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Quality of Water in Domestic Wells in the Chicot and Chicot Equivalent Aquifer Systems, Southern Louisiana and Southwestern Mississippi, 2000-2001

Water-Resources Investigations Report 03-4122

U.S. Department of the Interior
U.S. Geological Survey

Front cover: Domestic-supply well sampled in Tangipahoa Parish, Louisiana

(Photograph by Lane B. Simmons, U.S. Geological Survey)

QUALITY OF WATER IN DOMESTIC WELLS IN THE CHICOT AND CHICOT EQUIVALENT AQUIFER SYSTEMS, SOUTHERN LOUISIANA AND SOUTHWESTERN MISSISSIPPI, 2000-2001

By Roland W. Tollett, Robert B. Fendick, Jr., and Lane B. Simmons

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U.S. GEOLOGICAL SURVEY

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NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

Baton Rouge, Louisiana

2003

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U.S. GEOLOGICAL SURVEY
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FOREWORD

The U.S. Geological Survey (USGS) is committed to serve the Nation with accurate and timely scientific information that helps enhance and protect the overall quality of life, and facilitates effective management of water, biological, energy, and mineral resources. Information on the quality of the Nation's water resources is of critical interest to the USGS because it is so integrally linked to the long-term availability of water that is clean and safe for drinking and recreation and that is suitable for industry, irrigation, and habitat for fish and wildlife. Escalating population growth and increasing demands for the multiple water uses make water availability, now measured in terms of quantity *and* quality, even more critical to the long-term sustainability of our communities and ecosystems.

The USGS implemented the National Water-Quality Assessment (NAWQA) Program to support national, regional, and local information needs and decisions related to water-quality management and policy. Shaped by and coordinated with ongoing efforts of other Federal, State, and local agencies, the NAWQA Program is designed to answer: What is the condition of our Nation's streams and ground water? How are the conditions changing over time? How do natural features and human activities affect the quality of streams and ground water, and where are those effects most pronounced? By combining information on water chemistry, physical characteristics, stream habitat, and aquatic life, the NAWQA Program aims to provide science-based insights for current and emerging water issues. NAWQA results can contribute to informed decisions that result in practical and effective water-resource management and strategies that protect and restore water quality.

Since 1991, the NAWQA Program has implemented interdisciplinary assessments in more than 50 of the Nation's most important river basins and aquifers, referred to as Study Units. Collectively, these Study Units account for more than 60 percent of the overall water use and population served by public water supply, and are representative of the Nation's major hydrologic landscapes, priority ecological resources, and agricultural, urban, and natural sources of contamination.

Each assessment is guided by a nationally consistent study design and methods of sampling and analysis. The assessments thereby build local knowledge about water-quality issues and trends in a particular stream or aquifer while providing an understanding of how and why water quality varies regionally and nationally. The consistent, multi-scale approach helps to determine if certain types of water-quality issues are isolated or pervasive, and allows direct comparisons of how human activities and natural processes affect water quality and ecological health in the Nation's diverse geographic and environmental settings. Comprehensive assessments on pesticides, nutrients, volatile organic compounds, trace metals, and aquatic ecology are developed at the national scale through comparative analysis of the Study-Unit findings.

The USGS places high value on the communication and dissemination of credible, timely, and relevant science so that the most recent and available knowledge about water resources can be applied in management and policy decisions. We hope this NAWQA publication will provide you the needed insights and information to meet your needs, and thereby foster increased awareness and involvement in the protection and restoration of our Nation's waters.

The NAWQA Program recognizes that a national assessment by a single program cannot address all water-resource issues of interest. External coordination at all levels is critical for a fully integrated understanding of watersheds and for cost-effective management, regulation, and conservation of our Nation's water resources. The Program, therefore, depends extensively on the advice, cooperation, and information from other Federal, State, interstate, Tribal, and local agencies, non-government organizations, industry, academia, and other stakeholder groups. The assistance and suggestions of all are greatly appreciated.

Robert M. Hirsch
Associate Director for Water

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CONVERSION FACTORS, DATUMS, ABBREVIATED WATER-QUALITY UNITS, AND ACRONYMS

Multiply	By	To obtain
inch (in.)	25.4	millimeter (mm)
foot (ft)	0.3048	meter (m)
mile (mi)	1.609	kilometer (km)
square mile (mi^2)	2.590	square kilometer (km^2)
million gallons per day (Mgal/d)	3,785	cubic meters per day (m^3/d)

Temperature in degrees Fahrenheit (°F) can be converted to degrees Celsius (°C) as follows: °C = (°F - 32)/1.8.

