

# National Water-Quality Assessment of the Trinity River Basin, Texas—Well and Water-Quality Data from the Outcrop of the Woodbine Aquifer in Urban Tarrant County, 1993

By David C. Reutter

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**A Contribution of the  
National Water-Quality Assessment Program**

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<URL:[http://www.rvares.er.usgs.gov/nawqa/nawqa\\_home.html](http://www.rvares.er.usgs.gov/nawqa/nawqa_home.html)>

# FOREWORD

The mission of the U.S. Geological Survey (USGS) is to assess the quantity and quality of the earth resources of the Nation and to provide information that will assist resource managers and policymakers at Federal, State, and local levels in making sound decisions. Assessment of water-quality conditions and trends is an important part of this overall mission.

One of the greatest challenges faced by water-resources scientists is acquiring reliable information that will guide the use and protection of the Nation's water resources. That challenge is being addressed by Federal, State, interstate, and local water-resource agencies and by many academic institutions. These organizations are collecting water-quality data for a host of purposes that include: compliance with permits and water-supply standards; development of remediation plans for specific contamination problems; operational decisions on industrial, wastewater, or water-supply facilities; and research on factors that affect water quality. An additional need for water-quality information is to provide a basis on which regional and national-level policy decisions can be based. Wise decisions must be based on sound information. As a society we need to know whether certain types of water-quality problems are isolated or ubiquitous, whether there are significant differences in conditions among regions, whether the conditions are changing over time, and why these conditions change from place to place and over time. The information can be used to help determine the efficacy of existing water-quality policies and to help analysts determine the need for and likely consequences of new policies.

To address these needs, the U.S. Congress appropriated funds in 1986 for the USGS to begin a pilot program in seven project areas to develop and refine the National Water-Quality Assessment (NAWQA) Program. In 1991, the USGS began full implementation of the program. The NAWQA Program builds upon an existing base of water-quality studies of the USGS, as well as those of other Federal, State, and local agencies. The objectives of the NAWQA Program are to:

- Describe current water-quality conditions for a large part of the Nation's freshwater streams, rivers, and aquifers.

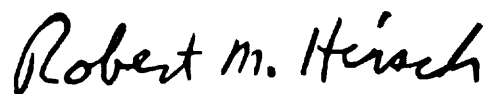
- Describe how water quality is changing over time.
- Improve understanding of the primary natural and human factors that affect water-quality conditions.

This information will help support the development and evaluation of management, regulatory, and monitoring decisions by other Federal, State, and local agencies to protect, use, and enhance water resources.

The goals of the NAWQA Program are being achieved through ongoing and proposed investigations of 60 of the Nation's most important river basins and aquifer systems, which are referred to as study units. These study units are distributed throughout the Nation and cover a diversity of hydrogeologic settings. More than two-thirds of the Nation's freshwater use occurs within the 60 study units and more than two-thirds of the people served by public water-supply systems live within their boundaries.

National synthesis of data analysis, based on aggregation of comparable information obtained from the study units, is a major component of the program. This effort focuses on selected water-quality topics using nationally consistent information. Comparative studies will explain differences and similarities in observed water-quality conditions among study areas and will identify changes and trends and their causes. The first topics addressed by the national synthesis are pesticides, nutrients, volatile organic compounds, and aquatic biology. Discussions on these and other water-quality topics will be published in periodic summaries of the quality of the Nation's ground and surface water as the information becomes available.

This report is an element of the comprehensive body of information developed as part of the NAWQA Program. The program depends heavily on the advice, cooperation, and information from many Federal, State, interstate, Tribal, and local agencies and the public. The assistance and suggestions of all are greatly appreciated.



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## CONVERSION FACTORS, VERTICAL DATUM, AND ABBREVIATED WATER-QUALITY UNITS

Multiply	By	To obtain
foot	0.3048	meter
foot per mile	0.189	meter per kilometer
gallon per minute	0.06309	liter per second
inch	25.40	millimeter
mile	1.609	kilometer
square mile	2.590	square kilometer

Sea level: In this report, “sea level” refers to the National Geodetic Vertical Datum of 1929—a geodetic datum derived from a general adjustment of the first-order level nets of the United States and Canada, formerly called Sea Level Datum of 1929.

Chemical concentrations are given in milligrams per liter (mg/L) and micrograms per liter (µg/L). Water temperature is given in degrees Celsius (°C), which can be converted to degrees Fahrenheit (°F) by the following equation:

$$^{\circ}\text{F} = 1.8(^{\circ}\text{C}) + 32$$

# National Water-Quality Assessment of the Trinity River Basin, Texas—Well and Water-Quality Data from the Outcrop of the Woodbine Aquifer in Urban Tarrant County, 1993

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## Abstract

An urban land-use study of the shallow water-bearing zones of the Woodbine aquifer outcrop area began in 1993 as a part of the National Water-Quality Assessment Program for the Trinity River Basin. Thirty-eight wells located within predominantly commercial or residential settings were selected for this study. Water samples were collected from each well and analyzed for 186 water-quality constituents.

A brief description of the study area and the Woodbine aquifer, a description of the installation and design of the wells used, and the water-quality data obtained from this study are included in this report. The well description includes the locations of the 38 wells used in the study, the well design of the 28 U.S. Geological Survey-installed wells, and the lithological logs. Laboratory analyses of water samples include major inorganic constituents, nutrients, trace elements, tritium, organic carbon, phenols, methyl blue active substance, pesticides, and volatile organic compounds. Field measurements (specific conductance, pH, water temperature, and dissolved oxygen concentration) were measured at each site.

## INTRODUCTION

The U.S. Geological Survey (USGS) began full implementation of the National Water-Quality Assessment (NAWQA) Program in 1991. The primary purposes of the NAWQA program are to describe the status and trends of the quality of the Nation's water resources and to provide a sound understanding of the natural and human factors affecting water quality (Leahy and

others, 1990). The Trinity River Basin was chosen as one of the first 20 study units.

One ground-water component of the assessment of the Nation's water resources is an examination of the natural and human factors affecting the quality of shallow ground water underlying major types of land use and land cover. Agricultural croplands and urban areas are the current focus. Considering the occurrence of the major and minor aquifer outcrops and these land uses in the basin, the outcrop of the Woodbine aquifer in the Dallas-Fort Worth metropolitan area was selected for study.

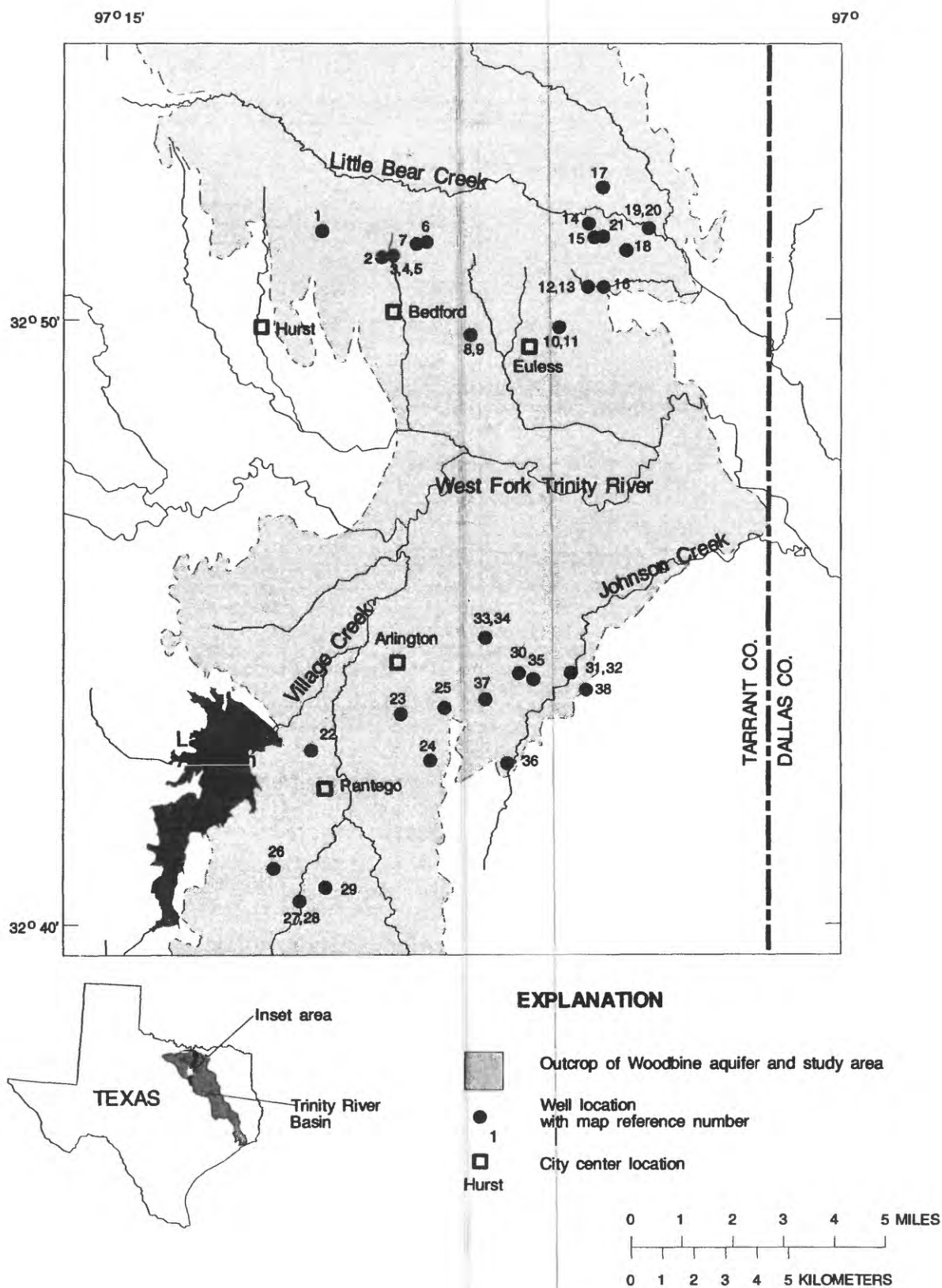
## Purpose and Scope

The purpose of this report is to describe the wells used in this study and to document the water-quality data. In addition, the sampling procedures will be described.

The purpose of this study is to examine the concentrations and distributions of water-quality constituents associated with shallow ground water underlying an urban land-use setting. This study focused on the shallow water-bearing zone of the Woodbine aquifer outcrop. Wells were restricted to areas that were predominantly residential or commercial.

## Description of Study Area

The study area (fig. 1) is located in the eastern part of Tarrant County where the cities of Arlington, Euless, Hurst, and Bedford and the town of Pantego are located. The area is located between the cities of Dallas and Fort Worth and is nearly fully developed. Many of the residents are employed in the cities of Dallas and Fort Worth; thus, much of the study area is developed for residential or commercial land use. The transition from mostly rural to urban land use began in the early 1950s.



**Figure 1.** Location of study area and monitoring wells in the outcrop of the Woodbine aquifer.

## Hydrogeology

The geology of the area is dominated by Cretaceous formations. The geologic structure is characterized by a crustal uplift in the west and subsidence to the southeast (fig. 2). The result is an east-southeast dip with outcrops occurring in northeast-southwest bands (Peckham and others, 1963). In the study area, the upper part of the Woodbine Formation is mostly fine-grained, well-sorted, crossbedded, reddish-brown sandstone with concretions and some gray shale. The middle part is a reddish sandstone with interbedded gray to brown clay and some shale. The lower part is an interbedded, red-brown to white sandstone with ironstone and sandy, gray to brown clay. The Woodbine Formation, designated as the Woodbine aquifer, is as much as 300 feet thick near the Tarrant-Dallas County line and dips about 35 feet per mile in the study area (Nordstrom, 1982). Considering the dip, thickness and topography, the width of the outcrop varies from 3 to 10 miles. Recharge to the Woodbine aquifer results from percolation of rainfall and (or) seepage from streams in the outcrop area (Nordstrom, 1982). Ground water moves either to nearby streams and wells or in the downdip direction which is the regional flow pattern. The lower part of the aquifer yields the greatest quantity of water with the lowest concentrations of dissolved solids and dissolved iron (Nordstrom, 1982; Baker and others, 1990). Ground-water use from the Woodbine aquifer in the study area is small and dominated by wells used to irrigate landscape. Water use for municipal and industrial purposes is constrained by low yielding wells, averaging less than 50 gallons per minute, and high concentrations of dissolved iron, manganese, and sulfate (Nordstrom, 1982).

## Acknowledgments

The cities of Bedford, Euless, and Arlington, the town of Pantego, and Tarrant County made the study possible by permitting the USGS to install monitoring wells on municipal properties. Officials, who were the primary contacts, include Dr. James Caffey, city of Arlington; Terry Highfield, city of Euless; Daniel Gentry, city of Bedford; Ronald Gibson, town of Pantego; and Commissioner Bob Hampton, Tarrant County. Several well owners aided the study by permitting the USGS to sample ground water from their wells.

## WELL DATA

Because of the scarce shallow wells (well screens less than 50 feet) in the study area, monitoring wells were designed and installed in the shallow zones. Domestic wells were used to sample intermediate and deep zones.

Considerations for a suitable site include the following: (1) permission, access for the drilling and well installation, and long-term availability for sampling; and (2) the inferred recharge area to the well had a land use that (a) was either residential or commercial; (b) was diversified in density, age and location; (c) did not have significant local or unusual contaminant sources; and (d) was expected to remain stable.

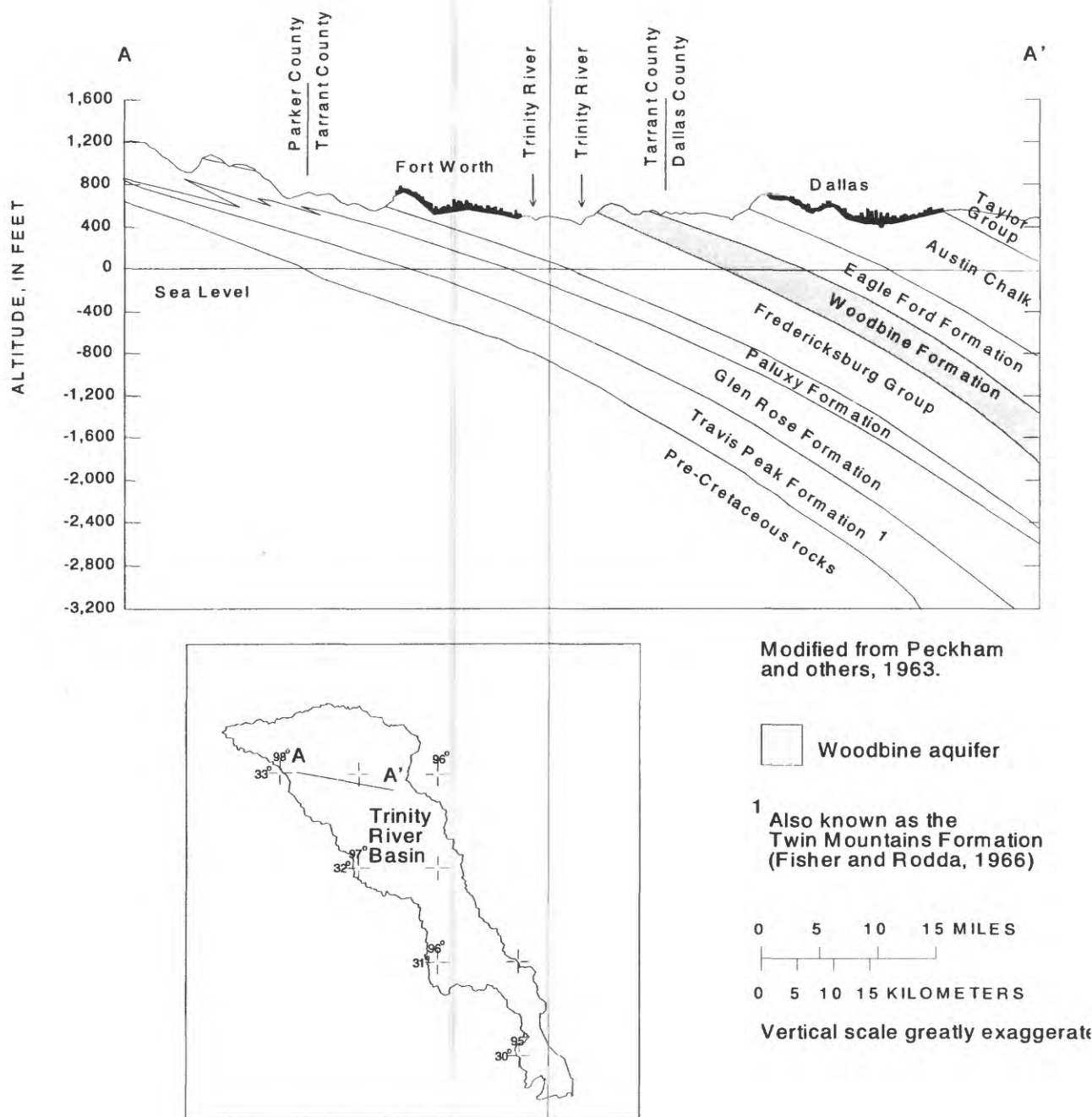
Considering permission and long-term availability, property owned by local governments was a preference. Parks, public facilities, and road rights-of-way were considered first. The recharge area to a shallow well was assumed to coincide with the surface drainage area. Preference was given to topographically low sites, such as swales and near small creeks, to reflect the effects of land use in the inferred recharge area. Nineteen sites were selected by the USGS for the installation of monitoring wells, and eight of these sites consisted of two or three wells installed to different depths. The USGS wells were installed during May through July 1993.

