1 of 3

FOURTH QUARTER 1993
AND 1993 SUMMARY

**METALLURGICAL LABORATORY
HAZARDOUS WASTE MANAGEMENT
FACILITY GROUNDWATER
MONITORING REPORT (U)**

PUBLICATION DATE: MARCH 1994

UNCLASSIFIED

DOES NOT CONTAIN
UNCLASSIFIED CONTROLLED
NUCLEAR INFORMATION

ADC &
Reviewing Official: Lucy B. Smith, Senior Scientist A
(Name and Title)
Date: 03/28/94

Authorized Derivative Classifier:

Lucy B. Smith, 03/28/94

UNCLASSIFIED

Does Not Contain Unclassified
Controlled Nuclear Information

WESTINGHOUSE SAVANNAH RIVER COMPANY
SAVANNAH RIVER SITE
AIKEN, SC 29808

Prepared for the U.S. Department of Energy under Contract No. DE-AC09-89SR18035

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KEY WORDS

AMB wells
pH
tetrachloroethylene
total organic halogens
trichloroethylene

PUBLICATION DATE: MARCH 1994

MASTER

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Abstract

During fourth quarter 1993, samples from AMB groundwater monitoring wells at the Metallurgical Laboratory Hazardous Waste Management Facility were analyzed for selected heavy metals, indicator parameters, radionuclides, volatile organic compounds, and other constituents. Six parameters exceeded standards during the quarter.

As in previous quarters, dichloromethane (methylene chloride), tetrachloroethylene, and trichloroethylene exceeded final Primary Drinking Water Standards; pH, specific conductance, and total organic halogens exceeded the Savannah River Site Flag 2 criteria in one or more of the wells.

Groundwater flow direction and rate in the water-table unit were similar to previous quarters.

Contents

	Page
Abstract	iii
List of Figures	vii
List of Tables	vii
Executive Summary	1
Introduction	3
Discussion	5
Groundwater Monitoring Data	5
Integrity of the Monitoring Well Network	6
Analytical Results Exceeding Standards	7
Time Series Results	8
Groundwater Elevations, Flow Directions, and Flow Rates	9
Upgradient vs. Downgradient Results	11
Quality Control Results	11
Conclusions	12
1993 Summary	13
References Cited	14
Errata	16
Appendix A – Final Primary Drinking Water Standards	A-1
Appendix B – Flagging Criteria	B-1
Appendix C – Figures	C-1
Appendix D – Groundwater Monitoring Results Tables	D-1
Appendix E – Data Quality/Useability Assessment	E-1
Appendix F – Time Series Plots	F-1

Appendix G – Hydrographs	G-1
Appendix H – M-Area Large-Scale Maps	H-1

List of Figures

	Page
1. Location of the Metallurgical Laboratory HWMF at the Savannah River Site	C-2
2. Water-Elevation Contour Map of the M-Area Aquifer Zone in A and M Areas	C-3
3. Water-Elevation Contour Map and Location of the M-Area Aquifer Zone Wells at the Metallurgical Laboratory HWMF	C-4
4. Water-Elevation Map and Location of Monitoring Wells in the Upper Lost Lake Aquifer Zone at the Metallurgical Laboratory HWMF	C-5
5. Water-Elevation Map and Locations of Monitoring Wells in the Lower Lost Lake Aquifer Zone at the Metallurgical Laboratory HWMF	C-6
6. Water-Elevation Map and Locations of Monitoring Wells in the Middle Sand Aquifer Zone of the Crouch Branch Confining Unit at the Metallurgical Laboratory HWMF	C-7
7. Hydrostratigraphy of the A/M Area	C-8

List of Tables

	Page
1. Maximum Levels of Constituents Exceeding the Final Primary Drinking Water Standards	D-6
2. Maximum Levels of Constituents Exceeding Other Flag 2 Criteria	D-7
3. Groundwater Monitoring Results for Individual Wells	D-8

Executive Summary

The AMB wells at the Metallurgical Laboratory Hazardous Waste Management Facility (Met Lab HWMF) are monitored for selected constituents to comply with the Natural Resources Defense Council et al. Consent Decree of May 1988 that identifies the Met Lab HWMF as subject to the Resource Conservation and Recovery Act. In addition, the wells are monitored, as requested, for other constituents as part of the Savannah River Site (SRS) Groundwater Monitoring Program.

During fourth quarter 1993, 18 wells were monitored at the facility. Well screen zone nomenclature was revised fourth quarter using the following hydrostratigraphic assignments: wells AMB 4D, 5, 6, 7, 8D, 9D, 10D, 11D, and 12D monitor the M-Area Aquifer Zone (previously Water Table unit); well AMB 11B monitors the Upper Lost Lake Aquifer Zone (upper portion of the Congaree unit) (previously upper portion of the Congaree unit); wells AMB 4B, 7B, and 10B monitor the Lower Lost Lake Aquifer Zone (lower portion of the Congaree unit) (previously lower portion of the Congaree unit); wells AMB 4A, 7A, 10A, and 13AR monitor the Middle Sand Aquifer Zone of the Crouch Branch Confining Unit (previously Ellenton Sand unit); and well AMB 10DD monitors a perched groundwater zone beneath the Met Lab HWMF.

Samples from these wells were analyzed for alkalinity, herbicides, pesticides, pH, radio-nuclides, specific conductance, total dissolved solids, toxic metals, volatile organic compounds, and other constituents. This report describes the results that exceeded final Primary Drinking Water Standards (PDWS) and SRS flagging criteria.

As in past quarters, dichloromethane (methylene chloride), tetrachloroethylene, and trichloroethylene exceeded the final PDWS; pH, specific conductance, and total organic halogens exceeded the Flag 2 criteria in one or more of the AMB wells. No constituents exceeded either the PDWS or the Flag 2 criteria in the upgradient wells or in approximately one third of the downgradient wells. Dichloromethane, a common laboratory contaminant, exceeded the final PDWS in two AMB wells.

Groundwater flow direction and rate in the M-Area Aquifer Zone (Water Table unit) were similar to previous quarters. Reliable estimates of flow directions and rates in the Upper and Lower Lost Lake Aquifer Zones (upper and lower portions of the Congaree unit) and in the Middle Sand Aquifer Zone of the Crouch Branch Confining Unit (Ellenton Sand unit) could not be calculated because of the low horizontal gradient or the near-linear distribution of the monitoring wells.

Introduction

The Metallurgical Laboratory Hazardous Waste Management Facility (Met Lab HWMF) is located in the eastern section of A Area at the Savannah River Site (SRS) (Figures 1 and 2, Appendix C). The facility consists of the process sewer line leading to the Metallurgical Laboratory Basin, the Metallurgical Laboratory Basin, the drainage outfall to a nearby Carolina bay, and the Carolina bay. The following description outlines important events at the facility:

- The Metallurgical Laboratory Basin was constructed and began receiving waste water effluent from the Metallurgical Laboratory Building in 1956 (WSRC, 1992a; WSRC, 1992b). Waste water released to the basin consisted of laboratory wastes from metallographic sample preparation and corrosion testing of stainless steel and nickel-based alloys. The quantity of waste water discharged to the basin was small, averaging approximately 1,000 gallons per day (Heffner and Exploration Resources, 1991).
- Release of hazardous waste from the Metallurgical Laboratory Building to the basin was discontinued in 1983 (WSRC, 1992a; WSRC, 1992b).
- Quarterly groundwater sampling began first quarter 1984 (WSRC, 1992a; WSRC, 1992b).
- Waste water flow to the Met Lab HWMF was terminated November 8, 1985 (WSRC, 1992a; WSRC, 1992b).
- The Met Lab HWMF was named in Section III of the Natural Resources Defense Council et al. Consent Decree, May 26, 1988 (Civil Action 1:85-2583-6, U.S. District Court, District of South Carolina, Aiken Division), thus becoming subject to the requirements of Subtitle C of the Resource Conservation and Recovery Act (RCRA).
- Revision 0 of the facility's RCRA Part B post-closure care permit application (WSRC, 1989) was submitted to the South Carolina Department of Health and Environmental Control (SCDHEC) August 18, 1989.
- A groundwater quality assessment plan (Jerome, 1990) was submitted to SCDHEC in October 1990.
- A revised groundwater quality assessment plan was submitted to SCDHEC in March 1991 and approved by SCDHEC in June 1991 (Jerome, 1991). The plan lists the selected heavy metals, indicator parameters, radionuclides, volatile organic compounds, and other constituents that currently require monitoring.
- In September 1991, a phased closure plan for the Met Lab HWMF was approved by SCDHEC, and construction to close the basin was begun (WSRC, 1992a).

- Revision 1 of the RCRA Part B post-closure care permit application (WSRC, 1991) was submitted to SCDHEC December 16, 1991.
- Closure construction of the basin was completed on May 1, 1992; official closure for the basin was completed May 11, 1992; and closure certification of the basin was submitted to SCDHEC July 10, 1992 (letter from J. Gray, ERC, to R. Sentelle, ERC, June 11, 1992). No decision has been made on closure of the Carolina bay.
- Revision 0 of the 1992 RCRA Part B post-closure care permit application renewal (WSRC, 1992a) was submitted to SCDHEC in September 1992 in accordance with the regulatory requirement to update and resubmit permit applications every five years.
- The 1992 RCRA Part B post-closure care permit application renewal (WSRC, 1992a) is currently being revised to incorporate changes requested by SCDHEC. It will be resubmitted to SCDHEC in March 1994.

Presently, the Environmental Protection Department/Environmental Monitoring Section (EPD/EMS) samples the 18 AMB wells each quarter, and the Environmental Restoration Department reports the results of this sampling to SCDHEC to meet the requirements of the South Carolina Hazardous Waste Management Regulations (SCDHEC, 1990).

Discussion

Groundwater Monitoring Data

The EPD/EMS sampling procedure (EPD/EMS, 1992) requires evacuation of a minimum of two well volumes and stabilization of pH, specific conductance, and turbidity prior to sample collection. Stability is established when a minimum of three successive measurements, taken within a given time period, are within a specified tolerance range. If a well pumps dry before two well volumes are purged or before stabilization is achieved, it must be revisited within 24 hours for the data to be considered from a single sampling event. On the second visit within 24 hours, samples are taken without purging or stability measurements; thus, these samples may not be representative of groundwater quality.

During fourth quarter 1993, the groundwater samples were analyzed by General Engineering Laboratories of Charleston, South Carolina (South Carolina certification number 10120), for selected heavy metals, indicator parameters, radionuclides, volatile organic compounds, and other constituents. This report describes the monitoring results that equaled or exceeded the Safe Drinking Water Act final Primary Drinking Water Standards (PDWS) or drinking water screening levels, as established by the U.S. Environmental Protection Agency (EPA) (Appendix A); the South Carolina final PDWS for lead (Appendix A); or SRS flagging criteria that are based on PDWS, Secondary Drinking Water Standards, and method detection limits (Appendix B). For simplicity, results that equaled or exceeded final PDWS or SRS Flag 2 criteria are described as *exceeding* or *above* standards or as *elevated*.

Beginning first quarter 1993, aluminum became part of comprehensive analyses, which are conducted routinely once every two years, and dichloromethane (methylene chloride) was evaluated for the first time against a final PDWS promulgated by EPA in July 1992 (enforceable beginning January 17, 1994). The status of radium isotopes was re-examined; radium-228 is now flagged according to its proposed drinking water standard, while both radium-226 and total alpha-emitting radium (radium-223, -224, and -226 analyzed together) are flagged according to the proposed drinking water standard for radium-226. The final PDWS for total radium (as the sum of radium-226 and -228 activities) is not used for flagging.

Final PDWS were assigned to 17 new constituents in the SRS Groundwater Monitoring Program for the first time beginning first quarter 1993. Those constituents with newly assigned PDWS that are analyzed in samples from AMB wells were antimony, benzo[a]pyrene, beryllium, bis(2-ethylhexyl) phthalate, 2-sec-butyl-4,6-dinitrophenol, chlorobenzene, cyanide, 1,2-dibromo-3-chloropropane, 1,2-dibromoethane, hexachlorobenzene, hexachlorocyclopentadiene, nickel, 2,3,7,8-tetrachlorodibenzo-p-dioxin, thallium, 1,2,4-trichlorobenzene, and 1,1,2-trichloroethane.

The final PDWS for individual analytes provided in Appendix A may not always match the SRS flagging criteria provided in Appendix B. The final PDWS are used as guidelines in this compliance report to meet regulatory requirements; the flagging criteria are used by EPD/EMS to identify relative levels of constituents in the groundwater and as guides for scheduling groundwater sampling.

Integrity of the Monitoring Well Network

The groundwater monitoring well network at the Met Lab HWMF has been developed over the past decade as described below (EPD/EMS, 1993a):

- Groundwater monitoring wells AMB 1, 2, and 3 were installed in 1983.
- Wells AMB 1 and 3 were abandoned and replaced by wells AMB 1A and 3A in 1984.
- In 1988, wells AMB 4, 5, 6, and 7 were installed, and wells AMB 1A, 2, and 3A were abandoned.
- In 1989, wells AMB 8, 8D, 9, 9D, 10, 10D, 10DD, 11D, and 12D were installed. Subsequently that year, wells AMB 8, 9, and 10 were abandoned.
- In 1991, wells AMB 4A, 4B, 4D, 7A, 7B, 10A, 10B, 11B, and 13AR were installed, and well AMB 4 was abandoned.

Well designations: Hydrostratigraphic nomenclature and well screen zone assignments (Lewis and Aadland, 1993) were revised fourth quarter 1993 as described below. Appendix D provides definitions for the screen zone abbreviations, and Table 3 (Appendix D) indicates the screen zone assignment for each well.

Hydrostratigraphic Nomenclature for the Met Lab HWMF

Hydrostratigraphic Division	Screen Zone Assignment (Lewis and Aadland, 1993)
M-Area Aquifer Zone (Water Table unit)	all MGC, M, GC, and GCL wells
Upper Lost Lake Aquifer Zone (upper portion of the Congaree unit)	all UL wells
Lower Lost Lake Aquifer Zone (lower portion of the Congaree unit)	all LL and (LL)L/MCBC wells
Middle Sand Aquifer Zone of the Crouch Branch Confining Unit (Ellenton Sand unit)	all MCBC wells

According to the revised nomenclature, the current groundwater monitoring well network at the Met Lab HWMF (Figures 3, 4, 5, and 6, Appendix C) comprises the following: wells AMB 4D, 5, 6, 7, 8D, 9D, 10D, 11D, and 12D screened within the M-Area Aquifer Zone (Water Table unit); well AMB 11B screened within the Upper Lost Lake Aquifer Zone (upper portion of the Congaree unit); wells AMB 4B, 7B, and 10B screened within the

Lower Lost Lake Aquifer Zone (lower portion of the Congaree unit); wells AMB 4A, 7A, 10A, and 13AR screened within the Middle Sand Aquifer Zone of the Crouch Branch Confining Unit (Ellenton Sand unit); and well AMB 10DD screened within a perched groundwater zone beneath the Met Lab HWMF. Figure 7 (from Lewis and Aadland, 1993) illustrates the hydrostratigraphy of the A/M Area.

Background wells for the facility were proposed in the recent Part B post-closure care permit application renewal (WSRC, 1992a).

Well purging: Table 3 (Appendix D) lists the number of well volumes purged from each well during fourth quarter 1993 and provides sampling codes (I, P, X, etc. as defined in Appendix D front matter) that describe incomplete or unsuccessful sampling events. Wells AMB 5, 6, 7, 10A, and 13AR went dry during purging and were sampled after they recovered. Thus, the samples from these wells may not be representative of the groundwater quality at the Met Lab HWMF.

Analytical Results Exceeding Standards

Results for analytes that exceeded the final PDWS (see Appendix A) during fourth quarter 1993 are provided in Table 1 (Appendix D). Dichloromethane exceeded the final PDWS in wells AMB 4A and 7A. Tetrachloroethylene exceeded the final PDWS in wells AMB 4A, 4D, 5, and 7A. Trichloroethylene was elevated in wells AMB 4A, 4B, 4D, 5, 6, and 7A. The highest dichloromethane, tetrachloroethylene, and trichloroethylene concentrations, 88 $\mu\text{g/L}$, 46 $\mu\text{g/L}$, and 508 $\mu\text{g/L}$, respectively, were found in well AMB 4A.

Constituents that exceeded other Flag 2 criteria (see Appendix B) during fourth quarter 1993 are summarized in Table 2 (Appendix D). Total organic halogens exceeded the Flag 2 criterion in wells AMB 4A, 5, and 7A, with a maximum concentration of 363 $\mu\text{g/L}$ in well AMB 4A. Specific conductance exceeded the Flag 2 criterion in well AMB 10A at 840 $\mu\text{S/cm}$; pH exceeded the Flag 2 criterion in wells AMB 10A and 13AR.

Table 3 (Appendix D) presents all of the results for individual wells and indicates the analytical laboratories that conducted the analyses and those analyses that received modifiers (which help identify laboratory accuracy and precision) or that exceeded the EPA-approved holding times during fourth quarter 1993. Constituent results in Table 3 that appear to equal the final PDWS but are not marked in the *D* column (exceeded final PDWS or screening level) are below the final PDWS in the database. Database results, the results that are compared to the final PDWS, are entered with more significant digits than the results given in this report. Apparent discrepancies are the result of the rounding of reported results.

Result values for earlier quarters presented in this report may differ from the values for those same quarters presented in previous reports because some re-analyses may have occurred after the quarterly reports were printed. Also, samples for field data are collected once each quarter but samples for analytical data may be collected more than once each quarter. Thus, because the results tables present the highest analytical results for the quarter, a reported analytical result may be from a sample collected on a different date from the date the field data sample was collected.

Appendix D provides definitions of the abbreviations and the modifiers used in the results tables as well as descriptions of holding times, data rounding, and data qualification practices. Appendix E provides a general assessment of the quality and useability of the data provided by EPD/EMS.

Time Series Results

Time series plots of field pH, field specific conductance, tetrachloroethylene, total alpha-emitting radium, total organic carbon, total organic halogens, and trichloroethylene for the 18 AMB wells are shown in Appendix F. Trends for these indicator parameters are as follows:

pH: Field pH values for most of the AMB wells have ranged between approximately 5 and 7 since sampling began. However, the pH in well AMB 10A consistently has exceeded the alkaline Flag 2 criterion of pH 10; during fourth quarter 1993, it was pH 12. The pH in well AMB 11D has usually fluctuated around neutral, but occasionally it has risen to greater than pH 9. The pH level in well AMB 13AR has exceeded the alkaline Flag 2 criterion during recent quarters; during fourth quarter 1993, it was pH 11.

Specific conductance: With few exceptions, field specific conductance for well AMB 10A consistently has exceeded the Flag 2 criterion of 500 $\mu\text{S}/\text{cm}$ since sampling began. During fourth quarter 1993, specific conductance in well AMB 10A was 840 $\mu\text{S}/\text{cm}$. Specific conductance has ranged between approximately 25 and 300 $\mu\text{S}/\text{cm}$ in the remaining wells in recent years.

Tetrachloroethylene: Tetrachloroethylene concentrations for most of the AMB wells have been near or below the final PDWS of 5 $\mu\text{g}/\text{L}$ since sampling began. Concentrations in well AMB 5 have been above the final PDWS since mid-1989, except during third quarter 1993 when the tetrachloroethylene concentration was less than the detection limit. During fourth quarter 1993, the tetrachloroethylene concentration in well AMB 5 was 9 $\mu\text{g}/\text{L}$. Concentrations above the final PDWS have been found in well AMB 4D during recent quarters, but during third quarter 1993 the tetrachloroethylene concentration was below the detection limit. Concentrations in wells AMB 4A and 7A have consistently exceeded the final PDWS.

Total alpha-emitting radium: All of the AMB wells have consistently exhibited total alpha-emitting radium activities below the Flag 2 criterion of 20 pCi/L.

Total organic carbon: Total organic carbon concentrations in the AMB well series have been consistently less than the Flag 2 criterion of 10,000 $\mu\text{g}/\text{L}$ since shortly after sampling began, except for a few isolated analyses in different wells during late 1989 through early 1990.

Total organic halogens: Most of the AMB wells have exhibited total organic halogen concentrations less than the Flag 2 criterion of 50 $\mu\text{g}/\text{L}$ since sampling began. However, concentrations in wells AMB 4A, 5, and 7A have exceeded this standard during most quarters that samples were analyzed, including fourth quarter 1993. The concentration of

total organic halogens in well AMB 4D has fluctuated around the Flag 2 criterion, except during second quarter 1993 when it exceeded 100 $\mu\text{g/L}$.

Trichloroethylene: Trichloroethylene concentrations in wells AMB 4A, 4B, 4D, 5, and 7A have consistently exceeded the final PDWS of 5 $\mu\text{g/L}$ since sampling began. Concentrations in wells AMB 6, 7, 7B, and 8D have fluctuated around the final PDWS. Concentrations in the remaining AMB wells have consistently been less than the final PDWS or the detection limit.

Groundwater Elevations, Flow Directions, and Flow Rates

Figure 2 (Appendix C) provides water-elevation contours for the M-Area Aquifer Zone (Water Table unit) in the A and M areas. Figures 3 through 6 (Appendix C) present water-elevation data for the M-Area Aquifer Zone (Water Table unit), the Upper Lost Lake Aquifer Zone (upper portion of the Congaree unit), the Lower Lost Lake Aquifer Zone (lower portion of the Congaree unit), and the Middle Sand Aquifer Zone of the Crouch Branch Confining Unit (Ellenton Sand unit) beneath the Met Lab HWMF. Hydrographs for the AMB wells are in Appendix G, and large-scale water-elevation and potentiometric maps of the M-Area Aquifer Zone (Water Table unit), the Upper Lost Lake Aquifer Zone (upper portion of the Congaree unit), the Lower Lost Lake Aquifer Zone (lower portion of the Congaree unit), and the Middle Sand Aquifer Zone of the Crouch Branch Confining Unit (Ellenton Sand unit) are in Appendix H. Water-elevation figures in Appendix C are oriented to true north using universal transverse Mercator coordinates (UTM), while figures in Appendix H are oriented to true north using latitude-longitude coordinates.

Historically, using UTM coordinates, the horizontal groundwater flow in the M-Area Aquifer Zone (Water Table unit) beneath the Met Lab HWMF is to the west-northwest, the flow in the Upper Lost Lake Aquifer Zone (upper portion of the Congaree unit) is to the south, the flow in the Lower Lost Lake Aquifer Zone (lower portion of the Congaree unit) is to the south-southwest, and the flow in the Middle Sand Aquifer Zone of the Crouch Branch Confining Unit (Ellenton Sand unit) is to the southwest. During fourth quarter 1993, horizontal flow in the M-Area Aquifer Zone (Water Table unit) was to the west-northwest (Figure 3, Appendix C). The Upper Lost Lake Aquifer Zone (upper portion of the Congaree unit) was not contoured because it is monitored by only one well. Potentiometric surfaces in the Lower Lost Lake Aquifer Zone (lower portion of the Congaree unit) and in the Middle Sand Aquifer Zone of the Crouch Branch Confining Unit (Ellenton Sand unit) were not contoured because of the low horizontal gradient or the near-linear distribution of the monitoring wells.

Horizontal flow rate estimates for the hydrostratigraphic divisions during the past four quarters are provided below.

**Horizontal Groundwater Flow Rates (ft/yr) in the Hydrostratigraphic Division
Beneath the Met Lab HWMF**

Division	1Q93	2Q93	3Q93	4Q93
M-Area Aquifer Zone (Water Table unit)	160	160	160	160
Upper Lost Lake Aquifer Zone (upper portion of the Congaree unit)	3.7	3.7	N ^a	N
Lower Lost Lake Aquifer Zone (lower portion of the Congaree unit)	N	N	N	N
Middle Sand Aquifer Zone of the Crouch Branch Confining Unit (Ellenton Sand unit)	NA	NA	N	N

Note: Well screen zone assignments were altered third quarter 1993 according to Lewis and Aadland (1992) and fourth quarter 1993 according to Lewis and Aadland (1993).

^a N = Horizontal gradient too low, well orientation too linear, or not enough data points to determine the flow rate.

^b NA = Prior to third quarter 1993, no well screens were assigned to the Middle Sand Aquifer Zone of the Crouch Branch Confining Unit (Ellenton Sand unit) (similar to the previous Ellenton Sand).

The groundwater flow rate beneath the Met Lab HWMF is estimated using the following equation:

$$\text{Flow (ft/day)} = \frac{\text{Hydraulic Conductivity (ft/day)}}{\text{Porosity (unitless)}} \times \frac{dh \text{ (ft)}}{dl \text{ (ft)}}$$

Hydraulic conductivity constants estimated for the M-Area Aquifer Zone (Water Table unit), the Upper Lost Lake Aquifer Zone (upper portion of the Congaree unit), the Lower Lost Lake Aquifer Zone (lower portion of the Congaree unit), and the Middle Sand Aquifer Zone of the Crouch Branch Confining Unit (Ellenton Sand unit) are 27, 45, 45, and 45 ft/day, respectively; the effective porosity value for each is 20% (Lewis and Aadland, 1992). The value dh is the difference in head, and dl is the length of the flow path.

Flow path length is calculated to the nearest 50 ft for each hydrostratigraphic unit. Flow rate per day is calculated to two significant figures, then multiplied by 365 and rounded to two significant figures for the flow rate per year. Flow rate estimates vary depending on the vertical gradient between wells, the size of the area under consideration, and the number of data points. The values presented here are useful as order of magnitude estimates only.

The flow rate estimate for groundwater in the M-Area Aquifer Zone (Water Table unit) beneath the Met Lab HWMF during fourth quarter 1993 is as follows (Figure 3, Appendix C):

$$\frac{27}{0.20} \times \frac{2.0}{600} = 0.45 \text{ ft/day}$$

$$0.45 \text{ ft/day} \times 365 \text{ days} \approx 160 \text{ ft/yr}$$

Upgradient vs. Downgradient Results

M-Area Aquifer Zone (Water Table unit) wells AMB 11D and 12D are upgradient relative to the Met Lab HWMF. No AMB wells monitor upgradient groundwater quality in the Upper and Lower Lost Lake Aquifer Zones (upper and lower portions of the Congaree unit) or the Middle Sand Aquifer Zone of the Crouch Branch Confining Unit (Ellenton Sand unit). The 1992 RCRA Part B post-closure care permit application renewal identifies proposed upgradient wells for this unit (WSRC, 1992a). These wells are scheduled to be constructed during 1994.

During fourth quarter 1993, no elevated constituents were found in the upgradient wells in the M-Area Aquifer Zone (Water Table unit). Downgradient M-Area Aquifer Zone (Water Table unit) wells AMB 4D, 5, and 6 contained elevated levels of tetrachloroethylene, total organic halogens, or trichloroethylene.

Downgradient well AMB 4B, in the Lower Lost Lake Aquifer Zone (lower portion of the Congaree unit), contained elevated levels of trichloroethylene. Downgradient wells AMB 4A, 7A, 10A, and 13AR in the Middle Sand Aquifer Zone of the Crouch Branch Confining Unit (Ellenton Sand unit) contained elevated levels of dichloromethane, pH, specific conductance, tetrachloroethylene, total organic halogens, or trichloroethylene.

Quality Control Results

Wells AMB 4A and 7A were selected to receive duplicate and blind replicate analyses during fourth quarter 1993. Blind replicate analyses, representing approximately 5% of the quarter's total groundwater samples, are performed by the analytical laboratories each quarter for wells selected by EPD/EMS as part of the EPD/EMS quality assurance program (see Appendix E). The results of the analyses are used for both intralaboratory and interlaboratory comparisons. **The Savannah River Site's Groundwater Monitoring Program, Third Quarter 1993 (U)** (EPD/EMS, 1993b) provides full replicate results and statistical comparisons of both blind replicate and duplicate results.

As a part of intralaboratory quality assurance procedures, certain analyses were duplicated by the laboratory. These results are reported in Table 3, Appendix D).

Conclusions

During fourth quarter 1993, as in previous quarters, tetrachloroethylene and trichloroethylene exceeded the final PDWS in several AMB wells. The RCRA Part B post-closure care permit application for the Met Lab HWMF (WSRC, 1991) indicates that a small, isolated plume of tetrachloroethylene and trichloroethylene, located in the M-Area Aquifer Zone (Water Table unit) near the Met Lab HWMF, is from the Metallurgical Laboratory Basin. The permit application also indicates that the primary source of the contamination in the deeper units near the Met Lab HWMF is the extensive organic halogens plume resulting from M-Area operations. SRS is addressing the effects of organic halogens near the Met Lab HWMF under the provisions of the corrective action program of the M-Area HWMF Part B post-closure care permit application renewal (WSRC, 1992a; WSRC, 1992c).

Dichloromethane, a common laboratory contaminant, exceeded the final PDWS in a few wells as occurred previously during the year. This constituent was not detected in the laboratory blanks associated with the samples containing elevated concentrations of dichloromethane. Similar to past quarters, pH and total organic halogens exceeded the Flag 2 criteria in one or more of the AMB wells during fourth quarter 1993. Maximum levels for pH and total organic halogens were found in wells screened in the Middle Sand Aquifer Zone of the Crouch Branch Confining Unit (Ellenton Sand unit). Aluminum, iron, lead, and manganese, all of which exceeded Flag 2 criteria in several wells during third quarter 1993, were not analyzed for during fourth quarter 1993.

During fourth quarter 1993, no elevated constituents were detected in upgradient wells. Also, elevated constituents were not found in downgradient wells AMB 7, 7B, 8D, 9D, 10B, 10D, 10DD, 11B, 11D, and 12D.

Historically and currently, the horizontal flow direction in the M-Area Aquifer Zone (Water Table unit) beneath the Met Lab HWMF is to the west-northwest (UTM coordinates). Historically, the flow direction in the Upper Lost Lake Aquifer Zone (upper portion of the Congaree unit) is to the south-southeast, the flow in the Lower Lost Lake Aquifer Zone (lower portion of the Congaree unit) is to the south-southwest, and the flow in the Middle Sand Aquifer Zone of the Crouch Branch Confining Unit (Ellenton Sand unit) is to the southwest. During fourth quarter 1993, the low horizontal gradient and near-linear arrangement of the monitoring wells in the Lower Lost Lake Aquifer Zone (lower portion of the Congaree unit) and in the Middle Sand Aquifer Zone of the Crouch Branch Confining Unit (Ellenton Sand unit) prevented determination of reliable flow directions and rates in these hydrostratigraphic divisions. Data were insufficient to determine the flow direction and rate in the Upper Lost Lake Aquifer Zone (upper portion of the Congaree unit). The flow rate estimate for groundwater in the M-Area Aquifer Zone (Water Table unit) during the quarter was 160 ft/yr. This estimated flow rate, which represents the assumed maximum contaminant migration rate, is the same as the estimated rate for previous quarters.

1993 Summary

During 1993, 18 groundwater monitoring wells of the AMB series at the Met Lab HWMF were sampled quarterly to comply with the Natural Resources Defense Council et al. Consent Decree of May 1988 and as part of the Savannah River Site Groundwater Monitoring Program. No new wells were added to the AMB monitoring network, and no wells were abandoned. The hydrostratigraphic assignments for AMB well screen zones were updated during the third and fourth quarters.

During the year, samples from six of the wells (33%) exhibited levels of dichloromethane, tetrachloroethylene, and trichloroethylene that exceeded the final PDWS. In addition, aluminum, iron, lead, manganese, pH, specific conductance, and total organic halogens exceeded Flag 2 criteria in one or more of the wells each quarter these constituents were analyzed.

The results for 1993 are very similar to the results for 1992, except for dichloromethane, thallium, and total alpha-emitting radium. The standards for thallium and total alpha-emitting radium changed between fourth quarter 1992 and first quarter 1993, and dichloromethane was not compared to a standard during 1992. Dichloromethane is a common laboratory contaminant; however, it was not detected in the laboratory blanks associated with the samples containing elevated concentrations of dichloromethane.

Groundwater flow directions and rates at the Met Lab HWMF were similar to flow directions and rates in 1992.

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Errata

First Quarter 1993:

- Page D-6, Table 2, Appendix D: The table should include the following information—lead exceeded the SRS Flag 2 criterion in well AMB 4D at 18 $\mu\text{g/L}$ and in well AMB 6 at 26 $\mu\text{g/L}$.

Second Quarter 1993:

- Page D-5, Table 1, Appendix D: The modifier column was incorrectly omitted from the table. None of the constituents listed had analytical modifiers.

Third Quarter 1993:

- No errata have been reported.

Appendix A – Final Primary Drinking Water Standards

Final Primary Drinking Water Standards

Analyte	Unit	Level	Status	Source
Antimony	µg/L	6	Final	EPA, 1992b
Arsenic	µg/L	50	Final	EPA, 1992a
Asbestos	fibers/L	7,000,000	Final	EPA, 1992a
Barium	µg/L	2,000	Final	EPA, 1992a
Benzene	µg/L	5	Final	EPA, 1992a
Benzo[a]pyrene	µg/L	0.2	Final	EPA, 1992b
Beryllium	µg/L	4	Final	EPA, 1992b
Bis(2-ethylhexyl) phthalate	µg/L	6	Final	EPA, 1992b
Bromodichloromethane	µg/L	100 ^a	Final	EPA, 1992a
Bromoform	µg/L	100 ^a	Final	EPA, 1992a
2-sec-Butyl-4,6-dinitrophenol	µg/L	7	Final	EPA, 1992b
Cadmium	µg/L	5	Final	EPA, 1992a
Carbon tetrachloride	µg/L	5	Final	EPA, 1992a
Chlordane	µg/L	2	Final	EPA, 1992a
Chlorobenzene	µg/L	100	Final	EPA, 1992a
Chloroethene (Vinyl chloride)	µg/L	2	Final	EPA, 1992a
Chloroform	µg/L	100 ^a	Final	EPA, 1992a
Chromium	µg/L	100	Final	EPA, 1992a
Copper	µg/L	1,300	Final	EPA, 1992a
Cyanide	µg/L	200	Final	EPA, 1992b
Dibromochloromethane	µg/L	100 ^a	Final	EPA, 1992a
Dibromochloropropane	µg/L	0.2	Final	EPA, 1992a
1,2-Dibromoethane (Ethylene dibromide)	µg/L	0.05	Final	EPA, 1992a
1,2-Dichlorobenzene	µg/L	600	Final	EPA, 1992a
1,4-Dichlorobenzene	µg/L	75	Final	EPA, 1992a
1,2-Dichloroethane	µg/L	5	Final	EPA, 1992a
1,1-Dichloroethene	µg/L	7	Final	EPA, 1992a
1,2-Dichloroethene	µg/L	50	Final	EPA, 1992b
cis-1,2-Dichloroethene	µg/L	70	Final	EPA, 1992a
trans-1,2-Dichloroethene	µg/L	100	Final	EPA, 1992a
Dichloromethane (Methylene chloride)	µg/L	5	Final	EPA, 1992b
2,4-Dichlorophenoxyacetic acid	µg/L	70	Final	EPA, 1992a
1,2-Dichloropropane	µg/L	5	Final	EPA, 1992a
Endrin	µg/L	2	Final	EPA, 1992b
Ethylbenzene	µg/L	700	Final	EPA, 1992a
Fluoride	µg/L	4,000	Final	EPA, 1992a
Gross alpha ^b	pCi/L	1.5E+01	Final	EPA, 1992a
Heptachlor	µg/L	0.4	Final	EPA, 1992a
Heptachlor epoxide	µg/L	0.2	Final	EPA, 1992a
Hexachlorobenzene	µg/L	1	Final	EPA, 1992b
Hexachlorocyclopentadiene	µg/L	50	Final	EPA, 1992b
Lead	µg/L	50	Final	SCDHEC, 1981
Lindane	µg/L	0.2	Final	EPA, 1992a
Mercury	µg/L	2	Final	EPA, 1992a
Methoxychlor	µg/L	40	Final	EPA, 1992a
Nickel	µg/L	100	Final	EPA, 1992b
Nitrate as nitrogen	µg/L	10,000	Final	EPA, 1992a
Nitrate-nitrite as nitrogen	µg/L	10,000	Final	EPA, 1992a
Nitrite as nitrogen	µg/L	1,000	Final	EPA, 1992a
Nonvolatile beta ^c	pCi/L	5E+01	Final	EPA, 1977
PCBs ^d	µg/L	0.5	Final	EPA, 1992a
Pentachlorophenol	µg/L	1	Final	EPA, 1992a
Selenium	µg/L	50	Final	EPA, 1992a

<u>Analyte</u>	<u>Unit</u>	<u>Level</u>	<u>Status</u>	<u>Source</u>
Strontium-89/90 ^a	pCi/L	8E+00	Final	EPA, 1992a
Strontium-90	pCi/L	8E+00	Final	EPA, 1992a
Styrene	μg/L	100	Final	EPA, 1992a
2,3,7,8-TCDD	μg/L	0.00003	Final	EPA, 1992b
Tetrachloroethylene	μg/L	5	Final	EPA, 1992a
Thallium	μg/L	2	Final	EPA, 1992b
Toluene	μg/L	1,000	Final	EPA, 1992a
Total trihalomethanes	μg/L	100	Final	EPA, 1992a
Toxaphene	μg/L	3	Final	EPA, 1992a
2,4,5-TP (Silvex)	μg/L	50	Final	EPA, 1992a
1,2,4-Trichlorobenzene	μg/L	70	Final	EPA, 1992b
1,1,1-Trichloroethane	μg/L	200	Final	EPA, 1992a
1,1,2-Trichloroethane	μg/L	5	Final	EPA, 1992b
Trichloroethylene	μg/L	5	Final	EPA, 1992a
Tritium	pCi/mL	2E+01	Final	EPA, 1992a
Xylenes	μg/L	10,000	Final	EPA, 1992a

- ^a This value is the drinking water standard for total trihalomethanes (the sum of bromoform, bromodichloromethane, chloroform, and dibromochloromethane).
- ^b The standard given is for gross alpha including radium-226 but excluding radon and uranium.
- ^c This is the screening level above which providers of public drinking water should perform analyses for specific man-made radionuclides. The standard for the total dose equivalent from all such radionuclides is 4 mrem per year.
- ^d Analyses were conducted in 1993 for the following: PCB 1016, PCB 1221, PCB 1232, PCB 1242, PCB 1248, PCB 1254, and PCB 1260.
- ^e For double radionuclide analyses where each separate radionuclide has its own standard, the more stringent standard is used.

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Appendix B – Flagging Criteria

Flagging Criteria

The Savannah River Site Environmental Protection Department/Environmental Monitoring Section (EPD/EMS) flagging criteria are as follows:

- Flag 2 criteria for constituents equal the Safe Drinking Water Act (SDWA) final Primary Drinking Water Standard (PDWS), the SDWA proposed PDWS, or the SDWA Secondary Drinking Water Standard (SDWS). If a constituent does not have a drinking water standard, the Flag 2 criterion equals 10 times the method detection limit (MDL) calculated as the 90th percentile detection limit obtained recently by one of the primary analytical laboratories.
- Flag 1 criteria for constituents equal one-half of the final PDWS, one-half the proposed PDWS, or one-half the SDWS. If a constituent does not have a drinking water standard, the Flag 1 criterion equals 5 times the MDL calculated as the 90th percentile detection limit obtained recently by one of the primary analytical laboratories.
- Flag 0 criteria are assigned to constituent levels below Flag 1 criteria, constituent levels below the sample detection limits, or constituents having no flagging criteria.

The following parameters are not assigned flagging criteria: alkalinity, calcium, color, corrosivity, Eh, magnesium, odor, potassium, silica, sodium, total dissolved solids, total phosphates (as P), total phosphorus, and turbidity. In addition, common laboratory contaminants and cleaners including some phthalates, ketones, and toluene are not assigned flagging criteria.