Horizontal coordinate information in this report is referenced to the North American Datum of 1983.

Vertical coordinate information in this report is referenced to the National Geodetic Vertical Datum of 1929 (NGVD 29)--a geodetic datum derived from a general adjustment of the first-order level nets of both the United States and Canada, formerly called Sea Level Datum of 1929.

Abbreviated water-quality units:

grams per kilogram (g/kg)
micrograms per liter (μg/L)
microsiemens per centimeter at 25 degrees Celsius (μS/cm)
milligrams per liter (mg/L)
milliliter (ml)
picocuries per liter (pCi/L)

Acronyms:

ACAD, Acadian-Pontchartrain (Study Unit)
DOC, dissolved organic carbon
DOTD, Louisiana Department of Transportation and Development
HA, Health Advisory
MCL, Maximum Contaminant Level
MCLG, Maximum Contaminant Level Goal
MDL, Method Detection Limit
MMM, Multimedia Mitigation (Program)
NAWQA, National Water-Quality Assessment (Program)
SMCL, Secondary Maximum Contaminant Level
USEPA, U.S. Environmental Protection Agency
USGS, U.S. Geological Survey
VOC, volatile organic compound

QUALITY OF WATER IN DOMESTIC WELLS IN THE CHICOT AND CHICOT EQUIVALENT AQUIFER SYSTEMS, SOUTHERN LOUISIANA AND SOUTHWESTERN MISSISSIPPI, 2000-2001

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ABSTRACT

In 2000-2001, water-quality data were collected from 60 randomly selected domestic wells in the Acadian-Pontchartrain Study Unit, as part of the National Water-Quality Assessment Program. The data were collected from wells screened in shallow sands (less than 350 feet below land surface) in two major aquifer systems--the Chicot aquifer system in southwestern Louisiana and the Chicot equivalent aquifer system in southeastern Louisiana and southwestern Mississippi. The Chicot equivalent aquifer system is part of the Southern Hills regional aquifer system, and both the Chicot aquifer system and the Southern Hills regional aquifer systems are designated as sole-source aquifers by the U.S. Environmental Protection Agency (USEPA).

The well depths ranged from 40 to 340 feet below land surface with a median depth of 120 feet. The ground-water-quality data included 5 physicochemical properties, dissolved solids, 9 major inorganic ions, 24 trace elements, 6 nutrients, dissolved organic carbon, 109 pesticides and degradation products, and 85 volatile organic compounds (VOC's); and a subset of the wells were sampled for radon, chlorofluorocarbons, and stable isotopes.

Water from 35 of the 60 domestic wells sampled had pH values less than the USEPA Secondary Maximum Contaminant Level (SMCL) range of 6.5 to 8.5 standard units. Specific conductance ranged from 17 to 1,420 microsiemens per centimeter at 25 degrees Celsius. Dissolved-solids concentrations in water from two wells exceeded the SMCL of 500 mg/L (milligrams per liter); the maximum concentration was 858 mg/L. Sodium and calcium were the dominant cations, and bicarbonate and chloride were the dominant anions. One chloride concentration (264 mg/L) exceeded the SMCL of 250 mg/L. One arsenic concentration (55.3 μg/L [micrograms per liter]) exceeded the USEPA Maximum Contaminant Level (MCL) of 10 μg/L. Iron concentrations in water from 22 wells exceeded the SMCL of 300 μg/L; the maximum concentration was 8,670 μg/L. Manganese concentrations in water from 26 wells exceeded the SMCL of 50 μg/L; the maximum concentration was 481 μg/L. Health Advisories have been established for six of the trace elements analyzed; no concentrations were greater than these nonenforceable standards. Radon concentrations in water from 9 of 50 wells sampled were greater than the proposed USEPA MCL of 300 picocuries per liter.

Concentrations of ammonia, ammonia plus organic nitrogen, and nitrite plus nitrate in water from four wells were greater than 2 mg/L, a level that might indicate anthropogenic influences. The median dissolved organic carbon concentration was an estimated 0.30 mg/L, which indicated naturally occurring dissolved organic carbon conditions in the study area. Eight pesticides and two degradation products were detected in water from five wells. Twenty-four VOC's were detected in water from 44 wells. All concentrations of pesticides and VOC's were less than USEPA drinking-water standards.