## Well Design

The well design is based on the need to: (1) monitor relatively short intervals in the shallow part of the aquifer, (2) induce as little contamination as possible into the well, (3) stay functional for many years, and (4) be economically installed. A conventional 8-inch hollow-stem auger drill rig was used to drill the wells. The wells were cased with 2-inch polyvinyl chloride (PVC) pipe with flush, threaded couplings; screened with 5 to 10 feet of 0.01-inch slotted PVC pipe; sand packed from the bottom of the well to 2 feet above the screen; sealed with benonite and a cement grout; and finished with a cemented-in-cast-iron monitoring well cover. A sketch of the installation is shown in figure 3. Each well was developed by swabbing, air lifting, and bailing.

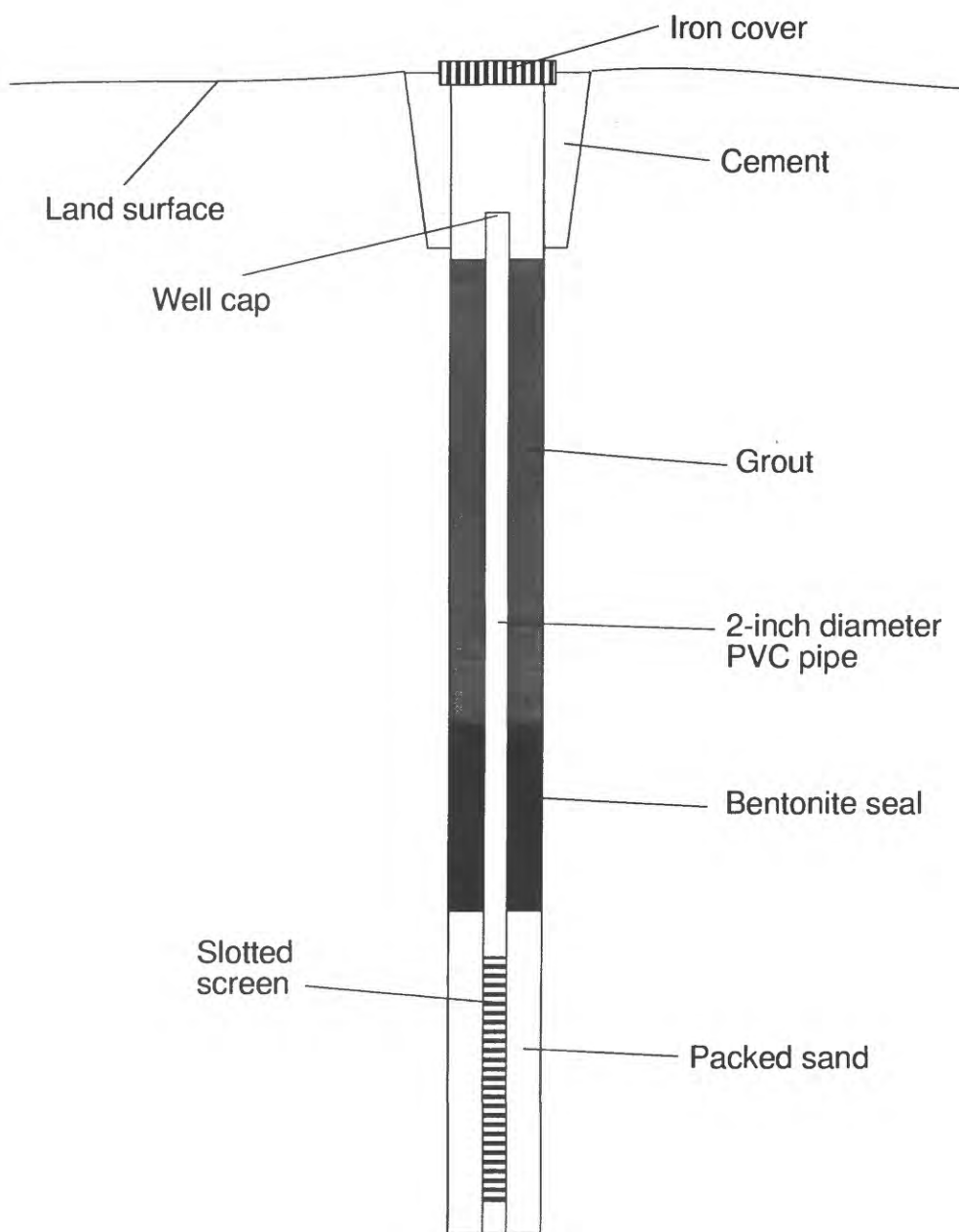
The domestic wells were commonly drilled by a mud rotary drilling rig with a 7- to 8-inch bit, and cased and screened with 4-inch PVC or steel pipe. They are gravel packed from the bottom to several feet above the





**Figure 2.** Generalized hydrogeologic section A-A' through the upper Trinity River Basin, Texas.





**Figure 3.** Schematic diagram of a monitoring well installed by the U.S. Geological Survey.

screen, and cemented to the top 5 to 10 feet. Most of these wells were installed in the 1970s and 1980s. All are equipped with a submersible pump and used seasonally for irrigation of the landscape.

### Well Description

The well locations (fig. 1) are listed in table 1 (at end of report) by well reference number. The lithologi-

cal logs from these wells are also listed in this table. Table 2 (at end of report) describes the design of the individual wells along with the predominant land use, water levels and maximum water yields.

### WATER-QUALITY DATA

The water samples were collected from each well during July through September 1993 by USGS

personnel. Specific conductance, pH, water temperature, and dissolved oxygen concentrations of the water were measured onsite (table 3, at end of report). The water samples were analyzed for nutrients (table 3), major inorganic constituents (table 4, at end of report), trace elements (table 5, at end of report), pesticides (table 6, at end of report), and organic compounds (table 7, at end of report). Water samples (table 3) were also collected and analyzed for tritium to establish if the water was recharged into the ground-water sampling zone prior to 1953. A major source of tritium has come from atmospheric testing of thermonuclear devices that began in 1952. Therefore, if tritium is not detected in water, significant amounts of post-1953 water are not present in the system (Freeze and Cherry, 1979).

Water was withdrawn from the wells by either pumping with a submersible pump or by bailing with stainless-steel and Teflon bailers. At the USGS-installed wells, a portable stainless-steel electric pump powered by a gasoline generator was used. Bailers were used only for the USGS-installed wells having very low yields. At the domestic private wells, the in-place submersible pumps were used to collect samples. Specific conductance, pH, water temperature, and dissolved oxygen (pumped water only) were measured at either 5-minute intervals for pumped water or after every tenth bail for bailed water. Sample collection began after at least three casing volumes of water were purged from the well and the field parameters had stabilized. A continuous-flow-through system consisting of Teflon tubing and stainless-steel connections was developed for processing samples from the pumped wells. If the wells were bailed, water was collected in 3-liter Teflon bottles for sample processing. Only the volatile organic compound (VOC) sample vials were filled directly from the bailer.

The filtration and preservation methods used in this study are described in Koterba and others (1995). The exceptions to the described methods were the use of 0.45-micron cellulose plate filters for the nutrient and the cation samples and the use of mercuric chloride as a nutrient sample preservative.

The sampling equipment was cleaned before sampling by the procedure described in Koterba and others (1995). The processed samples were chilled and shipped via overnight mail to the USGS National Water Quality Lab (NWQL) in Arvada, Colorado, for analysis.

Quality-assurance and quality-control samples comprised about 20 percent of the samples submitted to the NWQL for analysis. The quality-assurance and quality-control practices included submitting to the NWQL (1) three duplicate samples, (2) two organic-free blank water samples processed through the field equipment, and (3) one spiked VOC sample and three standard reference trace-element samples. In addition, one VOC sample was collected at a well previously sampled in order to verify the lab measurements.

## SUMMARY

Water from 38 wells in the Woodbine aquifer was sampled for the urban land-use study of the Woodbine aquifer (table 1). The sites selected were located in urban areas having either commercial or residential land use in the recharge areas. Twenty-eight of these wells were installed by the USGS to depths of less than 60 feet. The remaining wells were privately owned and had mid-screen depths ranging from 80 to 150 feet (table 2).

Each water sample was analyzed for 186 constituents. The constituents of interest were major inorganics, nutrients, trace elements, tritium, organic carbon, phenols, methyl blue active substance, pesticides, and VOCs. In addition, specific conductance, pH, water temperature, and dissolved oxygen were measured during sampling.

The nutrients measured were ammonia, nitrite, nitrite plus nitrate, ammonia plus organic nitrogen, orthophosphorus, and phosphorus (table 3). Nitrite plus nitrate was detected in 15 wells with a maximum concentration of 23 milligrams per liter. Ammonia plus organic nitrogen was detected in 25 wells with a maximum concentration of 2.5 milligrams per liter. Orthophosphorus was detected in 21 wells and had a maximum concentration of 0.14 milligram per liter. Phosphorus was detected in 20 wells and had a maximum concentration of 0.28 milligram per liter. Thirteen samples had no detectable concentrations of tritium.

The dissolved solids concentrations ranged from 267 to 20,500 milligrams per liter and had a median concentration of 1,130 milligrams per liter (table 4). Iron concentrations ranged from 6 to 91,000 micrograms per liter and had a median concentration of 970 micrograms per liter. Manganese concentrations ranged from 6 to greater than 70,000 micrograms per liter and had a median concentration of 677

micrograms per liter. Sulfate concentrations ranged from 19 to 3,400 milligrams per liter and had a median concentration of 380 milligrams per liter.

Seventeen trace elements were analyzed (table 5). Of these, aluminum, barium, cobalt, manganese, nickel, and zinc were detected in over one-half the wells sampled. Antimony and silver were not detected in any samples.

Four of the 85 pesticides had concentrations above detectable levels. The detected pesticides were desethyl atrazine, 2,4-D, metribuzin, and prometon. Prometon was the most frequently detected pesticide, with four detects.

Twelve of the 60 VOCs analyzed were above detectable levels of concentration (table 7). The VOCs detected were chlorobenzene, chloroform, 1,1-dichloroethylene, cis-1,2-dichloroethylene, trans-1,2-dichloroethylene, isopropylbenzene, 2-methoxy-2-methyl propene (MTBE), tetrachloroethylene, trichloroethylene, vinyl chloride (chloroethylene), xylene (dimethylbenzene), and 1,2,4-trimethylbenzene. MTBE was the most frequently detected VOC, with four detects. The highest number of VOCs detected from a single source, 10, were found in water from well XU-32-23-315. This well is located at a predominantly commercial land-use recharge area.

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**Table 1.** Well identification and lithological logs

Well reference number (fig. 1)	State well number	U.S. Geological Survey site number	Latitude and longitude (degrees, minutes, and seconds)	Lithological log (depth, in feet, and description)
1	XU-32-15-208	325137097104501	32°51'37" 97°10'45"	0-2 Topsoil and fill with gravel 2-8 Clay, with sand and some gravel 8-16 Clay, with sand 16-22 Clay, with some sand 22-26 Sand with clay 26 Limestone
2	XU-32-15-309	325111097093101	32°51'11" 97°09'31"	0-2 Topsoil and road fill 2-19 Clay with varying amounts of sand 19-30 No returns, probably clay with some sand
3	XU-32-15-310	325113097091701	32°51'13" 97°09'17"	0-2 Topsoil 2-8 Sand, with clay 8-11 Sand with very little clay 11-12 Sand, with clay 12-21 Sand, with some clay and occasional clay layer 21-45 Sand, few returns 45-46 Sand, with a gravel layer 46-49 Sand, few returns 49-59 Sand, with clay and layers of clay and gravel 59-62 No returns 62 Rock
4	XU-32-15-311	325113097091702	32°51'13" 97°09'17"	See well reference number 3
5	XU-32-15-312	325113097091703	32°51'13" 97°09'17"	See well reference number 3
6	XU-32-15-313	325127097083601	32°51'27" 97°08'36"	Unknown
7	XU-32-15-314	325125097084801	32°51'25" 97°08'48"	Unknown
8	XU-32-15-608	324952097074001	32°49'52" 97°07'40"	0-2 Topsoil 2-6 Clay, with sand 6-14 Sand, with some clay 14-16 Sand, with increasing amounts of clay 16-19 Clay, with sand 19-21 No returns 21-23 Clay, with some small gravel 23-39 No returns 39-42 Sand, with clay
9	XU-32-15-609	324952097074002	32°49'52" 97°07'40"	See well reference number 8
10	XU-32-16-106	325001097055101	32°50'01" 97°05'51"	0-2 Topsoil 2-17 Clay, with varying amounts of clay 17-20 No returns 20-22 Clay, with some small gravel 22-26 No returns 26-46 Clay, with sand 46-48 Sand, with some clay 48-48.5 Hard clay or rock

**Table 1. Well identification and lithological logs—Continued**

Well reference number (fig. 1)	State well number	U.S. Geological Survey site number	Latitude and longitude (degrees, minutes, and seconds)	Lithological log (depth, in feet, and description)
11	XU-32-16-107	325001097055102	32°50'01" 97°05'51"	See well reference number 10
12	XU-32-16-109	325043097051601	32°50'43" 97°05'16"	0–3 Topsoil 3–15 Clay, with sand 15–22 Sand, with clay 22–45 Clay, with thin layers of sand and sandstone
13	XU-32-16-110	325043097051602	32°50'43" 97°05'16"	See well reference number 12
14	XU-32-16-111	325148097051601	31°51'48" 97°05'16"	Unknown
15	XU-32-16-112	325134097050901	32°51'34" 97°05'09"	Unknown
16	XU-32-16-205	325043097045701	32°50'43" 97°04'57"	0–2 Topsoil 2–19 Clay, with siltstone layers at 10–12 feet 19–27 No returns 27–32 Clay, with sand 32–36 No returns 36–37.5 Sand, with silt 37.5 Rock
17	XU-32-16-206	325225097045901	32°52'25" 97°04'59"	0–2 Topsoil 2–14 Clay, with sand; some gravel and siltstone at 11 feet 14–16 Sand, with some gravel 16–21 Clay, with sand 21–25 No returns
18	XU-32-16-207	325121097042901	32°51'21" 97°04'29"	0–8 Clay, with sand 8–11 Sand, with some clay 11–12 Clay 12–13 Sand, with silt 13–14 No returns 14–18 Sand, with some clay 18 Rock
19	XU-32-16-208	325144097040201	32°51'44" 97°04'02"	0–2 Topsoil 2–12 Clay, with organic material 12–21 Clay, with some sand and silt 21–31 No returns, probably sand 31–32 Sandstone or gravel 32–33 No returns 33–33.8 Sandstone
20	XU-32-16-209	325144097040202	32°51'44" 97°04'02"	See well reference number 19
21	XU-32-16-210	325135097045801	32°51'35" 97°04'58"	Unknown

**Table 1. Well identification and lithological logs—Continued**

Well reference number (fig. 1)	State well number	U.S. Geological Survey site number	Latitude and longitude (degrees, minutes, and seconds)	Lithological log (depth, in feet, and description)
22	XU-32-23-206	324243097105001	32°42'43" 97°10'50"	0-2 Topsoil 2-8 Clay, with sand 8-11 Sand, with clay 11-13 Clay, with sand 13-17 Sand, with layers of clay 17-24.5 Sand and clay layers
23	XU-32-23-315	324321097090001	32°43'21" 97°09'00"	0-2 Sandy loam 2-8 Sand, with varying amounts of clay 8-14 Sand, with clay which increases with depth 14-16 No returns 16-20 Sand, with clay 20-20.6 Sandstone
24	XU-32-23-316	324234097082301	32°42'34" 97°08'23"	0-2 Topsoil and fill 2-16 Clay, with some sand; some gravel at 10 feet 16-22 No returns 22-24 Gravel, with sand and clay in layers 24-24.5 No returns
25	XU-32-23-317	324328097080601	32°43'28" 97°08'06"	0-3 Topsoil 3-8 Sand and clay layers 8-18 Sand, with clay 18-19 Sand, with layer of sandstone 19-20 No returns 20-30 Sand
26	XU-32-23-508	324040097113401	32°40'40" 97°11'34"	0-2 Topsoil and fill 2-15 Sand, with clay; thin layers of clay and siltstone 15-17 Sand 17-22 Clay, with sand 22-24.5 Sand, with clay
27	XU-32-23-509	324007097110201	32°40'07" 97°11'02"	0-2 Topsoil and backfill 2-10 Sand, with clay 10-16 Sand, with clay which increases with depth 16-17 Clay 17-20 No returns 20-23 Sand 23-25 No returns 25-34 Clay and sand layers; no return, 27-30 feet 34-36.5 Rock
28	XU-32-23-510	324007097110202	32°40'07" 97°11'02"	See well reference number 27
29	XU-32-23-511	324021097103001	32°40'21" 97°10'30"	Unknown
30	XU-32-24-111	324404097063501	32°44'04" 97°06'35"	0-2 Sandy loam fill 2-8 Sand, with clay 8-12 Sand, with varying amounts of clay 12-19 Clay, with some gravel at 13 and 17 feet 19-27 Sand, with clay layer at 23 feet 27-29 Clay

**Table 1.** Well identification and lithological logs—Continued

Well reference number (fig. 1)	State well number	U.S. Geological Survey site number	Latitude and longitude (degrees, minutes, and seconds)	Lithological log (depth, in feet, and description)
31	XU-32-24-112	324405097053102	32°44'05" 97°05'31"	0-3 Topsoil and fill 3-10 Clay, with some sand and small gravel 10-19 Sand, with clay; sandstone layer at 16 feet 19-20 Sand 20-25 Clay 25-28 Sand, with clay 28-28.5 Sandstone
32	XU-32-24-113	324405097053101	32°44'05" 97°05'31"	See well reference number 31
33	XU-32-24-114	324440097071702	32°44'40" 97°07'17"	0-2 Topsoil 2-5 Sand, with clay; some gravel at 5 feet 5-9 Sand 9-11 Clay, with some sand and gravel 11-18 Clay, with sand 18-23 Sand, with clay layers 23 Limestone
34	XU-32-24-115	324440097071701	32°44'40" 97°07'17"	See well reference number 33
35	XU-32-24-116	324358097061701	32°43'58" 97°06'17"	Unknown
36	XU-32-24-117	324232097064801	32°42'32" 97°06'48"	Unknown
37	XU-32-24-118	324337097071601	32°43'37" 97°07'16"	Unknown
38	XU-32-24-203	324340097050001	32°43'40" 97°05'00"	Unknown