Analyte	Unit	Flag 1	Flag 2	Source ^a
Acenaphthene	µg/L	50	100	EPA Method 8270
Acenaphthylene	µg/L	50	100	EPA Method 8270
Acetone	µg/L	500	1,000	EPA Method 8240
Acetonitrile (Methyl cyanide)	µg/L	500	1,000	EPA Method 8240
Acetophenone	µg/L	50	100	EPA Method 8270
2-Acetylaminofluorene	µg/L	50	100	EPA Method 8270
Acrolein	µg/L	100	200	EPA Method 8240
Acrylonitrile	µg/L	100	200	EPA Method 8240
Actinium-228	pCi/L	1.64E+03	3.27E+03	Proposed PDWS (EPA, 1991)
Aldrin	µg/L	0.25	0.5	EPA Method 8080
Alkalinity (as CaCO ₃)		No flag	No flag	Set by EPD/EMS
Allyl chloride	µg/L	250	500	EPA Method 8240
Aluminum	µg/L	25	50	SDWS (EPA, 1992c)
Americium-241	pCi/L	3.17E+00	6.34E+00	Proposed PDWS (EPA, 1991)
Americium-243	pCi/L	3.19E+00	6.37E+00	Proposed PDWS (EPA, 1991)
4-Aminobiphenyl	µg/L	50	100	EPA Method 8270
Ammonia	µg/L	500	1,000	APHA Method 417B
Ammonia nitrogen	µg/L	500	1,000	EPA Method 350.1
Aniline	µg/L	50	100	EPA Method 8270
Anthracene	µg/L	50	100	EPA Method 8270
Antimony	µg/L	3	6	Final PDWS (EPA, 1992b)
Antimony-125	pCi/L	1.5E+02	3E+02	Final PDWS (EPA, 1977)
Aramite	µg/L	50	100	EPA Method 8270
Arsenic	µg/L	25	50	Final PDWS (EPA, 1992a)

Analyte	Unit	Flag 1	Flag 2	Source ^a
Asbestos	Fibers/L	3,500,000	7,000,000	Final PDWS (EPA, 1992a)
Azobenzene	µg/L	50	100	EPA Method 625
Barium	µg/L	1,000	2,000	Final PDWS (EPA, 1992a)
Barium-140	pCi/L	4.5E+01	9E+01	Final PDWS (EPA, 1977)
Benzene	µg/L	2.5	5	Final PDWS (EPA, 1992a)
alpha-Benzene hexachloride	µg/L	0.25	0.5	EPA Method 8080
beta-Benzene hexachloride	µg/L	0.25	0.5	EPA Method 8080
delta-Benzene hexachloride	µg/L	0.25	0.5	EPA Method 8080
Benzidine	µg/L	250	500	EPA Method 8270
Benzo[a]anthracene	µg/L	0.05	0.1	Proposed PDWS (EPA, 1990)
Benzo[b]fluoranthene	µg/L	0.1	0.2	Proposed PDWS (EPA, 1990)
Benzo[k]fluoranthene	µg/L	0.1	0.2	Proposed PDWS (EPA, 1990)
Benzoic acid	µg/L	250	500	EPA Method 8270
Benzo[g,h,i]perylene	µg/L	50	100	EPA Method 8270
Benzo[a]pyrene	µg/L	0.1	0.2	Final PDWS (EPA, 1992b)
1,4-Benzoquinone	µg/L	50	100	EPA Method 8270
Benzyl alcohol	µg/L	50	100	EPA Method 8270
Beryllium	µg/L	2	4	Final PDWS (EPA, 1992b)
Beryllium-7	pCi/L	3E+03	6E+03	Final PDWS (EPA, 1977)
Bis(2-chloroethoxy) methane	µg/L	50	100	EPA Method 8270
Bis(2-chloroethyl) ether	µg/L	50	100	EPA Method 8270
Bis(2-chloroisopropyl) ether	µg/L	50	100	EPA Method 8270
Bis(chloromethyl) ether	µg/L	50	100	EPA Method 8270
Bis(2-ethylhexyl) phthalate	µg/L	3	6	Final PDWS (EPA, 1992b)
Bromide	µg/L	5,000	10,000	EPA Method 300.0
Bromodichloromethane	µg/L	50	100	Final PDWS (EPA, 1992a)
Bromoform	µg/L	50	100	Final PDWS (EPA, 1992a)
Bromomethane (Methyl bromide)	µg/L	5	10	EPA Method 8240
4-Bromophenyl phenyl ether	µg/L	50	100	EPA Method 8270
2-sec-Butyl-4,6-dinitrophenol	µg/L	3.5	7	Final PDWS (EPA, 1992b)
Butylbenzyl phthalate		No flag	No flag	Set by EPD/EMS
Cadmium	µg/L	2.5	5	Final PDWS (EPA, 1992a)
Calcium		No flag	No flag	Set by EPD/EMS
Carbon disulfide	µg/L	5	10	EPA Method 8240
Carbon tetrachloride	µg/L	2.5	5	Final PDWS (EPA, 1992a)
Carbon-14	pCi/L	1E+03	2E+03	Final PDWS (EPA, 1977)
Carbonate		No flag	No flag	Set by EPD/EMS
Cerium-141	pCi/L	1.5E+02	3E+02	Final PDWS (EPA, 1977)
Cerium-144	pCi/L	1.31E+02	2.61E+02	Proposed PDWS (EPA, 1991)
Cesium-134 ^b	pCi/L	4.07E+01	8.13E+01	Proposed PDWS (EPA, 1991)
Cesium-137	pCi/L	1E+02	2E+02	Final PDWS (EPA, 1977)
Chlordane	µg/L	1	2	Final PDWS (EPA, 1992a)
Chloride	µg/L	125,000	250,000	SDWS (EPA, 1992c)
4-Chloroaniline	µg/L	50	100	EPA Method 8270
Chlorobenzene	µg/L	50	100	Final PDWS (EPA, 1992a)
Chlorobenzilate	µg/L	50	100	EPA Method 8270
Chloroethane	µg/L	5	10	EPA Method 8240
Chloroethene (Vinyl chloride)	µg/L	1	2	Final PDWS (EPA, 1992a)
Chloroethyl vinyl ether	µg/L	5	10	EPA Method 8240
2-Chloroethyl vinyl ether	µg/L	5	10	EPA Method 8240
Chloroform	µg/L	50	100	Final PDWS (EPA, 1992a)
4-Chloro-m-cresol	µg/L	50	100	EPA Method 8270
Chloromethane (Methyl chloride)	µg/L	5	10	EPA Method 8240
2-Chloronaphthalene	µg/L	50	100	EPA Method 8240
2-Chlorophenol	µg/L	50	100	EPA Method 8270

Analyte	Unit	Flag 1	Flag 2	Source ^a
4-Chlorophenyl phenyl ether	µg/L	50	100	EPA Method 8270
Chloroprene	µg/L	1,000	2,000	EPA Method 8240
Chromium	µg/L	50	100	Final PDWS (EPA, 1992a)
Chromium-51	pCi/L	3E+03	6E+03	Final PDWS (EPA, 1977)
Chrysene	µg/L	0.1	0.2	Proposed PDWS (EPA, 1990)
Cobalt	µg/L	20	40	EPA Method 6010
Cobalt-57	pCi/L	5E+02	1E+03	Final PDWS (EPA, 1977)
Cobalt-58	pCi/L	4.5E+03	9E+03	Final PDWS (EPA, 1977)
Cobalt-60	pCi/L	5E+01	1E+02	Final PDWS (EPA, 1977)
Color		No flag	No flag	Set by EPD/EMS
Copper	µg/L	650	1,300	Final PDWS (EPA, 1992a)
Corrosivity		No flag	No flag	Set by EPD/EMS
m-Cresol (3-Methylphenol)	µg/L	50	100	EPA Method 8270
o-Cresol (2-Methylphenol)	µg/L	50	100	EPA Method 8270
p-Cresol (4-Methylphenol)	µg/L	50	100	EPA Method 8270
Curium-242	pCi/L	6.65E+01	1.33E+02	Proposed PDWS (EPA, 1991)
Curium-243	pCi/L	4.15E+00	8.3E+00	Proposed PDWS (EPA, 1991)
Curium-243/244 ^c	pCi/L	4.15E+00	8.3E+00	Proposed PDWS (EPA, 1991)
Curium-244	pCi/L	4.92E+00	9.84E+00	Proposed PDWS (EPA, 1991)
Curium-245/246 ^c	pCi/L	3.12E+00	6.23E+00	Proposed PDWS (EPA, 1991)
Curium-246	pCi/L	3.14E+00	6.27E+00	Proposed PDWS (EPA, 1991)
Cyanide	µg/L	100	200	Final PDWS (EPA, 1992b)
p,p'-DDD	µg/L	0.5	1	EPA Method 8080
p,p'-DDE	µg/L	0.5	1	EPA Method 8080
p,p'-DDT	µg/L	0.5	1	EPA Method 8080
Di-n-butyl phthalate		No flag	No flag	Set by EPD/EMS
Di-n-octyl phthalate		No flag	No flag	Set by EPD/EMS
Diallate	µg/L	50	100	EPA Method 8270
Dibenz[a,h]anthracene	µg/L	0.15	0.3	Proposed PDWS (EPA, 1990)
Dibenzofuran	µg/L	50	100	EPA Method 8270
Dibromochloromethane	µg/L	50	100	Final PDWS (EPA, 1992a)
1,2-Dibromo-3-chloropropane	µg/L	0.1	0.2	Final PDWS (EPA, 1992a)
1,2-Dibromoethane (Ethylene dibromide)	µg/L	0.025	0.05	Final PDWS (EPA, 1992a)
Dibromomethane (Methylene bromide)	µg/L	5	10	EPA Method 8240
1,2-Dichlorobenzene	µg/L	300	600	Final PDWS (EPA, 1992a)
1,3-Dichlorobenzene	µg/L	50	100	EPA Method 8270
1,4-Dichlorobenzene	µg/L	37.5	75	Final PDWS (EPA, 1992a)
3,3'-Dichlorobenzidine	µg/L	50	100	EPA Method 8270
trans-1,4-Dichloro-2-butene	µg/L	150	300	EPA Method 8240
Dichlorodifluoromethane	µg/L	5	10	EPA Method 8240
1,1-Dichloroethane	µg/L	5	10	EPA Method 8240
1,2-Dichloroethane	µg/L	2.5	5	Final PDWS (EPA, 1992a)
1,1-Dichloroethene	µg/L	3.5	7	Final PDWS (EPA, 1992a)
1,2-Dichloroethene	µg/L	25	50	Final PDWS (EPA, 1992b)
cis-1,2-Dichloroethene	µg/L	35	70	Final PDWS (EPA, 1992a)
trans-1,2-Dichloroethene	µg/L	50	100	Final PDWS (EPA, 1992a)
Dichloromethane (Methylene chloride)	µg/L	2.5	5	Final PDWS (EPA, 1992b)
2,4-Dichlorophenol	µg/L	50	100	EPA Method 8270
2,6-Dichlorophenol	µg/L	50	100	EPA Method 8270
2,4-Dichlorophenoxyacetic acid	µg/L	35	70	Final PDWS (EPA, 1992a)
1,2-Dichloropropane	µg/L	2.5	5	Final PDWS (EPA, 1992a)
cis-1,3-Dichloropropene	µg/L	5	10	EPA Method 8240

Analyte	Unit	Flag 1	Flag 2	Source ^a
trans-1,3-Dichloropropene	µg/L	5	10	EPA Method 8240
Dieldrin	µg/L	2.5	5	EPA Method 8080
Diethyl phthalate		No flag	No flag	Set by EPD/EMS
Dimethoate	µg/L	50	100	EPA Method 8270
p-Dimethylaminoazobenzene	µg/L	50	100	EPA Method 8270
p-(Dimethylamino)ethylbenzene	µg/L	50	100	EPA Method 8270
7,12-Dimethylbenz[<i>a</i>]anthracene	µg/L	50	100	EPA Method 8270
3,3'-Dimethylbenzidine	µg/L	50	100	EPA Method 8270
a,a-Dimethylphenethylamine	µg/L	50	100	EPA Method 8270
2,4-Dimethyl phenol	µg/L	50	100	EPA Method 8270
Dimethyl phthalate		No flag	No flag	Set by EPD/EMS
1,3-Dinitrobenzene	µg/L	50	100	EPA Method 8270
2,4-Dinitrophenol	µg/L	250	500	EPA Method 8270
2,4-Dinitrotoluene	µg/L	50	100	EPA Method 8270
2,6-Dinitrotoluene	µg/L	50	100	EPA Method 8270
1,4-Dioxane	µg/L	50	100	EPA Method 8270
Diphenylamine	µg/L	50	100	EPA Method 8270
1,2-Diphenylhydrazine	µg/L	50	100	EPA Method 8270
Dissolved organic carbon	µg/L	5,000	10,000	EPA Method 9060
Disulfoton	µg/L	50	100	EPA Method 8270
Eh		No flag	No flag	Set by EPD/EMS
alpha-Endosulfan	µg/L	50	100	EPA Method 8270
beta-Endosulfan	µg/L	50	100	EPA Method 8270
Endosulfan I	µg/L	0.5	1	EPA Method 8080
Endosulfan II	µg/L	0.5	1	EPA Method 8080
Endosulfan sulfate	µg/L	0.5	1	EPA Method 8080
Endrin	µg/L	1	2	Final PDWS (EPA, 1992b)
Endrin aldehyde	µg/L	0.5	1	EPA Method 8080
Endrin ketone		No flag	No flag	Set by EPD/EMS
Ethylbenzene	µg/L	350	700	Final PDWS (EPA, 1992a)
Ethyl methacrylate	µg/L	50	100	EPA Method 8270
Ethyl methanesulfonate	µg/L	50	100	EPA Method 8270
Europium-152	pCi/L	3E+01	6E+01	Final PDWS (EPA, 1977)
Europium-154	pCi/L	1E+02	2E+02	Final PDWS (EPA, 1977)
Europium-155	pCi/L	3E+02	6E+02	Final PDWS (EPA, 1977)
Famphur	µg/L	50	100	EPA Method 8270
Fluoranthene	µg/L	50	100	EPA Method 8270
Fluorene	µg/L	50	100	EPA Method 8270
Fluoride	µg/L	2,000	4,000	Final PDWS (EPA, 1992a)
Gross alpha	pCi/L	7.5E+00	1.5E+01	Final PDWS (EPA, 1992a)
Heptachlor	µg/L	0.2	0.4	Final PDWS (EPA, 1992a)
Heptachlor epoxide	µg/L	0.1	0.2	Final PDWS (EPA, 1992a)
Heptachlorodibenzo-p-dioxin isomers	µg/L	0.00325	0.0065	EPA Method 8280
1,2,3,4,6,7,8-HPCDD	µg/L	0.00325	0.0065	EPA Method 8280
Heptachlorodibenzo-p-furan isomers	µg/L	0.00225	0.0045	EPA Method 8280
1,2,3,4,6,7,8-HPCDF	µg/L	0.00225	0.0045	EPA Method 8280
Hexachlorobenzene	µg/L	0.5	1	Final PDWS (EPA, 1992b)
Hexachlorobutadiene	µg/L	50	100	EPA Method 8270
Hexachlorocyclopentadiene	µg/L	25	50	Final PDWS (EPA, 1992b)
Hexachlorodibenzo-p-dioxin isomers	µg/L	0.00225	0.0045	EPA Method 8280
1,2,3,4,7,8-HXCDD	µg/L	0.00225	0.0045	EPA Method 8280
Hexachlorodibenzo-p-furan isomers	µg/L	0.002	0.004	EPA Method 8280
1,2,3,4,7,8-HXCDF	µg/L	0.002	0.004	EPA Method 8280

Analyte	Unit	Flag 1	Flag 2	Source ^a
Hexachloroethane	µg/L	50	100	EPA Method 8270
Hexachlorophene	µg/L	250	500	EPA Method 8270
Hexachloropropene	µg/L	50	100	EPA Method 8270
2-Hexanone	µg/L	50	100	EPA Method 8240
Indeno[1,2,3-c,d]pyrene	µg/L	50	100	EPA Method 8270
Iodine	µg/L	250	500	APHA Method 415A
Iodine-129	pCi/L	5E-01	1E+00	Final PDWS (EPA, 1977)
Iodine-131	pCi/L	1.5E+00	3E+00	Final PDWS (EPA, 1977)
Iodomethane (Methyl iodide)	µg/L	75	150	EPA Method 8240
Iron	µg/L	150	300	SDWS (EPA, 1992c)
Iron-55	pCi/L	1E+03	2E+03	Final PDWS (EPA, 1977)
Iron-59	pCi/L	1E+02	2E+02	Final PDWS (EPA, 1977)
Isobutyl alcohol	µg/L	500	1,000	EPA Method 8240
Isodrin	µg/L	50	100	EPA Method 8270
Isophorone	µg/L	50	100	EPA Method 8270
Isosafrole	µg/L	50	100	EPA Method 8270
Kepone	µg/L	50	100	EPA Method 8270
Lanthanum-140	pCi/L	3E+01	6E+01	Final PDWS (EPA, 1977)
Lead	µg/L	7.5	15	Final PDWS (EPA, 1992a)
Lindane	µg/L	0.1	0.2	Final PDWS (EPA, 1992a)
Lithium	µg/L	25	50	EPA Method 6010
Magnesium		No flag	No flag	Set by EPD/EMS
Manganese	µg/L	25	50	SDWS (EPA, 1992c)
Manganese-54	pCi/L	1.5E+02	3E+02	Final PDWS (EPA, 1977)
Mercury	µg/L	1	2	Final PDWS (EPA, 1992a)
Methacrylonitrile	µg/L	250	500	EPA Method 8240
Methapyrilene	µg/L	50	100	EPA Method 8270
Methoxychlor	µg/L	20	40	Final PDWS (EPA, 1992a)
3-Methylcholanthrene	µg/L	50	100	EPA Method 8270
2-Methyl-4,6-dinitrophenol	µg/L	250	500	EPA Method 8270
Methyl ethyl ketone		No flag	No flag	Set by EPD/EMS
Methyl isobutyl ketone		No flag	No flag	Set by EPD/EMS
Methyl methacrylate	µg/L	50	100	EPA Method 8270
Methyl methanesulfonate	µg/L	50	100	EPA Method 8270
2-Methylnaphthalene	µg/L	50	100	EPA Method 8270
Molybdenum	µg/L	250	500	EPA Method 6010
Naphthalene	µg/L	50	100	EPA Method 8270
1,4-Naphthoquinone	µg/L	50	100	EPA Method 8270
1-Naphthylamine	µg/L	50	100	EPA Method 8270
2-Naphthylamine	µg/L	50	100	EPA Method 8270
Neptunium-237	pCi/L	3.53E+00	7.06E+00	Proposed PDWS (EPA, 1991)
Nickel	µg/L	50	100	Final PDWS (EPA, 1992b)
Nickel-59	pCi/L	1.5E+02	3E+02	Final PDWS (EPA, 1977)
Nickel-63	pCi/L	2.5E+01	5E+01	Final PDWS (EPA, 1977)
Niobium-95	pCi/L	1.5E+02	3.E+02	Final PDWS (EPA, 1977)
Nitrate as nitrogen	µg/L	5,000	10,000	Final PDWS (EPA, 1992a)
Nitrate-nitrite as nitrogen	µg/L	5,000	10,000	Final PDWS (EPA, 1992a)
Nitrite as nitrogen	µg/L	500	1,000	Final PDWS (EPA, 1992a)
2-Nitroaniline	µg/L	50	100	EPA Method 8270
3-Nitroaniline	µg/L	50	100	EPA Method 8270
4-Nitroaniline	µg/L	50	100	EPA Method 8270
Nitrobenzene	µg/L	50	100	EPA Method 8270
Nitrogen by Kjeldahl method	µg/L	500	1,000	EPA Method 351.2
2-Nitrophenol	µg/L	50	100	EPA Method 8270
4-Nitrophenol	µg/L	50	100	EPA Method 8270

Analyte	Unit	Flag 1	Flag 2	Source ^a
4-Nitroquinoline-1-oxide	µg/L	50	100	EPA Method 8270
N-Nitrosodi-n-butylamine	µg/L	50	100	EPA Method 8270
N-Nitrosodiethylamine	µg/L	50	100	EPA Method 8270
N-Nitrosodimethylamine	µg/L	50	100	EPA Method 8270
N-Nitrosodiphenylamine	µg/L	50	100	EPA Method 8270
N-Nitrosodipropylamine	µg/L	50	100	EPA Method 8270
N-Nitrosomethylethylamine	µg/L	50	100	EPA Method 8270
N-Nitrosomorpholine	µg/L	50	100	EPA Method 8270
N-Nitrosopiperidine	µg/L	50	100	EPA Method 8270
N-Nitrosopyrrolidine	µg/L	50	100	EPA Method 8270
5-Nitro-o-toluidine	µg/L	50	100	EPA Method 8270
Nonvolatile beta	pCi/L	2.5E+01	5E+01	Proposed PDWS (EPA, 1986)
Octachlorodibenzo-p-dioxin isomers	µg/L	0.005	0.01	EPA Method 8280
Octachlorodibenzo-p-furan isomers	µg/L	0.005	0.01	EPA Method 8280
Odor		No flag	No flag	Set by EPD/EMS
Oil & Grease	µg/L	5,000	10,000	EPA Method 413.1
Parathion	µg/L	0.25	0.5	EPA Method 8080
Parathion methyl	µg/L	0.25	0.5	EPA Method 8080
PCB 1016	µg/L	0.25	0.5	Final PDWS (EPA, 1992a)
PCB 1221	µg/L	0.25	0.5	Final PDWS (EPA, 1992a)
PCB 1232	µg/L	0.25	0.5	Final PDWS (EPA, 1992a)
PCB 1242	µg/L	0.25	0.5	Final PDWS (EPA, 1992a)
PCB 1248	µg/L	0.25	0.5	Final PDWS (EPA, 1992a)
PCB 1254	µg/L	0.25	0.5	Final PDWS (EPA, 1992a)
PCB 1260	µg/L	0.25	0.5	Final PDWS (EPA, 1992a)
PCB 1262	µg/L	0.25	0.5	Final PDWS (EPA, 1992a)
Pentachlorobenzene	µg/L	50	100	EPA Method 8270
Pentachlorodibenzo-p-dioxin isomers	µg/L	0.00275	0.0055	EPA Method 8280
1,2,3,7,8-PCDD	µg/L	0.00275	0.0055	EPA Method 8280
Pentachlorodibenzo-p-furan isomers	µg/L	0.00275	0.0055	EPA Method 8280
1,2,3,7,8-PCDF	µg/L	0.00275	0.0055	EPA Method 8280
Pentachloroethane	µg/L	50	100	EPA Method 8270
Pentachloronitrobenzene	µg/L	50	100	EPA Method 8270
Pentachlorophenol	µg/L	0.5	1	Final PDWS (EPA, 1992a)
pH	pH	8	10	Set by EPD/EMS
pH	pH	4	3	Set by EPD/EMS
Phenacetin	µg/L	50	100	EPA Method 8270
Phenanthrene	µg/L	50	100	EPA Method 8270
Phenol	µg/L	50	100	EPA Method 8270
Phenols	µg/L	25	50	EPA Method 420.1
p-Phenylenediamine	µg/L	50	100	EPA Method 8270
Phorate	µg/L	0.5	1	EPA Method 8080
2-Picoline	µg/L	50	100	EPA Method 8270
Plutonium-238	pCi/L	3.51E+00	7.02E+00	Proposed PDWS (EPA, 1991)
Plutonium-239	pCi/L	3.11E+01	6.21E+01	Proposed PDWS (EPA, 1991)
Plutonium-239/240 ^c	pCi/L	3.11E+01	6.21E+01	Proposed PDWS (EPA, 1991)
Plutonium-240	pCi/L	3.11E+01	6.22E+01	Proposed PDWS (EPA, 1991)
Plutonium-241	pCi/L	3.13E+01	6.26E+01	Proposed PDWS (EPA, 1991)
Plutonium-242	pCi/L	3.27E+01	6.54E+01	Proposed PDWS (EPA, 1991)
Potassium		No flag	No flag	Set by EPD/EMS
Potassium-40	pCi/L	1.5E+02	3E+02	Proposed PDWS (EPA, 1986)
Pronamid	µg/L	50	100	EPA Method 8270
Propionitrile	µg/L	1,000	2,000	EPA Method 8240
Pyrene	µg/L	50	100	EPA Method 8270
Pyridine	µg/L	50	100	EPA Method 8270

Analyte	Unit	Flag 1	Flag 2	Source ^a
Radium (alpha-emitting) ^d	pCi/L	1E+01	2E+01	Proposed PDWS (EPA, 1991)
Radium-226	pCi/L	1E+01	2E+01	Proposed PDWS (EPA, 1991)
Radium-228	pCi/L	1E+01	2E+01	Proposed PDWS (EPA, 1991)
Radon-222	pCi/L	1.5E+02	3E+02	Proposed PDWS (EPA, 1991)
Ruthenium-103	pCi/L	1E+02	2E+02	Final PDWS (EPA, 1977)
Ruthenium-106	pCi/L	1.5E+01	3E+01	Final PDWS (EPA, 1977)
Safrole	µg/L	50	100	EPA Method 8270
Selenium	µg/L	25	50	Final PDWS (EPA, 1992a)
Silica		No flag	No flag	Set by EPD/EMS
Total silica	µg/L	500	1,000	EPA Method 6010
Silver	µg/L	50	100	SDWS (EPA, 1992c)
Sodium		No flag	No flag	Set by EPD/EMS
Sodium-22	pCi/L	2.33E+02	4.66E+02	Proposed PDWS (EPA, 1991)
Specific conductance	µS/cm	250	500	Set by EPD/EMS
Strontium-89	pCi/L	1E+01	2E+01	Final PDWS (EPA, 1977)
Strontium-89/90 ^e	pCi/L	4E+00	8E+00	Final PDWS (EPA, 1992a)
Strontium-90	pCi/L	4E+00	8E+00	Final PDWS (EPA, 1992a)
Styrene	µg/L	50	100	Final PDWS (EPA, 1992a)
Sulfate	µg/L	200,000	400,000	Proposed PDWS (EPA, 1990)
Sulfide	µg/L	5,000	10,000	EPA Method 9030
Sulfotep	µg/L	50	100	EPA Method 8270
Surfactants		No flag	No flag	Set by EPD/EMS
2,3,7,8-TCDD	µg/L	0.000015	0.00003	Final PDWS (EPA, 1992b)
2,3,7,8-TCDF	µg/L	0.002	0.004	EPA Method 8280
Technetium-99	pCi/L	4.5E+02	9E+02	Final PDWS (EPA, 1977)
1,2,4,5-Tetrachlorobenzene	µg/L	50	100	EPA Method 8270
Tetrachlorodibenzo-p-dioxin isomers	µg/L	0.00225	0.0045	EPA Method 8280
Tetrachlorodibenzo-p-furan isomers	µg/L	0.002	0.004	EPA Method 8280
1,1,1,2-Tetrachloroethane	µg/L	5	10	EPA Method 8240
1,1,2,2-Tetrachloroethane	µg/L	5	10	EPA Method 8240
Tetrachloroethylene	µg/L	2.5	5	Final PDWS (EPA, 1992a)
2,3,4,6-Tetrachlorophenol	µg/L	50	100	EPA Method 8270
Tetraethyl dithiopyrophosphate	µg/L	50	100	EPA Method 8270
Thallium	µg/L	1	2	Final PDWS (EPA, 1992b)
Thionazin	µg/L	50	100	EPA Method 8270
Thorium-228	pCi/L	6.25E+01	1.25E+02	Proposed PDWS (EPA, 1991)
Thorium-230	pCi/L	3.96E+01	7.92E+01	Proposed PDWS (EPA, 1991)
Thorium-232	pCi/L	4.4E+01	8.8E+01	Proposed PDWS (EPA, 1991)
Thorium-234	pCi/L	2E+02	4.01E+02	Proposed PDWS (EPA, 1991)
Tin	µg/L	10	20	EPA Method 282.2
Tin-113	pCi/L	1.5E+02	3E+02	Final PDWS (EPA, 1977)
Toluene	µg/L	500	1,000	Final PDWS (EPA, 1992a)
o-Toluidine	µg/L	50	100	EPA Method 8270
Total carbon	µg/L	5,000	10,000	EPA Method 9060
Total dissolved solids		No flag	No flag	Set by EPD/EMS
Total hydrocarbons	µg/L	5,000	10,000	EPA Method 418.1
Total inorganic carbon	µg/L	5,000	10,000	EPA Method 9060
Total organic carbon	µg/L	5,000	10,000	EPA Method 9060
Total organic halogens	µg/L	25	50	EPA Method 9020
Total organic nitrogen	µg/L	500	1,000	APHA Method 420
Total petroleum hydrocarbons	µg/L	5,000	10,000	EPA Method 418.1
Total phosphates (as P)		No flag	No flag	Set by EPD/EMS
Total phosphorus		No flag	No flag	Set by EPD/EMS

Analyte	Unit	Flag 1	Flag 2	Source ^a
Toxaphene	µg/L	1.5	3	Final PDWS (EPA, 1992a)
2,4,5-TP (Silvex)	µg/L	25	50	Final PDWS (EPA, 1992a)
Tributyl phosphate	µg/L	50	100	EPA Method 8270
1,2,4-Trichlorobenzene	µg/L	35	70	Final PDWS (EPA, 1992b)
1,1,1-Trichloroethane	µg/L	100	200	Final PDWS (EPA, 1992a)
1,1,2-Trichloroethane	µg/L	2.5	5	Final PDWS (EPA, 1992b)
Trichloroethylene	µg/L	2.5	5	Final PDWS (EPA, 1992a)
Trichlorofluoromethane	µg/L	5	10	EPA Method 8240
2,4,5-Trichlorophenol	µg/L	50	100	EPA Method 8270
2,4,6-Trichlorophenol	µg/L	50	100	EPA Method 8270
2,4,5-Trichlorophenoxyacetic acid	µg/L	2.5	5	EPA Method 8150
1,2,3-Trichloropropane	µg/L	5	10	EPA Method 8240
O,O,O-Triethyl phosphorothioate	µg/L	50	100	EPA Method 8270
1,3,5-Trinitrobenzene	µg/L	50	100	EPA Method 8270
Tritium	pCi/mL	1E+01	2E+01	Final PDWS (EPA, 1992a)
Turbidity		No flag	No flag	Set by EPD/EMS
Uranium	µg/L	10	20	Proposed PDWS (EPA, 1991)
Uranium alpha activity	pCi/L	1.5E+01	3E+01	Proposed PDWS (EPA, 1991)
Uranium-233/234 ^c	pCi/L	6.9E+00	1.38E+01	Proposed PDWS (EPA, 1991)
Uranium-234	pCi/L	6.95E+00	1.39E+01	Proposed PDWS (EPA, 1991)
Uranium-235	pCi/L	7.25E+00	1.45E+01	Proposed PDWS (EPA, 1991)
Uranium-238	pCi/L	7.3E+00	1.46E+01	Proposed PDWS (EPA, 1991)
Vanadium	µg/L	40	80	EPA Method 6010
Vinyl acetate	µg/L	5	10	EPA Method 8240
Xylenes	µg/L	5,000	10,000	Final PDWS (EPA, 1992a)
Zinc	µg/L	2,500	5,000	SDWS (EPA, 1992c)
Zinc-65	pCi/L	1.5E+02	3E+02	Final PDWS (EPA, 1977)
Zirconium-95	pCi/L	1E+02	2E+02	Final PDWS (EPA, 1977)
Zirconium/Niobium-95 ^c	pCi/L	1E+02	2E+02	Final PDWS (EPA, 1977)

- ^a References for methods are found in Appendix E; references for dated sources are at the end of this appendix.
^b EPD/EMS set this flagging criterion using the 1991 proposed PDWS because the final PDWS in 1977 may have been in error.
^c When radionuclide analyses are combined, the lower PDWS of the two isotopes is used for flagging.
^d The applied standard is for radium-226.

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Appendix C – Figures

Figure 1. Location of the Metallurgical Laboratory HWMF at the Savannah River Site

Figure 3. Water-Elevation Contour Map and Location of the M-Area Aquifer Zone Wells at the Metallurgical Laboratory HWMF

Figure 4. Water-Elevation Map and Location of Monitoring Wells in the Upper Lost Lake Aquifer Zone at the Metallurgical Laboratory HWMF

Figure 5. Water-Elevations Map and Locations of Monitoring Wells in the Lower Lost Lake Aquifer Zone at the Metallurgical Laboratory HWMF

Figure 6. Water-Elevations Map and Locations of Monitoring Wells in the Middle Sand Aquifer Zone at the Metallurgical Laboratory HWMF

Figure 7. Hydrostratigraphy of the A/M Area

Appendix D – Groundwater Monitoring Results Tables

Key to Reading the Tables

The following abbreviations may appear in the data tables:

Nomenclature

Crouch Branch Aquifer Zone	previously Black Creek; includes CBA
Lower Lost Lake Aquifer Zone	previously Lower Congaree; includes LL
M-Area Aquifer Zone	previously Water Table; includes MCG, M, GC, and GCL
Middle Sand Aquifer Zone of CBCU	previously Ellenton Sand; includes MCBC
Upper Lost Lake Aquifer Zone	previously Upper Congaree; includes UL
CBA	Crouch Branch Aquifer
CBC	Crouch Branch CU
GC	Green Clay CZ
GCL	Green Clay - Lost Lake
L	Lost Lake (Undifferentiated) AZ
LCBC	Lost Lake AZ - Crouch Branch CU
LL	Lower Lost Lake AZ
M	M-Area AZ
MCBC	Middle Sand AZ of the CBCU
MGC	M-Area AZ - Green Clay CZ
MGCL	M-Area AZ - Green Clay CZ - Lost Lake AZ
UD	Undifferentiated
UL	Upper Lost Lake AZ
V2	Vadose Zone

Constituents

1,2,3,4,6,7,8-HPCDD	1,2,3,4,6,7,8-heptachlorodibenzo-p-dioxin
1,2,3,4,6,7,8-HPCDF	1,2,3,4,6,7,8-heptachlorodibenzo-p-furan
1,2,3,4,7,8-HXCDD	1,2,3,4,7,8-hexachlorodibenzo-p-dioxin
1,2,3,4,7,8-HXCDF	1,2,3,4,7,8-hexachlorodibenzo-p-furan
Lindane	gamma-benzene hexachloride
PCB	polychlorinated biphenyl
1,2,3,7,8-PCDD	1,2,3,7,8-pentachlorodibenzo-p-dioxin
1,2,3,7,8-PCDF	1,2,3,7,8-pentachlorodibenzo-p-furan
Sp. conductance	specific conductance
TCDD	tetrachlorodibenzo-p-dioxin
TCDF	tetrachlorodibenzo-p-furan

Laboratories

CN	Clemson Technical Center, Inc.
EM	Environmental Protection Department/ Environmental Monitoring Section (EPD/EMS) Laboratory
GE and GP	General Engineering Laboratories
SC	Savannah River Technology Center
SP	Spencer Testing Services, Inc.
TM	TMA/Eberline
WA and WS	Roy F. Weston, Inc.

Sampling Codes

B	blank sample was collected
C	well was pumping continuously
D	well was dry
E	equipment blank was collected
I	well went dry during sampling; insufficient water to collect all samples
L	well went dry before sampling began; only depth to water can be determined
P	inaccessibility or mechanical failure prevented sample collection and field analysis of the water
S	no water in standpipe; for water level events only
X	well went dry during purging; samples collected after well recovered

Sampling Methods

B	sample collected using an open bucket bailer
P	sample collected using a bladder pump
S	sample collected using a single-speed centrifugal downhole pump
V	sample collected using a variable-speed pump

Units

E	exponential notation (e.g., $1.1\text{E}-09 = 1.1 \times 10^{-9} = 0.0000000011$)
mg/L	milligrams per liter
msl	mean sea level
MSL	million structures per liter
NTU	turbidity unit
pCi/L	picocuries per liter
pCi/mL	picocuries per milliliter
pH	pH unit
μg/L	micrograms per liter
μS/cm	microsiemens per centimeter

Other

CS	carbon steel
D	primary drinking water standard (PDWS) column in data tables
GP	groundwater protection standard column in data tables
H	holding time column in data tables
Mod	modifier column in data tables
PDWS	primary drinking water standard
PVC	polyvinyl chloride
SZ	screen zone column in data tables
TOC	top of casing

Holding Times

Standard analytical methods include a limit, called holding time, on the maximum elapsed time between sample collection and extraction or analysis by the laboratory. In the data tables, a large dot (●) in the *H* (holding time) column indicates that holding time was exceeded. Analyses performed beyond holding time may not yield valid results.

The South Carolina Department of Health and Environmental Control allows only 15 minutes to elapse between sampling and analysis for pH. Thus, only field pH measurements can meet the holding time criterion; laboratory pH analyses always will exceed it.

The laboratory procedure used for the determination of specific conductance allows one day to elapse between sampling and analysis. Thus, laboratory specific conductance measurements may exceed the holding time criterion.

Data Rounding

Constituent results in analytical results tables that appear to equal the final PDWS but are not marked in the *D* (exceeded the final PDWS or screening level) column are below the final PDWS in the database. Values stored in the database contain more significant digits than the reported results. Apparent discrepancies in the tables are due to the rounding of reported results.

Data Qualification

The contract laboratories continually assess their own accuracy and precision according to U.S. Environmental Protection Agency (EPA) guidelines. They submit sample- or batch-specific quality assurance/quality control information either at the same time as analytical results or in a quarterly summary. Properly defined and used result modifiers (also referred to as qualifiers) can be a key component in assessing data useability. Result modifiers designed by Environmental Protection Department/Environmental Monitoring Section and provided to the primary laboratories are defined below. These modifiers appear in the data tables under the column "Mod." The lettered modifiers are based on EPA's STORET codes.

<u>Result modifier</u>	<u>Definition</u>
(Blank)	Data are not qualified. Number should be interpreted exactly as reported.
A	Value reported is the mean of two or more determinations.
J	Value is estimated because quantitation in the sample or in associated quality control samples did not meet specifications.
L	Value is off-scale high. The actual value is not known but is known to be greater than the value shown.
M	Presence of the analyte is verified but not quantified.
R	Result was rejected because performance requirements in the sample analysis or associated quality control analyses were not met.
T	Analyte was not detected; if present, it was below the criteria for detection.
V	Analyte was detected in an associated method blank.

<u>Result modifier</u>	<u>Definition</u>
Y	Result was obtained from an unpreserved or improperly preserved sample. Data may not be accurate.
1	Result may be an underestimation of the true value due to analytical bias.
2	Result may be an overestimation of the true value due to analytical bias.
3	The associated result may be of poor precision (high variability) due to analytical bias.
4	Result is associated with QA results indicating matrix interference.
6	The associated result is from a reanalysis performed out of holding time due to problems with an earlier analysis.

Table 1. Maximum Levels of Constituents Exceeding the Final Primary Drinking Water Standards

M-Area Aquifer Zone

<u>Well</u>	<u>Constituent</u>	<u>Unit</u>	<u>1Q93</u>	<u>2Q93</u>	<u>3Q93</u>	<u>4Q93</u>	<u>Mod</u>
AMB 4D	Dichloromethane	µg/L	- ^a	5.8	-	-	JV
	Tetrachloroethylene	µg/L	15	13	-	6.4	
	Trichloroethylene	µg/L	217	203	63	78	
AMB 5	Dichloromethane	µg/L	-	6.4	-	-	
	Tetrachloroethylene	µg/L	6.5	8.5	-	9.0	
	Trichloroethylene	µg/L	112	143	99	160	
AMB 6	Trichloroethylene	µg/L	-	5.7	-	6.1	

Lower Lost Lake Aquifer Zone

<u>Well</u>	<u>Constituent</u>	<u>Unit</u>	<u>1Q93</u>	<u>2Q93</u>	<u>3Q93</u>	<u>4Q93</u>	<u>Mod</u>
AMB 4B	Trichloroethylene	µg/L	5.9	5.9	5.7	5.2	

Middle Sand Aquifer Zone of Crouch Branch Confining Unit

<u>Well</u>	<u>Constituent</u>	<u>Unit</u>	<u>1Q93</u>	<u>2Q93</u>	<u>3Q93</u>	<u>4Q93</u>	<u>Mod</u>
AMB 4A	Dichloromethane	µg/L	28	-	-	88	
	Tetrachloroethylene	µg/L	45	48	50	46	
	Trichloroethylene	µg/L	478	533	588	508	
AMB 7A	Dichloromethane	µg/L	-	5.4	-	17	L
	Tetrachloroethylene	µg/L	16	14	12	11	
	Trichloroethylene	µg/L	268	298	312	311	

^a - = analyzed but not above the final PDWS.

Table 2. Maximum Levels of Constituents Exceeding Other Flag 2 Criteria

M-Area Aquifer Zone

<u>Well</u>	<u>Constituent</u>	<u>Unit</u>	<u>4Q93</u>	<u>Mod</u>
AMB 5	Total organic halogens	µg/L	76	

Middle Sand Aquifer of Crouch Branch Confining Unit

<u>Well</u>	<u>Constituent</u>	<u>Unit</u>	<u>4Q93</u>	<u>Mod</u>
AMB 4A	Total organic halogens	µg/L	363	
AMB 7A	Total organic halogens	µg/L	213	
AMB 10A	pH	pH	12	J
	Specific conductance	µS/cm	840	
AMB 13AR	pH	pH	11	J

Notes: These results do not include field data.

Flags are established by EPD/EMS and are based on PDWS, Secondary Drinking Water Standards, or method detection limits (see Appendix B).

Well AMB 4A continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Nickel, total recoverable		<4.0		<4.0		µg/L	GE	0
		Nitrate as nitrogen				873		µg/L	WA	0
		Nitrate-nitrite as nitrogen	1,030	970		950		µg/L	GE	0
•		Nonvolatile beta	2.5E+00					pCi/L		
		pH	7.1	6.8	6.8	6.5	J	pH	GE	0
		Phenols	<5.0					µg/L		
		Potassium, total recoverable	754					µg/L		
		Radium-226				1.6E+00		pCi/L	TM	0
		Radium-228				1.4E+00		pCi/L	TM	0
		Radium, total alpha-emitting	<1.0E+00	<1.0E+00	<1.0E+00	<1.0E+00		pCi/L	GE	0
		Selenium, total recoverable	<2.0					µg/L		
		Silica, total recoverable	21,500					µg/L		
		Silver, total recoverable	<2.0	<2.0		<2.0		µg/L	GE	0
		Sodium, total recoverable	5,210					µg/L		
		Specific conductance	70	57	54	55		µS/cm	GE	0
		Sulfate	2,000					µg/L		
		1,1,2,2-Tetrachloroethane	<25	<25	<25	<1.0		µg/L	GE	0
■		Tetrachloroethylene	45	48	50	46		µg/L	WA	2
		Toluene	<25	<25	<25	<1.0		µg/L	GE	0
		Total dissolved solids	62,000	67,000	125,000	59,000	V	µg/L	GE	0
		Total organic carbon	<1,000	<1,000	<1,000	<1,000		µg/L	GE	0
		Total organic halogens	195	148	84	363		µg/L	WA	2
		Total phosphates (as P)	80					µg/L		
		Toxaphene	<0.24					µg/L		
		2,4,5-TP (Silvex)	<0.090					µg/L		
		1,1,1-Trichloroethane	<25	<25	<25	<1.0		µg/L	GE	0
		1,1,2-Trichloroethane	<25	<25	<25	<1.0		µg/L	GE	0
■		Trichloroethylene	478	533	588	508		µg/L	WA	2
		Trichlorofluoromethane	<25	<25	<25	<1.0		µg/L	GE	0
		Tritium	<7.0E-01					pCi/mL		

WELL AMB 4B

SRS Coord.	Lat/Longitude	Screen Zone Elevation	Top of Casing	Casing	Pump	Screen Zone
N104145.6 E51482.7	33.340093 °N 81.733582 °W	157.3-152.3 ft msl	380.4 ft msl	4" PVC	S	LL

SAMPLE DATE 02/14/93 05/01/93 07/07/93 11/14/93

FIELD DATA

Analyte	1Q93	2Q93	3Q93	4Q93	Unit
Water elevation	224.1	223.6	224.0	225.1	ft msl
Depth to water	156.3	156.8	156.4	155.3	ft
pH	5.1	4.9	4.9	5.0	pH
Sp. conductance	32	33	35	36	µS/cm
Water temperature	18.4	19.6	20.0	19.1	°C
Alkalinity as CaCO ₃	1	0	0	1	mg/L
Turbidity	0	1	0	0	NTU
Volume purged	3.2	3.1	2.9	4.3	Well vol.
Sampling code					

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Aluminum, total recoverable	32		24			µg/L		
		Arsenic, total recoverable	<2.0					µg/L		
		Barium, total recoverable	8.7					µg/L		
		Benzene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Bromodichloromethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0

Note: Flagging levels, modifiers, and laboratories are for fourth quarter 1993 data only. See Appendix B for flagging criteria.

