: S 6010B Prep Method: S 3005A  
QC Batch: 2048 Date Analyzed: 2003-06-05 Analyzed By: BC  
Prep Batch: 1831 Date Prepared: 2003-06-05 Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		64.9	mg/L	1	0.500
Dissolved Potassium		18.5	mg/L	1	0.500
Dissolved Magnesium		20.0	mg/L	1	0.500
Dissolved Sodium		728	mg/L	1	0.500

Sample: 8875 - MW-3

Analysis: Ion Chromatography      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 1995      Date Analyzed: 2003-06-05      Analyzed By: JSW  
Prep Batch: 1799      Date Prepared: 2003-06-04      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		802	mg/L	100	0.500
Fluoride		3.07	mg/L	10	0.200
Sulfate		203	mg/L	10	0.500

Sample: 8875 - MW-3

Analysis: NO<sub>3</sub> (IC) Analytical Method: E 300.0 Prep Method: N/A  
QC Batch: 1995 Date Analyzed: 2003-06-05 Analyzed By: JSW  
Prep Batch: 1799 Date Prepared: 2003-06-04 Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		8.06	mg/L	10	0.200

Sample: 8875 - MW-3

Analysis: TDS Analytical Method: SM 2540C Prep Method: N/A  
QC Batch: 2030 Date Analyzed: 2003-06-06 Analyzed By: JSW

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Prep Batch: 1836 Date Prepared: 2003-06-05 Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		2720	mg/L	10	10.00

**Sample: 8876 - MW-6**

Analysis: Alkalinity Analytical Method: SM 2320B Prep Method: N/A  
QC Batch: 2104 Date Analyzed: 2003-06-06 Analyzed By: RS  
Prep Batch: 1893 Date Prepared: 2003-06-06 Prepared By: RS

Parameter	Flag	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		244	mg/L as CaCo3	1	4.00
Total Alkalinity		244	mg/L as CaCo3	1	4.00

**Sample: 8876 - MW-6**

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5030B  
QC Batch: 2012 Date Analyzed: 2003-06-04 Analyzed By: CG  
Prep Batch: 1818 Date Prepared: 2003-06-04 Prepared By: CG

Parameter	Flag	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 (isomers)		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.107	mg/L	1	0.100	107	78.7 - 110
4-Bromofluorobenzene (4-BFB)		0.0930	mg/L	1	0.100	93	77.8 - 110

**Sample: 8876 - MW-6**

Analysis: Cations Analytical Method: S 6010B Prep Method: S 3005A  
QC Batch: 2048 Date Analyzed: 2003-06-05 Analyzed By: BC  
Prep Batch: 1831 Date Prepared: 2003-06-05 Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		68.7	mg/L	1	0.500
Dissolved Potassium		14.4	mg/L	1	0.500
Dissolved Magnesium		23.3	mg/L	1	0.500
Dissolved Sodium		614	mg/L	1	0.500

**Sample: 8876 - MW-6**

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Analysis: Ion Chromatography  
QC Batch: 1995  
Prep Batch: 1799

Analytical Method: E 300.0  
Date Analyzed: 2003-06-05  
Date Prepared: 2003-06-04

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

Parameter	Flag	Result	Units	Dilution	RL
Chloride		772	mg/L	50	0.500
Fluoride		3.24	mg/L	5	0.200
Sulfate		181	mg/L	5	0.500

**Sample: 8876 - MW-6**

Analysis: NO3 (IC)  
QC Batch: 1995  
Prep Batch: 1799

Analytical Method: E 300.0  
Date Analyzed: 2003-06-05  
Date Prepared: 2003-06-04

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

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		6.62	mg/L	5	0.200

**Sample: 8876 - MW-6**

Analysis: TDS  
QC Batch: 2030  
Prep Batch: 1836

Analytical Method: SM 2540C  
Date Analyzed: 2003-06-06  
Date Prepared: 2003-06-05

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

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		2040	mg/L	4	10.00

**Sample: 8877 - WW-1**

Analysis: Alkalinity  
QC Batch: 2104  
Prep Batch: 1893

Analytical Method: SM 2320B  
Date Analyzed: 2003-06-06  
Date Prepared: 2003-06-06

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

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		154	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		154	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 8877 - WW-1**

Analysis: BTEX  
QC Batch: 2012  
Prep Batch: 1818

Analytical Method: S 8021B  
Date Analyzed: 2003-06-04  
Date Prepared: 2003-06-04

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

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Parameter	Flag	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 (isomers)		<0.00100	mg/L	1	0.00100
Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery
Trifluorotoluene (TFT)		0.0954	mg/L	1	95
4-Bromofluorobenzene (4-BFB)		0.0826	mg/L	1	83

Sample: 8877 - WW-1

Analysis: Cations                          Analytical Method: S 6010B                          Prep Method: S 3005A  
QC Batch: 2048                              Date Analyzed: 2003-06-05                          Analyzed By: BC  
Prep Batch: 1831                              Date Prepared: 2003-06-05                          Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		59.5	mg/L	1	0.500
Dissolved Potassium		7.14	mg/L	1	0.500
Dissolved Magnesium		24.1	mg/L	1	0.500
Dissolved Sodium		118	mg/L	1	0.500

Sample: 8877 - WW-1

Analysis: Ion Chromatography                          Analytical Method: E 300.0                          Prep Method: N/A  
QC Batch: 1995                                      Date Analyzed: 2003-06-05                          Analyzed By: JSW  
Prep Batch: 1799                                      Date Prepared: 2003-06-04                          Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		127	mg/L	5	0.500
Fluoride		1.69	mg/L	5	0.200
Sulfate		119	mg/L	5	0.500

Sample: 8877 - WW-1

Analysis: NO3 (IC)                                  Analytical Method: E 300.0                          Prep Method: N/A  
QC Batch: 1995                                      Date Analyzed: 2003-06-05                          Analyzed By: JSW  
Prep Batch: 1799                                      Date Prepared: 2003-06-04                          Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		3.77	mg/L	5	0.200

Sample: 8877 - WW-1

Analysis: TDS    Analytical Method: SM 2540C                          Prep Method: N/A  
QC Batch: 2030                                      Date Analyzed: 2003-06-06                          Analyzed By: JSW

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Prep Batch: 1836

Date Prepared: 2003-06-05

Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		621.0	mg/L	1	10.00

**Sample: 8878 - SW-MW**

Analysis: Alkalinity  
QC Batch: 2104  
Prep Batch: 1893

Analytical Method: SM 2320B  
Date Analyzed: 2003-06-06  
Date Prepared: 2003-06-06

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

Parameter	Flag	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		304	mg/L as CaCo3	1	4.00
Total Alkalinity		304	mg/L as CaCo3	1	4.00

**Sample: 8878 - SW-MW**

Analysis: BTEX  
QC Batch: 2012  
Prep Batch: 1818

Analytical Method: S 8021B  
Date Analyzed: 2003-06-04  
Date Prepared: 2003-06-04

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

Parameter	Flag	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 (isomers)		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.101	mg/L	1	0.100	101	78.7 - 110
4-Bromofluorobenzene (4-BFB)		0.0887	mg/L	1	0.100	89	77.8 - 110

**Sample: 8878 - SW-MW**

Analysis: Cations  
QC Batch: 2048  
Prep Batch: 1831

Analytical Method: S 6010B  
Date Analyzed: 2003-06-05  
Date Prepared: 2003-06-05

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

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		161	mg/L	1	0.500
Dissolved Potassium		49.1	mg/L	1	0.500
Dissolved Magnesium		45.7	mg/L	1	0.500
Dissolved Sodium		935	mg/L	1	0.500

**Sample: 8878 - SW-MW**

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Analysis: Ion Chromatography  
QC Batch: 1995  
Prep Batch: 1799

Analytical Method: E 300.0  
Date Analyzed: 2003-06-05  
Date Prepared: 2003-06-04

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

Parameter	Flag	Result	Units	Dilution	RL
Chloride		1420	mg/L	100	0.500
Fluoride		2.34	mg/L	10	0.200
Sulfate		282	mg/L	10	0.500

**Sample: 8878 - SW-MW**

Analysis: NO3 (IC)  
QC Batch: 1995  
Prep Batch: 1799

Analytical Method: E 300.0  
Date Analyzed: 2003-06-05  
Date Prepared: 2003-06-04

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

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		5.83	mg/L	10	0.200

**Sample: 8878 - SW-MW**

Analysis: TDS  
QC Batch: 2030  
Prep Batch: 1836

Analytical Method: SM 2540C  
Date Analyzed: 2003-06-06  
Date Prepared: 2003-06-05

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

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		4070	mg/L	10	10.00

**Sample: 8879 - RW-1**

Analysis: Alkalinity  
QC Batch: 2104  
Prep Batch: 1893

Analytical Method: SM 2320B  
Date Analyzed: 2003-06-06  
Date Prepared: 2003-06-06

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

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		276	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		276	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 8879 - RW-1**

Analysis: BTEX  
QC Batch: 2012  
Prep Batch: 1818

Analytical Method: S 8021B  
Date Analyzed: 2003-06-04  
Date Prepared: 2003-06-04

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

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Parameter	Flag	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 (isomers)		<0.00100	mg/L	1	0.00100
Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery
Trifluorotoluene (TFT)		0.0791	mg/L	1	0.100
4-Bromofluorobenzene (4-BFB)	<sup>1</sup>	0.0709	mg/L	1	0.100
					Recovery Limits
					78.7 - 110
					77.8 - 110

**Sample: 8879 - RW-1**

Analysis: Cations    Analytical Method: S 6010B    Prep Method: S 3005A  
QC Batch: 2048    Date Analyzed: 2003-06-05    Analyzed By: BC  
Prep Batch: 1831    Date Prepared: 2003-06-05    Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		194	mg/L	1	0.500
Dissolved Potassium		40.8	mg/L	1	0.500
Dissolved Magnesium		67.1	mg/L	1	0.500
Dissolved Sodium		923	mg/L	1	0.500

**Sample: 8879 - RW-1**

Analysis: Ion Chromatography    Analytical Method: E 300.0    Prep Method: N/A  
QC Batch: 1995    Date Analyzed: 2003-06-05    Analyzed By: JSW  
Prep Batch: 1799    Date Prepared: 2003-06-04    Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		1500	mg/L	100	0.500
Fluoride		2.05	mg/L	10	0.200
Sulfate		275	mg/L	10	0.500

**Sample: 8879 - RW-1**

Analysis: NO3 (IC)    Analytical Method: E 300.0    Prep Method: N/A  
QC Batch: 1995    Date Analyzed: 2003-06-05    Analyzed By: JSW  
Prep Batch: 1799    Date Prepared: 2003-06-04    Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		5.34	mg/L	10	0.200

**Sample: 8879 - RW-1**

Analysis: TDS    Analytical Method: SM 2540C    Prep Method: N/A

<sup>1</sup>Low surrogate recovery due to prep. ICV, CCV show the method to be in control.

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QC Batch: 2030 Date Analyzed: 2003-06-06 Analyzed By: JSW  
Prep Batch: 1836 Date Prepared: 2003-06-05 Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		4070	mg/L	10	10.00

**Sample: 8880 - MW-10**

Analysis: Alkalinity Analytical Method: SM 2320B Prep Method: N/A  
QC Batch: 2103 Date Analyzed: 2003-06-06 Analyzed By: RS  
Prep Batch: 1894 Date Prepared: 2003-06-06 Prepared By: RS

Parameter	Flag	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		198	mg/L as CaCo3	1	4.00
Total Alkalinity		198	mg/L as CaCo3	1	4.00

**Sample: 8880 - MW-10**

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5030B  
QC Batch: 2012 Date Analyzed: 2003-06-04 Analyzed By: CG  
Prep Batch: 1818 Date Prepared: 2003-06-04 Prepared By: CG

Parameter	Flag	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 (isomers)		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0816	mg/L	1	0.100	82	78.7 - 110
4-Bromofluorobenzene (4-BFB)	<sup>2</sup>	0.0708	mg/L	1	0.100	71	77.8 - 110

**Sample: 8880 - MW-10**

Analysis: Cations Analytical Method: S 6010B Prep Method: S 3005A  
QC Batch: 2048 Date Analyzed: 2003-06-05 Analyzed By: BC  
Prep Batch: 1831 Date Prepared: 2003-06-05 Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		75.7	mg/L	1	0.500
Dissolved Potassium		4.95	mg/L	1	0.500
Dissolved Magnesium		22.4	mg/L	1	0.500
Dissolved Sodium		80.4	mg/L	1	0.500

<sup>2</sup>Low surrogate recovery due to prep. ICV, CCV show the method to be in control.

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**Sample: 8880 - MW-10**

Analysis: Ion Chromatography  
QC Batch: 1995  
Prep Batch: 1799

Analytical Method: E 300.0  
Date Analyzed: 2003-06-05  
Date Prepared: 2003-06-04

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

Parameter	Flag	Result	Units	Dilution	RL
Chloride		55.7	mg/L	5	0.500
Fluoride		1.60	mg/L	5	0.200
Sulfate		134	mg/L	5	0.500

**Sample: 8880 - MW-10**

Analysis: NO3 (IC)  
QC Batch: 1995  
Prep Batch: 1799

Analytical Method: E 300.0  
Date Analyzed: 2003-06-05  
Date Prepared: 2003-06-04

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

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		4.31	mg/L	5	0.200

**Sample: 8880 - MW-10**

Analysis: TDS  
QC Batch: 2031  
Prep Batch: 1837

Analytical Method: SM 2540C  
Date Analyzed: 2003-06-06  
Date Prepared: 2003-06-05

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

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		624.0	mg/L	2	10.00

**Sample: 8881 - MW-13**

Analysis: Alkalinity  
QC Batch: 2103  
Prep Batch: 1894

Analytical Method: SM 2320B  
Date Analyzed: 2003-06-06  
Date Prepared: 2003-06-06

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

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		102	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		102	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 8881 - MW-13**

Analysis: BTEX  
QC Batch: 2043  
Prep Batch: 1848

Analytical Method: S 8021B  
Date Analyzed: 2003-06-05  
Date Prepared: 2003-06-05

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

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Parameter	Flag	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 (isomers)		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0990	mg/L	1	0.100	99	78.7 - 110
4-Bromofluorobenzene (4-BFB)		0.0921	mg/L	1	0.100	92	77.8 - 110

### Sample: 8881 - MW-13

Analysis: Cations      Analytical Method: S 6010B      Prep Method: S 3005A  
QC Batch: 2048      Date Analyzed: 2003-06-05      Analyzed By: BC  
Prep Batch: 1831      Date Prepared: 2003-06-05      Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		153	mg/L	1	0.500
Dissolved Potassium		11.0	mg/L	1	0.500
Dissolved Magnesium		56.0	mg/L	1	0.500
Dissolved Sodium		90.9	mg/L	1	0.500

### Sample: 8881 - MW-13

Analysis: Ion Chromatography      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 1996      Date Analyzed: 2003-06-05      Analyzed By: JSW  
Prep Batch: 1800      Date Prepared: 2003-06-04      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		421	mg/L	10	0.500
Fluoride		2.27	mg/L	5	0.200
Sulfate		122	mg/L	5	0.500

### Sample: 8881 - MW-13

Analysis: NO3 (IC)      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 1996      Date Analyzed: 2003-06-05      Analyzed By: JSW  
Prep Batch: 1800      Date Prepared: 2003-06-04      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		4.43	mg/L	5	0.200

### Sample: 8881 - MW-13

Analysis: TDS      Analytical Method: SM 2540C      Prep Method: N/A  
QC Batch: 2031      Date Analyzed: 2003-06-06      Analyzed By: JSW

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Prep Batch: 1837 Date Prepared: 2003-06-05 Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		1260	mg/L	4	10.00

Sample: 8882 - MW-12

Analysis: Alkalinity Analytical Method: SM 2320B Prep Method: N/A  
QC Batch: 2103 Date Analyzed: 2003-06-06 Analyzed By: RS  
Prep Batch: 1894 Date Prepared: 2003-06-06 Prepared By: RS

Parameter	Flag	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		72.0	mg/L as CaCo3	1	4.00
Total Alkalinity		72.0	mg/L as CaCo3	1	4.00

Sample: 8882 - MW-12

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5030B  
QC Batch: 2043 Date Analyzed: 2003-06-05 Analyzed By: CG  
Prep Batch: 1848 Date Prepared: 2003-06-05 Prepared By: CG

Parameter	Flag	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 (isomers)		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.104	mg/L	1	0.100	104	78.7 - 110
4-Bromofluorobenzene (4-BFB)		0.0953	mg/L	1	0.100	95	77.8 - 110

Sample: 8882 - MW-12

Analysis: Cations Analytical Method: S 6010B Prep Method: S 3005A  
QC Batch: 2048 Date Analyzed: 2003-06-05 Analyzed By: BC  
Prep Batch: 1831 Date Prepared: 2003-06-05 Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		491	mg/L	1	0.500
Dissolved Potassium		15.3	mg/L	1	0.500
Dissolved Magnesium		157	mg/L	1	0.500
Dissolved Sodium		151	mg/L	1	0.500

Sample: 8882 - MW-12

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Analysis: Ion Chromatography  
QC Batch: 1996  
Prep Batch: 1800

Analytical Method: E 300.0  
Date Analyzed: 2003-06-05  
Date Prepared: 2003-06-04

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

Parameter	Flag	Result	Units	Dilution	RL
Chloride		1380	mg/L	100	0.500
Fluoride		<2.00	mg/L	10	0.200
Sulfate		45.8	mg/L	10	0.500

**Sample: 8882 - MW-12**

Analysis: NO3 (IC)  
QC Batch: 1996  
Prep Batch: 1800

Analytical Method: E 300.0  
Date Analyzed: 2003-06-05  
Date Prepared: 2003-06-04

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

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		5.06	mg/L	10	0.200

**Sample: 8882 - MW-12**

Analysis: TDS  
QC Batch: 2031  
Prep Batch: 1837

Analytical Method: SM 2540C  
Date Analyzed: 2003-06-06  
Date Prepared: 2003-06-05

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

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		3250	mg/L	5	10.00

**Sample: 8883 - MW-9**

Analysis: Alkalinity  
QC Batch: 2103  
Prep Batch: 1894

Analytical Method: SM 2320B  
Date Analyzed: 2003-06-06  
Date Prepared: 2003-06-06

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

Parameter	Flag	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		122	mg/L as CaCo3	1	4.00
Total Alkalinity		122	mg/L as CaCo3	1	4.00

**Sample: 8883 - MW-9**

Analysis: BTEX  
QC Batch: 2043  
Prep Batch: 1848

Analytical Method: S 8021B  
Date Analyzed: 2003-06-05  
Date Prepared: 2003-06-05

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

Parameter	Flag	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 (isomers)		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.104	mg/L	1	0.100	104	78.7 - 110
4-Bromofluorobenzene (4-BFB)		0.0890	mg/L	1	0.100	89	77.8 - 110

### Sample: 8883 - MW-9

Analysis: Cations	Analytical Method: S 6010B	Prep Method: S 3005A
QC Batch: 2048	Date Analyzed: 2003-06-05	Analyzed By: BC
Prep Batch: 1831	Date Prepared: 2003-06-05	Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		113	mg/L	1	0.500
Dissolved Potassium		7.98	mg/L	1	0.500
Dissolved Magnesium		37.9	mg/L	1	0.500
Dissolved Sodium		240	mg/L	1	0.500

### Sample: 8883 - MW-9

Analysis: Ion Chromatography	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 1996	Date Analyzed: 2003-06-05	Analyzed By: JSW
Prep Batch: 1800	Date Prepared: 2003-06-04	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		514	mg/L	10	0.500
Fluoride		1.82	mg/L	5	0.200
Sulfate		102	mg/L	5	0.500

### Sample: 8883 - MW-9

Analysis: NO3 (IC)	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 1996	Date Analyzed: 2003-06-05	Analyzed By: JSW
Prep Batch: 1800	Date Prepared: 2003-06-04	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		3.01	mg/L	5	0.200

### Sample: 8883 - MW-9

Analysis: TDS	Analytical Method: SM 2540C	Prep Method: N/A
QC Batch: 2031	Date Analyzed: 2003-06-06	Analyzed By: JSW

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Prep Batch: 1837 Date Prepared: 2003-06-05 Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		1324	mg/L	4	10.00

**Sample: 8884 - W-MW**

Analysis: Alkalinity Analytical Method: SM 2320B Prep Method: N/A  
QC Batch: 2103 Date Analyzed: 2003-06-06 Analyzed By: RS  
Prep Batch: 1894 Date Prepared: 2003-06-06 Prepared By: RS

Parameter	Flag	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		202	mg/L as CaCo3	1	4.00
Total Alkalinity		202	mg/L as CaCo3	1	4.00

**Sample: 8884 - W-MW**

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5030B  
QC Batch: 2043 Date Analyzed: 2003-06-05 Analyzed By: CG  
Prep Batch: 1848 Date Prepared: 2003-06-05 Prepared By: CG

Parameter	Flag	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 (isomers)		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.100	mg/L	1	0.100	100	78.7 - 110
4-Bromofluorobenzene (4-BFB)		0.0901	mg/L	1	0.100	90	77.8 - 110

**Sample: 8884 - W-MW**

Analysis: Cations Analytical Method: S 6010B Prep Method: S 3005A  
QC Batch: 2048 Date Analyzed: 2003-06-05 Analyzed By: BC  
Prep Batch: 1831 Date Prepared: 2003-06-05 Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		48.4	mg/L	1	0.500
Dissolved Potassium		35.1	mg/L	1	0.500
Dissolved Magnesium		13.3	mg/L	1	0.500
Dissolved Sodium		283	mg/L	1	0.500

**Sample: 8884 - W-MW**

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Analysis: Ion Chromatography  
QC Batch: 1996  
Prep Batch: 1800

Analytical Method: E 300.0  
Date Analyzed: 2003-06-05  
Date Prepared: 2003-06-04

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

Parameter	Flag	Result	Units	Dilution	RL
Chloride		353	mg/L	10	0.500
Fluoride		1.54	mg/L	5	0.200
Sulfate		116	mg/L	5	0.500

**Sample: 8884 - W-MW**

Analysis: NO<sub>3</sub> (IC)  
QC Batch: 1996  
Prep Batch: 1800

Analytical Method: E 300.0  
Date Analyzed: 2003-06-05  
Date Prepared: 2003-06-04

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

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		4.16	mg/L	5	0.200

**Sample: 8884 - W-MW**

Analysis: TDS  
QC Batch: 2031  
Prep Batch: 1837

Analytical Method: SM 2540C  
Date Analyzed: 2003-06-06  
Date Prepared: 2003-06-05

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

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		1050	mg/L	2	10.00

**Sample: 8885 - MW-4**

Analysis: Alkalinity  
QC Batch: 2103  
Prep Batch: 1894

Analytical Method: SM 2320B  
Date Analyzed: 2003-06-06  
Date Prepared: 2003-06-06

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

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		236	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		236	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 8885 - MW-4**

Analysis: BTEX  
QC Batch: 2043  
Prep Batch: 1848

Analytical Method: S 8021B  
Date Analyzed: 2003-06-05  
Date Prepared: 2003-06-05

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

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Parameter	Flag	RL		Dilution	RL
		Result	Units		
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 (isomers)		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike	Percent	Recovery
					Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.0966	mg/L	1	0.100	97	78.7 - 110
4-Bromofluorobenzene (4-BFB)		0.0860	mg/L	1	0.100	86	77.8 - 110

Sample: 8885 - MW-4

Analysis: Cations  
QC Batch: 2048  
Prep Batch: 1831

Analytical Method: S 6010B  
Date Analyzed: 2003-06-05  
Date Prepared: 2003-06-05

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

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		113	mg/L	1	0.500
Dissolved Potassium		59.8	mg/L	1	0.500
Dissolved Magnesium		29.7	mg/L	1	0.500
Dissolved Sodium		664	mg/L	1	0.500

Sample: 8885 - MW-4

Analysis: Ion Chromatography  
QC Batch: 1996  
Prep Batch: 1800

Analytical Method: E 300.0  
Date Analyzed: 2003-06-05  
Date Prepared: 2003-06-04

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

Parameter	Flag	Result	Units	Dilution	RL
Chloride		1020	mg/L	100	0.500
Fluoride		<2.00	mg/L	10	0.200
Sulfate		79.6	mg/L	10	0.500

Sample: 8885 - MW-4

Analysis: NO3 (IC)  
QC Batch: 1996  
Prep Batch: 1800

Analytical Method: E 300.0  
Date Analyzed: 2003-06-05  
Date Prepared: 2003-06-04

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

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		5.53	mg/L	10	0.200

Sample: 8885 - MW-4

Analysis: TDS  
QC Batch: 2031

Analytical Method: SM 2540C  
Date Analyzed: 2003-06-06

Prep Method: N/A  
Analyzed By: JSW

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Prep Batch: 1837 Date Prepared: 2003-06-05 Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		2670	mg/L	10	10.00

**Sample: 8886 - Duplicate**

Analysis: Alkalinity Analytical Method: SM 2320B Prep Method: N/A  
QC Batch: 2103 Date Analyzed: 2003-06-06 Analyzed By: RS  
Prep Batch: 1894 Date Prepared: 2003-06-06 Prepared By: RS

Parameter	Flag	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		290	mg/L as CaCo3	1	4.00
Total Alkalinity		290	mg/L as CaCo3	1	4.00

**Sample: 8886 - Duplicate**

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5030B  
QC Batch: 2043 Date Analyzed: 2003-06-05 Analyzed By: CG  
Prep Batch: 1848 Date Prepared: 2003-06-05 Prepared By: CG

Parameter	Flag	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 (isomers)		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0857	mg/L	1	0.100	86	78.7 - 110
4-Bromofluorobenzene (4-BFB)	<sup>3</sup>	0.0737	mg/L	1	0.100	74	77.8 - 110

**Sample: 8886 - Duplicate**

Analysis: Cations Analytical Method: S 6010B Prep Method: S 3005A  
QC Batch: 2048 Date Analyzed: 2003-06-05 Analyzed By: BC  
Prep Batch: 1831 Date Prepared: 2003-06-05 Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		169	mg/L	1	0.500
Dissolved Potassium		45.0	mg/L	1	0.500
Dissolved Magnesium		54.5	mg/L	1	0.500
Dissolved Sodium		899	mg/L	1	0.500

<sup>3</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

**Sample: 8886 - Duplicate**

Analysis: Ion Chromatography  
QC Batch: 2011  
Prep Batch: 1801

Analytical Method: E 300.0  
Date Analyzed: 2003-06-05  
Date Prepared: 2003-06-04

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

Parameter	Flag	Result	Units	Dilution	RL
Chloride		1370	mg/L	100	0.500
Fluoride		2.12	mg/L	10	0.200
Sulfate		287	mg/L	10	0.500

**Sample: 8886 - Duplicate**

Analysis: NO3 (IC)  
QC Batch: 2011  
Prep Batch: 1801

Analytical Method: E 300.0  
Date Analyzed: 2003-06-05  
Date Prepared: 2003-06-04

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

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		5.65	mg/L	10	0.200

**Sample: 8886 - Duplicate**

Analysis: TDS  
QC Batch: 2031  
Prep Batch: 1837

Analytical Method: SM 2540C  
Date Analyzed: 2003-06-06  
Date Prepared: 2003-06-05

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

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		3420	mg/L	5	10.00

**Method Blank (1)** QC Batch: 1994

Parameter	Flag	Result	Units	RL
Nitrate-N		<0.200	mg/L	0.2

**Method Blank (1)** QC Batch: 1994

Parameter	Flag	Result	Units	RL
Chloride		<0.500	mg/L	0.5
Fluoride		<0.200	mg/L	0.2
Sulfate		<0.500	mg/L	0.5

**Method Blank (1)** QC Batch: 1995

Parameter	Flag	Result	Units	RL
Nitrate-N		<0.200	mg/L	0.2

Method Blank (1) QC Batch: 1995

Parameter	Flag	Result	Units	RL
Chloride		<0.500	mg/L	0.5
Fluoride		<0.200	mg/L	0.2
Sulfate		<0.500	mg/L	0.5

Method Blank (1) QC Batch: 1996

Parameter	Flag	Result	Units	RL
Nitrate-N		<0.200	mg/L	0.2

Method Blank (1) QC Batch: 1996

Parameter	Flag	Result	Units	RL
Chloride		<0.500	mg/L	0.5
Fluoride		<0.200	mg/L	0.2
Sulfate		<0.500	mg/L	0.5

Method Blank (1) QC Batch: 2011

Parameter	Flag	Result	Units	RL
Nitrate-N		<0.200	mg/L	0.2

Method Blank (1) QC Batch: 2011

Parameter	Flag	Result	Units	RL
Chloride		<0.500	mg/L	0.5
Fluoride		<0.200	mg/L	0.2
Sulfate		<0.500	mg/L	0.5

Method Blank (1) QC Batch: 2012

Parameter	Flag	Result		Units		RL	
Benzene		<0.00100		mg/L		0.001	
Toluene		<0.00100		mg/L		0.001	
Ethylbenzene		<0.00100		mg/L		0.001	
Xylene (isomers)		<0.00100		mg/L		0.001	
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0956	mg/L	1	0.100	96	78.7 - 110
4-Bromofluorobenzene (4-BFB)		0.0853	mg/L	1	0.100	85	77.8 - 110

**Method Blank (1)** QC Batch: 2030

Parameter	Flag	Result		Units		RL
Total Dissolved Solids		<10.00		mg/L		10

**Method Blank (1)** QC Batch: 2031

Parameter	Flag	Result		Units		RL
Total Dissolved Solids		<10.00		mg/L		10

**Method Blank (1)** QC Batch: 2043

Parameter	Flag	Result		Units		RL	
Benzene		<0.00100		mg/L		0.001	
Toluene		<0.00100		mg/L		0.001	
Ethylbenzene		<0.00100		mg/L		0.001	
Xylene (isomers)		<0.00100		mg/L		0.001	
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.105	mg/L	1	0.100	105	78.7 - 110
4-Bromofluorobenzene (4-BFB)		0.0906	mg/L	1	0.100	91	77.8 - 110

**Method Blank (1)** QC Batch: 2048

Parameter	Flag	Result		Units		RL
Dissolved Calcium		<0.500		mg/L		0.5
Dissolved Potassium		<0.500		mg/L		0.5
Dissolved Magnesium		<0.500		mg/L		0.5
Dissolved Sodium		<0.500		mg/L		0.5

**Method Blank (1)** QC Batch: 2103

Parameter	Flag	Result	Units	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1
Bicarbonate Alkalinity		<4.00	mg/L as CaCO <sub>3</sub>	4
Total Alkalinity		<4.00	mg/L as CaCO <sub>3</sub>	4

Method Blank (1) QC Batch: 2104

Parameter	Flag	Result	Units	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1
Bicarbonate Alkalinity		<4.00	mg/L as CaCO <sub>3</sub>	4
Total Alkalinity		<4.00	mg/L as CaCO <sub>3</sub>	4

Duplicate (1) QC Batch: 2030

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	631.0	621.0	mg/L	1	2	9.41

Duplicate (1) QC Batch: 2031

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	602.0	624.0	mg/L	2	4	9.41

Duplicate (1) QC Batch: 2103

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Hydroxide Alkalinity	<1.00	<1.00	mg/L as CaCO <sub>3</sub>	1	0	5.81
Carbonate Alkalinity	<1.00	<1.00	mg/L as CaCO <sub>3</sub>	1	0	5.81
Bicarbonate Alkalinity	126	122	mg/L as CaCO <sub>3</sub>	1	3	5.81
Total Alkalinity	126	122	mg/L as CaCO <sub>3</sub>	1	3	5.81

Duplicate (1) QC Batch: 2104

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Hydroxide Alkalinity	<1.00	<1.00	mg/L as CaCO <sub>3</sub>	1	0	5.81
Carbonate Alkalinity	<1.00	<1.00	mg/L as CaCO <sub>3</sub>	1	0	5.81
Bicarbonate Alkalinity	156	154	mg/L as CaCO <sub>3</sub>	1	1	5.81
Total Alkalinity	156	154	mg/L as CaCO <sub>3</sub>	1	1	5.81

Laboratory Control Spike (LCS-1) QC Batch: 1994

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Nitrate-N	2.36	2.38	mg/L	1	2.50	<0.630	94	1	90 - 110	20

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

#### Laboratory Control Spike (LCS-1) QC Batch: 1994

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	11.6	13.0	mg/L	1	12.5	<1.49	93	11	90 - 110	20
Fluoride	2.37	2.40	mg/L	1	2.50	<0.0153	95	1	90 - 110	20
Sulfate	12.0	13.2	mg/L	1	12.5	<0.171	96	10	90 - 110	20