**Table 2. Well description**

[[([gal/min)/ft]/ft, gallons per minute per foot per foot; USGS, U.S. Geological Survey; NA, not available]]

Well reference number (fig. 1)	State well number	Well owner	Well depth (feet below land surface)	Screen setting (feet below land surface)	Casing diameter (inches)	Water level (feet below land surface)	Date measured	Land-surface altitude (feet)	Predominant land use in vicinity	Maximum yield per foot of drawdown per foot of screen ((gal/min)/ft)/ft)	Latitude and longitude (degrees, minutes, and seconds)
1	XU-32-15-208	USGS	26.5	21.0–26.0	2	7.28	09-01-93	602.21	commercial	0.03	32°51'37" 97°10'45"
2	XU-32-15-309	USGS	30.0	19.5–29.5	2	3.73	09-28-93	588.96	commercial	.00004	32°51'11" 97°09'31"
3	XU-32-15-310	USGS	28.0	22.5--27.5	2	17.05	08-19-93	585.34	residential	.2	32°51'13" 97°09'17"
4	XU-32-15-311	USGS	46.5	36.0–46.0	2	16.87	08-18-93	585.29	residential	.07	32°51'13" 97°09'17"
5	XU-32-15-312	USGS	57.5	47.0–57.0	2	16.70	08-17-93	585.13	residential	.02	32°51'13" 97°09'17"
6	XU-32-15-313	private	150	NA	4.5	NA	NA	630	residential	NA	32°51'27" 97°08'36"
7	XU-32-15-314	private	180	NA	4.5	NA	NA	640	residential	NA	32°51'25" 97°08'48"
8	XU-32-15-608	USGS	26.0	15.5–25.5	2	10.77	08-01-93	580.82	commercial	.005	32°49'52" 97°07'40"
9	XU-32-15-609	USGS	42.0	36.5--41.5	2	12.48	08-05-93	580.72	commercial	.002	32°49'52" 97°07'40"
10	XU-32-16-106	USGS	28.5	18.0--28.0	2	10.37	08-12-93	544.10	commercial	.02	32°50'01" 97°05'51"
11	XU-32-16-107	USGS	48.5	38.0–48.0	2	36.77	08-11-93	544.1	commercial	.04	32°50'01" 97°05'51"
12	XU-32-16-109	USGS	26.5	13.5 23.5	2	10.29	08-03-93	582.3	residential	.008	32°50'43" 97°05'16"
13	XU-32-16-110	USGS	43.0	32.5–42.5	2	12.25	08-02-93	582.3	residential	.003	32°50'43" 97°05'16"
14	XU-32-16-111	private	129	NA	4.5	NA	NA	560	residential	NA	32°51'48" 97°05'16"
15	XU-32-16-112	private	120	NA	4.5	NA	NA	570	residential	NA	32°51'34" 97°05'09"

Table 2. Well description—Continued

Well reference number (fig. 1)	State well number	Well owner	Well depth (feet below land surface)	Screen setting (feet below land surface)	Casing diameter (inches)	Water level (feet below land surface)	Date measured	Land-surface altitude (feet)	Predominant land use in vicinity	Maximum yield per foot of drawdown per foot of screen ((gal/min)/ft/ft)	Latitude and longitude (degrees, minutes, and seconds)
16	XU-32-16-205	USGS	37.5	27.0 – 37.0	2	12.25	07-31-93	575.47	commercial	0.008	32°50'43" 97°04'57"
17	XU-32-16-206	USGS	25.0	14.5 – 24.5	2	10.60	08-20-93	558.18	residential	.01	32°52'25" 97°04'59"
18	XU-32-16-207	USGS	18.0	7.5 – 17.5	2	7.26	07-27-93	572.31	residential	.01	32°51'21" 97°04'29"
19	XU-32-16-208	USGS	24.8	19.8 – 24.8	2	8.79	07-28-93	503.30	residential	.02	32°51'44" 97°04'02"
20	XU-32-16-209	USGS	33.8	28.3 – 33.8	2	8.26	07-29-93	503.29	residential	.01	32°51'44" 97°04'02"
21	XU-32-16-210	private	150	NA	4.5	NA	NA	590	residential	NA	32°51'35" 97°04'58"
22	XU-32-23-206	USGS	24.5	14.0 – 19.0	2	13.71	09-01-93	528.70	residential	.00004	32°42'43" 97°10'50"
23	XU-32-23-315	USGS	20.5	10.5 – 20.5	2	8.98	08-10-93	569.10	commercial	NA	32°43'21" 97°09'00"
24	XU-32-23-316	USGS	24.5	14.0 – 24.0	2	7.87	08-30-93	610.44	commercial	.02	32°42'34" 97°08'23"
25	XU-32-23-317	USGS	30.5	20.0 – 30.0	2	13.4	08-09-93	619.07	residential	.02	32°43'28" 97°08'06"
26	XU-32-23-508	USGS	25.0	14.5 – 24.5	2	11.10	08-31-93	602.90	commercial	.01	32°40'40" 97°11'34"
27	XU-32-23-509	USGS	25.0	14.5 – 24.5	2	13.30	08-13-93	584.50	residential	.04	32°40'07" 97°11'02"
28	XU-32-23-510	USGS	36.5	31.0 – 36.0	2	13.36	08-13-93	584.28	residential	.02	32°40'07" 97°11'02"
29	XU-32-23-511	private	100	80.0 – 100	4.5	NA	NA	620	residential	NA	32°40'21" 97°10'30"
30	XU-32-24-111	USGS	29.0	13.5 – 23.5	2	9.79	08-25-93	606.10	commercial	.004	32°44'04" 97°06'35"

Table 2. Well description—Continued

Well reference number (fig. 1)	State well number	Well owner	Well depth (feet below land surface)	Screen setting (feet below land surface)	Casing diameter (inches)	Water level (feet below land surface)	Date measured	Land-surface altitude (feet)	Predominant land use in vicinity	Maximum yield per foot of drawdown per foot of screen ((gal/min)/ft)	Latitude and longitude (degrees, minutes, and seconds)
31	XU-32-24-112	USGS	16.5	12.0–16.5	2	11.76	08-22-93	562.68	commercial	0.0003	32°44'05" 97°05'31"
32	XU-32-24-113	USGS	28.5	21.5–28.0	2	13.20	08-21-93	562.53	commercial	.0003	32°44'05" 97°05'31"
33	XU-32-24-114	USGS	13.5	8.50–13.5	2	6.25	08-23-93	625.36	residential	.0003	32°44'40" 97°07'17"
34	XU-32-24-115	USGS	23.0	18.0–23.0	2	13.60	08-23-93	625.96	residential	.00003	32°44'40" 97°07'17"
35	XU-32-24-116	private	85.0	65.0–85.0	4.5	46.7	09-09-93	610	commercial	NA	32°43'58" 97°06'17"
36	XU-32-24-117	private	225	185–225	4.5	NA	NA	620	commercial	NA	32°42'32" 97°06'48"
37	XU-32-24-118	private	68.0	63.0–68.0	4.5	NA	NA	625 625	residential	NA	32°43'37" 97°07'16"
38	XU-32-24-203	private	100	NA	4.5	NA	NA	625	residential	NA	32°43'40" 97°05'00"

**Table 3.** Field measurements, nutrients, and tritium

[ $\mu\text{S}/\text{cm}$ , microsiemens per centimeter at 25 degrees Celsius;  $^{\circ}\text{C}$ , degrees Celsius;  $\text{mg}/\text{L}$ , milligrams per liter;  $>$ , greater than;  $--$ , no data; B, bailer; S, portable U.S. Geological Survey submersible pump; P, permanently installed submersible pump;  $<$ , less than;  $\text{pCi}/\text{L}$ , picocuries per liter]

Well reference number (fig. 1)	State well number	Date	Specific conductance ( $\mu\text{S}/\text{cm}$ )	pH, field (standard units)	Temperature, water ( $^{\circ}\text{C}$ )	Dissolved oxygen ( $\text{mg}/\text{L}$ )	Method of water extraction	Nitrogen, ammonia, dissolved ( $\text{mg}/\text{L}$ as N)
1	XU-32-15-208	09-01-93	$>2,000$	6.8	25.0	--	B	0.61
2	XU-32-15-309	09-29-93	9,560	4.4	25.0	--	B	.65
3	XU-32-15-310	08-19-93	1,500	6.7	22.5	1.8	S	.03
4	XU-32-15-311	08-18-93	1,810	6.7	22.0	.2	S	.25
5	XU-32-15-312	08-17-93	2,030	6.8	22.0	.8	S	.17
6	XU-32-15-313	09-14-93	600	8.1	21.5	.0	P	.28
7	XU-32-15-314	09-15-93	652	7.9	21.0	.0	P	.63
8	XU-32-15-608	08-01-93	670	6.0	22.0	--	B	.15
9	XU-32-15-609	08-04-93	546	5.8	27.0	.2	S	.11
10	XU-32-16-106	08-12-93	1,630	6.7	26.5	.2	S	.03
11	XU-32-16-107	08-11-93	2,110	6.5	21.0	.2	B	.08
12	XU-32-16-109	08-03-93	680	6.7	25.0	1.0	S	.04
13	XU-32-16-110	08-02-93	754	6.7	24.0	.4	S	.12
14	XU-32-16-111	09-13-93	498	7.0	23.0	.0	P	.83
15	XU-32-16-112	09-10-93	531	6.6	19.5	--	P	.13
16	XU-32-16-205	07-31-93	764	7.0	23.0	.2	S	.16
17	XU-32-16-206	08-20-93	3,700	3.8	23.0	1.6	S	.40
18	XU-32-16-207	07-27-93	1,520	5.6	28.0	1.6	S	.27
19	XU-32-16-208	07-28-93	1,330	6.3	23.0	--	B	.03
20	XU-32-16-209	07-29-93	1,040	5.8	24.5	.2	S	.31
21	XU-32-16-210	09-13-93	539	7.3	21.0	.2	P	.83
22	XU-32-23-206	09-01-93	6,030	6.7	21.0	--	B	1.30
23	XU-32-23-315	08-10-93	455	6.3	24.5	.4	S	.03
24	XU-32-23-316	08-24-93	3,060	6.0	29.0	.6	S	.21
25	XU-32-23-317	08-09-93	1,570	6.0	21.0	.2	S	.03
26	XU-32-23-508	08-31-93	$>2,000$	6.1	20.5	.4	B	$<.01$
27	XU-32-23-509	08-13-93	1,730	4.9	21.5	--	B	.23
28	XU-32-23-510	08-13-93	989	6.6	22.5	--	B	.28
29	XU-32-23-511	09-11-93	2,540	6.9	21.0	.0	P	2.30
30	XU-32-24-111	08-25-93	3,720	6.5	27.0	.4	S	.03
31	XU-32-24-112	08-22-93	1,960	7.0	25.0	--	B	.08
32	XU-32-24-113	08-21-93	4,220	6.7	23.0	--	B	1.00
33	XU-32-24-114	08-23-93	3,300	3.7	28.0	.5	S	1.20
34	XU-32-24-115	08-24-93	3,490	6.8	21.0	--	B	.15
35	XU-32-24-116	09-09-93	4,020	6.6	21.0	.0	P	.48
36	XU-32-24-117	09-11-93	847	7.6	21.0	.2	P	1.20
37	XU-32-24-118	09-08-93	1,300	6.8	20.5	.4	P	.03
38	XU-32-24-203	09-09-93	1,520	7.0	22.0	.0	P	.05

**Table 3.** Field measurements, nutrients, and tritium—Continued

Well reference number (fig. 1)	State well number	Date	Nitrogen, nitrite, dissolved (mg/L as N)	Nitrogen, ammonia + organic, dissolved (mg/L as N)	Nitrogen, nitrite + nitrate, dissolved (mg/L as N)	Phosphorus, dissolved (mg/L as P)	Ortho phosphorus, dissolved (mg/L as P)	Tritium, total (pCi/L)
1	XU-32-15-208	09-01-93	<0.01	0.60	<0.05	<0.01	<0.01	<1
2	XU-32-15-309	09-29-93	.01	.60	.13	<.01	<.01	10
3	XU-32-15-310	08-19-93	<.01	<.20	11.0	.11	.11	25
4	XU-32-15-311	08-18-93	<.01	.20	<.05	.02	.04	28
5	XU-32-15-312	08-17-93	<.01	<.20	<.05	<.01	<.01	36
6	XU-32-15-313	09-14-93	<.01	.30	.067	.08	.10	<1
7	XU-32-15-314	09-15-93	<.01	.70	<.050	.11	.12	<1
8	XU-32-15-608	08-01-93	<.01	.30	<.050	<.01	<.01	7
9	XU-32-15-609	08-04-93	<.01	2.5	<.050	.03	<.01	<1
10	XU-32-16-106	08-12-93	<.01	<.20	.091	.02	.03	17
11	XU-32-16-107	08-11-93	<.01	.30	.51	<.01	.02	23
12	XU-32-16-109	08-03-93	<.01	<.20	.085	.02	.01	7
13	XU-32-16-110	08-02-93	<.01	<.20	<.05	.02	.01	<1
14	XU-32-16-111	09-13-93	<.01	.80	<.05	.28	<.01	<1
15	XU-32-16-112	09-10-93	<.01	<.20	<.05	<.01	<.01	1
16	XU-32-16-205	07-31-93	<.01	<.2	<.05	.01	<.01	<1
17	XU-32-16-206	08-20-93	<.01	.40	.46	.10	.04	16
18	XU-32-16-207	07-27-93	<.01	.30	.14	<.01	<.01	19
19	XU-32-16-208	07-28-93	<.01	<.20	.056	.15	.14	18
20	XU-32-16-209	07-29-93	<.01	.40	<.05	.03	.01	17
21	XU-32-16-210	09-13-93	<.01	.80	<.05	.12	.06	<1
22	XU-32-23-206	09-01-93	<.01	1.30	<.05	<.01	.02	21
23	XU-32-23-315	08-10-93	<.01	<.20	<.05	<.01	.02	20
24	XU-32-23-316	08-24-93	<.01	.30	<.05	<.01	.01	13
25	XU-32-23-317	08-09-93	<.01	<.20	9.8	<.01	.02	20
26	XU-32-23-508	08-31-93	<.01	.80	<.05	.03	<.01	<1
27	XU-32-23-509	08-13-93	<.01	.50	<.05	<.01	<.01	15
28	XU-32-23-510	08-13-93	<.01	.50	<.05	<.01	.02	<1
29	XU-32-23-511	09-11-93	<.01	2.1	<.05	<.01	<.01	<1
30	XU-32-24-111	08-25-93	.06	.30	23.0	<.01	.02	14
31	XU-32-24-112	08-22-93	.14	.50	.59	<.01	<.01	21
32	XU-32-24-113	08-21-93	<.01	1.20	<.05	<.01	<.01	13
33	XU-32-24-114	08-23-93	<.01	1.1	<.05	.01	.02	11
34	XU-32-24-115	08-24-93	.27	<.20	.50	<.01	<.01	<1
35	XU-32-24-116	09-09-93	<.01	.40	<.05	.06	<.01	<1
36	XU-32-24-117	09-11-93	<.01	1.1	<.05	.04	.06	1
37	XU-32-24-118	09-08-93	<.01	<.20	8.6	.05	.04	27
38	XU-32-24-203	09-09-93	<.01	<.20	.054	.02	<.01	23

**Table 4.** Major inorganic constituents[mg/L, milligrams per liter; CaCO<sub>3</sub>, calcium carbonate; µg/L, micrograms per liter; --, no data; <, less than; °C, degrees Celsius]

Well reference number (fig. 1)	State well number	Date	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	Bromide, dissolved (mg/L as Br)	Calcium, dissolved (mg/L as Ca)	Chloride, dissolved (mg/L as Cl)	Fluoride, dissolved (mg/L as F)	Hardness, total (mg/L as CaCO <sub>3</sub> )	Iron, dissolved (µg/L as Fe)
1	XU-32-15-208	09-01-93	247	1.6	140	460	0.3	556	960
2	XU-32-15-309	09-29-93	0	4.7	660	1,500	1.3	3,378	190
3	XU-32-15-310	08-19-93	343	.72	75	120	.3	266	6
4	XU-32-15-311	08-18-93	302	.57	100	190	.4	386	5,000
5	XU-32-15-312	08-17-93	350	.74	120	190	.5	432	4,400
6	XU-32-15-313	09-14-93	212	.08	4.9	31	.5	20.1	87
7	XU-32-15-314	09-15-93	201	.20	9.0	49	.4	37.7	360
8	XU-32-15-608	08-01-93	78	1.4	54	110	.3	213	140
9	XU-32-15-609	08-04-93	134	.50	35	56	.2	127	20,000
10	XU-32-16-106	08-12-93	385	.45	150	85	2.0	453	15
11	XU-32-16-107	08-11-93	375	.87	190	220	1.3	718	1,100
12	XU-32-16-109	08-03-93	234	.51	77	67	1.0	233	77
13	XU-32-16-110	08-02-93	125	.50	88	120	.7	286	3,300
14	XU-32-16-111	09-13-93	160	.37	15	39	.2	59.3	7,500
15	XU-32-16-112	09-10-93	156	.32	40	38	.3	153	11,000
16	XU-32-16-205	07-31-93	283	.16	100	37	.6	324	1,000
17	XU-32-16-206	08-20-93	--	.54	340	120	5.0	1,302	940
18	XU-32-16-207	07-27-93	66	.25	250	57	.7	826	38,000
19	XU-32-16-208	07-28-93	177	1.6	130	150	.3	539	130
20	XU-32-16-209	07-29-93	176	.58	96	100	.4	372	3,400
21	XU-32-16-210	09-13-93	156	.14	18	42	.2	68.4	730
22	XU-32-23-206	09-01-93	398	2.5	660	1,000	.5	2,431	220
23	XU-32-23-315	08-10-93	195	.31	42	11	.5	154	25
24	XU-32-23-316	08-24-93	202	1.7	280	410	.4	1,091	4,700
25	XU-32-23-317	08-09-93	92	.56	200	150	.4	644	69
26	XU-32-23-508	08-31-93	359	6.2	950	3,100	.5	3,443	12,000
27	XU-32-23-509	08-13-93	5	.48	130	100	1.0	584	29,000
28	XU-32-23-510	08-13-93	125	.45	55	73	.2	220	8,000
29	XU-32-23-511	09-11-93	305	1.1	220	300	.4	788	6,600
30	XU-32-24-111	08-25-93	406	1.1	310	390	1.7	898	15
31	XU-32-24-112	08-22-93	364	.93	220	120	1.4	694	980
32	XU-32-24-113	08-21-93	599	1.0	580	230	.3	2,025	22
33	XU-32-24-114	08-23-93	0	.36	270	41	1.1	1,008	91,000
34	XU-32-24-115	08-24-93	--	.26	640	73	.2	2,340	<9
35	XU-32-24-116	09-09-93	318	1.7	700	550	.3	2,201	13,000
36	XU-32-24-117	09-11-93	250	.18	26	46	.4	103	160
37	XU-32-24-118	09-08-93	356	.51	180	92	1.2	561	44
38	XU-32-24-203	09-09-93	322	.56	230	62	1.6	632	9,200