• = exceeded holding time for fourth quarter 1993.

■ = exceeded screening level or final primary drinking water standard for fourth quarter 1993.

Well AMB 4B continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Bromoform	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Bromomethane (Methyl bromide)	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Cadmium, total recoverable	<2.0					µg/L		
		Calcium, total recoverable	1,300					µg/L		
		Carbon tetrachloride	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chloride	3,900	3,840		4,130		µg/L	GE	0
		Chlorobenzene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chloroethene (Vinyl chloride)	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2-Chloroethyl vinyl ether	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chloroform	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chloromethane (Methyl chloride)	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chromium, total recoverable	<4.0					µg/L		
		Cyanide		<5.0		<5.0		µg/L	GE	0
		Dibromochloromethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,1-Dichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,2-Dichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,1-Dichloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		trans-1,2-Dichloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Dichloromethane (Methylene chloride)	<1.0	<1.0	1.6	1.7	JV	µg/L	GE	0
		2,4-Dichlorophenoxyacetic acid	<0.30					µg/L		
		1,2-Dichloropropane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		cis-1,3-Dichloropropene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		trans-1,3-Dichloropropene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Endrin	<0.0060					µg/L		
		Ethylbenzene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Fluoride	<100	<100		<100		µg/L	GE	0
		Gross alpha	<2.0E+00					pCi/L		
		Iron, total recoverable	6.2		<4.0			µg/L		
		Lead, total recoverable	<3.0		<3.0			µg/L		
		Lindane	<0.0050					µg/L		
		Magnesium, total recoverable	371					µg/L		
		Manganese, total recoverable	9.1		8.2			µg/L		
		Mercury, total recoverable	<0.20					µg/L		
		Methoxychlor	<0.50					µg/L		
		Nickel, total recoverable		<4.0		<4.0		µg/L	GE	0
		Nitrate-nitrite as nitrogen	880	790		880		µg/L	GE	0
		Nonvolatile beta	3.0E+00					pCi/L		
•		pH	5.4	5.2	5.3	5.3	J	pH	GE	0
		Phenols	<5.0					µg/L		
		Potassium, total recoverable	<500					µg/L		
		Radium, total alpha-emitting	2.1E+00	1.9E+00	3.2E+00	1.2E+00		pCi/L	GE	0
		Selenium, total recoverable	<2.0					µg/L		
		Silica, total recoverable	8,460					µg/L		
		Silver, total recoverable	<2.0	<2.0		<2.0		µg/L	GE	0
		Sodium, total recoverable	3,310					µg/L		
		Specific conductance	30	30	30	31		µS/cm	GE	0
		Sulfate	<1,000					µg/L		
		1,1,2,2-Tetrachloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Tetrachloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Toluene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Total dissolved solids	23,000	24,000	75,000	40,000	V	µg/L	GE	0
		Total organic carbon	<1,000	<1,000	<1,000	<1,000		µg/L	GE	0
		Total organic halogens	9.8	<5.0	6.8	<5.0		µg/L	GE	0
		Total phosphates (as P)	<50					µg/L		
		Toxaphene	<0.24					µg/L		
		2,4,5-TP (Silvex)	<0.090					µg/L		
		1,1,1-Trichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,1,2-Trichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
■		Trichloroethylene	5.9	5.9	5.7	5.2		µg/L	GE	2
		Trichlorofluoromethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Tritium	<7.0E-01					pCi/mL		

Note: Flagging levels, modifiers, and laboratories are for fourth quarter 1993 data only. See Appendix B for flagging criteria.

• = exceeded holding time for fourth quarter 1993.

■ = exceeded screening level or final primary drinking water standard for fourth quarter 1993.

WELL AMB 4D

SRS Coord.	Lat/Longitude	Screen Zone Elevation	Top of Casing	Casing	Pump	Screen Zone
N104154.7 E51489.0	33.340124 °N 81.733584 °W	233.4-213.4 ft msl	380.3 ft msl	4" PVC	S	M

SAMPLE DATE	02/14/93	05/01/93	07/07/93	11/14/93
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FIELD DATA

Analyte	1Q93	2Q93	3Q93	4Q93	Unit
Water elevation	232.8	232.4	232.6	233.2	ft msl
Depth to water	147.6	147.9	147.7	147.1	ft
pH	5.2	4.9	5.2	5.2	pH
Sp. conductance	48	45	39	39	µS/cm
Water temperature	16.1	22.8	20.1	19.5	°C
Alkalinity as CaCO ₃	4	1	5	1	mg/L
Turbidity	21	19	8	1	NTU
Volume purged	0.9	1.0	6.6	4.2	Well vol.
Sampling code	X	X			

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Acenaphthene			<10			µg/L		
		Acenaphthylene			<10			µg/L		
		Acetone			<500			µg/L		
		Acetonitrile (Methyl cyanide)			<5.0			µg/L		
		Acetophenone			<10			µg/L		
		2-Acetylaminofluorene			<10			µg/L		
		Acrolein			<100			µg/L		
		Acrylonitrile			<100			µg/L		
		Aldrin			<0.050			µg/L		
		Allyl chloride			<250			µg/L		
		Aluminum, total recoverable	371		164			µg/L		
		4-Aminobiphenyl			<10			µg/L		
		Aniline			<10			µg/L		
		Anthracene			<10			µg/L		
		Antimony, total recoverable			<2.0			µg/L		
		Aramite			<10			µg/L		
		Arsenic, total recoverable	<2.0		<2.0			µg/L		
		Barium, total recoverable	14		8.5			µg/L		
		Benzene	<1.0	<5.0	<5.0	<1.0		µg/L	GE	0
		alpha-Benzene hexachloride			<0.050			µg/L		
		beta-Benzene hexachloride			<0.050			µg/L		
		delta-Benzene hexachloride			<0.050			µg/L		
		Benzo(a)anthracene			<10			µg/L		
		Benzo(b)fluoranthene			<10			µg/L		
		Benzo(k)fluoranthene			<10			µg/L		
		Benzo(g,h,i)perylene			<10			µg/L		
		Benzo(e)pyrene			<10			µg/L		
		Benzyl alcohol			<10			µg/L		
		Beryllium, total recoverable			<3.0			µg/L		
		Bis(2-chloroethoxy) methane			<10			µg/L		
		Bis(2-chloroethyl) ether			<10			µg/L		
		Bis(2-chloroisopropyl) ether			<50			µg/L		
		Bis(2-ethylhexyl) phthalate			<10			µg/L		
		Bromodichloromethane	<1.0	<5.0	<5.0	<1.0		µg/L	GE	0
		Bromoform	<1.0	<5.0	<5.0	<1.0		µg/L	GE	0
		Bromomethane (Methyl bromide)	<1.0	<5.0	<5.0	<1.0		µg/L	GE	0
		4-Bromophenyl phenyl ether			<10			µg/L		
		Butylbenzyl phthalate			<10			µg/L		
		2-sec-Butyl-4,6-dinitrophenol			<10			µg/L		

Note: Flagging levels, modifiers, and laboratories are for fourth quarter 1993 data only. See Appendix B for flagging criteria.

● = exceeded holding time for fourth quarter 1993.

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Well AMB 4D continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Cadmium, total recoverable	<2.0		<2.0			µg/L		
		Calcium, total recoverable	521					µg/L		
		Carbon disulfide			<5.0			µg/L		
		Carbon tetrachloride	3.7	<5.0	<5.0	1.0		µg/L	GE	0
		Chlordane			<0.50			µg/L		
		Chloride	3,030	2,760		2,510		µg/L	GE	0
		4-Chloroaniline			<10			µg/L		
		Chlorobenzene	<1.0	<5.0	<5.0	<1.0		µg/L	GE	0
		Chlorobenzilate			<10			µg/L		
		4-Chloro-m-cresol			<10			µg/L		
		Chloroethane	<1.0	<5.0	<5.0	<1.0		µg/L	GE	0
		Chloroethane (Vinyl chloride)	<1.0	<5.0	<5.0	<1.0		µg/L	GE	0
		2-Chloroethyl vinyl ether	<1.0	<5.0	<10	<1.0		µg/L	GE	0
		Chloroform	<1.0	<5.0	<5.0	<1.0		µg/L	GE	0
		Chloromethane (Methyl chloride)	<1.0	<5.0	<5.0	<1.0		µg/L	GE	0
		2-Chloronaphthalene			<10			µg/L		
		2-Chlorophenol			<10			µg/L		
		4-Chlorophenyl phenyl ether			<10			µg/L		
		Chloroprene			<1,000			µg/L		
		Chromium, total recoverable	<4.0		<4.0			µg/L		
		Chrysene			<10			µg/L		
		Cobalt, total recoverable			<4.0			µg/L		
		Copper, total recoverable			4.7			µg/L		
		o-Cresol (2-Methylphenol)			<10			µg/L		
		m-Cresol (3-Methylphenol)			<10			µg/L		
		p-Cresol (4-Methylphenol)			<10			µg/L		
		Cyanide		<5.0	<5.0	<5.0		µg/L	GE	0
		p,p'-DDD			<0.10			µg/L		
		p,p'-DDE			<0.10			µg/L		
		p,p'-DDT			<0.10			µg/L		
		Diallate			<10			µg/L		
		Dibenz(a,h)anthracene			<10			µg/L		
		Dibenzofuran			<10			µg/L		
		Dibromochloromethane	<1.0	<5.0	<5.0	<1.0		µg/L	GE	0
		1,2-Dibromo-3-chloropropane			<5.0			µg/L		
		1,2-Dibromoethane			<100			µg/L		
		Dibromomethane (Methylene bromide)			<5.0			µg/L		
		Di-n-butyl phthalate			<10			µg/L		
		1,2-Dichlorobenzene			<10			µg/L		
		1,3-Dichlorobenzene			<10			µg/L		
		1,4-Dichlorobenzene			<10			µg/L		
		3,3'-Dichlorobenzidine			<10			µg/L		
		trans-1,4-Dichloro-2-butene			<150			µg/L		
		Dichlorodifluoromethane			<5.0			µg/L		
		1,1-Dichloroethane	2.0	<5.0	<5.0	<1.0		µg/L	GE	0
		1,2-Dichloroethane	<1.0	<5.0	<5.0	<1.0		µg/L	GE	0
		1,1-Dichloroethylene	<1.0	<5.0	<5.0	<1.0		µg/L	GE	0
		trans-1,2-Dichloroethylene	<1.0	<5.0	<5.0	<1.0		µg/L	GE	0
		Dichloromethane (Methylene chloride)	<1.0	5.8	<5.0	1.0	JV	µg/L	GE	0
		2,4-Dichlorophenol			<10			µg/L		
		2,6-Dichlorophenol			<10			µg/L		
		2,4-Dichlorophenoxyacetic acid	<0.30		<0.30			µg/L		
		1,2-Dichloropropane	<1.0	<5.0	<5.0	<1.0		µg/L	GE	0
		cis-1,3-Dichloropropene	<1.0	<5.0	<5.0	<1.0		µg/L	GE	0
		trans-1,3-Dichloropropene	<1.0	<5.0	<5.0	<1.0		µg/L	GE	0
		Dieldrin			<0.50			µg/L		
		Diethyl phthalate			<10			µg/L		
		Dimethoate			<10			µg/L		
		2,4-Dimethyl phenol			<10			µg/L		
		Dimethyl phthalate			<10			µg/L		
		p-Dimethylaminoazobenzene			<10			µg/L		
		7,12-Dimethylbenz(a)anthracene			<10			µg/L		

Note: Flagging levels, modifiers, and laboratories are for fourth quarter 1993 data only. See Appendix B for flagging criteria.

● = exceeded holding time for fourth quarter 1993.

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Well AMB 4D continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		3,3'-Dimethylbenzidine			<10			µg/L		
		a,a-Dimethylphenethylamine			<10			µg/L		
		1,3-Dinitrobenzene			<10			µg/L		
		2,4-Dinitrophenol			<45			µg/L		
		2,4-Dinitrotoluene			<10			µg/L		
		2,6-Dinitrotoluene			<10			µg/L		
		Di-n-octyl phthalate			<10			µg/L		
		1,4-Dioxane			<10			µg/L		
		Diphenylamine			<10			µg/L		
		Disulfoton			<10			µg/L		
		Endosulfan I			<0.10			µg/L		
		Endosulfan II			<0.10			µg/L		
		Endosulfan sulfate			<0.10			µg/L		
		Endrin	<0.0060		<0.0060			µg/L		
		Endrin aldehyde			<0.10			µg/L		
		Ethyl methacrylate			<10			µg/L		
		Ethyl methanesulfonate			<10			µg/L		
		Ethylbenzene	<1.0	<5.0	<5.0	<1.0		µg/L	GE	0
		Famphur			<10			µg/L		
		Fluoranthene			<10			µg/L		
		Fluorene			<10			µg/L		
		Fluoride	<100	<100		<100		µg/L	GE	0
		Gross alpha	1.1E+01					pCi/L		
		Heptachlor			<0.050			µg/L		
		Heptachlor epoxide			<0.050			µg/L		
		1,2,3,4,6,7,8-HPCDD			<0.00065			µg/L		
		Heptachlorodibenzo-p-dioxin isomers			<0.00065			µg/L		
		1,2,3,4,6,7,8-HPCDF			<0.00045			µg/L		
		Heptachlorodibenzo-p-furan isomers			<0.00045			µg/L		
		Hexachlorobenzene			<10			µg/L		
		Hexachlorobutadiene			<10			µg/L		
		Hexachlorocyclopentadiene			<10			µg/L		
		1,2,3,4,7,8-HXCDD			<0.00045			µg/L		
		Hexachlorodibenzo-p-dioxin isomers			<0.00045			µg/L		
		1,2,3,4,7,8-HXCDF			<0.00040			µg/L		
		Hexachlorodibenzo-p-furan isomers			<0.00040			µg/L		
		Hexachloroethane			<10			µg/L		
		Hexachlorophene			<10			µg/L		
		Hexachloropropene			<10			µg/L		
		2-Hexanone			<5.0			µg/L		
		Indeno(1,2,3-c,d)pyrene			<10			µg/L		
		Iodomethane (Methyl iodide)			<75			µg/L		
		Iron, total recoverable	754		137			µg/L		
		Isobutyl alcohol			<500			µg/L		
		Isodrin			<10			µg/L		
		Isophorone			<10			µg/L		
		Isosafrole			<10			µg/L		
		Kepone			<10			µg/L		
		Lead, total recoverable	18		7.5			µg/L		
		Lindane	<0.0050		<0.0050			µg/L		
		Magnesium, total recoverable	935					µg/L		
		Manganese, total recoverable	44		28			µg/L		
		Mercury, total recoverable	<0.20		<0.20			µg/L		
		Methacrylonitrile			<250			µg/L		
		Methapyrilene			<10			µg/L		
		Methoxychlor	<0.50		<0.50			µg/L		
		2-Methyl-4,6-dinitrophenol			<10			µg/L		
		Methyl ethyl ketone			<5.0			µg/L		
		Methyl isobutyl ketone			<5.0			µg/L		
		Methyl methacrylate			<10			µg/L		
		Methyl methanesulfonate			<10			µg/L		
		3-Methylcholanthrene			<10			µg/L		

Note: Flagging levels, modifiers, and laboratories are for fourth quarter 1993 data only. See Appendix B for flagging criteria.

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Well AMB 4D continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		2-Methylnaphthalene			<10			µg/L		
		Naphthalene			<10			µg/L		
		1,4-Naphthoquinone			<10			µg/L		
		1-Naphthylamine			<10			µg/L		
		2-Naphthylamine			<10			µg/L		
		Nickel, total recoverable		<4.0	<4.0	<4.0		µg/L	GE	0
		Nitrate-nitrite as nitrogen	2,640	2,780		1,650		µg/L	GE	0
		o-Nitroaniline			<10			µg/L		
		m-Nitroaniline			<10			µg/L		
		p-Nitroaniline			<10			µg/L		
		Nitrobenzene			<10			µg/L		
		2-Nitrophenol			<10			µg/L		
		4-Nitrophenol			<10			µg/L		
		4-Nitroquinoline-1-oxide			<10			µg/L		
		N-Nitrosodi-n-butylamine			<10			µg/L		
		N-Nitrosodilethylamine			<10			µg/L		
		N-Nitrosodimethylamine			<10			µg/L		
		N-Nitrosodiphenylamine			<10			µg/L		
		N-Nitrosodipropylamine			<10			µg/L		
		N-Nitrosomethylethylamine			<10			µg/L		
		N-Nitrosomorpholine			<10			µg/L		
		N-Nitrosopiperidine			<10			µg/L		
		N-Nitrosopyrrolidine			<10			µg/L		
		5-Nitro-o-toluidine			<10			µg/L		
		Nonvolatile beta	4.3E+00					pCi/L		
		O,O,O-Triethyl phosphorothioate			<10			µg/L		
		Octachlorodibenzo-p-dioxin isomers			<0.0010			µg/L		
		Octachlorodibenzo-p-furan isomers			<0.0010			µg/L		
		Parathion			<0.050			µg/L		
		Parathion methyl			<0.050			µg/L		
		PCB 1016			<0.50			µg/L		
		PCB 1221			<0.50			µg/L		
		PCB 1232			<0.50			µg/L		
		PCB 1242			<0.50			µg/L		
		PCB 1248			<0.50			µg/L		
		PCB 1254			<0.50			µg/L		
		PCB 1260			<0.50			µg/L		
		Pentachlorobenzene			<10			µg/L		
		1,2,3,7,8-PCDD			<0.00055			µg/L		
		Pentachlorodibenzo-p-dioxin isomers			<0.00055			µg/L		
		1,2,3,7,8-PCDF			<0.00055			µg/L		
		Pentachloroethane			<10			µg/L		
		Pentachloronitrobenzene			<10			µg/L		
		Pentachlorophenol			<10			µg/L		
•		pH	5.2	5.2	5.5	5.6	J	pH	GE	0
		Phenacetin			<10			µg/L		
		Phenanthrene			<10			µg/L		
		Phenol			<10			µg/L		
		Phenols	<5.0					µg/L		
		p-Phenylenediamine			<10			µg/L		
		Phorate			<0.10			µg/L		
		2-Picoline			<10			µg/L		
		Potassium, total recoverable	<500					µg/L		
		Pronamid			<10			µg/L		
		Propionitrile			<1,000			µg/L		
		Pyrene			<10			µg/L		
		Pyridine			<10			µg/L		
		Radium, total alpha-emitting	7.4E+00	8.9E+00	5.4E+00	2.9E+00		pCi/L	GE	0
		Safrole			<10			µg/L		
		Selenium, total recoverable	<2.0		<2.0			µg/L		
		Silica, total recoverable	8,300					µg/L		
		Silver, total recoverable	<2.0	<2.0	<2.0	<2.0		µg/L	GE	0

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WSRC-TR-94-015
Unclassified

Well AMB 4D continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Sodium, total recoverable	5,420		32			µg/L		
		Specific conductance	39	40		34		µS/cm	GE	0
		Styrene			<5.0			µg/L		
		Sulfate	<1,000					µg/L		
		Sulfide			<1,000			µg/L		
		Sulfoterp			<10			µg/L		
		1,2,4,5-Tetrachlorobenzene			<10			µg/L		
		2,3,7,8-TCDD			<0.00045			µg/L		
		2,3,7,8-TCDF			<0.00040			µg/L		
		Tetrachlorodibenzo-p-dioxin isomers			<0.00045			µg/L		
		Tetrachlorodibenzo-p-furan isomers			<0.00040			µg/L		
		1,1,1,2-Tetrachloroethane			<5.0			µg/L		
		1,1,2,2-Tetrachloroethane	<1.0	<5.0	<5.0	<1.0		µg/L	GE	0
■		Tetrachloroethylene	15	13	<5.0	6.4		µg/L	GE	2
		2,3,4,6-Tetrachlorophenol			<10			µg/L		
		Thallium, total recoverable			<2.0			µg/L		
		Thionazin			<10			µg/L		
		Tin, total recoverable			<2.0			µg/L		
		Toluene	<1.0	<5.0	<5.0	<1.0		µg/L	GE	0
		o-Toluidine			<10			µg/L		
		Total dissolved solids	33,000	30,000	30,000	39,000	V	µg/L	GE	0
		Total organic carbon	<1,000	<1,000	<1,000	<1,000		µg/L	GE	0
		Total organic halogens	24	131	18	41		µg/L	GE	1
		Total phosphates (as P)	<50					µg/L		
		Toxaphene	<0.24		<0.24			µg/L		
		2,4,5-TP (Silvex)	<0.090		<0.090			µg/L		
		1,2,4-Trichlorobenzene			<10			µg/L		
		1,1,1-Trichloroethane	<1.0	<5.0	<5.0	<1.0		µg/L	GE	0
		1,1,2-Trichloroethane	<1.0	<5.0	<5.0	<1.0		µg/L	GE	0
■		Trichloroethylene	217	203	63	78		µg/L	GE	2
		Trichlorofluoromethane	<1.0	<5.0	<5.0	<1.0		µg/L	GE	0
		2,4,5-Trichlorophenol			<10			µg/L		
		2,4,6-Trichlorophenol			<10			µg/L		
		2,4,5-T			<0.090			µg/L		
		1,2,3-Trichloropropane			<5.0			µg/L		
		1,3,5-Trinitrobenzene			<10			µg/L		
		Tritium	<7.0E-01					pCi/mL		
		Vanadium, total recoverable			<8.0			µg/L		
		Vinyl acetate			<5.0			µg/L		
		Xylenes			<10			µg/L		
		Zinc, total recoverable			8.6			µg/L		

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WELL AMB 5

SRS Coord.	Lat/Longitude	Screen Zone Elevation	Top of Casing	Casing	Pump	Screen Zone
N104083.4 E51487.2	33.339930 °N 81.733502 °W	242.1-222.1 ft mel	379.6 ft mel	4" PVC	8	MGCL

SAMPLE DATE	02/14/93	05/01/93	07/08/93	10/28/93
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FIELD DATA

Analyte	1Q93	2Q93	3Q93	4Q93	Unit
Water elevation	233.1	233.8	234.3	234.1	ft mel
Depth to water	146.5	145.8	145.4	145.5	ft
pH	4.7	4.7	4.6	4.8	pH
Sp. conductance	46	51	53	62	µS/cm
Water temperature	17.5	21.5	20.4	18.0	°C
Alkalinity as CaCO ₃	1	0	0	4	mg/L
Turbidity	32	14	56	98	NTU
Volume purged	1.9	2.3	0.3	0.6	Well vol.
Sampling code	X	X	X	X	

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Acenaphthene			<10			µg/L		
		Acenaphthylene			<10			µg/L		
		Acetone			<500			µg/L		
		Acetonitrile (Methyl cyanide)			<5.0			µg/L		
		Acetophenone			<10			µg/L		
		2-Acetylaminofluorene			<10			µg/L		
		Acrolein			<100			µg/L		
		Acrylonitrile			<100			µg/L		
		Aldrin			<0.15			µg/L		
		Allyl chloride			<250			µg/L		
		Aluminum, total recoverable	386		973			µg/L		
		4-Aminobiphenyl			<10			µg/L		
		Aniline			<10			µg/L		
		Anthracene			<10			µg/L		
		Antimony, total recoverable			<2.0			µg/L		
		Aramid			<10			µg/L		
		Arsenic, total recoverable	<2.0		<2.0			µg/L		
		Barium, total recoverable	7.8		11			µg/L		
		Benzene	<5.0	<5.0	<5.0	<5.0		µg/L	GE	0
		alpha-Benzene hexachloride			<0.15			µg/L		
		beta-Benzene hexachloride			<0.15			µg/L		
		delta-Benzene hexachloride			<0.15			µg/L		
		Benzo[a]anthracene			<10			µg/L		
		Benzo[b]fluoranthene			<10			µg/L		
		Benzo[k]fluoranthene			<10			µg/L		
		Benzo[g,h,i]perylene			<10			µg/L		
		Benzo[a]pyrene			<10			µg/L		
		Benzyl alcohol			<10			µg/L		
		Beryllium, total recoverable			<3.0			µg/L		
		Bis(2-chloroethoxy) methane			<10			µg/L		
		Bis(2-chloroethyl) ether			<10			µg/L		
		Bis(2-chloroisopropyl) ether			<50			µg/L		
		Bis(2-ethylhexyl) phthalate			<10			µg/L		
		Bromodichloromethane	<5.0	<5.0	<5.0	<5.0		µg/L	GE	0
		Bromoform	<5.0	<5.0	<5.0	<5.0		µg/L	GE	0
		Bromomethane (Methyl bromide)	<5.0	<5.0	<5.0	<5.0		µg/L	GE	0
		4-Bromophenyl phenyl ether			<10			µg/L		
		Butylbenzyl phthalate			<10			µg/L		
		2-sec-Butyl-4,6-dinitrophenol			<10			µg/L		

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Well AMB 5 continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Cadmium, total recoverable	<2.0		<2.0			µg/L		
		Calcium, total recoverable	151					µg/L		
		Carbon disulfide			<5.0			µg/L		
		Carbon tetrachloride	<5.0	<5.0	<5.0	<5.0		µg/L	GE	0
		Chlordane			<1.5			µg/L		
		Chloride	4,300	4,110		4,450		µg/L	GE	0
		4-Chloroaniline			<10			µg/L		
		Chlorobenzene	<5.0	<5.0	<5.0	<5.0		µg/L	GE	0
		Chlorobenzilate			<10			µg/L		
		4-Chloro-m-cresol			<10			µg/L		
		Chloroethane	<5.0	<5.0	<5.0	<5.0		µg/L	GE	0
		Chloroethane (Vinyl chloride)	<5.0	<5.0	<5.0	<5.0		µg/L	GE	0
		2-Chloroethyl vinyl ether	<5.0	<5.0	<10	<5.0		µg/L	GE	0
		Chloroform	<5.0	<5.0	<5.0	<5.0		µg/L	GE	0
		Chloromethane (Methyl chloride)	<5.0	<5.0	<5.0	<5.0		µg/L	GE	0
		2-Chloronaphthalene			<10			µg/L		
		2-Chlorophenol			<10			µg/L		
		4-Chlorophenyl phenyl ether			<10			µg/L		
		Chloroprene			<1,000			µg/L		
		Chromium, total recoverable	<4.0		<4.0			µg/L		
		Chrysene			<10			µg/L		
		Cobalt, total recoverable			<4.0			µg/L		
		Copper, total recoverable			7.8			µg/L		
		o-Cresol (2-Methylphenol)			<10			µg/L		
		m-Cresol (3-Methylphenol)			<10			µg/L		
		p-Cresol (4-Methylphenol)			<10			µg/L		
		Cyanide		<5.0	<5.0	<5.0		µg/L	GE	0
		p,p'-DDD			<0.30			µg/L		
		p,p'-DDE			<0.30			µg/L		
		p,p'-DDT			<0.30			µg/L		
		Diallate			<10			µg/L		
		Dibenz(a,h)anthracene			<10			µg/L		
		Dibenzofuran			<10			µg/L		
		Dibromochloromethane	<5.0	<5.0	<5.0	<5.0		µg/L	GE	0
		1,2-Dibromo-3-chloropropane			<5.0			µg/L		
		1,2-Dibromoethane			<100			µg/L		
		Dibromomethane (Methylene bromide)			<5.0			µg/L		
		Di-n-butyl phthalate			<10			µg/L		
		1,2-Dichlorobenzene			<10			µg/L		
		1,3-Dichlorobenzene			<10			µg/L		
		1,4-Dichlorobenzene			<10			µg/L		
		3,3'-Dichlorobenzidine			<10			µg/L		
		trans-1,4-Dichloro-2-butene			<150			µg/L		
		Dichlorodifluoromethane			<5.0			µg/L		
		1,1-Dichloroethane	<5.0	<5.0	<5.0	<5.0		µg/L	GE	0
		1,2-Dichloroethane	<5.0	<5.0	<5.0	<5.0		µg/L	GE	0
		1,1-Dichloroethylene	<5.0	<5.0	<5.0	<5.0		µg/L	GE	0
		trans-1,2-Dichloroethylene	<5.0	<5.0	<5.0	<5.0		µg/L	GE	0
		Dichloromethane (Methylene chloride)	<5.0	6.4	<5.0	<5.0		µg/L	GE	0
		2,4-Dichlorophenol			<10			µg/L		
		2,6-Dichlorophenol			<10			µg/L		
		2,4-Dichlorophenoxyacetic acid	<0.30		<0.30			µg/L		
		1,2-Dichloropropane	<5.0	<5.0	<5.0	<5.0		µg/L	GE	0
		cis-1,3-Dichloropropene	<5.0	<5.0	<5.0	<5.0		µg/L	GE	0
		trans-1,3-Dichloropropene	<5.0	<5.0	<5.0	<5.0		µg/L	GE	0
		Dieldrin			<1.5			µg/L		
		Diethyl phthalate			<10			µg/L		
		Dimethoate			<10			µg/L		
		2,4-Dimethyl phenol			<10			µg/L		
		Dimethyl phthalate			<10			µg/L		
		p-Dimethylaminoazobenzene			<10			µg/L		
		7,12-Dimethylbenz(a)anthracene			<10			µg/L		

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Well AMB 5 continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		3,3'-Dimethylbenzidine			<10			µg/L		
		a,a-Dimethylphenethylamine			<10			µg/L		
		1,3-Dinitrobenzene			<10			µg/L		
		2,4-Dinitrophenol			<45			µg/L		
		2,4-Dinitrotoluene			<10			µg/L		
		2,6-Dinitrotoluene			<10			µg/L		
		Di-n-octyl phthalate			<10			µg/L		
		1,4-Dioxane			14			µg/L		
		Diphenylamine			<10			µg/L		
		Disulfoton			<10			µg/L		
		Endosulfan I			<0.30			µg/L		
		Endosulfan II			<0.30			µg/L		
		Endosulfan sulfate			<0.30			µg/L		
		Endrin	<0.0060		<0.018			µg/L		
		Endrin aldehyde			<0.30			µg/L		
		Ethyl methacrylate			<10			µg/L		
		Ethyl methanesulfonate			<10			µg/L		
		Ethylbenzene	<5.0	<5.0	<5.0	<5.0		µg/L	GE	0
		Famphur			<10			µg/L		
		Fluoranthene			<10			µg/L		
		Fluorene			<10			µg/L		
		Fluoride	<100	<100		<100		µg/L	GE	0
		Gross alpha	9.3E +00		1.4E +01			pCi/L		
		Heptachlor			<0.15			µg/L		
		Heptachlor epoxide			<0.15			µg/L		
		1,2,3,4,6,7,8-HPCDD			<0.00065			µg/L		
		Heptachlorodibenzo-p-dioxin isomers			<0.00065			µg/L		
		1,2,3,4,6,7,8-HPCDF			<0.00045			µg/L		
		Heptachlorodibenzo-p-furan isomers			<0.00045			µg/L		
		Hexachlorobenzene			<10			µg/L		
		Hexachlorobutadiene			<10			µg/L		
		Hexachlorocyclopentadiene			<10			µg/L		
		1,2,3,4,7,8-HxCDD			<0.00045			µg/L		
		Hexachlorodibenzo-p-dioxin isomers			<0.00045			µg/L		
		1,2,3,4,7,8-HxCDF			<0.00040			µg/L		
		Hexachlorodibenzo-p-furan isomers			<0.00040			µg/L		
		Hexachloroethane			<10			µg/L		
		Hexachlorophene			<10			µg/L		
		Hexachloropropene			<10			µg/L		
		2-Hexanone			<5.0			µg/L		
		Indeno[1,2,3-c,d]pyrene			<10			µg/L		
		Iodomethane (Methyl iodide)			<75			µg/L		
		Iron, total recoverable	321		755			µg/L		
		Isobutyl alcohol			<500			µg/L		
		Isodrin			<10			µg/L		
		Isophorone			<10			µg/L		
		Isosafrole			<10			µg/L		
		Kepone			<10			µg/L		
		Lead, total recoverable	<3.0		5.1			µg/L		
		Lindane	<0.0050		<0.015			µg/L		
		Magnesium, total recoverable	619					µg/L		
		Manganese, total recoverable	12		18			µg/L		
		Mercury, total recoverable	<0.20		<0.20			µg/L		
		Methacrylonitrile			<250			µg/L		
		Methapyrilene			<10			µg/L		
		Methoxychlor	<0.50		<1.5			µg/L		
		2-Methyl-4,6-dinitrophenol			<10			µg/L		
		Methyl ethyl ketone			<5.0			µg/L		
		Methyl isobutyl ketone			<5.0			µg/L		
		Methyl methacrylate			<10			µg/L		
		Methyl methanesulfonate			<10			µg/L		
		3-Methylcholanthrene			<10			µg/L		

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Well AMB 5 continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		2-Methylnaphthalene			<10			µg/L		
		Naphthalene			<10			µg/L		
		1,4-Naphthoquinone			<10			µg/L		
		1-Naphthylamine			<10			µg/L		
		2-Naphthylamine			<10			µg/L		
		Nickel, total recoverable		<4.0	<4.0	<4.0		µg/L	GE	0
		Nitrate-nitrite as nitrogen	1,680	1,890		1,970		µg/L	GE	0
		o-Nitroaniline			<10			µg/L		
		m-Nitroaniline			<10			µg/L		
		p-Nitroaniline			<10			µg/L		
		Nitrobenzene			<10			µg/L		
		2-Nitrophenol			<10			µg/L		
		4-Nitrophenol			<10			µg/L		
		4-Nitroquinoline-1-oxide			<10			µg/L		
		N-Nitrosodi-n-butylamine			<10			µg/L		
		N-Nitrosodiethylamine			<10			µg/L		
		N-Nitrosodimethylamine			<10			µg/L		
		N-Nitrosodiphenylamine			<10			µg/L		
		N-Nitrosodipropylamine			<10			µg/L		
		N-Nitrosomethylethylamine			<10			µg/L		
		N-Nitrosomorpholine			<10			µg/L		
		N-Nitrosopiperidine			<10			µg/L		
		N-Nitrosopyrrolidine			<10			µg/L		
		5-Nitro-o-toluidine			<10			µg/L		
		Nonvolatile beta	4.0E+00					pCi/L		
		O,O,O-Triethyl phosphorothioate			<10			µg/L		
		Octachlorodibenzo-p-dioxin isomers			<0.0010			µg/L		
		Octachlorodibenzo-p-furan isomers			<0.0010			µg/L		
		Parathion			<0.15			µg/L		
		Parathion methyl			<0.15			µg/L		
		PCB 1016			<1.5			µg/L		
		PCB 1221			<1.5			µg/L		
		PCB 1232			<1.5			µg/L		
		PCB 1242			<1.5			µg/L		
		PCB 1248			<1.5			µg/L		
		PCB 1254			<1.5			µg/L		
		PCB 1260			<1.5			µg/L		
		Pentachlorobenzene			<10			µg/L		
		1,2,3,7,8-PCDD			<0.00055			µg/L		
		Pentachlorodibenzo-p-dioxin isomers			<0.00055			µg/L		
		1,2,3,7,8-PCDF			<0.00055			µg/L		
		Pentachloroethane			<10			µg/L		
		Pentachloronitrobenzene			<10			µg/L		
		Pentachlorophenol			<10			µg/L		
•		pH	5.1	5.0	5.4	5.1	J	pH	GE	0
		Phenacetin			<10			µg/L		
		Phenanthrene			<10			µg/L		
		Phenol			<10			µg/L		
		Phenols	<5.0					µg/L		
		p-Phenylenediamine			<10			µg/L		
		Phorate			<0.30			µg/L		
		2-Picoline			<10			µg/L		
		Potassium, total recoverable	<500					µg/L		
		Pronamid			<10			µg/L		
		Propionitrile			<1,000			µg/L		
		Pyrene			<10			µg/L		
		Pyridine			<10			µg/L		
		Radium, total alpha-emitting	5.8E+00	8.7E+00	1.1E+01	9.7E+00		pCi/L	GE	0
		Safrole			<10			µg/L		
		Selenium, total recoverable	<2.0		<2.0			µg/L		
		Silica, total recoverable	7,880					µg/L		
		Silver, total recoverable	<2.0	<2.0	<2.0	<2.0		µg/L	GE	0

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Well AMB 5 continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Sodium, total recoverable	6,700					µg/L		
		Specific conductance	45	49	40	44		µS/cm	GE	0
		Styrene			<5.0			µg/L		
		Sulfate	2,400					µg/L		
		Sulfide			<1,000			µg/L		
		Sulfotep			<10			µg/L		
		1,2,4,5-Tetrachlorobenzene			<10			µg/L		
		2,3,7,8-TCDD			<0.00045			µg/L		
		2,3,7,8-TCDF			<0.00040			µg/L		
		Tetrachlorodibenzo-p-dioxin isomers			<0.00045			µg/L		
		Tetrachlorodibenzo-p-furan isomers			<0.00040			µg/L		
		1,1,1,2-Tetrachloroethane			<5.0			µg/L		
		1,1,2,2-Tetrachloroethane	<5.0	<5.0	<5.0	<5.0		µg/L	GE	0
		Tetrachloroethylene	6.5	8.5	<5.0	9.0		µg/L	GE	2
		2,3,4,6-Tetrachlorophenol			<10			µg/L		
		Thallium, total recoverable			<2.0			µg/L		
		Thionazin			<10			µg/L		
		Tin, total recoverable			2.8			µg/L		
		Toluene	<5.0	<5.0	<5.0	<5.0		µg/L	GE	0
		o-Toluidine			<10			µg/L		
		Total dissolved solids	43,000	29,000	44,000	37,000	V	µg/L	GE	0
		Total organic carbon	<1,000	<1,000	<1,000	1,350		µg/L	GE	0
		Total organic halogens	59	86	91	78		µg/L	GE	2
		Total phosphates (as P)	<50					µg/L		
		Toxaphene	<0.24		<0.72			µg/L		
		2,4,5-TP (Silvex)	<0.090		<0.090			µg/L		
		1,2,4-Trichlorobenzene			<10			µg/L		
		1,1,1-Trichloroethane	<5.0	<5.0	<5.0	<5.0		µg/L	GE	0
		1,1,2-Trichloroethane	<5.0	<5.0	<5.0	<5.0		µg/L	GE	0
		Trichloroethylene	112	143	99	160		µg/L	GE	2
		Trichlorofluoromethane	<5.0	<5.0	<5.0	<5.0		µg/L	GE	0
		2,4,5-Trichlorophenol			<10			µg/L		
		2,4,6-Trichlorophenol			<10			µg/L		
		2,4,5-T			<0.090			µg/L		
		1,2,3-Trichloropropane			<5.0			µg/L		
		1,3,5-Trinitrobenzene			<10			µg/L		
		Tritium	<7.0E-01					pCi/mL		
		Vanadium, total recoverable			<8.0			µg/L		
		Vinyl acetate			<5.0			µg/L		
		Xylenes			<10			µg/L		
		Zinc, total recoverable			34			µg/L		

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WELL AMB 6

SRS Coord.	Lat/Longitude	Screen Zone Elevation	Top of Casing	Casing	Pump	Screen Zone
N104034.1 E51466.0	33.339819 °N 81.733410 °W	242.6-222.6 ft msl	377.2 ft msl	4" PVC	S	GCL

SAMPLE DATE	02/14/93	05/01/93	07/08/93	10/28/93
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FIELD DATA

Analyte	1Q93	2Q93	3Q93	4Q93	Unit
Water elevation	233.2	232.7	233.1	234.2	ft msl
Depth to water	144.0	144.6	144.1	143.0	ft
pH	5.5	5.5	5.1	5.7	pH
Sp. conductance	40	42	43	48	µS/cm
Water temperature	17.5	21.8	20.3	18.6	°C
Alkalinity as CaCO ₃	11	11	9	8	mg/L
Turbidity	62	42	97	6	NTU
Volume purged	0.1	0.2	0.1	0.3	Well vol.
Sampling code	X	X	X	X	