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

#### Laboratory Control Spike (LCS-1) QC Batch: 1995

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Nitrate-N	2.38	2.38	mg/L	1	2.50	<0.630	95	0	90 - 110	20

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

#### Laboratory Control Spike (LCS-1) QC Batch: 1995

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	12.9	13.0	mg/L	1	12.5	<1.49	103	1	90 - 110	20
Fluoride	2.39	2.40	mg/L	1	2.50	<0.0153	96	0	90 - 110	20
Sulfate	13.0	13.2	mg/L	1	12.5	<0.171	104	2	90 - 110	20

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

#### Laboratory Control Spike (LCS-1) QC Batch: 1996

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Nitrate-N	2.37	2.38	mg/L	1	2.50	<0.630	95	0	90 - 110	20

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

#### Laboratory Control Spike (LCS-1) QC Batch: 1996

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	11.4	11.6	mg/L	1	12.5	<1.49	91	2	90 - 110	20
Fluoride	2.37	2.37	mg/L	1	2.50	<0.0153	95	0	90 - 110	20
Sulfate	11.9	12.1	mg/L	1	12.5	<0.171	95	2	90 - 110	20

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

#### Laboratory Control Spike (LCS-1) QC Batch: 2011

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Nitrate-N	2.37	2.37	mg/L	1	2.50	<0.630	95	0	90 - 110	20

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

**Laboratory Control Spike (LCS-1) QC Batch: 2011**

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	13.1	11.7	mg/L	1	12.5	<1.49	105	11	90 - 110	20
Fluoride	2.40	2.38	mg/L	1	2.50	<0.0153	96	1	90 - 110	20
Sulfate	13.2	12.1	mg/L	1	12.5	<0.171	106	9	90 - 110	20

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

**Laboratory Control Spike (LCS-1) QC Batch: 2012**

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Benzene	0.102	0.106	mg/L	1	0.100	<0.000410	102	4	80.5 - 113	20
Benzene	0.102	0.106	mg/L	1	0.100	<0.000410	102	4	80.5 - 113	20
Toluene	0.101	0.107	mg/L	1	0.100	<0.000760	101	6	81.2 - 112	20
Toluene	0.101	0.107	mg/L	1	0.100	<0.000760	101	6	81.2 - 112	20
Ethylbenzene	0.101	0.106	mg/L	1	0.100	<0.00120	101	5	82.2 - 112	20
Ethylbenzene	0.101	0.106	mg/L	1	0.100	<0.00120	101	5	82.2 - 112	20
Xylene (isomers)	0.304	0.318	mg/L	1	0.300	<0.00183	101	4	80.6 - 112	20
Xylene (isomers)	0.304	0.318	mg/L	1	0.300	<0.00183	101	4	80.6 - 112	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)	0.102	0.0956	mg/L	1	0.100	102	96	78.7 - 110
Trifluorotoluene (TFT)	0.102	0.0956	mg/L	1	0.100	102	96	78.7 - 110
4-Bromofluorobenzene (4-BFB)	0.101	0.0974	mg/L	1	0.100	101	97	77.8 - 110
4-Bromofluorobenzene (4-BFB)	0.101	0.0974	mg/L	1	0.100	101	97	77.8 - 110

**Laboratory Control Spike (LCS-1) QC Batch: 2043**

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Benzene	0.100	0.101	mg/L	1	0.100	<0.000410	100	0	80.5 - 113	20
Benzene	0.100	0.101	mg/L	1	0.100	<0.000410	100	0	80.5 - 113	20
Toluene	0.101	0.101	mg/L	1	0.100	<0.000760	101	0	81.2 - 112	20
Toluene	0.101	0.101	mg/L	1	0.100	<0.000760	101	0	81.2 - 112	20
Ethylbenzene	0.101	0.101	mg/L	1	0.100	<0.00120	101	0	82.2 - 112	20
Ethylbenzene	0.101	0.101	mg/L	1	0.100	<0.00120	101	0	82.2 - 112	20
Xylene (isomers)	0.302	0.304	mg/L	1	0.300	<0.00183	101	0	80.6 - 112	20
Xylene (isomers)	0.302	0.304	mg/L	1	0.300	<0.00183	101	0	80.6 - 112	20

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

*continued . . .*

*control spikes continued ...*

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0992	0.0976	mg/L	1	0.100	99	98	78.7 - 110
Trifluorotoluene (TFT)	0.0992	0.0976	mg/L	1	0.100	99	98	78.7 - 110
4-Bromofluorobenzene (4-BFB)	0.0941	0.0971	mg/L	1	0.100	94	97	77.8 - 110
4-Bromofluorobenzene (4-BFB)	0.0941	0.0971	mg/L	1	0.100	94	97	77.8 - 110

**Laboratory Control Spike (LCS-1)      QC Batch: 2048**

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Dissolved Calcium	102	101	mg/L	1	100	<0.183	102	1	85 - 115	20
Dissolved Potassium	110	109	mg/L	1	100	<0.135	110	1	85 - 115	20
Dissolved Magnesium	103	102	mg/L	1	100	<0.183	103	1	85 - 115	20
Dissolved Sodium	103	108	mg/L	1	100	<0.105	103	5	85 - 115	20

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

**Matrix Spike (MS-1)      QC Batch: 1994**

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Nitrate-N	129	127	mg/L	50	2.50	<31.5	93	2	62.2 - 121	20

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

**Matrix Spike (MS-1)      QC Batch: 1994**

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	1240	1160	mg/L	50	12.5	588	104	7	32.7 - 136	20
Fluoride	119	121	mg/L	50	2.50	5.1	91	2	30.1 - 187	20
Sulfate	788	737	mg/L	50	12.5	148	102	7	69.9 - 114	20

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

**Matrix Spike (MS-1)      QC Batch: 1995**

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Nitrate-N	251	252	mg/L	100	2.50	<63.0	92	0	62.2 - 121	20

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

**Matrix Spike (MS-1)      QC Batch: 1995***continued ...*

*matrix spikes continued ...*

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	2650	2640	mg/L	100	12.5	1500	92	0	32.7 - 136	20
Fluoride	232	232	mg/L	100	2.50	10.2	89	0	30.1 - 187	20
Sulfate	1470	1430	mg/L	100	12.5	288	94	3	69.9 - 114	20

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

**Matrix Spike (MS-1)** QC Batch: 1996

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Nitrate-N	249	250	mg/L	100	2.50	<63.0	91	0	62.2 - 121	20

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

**Matrix Spike (MS-1)** QC Batch: 1996

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	2180	2160	mg/L	100	12.5	1020	93	1	32.7 - 136	20
Fluoride	238	243	mg/L	100	2.50	<1.53	95	2	30.1 - 187	20
Sulfate	1290	1290	mg/L	100	12.5	125	93	0	69.9 - 114	20

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

**Matrix Spike (MS-1)** QC Batch: 2011

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Nitrate-N	256	254	mg/L	100	2.50	<63.0	94	1	62.2 - 121	20

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

**Matrix Spike (MS-1)** QC Batch: 2011

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	2520	2530	mg/L	100	12.5	1370	92	0	32.7 - 136	20
Fluoride	239	233	mg/L	100	2.50	10.3	91	2	30.1 - 187	20
Sulfate	1450	1470	mg/L	100	12.5	284	93	1	69.9 - 114	20

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

**Matrix Spike (MS-1)** QC Batch: 2048

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Dissolved Calcium	281	279	mg/L	1	100	176	105	1	75 - 125	20

*continued ...*

*matrix spikes continued ...*

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Dissolved Potassium	119	120	mg/L	1	100	9.94	109	1	75 - 125	20
Dissolved Magnesium	146	149	mg/L	1	100	52.6	93	2	75 - 125	20
Dissolved Sodium	499	484	mg/L	1	100	383	116	3	75 - 125	20

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

**Standard (ICV-1)** QC Batch: 1994

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.39	96	90 - 110	2003-06-05

**Standard (ICV-1)** QC Batch: 1994

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	12.9	103	90 - 110	2003-06-05
Fluoride		mg/L	2.50	2.38	95	90 - 110	2003-06-05
Sulfate		mg/L	12.5	12.9	103	90 - 110	2003-06-05

**Standard (CCV-1)** QC Batch: 1994

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.40	96	90 - 110	2003-06-05

**Standard (CCV-1)** QC Batch: 1994

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	12.9	103	90 - 110	2003-06-05
Fluoride		mg/L	2.50	2.41	96	90 - 110	2003-06-05
Sulfate		mg/L	12.5	13.1	105	90 - 110	2003-06-05

**Standard (ICV-1)** QC Batch: 1995

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.40	96	90 - 110	2003-06-05

**Standard (ICV-1)** QC Batch: 1995

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	12.9	103	90 - 110	2003-06-05
Fluoride		mg/L	2.50	2.41	96	90 - 110	2003-06-05
Sulfate		mg/L	12.5	13.1	105	90 - 110	2003-06-05

## Standard (CCV-1) QC Batch: 1995

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.38	95	90 - 110	2003-06-05

## Standard (CCV-1) QC Batch: 1995

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	13.0	104	90 - 110	2003-06-05
Fluoride		mg/L	2.50	2.39	96	90 - 110	2003-06-05
Sulfate		mg/L	12.5	13.0	104	90 - 110	2003-06-05

## Standard (ICV-1) QC Batch: 1996

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.38	95	90 - 110	2003-06-05

## Standard (ICV-1) QC Batch: 1996

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	13.0	104	90 - 110	2003-06-05
Fluoride		mg/L	2.50	2.39	96	90 - 110	2003-06-05
Sulfate		mg/L	12.5	13.0	104	90 - 110	2003-06-05

## Standard (CCV-1) QC Batch: 1996

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.37	95	90 - 110	2003-06-05

## Standard (CCV-1) QC Batch: 1996

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.5	92	90 - 110	2003-06-05
Fluoride		mg/L	2.50	2.38	95	90 - 110	2003-06-05
Sulfate		mg/L	12.5	12.0	96	90 - 110	2003-06-05

**Standard (ICV-1)** QC Batch: 2011

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.37	95	90 - 110	2003-06-05

**Standard (ICV-1)** QC Batch: 2011

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.5	92	90 - 110	2003-06-05
Fluoride		mg/L	2.50	2.38	95	90 - 110	2003-06-05
Sulfate		mg/L	12.5	12.0	96	90 - 110	2003-06-05

**Standard (CCV-1)** QC Batch: 2011

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.39	96	90 - 110	2003-06-05

**Standard (CCV-1)** QC Batch: 2011

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.6	93	90 - 110	2003-06-05
Fluoride		mg/L	2.50	2.37	95	90 - 110	2003-06-05
Sulfate		mg/L	12.5	12.1	97	90 - 110	2003-06-05

**Standard (ICV-1)** QC Batch: 2012

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.102	102	85 - 115	2003-06-04
Toluene		mg/L	0.100	0.101	101	85 - 115	2003-06-04
Ethylbenzene		mg/L	0.100	0.101	101	85 - 115	2003-06-04
Xylene (isomers)		mg/L	0.300	0.305	102	85 - 115	2003-06-04

**Standard (CCV-1)** QC Batch: 2012

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0999	100	85 - 115	2003-06-04
Toluene		mg/L	0.100	0.0999	100	85 - 115	2003-06-04
Ethylbenzene		mg/L	0.100	0.0999	100	85 - 115	2003-06-04
Xylene (isomers)		mg/L	0.300	0.299	100	85 - 115	2003-06-04

## Standard (CCV-2) QC Batch: 2012

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0986	99	85 - 115	2003-06-04
Toluene		mg/L	0.100	0.0993	99	85 - 115	2003-06-04
Ethylbenzene		mg/L	0.100	0.0994	99	85 - 115	2003-06-04
Xylene (isomers)		mg/L	0.300	0.298	99	85 - 115	2003-06-04

## Standard (ICV-1) QC Batch: 2030

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1011	101	90 - 110	2003-06-06

## Standard (CCV-1) QC Batch: 2030

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1034	103	90 - 110	2003-06-06

## Standard (ICV-1) QC Batch: 2031

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1034	103	90 - 110	2003-06-06

## Standard (CCV-1) QC Batch: 2031

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1025	102	90 - 110	2003-06-06

## Standard (ICV-1) QC Batch: 2043

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0986	99	85 - 115	2003-06-05
Toluene		mg/L	0.100	0.0992	99	85 - 115	2003-06-05
Ethylbenzene		mg/L	0.100	0.0996	100	85 - 115	2003-06-05
Xylene (isomers)		mg/L	0.300	0.297	99	85 - 115	2003-06-05

**Standard (CCV-1) QC Batch: 2043**

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0978	98	85 - 115	2003-06-05
Toluene		mg/L	0.100	0.0982	98	85 - 115	2003-06-05
Ethylbenzene		mg/L	0.100	0.0966	97	85 - 115	2003-06-05
Xylene (isomers)		mg/L	0.300	0.292	97	85 - 115	2003-06-05

**Standard (ICV-1) QC Batch: 2048**

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25.0	25.2	101	90 - 110	2003-06-05
Dissolved Potassium		mg/L	25.0	25.5	102	90 - 110	2003-06-05
Dissolved Magnesium		mg/L	25.0	25.2	101	90 - 110	2003-06-05
Dissolved Sodium		mg/L	25.0	24.6	98	90 - 110	2003-06-05

**Standard (CCV-1) QC Batch: 2048**

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25.0	24.3	97	90 - 110	2003-06-05
Dissolved Potassium		mg/L	25.0	26.2	105	90 - 110	2003-06-05
Dissolved Magnesium		mg/L	25.0	24.1	96	90 - 110	2003-06-05
Dissolved Sodium		mg/L	25.0	25.5	102	90 - 110	2003-06-05

**Standard (CCV-2) QC Batch: 2048**

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25.0	24.3	97	90 - 110	2003-06-05
Dissolved Potassium		mg/L	25.0	25.2	101	90 - 110	2003-06-05
Dissolved Magnesium		mg/L	25.0	22.6	90	90 - 110	2003-06-05
Dissolved Sodium		mg/L	25.0	24.8	99	90 - 110	2003-06-05

**Standard (ICV-1) QC Batch: 2103**

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	2003-06-06
Carbonate Alkalinity		mg/L as CaCo3	0.00	232		0 - 200	2003-06-06
Bicarbonate Alkalinity		mg/L as CaCo3	0.00	6.00		0 - 200	2003-06-06
Total Alkalinity		mg/L as CaCo3	250	238	95	90 - 110	2003-06-06

## Standard (CCV-1) QC Batch: 2103

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	2003-06-06
Carbonate Alkalinity		mg/L as CaCo3	0.00	228		0 - 200	2003-06-06
Bicarbonate Alkalinity		mg/L as CaCo3	0.00	20.0		0 - 200	2003-06-06
Total Alkalinity		mg/L as CaCo3	250	248	99	90 - 110	2003-06-06

## Standard (ICV-1) QC Batch: 2104

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	2003-06-06
Carbonate Alkalinity		mg/L as CaCo3	0.00	236		0 - 200	2003-06-06
Bicarbonate Alkalinity		mg/L as CaCo3	0.00	10.0		0 - 200	2003-06-06
Total Alkalinity		mg/L as CaCo3	250	246	98	90 - 110	2003-06-06

## Standard (CCV-1) QC Batch: 2104

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	2003-06-06
Carbonate Alkalinity		mg/L as CaCo3	0.00	232		0 - 200	2003-06-06
Bicarbonate Alkalinity		mg/L as CaCo3	0.00	6.00		0 - 200	2003-06-06
Total Alkalinity		mg/L as CaCo3	250	238	95	90 - 110	2003-06-06

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CHAIN—OF—CUSTODY RECORD											
CLIENT NAME:		PROJECT NO.:		PAGE		LAB. PO #		PARAMETERS/METHOD NUMBER			
<u>Chris, Lee</u>		<u>Project Name: G. Erwin</u>		1 OF 1							
RECEIVING LABORATORY: <u>Arson &amp; Associates, Inc.</u>		ADDRESS: <u>507 N. Marienfeld, Ste. 202 • Midland, TX 79701</u>		CITY: <u>Midland</u>		STATE: <u>TX</u> ZIP: <u>79701</u> PHONE: <u>(432) 682-1100</u>		REMARKS (I.E., FILTERED, UNFILTERED, PRESERVED, UNPRESERVED, GRAB COMPOSITE)			
SAMPLED BY: <u>Chris, Lee</u> (Signature)		RElinquished BY: <u>Chris, Lee</u> (Signature)		RECEIVED BY: <u>John A. Johnson</u> (Signature)		DATE: <u>6/30/03</u> TIME: <u>9:51 AM</u>		DATE: <u>6/30/03</u> TIME: <u>1:30 PM</u>			
COMMENTS: <u>None</u>		RElinquished BY: <u>John A. Johnson</u> (Signature)		RECEIVED BY: <u>John A. Johnson</u> (Signature)		DATE: <u>6/30/03</u> TIME: <u>1:30 PM</u>		DATE: <u>6/30/03</u> TIME: <u>1:30 PM</u>			
RECEIVING LABORATORY: <u>Arson &amp; Associates</u>		ADDRESS: <u>507 N. Marienfeld, Ste. 202 • Midland, TX 79701</u>		CITY: <u>Midland</u>		STATE: <u>TX</u> ZIP: <u>79701</u> PHONE: <u>(432) 682-1100</u>		RECEIVED BY: <u>John A. Johnson</u> (Signature)			
SAMPLE CONDITION WHEN RECEIVED:		LAB. I.D. NUMBER (LAB USE ONLY)						WHITE — RECEIVING LAB YELLOW — RECEIVING LAB (TO BE RETURNED TO LA AFTER RECEIPT)			
SAMPLE TYPE:								DATE: <u>6/30/03</u> TIME: <u>1:30 PM</u> SAMPLE SHIPPED BY: (Circle) ① FEDEX ② UPS ③ OTHER			
								DATE: <u>6/30/03</u> TIME: <u>9:51 AM</u> FEDEX DATE: <u>6/30/03</u> TIME: <u>1:30 PM</u> UPS DATE: <u>6/30/03</u> TIME: <u>1:30 PM</u> OTHER			
								WHITE — RECEIVING LAB YELLOW — RECEIVING LAB (TO BE RETURNED TO LA AFTER RECEIPT)			
								PINK — PROJECT MANAGER GOLD — QA/QC COORDINATOR			

# TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298  
155 McCutcheon, Suite H El Paso, Texas 79932 888•588•3443 915•585•3443 FAX 915•585•4944  
E-Mail: lab@traceanalysis.com

## Analytical and Quality Control Report

Mark Larson  
Larson and Associates, Inc.  
P. O. Box 50685  
Midland, Tx 79710

Report Date: September 16, 2003

Work Order: 3082714

Project Name: G.L. Erwin  
Project Number: 0-0112

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
16209	WW-1	water	2003-08-25	10:20	2003-08-27
16210	MW-9	water	2003-08-25	10:53	2003-08-27
16211	W-MW	water	2003-08-25	11:12	2003-08-27
16212	SW-MW	water	2003-08-25	11:30	2003-08-27
16213	RW-1	water	2003-08-25	11:47	2003-08-27
16214	MW-4	water	2003-08-25	12:35	2003-08-27
16215	MW-8	water	2003-08-25	12:55	2003-08-27
16216	MW-7	water	2003-08-25	14:04	2003-08-27
16217	MW-2	water	2003-08-25	14:26	2003-08-27
16218	MW-1	water	2003-08-25	14:45	2003-08-27
16219	Dup	water	2003-08-25	00:00	2003-08-27
16220	MW-5	water	2003-08-26	08:07	2003-08-27
16221	MW-3	water	2003-08-26	08:30	2003-08-27
16222	MW-6	water	2003-08-26	09:05	2003-08-27
16223	MW-13	water	2003-08-26	09:18	2003-08-27
16224	MW-12	water	2003-08-26	09:38	2003-08-27
16225	MW-10	water	2003-08-26	09:58	2003-08-27

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

  
Dr. Blair Leftwich, Director

## Analytical Report

### Sample: 16209 - WW-1

Analysis: Alkalinity  
QC Batch: 4076  
Prep Batch: 3647

Analytical Method: SM 2320B  
Date Analyzed: 2003-08-28  
Date Prepared: 2003-08-28

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

Parameter	Flag	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		148	mg/L as CaCo3	1	4.00
Total Alkalinity		148	mg/L as CaCo3	1	4.00

### Sample: 16209 - WW-1

Analysis: Cations  
QC Batch: 4200  
Prep Batch: 3652

Analytical Method: S 6010B  
Date Analyzed: 2003-09-03  
Date Prepared: 2003-08-28

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

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		63.0	mg/L	1	0.500
Dissolved Potassium		8.43	mg/L	1	0.500
Dissolved Magnesium		24.0	mg/L	1	0.500
Dissolved Sodium		104	mg/L	1	0.500

### Sample: 16209 - WW-1

Analysis: Ion Chromatography  
QC Batch: 4062  
Prep Batch: 3633

Analytical Method: E 300.0  
Date Analyzed: 2003-08-28  
Date Prepared: 2003-08-27

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

Parameter	Flag	Result	Units	Dilution	RL
Chloride		136	mg/L	5	0.500
Fluoride		1.70	mg/L	5	0.200
Sulfate		111	mg/L	5	0.500

### Sample: 16209 - WW-1

Analysis: NO3 (IC)  
QC Batch: 4062  
Prep Batch: 3633

Analytical Method: E 300.0  
Date Analyzed: 2003-08-28  
Date Prepared: 2003-08-27

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

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		3.72	mg/L	5	0.200

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**Sample: 16209 - WW-1**

Analysis: TDS	Analytical Method: SM 2540C	Prep Method: N/A
QC Batch: 4069	Date Analyzed: 2003-08-29	Analyzed By: JSW
Prep Batch: 3640	Date Prepared: 2003-08-28	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		652.0	mg/L	1	10.00

**Sample: 16210 - MW-9**

Analysis: Alkalinity	Analytical Method: SM 2320B	Prep Method: N/A
QC Batch: 4076	Date Analyzed: 2003-08-28	Analyzed By: RS
Prep Batch: 3647	Date Prepared: 2003-08-28	Prepared By: RS

Parameter	Flag	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		114	mg/L as CaCo3	1	4.00
Total Alkalinity		114	mg/L as CaCo3	1	4.00

**Sample: 16210 - MW-9**

Analysis: Cations	Analytical Method: S 6010B	Prep Method: S 3005A
QC Batch: 4200	Date Analyzed: 2003-09-03	Analyzed By: BC
Prep Batch: 3652	Date Prepared: 2003-08-28	Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		120	mg/L	1	0.500
Dissolved Potassium		9.45	mg/L	1	0.500
Dissolved Magnesium		39.2	mg/L	1	0.500
Dissolved Sodium		219	mg/L	1	0.500

**Sample: 16210 - MW-9**

Analysis: Ion Chromatography	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 4062	Date Analyzed: 2003-08-28	Analyzed By: JSW
Prep Batch: 3633	Date Prepared: 2003-08-27	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		562	mg/L	10	0.500
Fluoride		1.58	mg/L	5	0.200
Sulfate		95.2	mg/L	5	0.500

**Sample: 16210 - MW-9**

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Analysis: NO<sub>3</sub> (IC)  
QC Batch: 4062  
Prep Batch: 3633

Analytical Method: E 300.0  
Date Analyzed: 2003-08-28  
Date Prepared: 2003-08-27

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

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		2.98	mg/L	5	0.200

**Sample: 16210 - MW-9**

Analysis: TDS  
QC Batch: 4069  
Prep Batch: 3640

Analytical Method: SM 2540C  
Date Analyzed: 2003-08-29  
Date Prepared: 2003-08-28

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

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		1428	mg/L	4	10.00

**Sample: 16211 - W-MW**

Analysis: Alkalinity  
QC Batch: 4076  
Prep Batch: 3647

Analytical Method: SM 2320B  
Date Analyzed: 2003-08-28  
Date Prepared: 2003-08-28

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

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		194	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		194	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 16211 - W-MW**

Analysis: Cations  
QC Batch: 4200  
Prep Batch: 3652

Analytical Method: S 6010B  
Date Analyzed: 2003-09-03  
Date Prepared: 2003-08-28

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

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		49.4	mg/L	1	0.500
Dissolved Potassium		38.4	mg/L	1	0.500
Dissolved Magnesium		13.2	mg/L	1	0.500
Dissolved Sodium		265	mg/L	1	0.500

**Sample: 16211 - W-MW**

Analysis: Ion Chromatography  
QC Batch: 4062  
Prep Batch: 3633

Analytical Method: E 300.0  
Date Analyzed: 2003-08-28  
Date Prepared: 2003-08-27

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

Parameter	Flag	Result	Units	Dilution	RL
Chloride		351	mg/L	10	0.500
Fluoride		1.50	mg/L	5	0.200
Sulfate		112	mg/L	5	0.500

**Sample: 16211 - W-MW**

Analysis: NO<sub>3</sub> (IC)      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 4062      Date Analyzed: 2003-08-28      Analyzed By: JSW  
Prep Batch: 3633      Date Prepared: 2003-08-27      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		4.08	mg/L	5	0.200

**Sample: 16211 - W-MW**

Analysis: TDS      Analytical Method: SM 2540C      Prep Method: N/A  
QC Batch: 4069      Date Analyzed: 2003-08-29      Analyzed By: JSW  
Prep Batch: 3640      Date Prepared: 2003-08-28      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		1066	mg/L	2	10.00

**Sample: 16212 - SW-MW**

Analysis: Alkalinity      Analytical Method: SM 2320B      Prep Method: N/A  
QC Batch: 4076      Date Analyzed: 2003-08-28      Analyzed By: RS  
Prep Batch: 3647      Date Prepared: 2003-08-28      Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		310	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		310	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 16212 - SW-MW**

Analysis: Cations      Analytical Method: S 6010B      Prep Method: S 3005A  
QC Batch: 4200      Date Analyzed: 2003-09-03      Analyzed By: BC  
Prep Batch: 3652      Date Prepared: 2003-08-28      Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		117	mg/L	1	0.500
Dissolved Potassium		49.7	mg/L	1	0.500

*continued . . .*

*sample 16212 continued ...*

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Magnesium		33.6	mg/L	1	0.500
Dissolved Sodium		774	mg/L	1	0.500

**Sample: 16212 - SW-MW**Analysis: Ion Chromatography  
QC Batch: 4062  
Prep Batch: 3633Analytical Method: E 300.0  
Date Analyzed: 2003-08-28  
Date Prepared: 2003-08-27Prep Method: N/A  
Analyzed By: JSW  
Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		1190	mg/L	100	0.500
Fluoride		2.25	mg/L	10	0.200
Sulfate		272	mg/L	10	0.500

**Sample: 16212 - SW-MW**Analysis: NO3 (IC)  
QC Batch: 4062  
Prep Batch: 3633Analytical Method: E 300.0  
Date Analyzed: 2003-08-28  
Date Prepared: 2003-08-27Prep Method: N/A  
Analyzed By: JSW  
Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		6.10	mg/L	10	0.200

**Sample: 16212 - SW-MW**Analysis: TDS  
QC Batch: 4069  
Prep Batch: 3640Analytical Method: SM 2540C  
Date Analyzed: 2003-08-29  
Date Prepared: 2003-08-28Prep Method: N/A  
Analyzed By: JSW  
Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		3205	mg/L	5	10.00

**Sample: 16213 - RW-1**Analysis: Alkalinity  
QC Batch: 4076  
Prep Batch: 3647Analytical Method: SM 2320B  
Date Analyzed: 2003-08-28  
Date Prepared: 2003-08-28Prep Method: N/A  
Analyzed By: RS  
Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00

*continued ...*

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*sample 16213 continued . . .*

Parameter	Flag	Result	Units	Dilution	RL
Bicarbonate Alkalinity		298	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		298	mg/L as CaCO <sub>3</sub>	1	4.00

Sample: 16213 - RW-1

Analysis: Cations  
QC Batch: 4200  
Prep Batch: 3652

Analytical Method: S 6010B  
Date Analyzed: 2003-09-03  
Date Prepared: 2003-08-28

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

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		117	mg/L	1	0.500
Dissolved Potassium		46.1	mg/L	1	0.500
Dissolved Magnesium		32.7	mg/L	1	0.500
Dissolved Sodium		705	mg/L	1	0.500

Sample: 16213 - RW-1

Analysis: Ion Chromatography  
QC Batch: 4062  
Prep Batch: 3633

Analytical Method: E 300.0  
Date Analyzed: 2003-08-28  
Date Prepared: 2003-08-27

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

Parameter	Flag	Result	Units	Dilution	RL
Chloride		1190	mg/L	100	0.500
Fluoride		2.01	mg/L	10	0.200
Sulfate		278	mg/L	10	0.500

Sample: 16213 - RW-1

Analysis: NO3 (IC)  
QC Batch: 4062  
Prep Batch: 3633

Analytical Method: E 300.0  
Date Analyzed: 2003-08-28  
Date Prepared: 2003-08-27

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

Parameter	Flag	Result	Units	Dilution	RL
Nitrate- $\bar{N}$		6.15	mg/L	10	0.200

Sample: 16213 - RW-1

Analysis: TDS  
QC Batch: 4069  
Prep Batch: 3640

Analytical Method: SM 2540C  
Date Analyzed: 2003-08-29  
Date Prepared: 2003-08-28

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

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Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		2940	mg/L	5	10.00

**Sample: 16214 - MW-4**

Analysis: Alkalinity  
QC Batch: 4076  
Prep Batch: 3647

Analytical Method: SM 2320B  
Date Analyzed: 2003-08-28  
Date Prepared: 2003-08-28

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

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		192	mg/L as CaCo3	1	4.00
Total Alkalinity		192	mg/L as CaCo3	1	4.00

**Sample: 16214 - MW-4**

Analysis: Cations  
QC Batch: 4200  
Prep Batch: 3652

Analytical Method: S 6010B  
Date Analyzed: 2003-09-03  
Date Prepared: 2003-08-28

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

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Calcium		143	mg/L	1	0.500
Dissolved Potassium		82.1	mg/L	1	0.500
Dissolved Magnesium		35.0	mg/L	1	0.500
Dissolved Sodium		616	mg/L	1	0.500

**Sample: 16214 - MW-4**

Analysis: Ion Chromatography  
QC Batch: 4064  
Prep Batch: 3636

Analytical Method: E 300.0  
Date Analyzed: 2003-08-28  
Date Prepared: 2003-08-27

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

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1170	mg/L	100	0.500
Fluoride		<2.00	mg/L	10	0.200
Sulfate		72.9	mg/L	10	0.500

**Sample: 16214 - MW-4**

Analysis: NO3 (IC)  
QC Batch: 4064  
Prep Batch: 3636

Analytical Method: E 300.0  
Date Analyzed: 2003-08-28  
Date Prepared: 2003-08-27

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

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Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		5.43	mg/L	10	0.200

Sample: 16214 - MW-4

Analysis: TDS Analytical Method: SM 2540C Prep Method: N/A  
QC Batch: 4069 Date Analyzed: 2003-08-29 Analyzed By: JSW  
Prep Batch: 3640 Date Prepared: 2003-08-28 Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		2935	mg/L	5	10.00

Sample: 16215 - MW-8

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		244	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		244	mg/L as CaCO <sub>3</sub>	1	4.00

Sample: 16215 - MW-8

Analysis: Cations Analytical Method: S 6010B Prep Method: S 3005A  
QC Batch: 4200 Date Analyzed: 2003-09-03 Analyzed By: BC  
Prep Batch: 3652 Date Prepared: 2003-08-28 Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		59.4	mg/L	1	0.500
Dissolved Potassium		11.4	mg/L	1	0.500
Dissolved Magnesium		17.3	mg/L	1	0.500
Dissolved Sodium		534	mg/L	1	0.500

Sample: 16215 - MW-8

Analysis: Ion Chromatography      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 4064      Date Analyzed: 2003-08-28      Analyzed By: JSW  
Prep Batch: 3636      Date Prepared: 2003-08-27      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		738	mg/L	50	0.500

*continued . . .*

sample 16215 continued ...