**Table 4.** Major inorganic constituents—Continued

Well reference number (fig. 1)	State well number	Date	Magnesium, dissolved (mg/L as Mg)	Potassium, dissolved (mg/L as K)	Silica, dissolved (mg/L as SiO <sub>2</sub> )	Sodium, dissolved (mg/L as Na)	Solids, residue at 180 °C, dissolved (mg/L)	Sulfate, dissolved (mg/L as SO <sub>4</sub> )
1	XU-32-15-208	09-01-93	50	4.5	20	350	1,620	440
2	XU-32-15-309	09-29-93	420	23	55	1,200	20,500	3,400
3	XU-32-15-310	08-19-93	19	1.6	15	220	936	230
4	XU-32-15-311	08-18-93	33	2.5	17	220	1,130	360
5	XU-32-15-312	08-17-93	32	2.3	17	260	1,290	420
6	XU-32-15-313	09-14-93	1.9	3.1	11	130	350	55
7	XU-32-15-314	09-15-93	3.7	1.8	12	120	374	61
8	XU-32-15-608	08-01-93	19	3.3	29	35	443	81
9	XU-32-15-609	08-04-93	9.7	3.1	25	25	273	19
10	XU-32-16-106	08-12-93	19	.9	19	180	1,130	400
11	XU-32-16-107	08-11-93	59	3.6	15	170	1,460	470
12	XU-32-16-109	08-03-93	9.9	.7	22	66	451	55
13	XU-32-16-110	08-02-93	16	1.4	23	28	561	65
14	XU-32-16-111	09-13-93	5.3	2.4	14	75	285	42
15	XU-32-16-112	09-10-93	13	1.7	14	29	290	55
16	XU-32-16-205	07-31-93	18	1.9	20	32	472	74
17	XU-32-16-206	08-20-93	110	3.7	62	270	1,710	2,100
18	XU-32-16-207	07-27-93	49	2.2	42	47	1,360	810
19	XU-32-16-208	07-28-93	52	.4	53	64	1,010	340
20	XU-32-16-209	07-29-93	32	2.2	32	64	706	230
21	XU-32-16-210	09-13-93	5.7	2.4	13	80	305	52
22	XU-32-23-206	09-01-93	190	14	26	480	4,860	2,000
23	XU-32-23-315	08-10-93	12	.7	18	40	267	27
24	XU-32-23-316	08-24-93	95	1.5	36	340	2,280	910
25	XU-32-23-317	08-09-93	35	1.4	37	82	1,140	470
26	XU-32-23-508	08-31-93	260	6.2	18	1,600	8,920	2,000
27	XU-32-23-509	08-13-93	63	4.5	63	140	1,410	810
28	XU-32-23-510	08-13-93	20	2.7	26	110	643	270
29	XU-32-23-511	09-11-93	58	7.8	18	250	1,660	650
30	XU-32-24-111	08-25-93	30	1.5	23	380	1,690	360
31	XU-32-24-112	08-22-93	35	1.6	28	170	1,400	550
32	XU-32-24-113	08-21-93	140	8.8	21	260	3,380	1,500
33	XU-32-24-114	08-23-93	81	6.2	96	48	2,020	1,300
34	XU-32-24-115	08-24-93	180	7.2	16	69	3,350	1,900
35	XU-32-24-116	09-09-93	110	5.0	27	100	3,210	1,400
36	XU-32-24-117	09-11-93	9.3	3.5	13	140	498	120
37	XU-32-24-118	09-08-93	27	.4	28	68	832	180
38	XU-32-24-203	09-09-93	14	1.6	13	95	1,060	470



**Table 5. Trace elements**

[µg/L, micrograms per liter; <, less than; >, greater than]

Well reference number (fig. 1)	State well number	Date	Aluminum, dissolved (µg/L as Al)	Antimony, dissolved (µg/L as Sb)	Arsenic, dissolved (µg/L as As)	Barium, dissolved (µg/L as Ba)	Beryllium, dissolved (µg/L as Be)	Cadmium, dissolved (µg/L as Cd)	Chromium, dissolved (µg/L as Cr)	Cobalt, dissolved (µg/L as Co)	Copper, dissolved (µg/L as Cu)
1	XU-32-15-208	09-01-93	15	<2	8	19	<2	<2	<2	<2	<2
2	XU-32-15-309	09-29-93	>1,000	<2	<1	40	15	6	<2	569	23
3	XU-32-15-310	08-19-93	6	<1	2	31	<1	<1	2	<1	2
4	XU-32-15-311	08-18-93	7	<1	<1	52	<1	<1	<1	1	1
5	XU-32-15-312	08-17-93	9	<1	<1	37	<1	<1	<1	<1	2
6	XU-32-15-313	09-14-93	2	<1	<1	3	<1	<1	<1	<1	<1
7	XU-32-15-314	09-15-93	4	<1	<1	5	<1	<1	<1	<1	2
8	XU-32-15-608	08-01-93	19	<1	<1	92	<1	<1	<1	42	2
9	XU-32-15-609	08-04-93	3	<1	<1	49	<1	<1	1	3	<1
10	XU-32-16-106	08-12-93	5	<1	<1	17	<1	<1	1	3	4
11	XU-32-16-107	08-11-93	6	<1	<1	18	<1	<1	1	1	1
12	XU-32-16-109	08-03-93	9	<1	<1	25	<1	<1	<1	<1	<1
13	XU-32-16-110	08-02-93	2	<1	<1	33	<1	<1	<1	<1	<1
14	XU-32-16-111	09-13-93	1	<1	<1	11	<1	<1	<1	<1	<1
15	XU-32-16-112	09-10-93	1	<1	<1	20	<1	<1	<1	<1	<1
16	XU-32-16-205	07-31-93	3	<1	<1	43	<1	<1	<1	<1	<1
17	XU-32-16-206	08-20-93	>1,000	<1	<1	30	18	8	<1	684	19
18	XU-32-16-207	07-27-93	135	<1	5	37	<1	<1	1	124	2
19	XU-32-16-208	07-28-93	6	<1	<1	60	<1	<1	<1	4	<1
20	XU-32-16-209	07-29-93	5	<1	<1	54	<1	<1	<1	8	<1
21	XU-32-16-210	09-13-93	8	<1	<1	17	<1	<1	<1	<1	<1
22	XU-32-23-206	09-01-93	9	<3	<1	69	<3	<3	<3	4	7
23	XU-32-23-315	08-10-93	12	<1	<1	17	<1	<1	<1	2	<1
24	XU-32-23-316	08-24-93	6	<1	<1	29	<1	<1	<1	9	2
25	XU-32-23-317	08-09-93	8	<1	<1	53	<1	<1	<1	<1	1
26	XU-32-23-508	08-31-93	7	<2	<1	21	<2	<2	<2	6	5
27	XU-32-23-509	08-13-93	>1,000	<1	<1	17	2	<1	<1	122	2
28	XU-32-23-510	08-13-93	7	<1	<1	19	<1	<1	<1	2	<1
29	XU-32-23-511	09-11-93	5	<2	<1	27	<2	<2	<2	<2	3
30	XU-32-24-111	08-25-93	7	<2	<1	33	<2	<2	<2	<2	3
31	XU-32-24-112	08-22-93	5	<1	3	44	<1	<1	<1	3	2
32	XU-32-24-113	08-21-93	4	<1	1	47	<1	<1	<1	19	4
33	XU-32-24-114	08-23-93	>2,000	<2	1	4	4	<2	12	272	7
34	XU-32-24-115	08-24-93	9	<2	<1	32	<2	<2	<2	19	10
35	XU-32-24-116	09-09-93	<2	<2	<1	26	<2	<2	<2	<2	5
36	XU-32-24-117	09-11-93	1	<1	<1	18	<1	<1	<1	<1	<1
37	XU-32-24-118	09-08-93	6	<1	<1	62	<1	<1	1	<1	2
38	XU-32-24-203	09-09-93	2	<1	<1	9	<1	<1	1	1	2

Table 5. Trace elements—Continued

Well reference number (fig. 1)	State well number	Date	Lead, dissolved ( $\mu\text{g/L}$ as Pb)	Manganese, dissolved ( $\mu\text{g/L}$ as Mn)	Molybdenum, dissolved ( $\mu\text{g/L}$ as Mo)	Nickel, dissolved ( $\mu\text{g/L}$ as Ni)	Selenium, dissolved ( $\mu\text{g/L}$ as Se)	Silver, dissolved ( $\mu\text{g/L}$ as Ag)	Uranium, dissolved ( $\mu\text{g/L}$ as U)	Zinc, dissolved ( $\mu\text{g/L}$ as Zn)
1	XU-32-15-208	09-01-93	<2	838	<2	<2	<1	<2	<2	19
2	XU-32-15-309	09-29-93	12	>70,000	<2	666	<1	<2	4	870
3	XU-32-15-310	08-19-93	<1	26	<1	2	14	<1	3	3
4	XU-32-15-311	08-18-93	2	443	<1	6	<1	<1	<1	4
5	XU-32-15-312	08-17-93	1	272	<1	5	<1	<1	<1	17
6	XU-32-15-313	09-14-93	<1	13	<1	<1	<1	<1	<1	2
7	XU-32-15-314	09-15-93	<1	36	<1	<1	<1	<1	<1	110
8	XU-32-15-608	08-01-93	<1	6,100	<1	41	<1	<1	<1	67
9	XU-32-15-609	08-04-93	<1	>2,800	<1	6	<1	<1	<1	2
10	XU-32-16-106	08-12-93	<1	146	<1	5	<1	<1	3	16
11	XU-32-16-107	08-11-93	<1	371	<1	4	2	<1	2	17
12	XU-32-16-109	08-03-93	<1	129	<1	2	<1	<1	<1	1
13	XU-32-16-110	08-02-93	<1	310	<1	1	<1	<1	<1	1
14	XU-32-16-111	09-13-93	<1	164	<1	<1	<1	<1	<1	44
15	XU-32-16-112	09-10-93	<1	733	<1	3	<1	<1	<1	>1,000
16	XU-32-16-205	07-31-93	<1	72	<1	2	<1	<1	<1	2
17	XU-32-16-206	08-20-93	2	>4,400	<1	551	<1	<1	17	>1,000
18	XU-32-16-207	07-27-93	<1	>8,300	<1	99	<1	<1	<1	130
19	XU-32-16-208	07-28-93	<1	622	1	10	<1	<1	<1	5
20	XU-32-16-209	07-29-93	<1	845	<1	5	<1	<1	<1	5
21	XU-32-16-210	09-13-93	<1	76	<1	<1	<1	<1	<1	44
22	XU-32-23-206	09-01-93	4	913	<3	39	<1	<3	10	25
23	XU-32-23-315	08-10-93	<1	464	<1	5	<1	<1	<1	6
24	XU-32-23-316	08-24-93	<1	>1,000	<1	5	<1	<1	<1	8
25	XU-32-23-317	08-09-93	<1	49	<1	5	<1	<1	<1	19
26	XU-32-23-508	08-31-93	2	>3,500	<2	11	<1	<2	<2	30
27	XU-32-23-509	08-13-93	<1	>8,300	<1	116	<1	<1	<1	180
28	XU-32-23-510	08-13-93	<1	>1,700	<1	2	<1	<1	<1	22
29	XU-32-23-511	09-11-93	<2	1,070	<2	2	<1	<2	<2	8
30	XU-32-24-111	08-25-93	5	100	<2	19	<1	<2	35	4
31	XU-32-24-112	08-22-93	<1	>1,900	6	8	<1	<1	7	6
32	XU-32-24-113	08-21-93	1	>3,100	2	42	<1	<1	5	10
33	XU-32-24-114	08-23-93	<2	>2,400	<2	336	<5	<2	<2	580
34	XU-32-24-115	08-24-93	<2	>1,900	<2	49	<1	<2	2	33
35	XU-32-24-116	09-09-93	<2	762	<2	7	<1	<2	<2	21
36	XU-32-24-117	09-11-93	<1	50	<1	<1	<1	<1	<1	4
37	XU-32-24-118	09-08-93	<1	6	<1	2	<1	<1	2	15
38	XU-32-24-203	09-09-93	<1	243	5	4	<1	<1	1	9

**Table 6. Pesticides**

[µg/L, micrograms per liter; <, less than; ---, no data]

Well reference number (fig. 1)	State well number	Date	2,4-D, dissolved (µg/L)	2,4-DB, dissolved (µg/L)	2,4,5-T, dissolved (µg/L)	Acifluorfen, dissolved (µg/L)	Alachlor, dissolved (µg/L)	Aldicarb, dissolved (µg/L)	Aldicarb sulfone, dissolved (µg/L)	Aldicarb sulfoxide, dissolved (µg/L)	Alpha HCH, dissolved (µg/L)	Amiben, dissolved (µg/L)	Atrazine, dissolved (µg/L)	Desethyl atrazine, dissolved (µg/L)
1	XU 32 15 208	09-01-93	<0.05	<0.05	<0.05	<0.05	<0.009	<0.05	<0.05	<0.05	<0.007	<0.05	<0.017	<0.02
2	XU 32-15-309	09-29-93	<0.05	<0.05	<0.05	<0.05	<0.009	<0.05	<0.05	<0.05	<0.007	<0.05	<0.017	<0.02
3	XU 32-15 310	08-19-93	<0.05	<0.05	<0.05	<0.05	<0.009	<0.05	<0.05	<0.05	<0.007	<0.05	<0.017	<0.02
4	XU-32 15-311	08-18-93	<0.05	<0.05	<0.05	<0.05	<0.009	<0.05	<0.05	<0.05	<0.007	<0.05	<0.017	<0.02
5	XU-32-15 312	08-17-93	<0.05	<0.05	<0.05	<0.05	<0.009	<0.05	<0.05	<0.05	<0.007	<0.05	<0.017	<0.02
6	XU-32-15 313	09-14-93	<0.05	<0.05	<0.05	<0.05	<0.009	<0.05	<0.05	<0.05	<0.007	<0.05	<0.017	<0.02
7	XU 32-15-314	09-15-93	<0.05	<0.05	<0.05	<0.05	<0.009	<0.05	<0.05	<0.05	<0.007	<0.05	<0.017	<0.02
8	XU 32 15 608	08-01-93	<0.05	<0.05	<0.05	<0.05	<0.009	<0.05	<0.05	<0.05	<0.007	<0.05	<0.017	<0.02
9	XU 32-15-609	08-04-93	<0.05	<0.05	<0.05	<0.05	<0.009	<0.05	<0.05	<0.05	<0.007	<0.05	<0.017	<0.02
10	XU 32-16-106	08-12-93	<0.05	<0.05	<0.05	<0.05	<0.009	<0.05	<0.05	<0.05	<0.007	<0.05	<0.017	<0.02
11	XU-32 16 107	08-11 93	<0.05	<0.05	<0.05	<0.05	<0.009	<0.05	<0.05	<0.05	<0.007	<0.05	<0.017	<0.02
12	XU-32-16 109	08-03-93	<0.05	<0.05	<0.05	<0.05	<0.009	<0.05	<0.05	<0.05	<0.007	<0.05	<0.017	<0.02
13	XU-32-16-110	08-02-93	<0.05	<0.05	<0.05	<0.05	<0.009	<0.05	<0.05	<0.05	<0.007	<0.05	<0.017	<0.02
14	XU-32 16 111	09-13-93	<0.05	<0.05	<0.05	<0.05	<0.009	<0.05	<0.05	<0.05	<0.007	<0.05	<0.017	<0.02
15	XU-32-16 112	09-10-93	<0.05	<0.05	<0.05	<0.05	<0.009	<0.05	<0.05	<0.05	<0.007	<0.05	<0.017	<0.02
16	XU 32 16 205	07-31-93	<0.01	<0.05	<0.05	<0.05	<0.009	<0.05	<0.05	<0.05	<0.007	<0.05	<0.017	<0.02
17	XU-32 16 206	08-20-93	<0.05	<0.05	<0.05	<0.05	<0.009	<0.05	<0.05	<0.05	<0.007	<0.05	<0.017	<0.02
18	XU-32-16-207	07-27-93	30	<0.05	<0.05	<0.05	<0.009	<0.05	<0.05	<0.05	<0.007	<0.05	<0.017	0.034
19	XU-32-16-208	07-28-93	34	<0.05	<0.05	<0.05	<0.009	<0.05	<0.05	<0.05	<0.007	<0.05	<0.017	<0.02
20	XU-32-16-209	07-29-93	<0.05	<0.05	<0.05	<0.05	<0.009	<0.05	<0.05	<0.05	<0.007	<0.05	<0.017	<0.02
21	XU 32-16-210	09-13-93	<0.05	<0.05	<0.05	<0.05	<0.009	<0.05	<0.05	<0.05	<0.007	<0.05	<0.017	<0.02
22	XU-32-23-206	09-01-93	<0.05	<0.05	<0.05	<0.05	<0.009	<0.05	<0.05	<0.05	<0.007	<0.05	<0.017	<0.02
23	XU-32-23-315	08-10-93	<0.05	<0.05	<0.05	<0.05	<0.009	<0.05	<0.05	<0.05	<0.007	<0.05	<0.017	<0.02
24	XU-32-23-316	08-24-93	<0.05	<0.05	<0.05	<0.05	<0.009	<0.05	<0.05	<0.05	<0.007	<0.05	<0.017	<0.02
25	XU-32-23-317	08-09-93	<0.05	<0.05	<0.05	<0.05	<0.009	<0.05	<0.05	<0.05	<0.007	<0.05	<0.017	<0.02
26	XU-32-23-508	08-31-93	<0.05	<0.05	<0.05	<0.05	<0.009	<0.05	<0.05	<0.05	<0.007	<0.05	<0.017	<0.02
27	XU-32-23-509	08-13-93	<0.05	<0.05	<0.05	<0.05	<0.009	<0.05	<0.05	<0.05	<0.007	<0.05	<0.017	<0.02
28	XU-32-23-510	08-13-93	<0.05	<0.05	<0.05	<0.05	<0.009	<0.05	<0.05	<0.05	<0.007	<0.05	<0.017	<0.02
29	XU-32-23-511	09-11-93	<0.05	<0.05	<0.05	<0.05	<0.009	<0.05	<0.05	<0.05	<0.007	<0.05	<0.017	<0.02
30	XU-32-24-111	08-25-93	<0.05	<0.05	<0.05	<0.05	<0.009	<0.05	<0.05	<0.05	<0.007	<0.05	<0.017	<0.02
31	XU-32-24-112	08-22-93	<0.05	<0.05	<0.05	<0.05	<0.009	<0.05	<0.05	<0.05	<0.007	<0.05	<0.017	<0.02
32	XU-32-24-113	08-21-93	<0.05	<0.05	<0.05	<0.05	<0.013	<0.05	<0.05	<0.05	<0.01	<0.05	<0.017	<0.02
33	XU-32-24-114	08-23-93	<0.05	<0.05	<0.05	<0.05	<0.009	<0.05	<0.05	<0.05	<0.007	<0.05	<0.017	<0.02
34	XU-32 24-115	08-24-93	<0.05	<0.05	<0.05	<0.05	<0.013	<0.05	<0.05	<0.05	<0.01	<0.05	<0.017	<0.02
35	XU-32-24-116	09-09-93	<0.05	<0.05	<0.05	<0.05	<0.009	<0.05	<0.05	<0.05	<0.007	<0.05	<0.017	<0.02
36	XU-32 24 117	09-11-93	<0.05	<0.05	<0.05	<0.05	<0.009	<0.05	<0.05	<0.05	<0.007	<0.05	<0.017	<0.02
37	XU-32-24-118	09-08-93	<0.05	<0.05	<0.05	<0.05	<0.009	<0.05	<0.05	<0.05	<0.007	<0.05	<0.017	<0.02
38	XU 32 24 203	09-09-93	<0.05	<0.05	<0.05	<0.05	<0.009	<0.05	<0.05	<0.05	<0.007	<0.05	<0.017	<0.02