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Acenaphthene			<10			µg/L		
		Acenaphthylene			<10			µg/L		
		Acetone			<100			µg/L		
		Acetonitrile (Methyl cyanide)			<1.0			µg/L		
		Acetophenone			<10			µg/L		
		2-Acetylaminofluorene			<10			µg/L		
		Acrolein			<20			µg/L		
		Acrylonitrile			<20			µg/L		
		Aldrin			<0.050			µg/L		
		Allyl chloride			<50			µg/L		
		Aluminum, total recoverable	1,400		1,840			µg/L		
		4-Aminobiphenyl			<10			µg/L		
		Aniline			<10			µg/L		
		Anthracene			<10			µg/L		
		Antimony, total recoverable			<2.0			µg/L		
		Aramite			<10			µg/L		
		Arsenic, total recoverable	<2.0		<2.0			µg/L		
		Barium, total recoverable	4.1		3.5			µg/L		
		Benzene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		alpha-Benzene hexachloride			<0.050			µg/L		
		beta-Benzene hexachloride			<0.050			µg/L		
		delta-Benzene hexachloride			<0.050			µg/L		
		Benzo(a)anthracene			<10			µg/L		
		Benzo(b)fluoranthene			<10			µg/L		
		Benzo(k)fluoranthene			<10			µg/L		
		Benzo(g,h,i)perylene			<10			µg/L		
		Benzo(a)pyrene			<10			µg/L		
		Benzyl alcohol			<10			µg/L		
		Beryllium, total recoverable			<3.0			µg/L		
		Bis(2-chloroethoxy) methane			<10			µg/L		
		Bis(2-chloroethyl) ether			<10			µg/L		
		Bis(2-chloroisopropyl) ether			<10			µg/L		
		Bis(2-ethylhexyl) phthalate			<10			µg/L		
		Bromodichloromethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Bromoform	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Bromomethane (Methyl bromide)	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		4-Bromophenyl phenyl ether			<10			µg/L		
		Butylbenzyl phthalate			<10			µg/L		
		2-sec-Butyl-4,6-dinitrophenol			<10			µg/L		

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Well AMB 8 continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Cadmium, total recoverable	<2.0		<2.0			µg/L		
		Calcium, total recoverable	414					µg/L		
		Carbon disulfide			<1.0			µg/L		
		Carbon tetrachloride	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chlordane			<0.50			µg/L		
		Chloride	3,400	3,190		2,990		µg/L	GE	0
		4-Chloroaniline			<10			µg/L		
		Chlorobenzene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chlorobenzilate			<10			µg/L		
		4-Chloro-m-cresol			<10			µg/L		
		Chloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chloroethene (Vinyl chloride)	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2-Chloroethyl vinyl ether	<1.0	<1.0	<10	<1.0		µg/L	GE	0
		Chloroform	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chloromethane (Methyl chloride)	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2-Chloronaphthalene			<10			µg/L		
		2-Chlorophenol			<10			µg/L		
		4-Chlorophenyl phenyl ether			<10			µg/L		
		Chloroprene			<200			µg/L		
		Chromium, total recoverable	<4.0		<4.0			µg/L		
		Chrysene			<10			µg/L		
		Cobalt, total recoverable			<4.0			µg/L		
		Copper, total recoverable			41			µg/L		
		o-Cresol (2-Methylphenol)			<10			µg/L		
		m-Cresol (3-Methylphenol)			<10			µg/L		
		p-Cresol (4-Methylphenol)			<10			µg/L		
		Cyanide		<2.5	<5.0	<5.0		µg/L	GE	0
		p,p'-DDD			<0.10			µg/L		
		p,p'-DDE			<0.10			µg/L		
		p,p'-DDT			<0.10			µg/L		
		Diallate			<10			µg/L		
		Dibenz(a,h)anthracene			<10			µg/L		
		Dibenzofuran			<10			µg/L		
		Dibromochloromethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,2-Dibromo-3-chloropropane			<1.0			µg/L		
		1,2-Dibromoethane			<20			µg/L		
		Dibromomethane (Methylene bromide)			<1.0			µg/L		
		Di-n-butyl phthalate			<10			µg/L		
		1,2-Dichlorobenzene			<10			µg/L		
		1,3-Dichlorobenzene			<10			µg/L		
		1,4-Dichlorobenzene			<10			µg/L		
		3,3'-Dichlorobenzidine			<10			µg/L		
		trans-1,4-Dichloro-2-butene			<30			µg/L		
		Dichlorodifluoromethane			<1.0			µg/L		
		1,1-Dichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,2-Dichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,1-Dichloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		trans-1,2-Dichloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Dichloromethane (Methylene chloride)	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2,4-Dichlorophenol			<10			µg/L		
		2,6-Dichlorophenol			<10			µg/L		
		2,4-Dichlorophenoxyacetic acid	<0.30		<0.30			µg/L		
		1,2-Dichloropropane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		cis-1,3-Dichloropropene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		trans-1,3-Dichloropropene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Dieldrin			<0.50			µg/L		
		Diethyl phthalate			<10			µg/L		
		Dimethoate			<10			µg/L		
		2,4-Dimethyl phenol			<10			µg/L		
		Dimethyl phthalate			<10			µg/L		
		p-Dimethylaminoazobenzene			<10			µg/L		
		7,12-Dimethylbenz(a)anthracene			<10			µg/L		

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Well AMB 6 continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		3,3'-Dimethylbenzidine			<10			µg/L		
		a,a-Dimethylphenethylamine			<10			µg/L		
		1,3-Dinitrobenzene			<10			µg/L		
		2,4-Dinitrophenol			<45			µg/L		
		2,4-Dinitrotoluene			<10			µg/L		
		2,6-Dinitrotoluene			<10			µg/L		
		Di-n-octyl phthalate			<10			µg/L		
		1,4-Dioxane			<10			µg/L		
		Diphenylamine			<10			µg/L		
		Disulfoton			<10			µg/L		
		Endosulfan I			<0.10			µg/L		
		Endosulfan II			<0.10			µg/L		
		Endosulfan sulfate			<0.10			µg/L		
		Endrin	<0.0060		<0.0060			µg/L		
		Endrin aldehyde			<0.10			µg/L		
		Ethyl methacrylate			<10			µg/L		
		Ethyl methanesulfonate			<10			µg/L		
		Ethylbenzene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Famphur			<10			µg/L		
		Fluoranthene			<10			µg/L		
		Fluorene			<10			µg/L		
		Fluoride	<100	<100		<100		µg/L	GE	0
		Gross alpha	<2.0E+00		3.8E+00			pCi/L		
		Heptachlor			<0.050			µg/L		
		Heptachlor epoxide			<0.050			µg/L		
		1,2,3,4,6,7,8-HPCDD			<0.00065			µg/L		
		Heptachlorodibenzo-p-dioxin isomers			<0.00065			µg/L		
		1,2,3,4,6,7,8-HPCDF			<0.00045			µg/L		
		Heptachlorodibenzo-p-furan isomers			<0.00045			µg/L		
		Hexachlorobenzene			<10			µg/L		
		Hexachlorobutadiene			<10			µg/L		
		Hexachlorocyclopentadiene			<10			µg/L		
		1,2,3,4,7,8-HXCDD			<0.00045			µg/L		
		Hexachlorodibenzo-p-dioxin isomers			<0.00045			µg/L		
		1,2,3,4,7,8-HXCDF			<0.00040			µg/L		
		Hexachlorodibenzo-p-furan isomers			<0.00040			µg/L		
		Hexachloroethane			<10			µg/L		
		Hexachlorophene			<10			µg/L		
		Hexachloropropene			<10			µg/L		
		2-Hexanone			<1.0			µg/L		
		Indeno[1,2,3-c,d]pyrene			<10			µg/L		
		Iodomethane (Methyl iodide)			<15			µg/L		
		Iron, total recoverable	1,220		1,140			µg/L		
		Isobutyl alcohol			<100			µg/L		
		Isodrin			<10			µg/L		
		Isophorone			<10			µg/L		
		Isosafrole			<10			µg/L		
		Kepone			<10			µg/L		
		Lead, total recoverable	26		24			µg/L		
		Lindane	<0.0050		<0.0050			µg/L		
		Magnesium, total recoverable	136					µg/L		
		Manganese, total recoverable	5.9		5.6			µg/L		
		Mercury, total recoverable	<0.20		<0.20			µg/L		
		Methacrylonitrile			<50			µg/L		
		Methapyrilene			<10			µg/L		
		Methoxychlor	<0.50		<0.50			µg/L		
		2-Methyl-4,6-dinitrophenol			<10			µg/L		
		Methyl ethyl ketone			<1.0			µg/L		
		Methyl isobutyl ketone			<1.0			µg/L		
		Methyl methacrylate			<10			µg/L		
		Methyl methanesulfonate			<10			µg/L		
		3-Methylcholanthrene			<10			µg/L		

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Well AMB 6 continued

ANALYTICAL DATA

<u>H</u>	<u>D</u>	<u>Analyte</u>	<u>1Q93</u>	<u>2Q93</u>	<u>3Q93</u>	<u>4Q93</u>	<u>Mod</u>	<u>Unit</u>	<u>Lab</u>	<u>Flag</u>
		2-Methylnaphthalene			<10			µg/L		
		Naphthalene			<10			µg/L		
		1,4-Naphthoquinone			<10			µg/L		
		1-Naphthylamine			<10			µg/L		
		2-Naphthylamine			<10			µg/L		
		Nickel, total recoverable		<4.0	<4.0	<4.0		µg/L	GE	0
		Nitrate-nitrite as nitrogen	270	280		290		µg/L	GE	0
		o-Nitroaniline			<10			µg/L		
		m-Nitroaniline			<10			µg/L		
		p-Nitroaniline			<10			µg/L		
		Nitrobenzene			<10			µg/L		
		2-Nitrophenol			<10			µg/L		
		4-Nitrophenol			<10			µg/L		
		4-Nitroquinoline-1-oxide			<10			µg/L		
		N-Nitrosodi-n-butylamine			<10			µg/L		
		N-Nitrosodimethylamine			<10			µg/L		
		N-Nitrosodiphenylamine			<10			µg/L		
		N-Nitrosodipropylamine			<10			µg/L		
		N-Nitrosomethylethylamine			<10			µg/L		
		N-Nitrosomorpholine			<10			µg/L		
		N-Nitrosopiperidine			<10			µg/L		
		N-Nitrosopyrrolidine			<10			µg/L		
		5-Nitro-o-toluidine			<10			µg/L		
		Nonvolatile beta	< 2.0E + 00					pCi/L		
		O,O,O-Triethyl phosphorothioate			<10			µg/L		
		Octachlorodibenzo-p-dioxin isomers			<0.0010			µg/L		
		Octachlorodibenzo-p-furan isomers			<0.0010			µg/L		
		Parathion			<0.050			µg/L		
		Parathion methyl			<0.050			µg/L		
		PCB 1016			<0.50			µg/L		
		PCB 1221			<0.50			µg/L		
		PCB 1232			<0.50			µg/L		
		PCB 1242			<0.50			µg/L		
		PCB 1248			<0.50			µg/L		
		PCB 1254			<0.50			µg/L		
		PCB 1260			<0.50			µg/L		
		Pentachlorobenzene			<10			µg/L		
		1,2,3,7,8-PCDD			<0.00055			µg/L		
		Pentachlorodibenzo-p-dioxin isomers			<0.00055			µg/L		
		1,2,3,7,8-PCDF			<0.00055			µg/L		
		Pentachloroethane			<10			µg/L		
		Pentachloronitrobenzene			<10			µg/L		
		Pentachlorophenol			<10			µg/L		
•		pH	5.7	5.7	5.6	5.7	J	pH	GE	0
		Phenacetin			<10			µg/L		
		Phenanthrene			<10			µg/L		
		Phenol			<10			µg/L		
		Phenols	<5.0					µg/L		
		p-Phenylenediamine			<10			µg/L		
		Phorate			<0.10			µg/L		
		2-Picoline			<10			µg/L		
		Potassium, total recoverable	<500					µg/L		
		Pronamid			<10			µg/L		
		Propionitrile			<200			µg/L		
		Pyrene			<10			µg/L		
		Pyridine			<10			µg/L		
		Radium, total alpha-emitting	1.7E + 00	1.5E + 00	1.9E + 00	2.0E + 00		pCi/L	GE	0
		Safrole			<10			µg/L		
		Selenium, total recoverable	<2.0		<2.0			µg/L		
		Silica, total recoverable	8,920					µg/L		
		Silver, total recoverable	<2.0	<2.0	<2.0	<2.0		µg/L	GE	0

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Well AMB 6 continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Sodium, total recoverable	7,900		30	34		µg/L		
		Specific conductance	38	40	<1.0			µS/cm	GE	0
		Styrene			<1.0			µg/L		
		Sulfate	2,900					µg/L		
		Sulfide			<1,000			µg/L		
		Sulfotep			<10			µg/L		
		1,2,4,5-Tetrachlorobenzene			<10			µg/L		
		2,3,7,8-TCDD			<0.00045			µg/L		
		2,3,7,8-TCDF			<0.00040			µg/L		
		Tetrachlorodibenzo-p-dioxin isomers			<0.00045			µg/L		
		Tetrachlorodibenzo-p-furan isomers			<0.00040			µg/L		
		1,1,1,2-Tetrachloroethane			<1.0			µg/L		
		1,1,2,2-Tetrachloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Tetrachloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2,3,4,6-Tetrachlorophenol			<10			µg/L		
		Thallium, total recoverable			<2.0			µg/L		
		Thionazin			<10			µg/L		
		Tin, total recoverable			<2.0			µg/L		
		Toluene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		o-Toluidine			<10			µg/L		
		Total dissolved solids	40,000	25,000	35,000	28,000	V	µg/L	GE	0
		Total organic carbon	<1,000	<1,000	<1,000	1,380		µg/L	GE	0
		Total organic halogens	<5.0	19	<5.0	6.7		µg/L	GE	0
		Total phosphates (as P)	310					µg/L		
		Toxaphene	<0.24		<0.24			µg/L		
		2,4,5-TP (Silvex)	<0.090		<0.090			µg/L		
		1,2,4-Trichlorobenzene			<10			µg/L		
		1,1,1-Trichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,1,2-Trichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
■		Trichloroethylene	4.8	5.7	4.7	6.1		µg/L	GE	2
		Trichlorofluoromethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2,4,5-Trichlorophenol			<10			µg/L		
		2,4,6-Trichlorophenol			<10			µg/L		
		2,4,5-T			<0.090			µg/L		
		1,2,3-Trichloropropane			<1.0			µg/L		
		1,3,5-Trinitrobenzene			<10			µg/L		
		Tritium	<7.0E-01					pCi/mL		
		Vanadium, total recoverable			<8.0			µg/L		
		Vinyl acetate			<1.0			µg/L		
		Xylenes			<2.0			µg/L		
		Zinc, total recoverable			50			µg/L		

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WELL AMB 7

<u>SRS Coord.</u>	<u>Lat/Longitude</u>	<u>Screen Zone Elevation</u>	<u>Top of Casing</u>	<u>Casing</u>	<u>Pump</u>	<u>Screen Zone</u>
N103920.0 E51624.9	33.339827 °N 81.732789 °W	242.1-222.1 ft msl	369.9 ft msl	4" PVC	S	M

<u>SAMPLE DATE</u>	02/14/93	05/01/93	07/08/93	11/12/93
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FIELD DATA

<u>Analyte</u>	<u>1Q93</u>	<u>2Q93</u>	<u>3Q93</u>	<u>4Q93</u>	<u>Unit</u>
Water elevation	233.6	233.7	233.5	234.7	ft msl
Depth to water	136.4	136.2	136.4	135.2	ft
pH	8.1	8.1	5.8	6.1	pH
Sp. conductance	77	95	75	71	µS/cm
Water temperature	17.6	19.7	20.5	19.1	°C
Alkalinity as CaCO ₃	31	39	26	20	mg/L
Turbidity	12	17	11	9	NTU
Volume purged	1.3	0.8	1.1	1.1	Well vol.
Sampling code	X	X	X	X	

ANALYTICAL DATA

<u>H</u>	<u>D</u>	<u>Analyte</u>	<u>1Q93</u>	<u>2Q93</u>	<u>3Q93</u>	<u>4Q93</u>	<u>Mod</u>	<u>Unit</u>	<u>Lab</u>	<u>Flag</u>
		Acenaphthene			<10			µg/L		
		Acenaphthylene			<10			µg/L		
		Acetone			<100			µg/L		
		Acetonitrile (Methyl cyanide)			<1.0			µg/L		
		Acetophenone			<10			µg/L		
		2-Acetylaminofluorene			<10			µg/L		
		Acrolein			<20			µg/L		
		Acrylonitrile			<20			µg/L		
		Aldrin			<0.050			µg/L		
		Allyl chloride			<50			µg/L		
		Aluminum, total recoverable	141		236			µg/L		
		4-Aminobiphenyl			<10			µg/L		
		Aniline			<10			µg/L		
		Anthracene			<10			µg/L		
		Antimony, total recoverable			<2.0			µg/L		
		Aramite			<10			µg/L		
		Arsenic, total recoverable	<2.0		<2.0			µg/L		
		Barium, total recoverable	8.3		7.6			µg/L		
		Benzene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		alpha-Benzene hexachloride			<0.050			µg/L		
		beta-Benzene hexachloride			<0.050			µg/L		
		delta-Benzene hexachloride			<0.050			µg/L		
		Benzo(a)anthracene			<10			µg/L		
		Benzo(b)fluoranthene			<10			µg/L		
		Benzo(k)fluoranthene			<10			µg/L		
		Benzo(g,h,i)perylene			<10			µg/L		
		Benzo(e)pyrene			<10			µg/L		
		Benzyl alcohol			<10			µg/L		
		Beryllium, total recoverable			<3.0			µg/L		
		Bis(2-chloroethoxy) methane			<10			µg/L		
		Bis(2-chloroethyl) ether			<10			µg/L		
		Bis(2-chloroisopropyl) ether			<10			µg/L		
		Bis(2-ethylhexyl) phthalate			<10			µg/L		
		Bromodichloromethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Bromoforn	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Bromomethane (Methyl bromide)	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		4-Bromophenyl phenyl ether			<10			µg/L		
		Butylbenzyl phthalate			<10			µg/L		
		2-sec-Butyl-4,6-dinitrophenol			<10			µg/L		

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Well AMB 7 continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Cadmium, total recoverable	< 2.0		< 2.0			µg/L		
		Calcium, total recoverable	2,740					µg/L		
		Carbon disulfide			< 1.0			µg/L		
		Carbon tetrachloride	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		Chlordane			< 0.50			µg/L		
		Chloride	2,400	2,150		2,270		µg/L	GE	0
		4-Chloroaniline			< 10			µg/L		
		Chlorobenzene	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		Chlorobenzilate			< 10			µg/L		
		4-Chloro-m-cresol			< 10			µg/L		
		Chloroethane	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		Chloroethene (Vinyl chloride)	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		2-Chloroethyl vinyl ether	< 1.0	< 1.0	< 10	< 1.0		µg/L	GE	0
		Chloroform	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		Chloromethane (Methyl chloride)	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		2-Chloronaphthalene			< 10			µg/L		
		2-Chlorophenol			< 10			µg/L		
		4-Chlorophenyl phenyl ether			< 10			µg/L		
		Chloroprene			< 200			µg/L		
		Chromium, total recoverable	< 4.0		< 4.0			µg/L		
		Chrysene			< 10			µg/L		
		Cobalt, total recoverable			< 4.0			µg/L		
		Copper, total recoverable			56			µg/L		
		o-Cresol (2-Methylphenol)			< 10			µg/L		
		m-Cresol (3-Methylphenol)			< 10			µg/L		
		p-Cresol (4-Methylphenol)			< 10			µg/L		
		Cyanide		< 5.0	< 5.0	< 5.0		µg/L	GE	0
		p,p'-DDD			< 0.10			µg/L		
		p,p'-DDE			< 0.10			µg/L		
		p,p'-DDT			< 0.10			µg/L		
		Diallyl			< 10			µg/L		
		Dibenz(a,h)anthracene			< 10			µg/L		
		Dibenzofuran			< 10			µg/L		
		Dibromochloromethane	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		1,2-Dibromo-3-chloropropane			< 1.0			µg/L		
		1,2-Dibromoethane			< 20			µg/L		
		Dibromomethane (Methylene bromide)			< 1.0			µg/L		
		Di-n-butyl phthalate			< 10			µg/L		
		1,2-Dichlorobenzene			< 10			µg/L		
		1,3-Dichlorobenzene			< 10			µg/L		
		1,4-Dichlorobenzene			< 10			µg/L		
		3,3'-Dichlorobenzidine			< 10			µg/L		
		trans-1,4-Dichloro-2-butene			< 30			µg/L		
		Dichlorodifluoromethane			< 1.0			µg/L		
		1,1-Dichloroethane	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		1,2-Dichloroethane	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		1,1-Dichloroethylene	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		trans-1,2-Dichloroethylene	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		Dichloromethane (Methylene chloride)	< 1.0	< 1.0	< 1.0	1.5		µg/L	GE	0
		2,4-Dichlorophenol			< 10			µg/L		
		2,6-Dichlorophenol			< 10			µg/L		
		2,4-Dichlorophenoxyacetic acid	< 0.30		< 0.30			µg/L		
		1,2-Dichloropropane	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		cis-1,3-Dichloropropene	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		trans-1,3-Dichloropropene	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		Dieldrin			< 0.50			µg/L		
		Diethyl phthalate			< 10			µg/L		
		Dimethoate			< 10			µg/L		
		2,4-Dimethyl phenol			< 10			µg/L		
		Dimethyl phthalate			< 10			µg/L		
		p-Dimethylaminoazobenzene			< 10			µg/L		
		7,12-Dimethylbenz(a)anthracene			< 10			µg/L		

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Well AMB 7 continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		3,3'-Dimethylbenzidine			<10			µg/L		
		a,a-Dimethylphenethylamine			<10			µg/L		
		1,3-Dinitrobenzene			<10			µg/L		
		2,4-Dinitrophenol			<45			µg/L		
		2,4-Dinitrotoluene			<10			µg/L		
		2,6-Dinitrotoluene			<10			µg/L		
		Di-n-octyl phthalate			<10			µg/L		
		1,4-Dioxane			<10			µg/L		
		Diphenylamine			<10			µg/L		
		Disulfoton			<10			µg/L		
		Endosulfan I			<0.10			µg/L		
		Endosulfan II			<0.10			µg/L		
		Endosulfan sulfate			<0.10			µg/L		
		Endrin	<0.0060		<0.0060			µg/L		
		Endrin aldehyde			<0.10			µg/L		
		Ethyl methacrylate			<10			µg/L		
		Ethyl methanesulfonate			<10			µg/L		
		Ethylbenzene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Famphur			<10			µg/L		
		Fluoranthene			<10			µg/L		
		Fluorene			<10			µg/L		
		Fluoride	<100	<100		<100		µg/L	GE	0
		Gross alpha	<2.0E+00		<2.0E+00			pCi/L		
		Heptachlor			<0.050			µg/L		
		Heptachlor epoxide			<0.050			µg/L		
		1,2,3,4,6,7,8-HPCDD			<0.00065			µg/L		
		Heptachlorodibenzo-p-dioxin isomers			<0.00065			µg/L		
		1,2,3,4,6,7,8-HPCDF			<0.00045			µg/L		
		Heptachlorodibenzo-p-furan isomers			<0.00045			µg/L		
		Hexachlorobenzene			<10			µg/L		
		Hexachlorobutadiene			<10			µg/L		
		Hexachlorocyclopentadiene			<10			µg/L		
		1,2,3,4,7,8-HXCDD			<0.00045			µg/L		
		Hexachlorodibenzo-p-dioxin isomers			<0.00045			µg/L		
		1,2,3,4,7,8-HXCDF			<0.00040			µg/L		
		Hexachlorodibenzo-p-furan isomers			<0.00040			µg/L		
		Hexachloroethane			<10			µg/L		
		Hexachlorophene			<10			µg/L		
		Hexachloropropene			<10			µg/L		
		2-Hexanone			<1.0			µg/L		
		Indeno[1,2,3-c,d]pyrene			<10			µg/L		
		Iodomethane (Methyl iodide)			<15			µg/L		
		Iron, total recoverable	152		132			µg/L		
		Isobutyl alcohol			<100			µg/L		
		Isodrin			<10			µg/L		
		Isophorone			<10			µg/L		
		Isosafrole			<10			µg/L		
		Kepone			<10			µg/L		
		Lead, total recoverable	6.1		5.5			µg/L		
		Lindane	<0.0050		<0.0050			µg/L		
		Magnesium, total recoverable	282					µg/L		
		Manganese, total recoverable	3.3		2.9			µg/L		
		Mercury, total recoverable	<0.20		<0.20			µg/L		
		Methacrylonitrile			<50			µg/L		
		Methapyrene			<10			µg/L		
		Methoxychlor	<0.50		<0.50			µg/L		
		2-Methyl-4,6-dinitrophenol			<10			µg/L		
		Methyl ethyl ketone			<1.0			µg/L		
		Methyl isobutyl ketone			<1.0			µg/L		
		Methyl methacrylate			<10			µg/L		
		Methyl methanesulfonate			<10			µg/L		
		3-Methylcholanthrene			<10			µg/L		

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Well AMB 7 continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		2-Methylnaphthalene			<10			µg/L		
		Naphthalene			<10			µg/L		
		1,4-Naphthoquinone			<10			µg/L		
		1-Naphthylamine			<10			µg/L		
		2-Naphthylamine			<10			µg/L		
		Nickel, total recoverable		8.4	6.9	5.7		µg/L	GE	0
		Nitrate-nitrite as nitrogen	180	210		320		µg/L	GE	0
		o-Nitroaniline			<10			µg/L		
		m-Nitroaniline			<10			µg/L		
		p-Nitroaniline			<10			µg/L		
		Nitrobenzene			<10			µg/L		
		2-Nitrophenol			<10			µg/L		
		4-Nitrophenol			<10			µg/L		
		4-Nitroquinoline-1-oxide			<10			µg/L		
		N-Nitrosodi-n-butylamine			<10			µg/L		
		N-Nitrosodiethylamine			<10			µg/L		
		N-Nitrosodimethylamine			<10			µg/L		
		N-Nitrosodiphenylamine			<10			µg/L		
		N-Nitrosodipropylamine			<10			µg/L		
		N-Nitrosomethylethylamine			<10			µg/L		
		N-Nitrosomorpholine			<10			µg/L		
		N-Nitrosopiperidine			<10			µg/L		
		N-Nitrosopyrrolidine			<10			µg/L		
		5-Nitro-o-toluidine			<10			µg/L		
		Nonvolatile beta	< 2.0E + 00					pCi/L		
		O,O,O-Triethyl phosphorothioate			<10			µg/L		
		Octachlorodibenzo-p-dioxin isomers			<0.0010			µg/L		
		Octachlorodibenzo-p-furan isomers			<0.0010			µg/L		
		Parathion			<0.050			µg/L		
		Parathion methyl			<0.050			µg/L		
		PCB 1016			<0.50			µg/L		
		PCB 1221			<0.50			µg/L		
		PCB 1232			<0.50			µg/L		
		PCB 1242			<0.50			µg/L		
		PCB 1248			<0.50			µg/L		
		PCB 1254			<0.50			µg/L		
		PCB 1260			<0.50			µg/L		
		Pentachlorobenzene			<10			µg/L		
		1,2,3,7,8-PCDD			<0.00055			µg/L		
		Pentachlorodibenzo-p-dioxin isomers			<0.00055			µg/L		
		1,2,3,7,8-PCDF			<0.00055			µg/L		
		Pentachloroethane			<10			µg/L		
		Pentachloronitrobenzene			<10			µg/L		
		Pentachlorophenol			<10			µg/L		
•		pH	6.3	6.3	6.2	6.3	J	pH	GE	0
		Phenacetin			<10			µg/L		
		Phenanthrene			<10			µg/L		
		Phenol			<10			µg/L		
		Phenols	<5.0					µg/L		
		p-Phenylenediamine			<10			µg/L		
		Phorate			<0.10			µg/L		
		2-Picoline			<10			µg/L		
		Potassium, total recoverable	1,230					µg/L		
		Pronamid			<10			µg/L		
		Propionitrile			<200			µg/L		
		Pyrene			<10			µg/L		
		Pyridine			<10			µg/L		
		Radium, total alpha-emitting	<1.0E + 00	1.0E + 00	1.1E + 00	<1.0E + 00		pCi/L	GE	0
		Safrole			<10			µg/L		
		Selenium, total recoverable	<2.0		<2.0			µg/L		
		Silica, total recoverable	8.370					µg/L		
		Silver, total recoverable	<2.0	<2.0	<2.0	<2.0		µg/L	GE	0

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Well AMB 7 continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Sodium, total recoverable	14,300					µg/L		
		Specific conductance	70	70	70	65		µS/cm	GE	0
		Styrene			<1.0			µg/L		
		Sulfate	1,300					µg/L		
		Sulfide			<1,000			µg/L		
		Sulfotep			<10			µg/L		
		1,2,4,5-Tetrachlorobenzene			<10			µg/L		
		2,3,7,8-TCDD			<0.00045			µg/L		
		2,3,7,8-TCDF			<0.00040			µg/L		
		Tetrachlorodibenzo-p-dioxin isomers			<0.00045			µg/L		
		Tetrachlorodibenzo-p-furan isomers			<0.00040			µg/L		
		1,1,1,2-Tetrachloroethane			<1.0			µg/L		
		1,1,2,2-Tetrachloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Tetrachloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2,3,4,6-Tetrachlorophenol			<10			µg/L		
		Thallium, total recoverable			<2.0			µg/L		
		Thionazin			<10			µg/L		
		Tin, total recoverable			<2.0			µg/L		
		Toluene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		o-Toluidine			<10			µg/L		
		Total dissolved solids	55,000	40,000	50,000	46,000	V	µg/L	GE	0
		Total organic carbon	<1,000	<1,000	<1,000	<1,000		µg/L	GE	0
		Total organic halogens	7.2	<5.0	<5.0	<5.0		µg/L	GE	0
		Total phosphates (as P)	<50					µg/L		
		Toxaphene	<0.24		<0.24			µg/L		
		2,4,5-TP (Silvex)	<0.090		<0.090			µg/L		
		1,2,4-Trichlorobenzene			<10			µg/L		
		1,1,1-Trichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,1,2-Trichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Trichloroethylene	4.0	4.2	4.6	3.9		µg/L	GE	1
		Trichlorofluoromethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2,4,5-Trichlorophenol			<10			µg/L		
		2,4,6-Trichlorophenol			<10			µg/L		
		2,4,5-T			<0.090			µg/L		
		1,2,3-Trichloropropane			<1.0			µg/L		
		1,3,5-Trinitrobenzene			<10			µg/L		
		Tritium	<7.0E-01					pCi/mL		
		Vanadium, total recoverable			<8.0			µg/L		
		Vinyl acetate			<1.0			µg/L		
		Xylenes			<2.0			µg/L		
		Zinc, total recoverable			55			µg/L		

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WELL A11B 7A

SRS Coord.	Lat/Longitude	Screen Zone Elevation	Top of Casing	Casing	Pump	Screen Zone
N103987.1 E51591.0	33.339920 °N 81.732989 °W	125.6-115.0 ft msl	373.6 ft msl	4" PVC	S	MCBC

SAMPLE DATE	02/15/93	05/01/93	07/07/93	11/12/93
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FIELD DATA

Analyte	1Q93	2Q93	3Q93	4Q93	Unit
Water elevation	218.7	218.4	218.7	218.8	ft msl
Depth to water	154.9	155.2	154.9	154.8	ft
pH	6.0	5.9	5.7	5.8	pH
Sp. conductance	35	35	35	35	µS/cm
Water temperature	18.4	19.2	19.5	18.9	°C
Alkalinity as CaCO ₃	9	8	7	6	mg/L
Turbidity	1	2	1	1	NTU
Volume purged	3.7	3.0	3.4	3.1	Well vol.
Sampling code					

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Acenaphthene			<10			µg/L		
		Acenaphthylene			<10			µg/L		
		Acetone			<100			µg/L		
		Acetonitrile (Methyl cyanide)			<1.0			µg/L		
		Acetophenone			<10			µg/L		
		2-Acetylaminofluorene			<10			µg/L		
		Acrolein			<20			µg/L		
		Acrylonitrile			<20			µg/L		
		Aldrin			<0.050			µg/L		
		Allyl chloride			<50			µg/L		
		Aluminum, total recoverable	48		23			µg/L		
		4-Aminobiphenyl			<10			µg/L		
		Aniline			<10			µg/L		
		Anthracene			<10			µg/L		
		Antimony, total recoverable			<2.0			µg/L		
		Aramite			<10			µg/L		
		Arsenic, total recoverable	<2.0		<2.0			µg/L		
		Barium, total recoverable	5.2		4.9			µg/L		
		Benzene	<5.0	<5.0	<1.0	<1.0		µg/L	GE	0
		alpha-Benzene hexachloride			<0.050			µg/L		
		beta-Benzene hexachloride			<0.050			µg/L		
		delta-Benzene hexachloride			<0.050			µg/L		
		Benzo(a)anthracene			<10			µg/L		
		Benzo(b)fluoranthene			<10			µg/L		
		Benzo(k)fluoranthene			<10			µg/L		
		Benzo(g,h,i)perylene			<10			µg/L		
		Benzo(a)pyrene			<10			µg/L		
		Benzyl alcohol			<10			µg/L		
		Beryllium, total recoverable			<3.0			µg/L		
		Bis(2-chloroethoxy) methane			<10			µg/L		
		Bis(2-chloroethyl) ether			<10			µg/L		
		Bis(2-chloroisopropyl) ether			<10			µg/L		
		Bis(2-ethylhexyl) phthalate			<10			µg/L		
		Bromodichloromethane	<5.0	<5.0	<1.0	<1.0		µg/L	GE	0
		Bromoform	<5.0	<5.0	<1.0	<1.0		µg/L	GE	0
		Bromomethane (Methyl bromide)	<5.0	<5.0	<1.0	<1.0		µg/L	GE	0
		4-Bromophenyl phenyl ether			<10			µg/L		
		Butylbenzyl phthalate			<10			µg/L		
		2-sec-Butyl-4,6-dinitrophenol			<10			µg/L		

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Well AMB 7A continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Cadmium, total recoverable	< 2.0		< 2.0			µg/L		
		Calcium, total recoverable	3,490					µg/L		
		Carbon disulfide			< 1.0			µg/L		
		Carbon tetrachloride	< 5.0	< 5.0	< 1.0	< 1.0		µg/L	GE	0
		Chlordane			< 0.50			µg/L		
		Chloride	1,990	1,760		1,900		µg/L	WA	0
		4-Chloroaniline			< 10			µg/L		
		Chlorobenzene	< 5.0	< 5.0	< 1.0	< 1.0		µg/L	GE	0
		Chlorobenzilate			< 10			µg/L		
		4-Chloro-m-cresol			< 10			µg/L		
		Chloroethane	< 5.0	< 5.0	< 1.0	< 1.0		µg/L	GE	0
		Chloroethene (Vinyl chloride)	< 5.0	< 5.0	< 1.0	< 1.0		µg/L	GE	0
		2-Chloroethyl vinyl ether	< 5.0	< 5.0	< 10	< 1.0		µg/L	GE	0
		Chloroform	< 5.0	< 5.0	< 1.0	< 1.0		µg/L	GE	0
		Chloromethane (Methyl chloride)	< 5.0	< 5.0	< 1.0	< 1.0		µg/L	GE	0
		2-Chloronaphthalene			< 10			µg/L		
		2-Chlorophenol			< 10			µg/L		
		4-Chlorophenyl phenyl ether			< 10			µg/L		
		Chloroprene			< 200			µg/L		
		Chromium, total recoverable	< 4.0		< 4.0			µg/L		
		Chrysene			< 10			µg/L		
		Cobalt, total recoverable			< 4.0			µg/L		
		Copper, total recoverable			< 4.0			µg/L		
		o-Cresol (2-Methylphenol)			< 10			µg/L		
		m-Cresol (3-Methylphenol)			< 10			µg/L		
		p-Cresol (4-Methylphenol)			< 10			µg/L		
		Cyanide		< 5.0	< 5.0	< 5.0		µg/L	GE	0
		p,p'-DDD			< 0.10			µg/L		
		p,p'-DDE			< 0.10			µg/L		
		p,p'-DDT			< 0.10			µg/L		
		Diallate			< 10			µg/L		
		Dibenz(a,h)anthracene			< 10			µg/L		
		Dibenzofuran			< 10			µg/L		
		Dibromochloromethane	< 5.0	< 5.0	< 1.0	< 1.0		µg/L	GE	0
		1,2-Dibromo-3-chloropropane			< 1.0			µg/L		
		1,2-Dibromomethane			< 20			µg/L		
		Dibromomethane (Methylene bromide)			< 1.0			µg/L		
		Di-n-butyl phthalate			< 10			µg/L		
		1,2-Dichlorobenzene			< 10			µg/L		
		1,3-Dichlorobenzene			< 10			µg/L		
		1,4-Dichlorobenzene			< 10			µg/L		
		3,3'-Dichlorobenzidine			< 10			µg/L		
		trans-1,4-Dichloro-2-butene			< 30			µg/L		
		Dichlorodifluoromethane			< 1.0			µg/L		
		1,1-Dichloroethane	< 5.0	< 5.0	< 1.0	< 1.0		µg/L	GE	0
		1,2-Dichloroethane	< 5.0	< 5.0	< 1.0	< 1.0		µg/L	GE	0
		1,1-Dichloroethylene	< 5.0	< 5.0	< 1.0	< 1.0		µg/L	GE	0
		trans-1,2-Dichloroethylene	< 5.0	< 5.0	< 1.0	< 1.0		µg/L	GE	0
	■	Dichloromethane (Methylene chloride)	< 5.0	5.4	< 1.0	17		µg/L	GE	2
		2,4-Dichlorophenol			< 10			µg/L		
		2,6-Dichlorophenol			< 10			µg/L		
		2,4-Dichlorophenoxyacetic acid	< 0.30		< 0.30			µg/L		
		1,2-Dichloropropane	< 5.0	< 5.0	< 1.0	< 1.0		µg/L	GE	0
		cis-1,3-Dichloropropene	< 5.0	< 5.0	< 1.0	< 1.0		µg/L	GE	0
		trans-1,3-Dichloropropene	< 5.0	< 5.0	< 1.0	< 1.0		µg/L	GE	0
		Dieldrin			< 0.50			µg/L		
		Diethyl phthalate			< 10			µg/L		
		Dimethoate			< 10			µg/L		
		2,4-Dimethyl phenol			< 10			µg/L		
		Dimethyl phthalate			< 10			µg/L		
		p-Dimethylaminoazobenzene			< 10			µg/L		
		7,12-Dimethylbenz(a)anthracene			< 10			µg/L		

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Well AMB 7A continued

ANALYTICAL DATA

H	Q	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		3,3'-Dimethylbenzidine			<10			µg/L		
		s,s-Dimethylphenethylamine			<10			µg/L		
		1,3-Dinitrobenzene			<10			µg/L		
		2,4-Dinitrophenol			<45			µg/L		
		2,4-Dinitrotoluene			<10			µg/L		
		2,6-Dinitrotoluene			<10			µg/L		
		Di-n-octyl phthalate			<10			µg/L		
		1,4-Dioxane			<10			µg/L		
		Diphenylamine			<10			µg/L		
		Disulfoton			<10			µg/L		
		Endosulfen I			<0.10			µg/L		
		Endosulfen II			<0.10			µg/L		
		Endosulfen sulfate			<0.10			µg/L		
		Endrin	<0.0060		<0.0060			µg/L		
		Endrin aldehyde			<0.10			µg/L		
		Ethyl methacrylate			<10			µg/L		
		Ethyl methanesulfonate			<10			µg/L		
		Ethylbenzene	<5.0	<5.0	<1.0	<1.0		µg/L	GE	0
		Famphur			<10			µg/L		
		Fluoranthene			<10			µg/L		
		Fluorene			<10			µg/L		
		Fluoride	<100	<100		<100		µg/L	GE	0
		Gross alpha	<2.0E+00					pCi/L		
		Heptachlor			<0.050			µg/L		
		Heptachlor epoxide			<0.050			µg/L		
		1,2,3,4,6,7,8-HPCDD			<0.00065			µg/L		
		Heptachlorodibenzo-p-dioxin isomers			<0.00065			µg/L		
		1,2,3,4,6,7,8-HPCDF			<0.00045			µg/L		
		Heptachlorodibenzo-p-furan isomers			<0.00045			µg/L		
		Hexachlorobenzene			<10			µg/L		
		Hexachlorobutadiene			<10			µg/L		
		Hexachlorocyclopentadiene			<10			µg/L		
		1,2,3,4,7,8-HXCDD			<0.00045			µg/L		
		Hexachlorodibenzo-p-dioxin isomers			<0.00045			µg/L		
		1,2,3,4,7,8-HXCDF			<0.00040			µg/L		
		Hexachlorodibenzo-p-furan isomers			<0.00040			µg/L		
		Hexachloroethane			<10			µg/L		
		Hexachlorophene			<10			µg/L		
		Hexachloropropene			<10			µg/L		
		2-Hexanone			<1.0			µg/L		
		Indeno(1,2,3-c,d)pyrene			<10			µg/L		
		Iodomethane (Methyl iodide)			<15			µg/L		
		Iron, total recoverable	24		11			µg/L		
		Isobutyl alcohol			<100			µg/L		
		Isodrin			<10			µg/L		
		Isophorone			<10			µg/L		
		Isosafrole			<10			µg/L		
		Kepone			<10			µg/L		
		Lead, total recoverable	<3.0		<3.0			µg/L		
		Lindane	<0.0050		<0.0050			µg/L		
		Magnesium, total recoverable	297					µg/L		
		Manganese, total recoverable	7.8		7.4			µg/L		
		Mercury, total recoverable	<0.20		<0.20			µg/L		
		Methacrylonitrile			<50			µg/L		
		Methapyrilene			<10			µg/L		
		Methoxychlor	<0.50		<0.50			µg/L		
		2-Methyl-4,6-dinitrophenol			<10			µg/L		
		Methyl ethyl ketone			<1.0			µg/L		
		Methyl isobutyl ketone			<1.0			µg/L		
		Methyl methacrylate			<10			µg/L		
		Methyl methanesulfonate			<10			µg/L		
		3-Methylcholanthrene			<10			µg/L		