Quality-control samples, which included field-blank samples, replicates, and field and laboratory spikes, indicated no bias in ground-water data from collection procedures or analyses. Variance between the environmental samples and the corresponding replicate samples was typically less than 5 percent, indicating an acceptable degree of laboratory precision and data collection reproducibility.

The Mann-Whitney rank-sum test was used to compare depth to top of screen and selected physicochemical properties and chemical constituents between six groups of wells. Values for selected physicochemical and chemical constituents were typically greater in wells located in the Chicot aquifer system than in the Chicot equivalent aquifer system.

Values for specific conductance, pH, calcium, sodium, bicarbonate, chloride, dissolved solids, and iron were typically greater in wells located south of the outcrop areas of the Chicot and Chicot equivalent aquifer systems than in wells located in the outcrop areas. The increase in concentrations are considered normal because dissolved solids and other constituents generally increase down gradient along ground-water flow paths. Most constituents were not significantly different between the two outcrop areas or the two areas south of the outcrop areas. The results of statistical analyses indicated that water quality in a well is influenced by the location of the well relative to the outcrop area.

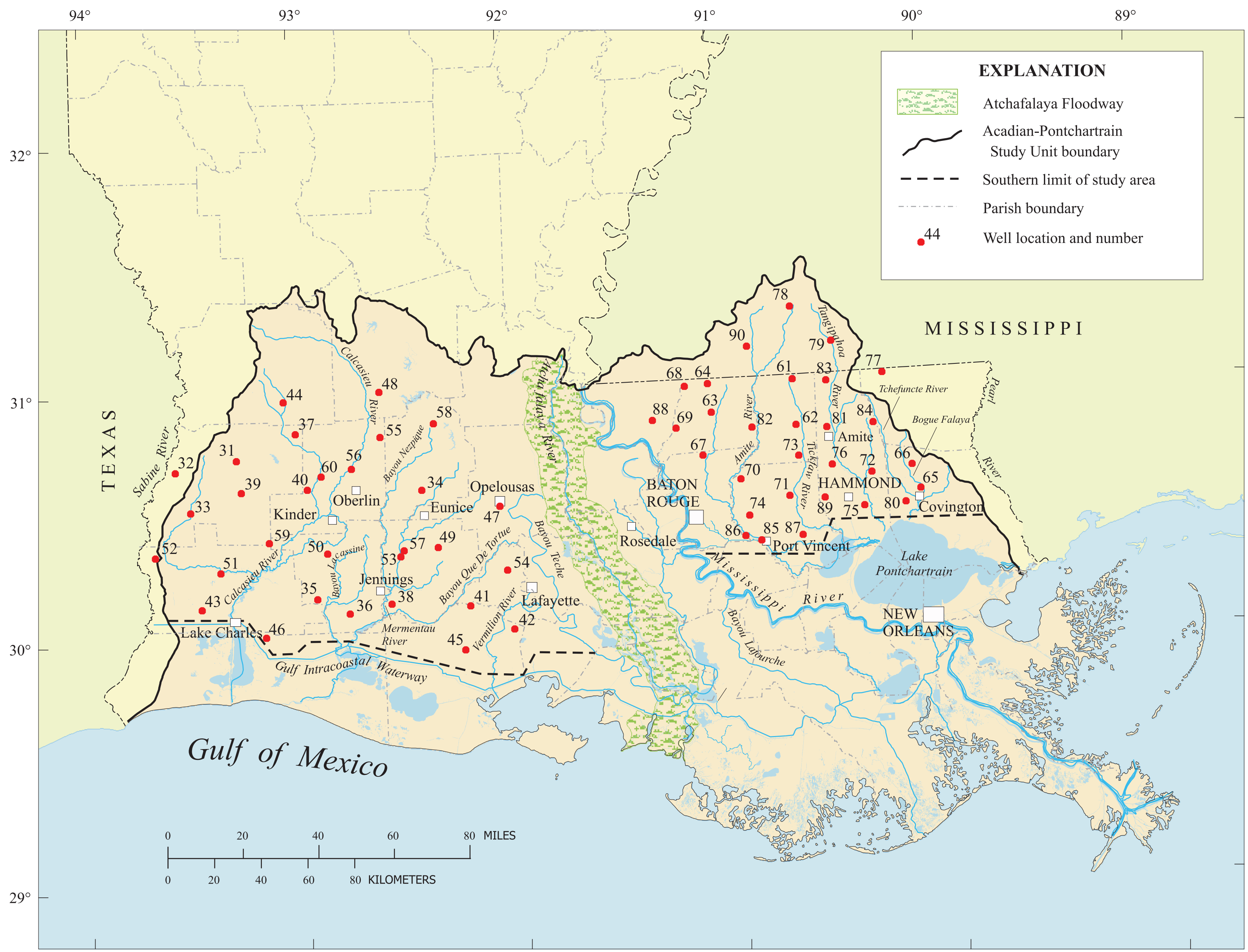
INTRODUCTION

Ground water is one of the Nation's most important resources and is the source of drinking water for about 50 percent of the population, or about 130 million residents (U.S. Geological Survey, 1999a). Because ground water is used for public-water supplies and because of the potential for ground water to affect surface-water quality and ecological and recreational resources, degradation of ground-water quality as a result of anthropogenic activities is a major concern. In 1991, the U.S. Geological Survey (USGS) began full implementation of the National Water Quality Assessment (NAWQA) Program to describe the status and trends in the quality of the Nation's surface- and ground-water resources and to determine the natural and anthropogenic factors affecting water quality (Hirsch and others, 1988; Gilliom and others, 1995). Knowledge of the quality of the Nation's water resources is important for the protection of human and aquatic health and for the management of land and water resources and the conservation and regulation of those resources. More than 50 major river basins or aquifer systems, referred to as study units, have been identified for investigation as part of the NAWQA Program. Together, these basins and aquifer systems include water resources available to more than 60 percent of the population and cover about one-half of the land area in the conterminous United States. Ground-water studies in the NAWQA Program include (1) subunit surveys, designed to assess the water quality of major aquifer systems within a study unit; (2) land-use studies, designed to assess the quality of recently recharged ground water associated with regionally extensive combinations of land use and hydrogeologic conditions; and (3) flowpath studies, designed to examine specific relations among land-use practices, ground-water flow, contaminant occurrence and transport, and surface- and ground-water interactions (Gilliom and others, 1995).