Table 6. Pesticides—Continued

Well refer- ence number (fig. 1)	State well number	Date	Benflur- alin, dis- solved (µg/L)	Bent- azon, dis- solved (µg/L)	Bromacil, dis- solved (µg/L)	Bromo- xynil, dis- solved (µg/L)	Butylate, dis- solved (µg/L)	Carbaryl, dis- solved (µg/L)	Carbo- furan, dis- solved (µg/L)	Chloro- thalonil, dis- solved (µg/L)	Chlor- pyrifos, dis- solved (µg/L)	Clopyra- lid, dis- solved (µg/L)	Cyan- azine, dis- solved (µg/L)	Mono acid dacthal, dis- solved (µg/L)	DCPA, dis- solved (µg/L)	PP', DDE, dis- solved (µg/L)
1	XU-32-15-208	09-01-93	<0.013	<0.05	<0.05	<0.05	<0.008	<0.046	<0.013	<0.05	<0.005	<0.05	<0.013	<0.05	<0.005	<0.02
2	XU-32-15-309	09-29-93	<0.013	<0.05	<0.05	<0.05	<0.008	<0.046	<0.013	<0.05	<0.005	<0.05	<0.013	<0.05	<0.004	<0.01
3	XU-32-15-310	08-19-93	<0.013	<0.05	<0.05	<0.05	<0.008	<0.046	<0.013	<0.05	<0.005	<0.05	<0.013	<0.05	<0.005	<0.02
4	XU-32-15-311	08-18-93	<0.013	<0.05	<0.05	<0.05	<0.008	<0.046	<0.013	<0.05	<0.005	<0.05	<0.013	<0.05	<0.005	<0.02
5	XU-32-15-312	08-17-93	<0.013	<0.05	<0.05	<0.05	<0.008	<0.046	<0.013	<0.05	<0.005	<0.05	<0.013	<0.05	<0.005	<0.02
6	XU-32-15-313	09-14-93	<0.013	<0.05	<0.05	<0.05	<0.008	<0.046	<0.013	<0.05	<0.005	<0.05	<0.013	<0.05	<0.004	<0.01
7	XU-32-15-314	09-15-93	<0.013	<0.05	<0.05	<0.05	<0.008	<0.046	<0.013	<0.05	<0.005	<0.05	<0.013	<0.05	<0.004	<0.01
8	XU-32-15-608	08-01-93	<0.013	<0.05	<0.05	<0.05	<0.008	<0.046	<0.013	<0.05	<0.005	<0.05	<0.013	<0.05	<0.005	<0.02
9	XU-32-15-609	08-04-93	<0.013	<0.05	<0.05	<0.05	<0.008	<0.046	<0.013	<0.05	<0.005	<0.05	<0.013	<0.05	<0.005	<0.02
10	XU-32-16-106	08-12-93	<0.013	<0.05	<0.05	<0.05	<0.008	<0.046	<0.013	<0.05	<0.005	<0.05	<0.013	<0.05	<0.005	<0.02
11	XU-32-16-107	08-11-93	<0.013	<0.05	<0.05	<0.05	<0.008	<0.046	<0.013	<0.05	<0.005	<0.05	<0.013	<0.05	<0.005	<0.02
12	XU-32-16-109	08-03-93	<0.013	<0.05	<0.05	<0.05	<0.008	<0.046	<0.013	<0.05	<0.005	<0.05	<0.013	<0.05	<0.005	<0.02
13	XU-32-16-110	08-02-93	<0.013	<0.05	<0.05	<0.05	<0.008	<0.046	<0.013	<0.05	<0.005	<0.05	<0.013	<0.05	<0.005	<0.02
14	XU-32-16-111	09-13-93	<0.013	<0.05	<0.05	<0.05	<0.008	<0.046	<0.013	<0.05	<0.005	<0.05	<0.013	<0.05	<0.004	<0.01
15	XU-32-16-112	09-10-93	<0.013	<0.05	<0.05	<0.05	<0.008	<0.046	<0.013	<0.05	<0.005	<0.05	<0.013	<0.05	<0.004	<0.01
16	XU-32-16-205	07-31-93	<0.013	--	<0.05	--	<0.008	<0.046	<0.013	<0.05	<0.005	--	<0.013	--	<0.005	<0.02
17	XU-32-16-206	08-20-93	<0.013	<0.05	<0.05	<0.05	<0.008	<0.046	<0.013	<0.05	<0.005	<0.05	<0.013	<0.05	<0.005	<0.02
18	XU-32-16-207	07-27-93	<0.013	<0.05	<0.05	<0.05	<0.008	<0.046	<0.013	<0.05	<0.005	<0.05	<0.013	<0.05	<0.005	<0.02
19	XU-32-16-208	07-28-93	<0.013	<0.05	<0.05	<0.05	<0.008	<0.046	<0.013	<0.05	<0.005	<0.05	<0.013	<0.05	<0.005	<0.02
20	XU-32-16-209	07-29-93	<0.013	<0.05	<0.05	<0.05	<0.008	<0.046	<0.013	<0.05	<0.005	<0.05	<0.013	<0.05	<0.005	<0.02
21	XU-32-16-210	09-13-93	<0.013	<0.05	<0.05	<0.05	<0.008	<0.046	<0.013	<0.05	<0.005	<0.05	<0.013	<0.05	<0.005	<0.01
22	XU-32-23-206	09-01-93	<0.013	<0.05	<0.05	<0.05	<0.008	<0.046	<0.013	<0.05	<0.005	<0.05	<0.013	<0.05	<0.005	<0.02
23	XU-32-23-315	08-10-93	<0.013	<0.05	<0.05	<0.05	<0.008	<0.046	<0.013	<0.05	<0.005	<0.05	<0.013	<0.05	<0.005	<0.02
24	XU-32-23-316	08-24-93	<0.013	<0.05	<0.05	<0.05	<0.008	<0.046	<0.013	<0.05	<0.005	<0.05	<0.013	<0.05	<0.005	<0.02
25	XU-32-23-317	08-09-93	<0.013	<0.05	<0.05	<0.05	<0.008	<0.046	<0.013	<0.05	<0.005	<0.05	<0.013	<0.05	<0.005	<0.02
26	XU-32-23-508	08-31-93	<0.013	<0.05	<0.05	<0.05	<0.008	<0.046	<0.013	<0.05	<0.005	<0.05	<0.013	<0.05	<0.005	<0.02
27	XU-32-23-509	08-13-93	<0.013	<0.05	<0.05	<0.05	<0.008	<0.046	<0.013	--	<0.005	<0.05	<0.013	<0.05	<0.005	<0.02
28	XU-32-23-510	08-13-93	<0.013	<0.05	<0.05	<0.05	<0.008	<0.046	<0.013	--	<0.005	<0.05	<0.013	<0.05	<0.005	<0.02
29	XU-32-23-511	09-11-93	<0.013	<0.05	<0.05	<0.05	<0.008	<0.046	<0.013	<0.05	<0.005	<0.05	<0.013	<0.05	<0.004	<0.01
30	XU-32-24-111	08-25-93	<0.013	<0.05	<0.05	<0.05	<0.008	<0.046	<0.013	<0.05	<0.005	<0.05	<0.013	<0.05	<0.005	<0.02
31	XU-32-24-112	08-22-93	<0.013	<0.05	<0.05	<0.05	<0.008	<0.046	<0.013	<0.05	<0.005	<0.05	<0.013	<0.05	<0.005	<0.02
32	XU-32-24-113	08-21-93	<0.013	<0.05	<0.05	<0.05	<0.011	<0.066	<0.013	<0.05	<0.007	<0.05	<0.019	<0.05	<0.005	<0.02
33	XU-32-24-114	08-23-93	<0.013	<0.05	<0.05	<0.05	<0.008	<0.046	<0.019	<0.05	<0.005	<0.05	<0.013	<0.05	<0.005	<0.02
34	XU-32-24-115	08-24-93	<0.013	<0.05	<0.05	<0.05	<0.011	<0.065	<0.018	<0.05	<0.007	<0.05	<0.018	<0.05	<0.005	<0.02
35	XU-32-24-116	09-09-93	<0.013	<0.05	<0.05	<0.05	<0.008	<0.046	<0.013	<0.05	<0.005	<0.05	<0.013	<0.05	<0.004	<0.01
36	XU-32-24-117	09-11-93	<0.013	<0.05	<0.05	<0.05	<0.008	<0.046	<0.013	<0.05	<0.005	<0.05	<0.013	<0.05	<0.004	<0.01
37	XU-32-24-118	09-08-93	<0.013	<0.05	<0.05	<0.05	<0.008	<0.046	<0.013	<0.05	<0.005	<0.05	<0.013	<0.05	<0.004	<0.01
38	XU-32-24-203	09-09-93	<0.013	<0.05	<0.05	<0.05	<0.008	<0.046	<0.013	<0.05	<0.005	<0.05	<0.013	<0.05	<0.004	<0.02

Table 6. Pesticides—Continued

Well refer- ence number (fig. 1)	State well number	Date	Diazinon, dissolved (µg/L)	Dicamba, dissolved (µg/L)	Dichlo- benil, dissolved (µg/L)	Dichlor- prop, dissolved (µg/L)	Dieldrin, dissolved (µg/L)	2,6- Diethyl- aniline, dissolved (µg/L)	Dimeth- oate, dissolved (µg/L)	4,6- Dinitro- O-Cresol, dissolved (µg/L)	Dinoseb, dissolved (µg/L)	Disul- foton, dissolved (µg/L)	Diuron, dissolved (µg/L)	EPTC, dissolved (µg/L)
1	XU-32-15-208	09-01-93	<0.008	<0.05	<0.05	<0.05	<0.02	<0.006	<0.024	<0.05	<0.05	<0.02	<0.05	<0.01
2	XU-32-15-309	09-29-93	<0.008	<0.05	<0.05	<0.05	<0.02	<0.006	<0.024	<0.05	<0.05	<0.02	<0.05	<0.005
3	XU-32-15-310	08-19-93	<0.008	<0.05	<0.05	<0.05	<0.02	<0.006	<0.024	<0.05	<0.05	<0.02	<0.05	<0.01
4	XU-32-15-311	08-18-93	<0.008	<0.05	<0.05	<0.05	<0.02	<0.006	<0.024	<0.05	<0.05	<0.02	<0.05	<0.01
5	XU-32-15-312	08-17-93	<0.008	<0.05	<0.05	<0.05	<0.02	<0.006	<0.024	<0.05	<0.05	<0.02	<0.05	<0.01
6	XU-32-15-313	09-14-93	<0.008	<0.05	<0.05	<0.05	<0.02	<0.006	<0.024	<0.05	<0.05	<0.02	<0.05	<0.005
7	XU 32-15-314	09-15-93	<0.008	<0.05	<0.05	<0.05	<0.02	<0.006	<0.024	<0.05	<0.05	<0.02	<0.05	<0.005
8	XU-32-15-608	08-01-93	<0.008	<0.05	<0.05	<0.05	<0.02	<0.006	<0.024	<0.05	<0.05	<0.02	<0.05	<0.01
9	XU-32-15-609	08-04-93	<0.008	<0.05	<0.05	<0.05	<0.02	<0.006	<0.024	<0.05	<0.05	<0.02	<0.05	<0.01
10	XU-32-16-106	08-12-93	<0.008	<0.05	<0.05	<0.05	<0.02	<0.006	<0.024	<0.05	<0.05	<0.02	<0.05	<0.01
11	XU-32-16-107	08-11-93	<0.008	<0.05	<0.05	<0.05	<0.02	<0.006	<0.024	<0.05	<0.05	<0.02	<0.05	<0.01
12	XU-32-16-109	08-03-93	<0.008	<0.05	<0.05	<0.05	<0.02	<0.006	<0.024	<0.05	<0.05	<0.02	<0.05	<0.01
13	XU-32-16-110	08-02-93	<0.008	<0.05	<0.05	<0.05	<0.02	<0.006	<0.024	<0.05	<0.05	<0.02	<0.05	<0.01
14	XU-32-16-111	09-13-93	<0.008	<0.05	<0.05	<0.05	<0.02	<0.006	<0.024	<0.05	<0.05	<0.02	<0.05	<0.005
15	XU-32-16-112	09-10-93	<0.008	<0.05	<0.05	<0.05	<0.02	<0.006	<0.024	<0.05	<0.05	<0.02	<0.05	<0.005
16	XU-32-16-205	07-31-93	<0.008	<0.05	<0.05	--	<0.02	<0.006	<0.024	<0.05	--	<0.02	<0.05	<0.01
17	XU-32-16-206	08-20-93	<0.008	<0.05	<0.05	<0.05	<0.02	<0.006	<0.024	<0.05	<0.05	<0.02	<0.05	<0.01
18	XU-32-16-207	07-27-93	<0.008	<0.05	<0.05	<0.05	<0.02	<0.006	<0.024	<0.05	<0.05	<0.02	<0.05	<0.01
19	XU-32-16-208	07-28-93	<0.008	<0.05	<0.05	<0.05	<0.02	<0.006	<0.024	<0.05	<0.05	<0.02	<0.05	<0.01
20	XU-32-16-209	07-29-93	<0.008	<0.05	<0.05	<0.05	<0.02	<0.006	<0.024	<0.05	<0.05	<0.02	<0.05	<0.01
21	XU-32-16-210	09-13-93	<0.008	<0.05	<0.05	<0.05	<0.02	<0.006	<0.024	<0.05	<0.05	<0.02	<0.05	<0.005
22	XU-32-23-206	09-01-93	<0.008	<0.05	<0.05	<0.05	<0.02	<0.006	<0.024	<0.05	<0.05	<0.02	<0.05	<0.01
23	XU-32-23-315	08-10-93	<0.008	<0.05	<0.05	<0.05	<0.02	<0.006	<0.024	<0.05	<0.05	<0.02	<0.05	<0.01
24	XU-32-23-316	08-24-93	<0.008	<0.05	<0.05	<0.05	<0.02	<0.006	<0.024	<0.05	<0.05	<0.02	<0.05	<0.01
25	XU-32-23-317	08-09-93	<0.008	<0.05	<0.05	<0.05	<0.02	<0.006	<0.024	<0.05	<0.05	<0.02	<0.05	<0.01
26	XU-32-23-508	08-31-93	<0.008	<0.05	<0.05	<0.05	<0.02	<0.006	<0.024	<0.05	<0.05	<0.02	<0.05	<0.01
27	XU-32-23-509	08-13-93	<0.008	<0.05	<0.05	<0.05	<0.02	<0.006	<0.024	<0.05	<0.05	<0.02	<0.05	<0.01
28	XU-32-23-510	08-13-93	<0.008	<0.05	<0.05	<0.05	<0.02	<0.006	<0.024	<0.05	<0.05	<0.02	<0.05	<0.01
29	XU-32-23-511	09-11-93	<0.008	<0.05	<0.05	<0.05	<0.02	<0.006	<0.024	<0.05	<0.05	<0.02	<0.05	<0.005
30	XU-32-24-111	08-25-93	<0.008	<0.05	<0.05	<0.05	<0.02	<0.006	<0.024	<0.05	<0.05	<0.02	<0.05	<0.01
31	XU-32-24-112	08-22-93	<0.008	<0.05	<0.05	<0.05	<0.02	<0.006	<0.024	<0.05	<0.05	<0.02	<0.05	<0.01
32	XU-32-24-113	08-21-93	<0.011	<0.05	<0.05	<0.05	<0.02	<0.009	<0.034	<0.05	<0.05	<0.02	<0.05	<0.014
33	XU-32-24-114	08-23-93	<0.008	<0.05	<0.05	<0.05	<0.02	<0.006	<0.024	<0.05	<0.05	<0.02	<0.05	<0.01
34	XU-32-24-115	08-24-93	<0.011	<0.05	<0.05	<0.05	<0.02	<0.008	<0.034	<0.05	<0.05	<0.02	<0.05	<0.014
35	XU-32-24-116	09-09-93	<0.008	<0.05	<0.05	<0.05	<0.02	<0.006	<0.024	<0.05	<0.05	<0.02	<0.05	<0.005
36	XU-32-24-117	09-11-93	<0.008	<0.05	<0.05	<0.05	<0.02	<0.006	<0.024	<0.05	<0.05	<0.02	<0.05	<0.005
37	XU-32-24-118	09-08-93	<0.008	<0.05	<0.05	<0.05	<0.02	<0.006	<0.024	<0.05	<0.05	<0.02	<0.05	<0.005
38	XU-32-24-203	09-09-93	<0.008	<0.05	<0.05	<0.05	<0.02	<0.006	<0.024	<0.05	<0.05	<0.02	<0.05	<0.005