Parameter	Flag	Result	Units	Dilution	RL
Fluoride		2.85	mg/L	5	0.200
Sulfate		159	mg/L	5	0.500

Sample: 16215 - MW-8

Analysis: NO<sub>3</sub> (IC) Analytical Method: E 300.0 Prep Method: N/A  
QC Batch: 4064 Date Analyzed: 2003-08-28 Analyzed By: JSW  
Prep Batch: 3636 Date Prepared: 2003-08-27 Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		6.42	mg/L	5	0.200

Sample: 16215 - MW-8

Analysis: TDS Analytical Method: SM 2540C Prep Method: N/A  
QC Batch: 4069 Date Analyzed: 2003-08-29 Analyzed By: JSW  
Prep Batch: 3640 Date Prepared: 2003-08-28 Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		1996	mg/L	2	10.00

Sample: 16216 - MW-7

Analysis: Alkalinity Analytical Method: SM 2320B Prep Method: N/A  
QC Batch: 4076 Date Analyzed: 2003-08-28 Analyzed By: RS  
Prep Batch: 3647 Date Prepared: 2003-08-28 Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		232	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		232	mg/L as CaCO <sub>3</sub>	1	4.00

Sample: 16216 - MW-7

Analysis: Cations Analytical Method: S 6010B Prep Method: S 3005A  
QC Batch: 4200 Date Analyzed: 2003-09-03 Analyzed By: BC  
Prep Batch: 3652 Date Prepared: 2003-08-28 Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		39.3	mg/L	1	0.500

continued ...

sample 16216 continued ...

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Potassium		7.14	mg/L	1	0.500
Dissolved Magnesium		12.3	mg/L	1	0.500
Dissolved Sodium		309	mg/L	1	0.500

Sample: 16216 - MW-7

Analysis: Ion Chromatography      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 4064      Date Analyzed: 2003-08-28      Analyzed By: JSW  
Prep Batch: 3636      Date Prepared: 2003-08-27      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		367	mg/L	10	0.500
Fluoride		2.77	mg/L	5	0.200
Sulfate		105	mg/L	5	0.500

Sample: 16216 - MW-7

Analysis: NO3 (IC)      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 4064      Date Analyzed: 2003-08-28      Analyzed By: JSW  
Prep Batch: 3636      Date Prepared: 2003-08-27      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		4.07	mg/L	5	0.200

Sample: 16216 - MW-7

Analysis: TDS      Analytical Method: SM 2540C      Prep Method: N/A  
QC Batch: 4069      Date Analyzed: 2003-08-29      Analyzed By: JSW  
Prep Batch: 3640      Date Prepared: 2003-08-28      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		1244	mg/L	4	10.00

Sample: 16217 - MW-2

Analysis: Alkalinity      Analytical Method: SM 2320B      Prep Method: N/A  
QC Batch: 4076      Date Analyzed: 2003-08-28      Analyzed By: RS  
Prep Batch: 3647      Date Prepared: 2003-08-28      Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00

continued ...

*sample 16217 continued ...*

Parameter	Flag	Result	Units	Dilution	RL
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		242	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		242	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 16217 - MW-2**

Analysis: Cations      Analytical Method: S 6010B      Prep Method: S 3005A  
QC Batch: 4200      Date Analyzed: 2003-09-03      Analyzed By: BC  
Prep Batch: 3652      Date Prepared: 2003-08-28      Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		36.1	mg/L	1	0.500
Dissolved Potassium		8.49	mg/L	1	0.500
Dissolved Magnesium		10.8	mg/L	1	0.500
Dissolved Sodium		333	mg/L	1	0.500

**Sample: 16217 - MW-2**

Analysis: Ion Chromatography      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 4064      Date Analyzed: 2003-08-28      Analyzed By: JSW  
Prep Batch: 3636      Date Prepared: 2003-08-27      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		374	mg/L	10	0.500
Fluoride		2.07	mg/L	5	0.200
Sulfate		142	mg/L	5	0.500

**Sample: 16217 - MW-2**

Analysis: NO<sub>3</sub> (IC)      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 4064      Date Analyzed: 2003-08-28      Analyzed By: JSW  
Prep Batch: 3636      Date Prepared: 2003-08-27      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		5.14	mg/L	5	0.200

**Sample: 16217 - MW-2**

Analysis: TDS      Analytical Method: SM 2540C      Prep Method: N/A  
QC Batch: 4069      Date Analyzed: 2003-08-29      Analyzed By: JSW  
Prep Batch: 3640      Date Prepared: 2003-08-28      Prepared By: JSW

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Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		1240	mg/L	4	10.00

**Sample: 16218 - MW-1**

Analysis: Alkalinity      Analytical Method: SM 2320B      Prep Method: N/A  
QC Batch: 4076      Date Analyzed: 2003-08-28      Analyzed By: RS  
Prep Batch: 3647      Date Prepared: 2003-08-28      Prepared By: RS

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		144	mg/L as CaCo3	1	4.00
Total Alkalinity		144	mg/L as CaCo3	1	4.00

**Sample: 16218 - MW-1**

Analysis: Cations      Analytical Method: S 6010B      Prep Method: S 3005A  
QC Batch: 4200      Date Analyzed: 2003-09-03      Analyzed By: BC  
Prep Batch: 3652      Date Prepared: 2003-08-28      Prepared By: TP

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Calcium		92.7	mg/L	1	0.500
Dissolved Potassium		7.17	mg/L	1	0.500
Dissolved Magnesium		31.3	mg/L	1	0.500
Dissolved Sodium		118	mg/L	1	0.500

**Sample: 16218 - MW-1**

Analysis: Ion Chromatography      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 4064      Date Analyzed: 2003-08-28      Analyzed By: JSW  
Prep Batch: 3636      Date Prepared: 2003-08-27      Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		279	mg/L	10	0.500
Fluoride		1.76	mg/L	5	0.200
Sulfate		73.3	mg/L	5	0.500

**Sample: 16218 - MW-1**

Analysis: NO3 (IC)      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 4064      Date Analyzed: 2003-08-28      Analyzed By: JSW  
Prep Batch: 3636      Date Prepared: 2003-08-27      Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Nitrate-N		3.39	mg/L	5	0.200

**Sample: 16218 - MW-1**

Analysis: TDS	Analytical Method: SM 2540C	Prep Method: N/A
QC Batch: 4069	Date Analyzed: 2003-08-29	Analyzed By: JSW
Prep Batch: 3640	Date Prepared: 2003-08-28	Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		856.0	mg/L	4	10.00

**Sample: 16219 - Dup**

Analysis: Alkalinity	Analytical Method: SM 2320B	Prep Method: N/A
QC Batch: 4077	Date Analyzed: 2003-08-28	Analyzed By: RS
Prep Batch: 3648	Date Prepared: 2003-08-28	Prepared By: RS

Parameter	Flag	RL Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		200	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		200	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 16219 - Dup**

Analysis: Cations	Analytical Method: S 6010B	Prep Method: S 3005A
QC Batch: 4200	Date Analyzed: 2003-09-03	Analyzed By: BC
Prep Batch: 3652	Date Prepared: 2003-08-28	Prepared By: TP

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Calcium		159	mg/L	1	0.500
Dissolved Potassium		79.0	mg/L	1	0.500
Dissolved Magnesium		41.8	mg/L	1	0.500
Dissolved Sodium		591	mg/L	1	0.500

**Sample: 16219 - Dup**

Analysis: Ion Chromatography	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 4067	Date Analyzed: 2003-08-28	Analyzed By: JSW
Prep Batch: 3638	Date Prepared: 2003-08-27	Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1260	mg/L	100	0.500

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sample 16219 continued ...

Parameter	Flag	Result	Units	Dilution	RL
Fluoride		<2.00	mg/L	10	0.200
Sulfate		75.5	mg/L	10	0.500

**Sample: 16219 - Dup**

Analysis: NO3 (IC) Analytical Method: E 300.0 Prep Method: N/A  
QC Batch: 4067 Date Analyzed: 2003-08-28 Analyzed By: JSW  
Prep Batch: 3638 Date Prepared: 2003-08-27 Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		5.61	mg/L	10	0.200

**Sample: 16219 - Dup**

Analysis: TDS Analytical Method: SM 2540C Prep Method: N/A  
QC Batch: 4070 Date Analyzed: 2003-08-29 Analyzed By: JSW  
Prep Batch: 3641 Date Prepared: 2003-08-28 Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		3270	mg/L	10	10.00

**Sample: 16220 - MW-5**

Analysis: Alkalinity Analytical Method: SM 2320B Prep Method: N/A  
QC Batch: 4077 Date Analyzed: 2003-08-28 Analyzed By: RS  
Prep Batch: 3648 Date Prepared: 2003-08-28 Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		210	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		210	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 16220 - MW-5**

Analysis: Cations Analytical Method: S 6010B Prep Method: S 3005A  
QC Batch: 4200 Date Analyzed: 2003-09-03 Analyzed By: BC  
Prep Batch: 3652 Date Prepared: 2003-08-28 Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		95.1	mg/L	1	0.500

*continued ...*

sample 16220 continued ...

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Potassium		23.4	mg/L	1	0.500
Dissolved Magnesium		29.0	mg/L	1	0.500
Dissolved Sodium		291	mg/L	1	0.500

Sample: 16220 - MW-5

Analysis: Ion Chromatography      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 4067      Date Analyzed: 2003-08-28      Analyzed By: JSW  
Prep Batch: 3638      Date Prepared: 2003-08-27      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		447	mg/L	50	0.500
Fluoride		1.32	mg/L	5	0.200
Sulfate		141	mg/L	5	0.500

Sample: 16220 - MW-5

Analysis: NO3 (IC)      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 4067      Date Analyzed: 2003-08-28      Analyzed By: JSW  
Prep Batch: 3638      Date Prepared: 2003-08-27      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		4.85	mg/L	5	0.200

Sample: 16220 - MW-5

Analysis: TDS      Analytical Method: SM 2540C      Prep Method: N/A  
QC Batch: 4070      Date Analyzed: 2003-08-29      Analyzed By: JSW  
Prep Batch: 3641      Date Prepared: 2003-08-28      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		1480	mg/L	4	10.00

Sample: 16221 - MW-3

Analysis: Alkalinity      Analytical Method: SM 2320B      Prep Method: N/A  
QC Batch: 4077      Date Analyzed: 2003-08-28      Analyzed By: RS  
Prep Batch: 3648      Date Prepared: 2003-08-28      Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00

continued ...

sample 16221 continued ...

Parameter	Flag	Result	Units	Dilution	RL
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		282	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		282	mg/L as CaCO <sub>3</sub>	1	4.00

Sample: 16221 - MW-3

Analysis: Cations      Analytical Method: S 6010B      Prep Method: S 3005A  
QC Batch: 4156      Date Analyzed: 2003-09-02      Analyzed By: BC  
Prep Batch: 3653      Date Prepared: 2003-08-28      Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		54.9	mg/L	1	0.500
Dissolved Potassium		16.4	mg/L	1	0.500
Dissolved Magnesium		18.0	mg/L	1	0.500
Dissolved Sodium		597	mg/L	1	0.500

Sample: 16221 - MW-3

Analysis: Ion Chromatography      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 4067      Date Analyzed: 2003-08-28      Analyzed By: JSW  
Prep Batch: 3638      Date Prepared: 2003-08-27      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		799	mg/L	100	0.500
Fluoride		3.00	mg/L	10	0.200
Sulfate		198	mg/L	10	0.500

Sample: 16221 - MW-3

Analysis: NO<sub>3</sub> (IC)      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 4067      Date Analyzed: 2003-08-28      Analyzed By: JSW  
Prep Batch: 3638      Date Prepared: 2003-08-27      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		7.99	mg/L	10	0.200

Sample: 16221 - MW-3

Analysis: TDS      Analytical Method: SM 2540C      Prep Method: N/A  
QC Batch: 4070      Date Analyzed: 2003-08-29      Analyzed By: JSW  
Prep Batch: 3641      Date Prepared: 2003-08-28      Prepared By: JSW

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Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		2320	mg/L	5	10.00

**Sample: 16222 - MW-6**

Analysis: Alkalinity  
QC Batch: 4077  
Prep Batch: 3648

Analytical Method: SM 2320B  
Date Analyzed: 2003-08-28  
Date Prepared: 2003-08-28

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

Parameter	Flag	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		246	mg/L as CaCo3	1	4.00
Total Alkalinity		246	mg/L as CaCo3	1	4.00

**Sample: 16222 - MW-6**

Analysis: Cations  
QC Batch: 4156  
Prep Batch: 3653

Analytical Method: S 6010B  
Date Analyzed: 2003-09-02  
Date Prepared: 2003-08-28

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

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		35.9	mg/L	1	0.500
Dissolved Potassium		12.2	mg/L	1	0.500
Dissolved Magnesium		11.6	mg/L	1	0.500
Dissolved Sodium		525	mg/L	1	0.500

**Sample: 16222 - MW-6**

Analysis: Ion Chromatography  
QC Batch: 4067  
Prep Batch: 3638

Analytical Method: E 300.0  
Date Analyzed: 2003-08-28  
Date Prepared: 2003-08-27

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

Parameter	Flag	Result	Units	Dilution	RL
Chloride		607	mg/L	50	0.500
Fluoride		2.95	mg/L	5	0.200
Sulfate		179	mg/L	5	0.500

**Sample: 16222 - MW-6**

Analysis: NO3 (IC)  
QC Batch: 4067  
Prep Batch: 3638

Analytical Method: E 300.0  
Date Analyzed: 2003-08-28  
Date Prepared: 2003-08-27

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

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Parameter	Flag	RL Result	Units	Dilution	RL
Nitrate-N		6.65	mg/L	5	0.200

**Sample: 16222 - MW-6**

Analysis: TDS                          Analytical Method: SM 2540C                          Prep Method: N/A  
QC Batch: 4070                          Date Analyzed: 2003-08-29                          Analyzed By: JSW  
Prep Batch: 3641                          Date Prepared: 2003-08-28                          Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		2370	mg/L	10	10.00

**Sample: 16223 - MW-13**

Analysis: Alkalinity                          Analytical Method: SM 2320B                          Prep Method: N/A  
QC Batch: 4077                          Date Analyzed: 2003-08-28                          Analyzed By: RS  
Prep Batch: 3648                          Date Prepared: 2003-08-28                          Prepared By: RS

Parameter	Flag	RL Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		92.0	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		92.0	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 16223 - MW-13**

Analysis: Cations                          Analytical Method: S 6010B                          Prep Method: S 3005A  
QC Batch: 4156                          Date Analyzed: 2003-09-02                          Analyzed By: BC  
Prep Batch: 3653                          Date Prepared: 2003-08-28                          Prepared By: TP

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Calcium		179	mg/L	1	0.500
Dissolved Potassium		12.0	mg/L	1	0.500
Dissolved Magnesium		66.0	mg/L	1	0.500
Dissolved Sodium		95.6	mg/L	1	0.500

**Sample: 16223 - MW-13**

Analysis: Ion Chromatography                          Analytical Method: E 300.0                          Prep Method: N/A  
QC Batch: 4067                          Date Analyzed: 2003-08-28                          Analyzed By: JSW  
Prep Batch: 3638                          Date Prepared: 2003-08-27                          Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		500	mg/L	10	0.500

*continued ...*

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sample 16223 continued ...

Parameter	Flag	Result	Units	Dilution	RL
Fluoride		2.10	mg/L	5	0.200
Sulfate		115	mg/L	5	0.500

Sample: 16223 - MW-13

Analysis: NO<sub>3</sub> (IC)      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 4067      Date Analyzed: 2003-08-28      Analyzed By: JSW  
Prep Batch: 3638      Date Prepared: 2003-08-27      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		4.23	mg/L	5	0.200

Sample: 16223 - MW-13

Analysis: TDS      Analytical Method: SM 2540C      Prep Method: N/A  
QC Batch: 4070      Date Analyzed: 2003-08-29      Analyzed By: JSW  
Prep Batch: 3641      Date Prepared: 2003-08-28      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		1360	mg/L	2	10.00

Sample: 16224 - MW-12

Analysis: Alkalinity      Analytical Method: SM 2320B      Prep Method: N/A  
QC Batch: 4077      Date Analyzed: 2003-08-28      Analyzed By: RS  
Prep Batch: 3648      Date Prepared: 2003-08-28      Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		66.0	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		66.0	mg/L as CaCO <sub>3</sub>	1	4.00

Sample: 16224 - MW-12

Analysis: Cations      Analytical Method: S 6010B      Prep Method: S 3005A  
QC Batch: 4156      Date Analyzed: 2003-09-02      Analyzed By: BC  
Prep Batch: 3653      Date Prepared: 2003-08-28      Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		525	mg/L	1	0.500

continued ...

sample 16224 continued ...

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Potassium		14.8	mg/L	1	0.500
Dissolved Magnesium		.178	mg/L	1	0.500
Dissolved Sodium		156	mg/L	1	0.500

Sample: 16224 - MW-12

Analysis: Ion Chromatography  
QC Batch: 4068  
Prep Batch: 3639

Analytical Method: E 300.0  
Date Analyzed: 2003-08-28  
Date Prepared: 2003-08-27

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

Parameter	Flag	Result	Units	Dilution	RL
Chloride		1550	mg/L	100	0.500
Fluoride		.<2.0	mg/L	10	0.200
Sulfate		45.9	mg/L	10	0.500

Sample: 16224 - MW-12

Analysis: NO3 (IC)  
QC Batch: 4068  
Prep Batch: 3639

Analytical Method: E 300.0  
Date Analyzed: 2003-08-28  
Date Prepared: 2003-08-27

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

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		4.94	mg/L	10	0.200

Sample: 16224 - MW-12

Analysis: TDS  
QC Batch: 4070  
Prep Batch: 3641

Analytical Method: SM 2540C  
Date Analyzed: 2003-08-29  
Date Prepared: 2003-08-28

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

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		3855	mg/L	5	10.00

Sample: 16225 - MW-10

Analysis: Alkalinity  
QC Batch: 4077  
Prep Batch: 3648

Analytical Method: SM 2320B  
Date Analyzed: 2003-08-28  
Date Prepared: 2003-08-28

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

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00

continued ...

sample 16225 continued ...

Parameter	Flag	Result	Units	Dilution	RL
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		188	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		188	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 16225 - MW-10**

Analysis: Cations      Analytical Method: S 6010B      Prep Method: S 3005A  
QC Batch: 4156      Date Analyzed: 2003-09-02      Analyzed By: BC  
Prep Batch: 3653      Date Prepared: 2003-08-28      Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		70.6	mg/L	1	0.500
Dissolved Potassium		6.29	mg/L	1	0.500
Dissolved Magnesium		23.4	mg/L	1	0.500
Dissolved Sodium		72.3	mg/L	1	0.500

**Sample: 16225 - MW-10**

Analysis: Ion Chromatography      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 4062      Date Analyzed: 2003-08-28      Analyzed By: JSW  
Prep Batch: 3633      Date Prepared: 2003-08-27      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		56.1	mg/L	5	0.500
Fluoride		1.58	mg/L	5	0.200
Sulfate		125	mg/L	5	0.500

**Sample: 16225 - MW-10**

Analysis: NO<sub>3</sub> (IC)      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 4062      Date Analyzed: 2003-08-28      Analyzed By: JSW  
Prep Batch: 3633      Date Prepared: 2003-08-27      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		4.10	mg/L	5	0.200

**Sample: 16225 - MW-10**

Analysis: TDS      Analytical Method: SM 2540C      Prep Method: N/A  
QC Batch: 4070      Date Analyzed: 2003-08-29      Analyzed By: JSW  
Prep Batch: 3641      Date Prepared: 2003-08-28      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		688.0	mg/L	4	10.00

Method Blank (1) QC Batch: 4062

Parameter	Flag	Result	Units	RL
Nitrate-N		<0.200	mg/L	0.2

Method Blank (1) QC Batch: 4062

Parameter	Flag	Result	Units	RL
Chloride		<0.500	mg/L	0.5
Fluoride		<0.200	mg/L	0.2
Sulfate		<0.500	mg/L	0.5

Method Blank (1) QC Batch: 4064

Parameter	Flag	Result	Units	RL
Nitrate-N		<0.200	mg/L	0.2

Method Blank (1) QC Batch: 4064

Parameter	Flag	Result	Units	RL
Chloride		<0.500	mg/L	0.5
Fluoride		<0.200	mg/L	0.2
Sulfate		<0.500	mg/L	0.5

Method Blank (1) QC Batch: 4067

Parameter	Flag	Result	Units	RL
Nitrate-N		<0.200	mg/L	0.2

Method Blank (1) QC Batch: 4067

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Parameter	Flag	Result	Units	RL
Chloride		<0.500	mg/L	0.5
Fluoride		<0.200	mg/L	0.2
Sulfate		<0.500	mg/L	0.5

Method Blank (1) QC Batch: 4068

Parameter	Flag	Result	Units	RL
Nitrate-N		<0.200	mg/L	0.2

Method Blank (1) QC Batch: 4068

Parameter	Flag	Result	Units	RL
Chloride		<0.500	mg/L	0.5
Fluoride		<0.200	mg/L	0.2
Sulfate		<0.500	mg/L	0.5

Method Blank (1) QC Batch: 4069

Parameter	Flag	Result	Units	RL
Total Dissolved Solids		<10.00	mg/L	10

Method Blank (1) QC Batch: 4070

Parameter	Flag	Result	Units	RL
Total Dissolved Solids		<10.00	mg/L	10

Method Blank (1) QC Batch: 4076

Parameter	Flag	Result	Units	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1
Bicarbonate Alkalinity		<4.00	mg/L as CaCO <sub>3</sub>	4
Total Alkalinity		<4.00	mg/L as CaCO <sub>3</sub>	4

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Method Blank (1) QC Batch: 4077

Parameter	Flag	Result	Units	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1
Bicarbonate Alkalinity		<4.00	mg/L as CaCO <sub>3</sub>	4
Total Alkalinity		<4.00	mg/L as CaCO <sub>3</sub>	4

Method Blank (1) QC Batch: 4156

Parameter	Flag	Result	Units	RL
Dissolved Calcium		<0.500	mg/L	0.5
Dissolved Potassium		<0.500	mg/L	0.5
Dissolved Magnesium		<0.500	mg/L	0.5
Dissolved Sodium		<0.500	mg/L	0.5

Method Blank (1) QC Batch: 4200

Parameter	Flag	Result	Units	RL
Dissolved Calcium		<0.500	mg/L	0.5
Dissolved Potassium		<0.500	mg/L	0.5
Dissolved Magnesium		<0.500	mg/L	0.5
Dissolved Sodium		<0.500	mg/L	0.5

Duplicate (1) QC Batch: 4069

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	1068	1066	mg/L	2	0	14.2

Duplicate (1) QC Batch: 4070

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	2240	2320	mg/L	5	4	14.2

Duplicate (1) QC Batch: 4076

*continued . . .*

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Hydroxide Alkalinity	<1.00	<1.00	mg/L as CaCo3	1	0	5.81
Carbonate Alkalinity	<1.00	<1.00	mg/L as CaCo3	1	0	5.81
Bicarbonate Alkalinity	142	144	mg/L as CaCo3	1	1	5.81
Total Alkalinity	142	144	mg/L as CaCo3	1	1	5.81

**Duplicate (1) QC Batch: 4077**

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Hydroxide Alkalinity	<1.00	<1.00	mg/L as CaCo3	1	0	5.81
Carbonate Alkalinity	<1.00	<1.00	mg/L as CaCo3	1	0	5.81
Bicarbonate Alkalinity	218	216	mg/L as CaCo3	1	1	5.81
Total Alkalinity	218	216	mg/L as CaCo3	1	1	5.81

**Laboratory Control Spike (LCS-1) QC Batch: 4062**

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Nitrate-N	2.33	2.32	mg/L	1	2.50	<0.126	93	0	90 - 110	20

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

**Laboratory Control Spike (LCS-1) QC Batch: 4062**

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	11.3	11.2	mg/L	1	12.5	<1.49	90	1	90 - 110	20
Fluoride	2.35	2.37	mg/L	1	2.50	<0.0153	94	1	90 - 110	20
Sulfate	11.5	11.5	mg/L	1	12.5	<0.171	92	0	90 - 110	20

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

**Laboratory Control Spike (LCS-1) QC Batch: 4064**

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Nitrate-N	2.33	2.31	mg/L	1	2.50	<0.126	93	1	90 - 110	20

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

**Laboratory Control Spike (LCS-1) QC Batch: 4064**

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	11.2	11.2	mg/L	1	12.5	<1.49	90	0	90 - 110	20
Fluoride	2.32	2.34	mg/L	1	2.50	<0.0153	93	1	90 - 110	20
Sulfate	11.4	11.5	mg/L	1	12.5	<0.171	91	1	90 - 110	20

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

**Laboratory Control Spike (LCS-1) QC Batch: 4067**

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Nitrate-N	2.31	2.31	mg/L	1	2.50	<0.126	92	0	90 - 110	20

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

**Laboratory Control Spike (LCS-1) QC Batch: 4067**

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	11.2	11.2	mg/L	1	12.5	<1.49	90	0	90 - 110	20
Fluoride	2.33	2.32	mg/L	1	2.50	<0.0153	93	0	90 - 110	20
Sulfate	11.4	11.4	mg/L	1	12.5	<0.171	91	0	90 - 110	20

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

**Laboratory Control Spike (LCS-1) QC Batch: 4068**

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Nitrate-N	2.30	2.31	mg/L	1	2.50	<0.126	92	0	90 - 110	20

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

**Laboratory Control Spike (LCS-1) QC Batch: 4068**

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	12.3	12.3	mg/L	1	12.5	<1.49	98	0	90 - 110	20
Fluoride	2.34	2.35	mg/L	1	2.50	<0.0153	94	0	90 - 110	20
Sulfate	12.3	12.3	mg/L	1	12.5	<0.171	98	0	90 - 110	20

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

**Laboratory Control Spike (LCS-1) QC Batch: 4156**

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Dissolved Calcium	98.9	96.2	mg/L	1	100	<0.183	99	3	85 - 115	20
Dissolved Potassium	95.2	95.6	mg/L	1	100	<0.135	95	0	85 - 115	20
Dissolved Magnesium	98.9	101	mg/L	1	100	<0.183	99	2	85 - 115	20

*continued ...*

*control spikes continued ...*

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Dissolved Sodium	104	101	mg/L	1	100	<0.105	104	3	85 - 115	20

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

**Laboratory Control Spike (LCS-1)** QC Batch: 4200

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Dissolved Calcium	103	103	mg/L	1	100	<0.183	103	0	85 - 115	20
Dissolved Potassium	104	103	mg/L	1	100	<0.135	104	1	85 - 115	20
Dissolved Magnesium	102	103	mg/L	1	100	<0.183	102	1	85 - 115	20
Dissolved Sodium	105	106	mg/L	1	100	<0.105	105	1	85 - 115	20

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

**Matrix Spike (MS-1)** QC Batch: 4062

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Nitrate-N	253	253	mg/L	100	2.50	24.1	92	0	62.2 - 121	20

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

**Matrix Spike (MS-1)** QC Batch: 4062

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	2260	2270	mg/L	100	12.5	1190	86	0	32.7 - 136	20
Fluoride	237	235	mg/L	100	2.50	<1.53	95	1	30.1 - 187	20
Sulfate	1440	1430	mg/L	100	12.5	301	91	1	69.9 - 114	20

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

**Matrix Spike (MS-1)** QC Batch: 4064

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Nitrate-N	130	127	mg/L	50	2.50	15.4	92	2	62.2 - 121	20

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

**Matrix Spike (MS-1)** QC Batch: 4064

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	1290	1280	mg/L	50	12.5	738	88	1	32.7 - 136	20
Fluoride	118	119	mg/L	50	2.50	7.22	89	1	30.1 - 187	20
Sulfate	740	739	mg/L	50	12.5	175	90	0	69.9 - 114	20

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

Matrix Spike (MS-1) QC Batch: 4067

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Nitrate-N	122	128	mg/L	50	2.50	15.4	85	5	62.2 - 121	20

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

Matrix Spike (MS-1) QC Batch: 4067

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	1180	1170	mg/L	50	12.5	607	92	1	32.7 - 136	20
Fluoride	111	118	mg/L	50	2.50	7.1	83	6	30.1 - 187	20
Sulfate	739	756	mg/L	50	12.5	186	88	2	69.9 - 114	20

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

Matrix Spike (MS-1) QC Batch: 4068

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Nitrate-N	2450	2440	mg/L	1000	2.50	<126	98	0	62.2 - 121	20

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

Matrix Spike (MS-1) QC Batch: 4068

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	26100	26000	mg/L	1000	12.5	14800	90	0	32.7 - 136	20
Fluoride	2340	2350	mg/L	1000	2.50	<15.3	94	0	30.1 - 187	20
Sulfate	18100	18100	mg/L	1000	12.5	6050	96	0	69.9 - 114	20

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

Matrix Spike (MS-1) QC Batch: 4156

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Dissolved Calcium	285	260	mg/L	1	100	179	106	9	75 - 125	20
Dissolved Potassium	119	118	mg/L	1	100	12	107	1	75 - 125	20
Dissolved Magnesium	168	155	mg/L	1	100	66	102	8	75 - 125	20
Dissolved Sodium	194	188	mg/L	1	100	95.6	98	3	75 - 125	20

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

Matrix Spike (MS-1) QC Batch: 4200

*continued ...*

*matrix spikes continued . . .*

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Dissolved Calcium	<sup>12</sup> 1100	1070	mg/L	1	100	927	173	3	75 - 125	20
Dissolved Potassium	289	299	mg/L	1	100	178	111	3	75 - 125	20
Dissolved Magnesium	<sup>3</sup> 1640	1510	mg/L	1	100	1430	210	8	75 - 125	20
Dissolved Sodium	<sup>45</sup> 7350	7720	mg/L	1	100	8710	-1360	5	75 - 125	20

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

**Matrix Spike (MS-2)** QC Batch: 4200

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Dissolved Calcium	<sup>6</sup> 251	233	mg/L	1	100	117	134	7	75 - 125	20
Dissolved Potassium	170	153	mg/L	1	100	49.7	120	10	75 - 125	20
Dissolved Magnesium	156	145	mg/L	1	100	33.6	122	7	75 - 125	20
Dissolved Sodium	<sup>78</sup> 1090	969	mg/L	1	100	774	316	12	75 - 125	20

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

**Standard (ICV-1)** QC Batch: 4062

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.32	93	90 - 110	2003-08-28

**Standard (ICV-1)** QC Batch: 4062

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.3	90	90 - 110	2003-08-28
Fluoride		mg/L	2.50	2.41	96	90 - 110	2003-08-28
Sulfate		mg/L	12.5	11.5	92	90 - 110	2003-08-28

**Standard (CCV-1)** QC Batch: 4062

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.31	92	90 - 110	2003-08-28

<sup>1</sup>ms recovery out of limits due to matrix effect, use lcs/lcsd

<sup>2</sup>ms recovery out of limits due to matrix effect, use lcs/lcsd

<sup>3</sup>ms recovery out of limits due to matrix effect, use lcs/lcsd

<sup>4</sup>ms recovery out of limits due to matrix effect, use lcs/lcsd

<sup>5</sup>ms recovery out of limits due to matrix effect, use lcs/lcsd

<sup>6</sup>ms recovery out of limits due to matrix effect, use lcs/lcsd

<sup>7</sup>ms recovery out of limits due to matrix effect, use lcs/lcsd

<sup>8</sup>ms recovery out of limits due to matrix effect, use lcs/lcsd

Standard (CCV-1) QC Batch: 4062

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.2	90	90 - 110	2003-08-28
Fluoride		mg/L	2.50	2.39	96	90 - 110	2003-08-28
Sulfate		mg/L	12.5	11.5	92	90 - 110	2003-08-28

Standard (ICV-1) QC Batch: 4064

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.31	92	90 - 110	2003-08-28

Standard (ICV-1) QC Batch: 4064

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.2	90	90 - 110	2003-08-28
Fluoride		mg/L	2.50	2.39	96	90 - 110	2003-08-28
Sulfate		mg/L	12.5	11.5	92	90 - 110	2003-08-28

Standard (CCV-1) QC Batch: 4064

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.30	92	90 - 110	2003-08-28

Standard (CCV-1) QC Batch: 4064

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.2	90	90 - 110	2003-08-28
Fluoride		mg/L	2.50	2.35	94	90 - 110	2003-08-28
Sulfate		mg/L	12.5	11.4	91	90 - 110	2003-08-28

Standard (ICV-1) QC Batch: 4067

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.30	92	90 - 110	2003-08-28

Standard (ICV-1) QC Batch: 4067

Report Date: September 16, 2003  
0-0112

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G.L. Erwin

Page Number: 32 of 36

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.2	90	90 - 110	2003-08-28
Fluoride		mg/L	2.50	2.35	94	90 - 110	2003-08-28
Sulfate		mg/L	12.5	11.4	91	90 - 110	2003-08-28