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Well AMB 7A continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		2-Methylnaphthalene			<10			µg/L		
		Naphthalene			<10			µg/L		
		1,4-Naphthoquinone			<10			µg/L		
		1-Naphthylamine			<10			µg/L		
		2-Naphthylamine			<10			µg/L		
		Nickel, total recoverable		<4.0	<4.0	4.9	J3	µg/L	WA	0
		Nitrate as nitrogen				795		µg/L	WA	0
		Nitrate-nitrite as nitrogen	950	980		910		µg/L	GE	0
		o-Nitroaniline			<10			µg/L		
		m-Nitroaniline			<10			µg/L		
		p-Nitroaniline			<10			µg/L		
		Nitrobenzene			<10			µg/L		
		2-Nitrophenol			<10			µg/L		
		4-Nitrophenol			<10			µg/L		
		4-Nitroquinoline-1-oxide			<10			µg/L		
		N-Nitrosodi-n-butylamine			<10			µg/L		
		N-Nitrosodimethylamine			<10			µg/L		
		N-Nitrosodiphenylamine			<10			µg/L		
		N-Nitrosodipropylamine			<10			µg/L		
		N-Nitrosomethylethylamine			<10			µg/L		
		N-Nitrosomorpholine			<10			µg/L		
		N-Nitrosopiperidine			<10			µg/L		
		N-Nitrosopyrrolidine			<10			µg/L		
		5-Nitro-o-toluidine			<10			µg/L		
		Nonvolatile beta	< 2.0E + 00					pCi/L		
		O,O,O-Triethyl phosphorothioate			<10			µg/L		
		Octachlorodibenzo-p-dioxin isomers			<0.0010			µg/L		
		Octachlorodibenzo-p-furan isomers			<0.0010			µg/L		
		Parathion			<0.050			µg/L		
		Parathion methyl			<0.050			µg/L		
		PCB 1016			<0.50			µg/L		
		PCB 1221			<0.50			µg/L		
		PCB 1232			<0.50			µg/L		
		PCB 1242			<0.50			µg/L		
		PCB 1248			<0.50			µg/L		
		PCB 1254			<0.50			µg/L		
		PCB 1260			<0.50			µg/L		
		Pentachlorobenzene			<10			µg/L		
		1,2,3,7,8-PCDD			<0.00055			µg/L		
		Pentachlorodibenzo-p-dioxin isomers			<0.00055			µg/L		
		1,2,3,7,8-PCDF			<0.00055			µg/L		
		Pentachloroethane			<10			µg/L		
		Pentachloronitrobenzene			<10			µg/L		
		Pentachlorophenol			<10			µg/L		
•		pH	5.3	6.1	6.0	6.3	J	pH	WA	0
		Phenacetin			<10			µg/L		
		Phenanthrene			<10			µg/L		
		Phenol			<10			µg/L		
		Phenols	< 5.0					µg/L		
		p-Phenylenediamine			<10			µg/L		
		Phorate			<0.10			µg/L		
		2-Picoline			<10			µg/L		
		Potassium, total recoverable	< 500					µg/L		
		Pronamid			<10			µg/L		
		Propionitrile			<200			µg/L		
		Pyrene			<10			µg/L		
		Pyridine			<10			µg/L		
		Radium-226				5.3E-01		pCi/L	TM	0
		Radium-228				1.3E + 00		pCi/L	TM	0
		Radium, total alpha-emitting	< 1.0E + 00	< 1.0E + 00	1.4E + 00	1.4E + 00		pCi/L	GE	0
		Safrole			<10			µg/L		

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Well AMB 7A continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Selenium, total recoverable	<2.0		<2.0			µg/L		
		Silica, total recoverable	12,800					µg/L		
		Silver, total recoverable	<2.0	<2.0	<2.0	<2.0		µg/L	GE	0
		Sodium, total recoverable	2,040					µg/L		
		Specific conductance	32	30	30	30		µS/cm	GE	0
		Styrene			<1.0			µg/L		
		Sulfate	1,120					µg/L		
		Sulfide			<1,000			µg/L		
		Sulfotep			<10			µg/L		
		1,2,4,5-Tetrachlorobenzene			<10			µg/L		
		2,3,7,8-TCDD			<0.00045			µg/L		
		2,3,7,8-TCDF			<0.00040			µg/L		
		Tetrachlorodibenzo-p-dioxin isomers			<0.00045			µg/L		
		Tetrachlorodibenzo-p-furan isomers			<0.00040			µg/L		
		1,1,1,2-Tetrachloroethane			<1.0			µg/L		
		1,1,2,2-Tetrachloroethane	<5.0	<5.0	<1.0	<1.0		µg/L	GE	0
■		Tetrachloroethylene	16	14	12	11		µg/L	WA	2
		2,3,4,6-Tetrachlorophenol			<10			µg/L		
		Thallium, total recoverable			<2.0			µg/L		
		Thionazin			<10			µg/L		
		Tin, total recoverable			<2.0			µg/L		
		Toluene	<5.0	<5.0	<1.0	<1.0		µg/L	GE	0
		o-Toluidine			<10			µg/L		
		Total dissolved solids	30,000	29,000	36,000	72,000		µg/L	WA	0
		Total organic carbon	<1,000	<1,000	<1,000	<1,000		µg/L	GE	0
		Total organic halogens	185	136	113	213		µg/L	WA	2
		Total phosphates (as P)	<50					µg/L		
		Toxaphene	<0.24		<0.24			µg/L		
		2,4,5-TP (Silvex)	<0.090		<0.090			µg/L		
		1,2,4-Trichlorobenzene			<10			µg/L		
		1,1,1-Trichloroethane	<5.0	<5.0	<1.0	<1.0		µg/L	GE	0
		1,1,2-Trichloroethane	<5.0	<5.0	<1.0	<1.0		µg/L	GE	0
■		Trichloroethylene	268	298	312	311	L	µg/L	WA	2
		Trichlorofluoromethane	<5.0	<5.0	<1.0	<1.0		µg/L	GE	0
		2,4,5-Trichlorophenol			<10			µg/L		
		2,4,6-Trichlorophenol			<10			µg/L		
		2,4,5-T			<0.090			µg/L		
		1,2,3-Trichloropropane			<1.0			µg/L		
		1,3,5-Trinitrobenzene			<10			µg/L		
		Tritium	<7.0E-01					pCi/mL		
		Vanadium, total recoverable			<8.0			µg/L		
		Vinyl acetate			<1.0			µg/L		
		Xylenes			<2.0			µg/L		
		Zinc, total recoverable			3.9			µg/L		

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WELL AMB 7B

SRS Coord.	Lat/Longitude	Screen Zone Elevation	Top of Casing	Casing	Pump	Screen Zone
N103972.0 E51590.3	33.339885 °N 81.732961 °W	162.9-152.9 ft msl	373 ft msl	4" PVC	S	LL

SAMPLE DATE	02/14/93	05/01/93	07/07/93	11/12/93
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FIELD DATA

Analyte	1Q93	2Q93	3Q93	4Q93	Unit
Water elevation	224.2	223.8	224.5	224.2	ft msl
Depth to water	148.8	149.2	148.5	148.8	ft
pH	5.2	5.0	4.9	4.9	pH
Sp. conductance	29	31	32	32	µS/cm
Water temperature	18.0	19.0	19.4	18.7	°C
Alkalinity as CaCO ₃	1	1	1	1	mg/L
Turbidity	0	1	0	1	NTU
Volume purged	4.1	5.0	3.2	3.5	Well vol.
Sampling code					

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Acenaphthene			<10			µg/L		
		Acenaphthylene			<10			µg/L		
		Acetone			<100			µg/L		
		Acetonitrile (Methyl cyanide)			<1.0			µg/L		
		Acetophenone			<10			µg/L		
		2-Acetylaminofluorene			<10			µg/L		
		Acrolein			<20			µg/L		
		Acrylonitrile			<20			µg/L		
		Aldrin			<0.050			µg/L		
		Allyl chloride			<50			µg/L		
		Aluminum, total recoverable	22		<20			µg/L		
		4-Aminobiphenyl			<10			µg/L		
		Aniline			<10			µg/L		
		Anthracene			<10			µg/L		
		Antimony, total recoverable			<2.0			µg/L		
		Aramite			<10			µg/L		
		Arsenic, total recoverable	<2.0		<2.0			µg/L		
		Barium, total recoverable	<3.0		<3.0			µg/L		
		Benzene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		alpha-Benzene hexachloride			<0.050			µg/L		
		beta-Benzene hexachloride			<0.050			µg/L		
		delta-Benzene hexachloride			<0.050			µg/L		
		Benzo(a)anthracene			<10			µg/L		
		Benzo(b)fluoranthene			<10			µg/L		
		Benzo(k)fluoranthene			<10			µg/L		
		Benzo(g,h,i)perylene			<10			µg/L		
		Benzo(a)pyrene			<10			µg/L		
		Benzyl alcohol			<10			µg/L		
		Beryllium, total recoverable			<3.0			µg/L		
		Bis(2-chloroethoxy) methane			<10			µg/L		
		Bis(2-chloroethyl) ether			<10			µg/L		
		Bis(2-chloroisopropyl) ether			<10			µg/L		
		Bis(2-ethylhexyl) phthalate			<10			µg/L		
		Bromodichloromethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Bromoform	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Bromomethane (Methyl bromide)	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		4-Bromophenyl phenyl ether			<10			µg/L		
		Butylbenzyl phthalate			<10			µg/L		
		2-sec-Butyl-4,6-dinitrophenol			<10			µg/L		

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Well AMB 7B continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Cadmium, total recoverable	3.1		<2.0			µg/L		
		Calcium, total recoverable	179					µg/L		
		Carbon disulfide			<1.0			µg/L		
		Carbon tetrachloride	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chlordane			<0.50			µg/L		
		Chloride	3,900	3,420		3,440		µg/L	GE	0
		4-Chloroaniline			<10			µg/L		
		Chlorobenzene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chlorobenzilate			<10			µg/L		
		4-Chloro-m-cresol			<10			µg/L		
		Chloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chloroethene (Vinyl chloride)	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2-Chloroethyl vinyl ether	<1.0	<1.0	<10	<1.0		µg/L	GE	0
		Chloroform	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chloromethane (Methyl chloride)	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2-Chloronaphthalene			<10			µg/L		
		2-Chlorophenol			<10			µg/L		
		4-Chlorophenyl phenyl ether			<10			µg/L		
		Chloroprene			<200			µg/L		
		Chromium, total recoverable	4.5		<4.0			µg/L		
		Chrysene			<10			µg/L		
		Cobalt, total recoverable			<4.0			µg/L		
		Copper, total recoverable			<4.0			µg/L		
		o-Cresol (2-Methylphenol)			<10			µg/L		
		m-Cresol (3-Methylphenol)			<10			µg/L		
		p-Cresol (4-Methylphenol)			<10			µg/L		
		Cyanide		<5.0	<5.0	<5.0		µg/L	GE	0
		p,p'-DDD			<0.10			µg/L		
		p,p'-DDE			<0.10			µg/L		
		p,p'-DDT			<0.10			µg/L		
		Diallate			<10			µg/L		
		Dibenz(a,h)anthracene			<10			µg/L		
		Dibenzofuran			<10			µg/L		
		Dibromochloromethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,2-Dibromo-3-chloropropane			<1.0			µg/L		
		1,2-Dibromoethane			<20			µg/L		
		Dibromomethane (Methylene bromide)			<1.0			µg/L		
		Di-n-butyl phthalate			<10			µg/L		
		1,2-Dichlorobenzene			<10			µg/L		
		1,3-Dichlorobenzene			<10			µg/L		
		1,4-Dichlorobenzene			<10			µg/L		
		3,3'-Dichlorobenzidine			<10			µg/L		
		trans-1,4-Dichloro-2-butene			<30			µg/L		
		Dichlorodifluoromethane			<1.0			µg/L		
		1,1-Dichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,2-Dichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,1-Dichloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		trans-1,2-Dichloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Dichloromethane (Methylene chloride)	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2,4-Dichlorophenol			<10			µg/L		
		2,6-Dichlorophenol			<10			µg/L		
		2,4-Dichlorophenoxyacetic acid	<0.30		<0.30			µg/L		
		1,2-Dichloropropane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		cis-1,3-Dichloropropene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		trans-1,3-Dichloropropene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Dieldrin			<0.50			µg/L		
		Diethyl phthalate			<10			µg/L		
		Dimethoate			<10			µg/L		
		2,4-Dimethyl phenol			<10			µg/L		
		Dimethyl phthalate			<10			µg/L		
		p-Dimethylaminoazobenzene			<10			µg/L		
		7,12-Dimethylbenz(a)anthracene			<10			µg/L		

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Weil AMB 7B continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		3,3'-Dimethylbenzidine			<10			µg/L		
		a,a-Dimethylphenethylamine			<10			µg/L		
		1,3-Dinitrobenzene			<10			µg/L		
		2,4-Dinitrophenol			<45			µg/L		
		2,4-Dinitrotoluene			<10			µg/L		
		2,6-Dinitrotoluene			<10			µg/L		
		Di-n-octyl phthalate			<10			µg/L		
		1,4-Dioxane			<10			µg/L		
		Diphenylamine			<10			µg/L		
		Disulfoton			<10			µg/L		
		Endosulfan I			<0.10			µg/L		
		Endosulfan II			<0.10			µg/L		
		Endosulfan sulfate			<0.10			µg/L		
		Endrin	<0.0060		<0.0060			µg/L		
		Endrin aldehyde			<0.10			µg/L		
		Ethyl methacrylate			<10			µg/L		
		Ethyl methanesulfonate			<10			µg/L		
		Ethylbenzene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Famphur			<10			µg/L		
		Fluoranthene			<10			µg/L		
		Fluorene			<10			µg/L		
		Fluoride	<100	<100		<100		µg/L	GE	0
		Gross alpha	<6.0E-01					pCi/L		
		Heptachlor			<0.050			µg/L		
		Heptachlor epoxide			<0.050			µg/L		
		1,2,3,4,6,7,8-HPCDD			<0.00065			µg/L		
		Heptachlorodibenzo-p-dioxin isomers			<0.00065			µg/L		
		1,2,3,4,6,7,8-HPCDF			<0.00045			µg/L		
		Heptachlorodibenzo-p-furan isomers			<0.00045			µg/L		
		Hexachlorobenzene			<10			µg/L		
		Hexachlorobutadiene			<10			µg/L		
		Hexachlorocyclopentadiene			<10			µg/L		
		1,2,3,4,7,8-HxCDD			<0.00045			µg/L		
		Hexachlorodibenzo-p-dioxin isomers			<0.00045			µg/L		
		1,2,3,4,7,8-HxCDF			<0.00040			µg/L		
		Hexachlorodibenzo-p-furan isomers			<0.00040			µg/L		
		Hexachloroethane			<10			µg/L		
		Hexachlorophene			<10			µg/L		
		Hexachloropropene			<10			µg/L		
		2-Hexanone			<1.0			µg/L		
		Indeno[1,2,3-c,d]pyrene			<10			µg/L		
		Iodomethane (Methyl iodide)			<15			µg/L		
		Iron, total recoverable	13		4.5			µg/L		
		Isobutyl alcohol			<100			µg/L		
		Isodrin			<10			µg/L		
		Isophorone			<10			µg/L		
		Isosafrole			<10			µg/L		
		Kepone			<10			µg/L		
		Lead, total recoverable	<3.0		<3.0			µg/L		
		Lindane	<0.0050		<0.0050			µg/L		
		Magnesium, total recoverable	100					µg/L		
		Manganese, total recoverable	2.2		<2.0			µg/L		
		Mercury, total recoverable	<0.20		<0.20			µg/L		
		Methacrylonitrile			<50			µg/L		
		Methapyrene			<10			µg/L		
		Methoxychlor	<0.50		<0.50			µg/L		
		2-Methyl-4,6-dinitrophenol			<10			µg/L		
		Methyl ethyl ketone			<1.0			µg/L		
		Methyl isobutyl ketone			<1.0			µg/L		
		Methyl methacrylate			<10			µg/L		
		Methyl methanesulfonate			<10			µg/L		
		3-Methylcholanthrene			<10			µg/L		

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Well AMB 7B continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		2-Methylnaphthalene			<10			µg/L		
		Naphthalene			<10			µg/L		
		1,4-Naphthoquinone			<10			µg/L		
		1-Naphthylamine			<10			µg/L		
		2-Naphthylamine			<10			µg/L		
		Nickel, total recoverable		<4.0	<4.0	<4.0		µg/L	GE	0
		Nitrate as nitrogen	281					µg/L		
		Nitrate-nitrite as nitrogen	290	320		330		µg/L	GE	0
		o-Nitroaniline			<10			µg/L		
		m-Nitroaniline			<10			µg/L		
		p-Nitroaniline			<10			µg/L		
		Nitrobenzene			<10			µg/L		
		2-Nitrophenol			<10			µg/L		
		4-Nitrophenol			<10			µg/L		
		4-Nitroquinoline-1-oxide			<10			µg/L		
		N-Nitrosodi-n-butylamine			<10			µg/L		
		N-Nitrosodiethylamine			<10			µg/L		
		N-Nitrosodimethylamine			<10			µg/L		
		N-Nitrosodiphenylamine			<10			µg/L		
		N-Nitrosodipropylamine			<10			µg/L		
		N-Nitrosomethylethylamine			<10			µg/L		
		N-Nitrosomorpholine			<10			µg/L		
		N-Nitrosopiperidine			<10			µg/L		
		N-Nitrosopyrrolidine			<10			µg/L		
		5-Nitro-o-toluidine			<10			µg/L		
		Nonvolatile beta	<8.0E-01					pCi/L		
		O,O,O-Triethyl phosphorothioate			<10			µg/L		
		Octachlorodibenzo-p-dioxin isomers			<0.0010			µg/L		
		Octachlorodibenzo-p-furan isomers			<0.0010			µg/L		
		Parathion			<0.050			µg/L		
		Parathion methyl			<0.050			µg/L		
		PCB 1016			<0.50			µg/L		
		PCB 1221			<0.50			µg/L		
		PCB 1232			<0.50			µg/L		
		PCB 1242			<0.50			µg/L		
		PCB 1248			<0.50			µg/L		
		PCB 1254			<0.50			µg/L		
		PCB 1260			<0.50			µg/L		
		Pentachlorobenzene			<10			µg/L		
		1,2,3,7,8-PCDD			<0.00055			µg/L		
		Pentachlorodibenzo-p-dioxin isomers			<0.00055			µg/L		
		1,2,3,7,8-PCDF			<0.00055			µg/L		
		Pentachloroethane			<10			µg/L		
		Pentachloronitrobenzene			<10			µg/L		
		Pentachlorophenol			<10			µg/L		
•		pH	5.3	5.3	5.2	5.4	J	pH	GE	0
		Phenacetin			<10			µg/L		
		Phenanthrene			<10			µg/L		
		Phenol			<10			µg/L		
		Phenols	<5.0					µg/L		
		p-Phenylenediamine			<10			µg/L		
		Phorate			<0.10			µg/L		
		2-Picoline			<10			µg/L		
		Potassium, total recoverable	646					µg/L		
		Pronamid			<10			µg/L		
		Propionitrile			<200			µg/L		
		Pyrene			<10			µg/L		
		Pyridine			<10			µg/L		
		Radium-226	<2.0E-01					pCi/L		
		Radium-228	<3.0E-01					pCi/L		
		Radium, total alpha-emitting	<1.0E+00	1.2E+00	1.2E+00	<1.0E+00		pCi/L	GE	0
		Safrole			<10			µg/L		

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Well AMB 7B continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Selenium, total recoverable	<2.0		<2.0			µg/L		
		Silica, total recoverable	7,910					µg/L		
		Silver, total recoverable	2.1	<2.0	<2.0	<2.0		µg/L	GE	0
		Sodium, total recoverable	6,000					µg/L		
		Specific conductance	30	28	29	27		µS/cm	GE	0
		Styrene			<1.0			µg/L		
		Sulfate	2,060					µg/L		
		Sulfide			<1,000			µg/L		
		Sulfotep			<10			µg/L		
		1,2,4,5-Tetrachlorobenzene			<10			µg/L		
		2,3,7,8-TCDD			<0.00045			µg/L		
		2,3,7,8-TCDF			<0.00040			µg/L		
		Tetrachlorodibenzo-p-dioxin isomers			<0.00045			µg/L		
		Tetrachlorodibenzo-p-furan isomers			<0.00040			µg/L		
		1,1,1,2-Tetrachloroethane			<1.0			µg/L		
		1,1,2,2-Tetrachloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Tetrachloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2,3,4,6-Tetrachlorophenol			<10			µg/L		
		Thallium, total recoverable			<2.0			µg/L		
		Thionazin			<10			µg/L		
		Tin, total recoverable			<2.0			µg/L		
		Toluene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		o-Toluidine			<10			µg/L		
		Total dissolved solids	39,000	18,000	19,000	21,000	V	µg/L	GE	0
		Total organic carbon	<1,000	<1,000	<1,000	1,020		µg/L	GE	0
		Total organic halogens	13	<5.0	35	<5.0		µg/L	GE	0
		Total phosphates (as P)	50					µg/L		
		Toxaphene	<0.24		<0.24			µg/L		
		2,4,5-TP (Silvex)	<0.090		<0.090			µg/L		
		1,2,4-Trichlorobenzene			<10			µg/L		
		1,1,1-Trichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,1,2-Trichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Trichloroethylene	1.2	1.2	1.5	1.9		µg/L	GE	0
		Trichlorofluoromethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2,4,5-Trichlorophenol			<10			µg/L		
		2,4,6-Trichlorophenol			<10			µg/L		
		2,4,5-T			<0.090			µg/L		
		1,2,3-Trichloropropane			<1.0			µg/L		
		1,3,5-Trinitrobenzene			<10			µg/L		
		Tritium	<4.4E-01					pCi/mL		
		Vanadium, total recoverable			<8.0			µg/L		
		Vinyl acetate			<1.0			µg/L		
		Xylenes			<2.0			µg/L		
		Zinc, total recoverable			<2.0			µg/L		

Note: Flagging levels, modifiers, and laboratories are for fourth quarter 1993 data only. See Appendix B for flagging criteria.

● = exceeded holding time for fourth quarter 1993.

■ = exceeded screening level or final primary drinking water standard for fourth quarter 1993.

WELL AMB 8D

SRS Coord.	Lat/Longitude	Screen Zone Elevation	Top of Casing	Casing	Pump	Screen Zone
N103874.7 E51400.5	33.339360 °N 81.733272 °W	240.8-220.8 ft msl	369.6 ft msl	4" PVC	S	M

SAMPLE DATE	02/15/93	05/01/93	07/08/93	10/27/93
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FIELD DATA

Analyte	1Q93	2Q93	3Q93	4Q93	Unit
Water elevation	232.8	232.4	232.9	234.1	ft msl
Depth to water	136.8	137.2	136.7	135.5	ft
pH	5.8	5.6	5.3	5.8	pH
Sp. conductance	64	68	71	64	µS/cm
Water temperature	18.1	19.0	18.5	18.8	°C
Alkalinity as CaCO ₃	17	17	6	15	mg/L
Turbidity	0	1	0	0	NTU
Volume purged	10.6	13.1	13.6	8.8	Well vol.
Sampling code					

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Acenaphthene			<10			µg/L		
		Acenaphthylene			<10			µg/L		
		Acetone			<100			µg/L		
		Acetonitrile (Methyl cyanide)			<1.0			µg/L		
		Acetophenone			<10			µg/L		
		2-Acetylaminofluorene			<10			µg/L		
		Acrolein			<20			µg/L		
		Acrylonitrile			<20			µg/L		
		Aldrin			<0.25			µg/L		
		Allyl chloride			<50			µg/L		
		Aluminum, total recoverable	<20		<20			µg/L		
		4-Aminobiphenyl			<10			µg/L		
		Aniline			<10			µg/L		
		Anthracene			<10			µg/L		
		Antimony, total recoverable			<2.0			µg/L		
		Aramite			<10			µg/L		
		Arsenic, total recoverable	<2.0		<2.0			µg/L		
		Barium, total recoverable	<3.0		<3.0			µg/L		
		Benzene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		alpha-Benzene hexachloride			<0.25			µg/L		
		beta-Benzene hexachloride			<0.25			µg/L		
		delta-Benzene hexachloride			<0.25			µg/L		
		Benzo[a]anthracene			<10			µg/L		
		Benzo[b]fluoranthene			<10			µg/L		
		Benzo[k]fluoranthene			<10			µg/L		
		Benzo[g,h,i]perylene			<10			µg/L		
		Benzo[a]pyrene			<10			µg/L		
		Benzyl alcohol			<10			µg/L		
		Beryllium, total recoverable			<3.0			µg/L		
		Bis(2-chloroethoxy) methane			<10			µg/L		
		Bis(2-chloroethyl) ether			<10			µg/L		
		Bis(2-chloroisopropyl) ether			<10			µg/L		
		Bis(2-ethylhexyl) phthalate			<10			µg/L		
		Bromodichloromethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Bromoform	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Bromomethane (Methyl bromide)	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		4-Bromophenyl phenyl ether			<10			µg/L		
		Butylbenzyl phthalate			<10			µg/L		
		2-sec-Butyl-4,6-dinitrophenol			<10			µg/L		

Note: Flagging levels, modifiers, and laboratories are for fourth quarter 1993 data only. See Appendix B for flagging criteria.

● = exceeded holding time for fourth quarter 1993.

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Well AMB 8D continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Cadmium, total recoverable	<2.0		<2.0			µg/L		
		Calcium, total recoverable	369					µg/L		
		Carbon disulfide			<1.0			µg/L		
		Carbon tetrachloride	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chlordane			<2.5			µg/L		
		Chloride	2,890	2,720		3,000		µg/L	GE	0
		4-Chloroaniline			<10			µg/L		
		Chlorobenzene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chlorobenzilate			<10			µg/L		
		4-Chloro-m-cresol			<10			µg/L		
		Chloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chloroethene (Vinyl chloride)	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2-Chloroethyl vinyl ether	<1.0	<1.0	<10	<1.0		µg/L	GE	0
		Chloroform	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chloromethane (Methyl chloride)	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2-Chloronaphthalene			<10			µg/L		
		2-Chlorophenol			<10			µg/L		
		4-Chlorophenyl phenyl ether			<10			µg/L		
		Chloroprene			<200			µg/L		
		Chromium, total recoverable	<4.0		<4.0			µg/L		
		Chrysene			<10			µg/L		
		Cobalt, total recoverable			<4.0			µg/L		
		Copper, total recoverable			<4.0			µg/L		
		o-Cresol (2-Methylphenol)			<10			µg/L		
		m-Cresol (3-Methylphenol)			<10			µg/L		
		p-Cresol (4-Methylphenol)			<10			µg/L		
		Cyanide		<5.0	<5.0	<5.0		µg/L	GE	0
		p,p'-DDD			<0.50			µg/L		
		p,p'-DDE			<0.50			µg/L		
		p,p'-DDT			<0.50			µg/L		
		Diallate			<10			µg/L		
		Dibenz(a,h)anthracene			<10			µg/L		
		Dibenzofuran			<10			µg/L		
		Dibromochloromethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,2-Dibromo-3-chloropropane			<1.0			µg/L		
		1,2-Dibromoethane			<20			µg/L		
		Dibromomethane (Methylene bromide)			<1.0			µg/L		
		Di-n-butyl phthalate			<10			µg/L		
		1,2-Dichlorobenzene			<10			µg/L		
		1,3-Dichlorobenzene			<10			µg/L		
		1,4-Dichlorobenzene			<10			µg/L		
		3,3'-Dichlorobenzidine			<10			µg/L		
		trans-1,4-Dichloro-2-butene			<30			µg/L		
		Dichlorodifluoromethane			<1.0			µg/L		
		1,1-Dichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,2-Dichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,1-Dichloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		trans-1,2-Dichloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Dichloromethane (Methylene chloride)	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2,4-Dichlorophenol			<10			µg/L		
		2,6-Dichlorophenol			<10			µg/L		
		2,4-Dichlorophenoxyacetic acid	<0.30		<0.30			µg/L		
		1,2-Dichloropropane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		cis-1,3-Dichloropropene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		trans-1,3-Dichloropropene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Dieldrin			<2.5			µg/L		
		Diethyl phthalate			<10			µg/L		
		Dimethoate			<10			µg/L		
		2,4-Dimethyl phenol			<10			µg/L		
		Dimethyl phthalate			<10			µg/L		
		p-Dimethylaminoazobenzene			<10			µg/L		
		7,12-Dimethylbenz(a)anthracene			<10			µg/L		

Note: Flagging levels, modifiers, and laboratories are for fourth quarter 1993 data only. See Appendix B for flagging criteria.

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Well AMB 8D continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		3,3'-Dimethylbenzidine			< 10			µg/L		
		a,a-Dimethylphenethylamine			< 10			µg/L		
		1,3-Dinitrobenzene			< 10			µg/L		
		2,4-Dinitrophenol			< 45			µg/L		
		2,4-Dinitrotoluene			< 10			µg/L		
		2,6-Dinitrotoluene			< 10			µg/L		
		Di-n-octyl phthalate			< 10			µg/L		
		1,4-Dioxane			< 10			µg/L		
		Diphenylamine			< 10			µg/L		
		Disulfoton			< 10			µg/L		
		Endosulfan I			< 0.50			µg/L		
		Endosulfan II			< 0.50			µg/L		
		Endosulfan sulfate			< 0.50			µg/L		
		Endrin	< 0.0060		< 0.030			µg/L		
		Endrin aldehyde			< 0.50			µg/L		
		Ethyl methacrylate			< 10			µg/L		
		Ethyl methanesulfonate			< 10			µg/L		
		Ethylbenzene	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		Famphur			< 10			µg/L		
		Fluoranthene			< 10			µg/L		
		Fluorene			< 10			µg/L		
		Fluoride	< 100	< 100		< 100		µg/L	GE	0
		Gross alpha	< 2.0E + 00		< 2.0E + 00			pCi/L		
		Heptachlor			< 0.25			µg/L		
		Heptachlor epoxide			< 0.25			µg/L		
		1,2,3,4,6,7,8-HPCDD			< 0.00065			µg/L		
		Heptachlorodibenzo-p-dioxin isomers			< 0.00065			µg/L		
		1,2,3,4,6,7,8-HPCDF			< 0.00045			µg/L		
		Heptachlorodibenzo-p-furan isomers			< 0.00045			µg/L		
		Hexachlorobenzene			< 10			µg/L		
		Hexachlorobutadiene			< 10			µg/L		
		Hexachlorocyclopentadiene			< 10			µg/L		
		1,2,3,4,7,8-HXCDD			< 0.00045			µg/L		
		Hexachlorodibenzo-p-dioxin isomers			< 0.00045			µg/L		
		1,2,3,4,7,8-HXCDF			< 0.00040			µg/L		
		Hexachlorodibenzo-p-furan isomers			< 0.00040			µg/L		
		Hexachloroethane			< 10			µg/L		
		Hexachlorophene			< 10			µg/L		
		Hexachloropropene			< 10			µg/L		
		2-Hexanone			< 1.0			µg/L		
		Indeno[1,2,3-c,d]pyrene			< 10			µg/L		
		Iodomethane (Methyl iodide)			< 15			µg/L		
		Iron, total recoverable	7.5		12			µg/L		
		Isobutyl alcohol			< 100			µg/L		
		Isodrin			< 10			µg/L		
		Isophorone			< 10			µg/L		
		Isosafrole			< 10			µg/L		
		Kepone			< 10			µg/L		
		Lead, total recoverable	< 3.0		< 3.0			µg/L		
		Lindane	< 0.0060		< 0.025			µg/L		
		Magnesium, total recoverable	120					µg/L		
		Manganese, total recoverable	< 2.0		< 2.0			µg/L		
		Mercury, total recoverable	< 0.20		< 0.20			µg/L		
		Methacrylonitrile			< 50			µg/L		
		Methacrylene			< 10			µg/L		
		Methoxychlor	< 0.50		< 2.5			µg/L		
		2-Methyl-4,6-dinitrophenol			< 10			µg/L		
		Methyl ethyl ketone			< 1.0			µg/L		
		Methyl isobutyl ketone			< 1.0			µg/L		
		Methyl methacrylate			< 10			µg/L		
		Methyl methanesulfonate			< 10			µg/L		
		3-Methylcholanthrene			< 10			µg/L		

Note: Flagging levels, modifiers, and laboratories are for fourth quarter 1993 data only. See Appendix B for flagging criteria.

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Well AMB 8D continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		2-Methylnaphthalene			<10			µg/L		
		Naphthalene			<10			µg/L		
		1,4-Naphthoquinone			<10			µg/L		
		1-Naphthylamine			<10			µg/L		
		2-Naphthylamine			<10			µg/L		
		Nickel, total recoverable		<4.0	<4.0	<4.0		µg/L	GE	0
		Nitrate-nitrite as nitrogen	560	360		300		µg/L	GE	0
		o-Nitroaniline			<10			µg/L		
		m-Nitroaniline			<10			µg/L		
		p-Nitroaniline			<10			µg/L		
		Nitrobenzene			<10			µg/L		
		2-Nitrophenol			<10			µg/L		
		4-Nitrophenol			<10			µg/L		
		4-Nitroquinoline-1-oxide			<10			µg/L		
		N-Nitrosodi-n-butylamine			<10			µg/L		
		N-Nitrosodimethylamine			<10			µg/L		
		N-Nitrosodimethylamine			<10			µg/L		
		N-Nitrosodiphenylamine			<10			µg/L		
		N-Nitrosodipropylamine			<10			µg/L		
		N-Nitrosomethylethylamine			<10			µg/L		
		N-Nitrosomorpholine			<10			µg/L		
		N-Nitrosopiperidine			<10			µg/L		
		N-Nitrosopyrrolidine			<10			µg/L		
		5-Nitro-o-toluidine			<10			µg/L		
		Nonvolatile beta	<2.0E+00					pCi/L		
		O,O,O-Triethyl phosphorothioate			<10			µg/L		
		Octachlorodibenzo-p-dioxin isomers			<0.0010			µg/L		
		Octachlorodibenzo-p-furan isomers			<0.0010			µg/L		
		Parathion			<0.25			µg/L		
		Parathion methyl			<0.25			µg/L		
		PCB 1016			<2.5			µg/L		
		PCB 1221			<2.5			µg/L		
		PCB 1232			<2.5			µg/L		
		PCB 1242			<2.5			µg/L		
		PCB 1248			<2.5			µg/L		
		PCB 1254			<2.5			µg/L		
		PCB 1260			<2.5			µg/L		
		Pentachlorobenzene			<10			µg/L		
		1,2,3,7,8-PCDD			<0.00055			µg/L		
		Pentachlorodibenzo-p-dioxin isomers			<0.00055			µg/L		
		1,2,3,7,8-PCDF			<0.00055			µg/L		
		Pentachloroethane			<10			µg/L		
		Pentachloronitrobenzene			<10			µg/L		
		Pentachlorophenol			<10			µg/L		
•		pH	5.1	5.9	5.8	5.9	J	pH	GE	0
		Phenacetin			<10			µg/L		
		Phenanthrene			<10			µg/L		
		Phenol			<10			µg/L		
		Phenols	<5.0					µg/L		
		p-Phenylenediamine			<10			µg/L		
		Phorate			<0.50			µg/L		
		2-Picoline			<10			µg/L		
		Potassium, total recoverable	<500					µg/L		
		Pronamid			<10			µg/L		
		Propionitrile			<200			µg/L		
		Pyrene			<10			µg/L		
		Pyridine			<10			µg/L		
		Radium, total alpha-emitting	1.9E+00	2.1E+00	<1.0E+00	<1.0E+00		pCi/L	GE	0
		Safrole			<10			µg/L		
		Selenium, total recoverable	<2.0		<2.0			µg/L		
		Silica, total recoverable	6,070					µg/L		
		Silver, total recoverable	<2.0	<2.0	<2.0	<2.0		µg/L	GE	0

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Well AMB 8D continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Sodium, total recoverable	13,600					µg/L		
		Specific conductance	58	59	68	59		µS/cm	GE	0
		Styrene			<1.0			µg/L		
		Sulfate	4,650					µg/L		
		Sulfide			<1,000			µg/L		
		Sulfotep			<10			µg/L		
		1,2,4,5-Tetrachlorobenzene			<10			µg/L		
		2,3,7,8-TCDD			<0.00045			µg/L		
		2,3,7,8-TCDF			<0.00040			µg/L		
		Tetrachlorodibenzo-p-dioxin isomers			<0.00045			µg/L		
		Tetrachlorodibenzo-p-furan isomers			<0.00040			µg/L		
		1,1,1,2-Tetrachloroethane			<1.0			µg/L		
		1,1,2,2-Tetrachloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Tetrachloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2,3,4,6-Tetrachlorophenol			<10			µg/L		
		Thallium, total recoverable			<2.0			µg/L		
		Thionazin			<10			µg/L		
		Tin, total recoverable			2.2			µg/L		
		Toluene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		o-Toluidine			<10			µg/L		
		Total dissolved solids	41,000	43,000	48,000	40,000	V	µg/L	GE	0
		Total organic carbon	<1,000	<1,000	<1,000	2,100		µg/L	GE	0
		Total organic halogens	8.7	5.4	<5.0	<5.0		µg/L	GE	0
		Total phosphates (as P)	<50					µg/L		
		Toxaphene	<0.24		<1.2			µg/L		
		2,4,5-TP (Silvex)	<0.090		<0.090			µg/L		
		1,2,4-Trichlorobenzene			<10			µg/L		
		1,1,1-Trichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,1,2-Trichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Trichloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Trichlorofluoromethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2,4,5-Trichlorophenol			<10			µg/L		
		2,4,6-Trichlorophenol			<10			µg/L		
		2,4,5-T			<0.090			µg/L		
		1,2,3-Trichloropropane			<1.0			µg/L		
		1,3,5-Trinitrobenzene			<10			µg/L		
		Tritium	<7.0E-01					pCi/mL		
		Vanadium, total recoverable			<8.0			µg/L		
		Vinyl acetate			<1.0			µg/L		
		Xylenes			<2.0			µg/L		
		Zinc, total recoverable			<2.0			µg/L		

Note: Flagging levels, modifiers, and laboratories are for fourth quarter 1993 data only. See Appendix B for flagging criteria.