Table 6. Pesticides—Continued

Well refer- ence number (fig. 1)	State well number	Date	Esfenval- erate, dissolved (µg/L)	Ethalfur- alin, dissolved (µg/L)	Ethoprop, dissolved (µg/L)	Fenuron, dissolved (µg/L)	Fluo- meturon, dissolved (µg/L)	Fonofos, dissolved (µg/L)	3-Hy- droxycar- boturan, dissolved (µg/L)	Lindane, dissolved (µg/L)	Linuron, dissolved (µg/L)	Malathion, dissolved (µg/L)	MCPA, dissolved (µg/L)
1	XU-32-15-208	09-01-93	<0.05	<0.013	<0.012	<0.05	<0.05	<0.008	<0.05	<0.011	<0.039	<0.014	<0.05
2	XU-32-15-309	09-29-93	<0.05	<0.013	<0.012	<0.05	<0.05	<0.008	<0.05	<0.011	<0.039	<0.010	<0.05
3	XU-32-15-310	08-19-93	<0.05	<0.013	<0.012	<0.05	<0.05	<0.008	<0.05	<0.011	<0.039	<0.014	<0.05
4	XU-32-15-311	08-18-93	<0.05	<0.013	<0.012	<0.05	<0.05	<0.008	<0.05	<0.011	<0.039	<0.014	<0.05
5	XU-32-15-312	08-17-93	<0.05	<0.013	<0.012	<0.05	<0.05	<0.008	<0.05	<0.011	<0.039	<0.014	<0.05
6	XU-32-15-313	09-14-93	<0.05	<0.013	<0.012	<0.05	<0.05	<0.008	<0.05	<0.011	<0.039	<0.010	<0.05
7	XU-32-15-314	09-15-93	<0.05	<0.013	<0.012	<0.05	<0.05	<0.008	<0.05	<0.011	<0.039	<0.010	<0.05
8	XU-32-15-608	08-01-93	<0.05	<0.013	<0.012	<0.05	<0.05	<0.008	<0.05	<0.011	<0.039	<0.014	<0.05
9	XU-32-15-609	08-04-93	<0.05	<0.013	<0.012	<0.05	<0.05	<0.008	<0.05	<0.011	<0.039	<0.014	<0.05
10	XU-32-16-106	08-12-93	<0.05	<0.013	<0.012	<0.05	<0.05	<0.008	<0.05	<0.011	<0.039	<0.014	<0.05
11	XU-32-16-107	08-11-93	<0.05	<0.013	<0.012	<0.05	<0.05	<0.008	<0.05	<0.011	<0.039	<0.014	<0.05
12	XU-32-16-109	08-03-93	<0.05	<0.013	<0.012	<0.05	<0.05	<0.080	<0.05	<0.011	<0.039	<0.014	<0.05
13	XU-32-16-110	08-02-93	<0.05	<0.013	<0.012	<0.05	<0.05	<0.008	<0.05	<0.011	<0.039	<0.014	<0.05
14	XU-32-16-111	09-13-93	<0.05	<0.013	<0.012	<0.05	<0.05	<0.008	<0.05	<0.011	<0.039	<0.010	<0.05
15	XU-32-16-112	09-10-93	<0.05	<0.013	<0.012	<0.05	<0.05	<0.008	<0.05	<0.011	<0.039	<0.010	<0.05
16	XU-32-16-205	07-31-93	<0.05	<0.013	<0.012	<0.05	<0.05	<0.008	<0.05	<0.011	<0.039	<0.014	--
17	XU-32-16-206	08-20-93	<0.05	<0.013	<0.012	<0.05	<0.05	<0.008	<0.05	<0.011	<0.039	<0.014	<0.05
18	XU-32-16-207	07-27-93	<0.05	<0.013	<0.012	<0.05	<0.05	<0.008	<0.05	<0.011	<0.039	<0.014	<0.05
19	XU-32-16-208	07-28-93	<0.05	<0.013	<0.012	<0.05	<0.05	<0.008	<0.05	<0.011	<0.039	<0.014	<0.05
20	XU-32-16-209	07-29-93	<0.05	<0.013	<0.012	<0.05	<0.05	<0.008	<0.05	<0.011	<0.039	<0.014	<0.05
21	XU-32-16-210	09-13-93	<0.05	<0.013	<0.012	<0.05	<0.05	<0.008	<0.05	<0.011	<0.039	<0.010	<0.05
22	XU-32-23-206	09-01-93	<0.05	<0.013	<0.012	<0.05	<0.05	<0.008	<0.05	<0.011	<0.039	<0.014	<0.05
23	XU-32-23-315	08-10-93	<0.05	<0.013	<0.012	<0.05	<0.05	<0.008	<0.05	<0.011	<0.039	<0.014	<0.05
24	XU-32-23-316	08-24-93	<0.05	<0.013	<0.012	<0.05	<0.05	<0.008	<0.05	<0.011	<0.039	<0.014	<0.05
25	XU-32-23-317	08-09-93	<0.05	<0.013	<0.012	<0.05	<0.05	<0.008	<0.05	<0.011	<0.039	<0.014	<0.05
26	XU-32-23-508	08-31-93	<0.05	<0.013	<0.012	<0.05	<0.05	<0.008	<0.05	<0.011	<0.039	<0.014	<0.05
27	XU-32-23-509	08-13-93	<0.05	<0.013	<0.012	<0.05	<0.05	<0.008	<0.05	<0.011	<0.039	<0.014	<0.05
28	XU-32-23-510	08-13-93	<0.05	<0.013	<0.012	<0.05	<0.05	<0.008	<0.05	<0.011	<0.039	<0.014	<0.05
29	XU-32-23-511	09-11-93	<0.05	<0.013	<0.012	<0.05	<0.05	<0.008	<0.05	<0.011	<0.039	<0.010	<0.05
30	XU-32-24-111	08-25-93	<0.05	<0.013	<0.012	<0.05	<0.05	<0.008	<0.05	<0.011	<0.039	<0.014	<0.05
31	XU-32-24-112	08-22-93	<0.05	<0.013	<0.012	<0.05	<0.05	<0.008	<0.05	<0.011	<0.039	<0.014	<0.05
32	XU-32-24-113	08-21-93	<0.05	<0.019	<0.017	<0.05	<0.05	<0.011	<0.05	<0.016	<0.036	<0.020	<0.05
33	XU-32-24-114	08-23-93	<0.05	<0.013	<0.012	<0.05	<0.05	<0.008	<0.05	<0.011	<0.039	<0.014	<0.05
34	XU-32-24-115	08-24-93	<0.05	<0.018	<0.017	<0.05	<0.05	<0.011	<0.05	<0.016	<0.035	<0.020	<0.05
35	XU-32-24-116	09-09-93	<0.05	<0.013	<0.012	<0.05	<0.05	<0.008	<0.05	<0.011	<0.039	<0.010	<0.05
36	XU-32-24-117	09-11-93	<0.05	<0.013	<0.012	<0.05	<0.05	<0.008	<0.05	<0.011	<0.039	<0.010	<0.05
37	XU-32-24-118	09-08-93	<0.05	<0.013	<0.012	<0.05	<0.05	<0.008	<0.05	<0.011	<0.039	<0.010	<0.05
38	XU-32-24-203	09-09-93	<0.05	<0.013	<0.012	<0.05	<0.05	<0.008	<0.05	<0.011	<0.039	<0.010	<0.05

Table 6. Pesticides—Continued

Well reference number (fig. 1)	State well number	Date	MCPB, dissolved ( $\mu\text{g/L}$ )	Methio- carb, dissolved ( $\mu\text{g/L}$ )	Methomyl, dissolved ( $\mu\text{g/L}$ )	Methyl- azinphos, dissolved ( $\mu\text{g/L}$ )	Metribu- zin, dissolved ( $\mu\text{g/L}$ )	Molinate, dissolved ( $\mu\text{g/L}$ )	Methyl- parathion, dissolved ( $\mu\text{g/L}$ )	Metola- chlor, dissolved ( $\mu\text{g/L}$ )	Naprop- amide, dissolved ( $\mu\text{g/L}$ )	1-Naph- thol, dissolved ( $\mu\text{g/L}$ )	Neburon, dissolved ( $\mu\text{g/L}$ )
1	XU-32-15-208	09-01-93	<0.05	<0.05	<0.05	<0.08	<0.012	<0.007	<0.035	<0.009	<0.01	<0.05	<0.05
2	XU-32-15-309	09-29-93	<0.05	<0.05	<0.05	<0.038	.019	<0.007	<0.035	<0.009	<0.01	<0.05	<0.05
3	XU-32-15-310	08-19-93	<0.05	<0.05	<0.05	<0.08	<0.012	<0.007	<0.035	<0.009	<0.01	<0.05	<0.05
4	XU-32-15-311	08-18-93	<0.05	<0.05	<0.05	<0.08	<0.012	<0.007	<0.035	<0.009	<0.01	<0.05	<0.05
5	XU-32-15-312	08-17-93	<0.05	<0.05	<0.05	<0.08	<0.012	<0.007	<0.035	<0.009	<0.01	<0.05	<0.05
6	XU-32-15-313	09-14-93	<0.05	<0.05	<0.05	<0.038	<0.012	<0.007	<0.035	<0.009	<0.01	<0.05	<0.05
7	XU-32-15-314	09-15-93	<0.05	<0.05	<0.05	<0.038	<0.012	<0.007	<0.035	<0.009	<0.01	<0.05	<0.05
8	XU-32-15-608	08-01-93	<0.05	<0.05	<0.05	<0.08	<0.012	<0.007	<0.035	<0.009	<0.01	<0.05	<0.05
9	XU-32-15-609	08-04-93	<0.05	<0.05	<0.05	<0.08	<0.012	<0.007	<0.035	<0.009	<0.01	<0.05	<0.05
10	XU-32-16-106	08-12-93	<0.05	<0.05	<0.05	<0.08	<0.012	<0.007	<0.035	<0.009	<0.01	<0.05	<0.05
11	XU-32-16-107	08-11-93	<0.05	<0.05	<0.05	<0.08	<0.012	<0.007	<0.035	<0.009	<0.01	<0.05	<0.05
12	XU-32-16-109	08-03-93	<0.05	<0.05	<0.05	<0.08	<0.012	<0.007	<0.035	<0.009	<0.01	<0.05	<0.05
13	XU-32-16-110	08-02-93	<0.05	<0.05	<0.05	<0.08	<0.012	<0.007	<0.035	<0.009	<0.01	<0.05	<0.05
14	XU-32-16-111	09-13-93	<0.05	<0.05	<0.05	<0.038	<0.012	<0.007	<0.035	<0.009	<0.01	<0.05	<0.05
15	XU-32-16-112	09-10-93	<0.05	<0.05	<0.05	<0.038	<0.012	<0.007	<0.035	<0.009	<0.01	<0.05	<0.05
16	XU-32-16-205	07-31-93	--	<0.05	<0.05	<0.08	<0.012	<0.007	<0.035	<0.009	<0.01	<0.05	<0.05
17	XU-32-16-206	08-20-93	<0.05	<0.05	<0.05	<0.08	<0.012	<0.007	<0.035	<0.009	<0.01	<0.05	<0.05
18	XU-32-16-207	07-27-93	<0.05	<0.05	<0.05	<0.08	<0.012	<0.007	<0.035	<0.009	<0.01	<0.05	<0.05
19	XU-32-16-208	07-28-93	<0.05	<0.05	<0.05	<0.08	<0.012	<0.007	<0.035	<0.009	<0.01	<0.05	<0.05
20	XU-32-16-209	07-29-93	<0.05	<0.05	<0.05	<0.08	<0.012	<0.007	<0.035	<0.009	<0.01	<0.05	<0.05
21	XU-32-16-210	09-13-93	<0.05	<0.05	<0.05	<0.038	<0.012	<0.007	<0.035	<0.009	<0.01	<0.05	<0.05
22	XU-32-23-206	09-01-93	<0.05	<0.05	<0.05	<0.08	<0.012	<0.007	<0.035	<0.009	<0.01	<0.05	<0.05
23	XU-32-23-315	08-10-93	<0.05	<0.05	<0.05	<0.08	<0.012	<0.007	<0.035	<0.009	<0.01	<0.05	<0.05
24	XU-32-23-316	08-24-93	<0.05	<0.05	<0.05	<0.08	<0.012	<0.007	<0.035	<0.009	<0.01	<0.05	<0.05
25	XU-32-23-317	08-09-93	<0.05	<0.05	<0.05	<0.08	<0.012	<0.007	<0.035	<0.009	<0.01	<0.05	<0.05
26	XU-32-23-508	08-31-93	<0.05	<0.05	<0.05	<0.08	<0.012	<0.007	<0.035	<0.009	<0.01	<0.05	<0.05
27	XU-32-23-509	08-13-93	<0.05	<0.05	<0.05	<0.08	<0.012	<0.007	<0.035	<0.009	<0.01	<0.05	<0.05
28	XU-32-23-510	08-13-93	<0.05	<0.05	<0.05	<0.08	<0.012	<0.007	<0.035	<0.009	<0.01	<0.05	<0.05
29	XU-32-23-511	09-11-93	<0.05	<0.05	<0.05	<0.038	<0.012	<0.007	<0.035	<0.009	<0.01	<0.05	<0.05
30	XU-32-24-111	08-25-93	<0.05	<0.05	<0.05	<0.08	<0.012	<0.007	<0.035	<0.009	<0.01	<0.05	<0.05
31	XU-32-24-112	08-22-93	<0.05	<0.05	<0.05	<0.08	<0.012	<0.007	<0.035	<0.009	<0.01	<0.05	<0.05
32	XU-32-24-113	08-21-93	<0.05	<0.05	<0.05	<0.11	<0.017	<0.010	<0.05	<0.013	<0.014	<0.05	<0.05
33	XU-32-24-114	08-23-93	<0.05	<0.05	<0.05	<0.08	<0.012	<0.007	<0.035	<0.009	<0.01	<0.05	<0.05
34	XU-32-24-115	08-24-93	<0.05	<0.05	<0.05	<0.11	<0.017	<0.010	<0.05	<0.013	<0.014	<0.05	<0.05
35	XU-32-24-116	09-09-93	<0.05	<0.05	<0.05	<0.038	<0.012	<0.007	<0.035	<0.009	<0.01	<0.05	<0.05
36	XU-32-24-117	09-11-93	<0.05	<0.05	<0.05	<0.038	<0.012	<0.007	<0.035	<0.009	<0.01	<0.05	<0.05
37	XU-32-24-118	09-08-93	<0.05	<0.05	<0.05	<0.038	<0.012	<0.007	<0.035	<0.009	<0.01	<0.05	<0.05
38	XU-32-24-203	09-09-93	<0.05	<0.05	<0.05	<0.038	<0.012	<0.007	<0.035	<0.009	<0.01	<0.05	<0.05