Standard (CCV-1) QC Batch: 4067

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.31	92	90 - 110	2003-08-28

Standard (CCV-1) QC Batch: 4067

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.2	90	90 - 110	2003-08-28
Fluoride		mg/L	2.50	2.29	92	90 - 110	2003-08-28
Sulfate		mg/L	12.5	11.4	91	90 - 110	2003-08-28

Standard (ICV-1) QC Batch: 4068

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.31	92	90 - 110	2003-08-28

Standard (ICV-1) QC Batch: 4068

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.2	90	90 - 110	2003-08-28
Fluoride		mg/L	2.50	2.29	92	90 - 110	2003-08-28
Sulfate		mg/L	12.5	11.4	91	90 - 110	2003-08-28

Standard (CCV-1) QC Batch: 4068

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.32	93	90 - 110	2003-08-28

Standard (CCV-1) QC Batch: 4068

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	12.3	98	90 - 110	2003-08-28
Fluoride		mg/L	2.50	2.35	94	90 - 110	2003-08-28
Sulfate		mg/L	12.5	12.3	98	90 - 110	2003-08-28

Standard (ICV-1) QC Batch: 4069

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1021	102	90 - 110	2003-08-29

Standard (CCV-1) QC Batch: 4069

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1024	102	90 - 110	2003-08-29

Standard (ICV-1) QC Batch: 4070

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1024	102	90 - 110	2003-08-29

Standard (CCV-1) QC Batch: 4070

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1039	104	90 - 110	2003-08-29

Standard (ICV-1) QC Batch: 4076

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCO <sub>3</sub>	0.00	<1.00		0 - 200	2003-08-28
Carbonate Alkalinity		mg/L as CaCO <sub>3</sub>	0.00	<1.00		0 - 200	2003-08-28
Bicarbonate Alkalinity		mg/L as CaCO <sub>3</sub>	0.00	<4.00		0 - 200	2003-08-28
Total Alkalinity		mg/L as CaCO <sub>3</sub>	250	244	98	90 - 110	2003-08-28

Standard (CCV-1) QC Batch: 4076

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	2003-08-28
Carbonate Alkalinity		mg/L as CaCo3	0.00	<1.00		0 - 200	2003-08-28
Bicarbonate Alkalinity		mg/L as CaCo3	0.00	<4.00		0 - 200	2003-08-28
Total Alkalinity		mg/L as CaCo3	250	240	96	90 - 110	2003-08-28

Standard (ICV-1) QC Batch: 4077

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	2003-08-28
Carbonate Alkalinity		mg/L as CaCo3	0.00	<1.00		0 - 200	2003-08-28
Bicarbonate Alkalinity		mg/L as CaCo3	0.00	<4.00		0 - 200	2003-08-28
Total Alkalinity		mg/L as CaCo3	250	240	96	90 - 110	2003-08-28

Standard (CCV-1) QC Batch: 4077

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	2003-08-28
Carbonate Alkalinity		mg/L as CaCo3	0.00	<1.00		0 - 200	2003-08-28
Bicarbonate Alkalinity		mg/L as CaCo3	0.00	<4.00		0 - 200	2003-08-28
Total Alkalinity		mg/L as CaCo3	250	240	96	90 - 110	2003-08-28

Standard (ICV-1) QC Batch: 4156

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25.0	25.1	100	90 - 110	2003-09-02
Dissolved Potassium		mg/L	25.0	24.9	100	90 - 110	2003-09-02
Dissolved Magnesium		mg/L	25.0	25.1	100	90 - 110	2003-09-02
Dissolved Sodium		mg/L	25.0	26.2	105	90 - 110	2003-09-02

Standard (CCV-1) QC Batch: 4156

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25.0	25.2	101	90 - 110	2003-09-02
Dissolved Potassium		mg/L	25.0	24.4	98	90 - 110	2003-09-02
Dissolved Magnesium		mg/L	25.0	24.6	98	90 - 110	2003-09-02
Dissolved Sodium		mg/L	25.0	25.7	103	90 - 110	2003-09-02

Standard (ICV-1) QC Batch: 4200

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25.0	25.2	101	90 - 110	2003-09-03
Dissolved Potassium		mg/L	25.0	24.9	100	90 - 110	2003-09-03
Dissolved Magnesium		mg/L	25.0	25.1	100	90 - 110	2003-09-03
Dissolved Sodium		mg/L	25.0	25.3	101	90 - 110	2003-09-03

**Standard (CCV-1)** QC Batch: 4200

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25.0	25.6	102	90 - 110	2003-09-03
Dissolved Potassium		mg/L	25.0	25.4	102	90 - 110	2003-09-03
Dissolved Magnesium		mg/L	25.0	25.2	101	90 - 110	2003-09-03
Dissolved Sodium		mg/L	25.0	24.5	98	90 - 110	2003-09-03

**Standard (CCV-2)** QC Batch: 4200

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25.0	24.5	98	90 - 110	2003-09-03
Dissolved Potassium		mg/L	25.0	24.6	98	90 - 110	2003-09-03
Dissolved Magnesium		mg/L	25.0	24.3	97	90 - 110	2003-09-03
Dissolved Sodium		mg/L	25.0	24.5	98	90 - 110	2003-09-03

16209-23

3082714

## CHAIN—OF—CUSTODY RECORD

CLIENT NAME:	SITE MANAGER:	PARAMETERS/METHOD NUMBER			
		DATE	TIME	WATER	SAMPLE IDENTIFICATION
16209 Tex.	<i>J. H. Jones</i>	PAGE 1 OF	LAB. PO #		
PROJECT NO.:	CD-0112				
NUMBER OF CONTAINERS					
8/25/03	10220	/	(S) 10220-1	1	1
10253	/	/	raw-9	1	1
1112	/	/	(S) raw	1	1
1130	/	/	SW-MW	1	1
1147	/	/	RWJ-1	1	1
1235	/	/	MW-2	1	1
1255	/	/	MW-8	1	1
1404	/	/	MW-7	1	1
1426	/	/	raw-2	1	1
1445	/	/	raw-1	1	1
8/26/03	0807	/	Dust	1	1
8/26/03	0830	/	MW-5	1	1
0905	/	/	MW-3	1	1
0913	/	/	MW-13	1	1
0938	/	/	MW-12	1	1
0953	/	/	MW-10	1	1
COMMENTS					
SAMPLED BY: <i>J. H. Jones</i>	RELINQUISHED BY: <i>Nellie Jackson</i>	DATE: 8/25/03	TIME: 10:00 AM	RECEIVED BY: <i>Nellie Jackson</i>	DATE: 8/26/03
RELINQUISHED BY: <i>J. H. Jones</i>	RECEIVED BY: <i>Nellie Jackson</i>	DATE: 8/26/03	TIME: 10:00 AM	RECEIVED BY: <i>Nellie Jackson</i>	DATE: 8/27/03
RECEIVING LABORATORY: <i>Arson &amp; Associates Inc.</i>	RECEIVED BY: (Signature)	RECEIVED BY: (Signature)	RECEIVED BY: (Signature)	RECEIVED BY: (Signature)	RECEIVED BY: (Signature)
ADDRESS: _____	STATE: _____	TIME: 10:00 AM	TIME: 10:00 AM	TIME: 10:00 AM	TIME: 10:00 AM
CITY: _____	ZIP: _____	PHONE: _____	PHONE: _____	PHONE: _____	PHONE: _____
SAMPLE CONDITION WHEN RECEIVED:					
<i>dry/glass</i>					
SAMPLE TYPE:					
<i>17 A sample - HS</i>					
DATE: 9/8/03 TIME: 9:00 AM					

*A*rson &  
SSOCIATES, Inc.  
Environmental Consultants  
915-687-0456  
507 N. Marienfeld, Ste. 202 • Midland, TX 79701

REMARKS  
(I.E. FILTERED, UNFILTERED,  
PRESERVED, UNPRESERVED,  
GRAB COMPOSITE)

LAB. I.D.  
NUMBER  
(LAB USE ONLY)

16209  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

6/26/03  
10:00 AM

RECEIVED BY: (Signature)

7/26/03  
10:00 AM

RECEIVED BY: (Signature)

SAMPLE TYPE:

LA CONTACT PERSON:  
*John Jones*

SAMPLE CONDITION WHEN RECEIVED:  
*dry/glass*

RECEIVING LAB TO BE RETURNED TO  
LA AFTER RECEIPT  
WHITE — RECEIVING LAB  
YELLOW — RECEIVING LAB  
PROJECT MANAGER  
AIRBILL #: *BUS*  
FEDEX  
HAND DELIVERED  
OTHER: *UPS*

PINK — QA/QC COORDINATOR  
GOLD — QA/QC COORDINATOR

17 A sample - HS  
9/8/03

4°C

# TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298  
155 McCutcheon, Suite H El Paso, Texas 79932 888•588•3443 915•585•3443 FAX 915•585•4944  
E-Mail: lab@traceanalysis.com

## Analytical and Quality Control Report

Cindy Crain  
Larson and Associates, Inc.  
P. O. Box 50685  
Midland, Tx 79710

Report Date: November 18, 2003

Work Order: 3111001

Project Name: G.L. Erwin  
Project Number: 0-0112

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
20983	MW-17	water	2003-11-05	12:09	2003-11-08
20984	MW-14	water	2003-11-05	12:29	2003-11-08
20985	MW-7	water	2003-11-05	13:03	2003-11-08
20986	MW-2	water	2003-11-05	13:20	2003-11-08
20987	MW-1	water	2003-11-05	13:35	2003-11-08
20988	Dup	water	2003-11-05	00:00	2003-11-08
20989	MW-16	water	2003-11-06	14:02	2003-11-08
20990	MW-12	water	2003-11-06	14:12	2003-11-08
20991	MW-13	water	2003-11-06	14:20	2003-11-08
20992	MW-6	water	2003-11-06	14:47	2003-11-08
20993	MW-3	water	2003-11-06	15:09	2003-11-08
20994	MW-5	water	2003-11-06	15:26	2003-11-08
20995	Dup	water	2003-11-06	00:00	2003-11-08
20996	MW-9	water	2003-11-07	08:31	2003-11-08
20997	WW-1	water	2003-11-07	09:17	2003-11-08
20999	MW-4	water	2003-11-07	10:14	2003-11-08
21000	RW-1	water	2003-11-07	10:34	2003-11-08
21001	SW-MW	water	2003-11-07	10:38	2003-11-08
21002	W-MW	water	2003-11-07	11:10	2003-11-08
21003	MW-8	water	2003-11-07	11:45	2003-11-08
21004	MW-10	water	2003-11-07	11:21	2003-11-08

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

*Michael T. Leftwich*

Dr. Blair Leftwich, Director

## Analytical Report

Sample: 20983 - MW-17

Analysis: Alkalinity	Analytical Method: SM 2320B	Prep Method: N/A
QC Batch: 5679	Date Analyzed: 2003-11-11	Analyzed By: RS
Prep Batch: 5071	Date Prepared: 2003-11-11	Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		154	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		154	mg/L as CaCO <sub>3</sub>	1	4.00

Sample: 20983 - MW-17

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5030B
QC Batch: 5623	Date Analyzed: 2003-11-10	Analyzed By: MT
Prep Batch: 5030	Date Prepared: 2003-11-10	Prepared By: MT

Parameter	Flag	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 (isomers)		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0944	mg/L	1	0.100	94	70 - 130
4-Bromofluorobenzene (4-BFB)		0.0944	mg/L	1	0.100	94	70 - 130

Sample: 20983 - MW-17

Analysis: Cations	Analytical Method: S 6010B	Prep Method: S 3005A
QC Batch: 5796	Date Analyzed: 2003-11-18	Analyzed By: RR
Prep Batch: 5079	Date Prepared: 2003-11-12	Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		177	mg/L	1	0.500
Dissolved Potassium		12.5	mg/L	1	0.500
Dissolved Magnesium		58.2	mg/L	1	0.500
Dissolved Sodium		184	mg/L	1	0.500

Sample: 20983 - MW-17

Analysis: Ion Chromatography	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 5631	Date Analyzed: 2003-11-11	Analyzed By: JSW
Prep Batch: 5034	Date Prepared: 2003-11-10	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		587	mg/L	50	0.500
Fluoride		2.06	mg/L	5	0.200
Sulfate		104	mg/L	5	0.500

**Sample: 20983 - MW-17**

Analysis: NO<sub>3</sub> (IC)      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 5631      Date Analyzed: 2003-11-11      Analyzed By: JSW  
Prep Batch: 5034      Date Prepared: 2003-11-10      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		3.85	mg/L	5	0.200

**Sample: 20983 - MW-17**

Analysis: TDS      Analytical Method: SM 2540C      Prep Method: N/A  
QC Batch: 5637      Date Analyzed: 2003-11-12      Analyzed By: JSW  
Prep Batch: 5042      Date Prepared: 2003-11-11      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		1556	mg/L	2	10.00

**Sample: 20984 - MW-14**

Analysis: Alkalinity      Analytical Method: SM 2320B      Prep Method: N/A  
QC Batch: 5679      Date Analyzed: 2003-11-11      Analyzed By: RS  
Prep Batch: 5071      Date Prepared: 2003-11-11      Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		100	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		100	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 20984 - MW-14**

Analysis: BTEX      Analytical Method: S 8021B      Prep Method: S 5030B  
QC Batch: 5623      Date Analyzed: 2003-11-10      Analyzed By: MT  
Prep Batch: 5030      Date Prepared: 2003-11-10      Prepared By: MT

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

*continued ...*

sample 20984 continued ...

Parameter	Flag	Result	Units	Dilution	RL
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene (isomers)		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.101	mg/L	1	0.100	101	70 - 130
4-Bromofluorobenzene (4-BFB)		0.0972	mg/L	1	0.100	97	70 - 130

## Sample: 20984 - MW-14

Analysis: Cations      Analytical Method: S 6010B      Prep Method: S 3005A  
QC Batch: 5796      Date Analyzed: 2003-11-18      Analyzed By: RR  
Prep Batch: 5079      Date Prepared: 2003-11-12      Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		951	mg/L	1	0.500
Dissolved Potassium		45.3	mg/L	1	0.500
Dissolved Magnesium		324	mg/L	1	0.500
Dissolved Sodium		732	mg/L	1	0.500

## Sample: 20984 - MW-14

Analysis: Ion Chromatography      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 5631      Date Analyzed: 2003-11-11      Analyzed By: JSW  
Prep Batch: 5034      Date Prepared: 2003-11-10      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		3500	mg/L	500	0.500
Fluoride		<4.00	mg/L	20	0.200
Sulfate		525	mg/L	20	0.500

## Sample: 20984 - MW-14

Analysis: NO3 (IC)      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 5631      Date Analyzed: 2003-11-11      Analyzed By: JSW  
Prep Batch: 5034      Date Prepared: 2003-11-10      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		6.58	mg/L	20	0.200

## Sample: 20984 - MW-14

Analysis: TDS      Analytical Method: SM 2540C      Prep Method: N/A

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QC Batch: 5637 Date Analyzed: 2003-11-12 Analyzed By: JSW  
Prep Batch: 5042 Date Prepared: 2003-11-11 Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		7315	mg/L	5	10.00

**Sample: 20985 - MW-7**

Analysis: Alkalinity Analytical Method: SM 2320B Prep Method: N/A  
QC Batch: 5679 Date Analyzed: 2003-11-11 Analyzed By: RS  
Prep Batch: 5071 Date Prepared: 2003-11-11 Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		240	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		240	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 20985 - MW-7**

Analysis: Cations Analytical Method: S 6010B Prep Method: S 3005A  
QC Batch: 5796 Date Analyzed: 2003-11-18 Analyzed By: RR  
Prep Batch: 5079 Date Prepared: 2003-11-12 Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		36.6	mg/L	1	0.500
Dissolved Potassium		7.67	mg/L	1	0.500
Dissolved Magnesium		11.4	mg/L	1	0.500
Dissolved Sodium		304	mg/L	1	0.500

**Sample: 20985 - MW-7**

Analysis: Ion Chromatography Analytical Method: E 300.0 Prep Method: N/A  
QC Batch: 5631 Date Analyzed: 2003-11-11 Analyzed By: JSW  
Prep Batch: 5034 Date Prepared: 2003-11-10 Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		343	mg/L	10	0.500
Fluoride		3.08	mg/L	5	0.200
Sulfate		117	mg/L	5	0.500

**Sample: 20985 - MW-7**

Analysis: NO<sub>3</sub> (IC) Analytical Method: E 300.0 Prep Method: N/A  
QC Batch: 5631 Date Analyzed: 2003-11-11 Analyzed By: JSW  
Prep Batch: 5034 Date Prepared: 2003-11-10 Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		4.16	mg/L	5	0.200

**Sample: 20985 - MW-7**

Analysis: TDS	Analytical Method: SM 2540C	Prep Method: N/A
QC Batch: 5637	Date Analyzed: 2003-11-12	Analyzed By: JSW
Prep Batch: 5042	Date Prepared: 2003-11-11	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		1186	mg/L	2	10.00

**Sample: 20986 - MW-2**

Analysis: Alkalinity	Analytical Method: SM 2320B	Prep Method: N/A
QC Batch: 5678	Date Analyzed: 2003-11-11	Analyzed By: RS
Prep Batch: 5072	Date Prepared: 2003-11-11	Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		232	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		232	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 20986 - MW-2**

Analysis: Cations	Analytical Method: S 6010B	Prep Method: S 3005A
QC Batch: 5796	Date Analyzed: 2003-11-18	Analyzed By: RR
Prep Batch: 5079	Date Prepared: 2003-11-12	Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		68.7	mg/L	1	0.500
Dissolved Potassium		10.1	mg/L	1	0.500
Dissolved Magnesium		21.1	mg/L	1	0.500
Dissolved Sodium		327	mg/L	1	0.500

**Sample: 20986 - MW-2**

Analysis: Ion Chromatography	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 5631	Date Analyzed: 2003-11-11	Analyzed By: JSW
Prep Batch: 5034	Date Prepared: 2003-11-10	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		498	mg/L	50	0.500

*continued ...*

sample 20986 continued ...

Parameter	Flag	Result	Units	Dilution	RL
Fluoride		2.21	mg/L	5	0.200
Sulfate		145	mg/L	5	0.500

**Sample: 20986 - MW-2**

Analysis: NO <sub>3</sub> (IC)	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 5631	Date Analyzed: 2003-11-11	Analyzed By: JSW
Prep Batch: 5034	Date Prepared: 2003-11-10	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		5.13	mg/L	5	0.200

**Sample: 20986 - MW-2**

Analysis: TDS	Analytical Method: SM 2540C	Prep Method: N/A
QC Batch: 5637	Date Analyzed: 2003-11-12	Analyzed By: JSW
Prep Batch: 5042	Date Prepared: 2003-11-11	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		1354	mg/L	2	10.00

**Sample: 20987 - MW-1**

Analysis: Alkalinity	Analytical Method: SM 2320B	Prep Method: N/A
QC Batch: 5678	Date Analyzed: 2003-11-11	Analyzed By: RS
Prep Batch: 5072	Date Prepared: 2003-11-11	Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		162	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		162	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 20987 - MW-1**

Analysis: Cations	Analytical Method: S 6010B	Prep Method: S 3005A
QC Batch: 5796	Date Analyzed: 2003-11-18	Analyzed By: RR
Prep Batch: 5079	Date Prepared: 2003-11-12	Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		110	mg/L	1	0.500

continued ...

*sample 20987 continued ...*

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Potassium		9.03	mg/L	1	0.500
Dissolved Magnesium		37.7	mg/L	1	0.500
Dissolved Sodium		114	mg/L	1	0.500

**Sample: 20987 - MW-1**

Analysis: Ion Chromatography      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 5631      Date Analyzed: 2003-11-11      Analyzed By: JSW  
Prep Batch: 5034      Date Prepared: 2003-11-10      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		330	mg/L	10	0.500
Fluoride		1.94	mg/L	5	0.200
Sulfate		78.9	mg/L	5	0.500

**Sample: 20987 - MW-1**

Analysis: NO3 (IC)      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 5631      Date Analyzed: 2003-11-11      Analyzed By: JSW  
Prep Batch: 5034      Date Prepared: 2003-11-10      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		3.42	mg/L	5	0.200

**Sample: 20987 - MW-1**

Analysis: TDS      Analytical Method: SM 2540C      Prep Method: N/A  
QC Batch: 5637      Date Analyzed: 2003-11-12      Analyzed By: JSW  
Prep Batch: 5042      Date Prepared: 2003-11-11      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		994.0	mg/L	2	10.00

**Sample: 20988 - Dup**

Analysis: Alkalinity      Analytical Method: SM 2320B      Prep Method: N/A  
QC Batch: 5678      Date Analyzed: 2003-11-11      Analyzed By: RS  
Prep Batch: 5072      Date Prepared: 2003-11-11      Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO3	1	1.00

*continued ...*

sample 20988 continued ...

Parameter	Flag	Result	Units	Dilution	RL
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		238	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		238	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 20988 - Dup**

Analysis: Cations      Analytical Method: S 6010B      Prep Method: S 3005A  
QC Batch: 5796      Date Analyzed: 2003-11-18      Analyzed By: RR  
Prep Batch: 5079      Date Prepared: 2003-11-12      Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		34.7	mg/L	1	0.500
Dissolved Potassium		7.63	mg/L	1	0.500
Dissolved Magnesium		10.8	mg/L	1	0.500
Dissolved Sodium		298	mg/L	1	0.500

**Sample: 20988 - Dup**

Analysis: Ion Chromatography      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 5632      Date Analyzed: 2003-11-11      Analyzed By: JSW  
Prep Batch: 5035      Date Prepared: 2003-11-10      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		355	mg/L	10	0.500
Fluoride		3.04	mg/L	5	0.200
Sulfate		117	mg/L	5	0.500

**Sample: 20988 - Dup**

Analysis: NO<sub>3</sub> (IC)      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 5632      Date Analyzed: 2003-11-11      Analyzed By: JSW  
Prep Batch: 5035      Date Prepared: 2003-11-10      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		4.19	mg/L	5	0.200

**Sample: 20988 - Dup**

Analysis: TDS      Analytical Method: SM 2540C      Prep Method: N/A  
QC Batch: 5637      Date Analyzed: 2003-11-12      Analyzed By: JSW  
Prep Batch: 5042      Date Prepared: 2003-11-11      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		1170	mg/L	2	10.00

**Sample: 20989 - MW-16**

Analysis: Alkalinity      Analytical Method: SM 2320B      Prep Method: N/A  
 QC Batch: 5678      Date Analyzed: 2003-11-11      Analyzed By: RS  
 Prep Batch: 5072      Date Prepared: 2003-11-11      Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		188	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		188	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 20989 - MW-16**

Analysis: BTEX      Analytical Method: S 8021B      Prep Method: S 5030B  
 QC Batch: 5623      Date Analyzed: 2003-11-10      Analyzed By: MT  
 Prep Batch: 5030      Date Prepared: 2003-11-10      Prepared By: MT

Parameter	Flag	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 (isomers)		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0899	mg/L	1	0.100	90	70 - 130
4-Bromofluorobenzene (4-BFB)		0.0915	mg/L	1	0.100	92	70 - 130

**Sample: 20989 - MW-16**

Analysis: Cations      Analytical Method: S 6010B      Prep Method: S 3005A  
 QC Batch: 5796      Date Analyzed: 2003-11-18      Analyzed By: RR  
 Prep Batch: 5079      Date Prepared: 2003-11-12      Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		183	mg/L	1	0.500
Dissolved Potassium		14.2	mg/L	1	0.500
Dissolved Magnesium		55.6	mg/L	1	0.500
Dissolved Sodium		372	mg/L	1	0.500

**Sample: 20989 - MW-16**

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Analysis: Ion Chromatography  
QC Batch: 5632  
Prep Batch: 5035

Analytical Method: E 300.0  
Date Analyzed: 2003-11-11  
Date Prepared: 2003-11-10

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

Parameter	Flag	Result	Units	Dilution	RL
Chloride		863	mg/L	50	0.500
Fluoride		1.79	mg/L	5	0.200
Sulfate		150	mg/L	5	0.500

**Sample: 20989 - MW-16**

Analysis: NO3 (IC)  
QC Batch: 5632  
Prep Batch: 5035

Analytical Method: E 300.0  
Date Analyzed: 2003-11-11  
Date Prepared: 2003-11-10

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

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		5.65	mg/L	5	0.200

**Sample: 20989 - MW-16**

Analysis: TDS  
QC Batch: 5637  
Prep Batch: 5042

Analytical Method: SM 2540C  
Date Analyzed: 2003-11-12  
Date Prepared: 2003-11-11

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

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		2100	mg/L	2	10.00

**Sample: 20990 - MW-12**

Analysis: Alkalinity  
QC Batch: 5678  
Prep Batch: 5072

Analytical Method: SM 2320B  
Date Analyzed: 2003-11-11  
Date Prepared: 2003-11-11

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

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		80.0	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		80.0	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 20990 - MW-12**

Analysis: Cations  
QC Batch: 5796  
Prep Batch: 5079

Analytical Method: S 6010B  
Date Analyzed: 2003-11-18  
Date Prepared: 2003-11-12

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

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		568	mg/L	1	0.500
Dissolved Potassium		20.1	mg/L	1	0.500
Dissolved Magnesium		189	mg/L	1	0.500
Dissolved Sodium		159	mg/L	1	0.500

**Sample: 20990 - MW-12**

Analysis: Ion Chromatography      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 5632      Date Analyzed: 2003-11-11      Analyzed By: JSW  
Prep Batch: 5035      Date Prepared: 2003-11-10      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		1610	mg/L	100	0.500
Fluoride		2.25	mg/L	10	0.200
Sulfate		50.3	mg/L	10	0.500

**Sample: 20990 - MW-12**

Analysis: NO3 (IC)      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 5632      Date Analyzed: 2003-11-11      Analyzed By: JSW  
Prep Batch: 5035      Date Prepared: 2003-11-10      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		4.81	mg/L	10	0.200

**Sample: 20990 - MW-12**

Analysis: TDS      Analytical Method: SM 2540C      Prep Method: N/A  
QC Batch: 5637      Date Analyzed: 2003-11-12      Analyzed By: JSW  
Prep Batch: 5042      Date Prepared: 2003-11-11      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		3860	mg/L	5	10.00

**Sample: 20991 - MW-13**

Analysis: Alkalinity      Analytical Method: SM 2320B      Prep Method: N/A  
QC Batch: 5678      Date Analyzed: 2003-11-11      Analyzed By: RS  
Prep Batch: 5072      Date Prepared: 2003-11-11      Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00

*continued ...*

sample 20991 continued ...

Parameter	Flag	Result	Units	Dilution	RL
Bicarbonate Alkalinity		98.0	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		98.0	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 20991 - MW-13**

Analysis: Cations      Analytical Method: S 6010B      Prep Method: S 3005A  
QC Batch: 5796      Date Analyzed: 2003-11-18      Analyzed By: RR  
Prep Batch: 5079      Date Prepared: 2003-11-12      Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		193	mg/L	1	0.500
Dissolved Potassium		14.3	mg/L	1	0.500
Dissolved Magnesium		68.6	mg/L	1	0.500
Dissolved Sodium		91.5	mg/L	1	0.500

**Sample: 20991 - MW-13**

Analysis: Ion Chromatography      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 5632      Date Analyzed: 2003-11-11      Analyzed By: JSW  
Prep Batch: 5035      Date Prepared: 2003-11-10      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		492	mg/L	50	0.500
Fluoride		2.25	mg/L	5	0.200
Sulfate		125	mg/L	5	0.500

**Sample: 20991 - MW-13**

Analysis: NO<sub>3</sub> (IC)      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 5632      Date Analyzed: 2003-11-11      Analyzed By: JSW  
Prep Batch: 5035      Date Prepared: 2003-11-10      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		4.42	mg/L	5	0.200

**Sample: 20991 - MW-13**

Analysis: TDS      Analytical Method: SM 2540C      Prep Method: N/A  
QC Batch: 5637      Date Analyzed: 2003-11-12      Analyzed By: JSW  
Prep Batch: 5042      Date Prepared: 2003-11-11      Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		1434	mg/L	2	10.00

Sample: 20992 - MW-6

Analysis: Alkalinity      Analytical Method: SM 2320B      Prep Method: N/A  
QC Batch: 5678      Date Analyzed: 2003-11-11      Analyzed By: RS  
Prep Batch: 5072      Date Prepared: 2003-11-11      Prepared By: RS

Parameter	Flag	RL Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		250	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		250	mg/L as CaCO <sub>3</sub>	1	4.00

Sample: 20992 - MW-6

Analysis: Cations      Analytical Method: S 6010B      Prep Method: S 3005A  
QC Batch: 5796      Date Analyzed: 2003-11-18      Analyzed By: RR  
Prep Batch: 5079      Date Prepared: 2003-11-12      Prepared By: TP

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Calcium		46.0	mg/L	1	0.500
Dissolved Potassium		18.1	mg/L	1	0.500
Dissolved Magnesium		13.9	mg/L	1	0.500
Dissolved Sodium		503	mg/L	1	0.500

Sample: 20992 - MW-6

Analysis: Ion Chromatography      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 5632      Date Analyzed: 2003-11-11      Analyzed By: JSW  
Prep Batch: 5035      Date Prepared: 2003-11-10      Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		649	mg/L	50	0.500
Fluoride		3.28	mg/L	5	0.200
Sulfate		191	mg/L	5	0.500

Sample: 20992 - MW-6

Analysis: NO<sub>3</sub> (IC)      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 5632      Date Analyzed: 2003-11-11      Analyzed By: JSW  
Prep Batch: 5035      Date Prepared: 2003-11-10      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		6.89	mg/L	5	0.200

**Sample: 20992 - MW-6**

Analysis: TDS	Analytical Method: SM 2540C	Prep Method: N/A
QC Batch: 5637	Date Analyzed: 2003-11-12	Analyzed By: JSW
Prep Batch: 5042	Date Prepared: 2003-11-11	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		1932	mg/L	2	10.00

**Sample: 20993 - MW-3**

Analysis: Alkalinity	Analytical Method: SM 2320B	Prep Method: N/A
QC Batch: 5678	Date Analyzed: 2003-11-11	Analyzed By: RS
Prep Batch: 5072	Date Prepared: 2003-11-11	Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		286	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		286	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 20993 - MW-3**

Analysis: Cations	Analytical Method: S 6010B	Prep Method: S 3005A
QC Batch: 5799	Date Analyzed: 2003-11-18	Analyzed By: RR
Prep Batch: 5079	Date Prepared: 2003-11-12	Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		37.4	mg/L	1	0.500
Dissolved Potassium		24.9	mg/L	1	0.500
Dissolved Magnesium		11.1	mg/L	1	0.500
Dissolved Sodium		577	mg/L	1	0.500

**Sample: 20993 - MW-3**

Analysis: Ion Chromatography	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 5633	Date Analyzed: 2003-11-11	Analyzed By: JSW
Prep Batch: 5037	Date Prepared: 2003-11-10	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		746	mg/L	50	0.500

*continued ...*

*sample 20993 continued ...*

Parameter	Flag	Result	Units	Dilution	RL
Fluoride		2.92	mg/L	5	0.200
Sulfate		214	mg/L	5	0.500

**Sample: 20993 - MW-3**

Analysis: NO<sub>3</sub> (IC)      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 5633      Date Analyzed: 2003-11-11      Analyzed By: JSW  
Prep Batch: 5037      Date Prepared: 2003-11-10      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		7.26	mg/L	5	0.200

**Sample: 20993 - MW-3**

Analysis: TDS      Analytical Method: SM 2540C      Prep Method: N/A  
QC Batch: 5638      Date Analyzed: 2003-11-12      Analyzed By: JSW  
Prep Batch: 5043      Date Prepared: 2003-11-11      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		2092	mg/L	2	10.00

**Sample: 20994 - MW-5**

Analysis: Alkalinity      Analytical Method: SM 2320B      Prep Method: N/A  
QC Batch: 5678      Date Analyzed: 2003-11-11      Analyzed By: RS  
Prep Batch: 5072      Date Prepared: 2003-11-11      Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		214	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		214	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 20994 - MW-5**

Analysis: Cations      Analytical Method: S 6010B      Prep Method: S 3005A  
QC Batch: 5799      Date Analyzed: 2003-11-18      Analyzed By: RR  
Prep Batch: 5079      Date Prepared: 2003-11-12      Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		94.0	mg/L	1	0.500