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WELL AMB 9D

SRS Coord.	Lat/Longitude	Screen Zone Elevation	Top of Casing	Casing	Pump	Screen Zone
N103585.2 E51263.0	33.338496 °N 81.733071 °W	239.7-219.7 ft msl	367.9 ft msl	4" PVC	S	M

SAMPLE DATE	02/15/93	05/01/93	07/07/93	10/27/93
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FIELD DATA

Analyte	1Q93	2Q93	3Q93	4Q93	Unit
Water elevation	233.1	232.4	232.5	234.4	ft msl
Depth to water	134.8	135.5	135.4	133.5	ft
pH	5.7	5.6	5.4	5.7	pH
Sp. conductance	39	44	47	46	µS/cm
Water temperature	17.7	19.2	18.8	18.1	°C
Alkalinity as CaCO ₃	8	9	8	7	mg/L
Turbidity	1	1	0	1	NTU
Volume purged	10.4	7.7	11.6	10.0	Well vol.
Sampling code					

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Acenaphthene			<10			µg/L		
		Acenaphthylene			<10			µg/L		
		Acetone			<100			µg/L		
		Acetonitrile (Methyl cyanide)			<1.0			µg/L		
		Acetophenone			<10			µg/L		
		2-Acetylaminofluorene			<10			µg/L		
		Acrolein			<20			µg/L		
		Acrylonitrile			<20			µg/L		
		Aldrin			<0.050			µg/L		
		Allyl chloride			<50			µg/L		
		Aluminum, total recoverable	<20		<20			µg/L		
		4-Aminobiphenyl			<10			µg/L		
		Aniline			<10			µg/L		
		Anthracene			<10			µg/L		
		Antimony, total recoverable			<2.0			µg/L		
		Aramite			<10			µg/L		
		Arsenic, total recoverable	<2.0		<2.0			µg/L		
		Barium, total recoverable	<3.0		<3.0			µg/L		
		Benzene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		alpha-Benzene hexachloride			<0.050			µg/L		
		beta-Benzene hexachloride			<0.050			µg/L		
		delta-Benzene hexachloride			<0.050			µg/L		
		Benzo(a)anthracene			<10			µg/L		
		Benzo(b)fluoranthene			<10			µg/L		
		Benzo(k)fluoranthene			<10			µg/L		
		Benzo(g,h,i)perylene			<10			µg/L		
		Benzo(e)pyrene			<10			µg/L		
		Benzyl alcohol			<10			µg/L		
		Beryllium, total recoverable			<3.0			µg/L		
		Bis(2-chloroethoxy) methane			<10			µg/L		
		Bis(2-chloroethyl) ether			<10			µg/L		
		Bis(2-chloroisopropyl) ether			<10			µg/L		
		Bis(2-ethylhexyl) phthalate			<10			µg/L		
		Bromodichloromethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Bromoform	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Bromomethane (Methyl bromide)	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		4-Bromophenyl phenyl ether			<10			µg/L		
		Butylbenzyl phthalate			<10			µg/L		
		2-sec-Butyl-4,6-dinitrophenol			<10			µg/L		

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Well AMB 9D continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Cadmium, total recoverable	<2.0		<2.0			µg/L		
		Calcium, total recoverable	357					µg/L		
		Carbon disulfide			<1.0			µg/L		
		Carbon tetrachloride	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chlordane			<0.50			µg/L		
		Chloride	3,060	2,820		3,100		µg/L	GE	0
		4-Chloroaniline			<10			µg/L		
		Chlorobenzene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chlorobenzilate			<10			µg/L		
		4-Chloro-m-cresol			<10			µg/L		
		Chloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chloroethane (Vinyl chloride)	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2-Chloroethyl vinyl ether	<1.0	<1.0	<10	<1.0		µg/L	GE	0
		Chloroform	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chloromethane (Methyl chloride)	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2-Chloronaphthalene			<10			µg/L		
		2-Chlorophenol			<10			µg/L		
		4-Chlorophenyl phenyl ether			<10			µg/L		
		Chloroprene			<200			µg/L		
		Chromium, total recoverable	<4.0		<4.0			µg/L		
		Chrysene			<10			µg/L		
		Cobalt, total recoverable			<4.0			µg/L		
		Copper, total recoverable			7.6			µg/L		
		o-Cresol (2-Methylphenol)			<10			µg/L		
		m-Cresol (3-Methylphenol)			<10			µg/L		
		p-Cresol (4-Methylphenol)			<10			µg/L		
		Cyanide		<5.0	<5.0	<5.0		µg/L	GE	0
		p,p'-DDD			<0.10			µg/L		
		p,p'-DDE			<0.10			µg/L		
		p,p'-DDT			<0.10			µg/L		
		Diallyl			<10			µg/L		
		Dibenz(a,h)anthracene			<10			µg/L		
		Dibenzofuran			<10			µg/L		
		Dibromochloromethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,2-Dibromo-3-chloropropane			<1.0			µg/L		
		1,2-Dibromoethane			<20			µg/L		
		Dibromomethane (Methylene bromide)			<1.0			µg/L		
		Di-n-butyl phthalate			<10			µg/L		
		1,2-Dichlorobenzene			<10			µg/L		
		1,3-Dichlorobenzene			<10			µg/L		
		1,4-Dichlorobenzene			<10			µg/L		
		3,3'-Dichlorobenzidine			<10			µg/L		
		trans-1,4-Dichloro-2-butene			<30			µg/L		
		Dichlorodifluoromethane			<1.0			µg/L		
		1,1-Dichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,2-Dichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,1-Dichloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		trans-1,2-Dichloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Dichloromethane (Methylene chloride)	<1.0	1.5	<1.0	<1.0		µg/L	GE	0
		2,4-Dichlorophenol			<10			µg/L		
		2,6-Dichlorophenol			<10			µg/L		
		2,4-Dichlorophenoxyacetic acid	<0.30		<0.30			µg/L		
		1,2-Dichloropropane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		cis-1,3-Dichloropropene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		trans-1,3-Dichloropropene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Dieldrin			<0.50			µg/L		
		Diethyl phthalate			<10			µg/L		
		Dimethoate			<10			µg/L		
		2,4-Dimethyl phenol			<10			µg/L		
		Dimethyl phthalate			<10			µg/L		
		p-Dimethylaminoazobenzene			<10			µg/L		
		7,12-Dimethylbenz(a)anthracene			<10			µg/L		

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Well AMB 9D continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		3,3'-Dimethylbenzidine			<10			µg/L		
		s,s-Dimethylphenethylamine			<10			µg/L		
		1,3-Dinitrobenzene			<10			µg/L		
		2,4-Dinitrophenol			<45			µg/L		
		2,4-Dinitrotoluene			<10			µg/L		
		2,6-Dinitrotoluene			<10			µg/L		
		Di-n-octyl phthalate			<10			µg/L		
		1,4-Dioxane			<10			µg/L		
		Diphenylamine			<10			µg/L		
		Disulfoton			<10			µg/L		
		Endosulfan I			<0.10			µg/L		
		Endosulfan II			<0.10			µg/L		
		Endosulfan sulfate			<0.10			µg/L		
		Endrin	<0.0060		<0.0060			µg/L		
		Endrin aldehyde			<0.10			µg/L		
		Ethyl methacrylate			<10			µg/L		
		Ethyl methanesulfonate			<10			µg/L		
		Ethylbenzene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Famphur			<10			µg/L		
		Fluoranthene			<10			µg/L		
		Fluorene			<10			µg/L		
		Fluoride	<100	<100		<100		µg/L	GE	0
		Gross alpha	2.3E + 00		<2.0E + 00			pCi/L		
		Heptachlor			<0.050			µg/L		
		Heptachlor epoxide			<0.050			µg/L		
		1,2,3,4,6,7,8-HPCDD			<0.00065			µg/L		
		Heptachlorodibenzo-p-dioxin isomers			<0.00065			µg/L		
		1,2,3,4,6,7,8-HPCDF			<0.00045			µg/L		
		Heptachlorodibenzo-p-furan isomers			<0.00045			µg/L		
		Hexachlorobenzene			<10			µg/L		
		Hexachlorobutadiene			<10			µg/L		
		Hexachlorocyclopentadiene			<10			µg/L		
		1,2,3,4,7,8-HXCDD			<0.00045			µg/L		
		Hexachlorodibenzo-p-dioxin isomers			<0.00045			µg/L		
		1,2,3,4,7,8-HXCDF			<0.00040			µg/L		
		Hexachlorodibenzo-p-furan isomers			<0.00040			µg/L		
		Hexachloroethane			<10			µg/L		
		Hexachlorophene			<10			µg/L		
		Hexachloropropene			<10			µg/L		
		2-Hexanone			<1.0			µg/L		
		Indeno(1,2,3-c,d)pyrene			<10			µg/L		
		Iodomethane (Methyl iodide)			<15			µg/L		
		Iron, total recoverable	12		8.2			µg/L		
		Isobutyl alcohol			<100			µg/L		
		Isodrin			<10			µg/L		
		Isophorone			<10			µg/L		
		Isosafrole			<10			µg/L		
		Kepone			<10			µg/L		
		Lead, total recoverable	<3.0		<3.0			µg/L		
		Lindane	<0.0050		<0.0050			µg/L		
		Magnesium, total recoverable	125					µg/L		
		Manganese, total recoverable	2.4		2.3			µg/L		
		Mercury, total recoverable	<0.20		<0.20			µg/L		
		Methacrylonitrile			<50			µg/L		
		Methapyrene			<10			µg/L		
		Methoxychlor	<0.50		<0.50			µg/L		
		2-Methyl-4,6-dinitrophenol			<10			µg/L		
		Methyl ethyl ketone			<1.0			µg/L		
		Methyl isobutyl ketone			<1.0			µg/L		
		Methyl methacrylate			<10			µg/L		
		Methyl methanesulfonate			<10			µg/L		
		3-Methylcholanthrene			<10			µg/L		

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Well AMB 9D continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		2-Methylnaphthalene			<10			µg/L		
		Naphthalene			<10			µg/L		
		1,4-Naphthoquinone			<10			µg/L		
		1-Naphthylamine			<10			µg/L		
		2-Naphthylamine			<10			µg/L		
		Nickel, total recoverable		<4.0	<4.0	<4.0		µg/L	GE	0
		Nitrate-nitrite as nitrogen	110	140		120		µg/L	GE	0
		o-Nitroaniline			<10			µg/L		
		m-Nitroaniline			<10			µg/L		
		p-Nitroaniline			<10			µg/L		
		Nitrobenzene			<10			µg/L		
		2-Nitrophenol			<10			µg/L		
		4-Nitrophenol			<10			µg/L		
		4-Nitroquinoline-1-oxide			<10			µg/L		
		N-Nitrosodi-n-butylamine			<10			µg/L		
		N-Nitrosodimethylamine			<10			µg/L		
		N-Nitrosodimethylamine			<10			µg/L		
		N-Nitrosodiphenylamine			<10			µg/L		
		N-Nitrosodipropylamine			<10			µg/L		
		N-Nitrosomethylethylamine			<10			µg/L		
		N-Nitrosomorpholine			<10			µg/L		
		N-Nitrosopiperidine			<10			µg/L		
		N-Nitrosopyrrolidine			<10			µg/L		
		5-Nitro-o-toluidine			<10			µg/L		
		Nonvolatile beta	< 2.0E + 00					pCl/L		
		O,O,O-Triethyl phosphorothioate			<10			µg/L		
		Octachlorodibenzo-p-dioxin isomers			<0.0010			µg/L		
		Octachlorodibenzo-p-furan isomers			<0.0010			µg/L		
		Parathion			<0.050			µg/L		
		Parathion methyl			<0.050			µg/L		
		PCB 1018			<0.50			µg/L		
		PCB 1221			<0.50			µg/L		
		PCB 1232			<0.50			µg/L		
		PCB 1242			<0.50			µg/L		
		PCB 1248			<0.50			µg/L		
		PCB 1254			<0.50			µg/L		
		PCB 1260			<0.50			µg/L		
		Pentachlorobenzene			<10			µg/L		
		1,2,3,7,8-PCDD			<0.00055			µg/L		
		Pentachlorodibenzo-p-dioxin isomers			<0.00055			µg/L		
		1,2,3,7,8-PCDF			<0.00055			µg/L		
		Pentachloroethane			<10			µg/L		
		Pentachloronitrobenzene			<10			µg/L		
		Pentachlorophenol			<10			µg/L		
		pH	4.9	5.8	5.6	5.7	J	pH	GE	0
		Phenacetin			<10			µg/L		
		Phenanthrene			<10			µg/L		
		Phenol			<10			µg/L		
		Phenols	<5.0					µg/L		
		p-Phenylenediamine			<10			µg/L		
		Phorate			<0.10			µg/L		
		2-Picoline			<10			µg/L		
		Potassium, total recoverable	<500					µg/L		
		Pronamid			<10			µg/L		
		Propionitrile			<200			µg/L		
		Pyrene			<10			µg/L		
		Pyridine			<10			µg/L		
		Radium, total alpha-emitting	2.1E + 00	<1.0E + 00	2.6E + 00	1.3E + 00		pCi/L	GE	0
		Safrole			<10			µg/L		
		Selenium, total recoverable	<2.0		<2.0			µg/L		
		Silica, total recoverable	6,700					µg/L		
		Silver, total recoverable	<2.0	<2.0	<2.0	<2.0		µg/L	GE	0

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2 of 3

Well AMB 9D continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Sodium, total recoverable	7,450		40	42		µg/L		
		Specific conductance	38	42				µS/cm	GE	0
		Styrene			<1.0			µg/L		
		Sulfate	3,100					µg/L		
		Sulfide			<1,000			µg/L		
		Sulfotep			<10			µg/L		
		1,2,4,5-Tetrachlorobenzene			<10			µg/L		
		2,3,7,8-TCDD			<0.00045			µg/L		
		2,3,7,8-TCDF			<0.00040			µg/L		
		Tetrachlorodibenzo-p-dioxin isomers			<0.00045			µg/L		
		Tetrachlorodibenzo-p-furan isomers			<0.00040			µg/L		
		1,1,1,2-Tetrachloroethane			<1.0			µg/L		
		1,1,1,2-Tetrachloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Tetrachloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2,3,4,6-Tetrachlorophenol			<10			µg/L		
		Thallium, total recoverable			<2.0			µg/L		
		Thionazin			<10			µg/L		
		Tin, total recoverable			<2.0			µg/L		
		Toluene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		o-Toluidine			<10			µg/L		
		Total dissolved solids	26,000	25,000	33,000	35,000	V	µg/L	GE	0
		Total organic carbon	<1,000	<1,000	<1,000	1,570		µg/L	GE	0
		Total organic halogens	5.6	<5.0	<5.0	<5.0		µg/L	GE	0
		Total phosphates (as P)	<50					µg/L		
		Toxaphene	<0.24		<0.24			µg/L		
		2,4,5-TP (Silvex)	<0.090		<0.090			µg/L		
		1,2,4-Trichlorobenzene			<10			µg/L		
		1,1,1-Trichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,1,2-Trichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Trichloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Trichlorofluoromethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2,4,5-Trichlorophenol			<10			µg/L		
		2,4,6-Trichlorophenol			<10			µg/L		
		2,4,5-T			<0.090			µg/L		
		1,2,3-Trichloropropane			<1.0			µg/L		
		1,3,5-Trinitrobenzene			<10			µg/L		
		Tritium	<7.0E-01					pCi/mL		
		Vanadium, total recoverable			<8.0			µg/L		
		Vinyl acetate			<1.0			µg/L		
		Xylenes			<2.0			µg/L		
		Zinc, total recoverable			9.1			µg/L		

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WELL AMB 10A

SRS Coord.	Lat/Longitude	Screen Zone Elevation	Top of Casing	Casing	Pump	Screen Zone
N103326.4 E51410.0	33.338163 °N 81.732180 °W	111.4-106.4 ft msl	366.5 ft msl	4" PVC	S	MCBC

SAMPLE DATE	02/14/93	04/23/93	07/16/93	11/21/93
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FIELD DATA

Analyte	1Q93	2Q93	3Q93	4Q93	Unit
Water elevation	218.2	217.4	217.5	219.3	ft msl
Depth to water	148.3	149.1	149.0	147.3	ft
pH	11.9	11.4	11.0	12.1	pH
Sp. conductance	1058	430	453	910	µS/cm
Water temperature	15.0	18.6	20.2	16.7	°C
Alkalinity as CaCO ₃	148	97	126	203	mg/L
Turbidity	19	15	11	17	NTU
Volume purged	1.0	0.9	0.9	0.8	Well vol.
Sampling code	X	X	X	X	

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Acenaphthene			<10			µg/L		
		Acenaphthylene			<10			µg/L		
		Acetone			<100			µg/L		
		Acetonitrile (Methyl cyanide)			<1.0			µg/L		
		Acetophenone			<10			µg/L		
		2-Acetylaminofluorene			<10			µg/L		
		Acrolein			<20			µg/L		
		Acrylonitrile			<20			µg/L		
		Aldrin			<0.050			µg/L		
		Allyl chloride			<50			µg/L		
		Aluminum, total recoverable	1,500		762			µg/L		
		4-Aminobiphenyl			<10			µg/L		
		Aniline			<10			µg/L		
		Anthracene			<10			µg/L		
		Antimony, total recoverable			<2.0			µg/L		
		Aramite			<10			µg/L		
		Arsenic, total recoverable	<2.0		<2.0			µg/L		
		Barium, total recoverable	117		51			µg/L		
		Benzene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		alpha-Benzene hexachloride			<0.050			µg/L		
		beta-Benzene hexachloride			<0.050			µg/L		
		delta-Benzene hexachloride			<0.050			µg/L		
		Benzo(a)anthracene			<10			µg/L		
		Benzo(b)fluoranthene			<10			µg/L		
		Benzo(k)fluoranthene			<10			µg/L		
		Benzo(g,h,i)perylene			<10			µg/L		
		Benzo(a)pyrene			<10			µg/L		
		Benzyl alcohol			<10			µg/L		
		Beryllium, total recoverable			<3.0			µg/L		
		Bis(2-chloroethoxy) methane			<10			µg/L		
		Bis(2-chloroethyl) ether			<10			µg/L		
		Bis(2-chloroisopropyl) ether			<10			µg/L		
		Bis(2-ethylhexyl) phthalate			<10			µg/L		
		Bromodichloromethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Bromoform	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Bromomethane (Methyl bromide)	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		4-Bromophenyl phenyl ether			<10			µg/L		
		Butylbenzyl phthalate			<10			µg/L		
		2-sec-Butyl-4,6-dinitrophenol			<10			µg/L		

Note: Flagging levels, modifiers, and laboratories are for fourth quarter 1993 data only. See Appendix B for flagging criteria.

● = exceeded holding time for fourth quarter 1993.

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Well AMB 10A continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Cadmium, total recoverable	<8.0		<2.0			µg/L		
		Calcium, total recoverable	76,800					µg/L		
		Carbon disulfide			<1.0			µg/L		
		Carbon tetrachloride	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chlordane			<0.50			µg/L		
		Chloride	2,600	2,610		2,240		µg/L	GE	0
		4-Chloroaniline			<10			µg/L		
		Chlorobenzene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chlorobenzilate			<10			µg/L		
		4-Chloro-m-cresol			<10			µg/L		
		Chloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chloroethene (Vinyl chloride)	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2-Chloroethyl vinyl ether	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chloroform	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chloromethane (Methyl chloride)	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2-Chloronaphthalene			<10			µg/L		
		2-Chlorophenol			<10			µg/L		
		4-Chlorophenyl phenyl ether			<10			µg/L		
		Chloroprene			<200			µg/L		
		Chromium, total recoverable	<16		4.5			µg/L		
		Chrysene			<10			µg/L		
		Cobalt, total recoverable			<4.0			µg/L		
		Copper, total recoverable			<4.0			µg/L		
		o-Cresol (2-Methylphenol)			<10			µg/L		
		m-Cresol (3-Methylphenol)			<10			µg/L		
		p-Cresol (4-Methylphenol)			<10			µg/L		
		Cyanide		<5.0	<5.0	<5.0		µg/L	GE	0
		p,p'-DDD			<0.10			µg/L		
		p,p'-DDE			<0.10			µg/L		
		p,p'-DDT			<0.10			µg/L		
		Diallate			<10			µg/L		
		Dibenz[a,h]anthracene			<10			µg/L		
		Dibenzofuran			<10			µg/L		
		Dibromochloromethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,2-Dibromo-3-chloropropane			<1.0			µg/L		
		1,2-Dibromoethane			<20			µg/L		
		Dibromomethane (Methylene bromide)			<1.0			µg/L		
		Di-n-butyl phthalate			<10			µg/L		
		1,2-Dichlorobenzene			<10			µg/L		
		1,3-Dichlorobenzene			<10			µg/L		
		1,4-Dichlorobenzene			<10			µg/L		
		3,3'-Dichlorobenzidine			<10			µg/L		
		trans-1,4-Dichloro-2-butene			<30			µg/L		
		Dichlorodifluoromethane			<1.0			µg/L		
		1,1-Dichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,2-Dichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,1-Dichloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		trans-1,2-Dichloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Dichloromethane (Methylene chloride)	<1.0	<1.0	<1.0	1.3	JV	µg/L	GE	0
		2,4-Dichlorophenol			<10			µg/L		
		2,6-Dichlorophenol			<10			µg/L		
		2,4-Dichlorophenoxyacetic acid	<0.30		<0.30			µg/L		
		1,2-Dichloropropane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		cis-1,3-Dichloropropene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		trans-1,3-Dichloropropene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Dieldrin			<0.50			µg/L		
		Diethyl phthalate			<10			µg/L		
		Dimethoate			<10			µg/L		
		2,4-Dimethyl phenol			<10			µg/L		
		Dimethyl phthalate			<10			µg/L		
		p-Dimethylaminoazobenzene			<10			µg/L		
		7,12-Dimethylbenz[a]anthracene			<10			µg/L		

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Well AMB 10A continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		3,3'-Dimethylbenzidine			<10			µg/L		
		a,a-Dimethylphenethylamine			<10			µg/L		
		1,3-Dinitrobenzene			<10			µg/L		
		2,4-Dinitrophenol			<45			µg/L		
		2,4-Dinitrotoluene			<10			µg/L		
		2,6-Dinitrotoluene			<10			µg/L		
		Di-n-octyl phthalate			<10			µg/L		
		1,4-Dioxane			<10			µg/L		
		Diphenylamine			<10			µg/L		
		Disulfoton			<10			µg/L		
		Endosulfan I			<0.10			µg/L		
		Endosulfan II			<0.10			µg/L		
		Endosulfan sulfate			<0.10			µg/L		
		Endrin	<0.0060		<0.0060			µg/L		
		Endrin aldehyde			<0.10			µg/L		
		Ethyl methacrylate			<10			µg/L		
		Ethyl methanesulfonate			<10			µg/L		
		Ethylbenzene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Famphur			<10			µg/L		
		Fluoranthene			<10			µg/L		
		Fluorene			<10			µg/L		
		Fluoride	145	137		119		µg/L	GE	0
		Gross alpha	2.3E + 00					pCi/L		
		Heptachlor			<0.050			µg/L		
		Heptachlor epoxide			<0.050			µg/L		
		1,2,3,4,6,7,8-HPCDD			<0.00065			µg/L		
		Heptachlorodibenzo-p-dioxin isomers			<0.00065			µg/L		
		1,2,3,4,6,7,8-HPCDF			<0.00045			µg/L		
		Heptachlorodibenzo-p-furan isomers			<0.00045			µg/L		
		Hexachlorobenzene			<10			µg/L		
		Hexachlorobutadiene			<10			µg/L		
		Hexachlorocyclopentadiene			<10			µg/L		
		1,2,3,4,7,8-HxCDD			<0.00045			µg/L		
		Hexachlorodibenzo-p-dioxin isomers			<0.00045			µg/L		
		1,2,3,4,7,8-HxCDF			<0.00040			µg/L		
		Hexachlorodibenzo-p-furan isomers			<0.00040			µg/L		
		Hexachloroethane			<10			µg/L		
		Hexachlorophene			<10			µg/L		
		Hexachloropropene			<10			µg/L		
		2-Hexanone			<1.0			µg/L		
		Indeno(1,2,3-c,d)pyrene			<10			µg/L		
		Iodomethane (Methyl iodide)			<15			µg/L		
		Iron, total recoverable	30		31			µg/L		
		Isobutyl alcohol			<100			µg/L		
		Isodrin			<10			µg/L		
		Isophorone			<10			µg/L		
		Isosafrole			<10			µg/L		
		Kepona			<10			µg/L		
		Lead, total recoverable	<3.0		<3.0			µg/L		
		Lindane	<0.0050		<0.0050			µg/L		
		Magnesium, total recoverable	27					µg/L		
		Manganese, total recoverable	<8.0		<2.0			µg/L		
		Mercury, total recoverable	<0.20		<0.20			µg/L		
		Methacrylonitrile			<50			µg/L		
		Methapyrilene			<10			µg/L		
		Methoxychlor	<0.50		<0.50			µg/L		
		2-Methyl-4,6-dinitrophenol			<10			µg/L		
		Methyl ethyl ketone			<1.0			µg/L		
		Methyl isobutyl ketone			<1.0			µg/L		
		Methyl methacrylate			<10			µg/L		
		Methyl methanesulfonate			<10			µg/L		
		3-Methylcholanthrene			<10			µg/L		

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Well AMB 10A continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		2-Methylnaphthalene			<10			µg/L		
		Naphthalene			<10			µg/L		
		1,4-Naphthoquinone			<10			µg/L		
		1-Naphthylamine			<10			µg/L		
		2-Naphthylamine			<10			µg/L		
		Nickel, total recoverable		<4.0	<4.0	<4.0		µg/L	GE	0
		Nitrate-nitrite as nitrogen	70	180		5,450		µg/L	GE	1
		o-Nitroaniline			<10			µg/L		
		m-Nitroaniline			<10			µg/L		
		p-Nitroaniline			<10			µg/L		
		Nitrobenzene			<10			µg/L		
		2-Nitrophenol			<10			µg/L		
		4-Nitrophenol			<10			µg/L		
		4-Nitroquinoline-1-oxide			<10			µg/L		
		N-Nitrosodi-n-butylamine			<10			µg/L		
		N-Nitrosodiethylamine			<10			µg/L		
		N-Nitrosodimethylamine			<10			µg/L		
		N-Nitrosodiphenylamine			<10			µg/L		
		N-Nitrosodipropylamine			<10			µg/L		
		N-Nitrosomethylethylamine			<10			µg/L		
		N-Nitrosomorpholine			<10			µg/L		
		N-Nitrosopiperidine			<10			µg/L		
		N-Nitrosopyrrolidine			<10			µg/L		
		5-Nitro-o-toluidine			<10			µg/L		
		Nonvolatile beta	1.3E+01					pCi/L		
		O,O,O-Triethyl phosphorothioate			<10			µg/L		
		Octachlorodibenzo-p-dioxin isomers			<0.0010			µg/L		
		Octachlorodibenzo-p-furan isomers			<0.0010			µg/L		
		Parathion			<0.050			µg/L		
		Parathion methyl			<0.050			µg/L		
		PCB 1016			<0.50			µg/L		
		PCB 1221			<0.50			µg/L		
		PCB 1232			<0.50			µg/L		
		PCB 1242			<0.50			µg/L		
		PCB 1248			<0.50			µg/L		
		PCB 1254			<0.50			µg/L		
		PCB 1260			<0.50			µg/L		
		Pentachlorobenzene			<10			µg/L		
		1,2,3,7,8-PCDD			<0.00055			µg/L		
		Pentachlorodibenzo-p-dioxin isomers			<0.00055			µg/L		
		1,2,3,7,8-PCDF			<0.00055			µg/L		
		Pentachloroethane			<10			µg/L		
		Pentachloronitrobenzene			<10			µg/L		
		Pentachlorophenol			<10			µg/L		
•		pH	12	12	11	12	J	pH	GE	2
		Phenacetin			<10			µg/L		
		Phenanthrene			<10			µg/L		
		Phenol			<10			µg/L		
		Phenols	<5.0					µg/L		
		p-Phenylenediamine			<10			µg/L		
		Phorate			<0.10			µg/L		
		2-Picoline			<10			µg/L		
		Potassium, total recoverable	19,700					µg/L		
		Pronamid			<10			µg/L		
		Propionitrile			<200			µg/L		
		Pyrene			<10			µg/L		
		Pyridine			<10			µg/L		
		Radium, total alpha-emitting	<1.0E+00	1.1E+00	1.6E+00	1.0E+00		pCi/L	GE	0
		Safrole			<10			µg/L		
		Selenium, total recoverable	<2.0		<2.0			µg/L		
		Silica, total recoverable	18,100					µg/L		
		Silver, total recoverable	<8.0	<2.0	<2.0	<2.0		µg/L	GE	0

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Well AMB 10A continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Sodium, total recoverable	24,000		450			µg/L		
		Specific conductance	980	465		840		µS/cm	GE	2
		Styrene			<1.0			µg/L		
		Sulfate	8,900					µg/L		
		Sulfide			<1,000			µg/L		
		Sulfotep			<10			µg/L		
		1,2,4,5-Tetrachlorobenzene			<10			µg/L		
		2,3,7,8-TCDD			<0.00045			µg/L		
		2,3,7,8-TCDF			<0.00040			µg/L		
		Tetrachlorodibenzo-p-dioxin isomers			<0.00045			µg/L		
		Tetrachlorodibenzo-p-furan isomers			<0.00040			µg/L		
		1,1,1,2-Tetrachloroethane			<1.0			µg/L		
		1,1,2,2-Tetrachloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Tetrachloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2,3,4,6-Tetrachlorophenol			<10			µg/L		
		Thallium, total recoverable			<2.0			µg/L		
		Thionazin			<10			µg/L		
		Tin, total recoverable			11			µg/L		
		Toluene	2.1	<1.0	<1.0	<1.0		µg/L	GE	0
		o-Toluidine			<10			µg/L		
		Total dissolved solids	304,000	175,000	166,000	248,000	V	µg/L	GE	0
		Total organic carbon	3,030	1,720	1,560	1,420		µg/L	GE	0
		Total organic halogens	19	5.0	5.3	<5.0		µg/L	GE	0
		Total phosphates (as P)	130					µg/L		
		Toxaphene	<0.24		<0.24			µg/L		
		2,4,5-TP (Silvex)	<0.090		<0.090			µg/L		
		1,2,4-Trichlorobenzene			<10			µg/L		
		1,1,1-Trichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,1,2-Trichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Trichloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Trichlorofluoromethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2,4,5-Trichlorophenol			<10			µg/L		
		2,4,6-Trichlorophenol			<10			µg/L		
		2,4,5-T			<0.090			µg/L		
		1,2,3-Trichloropropane			<1.0			µg/L		
		1,3,5-Trinitrobenzene			<10			µg/L		
		Tritium	<7.0E-01					pCi/mL		
		Vanadium, total recoverable			13			µg/L		
		Vinyl acetate			<1.0			µg/L		
		Xylenes			<2.0			µg/L		
		Zinc, total recoverable			<2.0			µg/L		

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WELL AMB 10B

SRS Coord.	Lat/Longitude	Screen Zone Elevation	Top of Casing	Casing	Pump	Screen Zone
N103337.3 E51418.3	33.338201 °N 81.732180 °W	154.3-149.3 ft msl	366.4 ft msl	4" PVC	S	LL

SAMPLE DATE	02/15/93	05/01/93	07/07/93	11/05/93
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FIELD DATA

Analyte	1Q93	2Q93	3Q93	4Q93	Unit
Water elevation	222.3	222.1	222.0	224.1	ft msl
Depth to water	144.1	144.4	144.5	142.3	ft
pH	6.4	6.2	6.0	6.2	pH
Sp. conductance	77	75	71	71	µS/cm
Water temperature	17.7	18.8	18.6	18.0	°C
Alkalinity as CaCO ₃	24	29	23	19	mg/L
Turbidity	1	1	0	0	NTU
Volume purged	4.9	6.1	6.2	6.5	Well vol.
Sampling code					

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Acenaphthene			<10			µg/L		
		Acenaphthylene			<10			µg/L		
		Acetone			<100			µg/L		
		Acetonitrile (Methyl cyanide)			<1.0			µg/L		
		Acetophenone			<10			µg/L		
		2-Acetylaminofluorene			<10			µg/L		
		Acrolein			<20			µg/L		
		Acrylonitrile			<20			µg/L		
		Aldrin			<0.050			µg/L		
		Allyl chloride			<50			µg/L		
		Aluminum, total recoverable	<20		<20			µg/L		
		4-Aminobiphenyl			<10			µg/L		
		Aniline			<10			µg/L		
		Anthracene			<10			µg/L		
		Antimony, total recoverable			<2.0			µg/L		
		Aramite			<10			µg/L		
		Arsenic, total recoverable	<2.0		<2.0			µg/L		
		Barium, total recoverable	17		14			µg/L		
		Benzene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		alpha-Benzene hexachloride			<0.050			µg/L		
		beta-Benzene hexachloride			<0.050			µg/L		
		delta-Benzene hexachloride			<0.050			µg/L		
		Benzo(a)anthracene			<10			µg/L		
		Benzo(b)fluoranthene			<10			µg/L		
		Benzo(k)fluoranthene			<10			µg/L		
		Benzo(g,h,i)perylene			<10			µg/L		
		Benzo(a)pyrene			<10			µg/L		
		Benzyl alcohol			<10			µg/L		
		Beryllium, total recoverable			<3.0			µg/L		
		Bis(2-chloroethoxy) methane			<10			µg/L		
		Bis(2-chloroethyl) ether			<10			µg/L		
		Bis(2-chloroisopropyl) ether			<10			µg/L		
		Bis(2-ethylhexyl) phthalate			<10			µg/L		
		Bromodichloromethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Bromoform	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Bromomethane (Methyl bromide)	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		4-Bromophenyl phenyl ether			<10			µg/L		
		Butylbenzyl phthalate			<10			µg/L		
		2-sec-Butyl-4,6-dinitrophenol			<10			µg/L		

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Well AMB 10B continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Cadmium, total recoverable	<2.0		<2.0			µg/L		
		Calcium, total recoverable	8,820					µg/L		
		Carbon disulfide			<1.0			µg/L		
		Carbon tetrachloride	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chlordane			<0.50			µg/L		
		Chloride	3,960	3,620		3,810		µg/L	GE	0
		4-Chloroaniline			<10			µg/L		
		Chlorobenzene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chlorobenzilate			<10			µg/L		
		4-Chloro-m-cresol			<10			µg/L		
		Chloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chloroethene (Vinyl chloride)	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2-Chloroethyl vinyl ether	<1.0	<1.0	<10	<1.0		µg/L	GE	0
		Chloroform	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chloromethane (Methyl chloride)	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2-Chloronaphthalene			<10			µg/L		
		2-Chlorophenol			<10			µg/L		
		4-Chlorophenyl phenyl ether			<10			µg/L		
		Chloroprene			<200			µg/L		
		Chromium, total recoverable	<4.0		<4.0			µg/L		
		Chrysene			<10			µg/L		
		Cobalt, total recoverable			<4.0			µg/L		
		Copper, total recoverable			<4.0			µg/L		
		o-Cresol (2-Methylphenol)			<10			µg/L		
		m-Cresol (3-Methylphenol)			<10			µg/L		
		p-Cresol (4-Methylphenol)			<10			µg/L		
		Cyanide		<5.0	<5.0	<5.0		µg/L	GE	0
		p,p'-DDD			<0.10			µg/L		
		p,p'-DDE			<0.10			µg/L		
		p,p'-DDT			<0.10			µg/L		
		Diallate			<10			µg/L		
		Dibenz(a,h)anthracene			<10			µg/L		
		Dibenzofuran			<10			µg/L		
		Dibromochloromethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,2-Dibromo-3-chloropropane			<1.0			µg/L		
		1,2-Dibromoethane			<20			µg/L		
		Dibromomethane (Methylene bromide)			<1.0			µg/L		
		Di-n-butyl phthalate			<10			µg/L		
		1,2-Dichlorobenzene			<10			µg/L		
		1,3-Dichlorobenzene			<10			µg/L		
		1,4-Dichlorobenzene			<10			µg/L		
		3,3'-Dichlorobenzidine			<10			µg/L		
		trans-1,4-Dichloro-2-butene			<30			µg/L		
		Dichlorodifluoromethane			<1.0			µg/L		
		1,1-Dichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,2-Dichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,1-Dichloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		trans-1,2-Dichloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Dichloromethane (Methylene chloride)	<1.0	<1.0	<1.0	1.3	JV	µg/L	GE	0
		2,4-Dichlorophenol			<10			µg/L		
		2,6-Dichlorophenol			<10			µg/L		
		2,4-Dichlorophenoxyacetic acid	<0.30		<0.30			µg/L		
		1,2-Dichloropropane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		cis-1,3-Dichloropropene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		trans-1,3-Dichloropropene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Dieldrin			<0.50			µg/L		
		Diethyl phthalate			<10			µg/L		
		Dimethoate			<10			µg/L		
		2,4-Dimethyl phenol			<10			µg/L		
		Dimethyl phthalate			<10			µg/L		
		p-Dimethylaminoazobenzene			<10			µg/L		
		7,12-Dimethylbenz(a)anthracene			<10			µg/L		

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Well AMB 10B continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		3,3'-Dimethylbenzidine			<10			µg/L		
		a,a-Dimethylphenethylamine			<10			µg/L		
		1,3-Dinitrobenzene			<10			µg/L		
		2,4-Dinitrophenol			<45			µg/L		
		2,4-Dinitrotoluene			<10			µg/L		
		2,6-Dinitrotoluene			<10			µg/L		
		Di-n-octyl phthalate			<10			µg/L		
		1,4-Dioxane			<10			µg/L		
		Diphenylamine			<10			µg/L		
		Disulfoton			<10			µg/L		
		Endosulfan I			<0.10			µg/L		
		Endosulfan II			<0.10			µg/L		
		Endosulfan sulfate			<0.10			µg/L		
		Endrin	<0.0060		<0.0060			µg/L		
		Endrin aldehyde			<0.10			µg/L		
		Ethyl methacrylate			<10			µg/L		
		Ethyl methanesulfonate			<10			µg/L		
		Ethylbenzene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Famphur			<10			µg/L		
		Fluoranthene			<10			µg/L		
		Fluorene			<10			µg/L		
		Fluoride	<100	<100		<100		µg/L	GE	0
		Gross alpha	<2.0E+00					pCi/L		
		Heptachlor			<0.050			µg/L		
		Heptachlor epoxide			<0.050			µg/L		
		1,2,3,4,6,7,8-HPCDD			<0.00065			µg/L		
		Heptachlorodibenzo-p-dioxin isomers			<0.00065			µg/L		
		1,2,3,4,6,7,8-HPCDF			<0.00045			µg/L		
		Heptachlorodibenzo-p-furan isomers			<0.00045			µg/L		
		Hexachlorobenzene			<10			µg/L		
		Hexachlorobutadiene			<10			µg/L		
		Hexachlorocyclopentadiene			<10			µg/L		
		1,2,3,4,7,8-HXCDD			<0.00045			µg/L		
		Hexachlorodibenzo-p-dioxin isomers			<0.00045			µg/L		
		1,2,3,4,7,8-HXCDF			<0.00040			µg/L		
		Hexachlorodibenzo-p-furan isomers			<0.00040			µg/L		
		Hexachloroethane			<10			µg/L		
		Hexachlorophene			<10			µg/L		
		Hexachloropropene			<10			µg/L		
		2-Hexanone			<1.0			µg/L		
		Indeno[1,2,3-c,d]pyrene			<10			µg/L		
		Iodomethane (Methyl iodide)			<15			µg/L		
		Iron, total recoverable	4.5		<4.0			µg/L		
		Isobutyl alcohol			<100			µg/L		
		Iodrin			<10			µg/L		
		Isophorone			<10			µg/L		
		Isosafrole			<10			µg/L		
		Kepon			<10			µg/L		
		Lead, total recoverable	<3.0		<3.0			µg/L		
		Lindane	<0.0050		<0.0050			µg/L		
		Magnesium, total recoverable	355					µg/L		
		Manganese, total recoverable	21		18			µg/L		
		Mercury, total recoverable	<0.20		<0.20			µg/L		
		Methacrylonitrile			<50			µg/L		
		Methapyrene			<10			µg/L		
		Methoxychlor	<0.50		<0.50			µg/L		
		2-Methyl-4,6-dinitrophenol			<10			µg/L		
		Methyl ethyl ketone			<1.0			µg/L		
		Methyl isobutyl ketone			<1.0			µg/L		
		Methyl methacrylate			<10			µg/L		
		Methyl methanesulfonate			<10			µg/L		
		3-Methylcholanthrene			<10			µg/L		

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Well AMB 10B continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		2-Methylnaphthalene			<10			µg/L		
		Naphthalene			<10			µg/L		
		1,4-Naphthoquinone			<10			µg/L		
		1-Naphthylamine			<10			µg/L		
		2-Naphthylamine			<10			µg/L		
		Nickel, total recoverable		<4.0	<4.0	<4.0		µg/L	GE	0
		Nitrate-nitrite as nitrogen	100	120		100		µg/L	GE	0
		o-Nitroaniline			<10			µg/L		
		m-Nitroaniline			<10			µg/L		
		p-Nitroaniline			<10			µg/L		
		Nitrobenzene			<10			µg/L		
		2-Nitrophenol			<10			µg/L		
		4-Nitrophenol			<10			µg/L		
		4-Nitroquinoline-1-oxide			<10			µg/L		
		N-Nitrosodi-n-butylamine			<10			µg/L		
		N-Nitrosodiethylamine			<10			µg/L		
		N-Nitrosodimethylamine			<10			µg/L		
		N-Nitrosodiphenylamine			<10			µg/L		
		N-Nitrosodipropylamine			<10			µg/L		
		N-Nitrosomethylethylamine			<10			µg/L		
		N-Nitrosomorpholine			<10			µg/L		
		N-Nitrosopiperidine			<10			µg/L		
		N-Nitrosopyrrolidine			<10			µg/L		
		5-Nitro-o-toluidine			<10			µg/L		
		Nonvolatile beta	<2.0E+00					pCi/L		
		O,O,O-Triethyl phosphorothioate			<10			µg/L		
		Octachlorodibenzo-p-dioxin isomers			<0.0010			µg/L		
		Octachlorodibenzo-p-furan isomers			<0.0010			µg/L		
		Parathion			<0.050			µg/L		
		Parathion methyl			<0.050			µg/L		
		PCB 1016			<0.50			µg/L		
		PCB 1221			<0.50			µg/L		
		PCB 1232			<0.50			µg/L		
		PCB 1242			<0.50			µg/L		
		PCB 1248			<0.50			µg/L		
		PCB 1254			<0.50			µg/L		
		PCB 1260			<0.50			µg/L		
		Pentachlorobenzene			<10			µg/L		
		1,2,3,7,8-PCDD			<0.00055			µg/L		
		Pentachlorodibenzo-p-dioxin isomers			<0.00055			µg/L		
		1,2,3,7,8-PCDF			<0.00055			µg/L		
		Pentachloroethane			<10			µg/L		
		Pentachloronitrobenzene			<10			µg/L		
		Pentachlorophenol			<10			µg/L		
•		pH	5.4	6.4	6.0	6.3	J	pH	GE	0
		Phenacetin			<10			µg/L		
		Phenanthrene			<10			µg/L		
		Phenol			<10			µg/L		
		Phenols	<5.0					µg/L		
		p-Phenylenediamine			<10			µg/L		
		Phorate			<0.10			µg/L		
		2-Picoline			<10			µg/L		
		Potassium, total recoverable	580					µg/L		
		Pronamid			<10			µg/L		
		Propionitrile			<200			µg/L		
		Pyrene			<10			µg/L		
		Pyridine			<10			µg/L		
		Radium, total alpha-emitting	1.1E+00	1.3E+00	1.1E+00	2.7E+00		pCi/L	GE	0
		Safrole			<10			µg/L		
		Selenium, total recoverable	<2.0		<2.0			µg/L		
		Silica, total recoverable	9,170					µg/L		
		Silver, total recoverable	<2.0	<2.0	<2.0	<2.0		µg/L	GE	0