Table 6. Pesticides—Continued

Well reference number (fig. 1)	State well number	Date	Norflur- azon, dissolved (µg/L)	Oryzalin, dissolved (µg/L)	Oxamyl, dissolved (µg/L)	Parathion, dissolved (µg/L)	Pebulate, dissolved (µg/L)	Pendi- methalin, dissolved (µg/L)	Permeth- rin, dissolved (µg/L)	Phorate, dissolved (µg/L)	Picloram dissolved (µg/L)	Prometon, dissolved (µg/L)	Pron- amide, dissolved (µg/L)	Prop- chlor, dissolved (µg/L)
1	XU-32-15-208	09-01-93	<0.05	<0.05	<0.05	<0.022	<0.009	<0.018	<0.016	<0.02	<0.05	<0.008	<0.009	<0.015
2	XU-32-15-309	09-29-93	<0.05	<0.05	<0.05	<0.022	<0.009	<0.018	<0.016	<0.02	<0.05	<0.008	<0.009	<0.015
3	XU-32-15-310	08-19-93	<0.05	<0.05	<0.05	<0.022	<0.009	<0.018	<0.016	<0.02	<0.05	<0.008	<0.009	<0.015
4	XU-32-15-311	08-18-93	<0.05	<0.05	<0.05	<0.022	<0.009	<0.018	<0.016	<0.02	<0.05	<0.008	<0.009	<0.015
5	XU-32-15-312	08-17-93	<0.05	<0.05	<0.05	<0.022	<0.009	<0.018	<0.016	<0.02	<0.05	<0.008	<0.009	<0.015
6	XU-32-15-313	09-14-93	<0.05	<0.05	<0.05	<0.022	<0.009	<0.018	<0.016	<0.02	<0.05	<0.008	<0.009	<0.015
7	XU-32-15-314	09-15-93	<0.05	<0.05	<0.05	<0.022	<0.009	<0.018	<0.016	<0.02	<0.05	<0.008	<0.009	<0.015
8	XU-32-15-608	08-01-93	<0.05	<0.05	<0.05	<0.022	<0.009	<0.018	<0.016	<0.02	<0.05	<0.008	<0.009	<0.015
9	XU-32-15-609	08-04-93	<0.05	<0.05	<0.05	<0.022	<0.009	<0.018	<0.016	<0.02	<0.05	<0.008	<0.009	<0.015
10	XU-32-16-106	08-12-93	<0.05	<0.05	<0.05	<0.022	<0.009	<0.018	<0.016	<0.02	<0.05	<0.008	<0.009	<0.015
11	XU-32-16-107	08-11-93	<0.05	<0.05	<0.05	<0.022	<0.009	<0.018	<0.016	<0.02	<0.05	<0.008	<0.009	<0.015
12	XU-32-16-109	08-03-93	<0.05	<0.05	<0.05	<0.022	<0.009	<0.018	<0.016	<0.02	<0.05	<0.008	<0.009	<0.015
13	XU-32-16-110	08-02-93	<0.05	<0.05	<0.05	<0.022	<0.009	<0.018	<0.016	<0.02	<0.05	<0.008	<0.009	<0.015
14	XU-32-16-111	09-13-93	<0.05	<0.05	<0.05	<0.022	<0.009	<0.018	<0.016	<0.02	<0.05	<0.008	<0.009	<0.015
15	XU-32-16-112	09-10-93	<0.05	<0.05	<0.05	<0.022	<0.009	<0.018	<0.016	<0.02	<0.05	<0.008	<0.009	<0.015
16	XU-32-16-205	07-31-93	<0.05	<0.05	<0.05	<0.022	<0.009	<0.018	<0.016	<0.02	--	<0.008	<0.009	<0.015
17	XU-32-16-206	08-20-93	<0.05	<0.05	<0.05	<0.022	<0.009	<0.018	<0.016	<0.02	<0.05	<0.008	<0.009	<0.015
18	XU-32-16-207	07-27-93	<0.05	<0.05	<0.05	<0.022	<0.009	<0.018	<0.016	<0.02	<0.05	<0.008	<0.009	<0.015
19	XU-32-16-208	07-28-93	<0.05	<0.05	<0.05	<0.022	<0.009	<0.018	<0.016	<0.02	<0.05	<0.008	<0.009	<0.015
20	XU-32-16-209	07-29-93	<0.05	<0.05	<0.05	<0.022	<0.009	<0.018	<0.016	<0.02	<0.05	<0.008	<0.009	<0.015
21	XU-32-16-210	09-13-93	<0.05	<0.05	<0.05	<0.022	<0.009	<0.018	<0.016	<0.02	<0.05	<0.008	<0.009	<0.015
22	XU-32-23-206	09-01-93	<0.05	<0.05	<0.05	<0.022	<0.009	<0.018	<0.016	<0.02	<0.05	<0.008	<0.009	<0.015
23	XU-32-23-315	08-10-93	<0.05	<0.05	<0.05	<0.022	<0.009	<0.018	<0.016	<0.02	<0.05	.023	<0.009	<0.015
24	XU-32-23-316	08-24-93	<0.05	<0.05	<0.05	<0.022	<0.009	<0.018	<0.016	<0.02	<0.05	<0.008	<0.009	<0.015
25	XU-32-23-317	08-09-93	<0.05	<0.05	<0.05	<0.022	<0.009	<0.018	<0.016	<0.02	<0.05	<0.008	<0.009	<0.015
26	XU-32-23-508	08-31-93	<0.05	<0.05	<0.05	<0.022	<0.009	<0.018	<0.016	<0.02	<0.05	<0.008	<0.009	<0.015
27	XU-32-23-509	08-13-93	<0.05	<0.05	<0.05	<0.022	<0.009	<0.018	<0.016	<0.02	<0.05	<0.008	<0.009	<0.015
28	XU-32-23-510	08-13-93	<0.05	<0.05	<0.05	<0.022	<0.009	<0.018	<0.016	<0.02	<0.05	<0.008	<0.009	<0.015
29	XU-32-23-511	09-11-93	<0.05	<0.05	<0.05	<0.022	<0.009	<0.018	<0.016	<0.02	<0.05	<0.008	<0.009	<0.015
30	XU-32-24-111	08-25-93	<0.05	<0.05	<0.05	<0.022	<0.009	<0.018	<0.016	<0.02	<0.05	<0.008	<0.009	<0.015
31	XU-32-24-112	08-22-93	<0.05	<0.05	<0.05	<0.022	<0.009	<0.018	<0.016	<0.02	<0.05	.13	<0.009	<0.015
32	XU-32-24-113	08-21-93	<0.05	<0.05	<0.05	<0.031	<0.013	<0.026	<0.023	<0.02	<0.05	.011	<0.013	<0.021
33	XU-32-24-114	08-23-93	<0.05	<0.05	<0.05	<0.022	<0.009	<0.018	<0.016	<0.02	<0.05	<0.008	<0.009	<0.015
34	XU-32-24-115	08-24-93	<0.05	<0.05	<0.05	<0.031	<0.013	<0.025	<0.023	<0.02	<0.05	<0.011	<0.013	<0.021
35	XU-32-24-116	09-09-93	<0.05	<0.05	<0.05	<0.022	<0.009	<0.018	<0.016	<0.02	<0.05	<0.008	<0.009	<0.015
36	XU-32-24-117	09-11-93	<0.05	<0.05	<0.05	<0.022	<0.009	<0.018	<0.016	<0.02	<0.05	<0.008	<0.009	<0.015
37	XU-32-24-118	09-08-93	<0.05	<0.05	<0.05	<0.022	<0.009	<0.018	<0.016	<0.02	<0.05	.009	<0.009	<0.015
38	XU-32-24-203	09-09-93	<0.05	<0.05	<0.05	<0.022	<0.009	<0.018	<0.016	<0.02	<0.05	<0.008	<0.009	<0.015

Table 6. Pesticides—Continued

Well reference number (fig. 1)	State well number	Date	Propanil, dissolved (µg/L)	Propr- gite, dissolved (µg/L)	Propham, dissolved (µg/L)	Propoxur, dissolved (µg/L)	Silvex, dissolved (µg/L)	Simazine, dissolved (µg/L)	Tebuthi- uron, dissolved (µg/L)	Terbacil, dissolved (µg/L)	Terbufos, dissolved (µg/L)	Thioben- carb, dissolved (µg/L)	Triallate, dissolved (µg/L)	Triclopyr, dissolved (µg/L)	Trifluralin, dissolved (µg/L)
1	XU-32-15-208	09-01-93	<0.016	<0.01	<0.05	<0.05	<0.05	<0.01	<0.015	<0.03	<0.012	<0.008	<0.008	<0.05	<0.012
2	XU-32-15-309	09-29-93	<0.016	<0.01	<0.05	<0.05	<0.05	<0.01	<0.015	<0.03	<0.012	<0.008	<0.008	<0.05	<0.012
3	XU-32-15-310	08-19-93	<0.016	<0.01	<0.05	<0.05	<0.05	<0.01	<0.015	<0.03	<0.012	<0.008	<0.008	<0.05	<0.012
4	XU-32-15-311	08-18-93	<0.016	<0.01	<0.05	<0.05	<0.05	<0.01	<0.015	<0.03	<0.012	<0.008	<0.008	<0.05	<0.012
5	XU-32-15-312	08-17-93	<0.016	<0.01	<0.05	<0.05	<0.05	<0.01	<0.015	<0.03	<0.012	<0.008	<0.008	<0.05	<0.012
6	XU-32-15-313	09-14-93	<0.016	<0.01	<0.05	<0.05	<0.05	<0.01	<0.015	<0.03	<0.012	<0.008	<0.008	<0.05	<0.012
7	XU-32-15-314	09-15-93	<0.016	<0.01	<0.05	<0.05	<0.05	<0.01	<0.015	<0.03	<0.012	<0.008	<0.008	<0.05	<0.012
8	XU-32-15-608	08-01-93	<0.016	<0.01	<0.05	<0.05	<0.05	<0.01	<0.015	<0.03	<0.012	<0.008	<0.008	<0.05	<0.012
9	XU-32-15-609	08-04-93	<0.016	<0.01	<0.05	<0.05	<0.05	<0.01	<0.015	<0.03	<0.012	<0.008	<0.008	<0.05	<0.012
10	XU-32-16-106	08-12-93	<0.016	<0.01	<0.05	<0.05	<0.05	<0.01	<0.015	<0.03	<0.012	<0.008	<0.008	<0.05	<0.012
11	XU-32-16-107	08-11-93	<0.016	<0.01	<0.05	<0.05	<0.05	<0.01	<0.015	<0.03	<0.012	<0.008	<0.008	<0.05	<0.012
12	XU-32-16-109	08-03-93	<0.016	<0.01	<0.05	<0.05	<0.05	<0.01	<0.015	<0.03	<0.012	<0.008	<0.008	<0.05	<0.012
13	XU-32-16-110	08-02-93	<0.016	<0.01	<0.05	<0.05	<0.05	<0.01	<0.015	<0.03	<0.012	<0.008	<0.008	<0.05	<0.012
14	XU-32-16-111	09-13-93	<0.016	<0.01	<0.05	<0.05	<0.05	<0.01	<0.015	<0.03	<0.012	<0.008	<0.008	<0.05	<0.012
15	XU-32-16-112	09-10-93	<0.016	<0.01	<0.05	<0.05	<0.05	<0.01	<0.015	<0.03	<0.012	<0.008	<0.008	<0.05	<0.012
16	XU-32-16-205	07-31-93	<0.016	<0.006	<0.05	<0.05	<0.05	<0.01	<0.015	<0.03	<0.012	<0.008	<0.008	--	<0.012
17	XU-32-16-206	08-20-93	<0.016	<0.01	<0.05	<0.05	<0.05	<0.01	<0.015	<0.03	<0.012	<0.008	<0.008	<0.05	<0.012
18	XU-32-16-207	07-27-93	<0.016	<0.01	<0.05	<0.05	<0.05	<0.01	<0.015	<0.03	<0.012	<0.008	<0.008	<0.05	<0.012
19	XU-32-16-208	07-28-93	<0.016	<0.01	<0.05	<0.05	<0.05	<0.01	<0.015	<0.03	<0.012	<0.008	<0.008	<0.05	<0.012
20	XU-32-16-209	07-29-93	<0.016	<0.01	<0.05	<0.05	<0.05	<0.01	<0.015	<0.03	<0.012	<0.008	<0.008	<0.05	<0.012
21	XU-32-16-210	09-13-93	<0.016	<0.01	<0.05	<0.05	<0.05	<0.01	<0.015	<0.03	<0.012	<0.008	<0.008	<0.05	<0.012
22	XU-32-23-206	09-01-93	<0.016	<0.01	<0.05	<0.05	<0.05	<0.01	<0.015	<0.03	<0.012	<0.008	<0.008	<0.05	<0.012
23	XU-32-23-315	08-10-93	<0.016	<0.01	<0.05	<0.05	<0.05	<0.01	<0.015	<0.03	<0.012	<0.008	<0.008	<0.05	<0.012
24	XU-32-23-316	08-24-93	<0.016	<0.01	<0.05	<0.05	<0.05	<0.01	<0.015	<0.03	<0.012	<0.008	<0.008	<0.05	<0.012
25	XU-32-23-317	08-09-93	<0.016	<0.01	<0.05	<0.05	<0.05	<0.01	<0.015	<0.03	<0.012	<0.008	<0.008	<0.05	<0.012
26	XU-32-23-508	08-31-93	<0.016	<0.01	<0.05	<0.05	<0.05	<0.01	<0.015	<0.03	<0.012	<0.008	<0.008	<0.05	<0.012
27	XU-32-23-509	08-13-93	<0.016	<0.01	<0.05	<0.05	<0.05	<0.01	<0.015	<0.03	<0.012	<0.008	<0.008	<0.05	<0.012
28	XU-32-23-510	08-13-93	<0.016	<0.01	<0.05	<0.05	<0.05	<0.01	<0.015	<0.03	<0.012	<0.008	<0.008	<0.05	<0.012
29	XU-32-23-511	09-11-93	<0.016	<0.01	<0.05	<0.05	<0.05	<0.01	<0.015	<0.03	<0.012	<0.008	<0.008	<0.05	<0.012
30	XU-32-24-111	08-25-93	<0.016	<0.01	<0.05	<0.05	<0.05	<0.01	<0.015	<0.03	<0.012	<0.008	<0.008	<0.05	<0.012
31	XU-32-24-112	08-22-93	<0.016	<0.01	<0.05	<0.05	<0.05	<0.01	<0.015	<0.03	<0.012	<0.008	<0.008	<0.05	<0.012
32	XU-32-24-113	08-21-93	<0.023	<0.01	<0.05	<0.05	<0.05	<0.01	<0.015	<0.043	<0.017	<0.011	<0.008	<0.05	<0.017
33	XU-32-24-114	08-23-93	<0.016	<0.01	<0.05	<0.05	<0.05	<0.01	<0.015	<0.03	<0.012	<0.008	<0.008	<0.05	<0.012
34	XU-32-24-115	08-24-93	<0.023	<0.01	<0.05	<0.05	<0.05	<0.01	<0.021	<0.042	<0.017	<0.011	<0.008	<0.05	<0.017
35	XU-32-24-116	09-09-93	<0.016	<0.01	<0.05	<0.05	<0.05	<0.01	<0.015	<0.03	<0.012	<0.008	<0.008	<0.05	<0.012
36	XU-32-24-117	09-11-93	<0.016	<0.01	<0.05	<0.05	<0.05	<0.01	<0.015	<0.03	<0.012	<0.008	<0.008	<0.05	<0.012
37	XU-32-24-118	09-08-93	<0.016	<0.01	<0.05	<0.05	<0.05	<0.01	<0.015	<0.03	<0.012	<0.008	<0.008	<0.05	<0.012
38	XU-32-24-203	09-09-93	<0.016	<0.01	<0.05	<0.05	<0.05	<0.01	<0.015	<0.03	<0.012	<0.008	<0.008	<0.05	<0.012

**Table 7. Dissolved organic carbon, phenols, methylene blue active substance, and volatile organic compound data**

[mg/L, milligrams per liter; µg/L, micrograms per liter; <, less than; ---, no data]