*continued ...*

*sample 20994 continued ...*

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Potassium		24.8	mg/L	1	0.500
Dissolved Magnesium		29.3	mg/L	1	0.500
Dissolved Sodium		282	mg/L	1	0.500

**Sample: 20994 - MW-5**

Analysis: Ion Chromatography      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 5633      Date Analyzed: 2003-11-11      Analyzed By: JSW  
Prep Batch: 5037      Date Prepared: 2003-11-10      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		456	mg/L	50	0.500
Fluoride		1.43	mg/L	5	0.200
Sulfate		152	mg/L	5	0.500

**Sample: 20994 - MW-5**

Analysis: NO3 (IC)      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 5633      Date Analyzed: 2003-11-11      Analyzed By: JSW  
Prep Batch: 5037      Date Prepared: 2003-11-10      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		5.11	mg/L	5	0.200

**Sample: 20994 - MW-5**

Analysis: TDS      Analytical Method: SM 2540C      Prep Method: N/A  
QC Batch: 5638      Date Analyzed: 2003-11-12      Analyzed By: JSW  
Prep Batch: 5043      Date Prepared: 2003-11-11      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		1430	mg/L	2	10.00

**Sample: 20995 - Dup**

Analysis: Alkalinity      Analytical Method: SM 2320B      Prep Method: N/A  
QC Batch: 5678      Date Analyzed: 2003-11-11      Analyzed By: RS  
Prep Batch: 5072      Date Prepared: 2003-11-11      Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00

*continued ...*

*sample 20995 continued ...*

Parameter	Flag	Result	Units	Dilution	RL
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		132	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		132	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 20995 - Dup**

Analysis: Cations      Analytical Method: S 6010B      Prep Method: S 3005A  
QC Batch: 5799      Date Analyzed: 2003-11-18      Analyzed By: RR  
Prep Batch: 5079      Date Prepared: 2003-11-12      Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		120	mg/L	1	0.500
Dissolved Potassium		9.15	mg/L	1	0.500
Dissolved Magnesium		39.5	mg/L	1	0.500
Dissolved Sodium		200	mg/L	1	0.500

**Sample: 20995 - Dup**

Analysis: Ion Chromatography      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 5633      Date Analyzed: 2003-11-11      Analyzed By: JSW  
Prep Batch: 5037      Date Prepared: 2003-11-10      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		521	mg/L	10	0.500
Fluoride		1.85	mg/L	5	0.200
Sulfate		98.1	mg/L	5	0.500

**Sample: 20995 - Dup**

Analysis: NO<sub>3</sub> (IC)      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 5633      Date Analyzed: 2003-11-11      Analyzed By: JSW  
Prep Batch: 5037      Date Prepared: 2003-11-10      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		2.92	mg/L	5	0.200

**Sample: 20995 - Dup**

Analysis: TDS      Analytical Method: SM 2540C      Prep Method: N/A  
QC Batch: 5638      Date Analyzed: 2003-11-12      Analyzed By: JSW  
Prep Batch: 5043      Date Prepared: 2003-11-11      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		1392	mg/L	4	10.00

Sample: 20996 - MW-9

Analysis: Alkalinity      Analytical Method: SM 2320B      Prep Method: N/A  
QC Batch: 5733      Date Analyzed: 2003-11-13      Analyzed By: RS  
Prep Batch: 5120      Date Prepared: 2003-11-13      Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		132	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		132	mg/L as CaCO <sub>3</sub>	1	4.00

Sample: 20996 - MW-9

Analysis: Cations      Analytical Method: S 6010B      Prep Method: S 3005A  
QC Batch: 5799      Date Analyzed: 2003-11-18      Analyzed By: RR  
Prep Batch: 5079      Date Prepared: 2003-11-12      Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		119	mg/L	1	0.500
Dissolved Potassium		9.18	mg/L	1	0.500
Dissolved Magnesium		39.0	mg/L	1	0.500
Dissolved Sodium		200	mg/L	1	0.500

Sample: 20996 - MW-9

Analysis: Ion Chromatography      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 5633      Date Analyzed: 2003-11-11      Analyzed By: JSW  
Prep Batch: 5037      Date Prepared: 2003-11-10      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		468	mg/L	50	0.500
Fluoride		1.68	mg/L	5	0.200
Sulfate		96.2	mg/L	5	0.500

Sample: 20996 - MW-9

Analysis: NO<sub>3</sub> (IC)      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 5633      Date Analyzed: 2003-11-11      Analyzed By: JSW  
Prep Batch: 5037      Date Prepared: 2003-11-10      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		2.86	mg/L	5	0.200

Sample: 20996 - MW-9

Analysis: TDS Analytical Method: SM 2540C Prep Method: N/A  
QC Batch: 5638 Date Analyzed: 2003-11-12 Analyzed By: JSW  
Prep Batch: 5043 Date Prepared: 2003-11-11 Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		1250	mg/L	5	10.00

Sample: 20997 - WW-1

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		156	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		156	mg/L as CaCO <sub>3</sub>	1	4.00

Sample: 20997 - WW-1

Analysis: Cations Analytical Method: S 6010B Prep Method: S 3005A  
QC Batch: 5799 Date Analyzed: 2003-11-18 Analyzed By: RR  
Prep Batch: 5079 Date Prepared: 2003-11-12 Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		62.3	mg/L	1	0.500
Dissolved Potassium		8.30	mg/L	1	0.500
Dissolved Magnesium		24.4	mg/L	1	0.500
Dissolved Sodium		95.5	mg/L	1	0.500

Sample: 20997 - WW-1

Analysis: Ion Chromatography      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 5633      Date Analyzed: 2003-11-11      Analyzed By: JSW  
Prep Batch: 5037      Date Prepared: 2003-11-10      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		149	mg/L	5	0.500

*continued . . .*

sample 20997 continued ...

Parameter	Flag	Result	Units	Dilution	RL
Fluoride		1.80	mg/L	5	0.200
Sulfate		111	mg/L	5	0.500

Sample: 20997 - WW-1

Analysis: NO<sub>3</sub> (IC) Analytical Method: E 300.0 Prep Method: N/A  
QC Batch: 5633 Date Analyzed: 2003-11-11 Analyzed By: JSW  
Prep Batch: 5037 Date Prepared: 2003-11-10 Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		3.62	mg/L	5	0.200

Sample: 20997 - WW-1

Analysis: TDS Analytical Method: SM 2540C Prep Method: N/A  
QC Batch: 5638 Date Analyzed: 2003-11-12 Analyzed By: JSW  
Prep Batch: 5043 Date Prepared: 2003-11-11 Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		669.0	mg/L	1	10.00

Sample: 20999 - MW-4

Analysis: Alkalinity Analytical Method: SM 2320B Prep Method: N/A  
QC Batch: 5733 Date Analyzed: 2003-11-13 Analyzed By: RS  
Prep Batch: 5120 Date Prepared: 2003-11-13 Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		194	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		194	mg/L as CaCO <sub>3</sub>	1	4.00

Sample: 20999 - MW-4

Analysis: Cations Analytical Method: S 6010B Prep Method: S 3005A  
QC Batch: 5799 Date Analyzed: 2003-11-18 Analyzed By: RR  
Prep Batch: 5079 Date Prepared: 2003-11-12 Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		228	mg/L	1	0.500

continued ...

*sample 20999 continued ...*

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Potassium		83.6	mg/L	1	0.500
Dissolved Magnesium		61.4	mg/L	1	0.500
Dissolved Sodium		629	mg/L	1	0.500

**Sample: 20999 - MW-4**

Analysis: Ion Chromatography      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 5634      Date Analyzed: 2003-11-11      Analyzed By: JSW  
Prep Batch: 5038      Date Prepared: 2003-11-10      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		1620	mg/L	100	0.500
Fluoride		<2.00	mg/L	10	0.200
Sulfate		76.6	mg/L	10	0.500

**Sample: 20999 - MW-4**

Analysis: NO3 (IC)      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 5634      Date Analyzed: 2003-11-11      Analyzed By: JSW  
Prep Batch: 5038      Date Prepared: 2003-11-10      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		5.48	mg/L	10	0.200

**Sample: 20999 - MW-4**

Analysis: TDS      Analytical Method: SM 2540C      Prep Method: N/A  
QC Batch: 5638      Date Analyzed: 2003-11-12      Analyzed By: JSW  
Prep Batch: 5043      Date Prepared: 2003-11-11      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		3035	mg/L	5	10.00

**Sample: 21000 - RW-1**

Analysis: Alkalinity      Analytical Method: SM 2320B      Prep Method: N/A  
QC Batch: 5733      Date Analyzed: 2003-11-13      Analyzed By: RS  
Prep Batch: 5120      Date Prepared: 2003-11-13      Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00

*continued ...*

*sample 21000 continued ...*

Parameter	Flag	Result	Units	Dilution	RL
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		298	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		298	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 21000 - RW-1**

Analysis: Cations      Analytical Method: S 6010B      Prep Method: S 3005A  
QC Batch: 5799      Date Analyzed: 2003-11-18      Analyzed By: RR  
Prep Batch: 5079      Date Prepared: 2003-11-12      Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		166	mg/L	1	0.500
Dissolved Potassium		51.7	mg/L	1	0.500
Dissolved Magnesium		48.1	mg/L	1	0.500
Dissolved Sodium		106	mg/L	1	0.500

**Sample: 21000 - RW-1**

Analysis: Ion Chromatography      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 5634      Date Analyzed: 2003-11-11      Analyzed By: JSW  
Prep Batch: 5038      Date Prepared: 2003-11-10      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		1300	mg/L	100	0.500
Fluoride		2.13	mg/L	10	0.200
Sulfate		266	mg/L	10	0.500

**Sample: 21000 - RW-1**

Analysis: NO<sub>3</sub> (IC)      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 5634      Date Analyzed: 2003-11-11      Analyzed By: JSW  
Prep Batch: 5038      Date Prepared: 2003-11-10      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		5.56	mg/L	10	0.200

**Sample: 21000 - RW-1**

Analysis: TDS      Analytical Method: SM 2540C      Prep Method: N/A  
QC Batch: 5638      Date Analyzed: 2003-11-12      Analyzed By: JSW  
Prep Batch: 5043      Date Prepared: 2003-11-11      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		3240	mg/L	5	10.00

Sample: 21001 - SW-MW

Analysis: Alkalinity      Analytical Method: SM 2320B      Prep Method: N/A  
QC Batch: 5733      Date Analyzed: 2003-11-13      Analyzed By: RS  
Prep Batch: 5120      Date Prepared: 2003-11-13      Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		300	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		300	mg/L as CaCO <sub>3</sub>	1	4.00

Sample: 21001 - SW-MW

Analysis: Cations      Analytical Method: S 6010B      Prep Method: S 3005A  
QC Batch: 5799      Date Analyzed: 2003-11-18      Analyzed By: RR  
Prep Batch: 5079      Date Prepared: 2003-11-12      Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		129	mg/L	1	0.500
Dissolved Potassium		48.5	mg/L	1	0.500
Dissolved Magnesium		35.4	mg/L	1	0.500
Dissolved Sodium		727	mg/L	1	0.500

Sample: 21001 - SW-MW

Analysis: Ion Chromatography      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 5634      Date Analyzed: 2003-11-11      Analyzed By: JSW  
Prep Batch: 5038      Date Prepared: 2003-11-10      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		1240	mg/L	100	0.500
Fluoride		2.29	mg/L	10	0.200
Sulfate		255	mg/L	10	0.500

Sample: 21001 - SW-MW

Analysis: NO<sub>3</sub> (IC)      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 5634      Date Analyzed: 2003-11-11      Analyzed By: JSW  
Prep Batch: 5038      Date Prepared: 2003-11-10      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		5.77	mg/L	10	0.200

**Sample: 21001 - SW-MW**

Analysis: TDS	Analytical Method: SM 2540C	Prep Method: N/A
QC Batch: 5638	Date Analyzed: 2003-11-12	Analyzed By: JSW
Prep Batch: 5043	Date Prepared: 2003-11-11	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		3275	mg/L	5	10.00

**Sample: 21002 - W-MW**

Analysis: Alkalinity	Analytical Method: SM 2320B	Prep Method: N/A
QC Batch: 5733	Date Analyzed: 2003-11-13	Analyzed By: RS
Prep Batch: 5120	Date Prepared: 2003-11-13	Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		204	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		204	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 21002 - W-MW**

Analysis: Cations	Analytical Method: S 6010B	Prep Method: S 3005A
QC Batch: 5799	Date Analyzed: 2003-11-18	Analyzed By: RR
Prep Batch: 5079	Date Prepared: 2003-11-12	Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		51.3	mg/L	1	0.500
Dissolved Potassium		38.8	mg/L	1	0.500
Dissolved Magnesium		13.8	mg/L	1	0.500
Dissolved Sodium		235	mg/L	1	0.500

**Sample: 21002 - W-MW**

Analysis: Ion Chromatography	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 5634	Date Analyzed: 2003-11-11	Analyzed By: JSW
Prep Batch: 5038	Date Prepared: 2003-11-10	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		327	mg/L	10	0.500

*continued ...*

*sample 21002 continued ...*

Parameter	Flag	Result	Units	Dilution	RL
Fluoride		1.65	mg/L	5	0.200
Sulfate		115	mg/L	5	0.500

**Sample: 21002 - W-MW**

Analysis: NO<sub>3</sub> (IC)      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 5634      Date Analyzed: 2003-11-11      Analyzed By: JSW  
Prep Batch: 5038      Date Prepared: 2003-11-10      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		3.98	mg/L	5	0.200

**Sample: 21002 - W-MW**

Analysis: TDS      Analytical Method: SM 2540C      Prep Method: N/A  
QC Batch: 5638      Date Analyzed: 2003-11-12      Analyzed By: JSW  
Prep Batch: 5043      Date Prepared: 2003-11-11      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		1100	mg/L	2	10.00

**Sample: 21003 - MW-8**

Analysis: Alkalinity      Analytical Method: SM 2320B      Prep Method: N/A  
QC Batch: 5733      Date Analyzed: 2003-11-13      Analyzed By: RS  
Prep Batch: 5120      Date Prepared: 2003-11-13      Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		248	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		248	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 21003 - MW-8**

Analysis: Cations      Analytical Method: S 6010B      Prep Method: S 3005A  
QC Batch: 5799      Date Analyzed: 2003-11-18      Analyzed By: RR  
Prep Batch: 5079      Date Prepared: 2003-11-12      Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		58.1	mg/L	1	0.500

*continued ...*

*sample 21003 continued ...*

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Potassium		12.2	mg/L	1	0.500
Dissolved Magnesium		17.9	mg/L	1	0.500
Dissolved Sodium		525	mg/L	1	0.500

**Sample: 21003 - MW-8**

Analysis: Ion Chromatography      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 5634      Date Analyzed: 2003-11-11      Analyzed By: JSW  
Prep Batch: 5038      Date Prepared: 2003-11-10      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		722	mg/L	50	0.500
Fluoride		3.27	mg/L	5	0.200
Sulfate		171	mg/L	5	0.500

**Sample: 21003 - MW-8**

Analysis: NO3 (IC)      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 5634      Date Analyzed: 2003-11-11      Analyzed By: JSW  
Prep Batch: 5038      Date Prepared: 2003-11-10      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		6.65	mg/L	5	0.200

**Sample: 21003 - MW-8**

Analysis: TDS      Analytical Method: SM 2540C      Prep Method: N/A  
QC Batch: 5638      Date Analyzed: 2003-11-12      Analyzed By: JSW  
Prep Batch: 5043      Date Prepared: 2003-11-11      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		1972	mg/L	2	10.00

**Sample: 21004 - MW-10**

Analysis: Alkalinity      Analytical Method: SM 2320B      Prep Method: N/A  
QC Batch: 5733      Date Analyzed: 2003-11-13      Analyzed By: RS  
Prep Batch: 5120      Date Prepared: 2003-11-13      Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00

*continued ...*

*sample 21004 continued ...*

Parameter	Flag	Result	Units	Dilution	RL
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		200	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		200	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 21004 - MW-10**

Analysis: Cations      Analytical Method: S 6010B      Prep Method: S 3005A  
QC Batch: 5716      Date Analyzed: 2003-11-13      Analyzed By: BC  
Prep Batch: 5110      Date Prepared: 2003-11-13      Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		70.2	mg/L	1	0.500
Dissolved Potassium		5.80	mg/L	1	0.500
Dissolved Magnesium		23.5	mg/L	1	0.500
Dissolved Sodium		69.3	mg/L	1	0.500

**Sample: 21004 - MW-10**

Analysis: Ion Chromatography      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 5633      Date Analyzed: 2003-11-11      Analyzed By: JSW  
Prep Batch: 5037      Date Prepared: 2003-11-10      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		70.9	mg/L	5	0.500
Fluoride		1.69	mg/L	5	0.200
Sulfate		131	mg/L	5	0.500

**Sample: 21004 - MW-10**

Analysis: NO<sub>3</sub> (IC)      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 5633      Date Analyzed: 2003-11-11      Analyzed By: JSW  
Prep Batch: 5037      Date Prepared: 2003-11-10      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		4.19	mg/L	5	0.200

**Sample: 21004 - MW-10**

Analysis: TDS      Analytical Method: SM 2540C      Prep Method: N/A  
QC Batch: 5688      Date Analyzed: 2003-11-14      Analyzed By: JSW  
Prep Batch: 5087      Date Prepared: 2003-11-13      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		638.0	mg/L	2	10.00

**Method Blank (1)** QC Batch: 5623

Parameter	Flag	Result	Units	RL
Benzene		<0.00100	mg/L	0.001
Toluene		<0.00100	mg/L	0.001
Ethylbenzene		<0.00100	mg/L	0.001
Xylene (isomers)		<0.00100	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0872	mg/L	1	0.100	87	70 - 130
4-Bromofluorobenzene (4-BFB)		0.0846	mg/L	1	0.100	85	70 - 130

**Method Blank (1)** QC Batch: 5631

Parameter	Flag	Result	Units	RL
Nitrate-N		<0.200	mg/L	0.2

**Method Blank (1)** QC Batch: 5631

Parameter	Flag	Result	Units	RL
Chloride		<0.500	mg/L	0.5
Fluoride		<0.200	mg/L	0.2
Sulfate		<0.500	mg/L	0.5

**Method Blank (1)** QC Batch: 5632

Parameter	Flag	Result	Units	RL
Nitrate-N		<0.200	mg/L	0.2

**Method Blank (1)** QC Batch: 5632

Parameter	Flag	Result	Units	RL
Chloride		<0.500	mg/L	0.5
Fluoride		<0.200	mg/L	0.2
Sulfate		<0.500	mg/L	0.5

Method Blank (1) QC Batch: 5633

Parameter	Flag	Result	Units	RL
Nitrate-N		<0.200	mg/L	0.2

Method Blank (1) QC Batch: 5633

Parameter	Flag	Result	Units	RL
Chloride		<0.500	mg/L	0.5
Fluoride		<0.200	mg/L	0.2
Sulfate		<0.500	mg/L	0.5

Method Blank (1) QC Batch: 5634

Parameter	Flag	Result	Units	RL
Nitrate-N		<0.200	mg/L	0.2

Method Blank (1) QC Batch: 5634

Parameter	Flag	Result	Units	RL
Chloride		<0.500	mg/L	0.5
Fluoride		<0.200	mg/L	0.2
Sulfate		<0.500	mg/L	0.5

Method Blank (1) QC Batch: 5637

Parameter	Flag	Result	Units	RL
Total Dissolved Solids		<10.00	mg/L	10

Method Blank (1) QC Batch: 5638

Parameter	Flag	Result	Units	RL
Total Dissolved Solids		<10.00	mg/L	10

Method Blank (1) QC Batch: 5678

Parameter	Flag	Result	Units	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1

*continued ...*

*method blank continued ...*

Parameter	Flag	Result	Units	RL
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1
Bicarbonate Alkalinity		<4.00	mg/L as CaCo3	4
Total Alkalinity		<4.00	mg/L as CaCo3	4

Method Blank (1) QC Batch: 5679

Parameter	Flag	Result	Units	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1
Bicarbonate Alkalinity		<4.00	mg/L as CaCo3	4
Total Alkalinity		<4.00	mg/L as CaCo3	4

Method Blank (1) QC Batch: 5688

Parameter	Flag	Result	Units	RL
Total Dissolved Solids		<10.00	mg/L	10

Method Blank (1) QC Batch: 5716

Parameter	Flag	Result	Units	RL
Dissolved Calcium		<0.500	mg/L	0.5
Dissolved Potassium		<0.500	mg/L	0.5
Dissolved Magnesium		<0.500	mg/L	0.5
Dissolved Sodium		<0.500	mg/L	0.5

Method Blank (1) QC Batch: 5733

Parameter	Flag	Result	Units	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1
Bicarbonate Alkalinity		<4.00	mg/L as CaCo3	4
Total Alkalinity		<4.00	mg/L as CaCo3	4

Method Blank (1) QC Batch: 5796

Parameter	Flag	Result	Units	RL
Dissolved Calcium		<0.500	mg/L	0.5
Dissolved Potassium		<0.500	mg/L	0.5

*continued ...*

*method blank continued ...*

Parameter	Flag	Result	Units	RL
Dissolved Magnesium		<0.500	mg/L	0.5
Dissolved Sodium		<0.500	mg/L	0.5

**Method Blank (1)** QC Batch: 5799

Parameter	Flag	Result	Units	RL
Dissolved Calcium		<0.500	mg/L	0.5
Dissolved Potassium		<0.500	mg/L	0.5
Dissolved Magnesium		<0.500	mg/L	0.5
Dissolved Sodium		<0.500	mg/L	0.5

**Duplicate (1)** QC Batch: 5637

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	1478	1556	mg/L	2	5	14.2

**Duplicate (1)** QC Batch: 5638

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	2006	2092	mg/L	2	4	14.2

**Duplicate (1)** QC Batch: 5678

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Hydroxide Alkalinity	<1.00	<1.00	mg/L as CaCO <sub>3</sub>	1	0	20
Carbonate Alkalinity	<1.00	<1.00	mg/L as CaCO <sub>3</sub>	1	0	20
Bicarbonate Alkalinity	128	132	mg/L as CaCO <sub>3</sub>	1	3	20
Total Alkalinity	128	132	mg/L as CaCO <sub>3</sub>	1	3	5.16

**Duplicate (1)** QC Batch: 5679

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Hydroxide Alkalinity	<1.00	<1.00	mg/L as CaCO <sub>3</sub>	1	0	20
Carbonate Alkalinity	<1.00	<1.00	mg/L as CaCO <sub>3</sub>	1	0	20
Bicarbonate Alkalinity	240	248	mg/L as CaCO <sub>3</sub>	1	3	20
Total Alkalinity	240	248	mg/L as CaCO <sub>3</sub>	1	3	5.16

Duplicate (1) QC Batch: 5688

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	1970	2090	mg/L	1	6	14.2

Duplicate (1) QC Batch: 5733

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Hydroxide Alkalinity	<1.00	<1.00	mg/L as CaCO <sub>3</sub>	1	0	20
Carbonate Alkalinity	<1.00	<1.00	mg/L as CaCO <sub>3</sub>	1	0	20
Bicarbonate Alkalinity	132	130	mg/L as CaCO <sub>3</sub>	1	2	20
Total Alkalinity	132	130	mg/L as CaCO <sub>3</sub>	1	2	5.16

Laboratory Control Spike (LCS-1) QC Batch: 5623

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Benzene	0.0888	0.0912	mg/L	1	0.100	<0.000238	89	3	70 - 130	20
Toluene	0.0870	0.0914	mg/L	1	0.100	<0.000532	87	5	70 - 130	20
Ethylbenzene	0.0850	0.0908	mg/L	1	0.100	<0.00160	85	6	70 - 130	20
Xylene (isomers)	0.255	0.274	mg/L	1	0.300	<0.00571	85	7	70 - 130	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)	0.0933	0.0926	mg/L	1	0.100	93	93	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0940	0.0933	mg/L	1	0.100	94	93	70 - 130

Laboratory Control Spike (LCS-1) QC Batch: 5631

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Nitrate-N	2.45	2.46	mg/L	1	2.50	<0.126	98	0	90 - 110	20

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

Laboratory Control Spike (LCS-1) QC Batch: 5631

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	12.2	12.2	mg/L	1	12.5	<1.49	98	0	90 - 110	20
Fluoride	2.45	2.49	mg/L	1	2.50	<0.0153	98	2	90 - 110	20
Sulfate	12.5	12.8	mg/L	1	12.5	<0.171	100	2	90 - 110	20

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

Laboratory Control Spike (LCS-1) QC Batch: 5632

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Nitrate-N	2.63	2.60	mg/L	1	2.50	<0.126	105	1	90 - 110	20

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

**Laboratory Control Spike (LCS-1)      QC Batch: 5632**

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	12.5	12.3	mg/L	1	12.5	<1.49	100	2	90 - 110	20
Fluoride	2.61	2.62	mg/L	1	2.50	<0.0153	104	0	90 - 110	20
Sulfate	13.0	13.0	mg/L	1	12.5	<0.171	104	0	90 - 110	20

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

**Laboratory Control Spike (LCS-1)      QC Batch: 5633**

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Nitrate-N	2.61	2.60	mg/L	1	2.50	<0.126	104	0	90 - 110	20

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

**Laboratory Control Spike (LCS-1)      QC Batch: 5633**

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	12.3	12.3	mg/L	1	12.5	<1.49	98	0	90 - 110	20
Fluoride	2.60	2.60	mg/L	1	2.50	<0.0153	104	0	90 - 110	20
Sulfate	13.0	12.9	mg/L	1	12.5	<0.171	104	1	90 - 110	20

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

**Laboratory Control Spike (LCS-1)      QC Batch: 5634**

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Nitrate-N	2.62	2.59	mg/L	1	2.50	<0.126	105	1	90 - 110	20

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

**Laboratory Control Spike (LCS-1)      QC Batch: 5634**

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	12.4	12.4	mg/L	1	12.5	<1.49	99	0	90 - 110	20
Fluoride	2.60	2.62	mg/L	1	2.50	<0.0153	104	1	90 - 110	20
Sulfate	13.0	13.0	mg/L	1	12.5	<0.171	104	0	90 - 110	20

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

**Laboratory Control Spike (LCS-1)**   QC Batch: 5716

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Dissolved Calcium	103	99.5	mg/L	1	100	<0.183	103	3	85 - 115	20
Dissolved Potassium	101	99.1	mg/L	1	100	<0.135	101	2	85 - 115	20
Dissolved Magnesium	103	101	mg/L	1	100	<0.183	103	2	85 - 115	20
Dissolved Sodium	115	100	mg/L	1	100	<0.105	115	14	85 - 115	20

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

**Laboratory Control Spike (LCS-1)**   QC Batch: 5796

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Dissolved Calcium	88.4	100	mg/L	1	100	<0.00971	88	12	85 - 115	20
Dissolved Potassium	87.6	97.5	mg/L	1	100	<0.0297	88	11	85 - 115	20
Dissolved Magnesium	89.2	98.7	mg/L	1	100	<0.0138	89	10	85 - 115	20
Dissolved Sodium	88.1	100	mg/L	1	100	<0.0309	88	13	85 - 115	20

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

**Laboratory Control Spike (LCS-1)**   QC Batch: 5799

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Dissolved Calcium	88.4	100	mg/L	1	100	<0.00971	88	12	85 - 115	20
Dissolved Potassium	87.6	97.5	mg/L	1	100	<0.0297	88	11	85 - 115	20
Dissolved Magnesium	89.2	98.7	mg/L	1	100	<0.0138	89	10	85 - 115	20
Dissolved Sodium	88.1	100	mg/L	1	100	<0.0309	88	13	85 - 115	20

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

**Matrix Spike (MS-1)**   QC Batch: 5631

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Nitrate-N	132	132	mg/L	50	2.50	13.4	95	0	65.8 - 123	20

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

**Matrix Spike (MS-1)**   QC Batch: 5631

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	1050	1060	mg/L	50	12.5	498	88	1	56.4 - 130	20
Fluoride	123	127	mg/L	50	2.50	7.28	92	3	65.1 - 121	20
Sulfate	789	788	mg/L	50	12.5	187	96	0	69.9 - 114	20

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

**Matrix Spike (MS-1)**   QC Batch: 5632

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Nitrate-N	132	135	mg/L	50	2.50	15.2	93	2	65.8 - 123	20

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

**Matrix Spike (MS-1)    QC Batch: 5632**

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	1250	1260	mg/L	50	12.5	649	96	1	56.4 - 130	20
Fluoride	124	127	mg/L	50	2.50	8.15	93	2	65.1 - 121	20
Sulfate	824	815	mg/L	50	12.5	209	98	1	69.9 - 114	20

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

**Matrix Spike (MS-1)    QC Batch: 5633**

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Nitrate-N	132	130	mg/L	50	2.50	10.9	97	2	65.8 - 123	20

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

**Matrix Spike (MS-1)    QC Batch: 5633**

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	1050	1060	mg/L	50	12.5	468	93	1	56.4 - 130	20
Fluoride	127	127	mg/L	50	2.50	6.86	96	0	65.1 - 121	20
Sulfate	744	744	mg/L	50	12.5	122	100	0	69.9 - 114	20

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

**Matrix Spike (MS-1)    QC Batch: 5634**

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Nitrate-N	134	134	mg/L	50	2.50	14.7	95	0	65.8 - 123	20

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

**Matrix Spike (MS-1)    QC Batch: 5634**

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	1310	1340	mg/L	50	12.5	722	94	2	56.4 - 130	20
Fluoride	123	128	mg/L	50	2.50	8.06	92	4	65.1 - 121	20
Sulfate	802	816	mg/L	50	12.5	182	99	2	69.9 - 114	20

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

**Matrix Spike (MS-1)** QC Batch: 5716

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Dissolved Calcium	376	387	mg/L	1	100	276	100	3	75 - 125	20
Dissolved Potassium	124	136	mg/L	1	100	14.1	110	9	75 - 125	20
Dissolved Magnesium	182	195	mg/L	1	100	89	93	7	75 - 125	20
Dissolved Sodium	255	263	mg/L	1	100	177	78	3	75 - 125	20

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

**Matrix Spike (MS-1)** QC Batch: 5796

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Dissolved Calcium	271	269	mg/L	1	100	177	94	1	75 - 125	20
Dissolved Potassium	118	118	mg/L	1	100	12.5	106	0	75 - 125	20
Dissolved Magnesium	157	157	mg/L	1	100	58.2	99	0	75 - 125	20
Dissolved Sodium	264	261	mg/L	1	100	184	80	1	75 - 125	20

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

**Matrix Spike (MS-1)** QC Batch: 5799

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Dissolved Calcium	353	336	mg/L	1	100	228	125	5	75 - 125	20
Dissolved Potassium	183	173	mg/L	1	100	83.6	99	6	75 - 125	20
Dissolved Magnesium	172	162	mg/L	1	100	61.4	111	6	75 - 125	20
Dissolved Sodium	732	733	mg/L	1	100	629	103	0	75 - 125	20

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

**Standard (ICV-1)** QC Batch: 5623

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0874	87	85 - 115	2003-11-10
Toluene		mg/L	0.100	0.0880	88	85 - 115	2003-11-10
Ethylbenzene		mg/L	0.100	0.0878	88	85 - 115	2003-11-10
Xylene (isomers)		mg/L	0.300	0.263	88	85 - 115	2003-11-10

**Standard (CCV-1)** QC Batch: 5623

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0936	94	85 - 115	2003-11-10
Toluene		mg/L	0.100	0.0934	93	85 - 115	2003-11-10
Ethylbenzene		mg/L	0.100	0.0909	91	85 - 115	2003-11-10
Xylene (isomers)		mg/L	0.300	0.271	90	85 - 115	2003-11-10

**Standard (ICV-1)** QC Batch: 5631

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.46	98	90 - 110	2003-11-11

**Standard (ICV-1)** QC Batch: 5631

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	12.6	101	90 - 110	2003-11-11
Fluoride		mg/L	2.50	2.56	102	90 - 110	2003-11-11
Sulfate		mg/L	12.5	13.5	108	90 - 110	2003-11-11

**Standard (CCV-1)** QC Batch: 5631

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.46	98	90 - 110	2003-11-11

**Standard (CCV-1)** QC Batch: 5631

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	12.3	98	90 - 110	2003-11-11
Fluoride		mg/L	2.50	2.51	100	90 - 110	2003-11-11
Sulfate		mg/L	12.5	12.6	101	90 - 110	2003-11-11