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Well AMB 10B continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Sodium, total recoverable	4,160		60	60		µg/L		
		Specific conductance	60	79	<1.0			µS/cm	GE	0
		Styrene			<1.0			µg/L		
		Sulfate	1,160					µg/L		
		Sulfide			<1,000			µg/L		
		Sulfotep			<10			µg/L		
		1,2,4,5-Tetrachlorobenzene			<10			µg/L		
		2,3,7,8-TCDD			<0.00045			µg/L		
		2,3,7,8-TCDF			<0.00040			µg/L		
		Tetrachlorodibenzo-p-dioxin isomers			<0.00045			µg/L		
		Tetrachlorodibenzo-p-furan isomers			<0.00040			µg/L		
		1,1,1,2-Tetrachloroethane			<1.0			µg/L		
		1,1,2,2-Tetrachloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Tetrachloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2,3,4,6-Tetrachlorophenol			<10			µg/L		
		Thallium, total recoverable			<2.0			µg/L		
		Thionazin			<10			µg/L		
		Tin, total recoverable			<2.0			µg/L		
		Toluene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		o-Toluidine			<10			µg/L		
•		Total dissolved solids	44,000	40,000	47,000	25,000	JV6	µg/L	GE	0
		Total organic carbon	<1,000	<1,000	<1,000	<1,000		µg/L	GE	0
		Total organic halogens	<5.0	<5.0	<5.0	<5.0		µg/L	GE	0
		Total phosphates (as P)	<50					µg/L		
		Toxaphene	<0.24		<0.24			µg/L		
		2,4,5-TP (Silvex)	<0.090		<0.090			µg/L		
		1,2,4-Trichlorobenzene			<10			µg/L		
		1,1,1-Trichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,1,2-Trichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Trichloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Trichlorofluoromethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2,4,5-Trichlorophenol			<10			µg/L		
		2,4,6-Trichlorophenol			<10			µg/L		
		2,4,5-T			<0.090			µg/L		
		1,2,3-Trichloropropane			<1.0			µg/L		
		1,3,5-Trinitrobenzene			<10			µg/L		
		Tritium	<7.0E-01					pCi/mL		
		Vanadium, total recoverable			<8.0			µg/L		
		Vinyl acetate			<1.0			µg/L		
		Xylenes			<2.0			µg/L		
		Zinc, total recoverable			<2.0			µg/L		

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WELL AMB 10D

SRS Coord.	Lat/Longitude	Screen Zone Elevation	Top of Casing	Casing	Pump	Screen Zone
N103293.4 E51456.0	33.338166 °N 81.731995 °W	239.4-219.4 ft msl	365.5 ft msl	4" PVC	S	M

SAMPLE DATE	02/15/93	06/01/93	07/07/93	11/05/93
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FIELD DATA

Analyte	1Q93	2Q93	3Q93	4Q93	Unit
Water elevation	234.4	235.2	235.4	236.4	ft msl
Depth to water	131.1	130.3	130.1	129.1	ft
pH	5.7	5.6	5.4	5.6	pH
Sp. conductance	48	51	53	55	µS/cm
Water temperature	17.1	18.9	18.0	17.5	°C
Alkalinity as CaCO ₃	8	10	9	9	mg/L
Turbidity	0	0	0	0	NTU
Volume purged	14.6	13.8	11.6	10.9	Well vol.
Sampling code					

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Acenaphthene			<10			µg/L		
		Acenaphthylene			<10			µg/L		
		Acetone			<100			µg/L		
		Acetonitrile (Methyl cyanide)			<1.0			µg/L		
		Acetophenone			<10			µg/L		
		2-Acetylaminofluorene			<10			µg/L		
		Acrolein			<20			µg/L		
		Acrylonitrile			<20			µg/L		
		Aldrin			<0.050			µg/L		
		Allyl chloride			<50			µg/L		
		Aluminum, total recoverable	<20		<20			µg/L		
		4-Aminobiphenyl			<10			µg/L		
		Aniline			<10			µg/L		
		Anthracene			<10			µg/L		
		Antimony, total recoverable			<2.0			µg/L		
		Aramite			<10			µg/L		
		Arsenic, total recoverable	<2.0		<2.0			µg/L		
		Barium, total recoverable	4.1		4.5			µg/L		
		Benzene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		alpha-Benzene hexachloride			<0.050			µg/L		
		beta-Benzene hexachloride			<0.050			µg/L		
		delta-Benzene hexachloride			<0.050			µg/L		
		Benzo[a]anthracene			<10			µg/L		
		Benzo[b]fluoranthene			<10			µg/L		
		Benzo[k]fluoranthene			<10			µg/L		
		Benzo[g,h,i]perylene			<10			µg/L		
		Benzo[e]pyrene			<10			µg/L		
		Benzyl alcohol			<10			µg/L		
		Beryllium, total recoverable			<3.0			µg/L		
		Bis(2-chloroethoxy) methane			<10			µg/L		
		Bis(2-chloroethyl) ether			<10			µg/L		
		Bis(2-chloroisopropyl) ether			<10			µg/L		
		Bis(2-ethylhexyl) phthalate			<10			µg/L		
		Bromodichloromethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Bromoform	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Bromomethane (Methyl bromide)	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		4-Bromophenyl phenyl ether			<10			µg/L		
		Butylbenzyl phthalate			<10			µg/L		
		2-sec-Butyl-4,6-dinitrophenol			<10			µg/L		

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Well AMB 10D continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Cadmium, total recoverable	<2.0		<2.0			µg/L		
		Calcium, total recoverable	990					µg/L		
		Carbon disulfide			<1.0			µg/L		
		Carbon tetrachloride	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chlordane			<0.50			µg/L		
		Chloride	3,100	2,900		3,280		µg/L	GE	0
		4-Chloroaniline			<10			µg/L		
		Chlorobenzene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chlorobenzilate			<10			µg/L		
		4-Chloro-m-cresol			<10			µg/L		
		Chloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chloroethene (Vinyl chloride)	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2-Chloroethyl vinyl ether	<1.0	<1.0	<10	<1.0		µg/L	GE	0
		Chloroform	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chloromethane (Methyl chloride)	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2-Chloronaphthalene			<10			µg/L		
		2-Chlorophenol			<10			µg/L		
		4-Chlorophenyl phenyl ether			<10			µg/L		
		Chloroprene			<200			µg/L		
		Chromium, total recoverable	<4.0		<4.0			µg/L		
		Chrysene			<10			µg/L		
		Cobalt, total recoverable			<4.0			µg/L		
		Copper, total recoverable			<4.0			µg/L		
		o-Cresol (2-Methylphenol)			<10			µg/L		
		m-Cresol (3-Methylphenol)			<10			µg/L		
		p-Cresol (4-Methylphenol)			<10			µg/L		
		Cyanide		<5.0	<5.0	<5.0		µg/L	GE	0
		p,p'-DDD			<0.10			µg/L		
		p,p'-DDE			<0.10			µg/L		
		p,p'-DDT			<0.10			µg/L		
		Diallate			<10			µg/L		
		Dibenz[a,h]anthracene			<10			µg/L		
		Dibenzofuran			<10			µg/L		
		Dibromochloromethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,2-Dibromo-3-chloropropane			<1.0			µg/L		
		1,2-Dibromoethane			<20			µg/L		
		Dibromomethane (Methylene bromide)			<1.0			µg/L		
		Di-n-butyl phthalate			<10			µg/L		
		1,2-Dichlorobenzene			<10			µg/L		
		1,3-Dichlorobenzene			<10			µg/L		
		1,4-Dichlorobenzene			<10			µg/L		
		3,3'-Dichlorobenzidine			<10			µg/L		
		trans-1,4-Dichloro-2-butene			<30			µg/L		
		Dichlorodifluoromethane			<1.0			µg/L		
		1,1-Dichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,2-Dichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,1-Dichloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		trans-1,2-Dichloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Dichloromethane (Methylene chloride)	<1.0	<1.0	<1.0	1.3	JV	µg/L	GE	0
		2,4-Dichlorophenol			<10			µg/L		
		2,6-Dichlorophenol			<10			µg/L		
		2,4-Dichlorophenoxyacetic acid	<0.30		<0.30			µg/L		
		1,2-Dichloropropane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		cis-1,3-Dichloropropene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		trans-1,3-Dichloropropene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Dieldrin			<0.50			µg/L		
		Diethyl phthalate			<10			µg/L		
		Dimethoate			<10			µg/L		
		2,4-Dimethyl phenol			<10			µg/L		
		Dimethyl phthalate			<10			µg/L		
		p-Dimethylaminoazobenzene			<10			µg/L		
		7,12-Dimethylbenz[a]anthracene			<10			µg/L		

Note: Flagging levels, modifiers, and laboratories are for fourth quarter 1993 data only. See Appendix B for flagging criteria.

● = exceeded holding time for fourth quarter 1993.

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Well AMB 10D continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		3,3'-Dimethylbenzidine			<10			µg/L		
		a,a-Dimethylphenethylamine			<10			µg/L		
		1,3-Dinitrobenzene			<10			µg/L		
		2,4-Dinitrophenol			<45			µg/L		
		2,4-Dinitrotoluene			<10			µg/L		
		2,6-Dinitrotoluene			<10			µg/L		
		Di-n-octyl phthalate			<10			µg/L		
		1,4-Dioxane			<10			µg/L		
		Diphenylamine			<10			µg/L		
		Disulfoton			<10			µg/L		
		Endosulfan I			<0.10			µg/L		
		Endosulfan II			<0.10			µg/L		
		Endosulfan sulfate			<0.10			µg/L		
		Endrin	<0.0060		<0.0060			µg/L		
		Endrin aldehyde			<0.10			µg/L		
		Ethyl methacrylate			<10			µg/L		
		Ethyl methanesulfonate			<10			µg/L		
		Ethylbenzene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Famphur			<10			µg/L		
		Fluoranthene			<10			µg/L		
		Fluorene			<10			µg/L		
		Fluoride	<100	<100		<100		µg/L	GE	0
		Gross alpha	<2.0E+00		<2.0E+00			pCi/L		
		Heptachlor			<0.050			µg/L		
		Heptachlor epoxide			<0.050			µg/L		
		1,2,3,4,6,7,8-HPCDD			<0.00065			µg/L		
		Heptachlorodibenzo-p-dioxin isomers			<0.00065			µg/L		
		1,2,3,4,6,7,8-HPCDF			<0.00045			µg/L		
		Heptachlorodibenzo-p-furan isomers			<0.00045			µg/L		
		Hexachlorobenzene			<10			µg/L		
		Hexachlorobutadiene			<10			µg/L		
		Hexachlorocyclopentadiene			<10			µg/L		
		1,2,3,4,7,8-HXCDD			<0.00045			µg/L		
		Hexachlorodibenzo-p-dioxin isomers			<0.00045			µg/L		
		1,2,3,4,7,8-HXCDF			<0.00040			µg/L		
		Hexachlorodibenzo-p-furan isomers			<0.00040			µg/L		
		Hexachloroethane			<10			µg/L		
		Hexachlorophene			<10			µg/L		
		Hexachloropropene			<10			µg/L		
		2-Hexanone			<1.0			µg/L		
		Indeno(1,2,3-c,d)pyrene			<10			µg/L		
		Iodomethane (Methyl iodide)			<15			µg/L		
		Iron, total recoverable	7.1		7.0			µg/L		
		Isobutyl alcohol			<100			µg/L		
		Isodrin			<10			µg/L		
		Isophoron-			<10			µg/L		
		Isosafrole			<10			µg/L		
		Kepone			<10			µg/L		
		Lead, total recoverable	<3.0		<3.0			µg/L		
		Lindane	<0.0050		<0.0050			µg/L		
		Magnesium, total recoverable	206					µg/L		
		Manganese, total recoverable	6.8		8.1			µg/L		
		Mercury, total recoverable	<0.20		<0.20			µg/L		
		Methacrylonitrile			<50			µg/L		
		Methapyrilene			<10			µg/L		
		Methoxychlor	<0.50		<0.50			µg/L		
		2-Methyl-4,6-dinitrophenol			<10			µg/L		
		Methyl ethyl ketone			<1.0			µg/L		
		Methyl isobutyl ketone			<1.0			µg/L		
		Methyl methacrylate			<10			µg/L		
		Methyl methanesulfonate			<10			µg/L		
		3-Methylcholanthrene			<10			µg/L		

Note: Flagging levels, modifiers, and laboratories are for fourth quarter 1993 data only. See Appendix B for flagging criteria.

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Well AMB 10D continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		2-Methylnaphthalene			<10			µg/L		
		Naphthalene			<10			µg/L		
		1,4-Naphthoquinone			<10			µg/L		
		1-Naphthylamine			<10			µg/L		
		2-Naphthylamine			<10			µg/L		
		Nickel, total recoverable		<4.0	<4.0	<4.0		µg/L	GE	0
		Nitrate-nitrite as nitrogen	130	140		150		µg/L	GE	0
		o-Nitroaniline			<10			µg/L		
		m-Nitroaniline			<10			µg/L		
		p-Nitroaniline			<10			µg/L		
		Nitrobenzene			<10			µg/L		
		2-Nitrophenol			<10			µg/L		
		4-Nitrophenol			<10			µg/L		
		4-Nitroquinoline-1-oxide			<10			µg/L		
		N-Nitrosodi-n-butylamine			<10			µg/L		
		N-Nitrosodiethylamine			<10			µg/L		
		N-Nitrosodimethylamine			<10			µg/L		
		N-Nitrosodiphenylamine			<10			µg/L		
		N-Nitrosodipropylamine			<10			µg/L		
		N-Nitrosomethylethylamine			<10			µg/L		
		N-Nitrosomorpholine			<10			µg/L		
		N-Nitrosopiperidine			<10			µg/L		
		N-Nitrosopyrrolidine			<10			µg/L		
		5-Nitro-o-toluidine			<10			µg/L		
		Nonvolatile beta	<2.0E+00					pCi/L		
		O,O,O-Triethyl phosphorothioate			<10			µg/L		
		Octachlorodibenzo-p-dioxin isomers			<0.0010			µg/L		
		Octachlorodibenzo-p-furan isomers			<0.0010			µg/L		
		Parathion			<0.050			µg/L		
		Parathion methyl			<0.050			µg/L		
		PCB 1016			<0.50			µg/L		
		PCB 1221			<0.50			µg/L		
		PCB 1232			<0.50			µg/L		
		PCB 1242			<0.50			µg/L		
		PCB 1248			<0.50			µg/L		
		PCB 1254			<0.50			µg/L		
		PCB 1260			<0.50			µg/L		
		Pentachlorobenzene			<10			µg/L		
		1,2,3,7,8-PCDD			<0.00055			µg/L		
		Pentachlorodibenzo-p-dioxin isomers			<0.00055			µg/L		
		1,2,3,7,8-PCDF			<0.00055			µg/L		
		Pentachloroethane			<10			µg/L		
		Pentachloronitrobenzene			<10			µg/L		
		Pentachlorophenol			<10			µg/L		
●		pH	4.7	5.8	5.7	5.9	J	pH	GE	0
		Phenacetin			<10			µg/L		
		Phenanthrene			<10			µg/L		
		Phenol			<10			µg/L		
		Phenols	<5.0					µg/L		
		p-Phenylenediamine			<10			µg/L		
		Phorate			<0.10			µg/L		
		2-Picoline			<10			µg/L		
		Potassium, total recoverable	<500					µg/L		
		Pronamid			<10			µg/L		
		Propionitrile			<200			µg/L		
		Pyrene			<10			µg/L		
		Pyridine			<10			µg/L		
		Radium, total alpha-emitting	1.3E+00	<1.0E+00	1.0E+00	1.2E+00		pCi/L	GE	0
		Safrole			<10			µg/L		
		Selenium, total recoverable	<2.0		<2.0			µg/L		
		Silica, total recoverable	5,290					µg/L		
		Silver, total recoverable	<2.0	<2.0	<2.0	<2.0		µg/L	GE	0

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WSRC-TR-94-015
Unclassified

Well AMB 10D continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Sodium, total recoverable	8,170		49			µg/L		
		Specific conductance	45	50		50		µS/cm	GE	0
		Styrene			<1.0			µg/L		
		Sulfate	4,690					µg/L		
		Sulfide			<1,000			µg/L		
		Sulfotep			<10			µg/L		
		1,2,4,5-Tetrachlorobenzene			<10			µg/L		
		2,3,7,8-TCDD			<0.00045			µg/L		
		2,3,7,8-TCDF			<0.00040			µg/L		
		Tetrachlorodibenzo-p-dioxin isomers			<0.00045			µg/L		
		Tetrachlorodibenzo-p-furan isomers			<0.00040			µg/L		
		1,1,1,2-Tetrachloroethane			<1.0			µg/L		
		1,1,2,2-Tetrachloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Tetrachloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2,3,4,6-Tetrachlorophenol			<10			µg/L		
		Thallium, total recoverable			<2.0			µg/L		
		Thionazin			<10			µg/L		
		Tin, total recoverable			2.5			µg/L		
		Toluene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		o-Toluidine			<10			µg/L		
•		Total dissolved solids	36,000	32,000	34,000	16,000	JV6	µg/L	GE	0
		Total organic carbon	<1,000	<1,000	<1,000	<1,000		µg/L	GE	0
		Total organic halogens	7.8	<5.0	<5.0	<5.0		µg/L	GE	0
		Total phosphates (as P)	<50					µg/L		
		Toxaphene	<0.24		<0.24			µg/L		
		2,4,5-TP (Silvex)	<0.090		<0.090			µg/L		
		1,2,4-Trichlorobenzene			<10			µg/L		
		1,1,1-Trichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,1,2-Trichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Trichloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Trichlorofluoromethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2,4,5-Trichlorophenol			<10			µg/L		
		2,4,6-Trichlorophenol			<10			µg/L		
		2,4,5-T			<0.090			µg/L		
		1,2,3-Trichloropropane			<1.0			µg/L		
		1,3,5-Trinitrobenzene			<10			µg/L		
		Tritium	<7.0E-01					pCi/mL		
		Vanadium, total recoverable			<8.0			µg/L		
		Vinyl acetate			<1.0			µg/L		
		Xylenes			<2.0			µg/L		
		Zinc, total recoverable			<2.0			µg/L		

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WELL AMB 10DD

SRS Coord.	Lat/Longitude	Screen Zone Elevation	Top of Casing	Casing	Pump	Screen Zone
N103278.7 E51456.0	33.338133 °N 81.731966 °W	358.6-338.6 ft msl	365.4 ft msl	4" PVC	S	M

SAMPLE DATE	02/15/93	05/01/93	07/07/93	11/05/93
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FIELD DATA

Analyte	1Q93	2Q93	3Q93	4Q93	Unit
Water elevation	358.9	358.8	359.0	359.3	ft msl
Depth to water	6.5	6.6	6.4	6.1	ft
pH	6.6	6.5	6.1	6.3	pH
Sp. conductance	137	125	158	190	µS/cm
Water temperature	16.4	17.4	19.0	20.0	°C
Alkalinity as CaCO ₃	64	55	69	86	mg/L
Turbidity	1	1	1	1	NTU
Volume purged	7.4	5.1	4.8	8.2	Well vol.
Sampling code					

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Aluminum, total recoverable	< 20		< 20			µg/L		
		Arsenic, total recoverable	3.2					µg/L		
		Barium, total recoverable	11					µg/L		
		Benzene	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		Bromodichloromethane	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		Bromoform	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		Bromomethane (Methyl bromide)	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		Cadmium, total recoverable	< 2.0					µg/L		
		Calcium, total recoverable	5,860					µg/L		
		Carbon tetrachloride	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		Chloride	2,330	1,970		2,200		µg/L	GE	0
		Chlorobenzene	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		Chloroethane	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		Chloroethene (Vinyl chloride)	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		2-Chloroethyl vinyl ether	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		Chloroform	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		Chloromethane (Methyl chloride)	< 1.0	< 1.0	3.5	< 1.0		µg/L	GE	0
		Chromium, total recoverable	< 4.0					µg/L		
		Cyanide		< 5.0		< 5.0		µg/L	GE	0
		Dibromochloromethane	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		1,1-Dichloroethane	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		1,2-Dichloroethane	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		1,1-Dichloroethylene	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		trans-1,2-Dichloroethylene	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		Dichloromethane (Methylene chloride)	< 1.0	< 1.0	2.0	< 1.0	JV	µg/L	GE	0
		2,4-Dichlorophenoxyacetic acid	< 0.30					µg/L		
		1,2-Dichloropropane	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		cis-1,3-Dichloropropene	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		trans-1,3-Dichloropropene	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		Endrin	< 0.0060					µg/L		
		Ethylbenzene	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		Fluoride	< 100	< 100		< 100		µg/L	GE	0
		Gross alpha	< 2.0E+00		1.6E+00			pCi/L		
		Iron, total recoverable	6,910		7,150			µg/L		
		Lead, total recoverable	< 3.0		< 3.0			µg/L		
		Lindane	< 0.0050					µg/L		
		Magnesium, total recoverable	501					µg/L		
		Manganese, total recoverable	299		350			µg/L		
		Mercury, total recoverable	< 0.20					µg/L		

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Well AMB 10DD continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Methoxychlor	<0.50					µg/L		
		Nickel, total recoverable		<4.0		<4.0		µg/L	GE	0
		Nitrate-nitrite as nitrogen	<50	<50		<50		µg/L	GE	0
•		Nonvolatile beta	<2.0E+00					pCi/L		
		pH	6.2	6.5	6.4	6.4	J	pH	GE	0
		Phenols	<5.0					µg/L		
		Potassium, total recoverable	<500					µg/L		
		Radium-226			3.1E-01			pCi/L		
		Radium-228			1.8E+00			pCi/L		
		Radium, total alpha-emitting	<1.0E+00	1.2E+00	1.3E+00	<1.0E+00		pCi/L	GE	0
		Selenium, total recoverable	<2.0					µg/L		
		Silica, total recoverable	5,730					µg/L		
		Silver, total recoverable	<2.0	<2.0		<2.0		µg/L	GE	0
		Sodium, total recoverable	18,700					µg/L		
		Specific conductance	122	112	159	163		µS/cm	GE	0
		Sulfate	<1,000					µg/L		
		1,1,2,2-Tetrachloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Tetrachloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Toluene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
•		Total dissolved solids	67,000	59,000	103,000	96,000	JV6	µg/L	GE	0
		Total organic carbon	<1,000	1,050	1,410	3,610		µg/L	GE	0
		Total organic halogens	<5.0	<5.0	16	<5.0		µg/L	GE	0
		Total phosphates (as P)	<50					µg/L		
		Toxaphene	<0.24					µg/L		
		2,4,5-TP (Silvex)	<0.090					µg/L		
		1,1,1-Trichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,1,2-Trichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Trichloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Trichlorofluoromethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Tritium	<7.0E-01					pCi/mL		

WELL AMB 11B

SRS Coord.	Lat/Longitude	Screen Zone Elevation	Top of Casing	Casing	Pump	Screen Zone
N103154.2 E51919.5	33.338615 °N 81.730603 °W	184.5-174.5 ft msl	364.6 ft msl	4" PVC	S	UL

SAMPLE DATE 02/15/93 05/01/93 07/07/93 11/05/93

FIELD DATA

Analyte	1Q93	2Q93	3Q93	4Q93	Unit
Water elevation	222.5	221.7	221.9	223.9	ft msl
Depth to water	142.2	142.9	142.7	140.7	ft
pH	6.0	5.8	5.7	5.9	pH
Sp. conductance	52	54	62	53	µS/cm
Water temperature	17.8	18.3	18.9	18.0	°C
Alkalinity as CaCO ₃	14	15	15	11	mg/L
Turbidity	2	2	1	1	NTU
Volume purged	4.6	5.6	3.2	3.6	Well vol.
Sampling code					

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Acenaphthene			<10			µg/L		
		Acenaphthylene			<10			µg/L		
		Acetone			<100			µg/L		
		Acetonitrile (Methyl cyanide)			<1.0			µg/L		
		Acetophenone			<10			µg/L		

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Well AMB 11B continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		2-Acetylaminofluorene			<10			µg/L		
		Acrolein			<20			µg/L		
		Acrylonitrile			<20			µg/L		
		Aldrin			<0.050			µg/L		
		Allyl chloride			<50			µg/L		
		Aluminum, total recoverable	106		<20			µg/L		
		4-Aminobiphenyl			<10			µg/L		
		Aniline			<10			µg/L		
		Anthracene			<10			µg/L		
		Antimony, total recoverable			<2.0			µg/L		
		Aramite			<10			µg/L		
		Arsenic, total recoverable	<2.0		<2.0			µg/L		
		Barium, total recoverable	44		43			µg/L		
		Benzene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		alpha-Benzene hexachloride			<0.050			µg/L		
		beta-Benzene hexachloride			<0.050			µg/L		
		delta-Benzene hexachloride			<0.050			µg/L		
		Benzo(a)anthracene			<10			µg/L		
		Benzo(b)fluoranthene			<10			µg/L		
		Benzo(k)fluoranthene			<10			µg/L		
		Benzo(g,h,i)perylene			<10			µg/L		
		Benzo(a)pyrene			<10			µg/L		
		Benzyl alcohol			<10			µg/L		
		Beryllium, total recoverable			<3.0			µg/L		
		Bis(2-chloroethoxy) methane			<10			µg/L		
		Bis(2-chloroethyl) ether			<10			µg/L		
		Bis(2-chloroisopropyl) ether			<10			µg/L		
		Bis(2-ethylhexyl) phthalate			<10			µg/L		
		Bromodichloromethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Bromoform	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Bromomethane (Methyl bromide)	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		4-Bromophenyl phenyl ether			<10			µg/L		
		Butylbenzyl phthalate			<10			µg/L		
		2-sec-Butyl-4,6-dinitrophenol			<10			µg/L		
		Cadmium, total recoverable	<2.0		<2.0			µg/L		
		Calcium, total recoverable	4,330					µg/L		
		Carbon disulfide			<1.0			µg/L		
		Carbon tetrachloride	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chlordane			<0.50			µg/L		
		Chloride	4,140	3,920		4,190		µg/L	GE	0
		4-Chloroaniline			<10			µg/L		
		Chlorobenzene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chlorobenzilate			<10			µg/L		
		4-Chloro-m-cresol			<10			µg/L		
		Chloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chloroethene (Vinyl chloride)	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2-Chloroethyl vinyl ether	<1.0	<1.0	<10	<1.0		µg/L	GE	0
		Chloroform	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chloromethane (Methyl chloride)	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2-Chloronaphthalene			<10			µg/L		
		2-Chlorophenol			<10			µg/L		
		4-Chlorophenyl phenyl ether			<10			µg/L		
		Chloroprene			<200			µg/L		
		Chromium, total recoverable	<4.0		<4.0			µg/L		
		Chrysene			<10			µg/L		
		Cobalt, total recoverable			<4.0			µg/L		
		Copper, total recoverable			<4.0			µg/L		
		o-Cresol (2-Methylphenol)			<10			µg/L		
		m-Cresol (3-Methylphenol)			<10			µg/L		
		p-Cresol (4-Methylphenol)			<10			µg/L		
		Cyanide		<5.0	<5.0	<5.0		µg/L	GE	0
		p,p'-DDD			<0.10			µg/L		

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Well AMB 11B continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		p,p'-DDE			<0.10			µg/L		
		p,p'-DDT			<0.10			µg/L		
		Diallate			<10			µg/L		
		Dibenz(a,h)anthracene			<10			µg/L		
		Dibenzofuran			<10			µg/L		
		Dibromochloromethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,2-Dibromo-3-chloropropane			<1.0			µg/L		
		1,2-Dibromoethane			<20			µg/L		
		Dibromomethane (Methylene bromide)			<1.0			µg/L		
		Di-n-butyl phthalate			<10			µg/L		
		1,2-Dichlorobenzene			<10			µg/L		
		1,3-Dichlorobenzene			<10			µg/L		
		1,4-Dichlorobenzene			<10			µg/L		
		3,3'-Dichlorobenzidine			<10			µg/L		
		trans-1,4-Dichloro-2-butene			<30			µg/L		
		Dichlorodifluoromethane			<1.0			µg/L		
		1,1-Dichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,2-Dichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,1-Dichloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		trans-1,2-Dichloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Dichloromethane (Methylene chlori s)	<1.0	<1.0	<1.0	<1.0	JV	µg/L	GE	0
		2,4-Dichlorophenol			<10			µg/L		
		2,6-Dichlorophenol			<10			µg/L		
		2,4-Dichlorophenoxyacetic acid	<0.30		<0.30			µg/L		
		1,2-Dichloropropane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		cis-1,3-Dichloropropene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		trans-1,3-Dichloropropene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Dieldrin			<0.50			µg/L		
		Diethyl phthalate			<10			µg/L		
		Dimethoate			<10			µg/L		
		2,4-Dimethyl phenol			<10			µg/L		
		Dimethyl phthalate			<10			µg/L		
		p-Dimethylaminoazobenzene			<10			µg/L		
		7,12-Dimethylbenz(a)anthracene			<10			µg/L		
		3,3'-Dimethylbenzidine			<10			µg/L		
		a,a-Dimethylphenethylamine			<10			µg/L		
		1,3-Dinitrobenzene			<10			µg/L		
		2,4-Dinitrophenol			<45			µg/L		
		2,4-Dinitrotoluene			<10			µg/L		
		2,6-Dinitrotoluene			<10			µg/L		
		Di-n-octyl phthalate			<10			µg/L		
		1,4-Dioxane			<10			µg/L		
		Diphenylamine			<10			µg/L		
		Disulfoton			<10			µg/L		
		Endosulfan I			<0.10			µg/L		
		Endosulfan II			<0.10			µg/L		
		Endosulfan sulfate			<0.10			µg/L		
		Endrin	<0.0060		<0.0060			µg/L		
		Endrin aldehyde			<0.10			µg/L		
		Ethyl methacrylate			<10			µg/L		
		Ethyl methanesulfonate			<10			µg/L		
		Ethylbenzene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Famphur			<10			µg/L		
		Fluoranthene			<10			µg/L		
		Fluorene			<10			µg/L		
		Fluoride	<100	<100		<100		µg/L	GE	0
		Gross alpha	<2.0E+00					pCi/L		
		Heptachlor			<0.050			µg/L		
		Heptachlor epoxide			<0.050			µg/L		
		1,2,3,4,6,7,8-HPCDD			<0.00065			µg/L		
		Heptachlorodibenzo-p-dioxin isomers			<0.00065			µg/L		
		1,2,3,4,6,7,8-HPCDF			<0.00045			µg/L		

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Well AMB 11B continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Heptachlorodibenzo-p-furan isomers			<0.00045			µg/L		
		Hexachlorobenzene			<10			µg/L		
		Hexachlorobutadiene			<10			µg/L		
		Hexachlorocyclopentadiene			<10			µg/L		
		1,2,3,4,7,8-HxCDD			<0.00045			µg/L		
		Hexachlorodibenzo-p-dioxin isomers			<0.00045			µg/L		
		1,2,3,4,7,8-HxCDF			<0.00040			µg/L		
		Hexachlorodibenzo-p-furan isomers			<0.00040			µg/L		
		Hexachloroethane			<10			µg/L		
		Hexachlorophene			<10			µg/L		
		Hexachloropropene			<10			µg/L		
		2-Hexanone			<1.0			µg/L		
		Indeno(1,2,3-c,d)pyrene			<10			µg/L		
		Iodomethane (Methyl iodide)			<15			µg/L		
		Iron, total recoverable	22		8.3			µg/L		
		Isobutyl alcohol			<100			µg/L		
		Isodrin			<10			µg/L		
		Isophorone			<10			µg/L		
		Isosafrole			<10			µg/L		
		Kepone			<10			µg/L		
		Lead, total recoverable	<3.0		<3.0			µg/L		
		Lindane	<0.0050		<0.0050			µg/L		
		Magnesium, total recoverable	443					µg/L		
		Manganese, total recoverable	15		15			µg/L		
		Mercury, total recoverable	<0.20		<0.20			µg/L		
		Methacrylonitrile			<50			µg/L		
		Methapyrilene			<10			µg/L		
		Methoxychlor	<0.50		<0.50			µg/L		
		2-Methyl-4,6-dinitrophenol			<10			µg/L		
		Methyl ethyl ketone			<1.0			µg/L		
		Methyl isobutyl ketone			<1.0			µg/L		
		Methyl methacrylate			<10			µg/L		
		Methyl methanesulfonate			<10			µg/L		
		3-Methylcholanthrene			<10			µg/L		
		2-Methylnaphthalene			<10			µg/L		
		Naphthalene			<10			µg/L		
		1,4-Naphthoquinone			<10			µg/L		
		1-Naphthylamine			<10			µg/L		
		2-Naphthylamine			<10			µg/L		
		Nickel, total recoverable		<4.0	<4.0	<4.0		µg/L	GE	0
		Nitrate-nitrite as nitrogen	350	380		350		µg/L	GE	0
		o-Nitroaniline			<10			µg/L		
		m-Nitroaniline			<10			µg/L		
		p-Nitroaniline			<10			µg/L		
		Nitrobenzene			<10			µg/L		
		2-Nitrophenol			<10			µg/L		
		4-Nitrophenol			<10			µg/L		
		4-Nitroquinoline-1-oxide			<10			µg/L		
		N-Nitrosodi-n-butylamine			<10			µg/L		
		N-Nitrosodiethylamine			<10			µg/L		
		N-Nitrosodimethylamine			<10			µg/L		
		N-Nitrosodiphenylamine			<10			µg/L		
		N-Nitrosodipropylamine			<10			µg/L		
		N-Nitrosomethylethylamine			<10			µg/L		
		N-Nitrosomorpholine			<10			µg/L		
		N-Nitrosopiperidine			<10			µg/L		
		N-Nitrosopyrrolidine			<10			µg/L		
		5-Nitro-o-toluidine			<10			µg/L		
		Nonvolatile beta	<2.0E+00					pCl/L		
		O,O,O-Triethyl phosphorothioate			<10			µg/L		
		Octachlorodibenzo-p-dioxin isomers			<0.0010			µg/L		
		Octachlorodibenzo-p-furan isomers			<0.0010			µg/L		

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Well AMB 11B continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Parathion			<0.050			µg/L		
		Parathion methyl			<0.050			µg/L		
		PCB 1016			<0.50			µg/L		
		PCB 1221			<0.50			µg/L		
		PCB 1232			<0.50			µg/L		
		PCB 1242			<0.50			µg/L		
		PCB 1248			<0.50			µg/L		
		PCB 1254			<0.50			µg/L		
		PCB 1260			<0.50			µg/L		
		Pentachlorobenzene			<10			µg/L		
		1,2,3,7,8-PCDD			<0.00055			µg/L		
		Pentachlorodibenzo-p-dioxin isomers			<0.00055			µg/L		
		1,2,3,7,8-PCDF			<0.00055			µg/L		
		Pentachloroethane			<10			µg/L		
		Pentachloronitrobenzene			<10			µg/L		
		Pentachlorophenol			<10			µg/L		
•		pH	5.5	6.2	6.1	6.1	J	pH	GE	0
		Phenacetin			<10			µg/L		
		Phenanthrene			<10			µg/L		
		Phenol			<10			µg/L		
		Phenols	<5.0					µg/L		
		p-Phenylenediamine			<10			µg/L		
		Phorate			<0.10			µg/L		
		2-Picoline			<10			µg/L		
		Potassium, total recoverable	837					µg/L		
		Pronamid			<10			µg/L		
		Propionitrile			<200			µg/L		
		Pyrene			<10			µg/L		
		Pyridine			<10			µg/L		
		Radium, total alpha-emitting	1.2E+00	1.7E+00	1.5E+00	1.2E+00		pCi/L	GE	0
		Safrole			<10			µg/L		
		Selenium, total recoverable	<2.0		<2.0			µg/L		
		Silica, total recoverable	9,500					µg/L		
		Silver, total recoverable	<2.0	<2.0	<2.0	<2.0		µg/L	GE	0
		Sodium, total recoverable	4,960					µg/L		
		Specific conductance	50	52	52	49		µS/cm	GE	0
		Styrene			<1.0			µg/L		
		Sulfate	1,430					µg/L		
		Sulfide			<1,000			µg/L		
		Sulfotep			<10			µg/L		
		1,2,4,5-Tetrachlorobenzene			<10			µg/L		
		2,3,7,8-TCDD			<0.00045			µg/L		
		2,3,7,8-TCDF			<0.00040			µg/L		
		Tetrachlorodibenzo-p-dioxin isomers			<0.00045			µg/L		
		Tetrachlorodibenzo-p-furan isomers			<0.00040			µg/L		
		1,1,1,2-Tetrachloroethane			<1.0			µg/L		
		1,1,2,2-Tetrachloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Tetrachloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2,3,4,6-Tetrachlorophenol			<10			µg/L		
		Thallium, total recoverable			<2.0			µg/L		
		Thionazin			<10			µg/L		
		Tin, total recoverable			<2.0			µg/L		
		Toluene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		o-Toluidine			<10			µg/L		
•		Total dissolved solids	42,000	33,000	37,000	48,000	JV	µg/L	GE	0
		Total organic carbon	<1,000	<1,000	<1,000	1,180		µg/L	GE	0
		Total organic halogens	<5.0	<5.0	<5.0	<5.0		µg/L	GE	0
		Total phosphates (as P)	<50					µg/L		
		Toxaphene	<0.24		<0.24			µg/L		
		2,4,5-TP (Silvex)	<0.090		<0.090			µg/L		
		1,2,4-Trichlorobenzene			<10			µg/L		
		1,1,1-Trichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0

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Well AMB 11D continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		1,1-Dichloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		trans-1,2-Dichloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Dichloromethane (Methylene chloride)	<1.0	<1.0	2.1	<1.0	JV	µg/L	GE	0
		2,4-Dichlorophenoxyacetic acid	<0.30					µg/L		
		1,2-Dichloropropane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		cis-1,3-Dichloropropene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		trans-1,3-Dichloropropene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Endrin	<0.0060					µg/L		
		Ethylbenzene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Fluoride	<100	<100		<100		µg/L	GE	0
		Gross alpha	<2.0E+00		<2.0E+00			pCi/L		
		Iron, total recoverable	30		64			µg/L		
		Lead, total recoverable	<3.0		<3.0			µg/L		
		Lindane	<0.0050					µg/L		
		Magnesium, total recoverable	88					µg/L		
		Manganese, total recoverable	<2.0		<2.0			µg/L		
		Mercury, total recoverable	<0.20					µg/L		
		Methoxychlor	<0.50					µg/L		
		Nickel, total recoverable		<4.0		<4.0		µg/L	GE	0
		Nitrate-nitrite as nitrogen	<50	100		80		µg/L	GE	0
		Nonvolatile beta	<2.0E+00					pCi/L		
•		pH	5.2	6.0	6.0	6.0	J	pH	GE	0
		Phenols	<5.0					µg/L		
		Potassium, total recoverable	<500					µg/L		
		Radium, total alpha-emitting	<1.0E+00	1.3E+00	<1.0E+00	<1.0E+00		pCi/L	GE	0
		Selenium, total recoverable	<2.0					µg/L		
		Silica, total recoverable	8,950					µg/L		
		Silver, total recoverable	<2.0	<2.0		<2.0		µg/L	GE	0
		Sodium, total recoverable	8,660					µg/L		
		Specific conductance	43	50	34	43		µS/cm	GE	0
		Sulfate	3,940					µg/L		
		1,1,2,2-Tetrachloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Tetrachloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Toluene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
•		Total dissolved solids	25,000	25,000	28,000	27,000	JV6	µg/L	GE	0
		Total organic carbon	<1,000	<1,000	<1,000	<1,000		µg/L	GE	0
•		Total organic halogens	16	22	<5.0	6.9	J6	µg/L	GE	0
		Total phosphates (as P)	50					µg/L		
		Toxaphene	<0.24					µg/L		
		2,4,5-TP (Silvex)	<0.090					µg/L		
		1,1,1-Trichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,1,2-Trichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Trichloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Trichlorofluoromethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Tritium	<7.0E-01					pCi/mL		

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WELL AMB 12D

SRS Coord.	Lat/Longitude	Screen Zone Elevation	Top of Casing	Casing	Pump	Screen Zone
N103602.4 E51901.6	33.339576 °N 81.731422 °W	239.4-219.4 ft mel	369.8 ft mel	4" PVC	S	M

SAMPLE DATE	02/13/93	05/01/93	07/07/93	10/27/93
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FIELD DATA

Analyte	1Q93	2Q93	3Q93	4Q93	Unit
Water elevation	234.3	233.6	233.5	235.4	ft mel
Depth to water	135.5	136.2	136.3	134.4	ft
pH	5.7	5.7	5.6	5.9	pH
Sp. conductance	29	32	36	34	µS/cm
Water temperature	18.4	19.1	19.5	19.8	°C
Alkalinity as CaCO ₃	4	5	6	7	mg/L
Turbidity	4	1	1	1	NTU
Volume purged	9.7	7.9	5.6	4.3	Well vol.
Sampling code					

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Aluminum, total recoverable	31		62			µg/L		
		Arsenic, total recoverable	< 2.0					µg/L		
		Barium, total recoverable	5.1					µg/L		
		Benzene	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		Bromodichloromethane	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		Bromoform	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		Bromomethane (Methyl bromide)	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		Cadmium, total recoverable	< 2.0					µg/L		
		Calcium, total recoverable	1,180					µg/L		
		Carbon tetrachloride	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		Chloride	2,000	1,900		1,960		µg/L	GE	0
		Chlorobenzene	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		Chloroethane	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		Chloroethene (Vinyl chloride)	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		2-Chloroethyl vinyl ether	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		Chloroform	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		Chloromethane (Methyl chloride)	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		Chromium, total recoverable	< 4.0					µg/L		
		Cyanide		< 5.0		< 5.0		µg/L	GE	0
		Dibromochloromethane	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		1,1-Dichloroethane	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		1,2-Dichloroethane	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		1,1-Dichloroethylene	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		trans-1,2-Dichloroethylene	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		Dichloromethane (Methylene chloride)	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		2,4-Dichlorophenoxyacetic acid	< 0.30					µg/L		
		1,2-Dichloropropane	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		cis-1,3-Dichloropropene	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		trans-1,3-Dichloropropene	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		Endrin	< 0.0060					µg/L		
		Ethylbenzene	< 1.0	< 1.0	< 1.0	< 1.0		µg/L	GE	0
		Fluoride	< 100	< 100		< 100		µg/L	GE	0
		Gross alpha	< 2.0E + 00		< 2.0E + 00			pCi/L		
		Iron, total recoverable	14		16			µg/L		
		Lead, total recoverable	< 3.0		< 3.0			µg/L		
		Lindane	< 0.0050					µg/L		
		Magnesium, total recoverable	298					µg/L		
		Manganese, total recoverable	16		16			µg/L		
		Mercury, total recoverable	< 0.20					µg/L		

Note: Flagging levels, modifiers, and laboratories are for fourth quarter 1993 data only. See Appendix B for flagging criteria.