Well refer- ence number (fig. 1)	State well number	Date	Organic carbon, dissolved (mg/L as C)	Phenols, total (µg/L)	Methylene blue active substance (mg/L)	Benzene, total (µg/L)	Bromo- benzene, total (µg/L)	Bromo- chloro- methane, total (µg/L)	Bromo- methane, total (µg/L)	n-Butyl- benzene, total (µg/L)	sec-Butyl- benzene, total (µg/L)	tert-Butyl- benzene, total (µg/L)	Chloro- benzene, total (µg/L)	Chloro- ethane, total (µg/L)
1	XU-32-15-208	09-01-93	0.9	<1.0	<0.02	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
2	XU-32-15-309	09-29-93	4.5	2.0	<0.2	<2	<2	<2	<2	<2	<2	<2	<2	<2
3	XU-32-15-310	08-19-93	1.4	2.0	.02	<2	<2	<2	<2	<2	<2	<2	<2	<2
4	XU-32-15-311	08-18-93	1.4	<1.0	.04	<2	<2	<2	<2	<2	<2	<2	<2	<2
5	XU-32-15-312	08-17-93	1.5	<1.0	.04	<2	<2	<2	<2	<2	<2	<2	<2	<2
6	XU-32-15-313	09-14-93	.2	<1.0	.03	<2	<2	<2	<2	<2	<2	<2	<2	<2
7	XU-32-15-314	09-15-93	.2	<1.0	.03	<2	<2	<2	<2	<2	<2	<2	<2	<2
8	XU-32-15-608	08-01-93	1.5	2.0	.02	<2	<2	<2	<2	<2	<2	<2	<2	<2
9	XU-32-15-609	08-04-93	.6	1.0	.02	<2	<2	<2	<2	<2	<2	<2	<2	<2
10	XU-32-16-106	08-12-93	1.1	1.0	.04	<2	<2	<2	<2	<2	<2	<2	<2	<2
11	XU-32-16-107	08-11-93	1.6	1.0	<0.1	---	---	---	---	---	---	---	---	---
12	XU-32-16-109	08-03-93	.4	2.0	.02	<2	<2	<2	<2	<2	<2	<2	<2	<2
13	XU-32-16-110	08-02-93	.4	2.0	.03	<2	<2	<2	<2	<2	<2	<2	<2	<2
14	XU-32-16-111	09-13-93	.5	<1.0	<0.2	<2	<2	<2	<2	<2	<2	<2	<2	<2
15	XU-32-16-112	09-10-93	.4	<1.0	<0.2	<2	<2	<2	<2	<2	<2	<2	<2	<2
16	XU-32-16-205	07-31-93	.4	2.0	<0.2	<2	<2	<2	<2	<2	<2	<2	<2	<2
17	XU-32-16-206	08-20-93	2.8	1.0	.02	<2	<2	<2	<2	<2	<2	<2	<2	<2
18	XU-32-16-207	07-27-93	1.6	2.0	.05	<2	<2	<2	<2	<2	<2	<2	<2	<2
19	XU-32-16-208	07-28-93	1.8	1.0	.03	<2	<2	<2	<2	<2	<2	<2	<2	<2
20	XU-32-16-209	07-29-93	1.1	2.0	.04	<2	<2	<2	<2	<2	<2	<2	<2	<2
21	XU-32-16-210	09-13-93	.2	<1.0	<0.2	<2	<2	<2	<2	<2	<2	<2	<2	<2
22	XU-32-23-206	09-01-93	2.8	<1.0	<0.2	<2	<2	<2	<2	<2	<2	<2	<2	<2
23	XU-32-23-315	08-10-93	1.6	2.0	.11	<2	<2	<2	<2	<2	<2	<2	<2	<2
24	XU-32-23-316	08-24-93	1.6	1.0	.02	<2	<2	<2	<2	<2	<2	<2	<2	<2
25	XU-32-23-317	08-09-93	.9	1.0	.1	<2	<2	<2	<2	<2	<2	<2	<2	<2
26	XU-32-23-508	08-31-93	2.3	2.0	<0.2	<2	<2	<2	<2	<2	<2	<2	<2	<2
27	XU-32-23-509	08-13-93	2.8	<1.0	<0.1	<2	<2	<2	<2	<2	<2	<2	<2	<2
28	XU-32-23-510	08-13-93	1.2	<1.0	<0.1	<2	<2	<2	<2	<2	<2	<2	<2	<2
29	XU-32-23-511	09-11-93	.8	2.0	<0.2	<2	<2	<2	<2	<2	<2	<2	<2	<2
30	XU-32-24-111	08-25-93	3.4	<1.0	.02	<2	<2	<2	<2	<2	<2	<2	<2	<2
31	XU-32-24-112	08-22-93	2.1	2.0	<0.2	<2	<2	<2	<2	<2	<2	<2	<2	<2
32	XU-32-24-113	08-21-93	2.6	3.0	<0.2	<2	<2	<2	<2	<2	<2	<2	<2	<2
33	XU-32-24-114	08-23-93	6.9	<1.0	.05	<2	<2	<2	<2	<2	<2	<2	<2	<2
34	XU-32-24-115	08-24-93	1.4	<1.0	<0.2	<2	<2	<2	<2	<2	<2	<2	<2	<2
35	XU-32-24-116	09-09-93	.8	3.0	<0.2	<2	<2	<2	<2	<2	<2	<2	<2	<2
36	XU-32-24-117	09-11-93	.3	<1.0	<0.2	<2	<2	<2	<2	<2	<2	<2	<2	<2
37	XU-32-24-118	09-08-93	.8	<1.0	<0.2	<2	<2	<2	<2	<2	<2	<2	<2	<2
38	XU-32-24-203	09-09-93	1.0	1.0	.02	<2	<2	<2	<2	<2	<2	<2	<2	<2

**Table 7.** Dissolved organic carbon, phenols, methylene blue active substance, and volatile organic compound data—Continued

Well refer- ence number fig. 1)	State well number	Date	Chloro- ethylene, total (vinyl chloride) (µg/L)	Chloro- methane, total (µg/L)	1-Chloro- 2-methyl- benzene, total (µg/L)	1-Chloro- 4-methyl- benzene, total (µg/L)	Dibromo- chloro- methane, total (µg/L)	1,2- Dibromo- 3-chloro- propane, total (µg/L)	1,2- Dibromo- ethane, total (µg/L)	Dibromo- methane, total (µg/L)	1,2- Dichloro- benzene, total (µg/L)	1,3- Dichloro- benzene, total (µg/L)	1,4- Dichloro- benzene, total (µg/L)	Dichloro- bromo- methane, total (µg/L)	Dichloro- difluoro- methane, total (µg/L)
1	XU-32-15-208	09-01-93	<0.2	<1.0	<0.2	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
2	XU-32-15-309	09-29-93	<2	<1.0	<2	<2	<2	<1.0	<2	<2	<2	<2	<2	<2	<2
3	XU-32-15-310	08-19-93	<2	<1.0	<2	<2	<2	<1.0	<2	<2	<2	<2	<2	<2	<2
4	XU-32-15-311	08-18-93	<2	<1.0	<2	<2	<2	<1.0	<2	<2	<2	<2	<2	<2	<2
5	XU-32-15-312	08-17-93	<2	<1.0	<2	<2	<2	<1.0	<2	<2	<2	<2	<2	<2	<2
6	XU-32-15-313	09-14-93	<2	<1.0	<2	<2	<2	<1.0	<2	<2	<2	<2	<2	<2	<2
7	XU-32-15-314	09-15-93	<2	<1.0	<2	<2	<2	<1.0	<2	<2	<2	<2	<2	<2	<2
8	XU-32-15-608	08-01-93	<2	<1.0	<2	<2	<2	<1.0	<2	<2	<2	<2	<2	<2	<2
9	XU-32-15-609	08-04-93	<2	<1.0	<2	<2	<2	<1.0	<2	<2	<2	<2	<2	<2	<2
10	XU-32-16-106	08-12-93	<2	<1.0	<2	<2	<2	<1.0	<2	<2	<2	<2	<2	<2	<2
11	XU-32-16-107	08-11-93	---	---	---	---	---	---	---	---	---	---	---	---	---
12	XU-32-16-109	08-03-93	<2	<1.0	<2	<2	<2	<1.0	<2	<2	<2	<2	<2	<2	<2
13	XU-32-16-110	08-02-93	<2	<1.0	<2	<2	<2	<1.0	<2	<2	<2	<2	<2	<2	<2
14	XU-32-16-111	09-13-93	<2	<1.0	<2	<2	<2	<1.0	<2	<2	<2	<2	<2	<2	<2
15	XU-32-16-112	09-10-93	<2	<1.0	<2	<2	<2	<1.0	<2	<2	<2	<2	<2	<2	<2
16	XU-32-16-205	07-31-93	<2	<1.0	<2	<2	<2	<1.0	<2	<2	<2	<2	<2	<2	<2
17	XU-32-16-206	08-20-93	<2	<1.0	<2	<2	<2	<1.0	<2	<2	<2	<2	<2	<2	<2
18	XU-32-16-207	07-27-93	<2	<1.0	<2	<2	<2	<1.0	<2	<2	<2	<2	<2	<2	<2
19	XU-32-16-208	07-28-93	<2	<1.0	<2	<2	<2	<1.0	<2	<2	<2	<2	<2	<2	<2
20	XU-32-16-209	07-29-93	<2	<1.0	<2	<2	<2	<1.0	<2	<2	<2	<2	<2	<2	<2
21	XU-32-16-210	09-13-93	<2	<1.0	<2	<2	<2	<1.0	<2	<2	<2	<2	<2	<2	<2
22	XU-32-23-206	09-01-93	<2	<1.0	<2	<2	<2	<1.0	<2	<2	<2	<2	<2	<2	<2
23	XU-32-23-315	08-10-93	32	<1.0	<2	<2	<2	<1.0	<2	<2	<2	<2	<2	<2	<2
24	XU-32-23-316	08-24-93	<2	<1.0	<2	<2	<2	<1.0	<2	<2	<2	<2	<2	<2	<2
25	XU-32-23-317	08-09-93	<2	<1.0	<2	<2	<2	<1.0	<2	<2	<2	<2	<2	<2	<2
26	XU-32-23-508	08-31-93	<2	<1.0	<2	<2	<2	<1.0	<2	<2	<2	<2	<2	<2	<2
27	XU-32-23-509	08-13-93	<2	<1.0	<2	<2	<2	<1.0	<2	<2	<2	<2	<2	<2	<2
28	XU-32-23-510	08-13-93	<2	<1.0	<2	<2	<2	<1.0	<2	<2	<2	<2	<2	<2	<2
29	XU-32-23-511	09-11-93	<2	<1.0	<2	<2	<2	<1.0	<2	<2	<2	<2	<2	<2	<2
30	XU-32-24-111	08-25-93	<2	<1.0	<2	<2	<2	<1.0	<2	<2	<2	<2	<2	<2	<2
31	XU-32-24-112	08-22-93	<2	<1.0	<2	<2	<2	<1.0	<2	<2	<2	<2	<2	<2	<2
32	XU-32-24-113	08-21-93	<2	<1.0	<2	<2	<2	<1.0	<2	<2	<2	<2	<2	<2	<2
33	XU-32-24-114	08-23-93	<2	<1.0	<2	<2	<2	<1.0	<2	<2	<2	<2	<2	<2	<2
34	XU-32-24-115	08-24-93	<2	<1.0	<2	<2	<2	<1.0	<2	<2	<2	<2	<2	<2	<2
35	XU-32-24-116	09-09-93	<2	<1.0	<2	<2	<2	<1.0	<2	<2	<2	<2	<2	<2	<2
36	XU-32-24-117	09-11-93	<2	<1.0	<2	<2	<2	<1.0	<2	<2	<2	<2	<2	<2	<2
37	XU-32-24-118	09-08-93	<2	<1.0	<2	<2	<2	<1.0	<2	<2	<2	<2	<2	<2	<2
38	XU-32-24-203	09-09-93	<2	<1.0	<2	<2	<2	<1.0	<2	<2	<2	<2	<2	<2	<2

**Table 7. Dissolved organic carbon, phenols, methylene blue active substance, and volatile organic compound data—Continued**

Well reference number (fig. 1)	State well number	Date	1,1- Dichloro- ethane, total (µg/L)	1,2- Dichloro- ethane, total (µg/L)	1,1- Dichloro- ethylene, total (µg/L)	cis-1,2- Dichloro- ethylene, total (µg/L)	trans-1,2- Dichloro- ethylene, total (µg/L)	Dichloro- methane, total (µg/L)	1,2- Dichloro- propane, total (µg/L)	1,3- Dichloro- propane, total (µg/L)	2,2- Dichloro- propane, total (µg/L)	1,1- Dichloro- propane, total (µg/L)	cis-1,3- Dichloro- propane, total (µg/L)	trans-1,3- Dichloro- propane, total (µg/L)	Dimethyl- benzene, total (µg/L)
1	XU-32-15-208	09-01-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
2	XU-32-15-309	09-29-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
3	XU-32-15-310	08-19-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
4	XU-32-15-311	08-18-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
5	XU-32-15-312	08-17-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
6	XU-32-15-313	09-14-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
7	XU-32-15-314	09-15-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
8	XU-32-15-608	08-01-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
9	XU-32-15-609	08-04-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
10	XU-32-16-106	08-12-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
11	XU-32-16-107	08-11-93	---	---	---	---	---	---	---	---	---	---	---	---	---
12	XU-32-16-109	08-03-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
13	XU-32-16-110	08-02-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
14	XU-32-16-111	09-13-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
15	XU-32-16-112	09-10-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
16	XU-32-16-205	07-31-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
17	XU-32-16-206	08-20-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
18	XU-32-16-207	07-27-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
19	XU-32-16-208	07-28-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
20	XU-32-16-209	07-29-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
21	XU-32-16-210	09-13-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
22	XU-32-23-206	09-01-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
23	XU-32-23-315	08-10-93	<2	<2	2.8	82.0	4.4	<2	<2	<2	<2	<2	<2	<2	<2
24	XU-32-23-316	08-24-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
25	XU-32-23-317	08-09-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
26	XU-32-23-508	08-31-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
27	XU-32-23-509	08-13-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
28	XU-32-23-510	08-13-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
29	XU-32-23-511	09-11-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
30	XU-32-24-111	08-25-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
31	XU-32-24-112	08-22-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
32	XU-32-24-113	08-21-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
33	XU-32-24-114	08-23-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
34	XU-32-24-115	08-24-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
35	XU-32-24-116	09-09-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
36	XU-32-24-117	09-11-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
37	XU-32-24-118	09-08-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
38	XU-32-24-203	09-09-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2

**Table 7.** Dissolved organic carbon, phenols, methylene blue active substance, and volatile organic compound data—Continued

Well refer- ence number fig. 1)	State well number	Date	Ethyl- benzene, total (µg/L)	Hexa- chloro- buta- diene, total (µg/L)	Isopropyl- benzene, total (µg/L)	Methyl- benzene, total (toluene) (µg/L)	1-Methyl-4- isopropyl- benzene, total (µg/L)	2-Methoxy- 2-methyl propene, total (MTBE) (µg/L)	Naph- thalene, total (µg/L)	n-Propyl- benzene, total (µg/L)	Styrene, total (µg/L)	1,1,1,2- Tetra- chloro- ethane, total (µg/L)	Tetra- chloro- ethylene, total (µg/L)	Tetra- chloro- methane, total (µg/L)
1	XU-32-15-208	09-01-93	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
2	XU-32-15-309	09-29-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
3	XU-32-15-310	08-19-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
4	XU-32-15-311	08-18-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
5	XU-32-15-312	08-17-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
6	XU-32-15-313	09-14-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
7	XU-32-15-314	09-15-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
8	XU-32-15-608	08-01-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
9	XU-32-15-609	08-04-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
10	XU-32-16-106	08-12-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
11	XU-32-16-107	08-11-93	---	---	---	---	---	---	---	---	---	---	---	---
12	XU-32-16-109	08-03-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
13	XU-32-16-110	08-02-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
14	XU-32-16-111	09-13-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
15	XU-32-16-112	09-10-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
16	XU-32-16-205	07-31-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
17	XU-32-16-206	08-20-93	<2	<2	<2	<2	<2	.7	<2	<2	<2	<2	<2	<2
18	XU-32-16-207	07-27-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
19	XU-32-16-208	07-28-93	<2	<2	<2	<2	<2	.2	<2	<2	<2	<2	<2	<2
20	XU-32-16-209	07-29-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
21	XU-32-16-210	09-13-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
22	XU-32-23-206	09-01-93	<2	<2	<2	<2	<2	1.4	<2	<2	<2	<2	<2	<2
23	XU-32-23-315	08-10-93	<2	<2	.2	<2	<2	<2	<2	<2	<2	<2	4,800	<2
24	XU-32-23-316	08-24-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
25	XU-32-23-317	08-09-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
26	XU-32-23-508	08-31-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
27	XU-32-23-509	08-13-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
28	XU-32-23-510	08-13-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
29	XU-32-23-511	09-11-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
30	XU-32-24-111	08-25-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	.5	<2
31	XU-32-24-112	08-22-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
32	XU-32-24-113	08-21-93	<2	<2	<2	<2	<2	.4	<2	<2	<2	<2	<2	<2
33	XU-32-24-114	08-23-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
34	XU-32-24-115	08-24-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
35	XU-32-24-116	09-09-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
36	XU-32-24-117	09-11-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
37	XU-32-24-118	09-08-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
38	XU-32-24-203	09-09-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2

**Table 7.** Dissolved organic carbon, phenols, methylene blue active substance, and volatile organic compound data—Continued

Well reference number (fig. 1)	State well number	Date	Tribromo- methane, total (bromo- form) (µg/L)	1,2,3- Trichloro- benzene, total (µg/L)	1,2,4- Trichloro- benzene, total (µg/L)	1,1,1- Trichloro- ethane, total (µg/L)	1,1,2- Trichloro- ethane, total (µg/L)	Trichloro- ethylene, total (µg/L)	Trichloro- fluoro- methane, total (µg/L)	Trichloro- methane, total (chloro- form) (µg/L)	1,2,3- Trichloro- propane, total (µg/L)	Trichloro- trifluoro- ethane, total (µg/L)	1,2,4- Trimethyl- benzene, total (µg/L)	1,3,5- Trimethyl- benzene, total (µg/L)
1	XU-32-15-208	09-01-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
2	XU-32-15-309	09-29-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
3	XU-32-15-310	08-19-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
4	XU-32-15-311	08-18-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
5	XU-32-15-312	08-17-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
6	XU-32-15-313	09-14-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
7	XU-32-15-314	09-15-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
8	XU-32-15-608	08-01-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
9	XU-32-15-609	08-04-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
10	XU-32-16-106	08-12-93	<2	<2	<2	<2	<2	.4	<2	<2	<2	<2	<2	<2
11	XU-32-16-107	08-11-93	---	---	---	---	---	---	---	---	---	---	---	---
12	XU-32-16-109	08-03-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
13	XU-32-16-110	08-02-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
14	XU-32-16-111	09-13-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
15	XU-32-16-112	09-10-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
16	XU-32-16-205	07-31-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
17	XU-32-16-206	08-20-93	<2	<2	<2	<2	<2	<2	<2	.5	<2	<2	<2	<2
18	XU-32-16-207	07-27-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
19	XU-32-16-208	07-28-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
20	XU-32-16-209	07-29-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
21	XU-32-16-210	09-13-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
22	XU-32-23-206	09-01-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
23	XU-32-23-315	08-10-93	<2	<2	<2	<2	<2	230	<2	<2	<2	<2	.6	<2
24	XU-32-23-316	08-24-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
25	XU-32-23-317	08-09-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
26	XU-32-23-508	08-31-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
27	XU-32-23-509	08-13-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
28	XU-32-23-510	08-13-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
29	XU-32-23-511	09-11-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
30	XU-32-24-111	08-25-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
31	XU-32-24-112	08-22-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
32	XU-32-24-113	08-21-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
33	XU-32-24-114	08-23-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
34	XU-32-24-115	08-24-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
35	XU-32-24-116	09-09-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
36	XU-32-24-117	09-11-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
37	XU-32-24-118	09-08-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
38	XU-32-24-203	09-09-93	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2