**Standard (ICV-1)** QC Batch: 5632

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.46	98	90 - 110	2003-11-11

**Standard (ICV-1)** QC Batch: 5632

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	12.3	98	90 - 110	2003-11-11
Fluoride		mg/L	2.50	2.51	100	90 - 110	2003-11-11
Sulfate		mg/L	12.5	12.6	101	90 - 110	2003-11-11

**Standard (CCV-1)** QC Batch: 5632

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.60	104	90 - 110	2003-11-11

**Standard (CCV-1)** QC Batch: 5632

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	12.4	99	90 - 110	2003-11-11
Fluoride		mg/L	2.50	2.63	105	90 - 110	2003-11-11
Sulfate		mg/L	12.5	13.0	104	90 - 110	2003-11-11

**Standard (ICV-1)** QC Batch: 5633

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.60	104	90 - 110	2003-11-11

**Standard (ICV-1)** QC Batch: 5633

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	12.4	99	90 - 110	2003-11-11
Fluoride		mg/L	2.50	2.63	105	90 - 110	2003-11-11
Sulfate		mg/L	12.5	13.0	104	90 - 110	2003-11-11

**Standard (CCV-1)** QC Batch: 5633

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.61	104	90 - 110	2003-11-11

**Standard (CCV-1)** QC Batch: 5633

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	12.4	99	90 - 110	2003-11-11
Fluoride		mg/L	2.50	2.62	105	90 - 110	2003-11-11
Sulfate		mg/L	12.5	13.0	104	90 - 110	2003-11-11

**Standard (ICV-1)** QC Batch: 5634

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.61	104	90 - 110	2003-11-11

Standard (ICV-1) QC Batch: 5634

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	12.4	99	90 - 110	2003-11-11
Fluoride		mg/L	2.50	2.62	105	90 - 110	2003-11-11
Sulfate		mg/L	12.5	13.0	104	90 - 110	2003-11-11

Standard (CCV-1) QC Batch: 5634

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.61	104	90 - 110	2003-11-11

Standard (CCV-1) QC Batch: 5634

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	12.3	98	90 - 110	2003-11-11
Fluoride		mg/L	2.50	2.62	105	90 - 110	2003-11-11
Sulfate		mg/L	12.5	13.0	104	90 - 110	2003-11-11

Standard (ICV-1) QC Batch: 5637

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1019	102	90 - 110	2003-11-12

Standard (CCV-1) QC Batch: 5637

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1050	105	90 - 110	2003-11-12

Standard (ICV-1) QC Batch: 5638

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1050	105	90 - 110	2003-11-12

**Standard (CCV-1)** QC Batch: 5638

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1034	103	90 - 110	2003-11-12

**Standard (ICV-1)** QC Batch: 5678

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCO <sub>3</sub>	0.00	<1.00		0 - 200	2003-11-11
Carbonate Alkalinity		mg/L as CaCO <sub>3</sub>	0.00	<1.00		0 - 200	2003-11-11
Bicarbonate Alkalinity		mg/L as CaCO <sub>3</sub>	0.00	<4.00		0 - 200	2003-11-11
Total Alkalinity		mg/L as CaCO <sub>3</sub>	250	238	95	90 - 110	2003-11-11

**Standard (CCV-1)** QC Batch: 5678

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCO <sub>3</sub>	0.00	<1.00		0 - 200	2003-11-11
Carbonate Alkalinity		mg/L as CaCO <sub>3</sub>	0.00	<1.00		0 - 200	2003-11-11
Bicarbonate Alkalinity		mg/L as CaCO <sub>3</sub>	0.00	<4.00		0 - 200	2003-11-11
Total Alkalinity		mg/L as CaCO <sub>3</sub>	250	242	97	90 - 110	2003-11-11

**Standard (ICV-1)** QC Batch: 5679

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCO <sub>3</sub>	0.00	<1.00		0 - 200	2003-11-11
Carbonate Alkalinity		mg/L as CaCO <sub>3</sub>	0.00	<1.00		0 - 200	2003-11-11
Bicarbonate Alkalinity		mg/L as CaCO <sub>3</sub>	0.00	<4.00		0 - 200	2003-11-11
Total Alkalinity		mg/L as CaCO <sub>3</sub>	250	240	96	90 - 110	2003-11-11

**Standard (CCV-1)** QC Batch: 5679

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCO <sub>3</sub>	0.00	<1.00		0 - 200	2003-11-11
Carbonate Alkalinity		mg/L as CaCO <sub>3</sub>	0.00	<1.00		0 - 200	2003-11-11
Bicarbonate Alkalinity		mg/L as CaCO <sub>3</sub>	0.00	<4.00		0 - 200	2003-11-11
Total Alkalinity		mg/L as CaCO <sub>3</sub>	250	238	95	90 - 110	2003-11-11

**Standard (ICV-1)** QC Batch: 5688

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	994.0	99	90 - 110	2003-11-14

Standard (CCV-1) QC Batch: 5688

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1024	102	90 - 110	2003-11-14

Standard (ICV-1) QC Batch: 5716

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25.0	25.2	101	90 - 110	2003-11-13
Dissolved Potassium		mg/L	25.0	24.0	96	90 - 110	2003-11-13
Dissolved Magnesium		mg/L	25.0	25.3	101	90 - 110	2003-11-13
Dissolved Sodium		mg/L	25.0	24.2	97	90 - 110	2003-11-13

Standard (CCV-1) QC Batch: 5716

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25.0	24.2	97	90 - 110	2003-11-13
Dissolved Potassium		mg/L	25.0	24.2	97	90 - 110	2003-11-13
Dissolved Magnesium		mg/L	25.0	24.2	97	90 - 110	2003-11-13
Dissolved Sodium		mg/L	25.0	24.5	98	90 - 110	2003-11-13

Standard (ICV-1) QC Batch: 5733

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	2003-11-13
Carbonate Alkalinity		mg/L as CaCo3	0.00	<1.00		0 - 200	2003-11-13
Bicarbonate Alkalinity		mg/L as CaCo3	0.00	<4.00		0 - 200	2003-11-13
Total Alkalinity		mg/L as CaCo3	250	240	96	90 - 110	2003-11-13

Standard (CCV-1) QC Batch: 5733

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	2003-11-13
Carbonate Alkalinity		mg/L as CaCo3	0.00	<1.00		0 - 200	2003-11-13
Bicarbonate Alkalinity		mg/L as CaCo3	0.00	<4.00		0 - 200	2003-11-13
Total Alkalinity		mg/L as CaCo3	250	244	98	90 - 110	2003-11-13

Standard (ICV-1) QC Batch: 5796

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25.0	24.9	100	90 - 110	2003-11-18
Dissolved Potassium		mg/L	25.0	25.3	101	90 - 110	2003-11-18
Dissolved Magnesium		mg/L	25.0	25.0	100	90 - 110	2003-11-18
Dissolved Sodium		mg/L	25.0	25.4	102	90 - 110	2003-11-18

Standard (CCV-1) QC Batch: 5796

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25.0	25.1	100	90 - 110	2003-11-18
Dissolved Potassium		mg/L	25.0	24.8	99	90 - 110	2003-11-18
Dissolved Magnesium		mg/L	25.0	25.1	100	90 - 110	2003-11-18
Dissolved Sodium		mg/L	25.0	25.4	102	90 - 110	2003-11-18

Standard (ICV-1) QC Batch: 5799

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25.0	24.9	100	90 - 110	2003-11-18
Dissolved Potassium		mg/L	25.0	25.3	101	90 - 110	2003-11-18
Dissolved Magnesium		mg/L	25.0	25.0	100	90 - 110	2003-11-18
Dissolved Sodium		mg/L	25.0	25.4	102	90 - 110	2003-11-18

Standard (CCV-1) QC Batch: 5799

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25.0	24.9	100	90 - 110	2003-11-18
Dissolved Potassium		mg/L	25.0	24.4	98	90 - 110	2003-11-18
Dissolved Magnesium		mg/L	25.0	25.1	100	90 - 110	2003-11-18
Dissolved Sodium		mg/L	25.0	25.1	100	90 - 110	2003-11-18

3111001

CLIENT NAME: <i>Cheat - Texas</i>	SITE MANAGER: <i>Clinton Cheesing</i>	PROJECT NAME: <i>C.J. Erwin</i>	PARAMETERS/METHOD NUMBER										CHAIN-OF-CUSTODY RECORD	
			PAGE 1 OF 2	LAB. PO #	NUMBER OF CONTAINERS	SAMPLE IDENTIFICATION	WATER TYPE	SOIL TYPE	OTHER	LAB ID NUMBER (LAB USE ONLY)	REMARKS IE, ENTERED, UNENTERED, PRESERVED, UNPRESERVED, GRAD COMPOSITE			
11/5	1202	✓	MW-1	✓	✓	✓	20983							
11/5	1229	✓	MW-1	✓	✓	✓	84							
11/5	1303	✓	MW-1	✓	✓	✓	85							
11/5	1320	✓	MW-2	✓	✓	✓	86							
11/5	1333	✓	MW-1	✓	✓	✓	87							
11/5	1402	✓	MW-1	✓	✓	✓	88							
11/5	1412	✓	MW-1	✓	✓	✓	89							
11/6	1426	✓	MW-13	✓	✓	✓	90							
11/6	1447	✓	MW-12	✓	✓	✓	91							
11/6	1509	✓	MW-3	✓	✓	✓	92							
11/6	1521	✓	MW-5	✓	✓	✓	93							
11/7	1522	✓	DUE	✓	✓	✓	94							
11/7	0331	✓	MW-9	✓	✓	✓	95							
11/7	0717	✓	MW-1	✓	✓	✓	96							
11/7	1527	✓	MISSING	✓	✓	✓	97							
11/7	1527	✓	MW-1	✓	✓	✓	98							
11/7	1534	✓	RW-1	✓	✓	✓	99							
SAMPLED BY: (Signature) <i>J. C. Erwin</i>										DATE: 11/16/03	RECEIVED BY: (Signature) <i>J. C. Erwin</i>	DATE: 11/16/03		
										TIME: 10:31	TIME: 10:45	TIME: 10:45		
REINDEMNISHED BY: (Signature) <i>J. C. Erwin</i>										RECEIVED BY: (Signature) <i>J. C. Erwin</i>	RECEIVED BY: (Signature) <i>J. C. Erwin</i>	RECEIVED BY: (Signature) <i>J. C. Erwin</i>		
										DATE: 11/16/03	TIME: 10:45	DATE: 11/16/03	TIME: 10:45	
COMMENTS: <i>None</i>										TURNAROUND TIME NEEDED				
RECEIVING LABORATORY: <i>Arson &amp; Associates, Inc.</i>										SAMPLE SHIPPED BY: (Circle)				
ADDRESS: <i>507 N. Marienteld, Ste. 202 • Midland, TX 79701</i>										FEDEX	AIRBILL #: <i>1234567890</i>	OTHER: <i>UPS</i>		
CITY: <i>Midland</i>										DATE: <i>11/16/03</i>	TIME: <i>10:45</i>			
CONTACT: <i>None</i>										DATE: <i>11/16/03</i>	TIME: <i>10:45</i>			
SAMPLE CONDITION WHEN RECEIVED: <i>None</i>										LA CONTACT PERSON:	SAMPLE TYPE: <i>NA</i>			

3111001

CHIN-0E=CLISTY RECORD



311001

## CHAIN—OF—CUSTODY RECORD

CLIENT NAME:	PROJECT NO.:	SITE MANAGER:		PARAMETERS/METHOD NUMBER		NUMBER OF CONTAINERS	REMARKS		
		PROJECT NAME:	LAB. PO #	TIME	WATER <sup>+</sup>		SO <sub>4</sub> <sup>2-</sup>	OTHER <sup>+</sup>	LAB. I.D.
<u>Chas. Tx</u>	<u>0-012</u>	<u>Candy Crum</u>	<u>Ch Erwin</u>	<u>2</u>	<u>2</u>	<u>5</u>	<u>2/1001</u>	<u>01</u>	
PAGE <u>2</u> OF <u>2</u>		SAMPLE IDENTIFICATION		<u>Su-mw</u>	<u>w-mw</u>	<u>mw-g</u>	<u>02</u>	<u>03</u>	
		<u>DATE</u>	<u>TIME</u>	<u>11/7 1832</u>	<u>11/7 1110</u>	<u>11/7 1145</u>	<u>11/7 1121</u>	<u>04</u>	
		<u>DATE</u>	<u>TIME</u>	<u>11/7 1110</u>	<u>11/7 1145</u>	<u>11/7 1121</u>	<u>11/7 1121</u>	<u>11/7 1121</u>	
		RECEIVED BY: (Signature)		REINQUISITIONED BY: (Signature)		REMOVED BY: (Signature)		DATE: <u>11/07/03</u> RECEIVED BY: (Signature) DATE: <u>11/07/03</u> RECEIVED BY: (Signature) DATE: <u>11/07/03</u> RECEIVED BY: (Signature)	
								TIME: <u>1445</u> TIME: <u>1445</u> TIME: <u>1445</u>	
		COMMENTS:		TURNAROUND TIME NEEDED				TIME: <u>1720</u>	
		RECEIVING LABORATORY: <u>Chase</u>		RECEIVED BY: (Signature)		SAMPLE SHIPPED BY: (Circle)		DATE: <u>11/07/03</u> RECEIVED BY: (Signature) DATE: <u>11/07/03</u> RECEIVED BY: (Signature) DATE: <u>11/07/03</u> RECEIVED BY: (Signature)	
		ADDRESS: <u>2000 State St.</u>		TIME: <u>10:30</u>		FEDEX		TIME: <u>1720</u>	
		CITY: <u>Midland</u>		PHONE: <u>(432) 580-1000</u>		AIRBUL <sup>t</sup> UPS OTHER			
		CONTACT:							
		SAMPLE CONDITION WHEN RECEIVED:		LA CONTACT PERSON: <u>PC</u>		SAMPLE TYPE: <u>WT</u>			

# TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9   Lubbock, Texas 79424   800•378•1296   806•794•1296   FAX 806•794•1298  
155 McCutcheon, Suite H   El Paso, Texas 79932   888•588•3443   915•585•3443   FAX 915•585•4944  
E-Mail: lab@traceanalysis.com

## Analytical and Quality Control Report

Cindy Crain  
Larson and Associates, Inc.  
P. O. Box 50685  
Midland, Tx 79710

Report Date: February 20, 2004

Work Order: 4020621

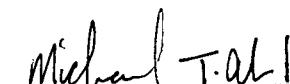
Client Name: Chev TX  
Project Name: G.L. Erwin  
Project Number: 0-0112

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
26867	MW-14	water	2004-02-04	09:57	2004-02-06
26868	WW-1	water	2004-02-04	09:10	2004-02-06
26869	MW-17	water	2004-02-04	10:30	2004-02-06
26870	MW-8	water	2004-02-04	10:52	2004-02-06
26871	MW-16	water	2004-02-04	11:15	2004-02-06
26872	MW-7	water	2004-02-04	12:35	2004-02-06
26873	MW-2	water	2004-02-04	12:58	2004-02-06
26874	MW-1	water	2004-02-04	13:17	2004-02-06
26875	MW-5	water	2004-02-04	13:40	2004-02-06
26876	MW-3	water	2004-02-04	14:05	2004-02-06
26877	MW-6	water	2004-02-04	14:31	2004-02-06
26878	Dup.	water	2004-02-04	00:00	2004-02-06
26879	MW-9	water	2004-02-05	07:35	2004-02-06
26880	MW-10	water	2004-02-05	07:58	2004-02-06
26881	MW-12	water	2004-02-05	08:20	2004-02-06
26882	MW-13	water	2004-02-05	08:33	2004-02-06
26883	MW-4	water	2004-02-05	09:35	2004-02-06
26884	SW-MW	water	2004-02-05	10:47	2004-02-06
26885	W-MW	water	2004-02-05	10:22	2004-02-06
26886	RW-1	water	2004-02-05	09:50	2004-02-06
26887	Dup.	water	2004-02-05	00:00	2004-02-06

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

  
Dr. Blair Leftwich, Director

## Analytical Report

### Sample: 26867 - MW-14

Analysis: Alkalinity      Analytical Method: SM 2320B      Prep Method: N/A  
QC Batch: 7464      Date Analyzed: 2004-02-10      Analyzed By: RS  
Prep Batch: 6684      Date Prepared: 2004-02-10      Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		74.0	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		74.0	mg/L as CaCO <sub>3</sub>	1	4.00

### Sample: 26867 - MW-14

Analysis: BTEX      Analytical Method: S 8021B      Prep Method: S 5030B  
QC Batch: 7407      Date Analyzed: 2004-02-06      Analyzed By: BS  
Prep Batch: 6637      Date Prepared: 2004-02-06      Prepared By: BS

Parameter	Flag	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)		0.0997	mg/L	1	0.100	100	79.7 - 119
4-Bromofluorobenzene (4-BFB)	<sup>1</sup>	0.0643	mg/L	1	0.100	64	65.6 - 141

### Sample: 26867 - MW-14

Analysis: Cations      Analytical Method: S 6010B      Prep Method: S 3005A  
QC Batch: 7628      Date Analyzed: 2004-02-16      Analyzed By: BC  
Prep Batch: 6678      Date Prepared: 2004-02-10      Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		966	mg/L	1	0.500
Dissolved Potassium		46.1	mg/L	1	0.500
Dissolved Magnesium		320	mg/L	1	0.500
Dissolved Sodium		840	mg/L	1	0.500

### Sample: 26867 - MW-14

Analysis: Ion Chromatography      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 7390      Date Analyzed: 2004-02-09      Analyzed By: JSW

<sup>1</sup> Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

Prep Batch: 6623      Date Prepared: 2004-02-09      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		3910	mg/L	100	0.500
Fluoride		<3.00	mg/L	15	0.200
Sulfate		559	mg/L	15	0.500

**Sample: 26867 - MW-14**

Analysis: NO3 (IC)      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 7390      Date Analyzed: 2004-02-09      Analyzed By: JSW  
Prep Batch: 6623      Date Prepared: 2004-02-09      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		6.01	mg/L	15	0.200

**Sample: 26867 - MW-14**

Analysis: TDS      Analytical Method: SM 2540C      Prep Method: N/A  
QC Batch: 7488      Date Analyzed: 2004-02-11      Analyzed By: JSW  
Prep Batch: 6699      Date Prepared: 2004-02-10      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		7720	mg/L	5	10.00

**Sample: 26868 - WW-1**

Analysis: Alkalinity      Analytical Method: SM 2320B      Prep Method: N/A  
QC Batch: 7464      Date Analyzed: 2004-02-10      Analyzed By: RS  
Prep Batch: 6684      Date Prepared: 2004-02-10      Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		156	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		156	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 26868 - WW-1**

Analysis: BTEX      Analytical Method: S 8021B      Prep Method: S 5030B  
QC Batch: 7408      Date Analyzed: 2004-02-06      Analyzed By: BS  
Prep Batch: 6638      Date Prepared: 2004-02-06      Prepared By: BS

*continued ...*

sample 26868 continued ...

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)		0.100	mg/L	1	0.100	100	79.7 - 119
4-Bromofluorobenzene (4-BFB)		0.0879	mg/L	1	0.100	88	65.6 - 141

**Sample: 26868 - WW-1**

Analysis: Cations      Analytical Method: S 6010B      Prep Method: S 3005A  
 QC Batch: 7628      Date Analyzed: 2004-02-16      Analyzed By: BC  
 Prep Batch: 6678      Date Prepared: 2004-02-10      Prepared By: TP

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Calcium		68.2	mg/L	1	0.500
Dissolved Potassium		8.70	mg/L	1	0.500
Dissolved Magnesium		25.5	mg/L	1	0.500
Dissolved Sodium		92.4	mg/L	1	0.500

**Sample: 26868 - WW-1**

Analysis: Ion Chromatography      Analytical Method: E 300.0      Prep Method: N/A  
 QC Batch: 7390      Date Analyzed: 2004-02-09      Analyzed By: JSW  
 Prep Batch: 6623      Date Prepared: 2004-02-09      Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		185	mg/L	5	0.500
Fluoride		1.81	mg/L	5	0.200
Sulfate		102	mg/L	5	0.500

**Sample: 26868 - WW-1**

Analysis: NO3 (IC)      Analytical Method: E 300.0      Prep Method: N/A  
 QC Batch: 7390      Date Analyzed: 2004-02-09      Analyzed By: JSW  
 Prep Batch: 6623      Date Prepared: 2004-02-09      Prepared By: JSW

*continued ...*

sample 26868 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Nitrate-N		3.79	mg/L	5	0.200

## Sample: 26868 - WW-1

Analysis: TDS	Analytical Method: SM 2540C	Prep Method: N/A
QC Batch: 7488	Date Analyzed: 2004-02-11	Analyzed By: JSW
Prep Batch: 6699	Date Prepared: 2004-02-10	Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		709.0	mg/L	1	10.00

## Sample: 26869 - MW-17

Analysis: Alkalinity	Analytical Method: SM 2320B	Prep Method: N/A
QC Batch: 7464	Date Analyzed: 2004-02-10	Analyzed By: RS
Prep Batch: 6684	Date Prepared: 2004-02-10	Prepared By: RS

Parameter	Flag	RL Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		158	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		158	mg/L as CaCO <sub>3</sub>	1	4.00

## Sample: 26869 - MW-17

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5030B
QC Batch: 7408	Date Analyzed: 2004-02-06	Analyzed By: BS
Prep Batch: 6638	Date Prepared: 2004-02-06	Prepared By: BS

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)		0.102	mg/L	1	0.100	102	79.7 - 119
4-Bromofluorobenzene (4-BFB)		0.0897	mg/L	1	0.100	90	65.6 - 141

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**Sample: 26869 - MW-17**

Analysis: Cations	Analytical Method: S 6010B	Prep Method: S 3005A
QC Batch: 7628	Date Analyzed: 2004-02-16	Analyzed By: BC
Prep Batch: 6678	Date Prepared: 2004-02-10	Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		158	mg/L	1	0.500
Dissolved Potassium		12.2	mg/L	1	0.500
Dissolved Magnesium		52.5	mg/L	1	0.500
Dissolved Sodium		205	mg/L	1	0.500

**Sample: 26869 - MW-17**

Analysis: Ion Chromatography	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 7390	Date Analyzed: 2004-02-09	Analyzed By: JSW
Prep Batch: 6623	Date Prepared: 2004-02-09	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		650	mg/L	50	0.500
Fluoride		2.01	mg/L	5	0.200
Sulfate		93.1	mg/L	5	0.500

**Sample: 26869 - MW-17**

Analysis: NO3 (IC)	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 7390	Date Analyzed: 2004-02-09	Analyzed By: JSW
Prep Batch: 6623	Date Prepared: 2004-02-09	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		3.93	mg/L	5	0.200

**Sample: 26869 - MW-17**

Analysis: TDS	Analytical Method: SM 2540C	Prep Method: N/A
QC Batch: 7488	Date Analyzed: 2004-02-11	Analyzed By: JSW
Prep Batch: 6699	Date Prepared: 2004-02-10	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		1416	mg/L	2	10.00

**Sample: 26870 - MW-8**

Analysis: Alkalinity	Analytical Method: SM 2320B	Prep Method: N/A
QC Batch: 7462	Date Analyzed: 2004-02-10	Analyzed By: RS
Prep Batch: 6685	Date Prepared: 2004-02-10	Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		254	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		254	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 26870 - MW-8**

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5030B
QC Batch: 7408	Date Analyzed: 2004-02-06	Analyzed By: BS
Prep Batch: 6638	Date Prepared: 2004-02-06	Prepared By: BS

Parameter	Flag	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)		0.101	mg/L	1	0.100	101	79.7 - 119
4-Bromofluorobenzene (4-BFB)		0.0808	mg/L	1	0.100	81	65.6 - 141

**Sample: 26870 - MW-8**

Analysis: Cations	Analytical Method: S 6010B	Prep Method: S 3005A
QC Batch: 7628	Date Analyzed: 2004-02-16	Analyzed By: BC
Prep Batch: 6678	Date Prepared: 2004-02-10	Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		55.2	mg/L	1	0.500
Dissolved Potassium		13.2	mg/L	1	0.500
Dissolved Magnesium		18.2	mg/L	1	0.500
Dissolved Sodium		522	mg/L	1	0.500

**Sample: 26870 - MW-8**

Analysis: Ion Chromatography	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 7390	Date Analyzed: 2004-02-09	Analyzed By: JSW
Prep Batch: 6623	Date Prepared: 2004-02-09	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		764	mg/L	50	0.500
Fluoride		3.77	mg/L	10	0.200
Sulfate		161	mg/L	10	0.500

**Sample: 26870 - MW-8**

Analysis: NO<sub>3</sub> (IC) Analytical Method: E 300.0 Prep Method: N/A  
QC Batch: 7390 Date Analyzed: 2004-02-09 Analyzed By: JSW  
Prep Batch: 6623 Date Prepared: 2004-02-09 Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		7.85	mg/L	10	0.200

**Sample: 26870 - MW-8**

Analysis: TDS Analytical Method: SM 2540C Prep Method: N/A  
QC Batch: 7489 Date Analyzed: 2004-02-11 Analyzed By: JSW  
Prep Batch: 6701 Date Prepared: 2004-02-10 Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		2038	mg/L	2	10.00

**Sample: 26871 - MW-16**

Analysis: Alkalinity Analytical Method: SM 2320B Prep Method: N/A  
QC Batch: 7462 Date Analyzed: 2004-02-10 Analyzed By: RS  
Prep Batch: 6685 Date Prepared: 2004-02-10 Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		174	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		174	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 26871 - MW-16**

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5030B  
QC Batch: 7408 Date Analyzed: 2004-02-06 Analyzed By: BS  
Prep Batch: 6638 Date Prepared: 2004-02-06 Prepared By: BS

Parameter	Flag	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)		0.0884	mg/L	1	0.100	88	79.7 - 119
4-Bromofluorobenzene (4-BFB)	<sup>2</sup>	0.0651	mg/L	1	0.100	65	65.6 - 141

<sup>2</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

Sample: 26871 - MW-16

Analysis: Cations	Analytical Method: S 6010B	Prep Method: S 3005A
QC Batch: 7628	Date Analyzed: 2004-02-16	Analyzed By: BC
Prep Batch: 6678	Date Prepared: 2004-02-10	Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		235	mg/L	1	0.500
Dissolved Potassium		15.2	mg/L	1	0.500
Dissolved Magnesium		76.8	mg/L	1	0.500
Dissolved Sodium		299	mg/L	1	0.500

Sample: 26871 - MW-16

Analysis: Ion Chromatography	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 7390	Date Analyzed: 2004-02-09	Analyzed By: JSW
Prep Batch: 6623	Date Prepared: 2004-02-09	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		937	mg/L	50	0.500
Fluoride		2.19	mg/L	10	0.200
Sulfate		123	mg/L	10	0.500

Sample: 26871 - MW-16

Analysis: NO <sub>3</sub> (IC)	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 7390	Date Analyzed: 2004-02-09	Analyzed By: JSW
Prep Batch: 6623	Date Prepared: 2004-02-09	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		6.59	mg/L	10	0.200

Sample: 26871 - MW-16

Analysis: TDS	Analytical Method: SM 2540C	Prep Method: N/A
QC Batch: 7489	Date Analyzed: 2004-02-11	Analyzed By: JSW
Prep Batch: 6701	Date Prepared: 2004-02-10	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		2200	mg/L	4	10.00

Sample: 26872 - MW-7

Analysis: Alkalinity	Analytical Method: SM 2320B	Prep Method: N/A
QC Batch: 7462	Date Analyzed: 2004-02-10	Analyzed By: RS

Prep Batch: 6685 Date Prepared: 2004-02-10 Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		262	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		262	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 26872 - MW-7**

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5030B
QC Batch: 7408	Date Analyzed: 2004-02-06	Analyzed By: BS
Prep Batch: 6638	Date Prepared: 2004-02-06	Prepared By: BS

Parameter	Flag	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)		0.0913	mg/L	1	0.100	91	79.7 - 119
4-Bromofluorobenzene (4-BFB)		0.0659	mg/L	1	0.100	66	65.6 - 141

**Sample: 26872 - MW-7**

Analysis: Cations	Analytical Method: S 6010B	Prep Method: S 3005A
QC Batch: 7628	Date Analyzed: 2004-02-16	Analyzed By: BC
Prep Batch: 6678	Date Prepared: 2004-02-10	Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		30.7	mg/L	1	0.500
Dissolved Potassium		7.95	mg/L	1	0.500
Dissolved Magnesium		9.87	mg/L	1	0.500
Dissolved Sodium		298	mg/L	1	0.500

**Sample: 26872 - MW-7**

Analysis: Ion Chromatography	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 7392	Date Analyzed: 2004-02-09	Analyzed By: JSW
Prep Batch: 6624	Date Prepared: 2004-02-09	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		320	mg/L	10	0.500
Fluoride		3.10	mg/L	5	0.200
Sulfate		112	mg/L	5	0.500

**Sample: 26872 - MW-7**

Analysis: NO<sub>3</sub> (IC)  
QC Batch: 7392  
Prep Batch: 6624

Analytical Method: E 300.0  
Date Analyzed: 2004-02-09  
Date Prepared: 2004-02-09

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

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		4.25	mg/L	5	0.200

**Sample: 26872 - MW-7**

Analysis: TDS  
QC Batch: 7489  
Prep Batch: 6701

Analytical Method: SM 2540C  
Date Analyzed: 2004-02-11  
Date Prepared: 2004-02-10

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

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		1138	mg/L	2	10.00

**Sample: 26873 - MW-2**

Analysis: Alkalinity  
QC Batch: 7462  
Prep Batch: 6685

Analytical Method: SM 2320B  
Date Analyzed: 2004-02-10  
Date Prepared: 2004-02-10

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

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		230	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		230	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 26873 - MW-2**

Analysis: BTEX  
QC Batch: 7408  
Prep Batch: 6638

Analytical Method: S 8021B  
Date Analyzed: 2004-02-06  
Date Prepared: 2004-02-06

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

Parameter	Flag	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)		0.0989	mg/L	1	0.100	99	79.7 - 119
4-Bromofluorobenzene (4-BFB)		0.0745	mg/L	1	0.100	74	65.6 - 141

Sample: 26873 - MW-2

Analysis: Cations  
QC Batch: 7628  
Prep Batch: 6678

Analytical Method: S 6010B  
Date Analyzed: 2004-02-16  
Date Prepared: 2004-02-10

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

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		76.1	mg/L	1	0.500
Dissolved Potassium		10.7	mg/L	1	0.500
Dissolved Magnesium		25.2	mg/L	1	0.500
Dissolved Sodium		324	mg/L	1	0.500

Sample: 26873 - MW-2

Analysis: Ion Chromatography  
QC Batch: 7392  
Prep Batch: 6624

Analytical Method: E 300.0  
Date Analyzed: 2004-02-09  
Date Prepared: 2004-02-09

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

Parameter	Flag	Result	Units	Dilution	RL
Chloride		450	mg/L	50	0.500
Fluoride		2.06	mg/L	5	0.200
Sulfate		131	mg/L	5	0.500

Sample: 26873 - MW-2

Analysis: NO3 (IC)  
QC Batch: 7392  
Prep Batch: 6624

Analytical Method: E 300.0  
Date Analyzed: 2004-02-09  
Date Prepared: 2004-02-09

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

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		4.97	mg/L	5	0.200

Sample: 26873 - MW-2

Analysis: TDS  
QC Batch: 7489  
Prep Batch: 6701

Analytical Method: SM 2540C  
Date Analyzed: 2004-02-11  
Date Prepared: 2004-02-10

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

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		1424	mg/L	4	10.00

Sample: 26874 - MW-1

Analysis: Alkalinity  
QC Batch: 7462  
Prep Batch: 6685

Analytical Method: SM 2320B  
Date Analyzed: 2004-02-10  
Date Prepared: 2004-02-10

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

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		142	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		142	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 26874 - MW-1**

Analysis: BTEX                      Analytical Method: S 8021B                      Prep Method: S 5030B  
 QC Batch: 7408                      Date Analyzed: 2004-02-06                      Analyzed By: BS  
 Prep Batch: 6638                      Date Prepared: 2004-02-06                      Prepared By: BS

Parameter	Flag	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)		0.100	mg/L	1	0.100	100	79.7 - 119
4-Bromofluorobenzene (4-BFB)		0.0742	mg/L	1	0.100	74	65.6 - 141