In 2000-2001, a subunit survey was completed for two major aquifer systems--the Chicot aquifer system and the Chicot equivalent aquifer system of the Southern Hills regional aquifer system--in the Acadian-Pontchartrain (ACAD) Study Unit. The ACAD Study Unit encompasses most of southern Louisiana and a small part of southwestern Mississippi (fig. 1). Objectives of the study were to assess the occurrence and distribution of water-quality constituents in recently recharged ground water (generally less than 20 to 30 years old) in shallow sands (less than 350 feet below land surface) and to gain an understanding of the natural and anthropogenic factors that affect ground-water quality. Water in shallow sands in southern Louisiana and southwestern Mississippi is vulnerable to effects from land-surface activities in the area because recharge to the shallow sands occurs over most of their areal distribution (Strickland and others, 1987). The shallow sands are primarily located in the Chicot aquifer system in southwestern Louisiana and in the Chicot equivalent aquifer system of the Southern Hills regional aquifer system in southeastern Louisiana and southwestern Mississippi. The Chicot aquifer system and the Southern Hills regional aquifer system are U.S. Environmental Protection Agency (USEPA) designated sole-source aquifers (U.S. Environmental Protection Agency, 2002c). This designation recognizes an aquifer system as the sole or principal source of drinking water for an area and also recognizes that no alternative sources of drinking water are reasonably available should the aquifer become contaminated. Shallow depths to ground water and lack of a substantial, continuous confining unit to slow downward migration of contaminants from the land surface contribute to the potential for degradation of water quality in these aquifers.

Purpose and Scope

This report describes quality of water in domestic wells in the Chicot and Chicot equivalent aquifer systems in southern Louisiana and southwestern Mississippi, and relates that water quality to natural factors, such as depth to ground water, and anthropogenic activities, such as pesticide and fertilizer use. Water samples collected from 60 randomly selected domestic wells were analyzed for 5 physical and chemical-related (physicochemical) properties, dissolved solids, 9 major inorganic ions, 24 trace elements, 6 nutrients, dissolved organic carbon, 109 pesticides and degradation products, and 85 volatile organic compounds (VOC's); and a subset of the wells were sampled for radon, chlorofluorocarbons (CFC's), and stable isotopes.



Modified from J.K. Lovelace, 1999, and J.M. Griffith, U.S. Geological Survey, written commun., 2002

Figure 1. Study area and location of selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001.