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Well AMB 12D continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Methoxychlor	<0.50					µg/L		
		Nickel, total recoverable		<4.0		<4.0		µg/L	GE	0
		Nitrate-nitrite as nitrogen	710	700		680		µg/L	GE	0
•		Nonvolatile beta	<2.0E+00					pCi/L		
		pH	5.8	5.8	6.0	6.0	J	pH	GE	0
		Phenols	<5.0					µg/L		
		Potassium, total recoverable	<500					µg/L		
		Radium, total alpha-emitting	<1.0E+00	2.2E+00	<1.0E+00	<1.0E+00		pCi/L	GE	0
		Selenium, total recoverable	<2.0					µg/L		
		Silica, total recoverable	7,750					µg/L		
		Silver, total recoverable	<2.0	<2.0		<2.0		µg/L	GE	0
		Sodium, total recoverable	2,930					µg/L		
		Specific conductance	25	29	28	30		µS/cm	GE	0
		Sulfate	<1,000					µg/L		
		1,1,2,2-Tetrachloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Tetrachloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Toluene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Total dissolved solids	22,000	21,000	24,000	27,000	V	µg/L	GE	0
		Total organic carbon	<1,000	<1,000	1,000	<1,000		µg/L	GE	0
		Total organic halogens	5.0	10	<5.0	<5.0		µg/L	GE	0
		Total phosphates (as P)	<50					µg/L		
		Toxaphene	<0.24					µg/L		
		2,4,5-TP (Silvex)	<0.090					µg/L		
		1,1,1-Trichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,1,2-Trichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Trichloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Trichlorofluoromethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Tritium	<7.0E-01					pCi/mL		

WELL AMB 13AR

SRS Coord.	Lat/Longitude	Screen Zone Elevation	Top of Casing	Casing	Pump	Screen Zone
N103082.0 E51396.0	33.337600 °N 81.731742 °W	110.9-100.9 ft msl	365.1 ft msl	4" PVC	S	MCBC

SAMPLE DATE	02/14/93	05/01/93	07/08/93	10/28/93
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FIELD DATA

Analyte	1Q93	2Q93	3Q93	4Q93	Unit
Water elevation	218.8	217.9	218.0	219.0	ft msl
Depth to water	146.3	147.2	147.1	146.1	ft
pH	11.4	11.2	10.4	11.2	pH
Sp. conductance	308	342	205	244	µS/cm
Water temperature	15.0	21.5	19.3	16.4	°C
Alkalinity as CaCO ₃	90	88	70	71	mg/L
Turbidity	2	4	6	6	NTU
Volume purged	0.9	0.9	0.9	0.9	Well vol.
Sampling code	X	X	X	X	

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Acenaphthene			<10			µg/L		
		Acenaphthylene			<10			µg/L		
		Acetone			<100			µg/L		
		Acetonitrile (Methyl cyanide)			<1.0			µg/L		
		Acetophenone			<10			µg/L		
		2-Acetylaminofluorene			<10			µg/L		
		Acrolein			<20			µg/L		

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Well AMB 13AR continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Acrylonitrile			<20			µg/L		
		Aldrin			<0.15			µg/L		
		Allyl chloride			<50			µg/L		
		Aluminum, total recoverable	140		58			µg/L		
		4-Aminobiphenyl			<10			µg/L		
		Aniline			<10			µg/L		
		Anthracene			<10			µg/L		
		Antimony, total recoverable			<2.0			µg/L		
		Aramite			<10			µg/L		
		Arsenic, total recoverable	<2.0		<2.0			µg/L		
		Barium, total recoverable	96		56			µg/L		
		Benzene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		alpha-Benzene hexachloride			<0.15			µg/L		
		beta-Benzene hexachloride			<0.15			µg/L		
		delta-Benzene hexachloride			<0.15			µg/L		
		Benzo(a)anthracene			<10			µg/L		
		Benzo(b)fluoranthene			<10			µg/L		
		Benzo(k)fluoranthene			<10			µg/L		
		Benzo(g,h,i)perylene			<10			µg/L		
		Benzo(a)pyrene			<10			µg/L		
		Benzyl alcohol			<10			µg/L		
		Beryllium, total recoverable			<3.0			µg/L		
		Bis(2-chloroethoxy) methane			<10			µg/L		
		Bis(2-chloroethyl) ether			<10			µg/L		
		Bis(2-chloroisopropyl) ether			<10			µg/L		
		Bis(2-ethylhexyl) phthalate			<10			µg/L		
		Bromodichloromethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Bromoform	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Bromomethane (Methyl bromide)	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		4-Bromophenyl phenyl ether			<10			µg/L		
		Butylbenzyl phthalate			<10			µg/L		
		2-sec-Butyl-4,6-dinitrophenol			<10			µg/L		
		Cadmium, total recoverable	<2.0		<2.0			µg/L		
		Calcium, total recoverable	28,500					µg/L		
		Carbon disulfide			<1.0			µg/L		
		Carbon tetrachloride	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chlordane			<1.5			µg/L		
		Chloride	2,600	2,690		2,620		µg/L	GE	0
		4-Chloroaniline			<10			µg/L		
		Chlorobenzene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chlorobenzilate			<10			µg/L		
		4-Chloro-m-cresol			<10			µg/L		
		Chloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chloroethene (Vinyl chloride)	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2-Chloroethyl vinyl ether	<1.0	<1.0	<10	<1.0		µg/L	GE	0
		Chloroform	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Chloromethane (Methyl chloride)	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2-Chloronaphthalene			<10			µg/L		
		2-Chlorophenol			<10			µg/L		
		4-Chlorophenyl phenyl ether			<10			µg/L		
		Chloroprene			<200			µg/L		
		Chromium, total recoverable	<4.0		<4.0			µg/L		
		Chrysene			<10			µg/L		
		Cobalt, total recoverable			<4.0			µg/L		
		Copper, total recoverable			<4.0			µg/L		
		o-Cresol (2-Methylphenol)			<10			µg/L		
		m-Cresol (3-Methylphenol)			<10			µg/L		
		p-Cresol (4-Methylphenol)			<10			µg/L		
		Cyanide		<5.0	<5.0	<5.0		µg/L	GE	0
		p,p'-DDD			<0.30			µg/L		
		p,p'-DDE			<0.30			µg/L		
		p,p'-DDT			<0.30			µg/L		

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Well AMB 13AR continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Diallate			<10			µg/L		
		Dibenz(a,h)anthracene			<10			µg/L		
		Dibenzofuran			<10			µg/L		
		Dibromochloromethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,2-Dibromo-3-chloropropane			<1.0			µg/L		
		1,2-Dibromoethane			<20			µg/L		
		Dibromomethane (Methylene bromide)			<1.0			µg/L		
		Di-n-butyl phthalate			<10			µg/L		
		1,2-Dichlorobenzene			<10			µg/L		
		1,3-Dichlorobenzene			<10			µg/L		
		1,4-Dichlorobenzene			<10			µg/L		
		3,3'-Dichlorobenzidine			<10			µg/L		
		trans-1,4-Dichloro-2-butene			<30			µg/L		
		Dichlorodifluoromethane			<1.0			µg/L		
		1,1-Dichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,2-Dichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,1-Dichloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		trans-1,2-Dichloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Dichloromethane (Methylene chloride)	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2,4-Dichlorophenol			<10			µg/L		
		2,6-Dichlorophenol			<10			µg/L		
		2,4-Dichlorophenoxyacetic acid	<0.30		<0.30			µg/L		
		1,2-Dichloropropane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		cis-1,3-Dichloropropene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		trans-1,3-Dichloropropene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Dieldrin			<1.5			µg/L		
		Diethyl phthalate			<10			µg/L		
		Dimethoate			<10			µg/L		
		2,4-Dimethyl phenol			<10			µg/L		
		Dimethyl phthalate			<10			µg/L		
		p-Dimethylaminoazobenzene			<10			µg/L		
		7,12-Dimethylbenz(a)anthracene			<10			µg/L		
		3,3'-Dimethylbenzidine			<10			µg/L		
		a,a-Dimethylphenethylamine			<10			µg/L		
		1,3-Dinitrobenzene			<10			µg/L		
		2,4-Dinitrophenol			<45			µg/L		
		2,4-Dinitrotoluene			<10			µg/L		
		2,6-Dinitrotoluene			<10			µg/L		
		Di-n-octyl phthalate			<10			µg/L		
		1,4-Dioxane			<10			µg/L		
		Diphenylamine			<10			µg/L		
		Disulfoton			<10			µg/L		
		Endosulfan I			<0.30			µg/L		
		Endosulfan II			<0.30			µg/L		
		Endosulfan sulfate			<0.30			µg/L		
		Endrin	<0.0060		<0.018			µg/L		
		Endrin aldehyde			<0.30			µg/L		
		Ethyl methacrylate			<10			µg/L		
		Ethyl methanesulfonate			<10			µg/L		
		Ethylbenzene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Famphur			<10			µg/L		
		Fluoranthene			<10			µg/L		
		Fluorene			<10			µg/L		
		Fluoride	<100	<100		<100		µg/L	GE	0
		Gross alpha	<2.0E+00					pCi/L		
		Heptachlor			<0.15			µg/L		
		Heptachlor epoxide			<0.15			µg/L		
		1,2,3,4,6,7,8-HPCDD			<0.00065			µg/L		
		Heptachlorodibenzo-p-dioxin isomers			<0.00065			µg/L		
		1,2,3,4,6,7,8-HPCDF			<0.00045			µg/L		
		Heptachlorodibenzo-p-furan isomers			<0.00045			µg/L		
		Hexachlorobenzene			<10			µg/L		

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Well AMB 13AR continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		Hexachlorobutadiene			<10			µg/L		
		Hexachlorocyclopentadiene			<10			µg/L		
		1,2,3,4,7,8-HXCDD			<0.00045			µg/L		
		Hexachlorodibenzo-p-dioxin isomers			<0.00045			µg/L		
		1,2,3,4,7,8-HXCDF			<0.00040			µg/L		
		Hexachlorodibenzo-p-furan isomers			<0.00040			µg/L		
		Hexachloroethane			<10			µg/L		
		Hexachlorophene			<10			µg/L		
		Hexachloropropene			<10			µg/L		
		2-Hexanone			<1.0			µg/L		
		Indeno[1,2,3-c,d]pyrene			<10			µg/L		
		Iodomethane (Methyl iodide)			<15			µg/L		
		Iron, total recoverable	38		43			µg/L		
		Isobutyl alcohol			<100			µg/L		
		Isodrin			<10			µg/L		
		Isophorone			<10			µg/L		
		Isosafrole			<10			µg/L		
		Kepon			<10			µg/L		
		Lead, total recoverable	<3.0		<3.0			µg/L		
		Lindane	<0.0050		<0.015			µg/L		
		Magnesium, total recoverable	94					µg/L		
		Manganese, total recoverable	2.2		4.3			µg/L		
		Mercury, total recoverable	<0.20		<0.20			µg/L		
		Methacrylonitrile			<50			µg/L		
		Methapyrilene			<10			µg/L		
		Methoxychlor	<0.50		<1.5			µg/L		
		2-Methyl-4,6-dinitrophenol			<10			µg/L		
		Methyl ethyl ketone			<1.0			µg/L		
		Methyl isobutyl ketone			<1.0			µg/L		
		Methyl methacrylate			<10			µg/L		
		Methyl methanesulfonate			<10			µg/L		
		3-Methylcholanthrene			<10			µg/L		
		2-Methylnaphthalene			<10			µg/L		
		Naphthalene			<10			µg/L		
		1,4-Naphthoquinone			<10			µg/L		
		1-Naphthylamine			<10			µg/L		
		2-Naphthylamine			<10			µg/L		
		Nickel, total recoverable		<4.0	<4.0	<4.0		µg/L	GE	0
		Nitrate-nitrite as nitrogen	960	1,040		1,040		µg/L	GE	0
		o-Nitroaniline			<10			µg/L		
		m-Nitroaniline			<10			µg/L		
		p-Nitroaniline			<10			µg/L		
		Nitrobenzene			<10			µg/L		
		2-Nitrophenol			<10			µg/L		
		4-Nitrophenol			<10			µg/L		
		4-Nitroquinoline-1-oxide			<10			µg/L		
		N-Nitrosodi-n-butylamine			<10			µg/L		
		N-Nitrosodiethylamine			<10			µg/L		
		N-Nitrosodimethylamine			<10			µg/L		
		N-Nitrosodiphenylamine			<10			µg/L		
		N-Nitrosodipropylamine			<10			µg/L		
		N-Nitrosomethylethylamine			<10			µg/L		
		N-Nitrosomorpholine			<10			µg/L		
		N-Nitrosopiperidine			<10			µg/L		
		N-Nitrosopyrrolidine			<10			µg/L		
		5-Nitro-o-toluidine			<10			µg/L		
		Nonvolatile beta	8.4E+00					pCi/L		
		O,O,O-Triethyl phosphorothioate			<10			µg/L		
		Octachlorodibenzo-p-dioxin isomers			<0.0010			µg/L		
		Octachlorodibenzo-p-furan isomers			<0.0010			µg/L		
		Parathion			<0.15			µg/L		
		Parathion methyl			<0.15			µg/L		

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Well AMB 13AR continued

ANALYTICAL DATA

H	D	Analyte	1Q93	2Q93	3Q93	4Q93	Mod	Unit	Lab	Flag
		PCB 1016			<1.5			µg/L		
		PCB 1221			<1.5			µg/L		
		PCB 1232			<1.5			µg/L		
		PCB 1242			<1.5			µg/L		
		PCB 1248			<1.5			µg/L		
		PCB 1254			<1.5			µg/L		
		PCB 1260			<1.5			µg/L		
		Pentachlorobenzene			<10			µg/L		
		1,2,3,7,8-PCDD			<0.00055			µg/L		
		Pentachlorodibenzo-p-dioxin isomers			<0.00055			µg/L		
		1,2,3,7,8-PCDF			<0.00055			µg/L		
		Pentachloroethane			<10			µg/L		
		Pentachloronitrobenzene			<10			µg/L		
		Pentachlorophenol			<10			µg/L		
•		pH	11	11	11	11	J	pH	GE	2
		Phenacetin			<10			µg/L		
		Phenanthrene			<10			µg/L		
		Phenol			<10			µg/L		
		Phenols	<5.0					µg/L		
		p-Phenylenediamine			<10			µg/L		
		Phorate			<0.30			µg/L		
		2-Picoline			<10			µg/L		
		Potassium, total recoverable	8,270					µg/L		
		Pronamid			<10			µg/L		
		Propionitrile			<200			µg/L		
		Pyrene			<10			µg/L		
		Pyridine			<10			µg/L		
		Radium, total alpha-emitting	<1.0E+00	<1.0E+00	2.2E+00	1.5E+00		pCi/L	GE	0
		Safrole			<10			µg/L		
		Selenium, total recoverable	<2.0		<2.0			µg/L		
		Silica, total recoverable	37,500					µg/L		
		Silver, total recoverable	<2.0	<2.0	<2.0	<2.0		µg/L	GE	0
		Sodium, total recoverable	11,000					µg/L		
		Specific conductance	295	320	185	252		µS/cm	GE	1
		Styrene			<1.0			µg/L		
		Sulfate	1,800					µg/L		
		Sulfide			<1,000			µg/L		
		Sulfotep			<10			µg/L		
		1,2,4,5-Tetrachlorobenzene			<10			µg/L		
		2,3,7,8-TCDD			<0.00045			µg/L		
		2,3,7,8-TCDF			<0.00040			µg/L		
		Tetrachlorodibenzo-p-dioxin isomers			<0.00045			µg/L		
		Tetrachlorodibenzo-p-furan isomers			<0.00040			µg/L		
		1,1,1,2-Tetrachloroethane			<1.0			µg/L		
		1,1,2,2-Tetrachloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Tetrachloroethylene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2,3,4,6-Tetrachlorophenol			<10			µg/L		
		Thallium, total recoverable			<2.0			µg/L		
		Thionazin			<10			µg/L		
		Tin, total recoverable			<2.0			µg/L		
		Toluene	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		o-Toluidine			<10			µg/L		
		Total dissolved solids	140,000	142,000	117,000	125,000	V	µg/L	GE	0
		Total organic carbon	1,310	1,260	1,150	1,310		µg/L	GE	0
		Total organic halogens	11	<5.0	<5.0	<5.0		µg/L	GE	0
		Total phosphates (as P)	160					µg/L		
		Toxaphene	<0.24		<0.72			µg/L		
		2,4,5-TP (Silvex)	<0.090		<0.090			µg/L		
		1,2,4-Trichlorobenzene			<10			µg/L		
		1,1,1-Trichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		1,1,2-Trichloroethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		Trichloroethylene	<1.0	<1.0	1.0	1.0		µg/L	GE	0

Note: Flagging levels, modifiers, and laboratories are for fourth quarter 1993 data only. See Appendix B for flagging criteria.

● = exceeded holding time for fourth quarter 1993.

■ = exceeded screening level or final primary drinking water standard for fourth quarter 1993.

Well AMB 13AR continued

ANALYTICAL DATA

<u>H</u>	<u>D</u>	<u>Analyte</u>	<u>1Q93</u>	<u>2Q93</u>	<u>3Q93</u>	<u>4Q93</u>	<u>Mod</u>	<u>Unit</u>	<u>Lab</u>	<u>Flag</u>
		Trichlorofluoromethane	<1.0	<1.0	<1.0	<1.0		µg/L	GE	0
		2,4,5-Trichlorophenol			<10			µg/L		
		2,4,6-Trichlorophenol			<10			µg/L		
		2,4,5-T			<0.090			µg/L		
		1,2,3-Trichloropropane			<1.0			µg/L		
		1,3,5-Trinitrobenzene			<10			µg/L		
		Tritium	<7.0E-01					pCi/mL		
		Vanadium, total recoverable			<8.0			µg/L		
		Vinyl acetate			<1.0			µg/L		
		Xylenes			<2.0			µg/L		
		Zinc, total recoverable			2.8			µg/L		

Note: Flagging levels, modifiers, and laboratories are for fourth quarter 1993 data only. See Appendix B for flagging criteria.

● = exceeded holding time for fourth quarter 1993.

■ = exceeded screening level or final primary drinking water standard for fourth quarter 1993.

Appendix E – Data Quality/Useability Assessment

Data Quality/Useability Assessment

Quality assurance/quality control (QA/QC) procedures relating to accuracy and precision of analyses performed on groundwater samples are followed in the field and laboratory and are reviewed prior to publication of results. The Environmental Protection Department/Environmental Monitoring Section's (EPD/EMS) review of the volume of analytical data acquired each quarter and presented in various reports is an ongoing process; its review of the QA/QC data cannot be completed in time to meet the deadlines for the reports required by the Resource Conservation and Recovery Act and associated regulations. Other site and regulatory personnel can obtain further information on the data quality and useability in a variety of ways, including those described below.

Data Qualification

The contract laboratories continually assess their own accuracy and precision according to U.S. Environmental Protection Agency (EPA) guidelines. They submit sample- or batch-specific QA/QC information either at the same time as analytical results or in a quarterly summary. Properly defined and used result modifiers (also referred to as qualifiers) can be a key component in assessing data useability. Result modifiers designed by EPD/EMS and used by the primary laboratories are presented in Appendix D.

Assessment of Accuracy of the Data

Accuracy, or the nearness of the reported result to the true concentration of a constituent in a sample, can be assessed in several ways.

A laboratory's general accuracy can be judged by analysis of results obtained from known samples. The non-radionuclide contract laboratories analyze commercial reference samples every quarter at EPD/EMS' request. The results of these analyses are presented in the EPD/EMS quarterly report, *The Savannah River Site's Groundwater Monitoring Program*. The primary laboratories also seek or maintain state certification by participating periodically in performance studies; reference samples and analysis of results are provided by EPA. Results of these studies also are published in the EPD/EMS quarterly reports.

Analysis of blanks provides a tool for assessing the accuracy of both sampling and laboratory analysis. Results for all field blanks for the quarter can be found in the EPD/EMS quarterly reports. Any field or laboratory blanks that exceeded established minimums are identified in the same reports, in tables associating them with groundwater samples analyzed in the same batches.

Surrogates, organic compounds similar in chemical behavior to the compounds of interest but not normally found in environmental samples, are used to monitor the effect of the matrix on the accuracy of analyses for organic parameters. For example, for analyses of volatile organics by EPA Method 8240, three surrogate compounds are added to all samples

and blanks in each analytical batch. In analyses of semivolatile organics, three to four acid compounds and three to four base/neutral compounds are used. Other surrogates are used in pesticides analyses. Percent recoveries for surrogate analyses are calculated by laboratory personnel, reported to EPD/EMS, reviewed, and entered into the database, but they are not published. If recoveries are not within specified limits, the laboratory is expected to re-run the samples or attach result qualifiers to the data identifying the anomalous results.

Sample-specific accuracy for both organic and inorganic parameters can be assessed by examination of matrix spike/matrix spike duplicate results. A sample is analyzed unspiked to determine a baseline set of values. A second portion of sample is spiked with known concentrations of compounds appropriate to the analyses being performed, typically 5 volatile organic compounds for volatile organics analyses, 11 semivolatile compounds for semivolatiles, 6 pesticide compounds for pesticides, all metals for metals analyses, and a known quantity of cyanide for cyanide analysis. The percentage of the spike compound that is recovered (i.e., measured in excess of the value obtained for the unspiked sample) is a direct measure of analytical accuracy. EPA requires matrix spike/matrix spike duplicates to be run at least once per 20 samples of similar matrix.

Matrix spike/matrix spike duplicate results are reported to EPD/EMS but are not published. For organic compounds, according to EPA guidelines, no action is taken on the basis of matrix spike/matrix spike duplicate data alone (i.e., no result modifiers are assigned solely on the basis of matrix spike results); however, the results can indicate if a lab is having a systematic problem in the analysis of one or more analytes.

In the case of inorganic compounds, such as metals, the matrix spike sample analysis provides information about the effect of each sample matrix on the digestion and measurement methodology. Data qualifiers can be assigned on the basis of the percentage of spike recovery and are reported in the published results tables.

Assessment of Precision

Precision of the analyses, or agreement of a set of replicate results among themselves, is assessed through the use of duplicates (laboratory-initiated) and blind replicates (provided by EPD/EMS). The results of duplicate and replicate analyses are presented in the results tables of the first, second, and third quarter reports. Duplicate and replicate results are not presented in fourth quarter reports; the results tables present instead only the highest result for each analyte for each quarter of the year.

The laboratories assess precision by calculating the relative percent difference, or RPD, for each pair of laboratory-initiated duplicate results. During 1992, at least one of the contract laboratories used a data qualifier (J3) to modify metals analyses when the RPD for laboratory duplicates was greater than 20%.

Additional statistical comparisons of laboratory duplicate and blind replicate results, both intra- and interlaboratory, are presented in the EPD/EMS quarterly reports. The calculation used for these reports is the MRD, or mean relative difference, which is similar to EPA's RPD except that the MRD provides a single value for all of the analyses of a particular com-

pound, either inter- or intralaboratory, during one quarter. Because detection limits may vary among samples, the MRD requires calculation of a reference detection limit, which is the detection limit at the 90th percentile of the array of limits in the population of all replicate and duplicate analyses for a given analyte during a particular quarter. The MRD is not method-specific.

Method-Specific Accuracy and Precision

The contract laboratories' EPA-approved laboratory procedures include QA/QC requirements as an integral part of the methods. Thus, knowledge of the method used in obtaining data is an important component of determining data useability. EPA has conducted extensive research and development on the methods approved for the analysis of water and waste water; information on the accuracy and precision of the method is available from EPA publications, as is full information on required QA/QC procedures. A listing of the methods used by the primary laboratories during first quarter 1992 is given below along with the source for the method description. Many, if not all, of these sources include presentations of representative accuracy and precision results.

<u>Method</u>	<u>Used to Analyze</u>	<u>Source</u>
EPA120.1	Specific conductance	EPA EMSL 1983
EPA150.1	pH	EPA EMSL 1983
EPA160.1	Filterable residue (total dissolved solids)	EPA EMSL 1983
EPA160.2	Nonfilterable residue	EPA EMSL 1983
EPA180.1	Turbidity	EPA EMSL 1983
EPA200.7	Trace elements	EPA EMSL 1983
EPA206.2	Arsenic	EPA EMSL 1983
EPA208.2	Barium	EPA EMSL 1983
EPA239.2	Lead	EPA EMSL 1983
EPA245.1	Mercury	EPA EMSL 1983
EPA270.2	Selenium	EPA EMSL 1983
EPA279.2	Thallium	EPA EMSL 1983
EPA300.0	Inorganics, non-metallics	EPA EMSL 1991
EPA310.1	Alkalinity	EPA EMSL 1983
EPA325.2	Chloride	EPA EMSL 1983
EPA335.3	Cyanide	EPA EMSL 1983
EPA340.2	Fluoride	EPA EMSL 1983
EPA353.1	Nitrogen, nitrate-nitrite	EPA EMSL 1983
EPA353.2	Nitrogen, nitrate, nitrite, or combined	EPA EMSL 1983
EPA353.3	Nitrogen, nitrate-nitrite, or nitrite only	EPA EMSL 1983
EPA354.1	Nitrogen, nitrite	EPA EMSL 1983
EPA365.1	Phosphorus, all forms (reported as total phosphates)	EPA EMSL 1983
EPA365.2	Phosphorus, all forms (reported as total phosphates)	EPA EMSL 1983
EPA375.4	Sulfate, turbidimetric	EPA EMSL 1983
EPA376.2	Sulfide	EPA EMSL 1983
APHA403	Alkalinity	APHA 1985
EPA413.1	Oil & grease	EPA EMSL 1983
APHA415A	Iodine	APHA 1985
EPA415.1	Total organic carbon	EPA EMSL 1983
EPA418.1	Petroleum hydrocarbons	EPA EMSL 1983
EPA420.1	Phenolics	EPA EMSL 1983
EPA420.2	Phenolics	EPA EMSL 1983
APHA705	Total alpha-emitting radium	APHA 1985

<u>Method</u>	<u>Used to Analyze</u>	<u>Source</u>
ASTMD3869C	Iodide	ASTM 1992
APHA5320	Dissolved organic halogen	APHA 1989
EPA6010	Metals	EPA 1986
EPA7041	Antimony	EPA 1986
EPA7060	Arsenic	EPA 1986
EPA7421	Lead	EPA 1986
EPA7470	Mercury	EPA 1986
EPA7740	Selenium	EPA 1986
EPA7841	Thallium	EPA 1986
EPA8010	Halogenated volatile organics	EPA 1986
EPA8020	Aromatic volatile organics	EPA 1986
EPA8080	Organochlorine pesticides and PCBs	EPA 1986
EPA8140	Organophosphorus pesticides	EPA 1986
EPA8150	Chlorinated herbicides	EPA 1986
EPA8240	GCMS VOA	EPA 1986
EPA8270	GCMS semivolatiles	EPA 1986
EPA8280	Dioxins and furans	EPA 1986
EPA9012	Total cyanide	EPA 1986
EPA9020	Total organic halides	EPA 1986
EPA9030	Sulfides	EPA 1986

An example of the available method-specific QA/QC information is that for the analysis of metals by EPA Method 6010/200.7 (EPA, 1986/EPA EMSL, 1983). The primary laboratories, General Engineering Laboratories (GE) and Roy F. Weston, Inc. (Weston), use this inductively coupled plasma (ICP) atomic emission spectrometric method.

The following precision and accuracy data are based on the experience of seven laboratories that applied the ICP technique to acid-distilled water matrices that had been dosed with various metal concentrates. (Note: not all seven laboratories analyzed all 14 elements.) The references give results for samples having three concentration ranges; the results here are for samples having the lowest values, similar to actual groundwater results for SRS.

ICP Precision and Accuracy Data

<u>Element</u>	<u>True value (µg/L)</u>	<u>Mean reported value (µg/L)</u>	<u>Mean percent RSD^a</u>
Aluminum	60	62	33
Arsenic	22	19	23
Beryllium	20	20	9.8
Cadmium	2.5	2.9	16
Chromium	10	10	18
Cobalt	20	20	4.1
Copper	11	11	40
Iron	20	19	15
Lead	24	30	32
Manganese	15	15	6.7
Nickel	30	28	11
Selenium	6	8.5	42

Element	True value ($\mu\text{g/L}$)	Mean reported value ($\mu\text{g/L}$)	Mean percent RSD ^a
Vanadium	70	69	2.9
Zinc	16	19	45

Note: In EPA (1986), the column heading is Mean Standard Deviation (%).

^a Relative standard deviation.

As another example, EPA Method 601/8010 (EPA, 1991/EPA, 1986) is used by both GE and Weston for analyses of halogenated volatile organics. In the presentation of the method in both references, the following table gives method-specific accuracy and precision as functions of concentration. Contract laboratories are expected to achieve or at least approach these limits.

Accuracy and Precision as Functions of Concentration for EPA Method 601/8010

Parameter	Accuracy as recovery, X'^a ($\mu\text{g/L}$)	Single analyst precision ($\mu\text{g/L}$) ^b	Overall precision ($\mu\text{g/L}$) ^c
Bromodichloromethane	$1.12C - 1.02^d$	$0.11\bar{X} + 0.04^e$	$0.20\bar{X} + 1.00$
Bromoform	$0.96C - 2.05$	$0.12\bar{X} + 0.58$	$0.21\bar{X} + 2.41$
Bromomethane	$0.76C - 1.27$	$0.28\bar{X} + 0.27$	$0.36\bar{X} + 0.94$
Carbon tetrachloride	$0.98C - 1.04$	$0.15\bar{X} + 0.38$	$0.20\bar{X} + 0.39$
Chlorobenzene	$1.00C - 1.23$	$0.15\bar{X} - 0.02$	$0.18\bar{X} + 1.21$
Chloroethane	$0.99C - 1.53$	$0.14\bar{X} - 0.13$	$0.17\bar{X} + 0.63$
2-Chloroethyl vinyl ether ^f	$1.00C$	$0.20\bar{X}$	$0.35\bar{X}$
Chloroform	$0.93C - 0.39$	$0.13\bar{X} + 0.15$	$0.19\bar{X} - 0.02$
Chloromethane	$0.77C + 0.18$	$0.28\bar{X} - 0.31$	$0.52\bar{X} + 1.31$
Dibromochloromethane	$0.94C + 2.72$	$0.11\bar{X} + 1.10$	$0.24\bar{X} + 1.68$
1,2-Dichlorobenzene	$0.93C + 1.70$	$0.20\bar{X} + 0.97$	$0.13\bar{X} + 6.13$
1,3-Dichlorobenzene	$0.95C + 0.43$	$0.14\bar{X} + 2.33$	$0.26\bar{X} + 2.34$
1,4-Dichlorobenzene	$0.93C - 0.09$	$0.15\bar{X} + 0.29$	$0.20\bar{X} + 0.41$
1,1-Dichloroethane	$0.95C - 1.08$	$0.09\bar{X} + 0.17$	$0.14\bar{X} + 0.94$
1,2-Dichloroethane	$1.04C - 1.06$	$0.11\bar{X} + 0.70$	$0.15\bar{X} + 0.94$
1,1-Dichloroethene	$0.98C - 0.87$	$0.21\bar{X} - 0.23$	$0.29\bar{X} - 0.40$
trans-1,2-Dichloroethene	$0.97C - 0.16$	$0.11\bar{X} + 1.46$	$0.17\bar{X} + 1.46$
1,2-Dichloropropane ^f	$1.00C$	$0.13\bar{X}$	$0.23\bar{X}$
cis-1,3-Dichloropropene ^f	$1.00C$	$0.18\bar{X}$	$0.32\bar{X}$
trans-1,3-Dichloropropene ^f	$1.00C$	$0.18\bar{X}$	$0.32\bar{X}$
Dichloromethane (Methylene chloride)	$0.91C - 0.93$	$0.11\bar{X} + 0.33$	$0.21\bar{X} + 1.43$
1,1,2,2-Tetrachlorethane	$0.95C + 0.19$	$0.14\bar{X} + 2.41$	$0.23\bar{X} + 2.79$
Tetrachloroethylene	$0.94C + 0.06$	$0.14\bar{X} + 0.38$	$0.18\bar{X} + 2.21$
1,1,1-Trichloroethane	$0.90C - 0.16$	$0.15\bar{X} + 0.04$	$0.20\bar{X} + 0.37$
1,1,2-Trichloroethane	$0.86C + 0.30$	$0.13\bar{X} - 0.14$	$0.19\bar{X} + 0.67$
Trichloroethylene	$0.87C + 0.48$	$0.13\bar{X} - 0.03$	$0.23\bar{X} + 0.30$
Trichlorofluoromethane	$0.89C - 0.07$	$0.15\bar{X} + 0.67$	$0.26\bar{X} + 0.91$
Vinyl chloride	$0.97C - 0.36$	$0.13\bar{X} + 0.65$	$0.27\bar{X} + 0.40$

^a X' = expected recovery for one or more measurements of a sample containing a concentration of C , in $\mu\text{g/L}$.

- ^b Expected single analyst standard deviation of measurements.
- ^c Expected interlaboratory standard deviation of measurements.
- ^d C = true value for the concentration, in $\mu\text{g/L}$.
- ^e $\bar{X}$ = average recovery found for measurements of samples containing a concentration of C , in $\mu\text{g/L}$.
- ^f Estimates based on performance in a single laboratory.

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Appendix F – Time Series Plots

Field pH Well AMB 4A Through AMB 7B

Field pH Well AMB 8D Through AMB 13AR

Field Specific Conductance Wells AMB 4A Through AMB 7B

Field Specific Conductance Wells AMB 8D Through AMB 13AR

AMB 10A is plotted separately because its value distorts the scale of this chart.

Field Specific Conductance Well AMB 10A

Tetrachloroethylene Concentrations Well AMB 4A

Tetrachloroethylene Concentrations Well AMB 4B

Tetrachloroethylene Concentrations Well AMB 4D

Tetrachloroethylene Concentrations Well AMB 5

Tetrachloroethylene Concentrations Well AMB 6

Tetrachloroethylene Concentrations
Well AMB 7

Tetrachloroethylene Concentrations Well AMB 7A

Tetrachloroethylene Concentrations Well AMB 7B

Tetrachloroethylene Concentrations Well AMB 8D

Tetrachloroethylene Concentrations Well AMB 10A

Tetrachloroethylene Concentrations Well AMB 10B

Tetrachloroethylene Concentrations Well AMB 10D

Tetrachloroethylene Concentrations Well AMB 10DD

Tetrachloroethylene Concentrations Well AMB 11B

Tetrachloroethylene Concentrations Well AMB 11D

Tetrachloroethylene Concentrations Well AMB 12D

Tetrachloroethylene Concentrations Well AMB 13AR

Total Alpha-Emitting Radium Activities Well AMB 4A

Total Alpha-Emitting Radium Activities Well AMB 4B

Total Alpha-Emitting Radium Activities Well AMB 4D

Total Alpha-Emitting Radium Activities Well AMB 5

Total Alpha-Emitting Radium Activities Well AMB 6

Total Alpha-Emitting Radium Activities Well AMB 7

Total Alpha-Emitting Radium Activities Well AMB 7A

Total Alpha-Emitting Radium Activities Well AMB 7B

Total Alpha-Emitting Radium Activities Well AMB 8D

Total Alpha-Emitting Radium Activities Well AMB 9D

Total Alpha-Emitting Radium Activities Well AMB 10A

Total Alpha-Emitting Radium Activities Well AMB 10B

Total Alpha-Emitting Radium Activities Well AMB 10D

Total Alpha-Emitting Radium Activities Well AMB 10DD

Total Alpha-Emitting Radium Activities Well AMB 11B

Total Alpha-Emitting Radium Activities Well AMB 11D

Total Alpha-Emitting Radium Activities Well AMB 12D

Total Alpha-Emitting Radium Activities Well AMB 13AR

Total Organic Carbon Concentrations Well AMB 4A

Total Organic Carbon Concentrations Well AMB 4B

Total Organic Carbon Concentrations Well AMB 4D

Total Organic Carbon Concentrations Well AMB 5

Total Organic Carbon Concentrations Well AMB 6

Total Organic Carbon Concentrations Well AMB 7

Total Organic Carbon Concentrations Well AMB 7A

Total Organic Carbon Concentrations Well AMB 7B

Total Organic Carbon Concentrations Well AMB 8D

Total Organic Carbon Concentrations Well AMB 9D

Total Organic Carbon Concentrations Well AMB 10A

Total Organic Carbon Concentrations Well AMB 10B

Total Organic Carbon Concentrations Well AMB 10DD

3 of 3

Total Organic Carbon Concentrations Well AMB 11B

Total Organic Carbon Concentrations Well AMB 11D

Total Organic Carbon Concentrations Well AMB 12D

Total Organic Carbon Concentrations Well AMB 13AR

Total Organic Halogens Concentrations Well AMB 4A

Total Organic Halogens Concentrations Well AMB 4B

Total Organic Halogens Concentrations Well AMB 4D

Total Organic Halogens Concentrations Well AMB 5

Total Organic Halogens Concentrations Well AMB 6

Total Organic Halogens Concentrations Well AMB 7

Total Organic Halogens Concentrations Well AMB 7A

Total Organic Halogens Concentrations Well AMB 7B

Total Organic Halogens Concentrations Well AMB 8D

Total Organic Halogens Concentrations Well AMB 9D

Total Organic Halogens Concentrations Well AMB 10A

Total Organic Halogens Concentrations Well AMB 10B

Total Organic Halogens Concentrations Well AMB 10D

Total Organic Halogens Concentrations Well AMB 10DD

Total Organic Halogens Concentrations Well AMB 11B

Total Organic Halogens Concentrations Well AMB 11D

Total Organic Halogens Concentrations Well AMB 12D

Total Organic Halogens Concentrations Well AMB 13AR

Trichloroethylene Concentrations Well AMB 4A

Trichloroethylene Concentrations Well AMB 4B

Trichloroethylene Concentrations Well AMB 4D

Trichloroethylene Concentrations Well AMB 5

Trichloroethylene Concentrations Well AMB 6

Trichloroethylene Concentrations Well AMB 7

Trichloroethylene Concentrations Well AMB 7A

Trichloroethylene Concentrations Well AMB 7B

Trichloroethylene Concentrations Well AMB 8D

Trichloroethylene Concentrations Well AMB 9D

Trichloroethylene Concentrations Well AMB 10A

Trichloroethylene Concentrations Well AMB 10B

Trichloroethylene Concentrations Well AMB 10D

Trichloroethylene Concentrations Well AMB 11B

Trichloroethylene Concentrations Well AMB 11D

Trichloroethylene Concentrations Well AMB 12D

Trichloroethylene Concentrations Well AMB 13AR

Appendix G – Hydrographs

Hydrograph Well AMB 4A

Hydrograph Well AMB 4B

Hydrograph Well AMB 4D

Hydrograph Well AMB 5

Hydrograph Well AMB 6

Hydrograph Well AMB 7

Hydrograph Well AMB 7A

Hydrograph Well AMB 7B

Hydrograph Well AMB 8D

Hydrograph Well AMB 9D

Hydrograph Well AMB 10A

Hydrograph Well AMB 10B

Hydrograph Well AMB 10D

Hydrograph Well AMB 10DD

Hydrograph Well AMB 11B

Hydrograph Well AMB 11D

Hydrograph Well AMB 12D

Hydrograph Well AMB 13AR

Appendix H – M-Area Large-Scale Maps

AIM

Association for Information and Image Management

1100 Wayne Avenue, Suite 1100

Silver Spring, Maryland 20910

301/587-8202

Centimeter

Inches

MANUFACTURED TO AIM STANDARDS
BY APPLIED IMAGE, INC.

DATE

FILMED

1 / 17 / 95

END