**Sample: 26874 - MW-1**

Analysis: Cations                      Analytical Method: S 6010B                      Prep Method: S 3005A  
 QC Batch: 7628                      Date Analyzed: 2004-02-16                      Analyzed By: BC  
 Prep Batch: 6678                      Date Prepared: 2004-02-10                      Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		117	mg/L	1	0.500
Dissolved Potassium		10.2	mg/L	1	0.500
Dissolved Magnesium		43.2	mg/L	1	0.500
Dissolved Sodium		113	mg/L	1	0.500

**Sample: 26874 - MW-1**

Analysis: Ion Chromatography                      Analytical Method: E 300.0                      Prep Method: N/A  
 QC Batch: 7392                      Date Analyzed: 2004-02-09                      Analyzed By: JSW  
 Prep Batch: 6624                      Date Prepared: 2004-02-09                      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		390	mg/L	10	0.500
Fluoride		1.92	mg/L	5	0.200
Sulfate		71.1	mg/L	5	0.500

**Sample: 26874 - MW-1**

Analysis: NO <sub>3</sub> (IC)	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 7392	Date Analyzed: 2004-02-09	Analyzed By: JSW
Prep Batch: 6624	Date Prepared: 2004-02-09	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		3.25	mg/L	5	0.200

**Sample: 26874 - MW-1**

Analysis: TDS	Analytical Method: SM 2540C	Prep Method: N/A
QC Batch: 7489	Date Analyzed: 2004-02-11	Analyzed By: JSW
Prep Batch: 6701	Date Prepared: 2004-02-10	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		940.0	mg/L	4	10.00

**Sample: 26875 - MW-5**

Analysis: Alkalinity	Analytical Method: SM 2320B	Prep Method: N/A
QC Batch: 7462	Date Analyzed: 2004-02-10	Analyzed By: RS
Prep Batch: 6685	Date Prepared: 2004-02-10	Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		206	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		206	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 26875 - MW-5**

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5030B
QC Batch: 7408	Date Analyzed: 2004-02-06	Analyzed By: BS
Prep Batch: 6638	Date Prepared: 2004-02-06	Prepared By: BS

Parameter	Flag	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)		0.0992	mg/L	1	0.100	99	79.7 - 119
4-Bromofluorobenzene (4-BFB)		0.0809	mg/L	1	0.100	81	65.6 - 141

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**Sample: 26875 - MW-5**

Analysis: Cations	Analytical Method: S 6010B	Prep Method: S 3005A
QC Batch: 7628	Date Analyzed: 2004-02-16	Analyzed By: BC
Prep Batch: 6678	Date Prepared: 2004-02-10	Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		95.1	mg/L	1	0.500
Dissolved Potassium		27.3	mg/L	1	0.500
Dissolved Magnesium		31.4	mg/L	1	0.500
Dissolved Sodium		289	mg/L	1	0.500

**Sample: 26875 - MW-5**

Analysis: Ion Chromatography	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 7392	Date Analyzed: 2004-02-09	Analyzed By: JSW
Prep Batch: 6624	Date Prepared: 2004-02-09	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		504	mg/L	15	0.500
Fluoride		1.38	mg/L	5	0.200
Sulfate		147	mg/L	5	0.500

**Sample: 26875 - MW-5**

Analysis: NO3 (IC)	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 7392	Date Analyzed: 2004-02-09	Analyzed By: JSW
Prep Batch: 6624	Date Prepared: 2004-02-09	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		5.31	mg/L	5	0.200

**Sample: 26875 - MW-5**

Analysis: TDS	Analytical Method: SM 2540C	Prep Method: N/A
QC Batch: 7489	Date Analyzed: 2004-02-11	Analyzed By: JSW
Prep Batch: 6701	Date Prepared: 2004-02-10	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		1410	mg/L	5	10.00

**Sample: 26876 - MW-3**

Analysis: Alkalinity	Analytical Method: SM 2320B	Prep Method: N/A
QC Batch: 7462	Date Analyzed: 2004-02-10	Analyzed By: RS
Prep Batch: 6685	Date Prepared: 2004-02-10	Prepared By: RS

Parameter	Flag	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		296	mg/L as CaCo3	1	4.00
Total Alkalinity		296	mg/L as CaCo3	1	4.00

**Sample: 26876 - MW-3**

Analysis: BTEX                      Analytical Method: S 8021B                      Prep Method: S 5030B  
 QC Batch: 7408                      Date Analyzed: 2004-02-06                      Analyzed By: BS  
 Prep Batch: 6638                      Date Prepared: 2004-02-06                      Prepared By: BS

Parameter	Flag	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)		0.0989	mg/L	1	0.100	99	79.7 - 119
4-Bromofluorobenzene (4-BFB)		0.0741	mg/L	1	0.100	74	65.6 - 141

**Sample: 26876 - MW-3**

Analysis: Cations                      Analytical Method: S 6010B                      Prep Method: S 3005A  
 QC Batch: 7628                      Date Analyzed: 2004-02-16                      Analyzed By: BC  
 Prep Batch: 6678                      Date Prepared: 2004-02-10                      Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		42.7	mg/L	1	0.500
Dissolved Potassium		27.1	mg/L	1	0.500
Dissolved Magnesium		13.1	mg/L	1	0.500
Dissolved Sodium		546	mg/L	1	0.500

**Sample: 26876 - MW-3**

Analysis: Ion Chromatography                      Analytical Method: E 300.0                      Prep Method: N/A  
 QC Batch: 7392                      Date Analyzed: 2004-02-09                      Analyzed By: JSW  
 Prep Batch: 6624                      Date Prepared: 2004-02-09                      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		755	mg/L	50	0.500
Fluoride		2.74	mg/L	5	0.200
Sulfate		205	mg/L	5	0.500

Sample: 26876 - MW-3

Analysis: NO<sub>3</sub> (IC) Analytical Method: E 300.0 Prep Method: N/A  
QC Batch: 7392 Date Analyzed: 2004-02-09 Analyzed By: JSW  
Prep Batch: 6624 Date Prepared: 2004-02-09 Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		7.36	mg/L	5	0.200

Sample: 26876 - MW-3

Analysis: TDS Analytical Method: SM 2540C Prep Method: N/A  
QC Batch: 7489 Date Analyzed: 2004-02-11 Analyzed By: JSW  
Prep Batch: 6701 Date Prepared: 2004-02-10 Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		2275	mg/L	5	10.00

Sample: 26877 - MW-6

Analysis: Alkalinity Analytical Method: SM 2320B Prep Method: N/A  
QC Batch: 7462 Date Analyzed: 2004-02-10 Analyzed By: RS  
Prep Batch: 6685 Date Prepared: 2004-02-10 Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		266	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		266	mg/L as CaCO <sub>3</sub>	1	4.00

Sample: 26877 - MW-6

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5030B  
QC Batch: 7408 Date Analyzed: 2004-02-06 Analyzed By: BS  
Prep Batch: 6638 Date Prepared: 2004-02-06 Prepared By: BS

Parameter	Flag	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)		0.0905	mg/L	1	0.100	90	79.7 - 119
4-Bromofluorobenzene (4-BFB)		0.0697	mg/L	1	0.100	70	65.6 - 141

Sample: 26877 - MW-6

Analysis: Cations  
QC Batch: 7628  
Prep Batch: 6678

Analytical Method: S 6010B  
Date Analyzed: 2004-02-16  
Date Prepared: 2004-02-10

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

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		48.9	mg/L	1	0.500
Dissolved Potassium		19.9	mg/L	1	0.500
Dissolved Magnesium		15.4	mg/L	1	0.500
Dissolved Sodium		517	mg/L	1	0.500

Sample: 26877 - MW-6

Analysis: Ion Chromatography  
QC Batch: 7395  
Prep Batch: 6625

Analytical Method: E 300.0  
Date Analyzed: 2004-02-09  
Date Prepared: 2004-02-09

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

Parameter	Flag	Result	Units	Dilution	RL
Chloride		713	mg/L	50	0.500
Fluoride		3.15	mg/L	5	0.200
Sulfate		189	mg/L	5	0.500

Sample: 26877 - MW-6

Analysis: NO3 (IC)  
QC Batch: 7395  
Prep Batch: 6625

Analytical Method: E 300.0  
Date Analyzed: 2004-02-09  
Date Prepared: 2004-02-09

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

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		7.20	mg/L	5	0.200

Sample: 26877 - MW-6

Analysis: TDS  
QC Batch: 7489  
Prep Batch: 6701

Analytical Method: SM 2540C  
Date Analyzed: 2004-02-11  
Date Prepared: 2004-02-10

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

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		2210	mg/L	5	10.00

Sample: 26878 - Dup.

Analysis: Alkalinity  
QC Batch: 7462  
Prep Batch: 6685

Analytical Method: SM 2320B  
Date Analyzed: 2004-02-10  
Date Prepared: 2004-02-10

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

Parameter	Flag	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		172	mg/L as CaCo3	1	4.00
Total Alkalinity		172	mg/L as CaCo3	1	4.00

Sample: 26878 - Dup.

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5030B
QC Batch: 7470	Date Analyzed: 2004-02-10	Analyzed By: BS
Prep Batch: 6690	Date Prepared: 2004-02-10	Prepared By: BS

Parameter	Flag	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)	<sup>3</sup>	0.0172	mg/L	1	0.100	17	71.2 - 115
4-Bromofluorobenzene (4-BFB)	<sup>4</sup>	0.0136	mg/L	1	0.100	14	76.5 - 116

Sample: 26878 - Dup.

Analysis: Cations	Analytical Method: S 6010B	Prep Method: S 3005A
QC Batch: 7628	Date Analyzed: 2004-02-16	Analyzed By: BC
Prep Batch: 6678	Date Prepared: 2004-02-10	Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		162	mg/L	1	0.500
Dissolved Potassium		12.1	mg/L	1	0.500
Dissolved Magnesium		52.6	mg/L	1	0.500
Dissolved Sodium		204	mg/L	1	0.500

Sample: 26878 - Dup.

Analysis: Ion Chromatography	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 7395	Date Analyzed: 2004-02-09	Analyzed By: JSW
Prep Batch: 6625	Date Prepared: 2004-02-09	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		557	mg/L	50	0.500
Fluoride		2.08	mg/L	5	0.200

*continued ...*

<sup>3</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

<sup>4</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

*sample 26878 continued ...*

Parameter	Flag	Result	Units	Dilution	RL
Sulfate		95.7	mg/L	5	0.500

**Sample: 26878 - Dup.**

Analysis: NO<sub>3</sub> (IC)      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 7395      Date Analyzed: 2004-02-09      Analyzed By: JSW  
Prep Batch: 6625      Date Prepared: 2004-02-09      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		4.03	mg/L	5	0.200

**Sample: 26878 - Dup.**

Analysis: TDS      Analytical Method: SM 2540C      Prep Method: N/A  
QC Batch: 7489      Date Analyzed: 2004-02-11      Analyzed By: JSW  
Prep Batch: 6701      Date Prepared: 2004-02-10      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		1496	mg/L	4	10.00

**Sample: 26879 - MW-9**

Analysis: Alkalinity      Analytical Method: SM 2320B      Prep Method: N/A  
QC Batch: 7462      Date Analyzed: 2004-02-10      Analyzed By: RS  
Prep Batch: 6685      Date Prepared: 2004-02-10      Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		124	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		124	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 26879 - MW-9**

Analysis: BTEX      Analytical Method: S 8021B      Prep Method: S 5030B  
QC Batch: 7470      Date Analyzed: 2004-02-10      Analyzed By: BS  
Prep Batch: 6690      Date Prepared: 2004-02-10      Prepared By: BS

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

*continued ...*

sample 26879 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100
Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery
Trifluorotoluene (TFT)		0.0928	mg/L	1	93
4-Bromofluorobenzene (4-BFB)	<sup>5</sup>	0.0745	mg/L	1	74
			Dilution		Recovery Limits

## Sample: 26879 - MW-9

Analysis: Cations      Analytical Method: S 6010B      Prep Method: S 3005A  
 QC Batch: 7628      Date Analyzed: 2004-02-16      Analyzed By: BC  
 Prep Batch: 6678      Date Prepared: 2004-02-10      Prepared By: TP

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Calcium		125	mg/L	1	0.500
Dissolved Potassium		10.3	mg/L	1	0.500
Dissolved Magnesium		41.1	mg/L	1	0.500
Dissolved Sodium		221	mg/L	1	0.500

## Sample: 26879 - MW-9

Analysis: Ion Chromatography      Analytical Method: E 300.0      Prep Method: N/A  
 QC Batch: 7390      Date Analyzed: 2004-02-09      Analyzed By: JSW  
 Prep Batch: 6623      Date Prepared: 2004-02-09      Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		610	mg/L	10	0.500
Fluoride		2.32	mg/L	10	0.200
Sulfate		97.7	mg/L	10	0.500

## Sample: 26879 - MW-9

Analysis: NO<sub>3</sub> (IC)      Analytical Method: E 300.0      Prep Method: N/A  
 QC Batch: 7390      Date Analyzed: 2004-02-09      Analyzed By: JSW  
 Prep Batch: 6623      Date Prepared: 2004-02-09      Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Nitrate-N		4.18	mg/L	10	0.200

## Sample: 26879 - MW-9

<sup>5</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

Analysis: TDS	Analytical Method: SM 2540C	Prep Method: N/A
QC Batch: 7489	Date Analyzed: 2004-02-11	Analyzed By: JSW
Prep Batch: 6701	Date Prepared: 2004-02-10	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		1345	mg/L	5	10.00

**Sample: 26880 - MW-10**

Analysis: Alkalinity	Analytical Method: SM 2320B	Prep Method: N/A
QC Batch: 7544	Date Analyzed: 2004-02-11	Analyzed By: RS
Prep Batch: 6750	Date Prepared: 2004-02-11	Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		196	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		196	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 26880 - MW-10**

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5030B
QC Batch: 7470	Date Analyzed: 2004-02-10	Analyzed By: BS
Prep Batch: 6690	Date Prepared: 2004-02-10	Prepared By: BS

Parameter	Flag	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)		0.0908	mg/L	1	0.100	91	71.2 - 115
4-Bromofluorobenzene (4-BFB)	<sup>6</sup>	0.0744	mg/L	1	0.100	74	76.5 - 116

**Sample: 26880 - MW-10**

Analysis: Cations	Analytical Method: S 6010B	Prep Method: S 3005A
QC Batch: 7628	Date Analyzed: 2004-02-16	Analyzed By: BC
Prep Batch: 6678	Date Prepared: 2004-02-10	Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		75.8	mg/L	1	0.500
Dissolved Potassium		6.29	mg/L	1	0.500

*continued ...*

<sup>6</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

*sample 26880 continued ...*

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Magnesium		25.7	mg/L	1	0.500
Dissolved Sodium		73.8	mg/L	1	0.500

**Sample: 26880 - MW-10**

Analysis: Ion Chromatography      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 7395      Date Analyzed: 2004-02-09      Analyzed By: JSW  
Prep Batch: 6625      Date Prepared: 2004-02-09      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		101	mg/L	5	0.500
Fluoride		1.68	mg/L	5	0.200
Sulfate		121	mg/L	5	0.500

**Sample: 26880 - MW-10**

Analysis: NO3 (IC)      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 7395      Date Analyzed: 2004-02-09      Analyzed By: JSW  
Prep Batch: 6625      Date Prepared: 2004-02-09      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		4.22	mg/L	5	0.200

**Sample: 26880 - MW-10**

Analysis: TDS      Analytical Method: SM 2540C      Prep Method: N/A  
QC Batch: 7488      Date Analyzed: 2004-02-11      Analyzed By: JSW  
Prep Batch: 6699      Date Prepared: 2004-02-10      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		674.0	mg/L	2	10.00

**Sample: 26881 - MW-12**

Analysis: Alkalinity      Analytical Method: SM 2320B      Prep Method: N/A  
QC Batch: 7544      Date Analyzed: 2004-02-11      Analyzed By: RS  
Prep Batch: 6750      Date Prepared: 2004-02-11      Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00

*continued ...*

sample 26881 continued ...

Parameter	Flag	Result	Units	Dilution	RL
Bicarbonate Alkalinity		74.0	mg/L as CaCo3	1	4.00
Total Alkalinity		74.0	mg/L as CaCo3	1	4.00

**Sample: 26881 - MW-12**

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5030B
QC Batch: 7470	Date Analyzed: 2004-02-10	Analyzed By: BS
Prep Batch: 6690	Date Prepared: 2004-02-10	Prepared By: BS

Parameter	Flag	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)		0.0912	mg/L	1	0.100	91	71.2 - 115
4-Bromofluorobenzene (4-BFB)	7	0.0732	mg/L	1	0.100	73	76.5 - 116

**Sample: 26881 - MW-12**

Analysis: Cations	Analytical Method: S 6010B	Prep Method: S 3005A
QC Batch: 7628	Date Analyzed: 2004-02-16	Analyzed By: BC
Prep Batch: 6678	Date Prepared: 2004-02-10	Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		525	mg/L	1	0.500
Dissolved Potassium		21.6	mg/L	1	0.500
Dissolved Magnesium		181	mg/L	1	0.500
Dissolved Sodium		160	mg/L	1	0.500

**Sample: 26881 - MW-12**

Analysis: Ion Chromatography	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 7395	Date Analyzed: 2004-02-09	Analyzed By: JSW
Prep Batch: 6625	Date Prepared: 2004-02-09	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		1680	mg/L	100	0.500
Fluoride		2.19	mg/L	10	0.200
Sulfate		46.0	mg/L	10	0.500

<sup>7</sup> Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

**Sample: 26881 - MW-12**

Analysis: NO <sub>3</sub> (IC)	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 7395	Date Analyzed: 2004-02-09	Analyzed By: JSW
Prep Batch: 6625	Date Prepared: 2004-02-09	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		5.13	mg/L	10	0.200

**Sample: 26881 - MW-12**

Analysis: TDS	Analytical Method: SM 2540C	Prep Method: N/A
QC Batch: 7551	Date Analyzed: 2004-02-13	Analyzed By: JSW
Prep Batch: 6760	Date Prepared: 2004-02-11	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		2910	mg/L	5	10.00

**Sample: 26882 - MW-13**

Analysis: Alkalinity	Analytical Method: SM 2320B	Prep Method: N/A
QC Batch: 7544	Date Analyzed: 2004-02-11	Analyzed By: RS
Prep Batch: 6750	Date Prepared: 2004-02-11	Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		96.0	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		96.0	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 26882 - MW-13**

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5030B
QC Batch: 7470	Date Analyzed: 2004-02-10	Analyzed By: BS
Prep Batch: 6690	Date Prepared: 2004-02-10	Prepared By: BS

Parameter	Flag	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	71.2 - 115
4-Bromofluorobenzene (4-BFB)	<sup>8</sup>	0.0744	mg/L	1	0.100	74	76.5 - 116

<sup>8</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

Sample: 26882 - MW-13

Analysis: Cations	Analytical Method: S 6010B	Prep Method: S 3005A
QC Batch: 7628	Date Analyzed: 2004-02-16	Analyzed By: BC
Prep Batch: 6678	Date Prepared: 2004-02-10	Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		179	mg/L	1	0.500
Dissolved Potassium		15.4	mg/L	1	0.500
Dissolved Magnesium		65.6	mg/L	1	0.500
Dissolved Sodium		98.3	mg/L	1	0.500

Sample: 26882 - MW-13

Analysis: Ion Chromatography	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 7395	Date Analyzed: 2004-02-09	Analyzed By: JSW
Prep Batch: 6625	Date Prepared: 2004-02-09	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		543	mg/L	10	0.500
Fluoride		2.30	mg/L	5	0.200
Sulfate		120	mg/L	5	0.500

Sample: 26882 - MW-13

Analysis: NO3 (IC)	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 7395	Date Analyzed: 2004-02-09	Analyzed By: JSW
Prep Batch: 6625	Date Prepared: 2004-02-09	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		4.56	mg/L	5	0.200

Sample: 26882 - MW-13

Analysis: TDS	Analytical Method: SM 2540C	Prep Method: N/A
QC Batch: 7551	Date Analyzed: 2004-02-13	Analyzed By: JSW
Prep Batch: 6760	Date Prepared: 2004-02-11	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		1220	mg/L	2	10.00

Sample: 26883 - MW-4

Analysis: Alkalinity	Analytical Method: SM 2320B	Prep Method: N/A
QC Batch: 7544	Date Analyzed: 2004-02-11	Analyzed By: RS

Prep Batch: 6750 Date Prepared: 2004-02-11 Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		170	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		170	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 26883 - MW-4**

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5030B
QC Batch: 7470	Date Analyzed: 2004-02-10	Analyzed By: BS
Prep Batch: 6690	Date Prepared: 2004-02-10	Prepared By: BS

Parameter	Flag	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)		0.0904	mg/L	1	0.100	90	71.2 - 115
4-Bromofluorobenzene (4-BFB)	<sup>9</sup>	0.0741	mg/L	1	0.100	74	76.5 - 116

**Sample: 26883 - MW-4**

Analysis: Cations	Analytical Method: S 6010B	Prep Method: S 3005A
QC Batch: 7628	Date Analyzed: 2004-02-16	Analyzed By: BC
Prep Batch: 6678	Date Prepared: 2004-02-10	Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		277	mg/L	1	0.500
Dissolved Potassium		108	mg/L	1	0.500
Dissolved Magnesium		75.9	mg/L	1	0.500
Dissolved Sodium		630	mg/L	1	0.500

**Sample: 26883 - MW-4**

Analysis: Ion Chromatography	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 7396	Date Analyzed: 2004-02-09	Analyzed By: JSW
Prep Batch: 6626	Date Prepared: 2004-02-09	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		1730	mg/L	100	0.500

*continued ...*<sup>9</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

*sample 26883 continued ...*

Parameter	Flag	Result	Units	Dilution	RL
Fluoride		<2.00	mg/L	10	0.200
Sulfate		79.0	mg/L	10	0.500

**Sample: 26883 - MW-4**

Analysis: NO<sub>3</sub> (IC)      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 7396      Date Analyzed: 2004-02-09      Analyzed By: JSW  
Prep Batch: 6626      Date Prepared: 2004-02-09      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		5.93	mg/L	10	0.200

**Sample: 26883 - MW-4**

Analysis: TDS      Analytical Method: SM 2540C      Prep Method: N/A  
QC Batch: 7551      Date Analyzed: 2004-02-13      Analyzed By: JSW  
Prep Batch: 6760      Date Prepared: 2004-02-11      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		3380	mg/L	10	10.00

**Sample: 26884 - SW-MW**

Analysis: Alkalinity      Analytical Method: SM 2320B      Prep Method: N/A  
QC Batch: 7544      Date Analyzed: 2004-02-11      Analyzed By: RS  
Prep Batch: 6750      Date Prepared: 2004-02-11      Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		300	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		300	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 26884 - SW-MW**

Analysis: BTEX      Analytical Method: S 8021B      Prep Method: S 5030B  
QC Batch: 7470      Date Analyzed: 2004-02-10      Analyzed By: BS  
Prep Batch: 6690      Date Prepared: 2004-02-10      Prepared By: BS

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

*continued ...*

sample 26884 continued ...

Parameter	Flag	Result	Units	Dilution	RL	
Toluene		<0.00100	mg/L	1	0.00100	
Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0891	mg/L	1	0.100	89 71.2 - 115
4-Bromofluorobenzene (4-BFB)	<sup>10</sup>	0.0726	mg/L	1	0.100	73 76.5 - 116

**Sample: 26884 - SW-MW**

Analysis: Cations      Analytical Method: S 6010B      Prep Method: S 3005A  
 QC Batch: 7628      Date Analyzed: 2004-02-16      Analyzed By: BC  
 Prep Batch: 6678      Date Prepared: 2004-02-10      Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		109	mg/L	1	0.500
Dissolved Potassium		52.2	mg/L	1	0.500
Dissolved Magnesium		33.1	mg/L	1	0.500
Dissolved Sodium		716	mg/L	1	0.500

**Sample: 26884 - SW-MW**

Analysis: Ion Chromatography      Analytical Method: E 300.0      Prep Method: N/A  
 QC Batch: 7396      Date Analyzed: 2004-02-09      Analyzed By: JSW  
 Prep Batch: 6626      Date Prepared: 2004-02-09      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		1240	mg/L	100	0.500
Fluoride		2.37	mg/L	10	0.200
Sulfate		238	mg/L	10	0.500

**Sample: 26884 - SW-MW**

Analysis: NO3 (IC)      Analytical Method: E 300.0      Prep Method: N/A  
 QC Batch: 7396      Date Analyzed: 2004-02-09      Analyzed By: JSW  
 Prep Batch: 6626      Date Prepared: 2004-02-09      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		6.17	mg/L	10	0.200

<sup>10</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

Sample: 26884 - SW-MW

Analysis: TDS	Analytical Method: SM 2540C	Prep Method: N/A
QC Batch: 7551	Date Analyzed: 2004-02-13	Analyzed By: JSW
Prep Batch: 6760	Date Prepared: 2004-02-11	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		2860	mg/L	5	10.00

Sample: 26885 - W-MW

Analysis: Alkalinity	Analytical Method: SM 2320B	Prep Method: N/A
QC Batch: 7544	Date Analyzed: 2004-02-11	Analyzed By: RS
Prep Batch: 6750	Date Prepared: 2004-02-11	Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		196	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		196	mg/L as CaCO <sub>3</sub>	1	4.00

Sample: 26885 - W-MW

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5030B
QC Batch: 7470	Date Analyzed: 2004-02-10	Analyzed By: BS
Prep Batch: 6690	Date Prepared: 2004-02-10	Prepared By: BS

Parameter	Flag	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)		0.0916	mg/L	1	0.100	92	71.2 - 115
4-Bromofluorobenzene (4-BFB)	<sup>11</sup>	0.0727	mg/L	1	0.100	73	76.5 - 116

Sample: 26885 - W-MW

Analysis: Cations	Analytical Method: S 6010B	Prep Method: S 3005A
QC Batch: 7628	Date Analyzed: 2004-02-16	Analyzed By: BC
Prep Batch: 6678	Date Prepared: 2004-02-10	Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		51.6	mg/L	1	0.500

continued ...

<sup>11</sup> Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

*sample 26885 continued ...*

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Potassium		41.4	mg/L	1	0.500
Dissolved Magnesium		14.6	mg/L	1	0.500
Dissolved Sodium		235	mg/L	1	0.500

**Sample: 26885 - W-MW**

Analysis: Ion Chromatography      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 7396      Date Analyzed: 2004-02-09      Analyzed By: JSW  
Prep Batch: 6626      Date Prepared: 2004-02-09      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		345	mg/L	10	0.500
Fluoride		1.66	mg/L	5	0.200
Sulfate		112	mg/L	5	0.500

**Sample: 26885 - W-MW**

Analysis: NO3 (IC)      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 7396      Date Analyzed: 2004-02-09      Analyzed By: JSW  
Prep Batch: 6626      Date Prepared: 2004-02-09      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		4.09	mg/L	5	0.200

**Sample: 26885 - W-MW**

Analysis: TDS      Analytical Method: SM 2540C      Prep Method: N/A  
QC Batch: 7551      Date Analyzed: 2004-02-13      Analyzed By: JSW  
Prep Batch: 6760      Date Prepared: 2004-02-11      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		1074	mg/L	2	10.00

**Sample: 26886 - RW-1**

Analysis: Alkalinity      Analytical Method: SM 2320B      Prep Method: N/A  
QC Batch: 7544      Date Analyzed: 2004-02-11      Analyzed By: RS  
Prep Batch: 6750      Date Prepared: 2004-02-11      Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO3	1	1.00

*continued ...*

sample 26886 continued ...

Parameter	Flag	Result	Units	Dilution	RL
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		292	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		292	mg/L as CaCO <sub>3</sub>	1	4.00

## Sample: 26886 - RW-1

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5030B
QC Batch: 7470	Date Analyzed: 2004-02-10	Analyzed By: BS
Prep Batch: 6690	Date Prepared: 2004-02-10	Prepared By: BS

Parameter	Flag	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)		0.0919	mg/L	1	0.100	92	71.2 - 115
4-Bromofluorobenzene (4-BFB)	<sup>12</sup>	0.0742	mg/L	1	0.100	74	76.5 - 116

## Sample: 26886 - RW-1

Analysis: Cations	Analytical Method: S 6010B	Prep Method: S 3005A
QC Batch: 7628	Date Analyzed: 2004-02-16	Analyzed By: BC
Prep Batch: 6678	Date Prepared: 2004-02-10	Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		148	mg/L	1	0.500
Dissolved Potassium		53.8	mg/L	1	0.500
Dissolved Magnesium		44.7	mg/L	1	0.500
Dissolved Sodium		704	mg/L	1	0.500

## Sample: 26886 - RW-1

Analysis: Ion Chromatography	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 7396	Date Analyzed: 2004-02-09	Analyzed By: JSW
Prep Batch: 6626	Date Prepared: 2004-02-09	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		1270	mg/L	100	0.500
Fluoride		2.22	mg/L	10	0.200

*continued ...*<sup>12</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

*sample 26886 continued ...*

Parameter	Flag	Result	Units	Dilution	RL
Sulfate		246	mg/L	10	0.500

**Sample: 26886 - RW-1**

Analysis: NO<sub>3</sub> (IC)      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 7396      Date Analyzed: 2004-02-09      Analyzed By: JSW  
Prep Batch: 6626      Date Prepared: 2004-02-09      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		5.92	mg/L	10	0.200

**Sample: 26886 - RW-1**

Analysis: TDS      Analytical Method: SM 2540C      Prep Method: N/A  
QC Batch: 7551      Date Analyzed: 2004-02-13      Analyzed By: JSW  
Prep Batch: 6760      Date Prepared: 2004-02-11      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		2780	mg/L	5	10.00

**Sample: 26887 - Dup.**

Analysis: Alkalinity      Analytical Method: SM 2320B      Prep Method: N/A  
QC Batch: 7544      Date Analyzed: 2004-02-11      Analyzed By: RS  
Prep Batch: 6750      Date Prepared: 2004-02-11      Prepared By: RS

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		120	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		120	mg/L as CaCO <sub>3</sub>	1	4.00

**Sample: 26887 - Dup.**

Analysis: BTEX      Analytical Method: S 8021B      Prep Method: S 5030B  
QC Batch: 7470      Date Analyzed: 2004-02-10      Analyzed By: BS  
Prep Batch: 6690      Date Prepared: 2004-02-10      Prepared By: BS

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

*continued ...*

sample 26887 continued ...

Parameter	Flag	Result	Units	Dilution	RL
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	71.2 - 115
4-Bromofluorobenzene (4-BFB)	<sup>13</sup>	0.0734	mg/L	1	0.100	73	76.5 - 116

## Sample: 26887 - Dup.

Analysis: Cations      Analytical Method: S 6010B      Prep Method: S 3005A  
 QC Batch: 7672      Date Analyzed: 2004-02-17      Analyzed By: BC  
 Prep Batch: 6705      Date Prepared: 2004-02-11      Prepared By: TP

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		132	mg/L	1	0.500
Dissolved Potassium		10.1	mg/L	1	0.500
Dissolved Magnesium		43.9	mg/L	1	0.500
Dissolved Sodium		203	mg/L	1	0.500

## Sample: 26887 - Dup.

Analysis: Ion Chromatography      Analytical Method: E 300.0      Prep Method: N/A  
 QC Batch: 7396      Date Analyzed: 2004-02-09      Analyzed By: JSW  
 Prep Batch: 6626      Date Prepared: 2004-02-09      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Chloride		581	mg/L	50	0.500
Fluoride		1.23	mg/L	5	0.200
Sulfate		53.6	mg/L	5	0.500

## Sample: 26887 - Dup.

Analysis: NO3 (IC)      Analytical Method: E 300.0      Prep Method: N/A  
 QC Batch: 7396      Date Analyzed: 2004-02-09      Analyzed By: JSW  
 Prep Batch: 6626      Date Prepared: 2004-02-09      Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Nitrate-N		2.19	mg/L	5	0.200

## Sample: 26887 - Dup.

<sup>13</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

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Analysis: TDS	Analytical Method: SM 2540C	Prep Method: N/A
QC Batch: 7551	Date Analyzed: 2004-02-13	Analyzed By: JSW
Prep Batch: 6760	Date Prepared: 2004-02-11	Prepared By: JSW

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		1325	mg/L	5	10.00

Method Blank (1) QC Batch: 7390

Parameter	Flag	Result	Units	RL
Nitrate-N		<0.200	mg/L	0.2

Method Blank (1) QC Batch: 7390

Parameter	Flag	Result	Units	RL
Chloride		<0.500	mg/L	0.5
Fluoride		<0.200	mg/L	0.2
Sulfate		<0.500	mg/L	0.5

Method Blank (1) QC Batch: 7392

Parameter	Flag	Result	Units	RL
Nitrate-N		<0.200	mg/L	0.2

Method Blank (1) QC Batch: 7392

Parameter	Flag	Result	Units	RL
Chloride		<0.500	mg/L	0.5
Fluoride		<0.200	mg/L	0.2
Sulfate		<0.500	mg/L	0.5

Method Blank (1) QC Batch: 7395

Parameter	Flag	Result	Units	RL
Nitrate-N		<0.200	mg/L	0.2

Method Blank (1) QC Batch: 7395

Parameter	Flag	Result	Units	RL
Chloride		<0.500	mg/L	0.5
Fluoride		<0.200	mg/L	0.2
Sulfate		<0.500	mg/L	0.5

Method Blank (1) QC Batch: 7396

Parameter	Flag	Result	Units	RL
Nitrate-N		<0.200	mg/L	0.2

Method Blank (1) QC Batch: 7396

Parameter	Flag	Result	Units	RL
Chloride		<0.500	mg/L	0.5
Fluoride		<0.200	mg/L	0.2
Sulfate		<0.500	mg/L	0.5

Method Blank (1) QC Batch: 7407

Parameter	Flag	Result	Units	RL
Benzene		<0.00100	mg/L	0.001
Toluene		<0.00100	mg/L	0.001
Ethylbenzene		<0.00100	mg/L	0.001
Xylene		<0.00100	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0998	mg/L	1	0.100	100	76.2 - 119
4-Bromofluorobenzene (4-BFB)		0.0926	mg/L	1	0.100	93	58.5 - 136

Method Blank (1) QC Batch: 7408

Parameter	Flag	Result	Units	RL
Benzene		<0.00100	mg/L	0.001
Toluene		<0.00100	mg/L	0.001
Ethylbenzene		<0.00100	mg/L	0.001
Xylene		<0.00100	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0875	mg/L	1	0.100	88	76.2 - 119
4-Bromofluorobenzene (4-BFB)		0.0802	mg/L	1	0.100	80	58.5 - 136

Method Blank (1) QC Batch: 7462

Parameter	Flag	Result	Units	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1
Bicarbonate Alkalinity		<4.00	mg/L as CaCo3	4
Total Alkalinity		<4.00	mg/L as CaCo3	4

Method Blank (1) QC Batch: 7464

Parameter	Flag	Result	Units	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1
Bicarbonate Alkalinity		<4.00	mg/L as CaCo3	4
Total Alkalinity		<4.00	mg/L as CaCo3	4

Method Blank (1) QC Batch: 7470

Parameter	Flag	Result	Units	RL
Benzene		<0.00100	mg/L	0.001
Toluene		<0.00100	mg/L	0.001
Ethylbenzene		<0.00100	mg/L	0.001
Xylene		<0.00100	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0943	mg/L	1	0.100	94	64.1 - 117
4-Bromofluorobenzene (4-BFB)		0.0748	mg/L	1	0.100	75	72.2 - 118

Method Blank (1) QC Batch: 7488

Parameter	Flag	Result	Units	RL
Total Dissolved Solids		<10.00	mg/L	10

Method Blank (1) QC Batch: 7489

Parameter	Flag	Result	Units	RL
Total Dissolved Solids		<10.00	mg/L	10

Method Blank (1) QC Batch: 7544

Parameter	Flag	Result	Units	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1
Bicarbonate Alkalinity		<4.00	mg/L as CaCo3	4
Total Alkalinity		<4.00	mg/L as CaCo3	4

Method Blank (1) QC Batch: 7551

Parameter	Flag	Result	Units	RL
Total Dissolved Solids		<10.00	mg/L	10

Method Blank (1) QC Batch: 7628

Parameter	Flag	Result	Units	RL
Dissolved Calcium		<0.500	mg/L	0.5
Dissolved Potassium		<0.500	mg/L	0.5
Dissolved Magnesium		<0.500	mg/L	0.5
Dissolved Sodium		<0.500	mg/L	0.5

Method Blank (1) QC Batch: 7672

Parameter	Flag	Result	Units	RL
Dissolved Calcium		<0.500	mg/L	0.5
Dissolved Potassium		<0.500	mg/L	0.5
Dissolved Magnesium		<0.500	mg/L	0.5
Dissolved Sodium		<0.500	mg/L	0.5

Duplicate (1) QC Batch: 7462

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	248	254	mg/L as CaCo3	1	2	20
Total Alkalinity	248	254	mg/L as CaCo3	1	2	4.8

## Duplicate (1) QC Batch: 7464

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	152	156	mg/L as CaCo3	1	2	20
Total Alkalinity	152	156	mg/L as CaCo3	1	2	4.8

## Duplicate (1) QC Batch: 7488

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	1088	1096	mg/L	2	1	8.7

## Duplicate (1) QC Batch: 7489

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	1275	1345	mg/L	5	5	8.7

## Duplicate (1) QC Batch: 7544

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	264	270	mg/L as CaCo3	1	2	20
Total Alkalinity	264	270	mg/L as CaCo3	1	2	4.8

## Duplicate (1) QC Batch: 7551

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	1582	1474	mg/L	2	7	8.7

## Laboratory Control Spike (LCS-1) QC Batch: 7407

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Benzene	0.107	0.0969	mg/L	1	0.100	<0.000238	107	10	84.6 - 117	20
Toluene	0.102	0.0902	mg/L	1	0.100	<0.000532	102	12	80.9 - 115	20
Ethylbenzene	0.100	0.0869	mg/L	1	0.100	<0.000160	100	14	77.6 - 119	20
Xylene	0.302	0.254	mg/L	1	0.300	<0.000571	101	17	76.2 - 122	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)	0.0889	0.0878	mg/L	1	0.100	89	88	79.7 - 119
4-Bromofluorobenzene (4-BFB)	0.0883	0.0674	mg/L	1	0.100	88	67	65.6 - 141

**Laboratory Control Spike (LCS-1)      QC Batch: 7408**

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Benzene	0.0915	0.0969	mg/L	1	0.100	<0.000238	92	6	84.6 - 117	20
Toluene	0.0854	0.0902	mg/L	1	0.100	<0.000532	85	5	80.9 - 115	20
Ethylbenzene	0.0824	0.0869	mg/L	1	0.100	<0.000160	82	5	77.6 - 119	20
Xylene	0.246	0.254	mg/L	1	0.300	<0.000571	82	3	76.2 - 122	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)	0.0857	0.0878	mg/L	1	0.100	86	88	79.7 - 119
4-Bromofluorobenzene (4-BFB)	0.0759	0.0674	mg/L	1	0.100	76	67	65.6 - 141

**Laboratory Control Spike (LCS-1)      QC Batch: 7470**

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Benzene	0.0940	0.0896	mg/L	1	0.100	<0.000410	94	5	79.2 - 113	20
Toluene	0.0972	0.0937	mg/L	1	0.100	<0.000760	97	4	78.8 - 114	20
Ethylbenzene	0.0964	0.0947	mg/L	1	0.100	<0.00100	96	2	79.8 - 112	20
Xylene	0.290	0.284	mg/L	1	0.300	<0.00100	96	2	76.8 - 114	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)	0.0832	0.0861	mg/L	1	0.100	83	86	71.2 - 115
4-Bromofluorobenzene (4-BFB)	0.0852	0.0839	mg/L	1	0.100	85	84	76.5 - 116

**Laboratory Control Spike (LCS-1)      QC Batch: 7628**

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	RPD Limit
Dissolved Calcium	104	102	mg/L	1	100	<0.102	104	2	88.4 - 107
Dissolved Potassium	97.8	98.4	mg/L	1	100	<0.101	98	1	88 - 113
Dissolved Magnesium	102	100	mg/L	1	100	<0.110	102	2	85 - 112
Dissolved Sodium	102	99.2	mg/L	1	100	<0.120	102	3	90.9 - 112

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

**Laboratory Control Spike (LCS-1)      QC Batch: 7672**

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Dissolved Calcium	98.4	99.3	mg/L	1	100	<0.102	98	1	88.4 - 107	20
Dissolved Potassium	97.0	98.9	mg/L	1	100	<0.101	97	2	88 - 113	20
Dissolved Magnesium	98.7	98.8	mg/L	1	100	<0.110	99	0	85 - 112	20
Dissolved Sodium	98.9	98.4	mg/L	1	100	<0.120	99	0	90.9 - 112	20

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

**Matrix Spike (MS-1) QC Batch: 7390**

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Nitrate-N	129	129	mg/L	50	2.50	6.59	98	0	79.6 - 109	20

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

**Matrix Spike (MS-1) QC Batch: 7390**

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	1490	1480	mg/L	50	12.5	937	88	1	74.3 - 118	20
Fluoride	118	119	mg/L	50	2.50	<2.97	93	1	84.9 - 104	20
Sulfate	708	708	mg/L	50	12.5	123	94	0	77.8 - 112	20

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

**Matrix Spike (MS-1) QC Batch: 7392**

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Nitrate-N	130	131	mg/L	50	2.50	7.36	98	1	79.6 - 109	20

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

**Matrix Spike (MS-1) QC Batch: 7392**

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	1300	1300	mg/L	50	12.5	755	87	0	74.3 - 118	20
Fluoride	120	120	mg/L	50	2.50	<2.97	94	0	84.9 - 104	20
Sulfate	773	775	mg/L	50	12.5	205	91	0	77.8 - 112	20

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

**Matrix Spike (MS-1) QC Batch: 7395**

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Nitrate-N	126	127	mg/L	50	2.50	4.03	98	1	79.6 - 109	20

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

## Matrix Spike (MS-1) QC Batch: 7395

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	1110	1110	mg/L	50	12.5	557	88	0	74.3 - 118	20
Fluoride	118	119	mg/L	50	2.50	<2.97	93	1	84.9 - 104	20
Sulfate	684	688	mg/L	50	12.5	95.7	94	0	77.8 - 112	20

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

## Matrix Spike (MS-1) QC Batch: 7396

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Nitrate-N	127	126	mg/L	50	2.50	2.19	100	1	79.6 - 109	20

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

## Matrix Spike (MS-1) QC Batch: 7396

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	1150	1150	mg/L	50	12.5	581	91	0	74.3 - 118	20
Fluoride	119	119	mg/L	50	2.50	<2.97	94	0	84.9 - 104	20
Sulfate	727	722	mg/L	50	12.5	53.6	108	1	77.8 - 112	20

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

## Matrix Spike (MS-1) QC Batch: 7628

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Dissolved Calcium	<sup>14</sup> 145	140	mg/L	1	100	68.2	77	4	75 - 125	20
Dissolved Potassium	105	103	mg/L	1	100	8.7	96	2	75 - 125	20
Dissolved Magnesium	<sup>15</sup> 102	100	mg/L	1	100	25.5	76	2	75 - 125	20
Dissolved Sodium	194	190	mg/L	1	100	92.4	102	2	75 - 125	20

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

## Matrix Spike (MS-2) QC Batch: 7628

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Dissolved Calcium	123	120	mg/L	1	100	42.7	80	2	75 - 125	20
Dissolved Potassium	115	117	mg/L	1	100	27.1	88	2	75 - 125	20
Dissolved Magnesium	97.2	95.8	mg/L	1	100	13.1	84	1	75 - 125	20
Dissolved Sodium	665	667	mg/L	1	100	546	119	0	75 - 125	20

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

<sup>14</sup>ms recovery out of limits due to matrix effect, use lcs/lcsd

<sup>15</sup>ms recovery out of limits due to matrix effect, use lcs/lcsd

## Matrix Spike (MS-2) QC Batch: 7672

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Dissolved Calcium	223	210	mg/L	1	100	132	91	6	75 - 125	20
Dissolved Potassium	111	111	mg/L	1	100	10.1	101	0	75 - 125	20
Dissolved Magnesium	140	130	mg/L	1	100	43.9	96	7	75 - 125	20
Dissolved Sodium <sup>16</sup>	291	266	mg/L	1	100	203	88	9	75 - 125	20

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

## Standard (ICV-1) QC Batch: 7390

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.41	96	90 - 110	2004-02-09

## Standard (ICV-1) QC Batch: 7390

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.7	94	90 - 110	2004-02-09
Fluoride		mg/L	2.50	2.44	98	90 - 110	2004-02-09
Sulfate		mg/L	12.5	12.3	98	90 - 110	2004-02-09

## Standard (CCV-1) QC Batch: 7390

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.35	94	90 - 110	2004-02-09

## Standard (CCV-1) QC Batch: 7390

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.4	91	90 - 110	2004-02-09
Fluoride		mg/L	2.50	2.37	95	90 - 110	2004-02-09
Sulfate		mg/L	12.5	11.7	94	90 - 110	2004-02-09

## Standard (CCV-1) QC Batch: 7392

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.35	94	90 - 110	2004-02-09

<sup>16</sup>ms recovery out of limits due to matrix effect/spiking error, use lcs/lcsd

**Standard (CCV-1)** QC Batch: 7392

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.4	91	90 - 110	2004-02-09
Fluoride		mg/L	2.50	2.37	95	90 - 110	2004-02-09
Sulfate		mg/L	12.5	11.7	94	90 - 110	2004-02-09

**Standard (CCV-2)** QC Batch: 7392

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.39	96	90 - 110	2004-02-09

**Standard (CCV-2)** QC Batch: 7392

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.6	93	90 - 110	2004-02-09
Fluoride		mg/L	2.50	2.38	95	90 - 110	2004-02-09
Sulfate		mg/L	12.5	12.1	97	90 - 110	2004-02-09

**Standard (CCV-1)** QC Batch: 7395

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.39	96	90 - 110	2004-02-09

**Standard (CCV-1)** QC Batch: 7395

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.6	93	90 - 110	2004-02-09
Fluoride		mg/L	2.50	2.38	95	90 - 110	2004-02-09
Sulfate		mg/L	12.5	12.1	97	90 - 110	2004-02-09

**Standard (CCV-2)** QC Batch: 7395

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.39	96	90 - 110	2004-02-09

**Standard (CCV-2)** QC Batch: 7395

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.5	92	90 - 110	2004-02-09
Fluoride		mg/L	2.50	2.39	96	90 - 110	2004-02-09
Sulfate		mg/L	12.5	12.0	96	90 - 110	2004-02-09

## Standard (CCV-1) QC Batch: 7396

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.39	96	90 - 110	2004-02-09

## Standard (CCV-1) QC Batch: 7396

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.5	92	90 - 110	2004-02-09
Fluoride		mg/L	2.50	2.39	96	90 - 110	2004-02-09
Sulfate		mg/L	12.5	12.0	96	90 - 110	2004-02-09

## Standard (CCV-2) QC Batch: 7396

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.38	95	90 - 110	2004-02-09

## Standard (CCV-2) QC Batch: 7396

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.5	92	90 - 110	2004-02-09
Fluoride		mg/L	2.50	2.37	95	90 - 110	2004-02-09
Sulfate		mg/L	12.5	11.9	95	90 - 110	2004-02-09

## Standard (CCV-1) QC Batch: 7407

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.104	104	85 - 115	2004-02-06
Toluene		mg/L	0.100	0.0977	98	85 - 115	2004-02-06
Ethylbenzene		mg/L	0.100	0.0970	97	85 - 115	2004-02-06
Xylene		mg/L	0.300	0.289	96	85 - 115	2004-02-06

## Standard (CCV-2) QC Batch: 7407

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0961	96	85 - 115	2004-02-06
Toluene		mg/L	0.100	0.0905	90	85 - 115	2004-02-06
Ethylbenzene		mg/L	0.100	0.0862	86	85 - 115	2004-02-06
Xylene		mg/L	0.300	0.259	86	85 - 115	2004-02-06

**Standard (ICV-1)** QC Batch: 7408

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0976	98	85 - 115	2004-02-06
Toluene		mg/L	0.100	0.102	102	85 - 115	2004-02-06
Ethylbenzene		mg/L	0.100	0.100	100	85 - 115	2004-02-06
Xylene		mg/L	0.300	0.302	101	85 - 115	2004-02-06

**Standard (CCV-1)** QC Batch: 7408

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0961	96	85 - 115	2004-02-06
Toluene		mg/L	0.100	0.0905	90	85 - 115	2004-02-06
Ethylbenzene		mg/L	0.100	0.0862	86	85 - 115	2004-02-06
Xylene		mg/L	0.300	0.259	86	85 - 115	2004-02-06

**Standard (ICV-1)** QC Batch: 7462

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCO <sub>3</sub>	0.00	<1.00		0 - 200	2004-02-10
Carbonate Alkalinity		mg/L as CaCO <sub>3</sub>	0.00	<1.00		0 - 200	2004-02-10
Bicarbonate Alkalinity		mg/L as CaCO <sub>3</sub>	0.00	<4.00		0 - 200	2004-02-10
Total Alkalinity		mg/L as CaCO <sub>3</sub>	250	238	95	90 - 110	2004-02-10

**Standard (CCV-1)** QC Batch: 7462

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCO <sub>3</sub>	0.00	<1.00		0 - 200	2004-02-10
Carbonate Alkalinity		mg/L as CaCO <sub>3</sub>	0.00	<1.00		0 - 200	2004-02-10
Bicarbonate Alkalinity		mg/L as CaCO <sub>3</sub>	0.00	<4.00		0 - 200	2004-02-10
Total Alkalinity		mg/L as CaCO <sub>3</sub>	250	242	97	90 - 110	2004-02-10

**Standard (ICV-1)** QC Batch: 7464

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	2004-02-10
Carbonate Alkalinity		mg/L as CaCo3	0.00	<1.00		0 - 200	2004-02-10
Bicarbonate Alkalinity		mg/L as CaCo3	0.00	<4.00		0 - 200	2004-02-10
Total Alkalinity		mg/L as CaCo3	250	238	95	90 - 110	2004-02-10

**Standard (CCV-1)** QC Batch: 7464

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	2004-02-10
Carbonate Alkalinity		mg/L as CaCo3	0.00	<1.00		0 - 200	2004-02-10
Bicarbonate Alkalinity		mg/L as CaCo3	0.00	<4.00		0 - 200	2004-02-10
Total Alkalinity		mg/L as CaCo3	250	238	95	90 - 110	2004-02-10

**Standard (ICV-1)** QC Batch: 7470

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0913	91	85 - 115	2004-02-10
Toluene		mg/L	0.100	0.0947	95	85 - 115	2004-02-10
Ethylbenzene		mg/L	0.100	0.0945	94	85 - 115	2004-02-10
Xylene		mg/L	0.300	0.284	95	85 - 115	2004-02-10

**Standard (CCV-1)** QC Batch: 7470

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0896	90	85 - 115	2004-02-10
Toluene		mg/L	0.100	0.0945	94	85 - 115	2004-02-10
Ethylbenzene		mg/L	0.100	0.0948	95	85 - 115	2004-02-10
Xylene		mg/L	0.300	0.284	95	85 - 115	2004-02-10

**Standard (CCV-2)** QC Batch: 7470

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0898	90	85 - 115	2004-02-10
Toluene		mg/L	0.100	0.0942	94	85 - 115	2004-02-10
Ethylbenzene		mg/L	0.100	0.0945	94	85 - 115	2004-02-10
Xylene		mg/L	0.300	0.283	94	85 - 115	2004-02-10

**Standard (ICV-1)** QC Batch: 7488

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	999.0	100	90 - 110	2004-02-11

Standard (CCV-1) QC Batch: 7488

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1014	101	90 - 110	2004-02-11

Standard (ICV-1) QC Batch: 7489

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	999.0	100	90 - 110	2004-02-11

Standard (CCV-1) QC Batch: 7489

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1014	101	90 - 110	2004-02-11

Standard (ICV-1) QC Batch: 7544

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCO <sub>3</sub>	0.00	<1.00		0 - 200	2004-02-11
Carbonate Alkalinity		mg/L as CaCO <sub>3</sub>	0.00	<1.00		0 - 200	2004-02-11
Bicarbonate Alkalinity		mg/L as CaCO <sub>3</sub>	0.00	<4.00		0 - 200	2004-02-11
Total Alkalinity		mg/L as CaCO <sub>3</sub>	250	238	95	90 - 110	2004-02-11

Standard (CCV-1) QC Batch: 7544

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCO <sub>3</sub>	0.00	<1.00		0 - 200	2004-02-11
Carbonate Alkalinity		mg/L as CaCO <sub>3</sub>	0.00	<1.00		0 - 200	2004-02-11
Bicarbonate Alkalinity		mg/L as CaCO <sub>3</sub>	0.00	<4.00		0 - 200	2004-02-11
Total Alkalinity		mg/L as CaCO <sub>3</sub>	250	242	97	90 - 110	2004-02-11

Standard (ICV-1) QC Batch: 7551

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1008	101	90 - 110	2004-02-13

Standard (CCV-1) QC Batch: 7551

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1007	101	90 - 110	2004-02-13

Standard (ICV-1) QC Batch: 7628

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25.0	24.9	100	90 - 110	2004-02-16
Dissolved Potassium		mg/L	25.0	26.3	105	90 - 110	2004-02-16
Dissolved Magnesium		mg/L	25.0	25.3	101	90 - 110	2004-02-16
Dissolved Sodium		mg/L	25.0	26.3	105	90 - 110	2004-02-16

Standard (CCV-1) QC Batch: 7628

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25.0	26.7	107	90 - 110	2004-02-16
Dissolved Potassium		mg/L	25.0	24.8	99	90 - 110	2004-02-16
Dissolved Magnesium		mg/L	25.0	25.2	101	90 - 110	2004-02-16
Dissolved Sodium		mg/L	25.0	26.2	105	90 - 110	2004-02-16

Standard (CCV-2) QC Batch: 7628

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25.0	26.5	106	90 - 110	2004-02-16
Dissolved Potassium		mg/L	25.0	25.4	102	90 - 110	2004-02-16
Dissolved Magnesium		mg/L	25.0	25.5	102	90 - 110	2004-02-16
Dissolved Sodium		mg/L	25.0	25.9	104	90 - 110	2004-02-16

Standard (CCV-1) QC Batch: 7672

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25.0	25.1	100	90 - 110	2004-02-17
Dissolved Potassium		mg/L	25.0	24.0	96	90 - 110	2004-02-17
Dissolved Magnesium		mg/L	25.0	25.2	101	90 - 110	2004-02-17
Dissolved Sodium		mg/L	25.0	25.1	100	90 - 110	2004-02-17

Standard (CCV-2) QC Batch: 7672

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25.0	26.7	107	90 - 110	2004-02-17
Dissolved Potassium		mg/L	25.0	25.5	102	90 - 110	2004-02-17
Dissolved Magnesium		mg/L	25.0	26.5	106	90 - 110	2004-02-17
Dissolved Sodium		mg/L	25.0	26.1	104	90 - 110	2004-02-17

4020621

CLIENT NAME:		SITE MANAGER:	PARAMETERS/METHOD NUMBER		CHAIN-OF-CUSTODY RECORD	
<u>Ashley</u>		<u>G. L. Erwin</u>				
PROJECT NO.:		PROJECT NAME:	LAURSON & ASSOCIATES, INC.		Environmental Consultants, Inc. Fax: 432-687-0456 432-687-0901	
0-0112		GB	507 N. Marientfeld, Ste. 202 • Midland, TX 79701			
PAGE	1 OF 2	LAB. PO #	SAMPLE IDENTIFICATION		LAB. I.D. NUMBER	
4/1/03	0957	/	MW-11	321	26867	REMARKS (I.E., FILTERED, UNFILTERED, PRESERVED, UNPRESERVED, GRAB COMPOSITE)
0910	/	/	MW-1	31	26868	
1050	/	/	MW-1		26869	
1052	/	/	MW-1		26870	
1115	/	/	MW-1		26871	
1233	/	/	MW-1		26872	
1250	/	/	MW-2		26873	
1317	/	/	MW-1		26874	
1310	/	/	MW-5		26875	
1405	/	/	MW-3		26876	
1431	/	/	MW-1		26877	
26878						
SAMPLED BY: (Signature)	DATE: 2/1/04	RECEIVED BY: (Signature)	DATE: 2/25/04	RECEIVED BY: (Signature)	DATE: 2/25/04	RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature)	TIME: 14:15	RELINQUISHED BY: (Signature)	TIME: 15:15	RELINQUISHED BY: (Signature)	TIME: 15:15	RELINQUISHED BY: (Signature)
COMMENTS:	Standards					
RECEIVING LABORATORY:	John Anderson	RECEIVED BY: (Signature)	TURNAROUND TIME NEEDED	WHITE - RECEIVING LAB		
ADDRESS:	1212 S. 12th	DATE: 2/25/04	TIME: 17:30	YELLOW - RECEIVING LAB (TO BE RETURNED TO LA AFTER RECEIPT)		
CITY:	Midland	TIME: 15:15	FEDEX	PINK - PROJECT MANAGER		
CONTACT:	Phone: _____	DATE: 2/25/04	HAND DELIVERED	Gold - QA/QC COORDINATOR		
SAMPLE CONDITION WHEN RECEIVED:						
LA CONTACT PERSON: Cindy (Rein)						
SAMPLE TYPE: 31 samples - HS						

4020621

CLIENT NAME:		SITE MANAGER:	PROJECT NAME:	LAB. PO #	PARAMETERS/METHOD NUMBER	CHAIN-OF-CUSTODY RECORD
<u>Chris LEx</u>		<u>G.L. Erwin</u>	<u>4020621</u>			<u>A</u> rison & <u>S</u> soicates, Inc., Environmental Consultants 432-687-0456 432-687-0901 507 N. Marienfeld, Ste. 202 • Midland, TX 79701
PROJECT NO.:		PAGE <u>2</u> OF <u>2</u>			LAB. I.D.	REMARKS
					NUMBER LAB USE ONLY	I.E. FILTERED, UNFILTERED, PRESERVED, UNPRESERVED, GRAB COMPOSITE
Date:	Time:	WATER	SO <sub>4</sub>	SAMPLE IDENTIFICATION		
07/16/04	07:35	/	/	MW-1	26879	
	07:58	/	/	MW-10	26880	
	08:20	/	/	MW-12	26881	
	08:33	/	/	MW-13	26882	
	09:35	/	/	MW-4	26883	
	10:47	/	/	MW-MW	26884	
	10:22	/	/	MW-MW	26885	
	09:50	/	/	MW-1	26886	
SAMPLED BY: (Signature)		RECEIVED BY: (Signature)		DATE: 2/05/04 TIME: 15:15		RECEIVED BY: (Signature) DATE: _____ TIME: _____
RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature)		DATE: 2/05/04 TIME: 15:15		SAMPLE SHIPPED BY: (Circle) <input checked="" type="checkbox"/> AIR MAIL <input checked="" type="checkbox"/> FEDEX <input checked="" type="checkbox"/> UPS <input type="checkbox"/> OTHER
COMMENTS:				TURNAROUND TIME NEEDED		WHITE - RECEIVING LAB YELLOW - RECEIVING LAB (TO BE RETURNED TO LA AFTER RECEIPT)
RECEIVING LABORATORY: <u>4020621</u> ADDRESS: <u>100 Rock</u> CITY: <u>Midland</u> CONTACT: <u>Chris LEx</u>		RECEIVED BY: (Signature) <u>Brent Ward</u> STATE: <u>TX</u> ZIP: <u>79701</u> PHONE: <u>(432) 580-1122</u>		DATE: 2/05/04 TIME: 11:25		PINK - PROJECT MANAGER GOLD - QA/QC COORDINATOR
SAMPLE CONDITION WHEN RECEIVED:		LA CONTACT PERSON: <u>Brent Ward</u>		SAMPLE TYPE: <u>24 sample - HS</u>		

24867-77

102062/1

CLIENT NAME:			PROJECT NAME:			SITE MANAGER:			PARAMETERS/METHOD NUMBER			CHAIN-OF-CUSTODY RECORD		
<u>Sheetx</u>	<u>Candy Green</u>		<u>0.0112</u>	<u>Col. Edwin TB</u>			<u>Candy Green</u>		<u>LA</u>	<u>arson &amp; SSOCiates, Inc.</u>	<u>Environmental Consultants</u>	<u>507 N. Marienfeld, Ste. 202 • Midland, TX 79701</u>	<u>432-687-0456</u>	<u>Fax: 432-687-0901</u>
PAGE <u>1</u>	OF <u>2</u>	LAB PO #							LAB. I.D.	NUMBER	REMARKS (I.E., FILTERED, UNFILTERED, PRESERVED, UNPRESERVED, GRAB COMPOSITE)			
DATE	TIME	MATERIAL	SOIL	OTHER	SAMPLE IDENTIFICATION									
2/4/03 09:57	/	MW-11			3 2							26 867		
0910	/	MW-1			3 1							26 868		
1057.0	/	MW-17			mw-18							26 869		
1052	/	MW-11			MW-12							26 870		
1115	/	MW-1			MW-2							26 871		
1235	/	MW-2			MW-1							26 872		
1256	/	MW-1			MW-5							26 873		
1317	/	MW-3			MW-1							26 874		
1340		MW-5			MW-3							26 875		
14105		MW-1			MW-1							26 876		
1431		MW-3			MW-1							26 877		
													26 878	
COMMENTS: <u>None</u>														
RECEIVING LABORATORY: <u>LA</u> RECEIVED BY: <u>Helen Shultz</u> DATE: <u>2/4/03</u> TIME: <u>09:45</u>														
RELINQUISHED BY: <u>Signature</u> RECEIVED BY: <u>Col. Edwin TB</u> DATE: <u>2/5/03</u> TIME: <u>15:15</u>														
TURNAROUND TIME NEEDED <u>Standby</u>														
RECEIVING LAB: <u>LA</u> RECEIVING LAB (TO BE RETURNED TO) <u>LA</u> AFTER RECEIPT														
PROJECT MANAGER <u>Brenda Weland</u> OTHER <u>None</u>														
QA/QC COORDINATOR <u>Cindy Green</u>														
SAMPLE CONDITION WHEN RECEIVED: <u>samples - HS</u>														
LA CONTACT PERSON: <u>Candy Green</u>														
SAMPLE TYPE: <u>33 samples - HS</u>														

2/20/03

4/02/06 21

CLIENT NAME:		SITE MANAGER:		PARAMETERS/METHOD NUMBER		CHAIN-OF-CUSTODY RECORD	
Enviro. Inc.		Linda Ward		LA	orson & ASSOCIATES, Inc.	Environmental Consultants	432-687-0456
PROJECT NO.:	0-0112	PROJECT NAME:	Cibolo River		INC. Fax:	432-687-0901	432-687-0901
PAGE	2 OF 2	LAB PO #		507 N. Marienfeld, Ste. 202 • Midland, TX 79701			
NUMBER OF CONTAINERS							
3							
DATE	TIME	WATER SOIL	OTHER	SAMPLE IDENTIFICATION			
3/16/04	071355	/		MW-1			
0758	/			MW-10			
08220	/			MW-12			
08333	/			MW-13			
0935	/			MW-4			
1047	/			MW-MW			
1032	/			MW-MW			
0750	/			RW-1			
SAMPLED BY: (Signature)							
Daryl Ward							
RECEIVED BY: (Signature)							
Daryl Ward							
RELINQUISHED BY: (Signature)							
Daryl Ward							
COMMENTS:							
RECEIVING LABORATORY: <u>Arson &amp; Associates</u>							
ADDRESS: <u>1000 Stockade</u> STATE: <u>TX</u> ZIP: <u>79701</u>							
CITY: <u>Midland</u> CONTACT: <u>Daryl Ward</u>							
SAMPLE CONDITION WHEN RECEIVED:							
SAMPLE TYPE: <u>24 samples - HS</u>							
RECEIVED BY: (Signature) <u>Daryl Ward</u> DATE: <u>4/05/04</u> TIME: <u>15:15</u>							
RECEIVED BY: (Signature) <u>Daryl Ward</u> DATE: <u>4/05/04</u> TIME: <u>17:30</u>							
TURNAROUND TIME NEEDED <u>2 days</u>							
WHITE - RECEIVING LAB							
YELLOW - RECEIVING LAB (TO BE RETURNED TO LA AFTER RECEIPT)							
PINK - PROJECT MANAGER							
GOLD - QA/QC COORDINATOR							
RECEIVED BY: (Signature) <u>Daryl Ward</u> DATE: <u>4/04/04</u> TIME: <u>11:25</u>							
LA CONTACT PERSON: <u>Daryl Ward</u>							