These constituents were compared to USEPA drinking-water guidelines and standards for a frame of reference. Statistical analyses were used to determine possible relations between the top of screened interval, selected physicochemical properties and chemical constituents, and well locations. Selected physicochemical properties and chemical constituents were compared between groups of wells in the two major aquifer systems--the Chicot and Chicot equivalent aquifer systems. Data from this report can be compared to data from similar studies throughout the United States to assess the quality of the Nation's water resources to determine any long-term changes in water quality, and to identify the natural and anthropogenic factors that might affect water quality (Gilliom and others, 1998).

Acknowledgments

The authors express appreciation to the well owners in the area for allowing the USGS access to sample and collect information concerning their wells. Also, the authors express appreciation to Zahir "Bo" Bolourchi, Chief, Public Works and Water Resources Division, Louisiana Department of Transportation and Development, and the Mississippi Department of Environmental Quality, from which most of the well data were obtained.

DESCRIPTION OF STUDY AREA

The ACAD Study Unit includes all or parts of 39 parishes in southern Louisiana and 5 counties in southwestern Mississippi. The 26,000-mi^2 study unit extends north to the headwaters of the Calcasieu River in west-central Louisiana, and the headwaters of the Amite and Tangipahoa Rivers in southwestern Mississippi; east near the Pearl River; south near the Gulf of Mexico; and west near the Sabine River. The study unit is centrally bounded by the Atchafalaya Floodway and the Mississippi River (fig. 1). The study area differs from the ACAD Study Unit because the southern limit extends to the Gulf Intracoastal Waterway in the western part of the study area and to an area north and west of Lake Pontchartrain in the eastern part of the study area (fig. 1). Land-surface elevations range from less than 5 feet above NGVD 29 near the coast to more than 600 feet above NGVD 29 in southwestern Mississippi.

Climate

The climate in southern Louisiana and southwestern Mississippi is humid and subtropical. Warm temperatures prevail from May through September with generally mild temperatures during the remainder of the year. The average annual rainfall and temperature for the 2-year period, 2000-2001, was obtained at two selected stations: Oberlin Fire Tower, in southwestern Louisiana, and Amite, in southeastern Louisiana (Elizabeth Mons, Louisiana State Office of Climatology, written commun., 2002). In 2000, the annual rainfall at the Oberlin Fire Tower was 45.5 inches, about 21.4 inches below the 30-year normal (1971-2000), and the annual rainfall at Amite was 47.2 inches, about 18.5 inches below the 30-year normal. In 2001, the annual rainfall at the Oberlin Fire Tower was 64.0 inches, about 2.9 inches less than the 30-year normal, and the annual rainfall at Amite was 73.4 inches, about 7.7 inches greater than the 30-year normal. In 2000, the average annual temperature at Oberlin Fire Tower was 68.3°F and was 66.7°F at Amite; both average annual temperatures were about 0.5°F above the 30-year normals for their respective locations. In 2001, the average annual temperature at the Oberlin Fire Tower was 0.3°F below the 30-year normal and 0.2°F above the 30-year normal at Amite.

Hydrogeologic Setting

Southwestern Louisiana is underlain by a thick sequence of southerly and southeasterly dipping interbedded clays, silts, sands, and gravels. Freshwater-bearing aquifers in southwestern Louisiana, from youngest to oldest, are the Chicot aquifer system (fig. 2), Evangeline aquifer, Jasper aquifer system, and Catahoula aquifer (not shown). The Evangeline aquifer, Jasper aquifer system, and Catahoula aquifer contain freshwater only in the northern part of the study area and are not discussed in this report.

In the Lake Charles area, the Chicot aquifer system includes the "200-foot," "500-foot," and "700-foot" sands. East of the Lake Charles area (in the rice-growing area), the Chicot aquifer system includes two major units, the upper sand and an undifferentiated lower sand (Nyman, 1984; fig. 2). The sands generally are several hundred feet thick and are separated in places by thick discontinuous clays (Nyman and others, 1990). Wells located in the outcrop area are generally considered to be under unconfined or semi-confined conditions and wells located south of the outcrop area are generally considered to be under confined conditions (fig. 3).

Southeastern Louisiana and southwestern Mississippi are underlain by gulfward thickening and dipping, complexly interbedded series of clayey and sandy formations (Buono, 1983). Aquifers in this area, from youngest to oldest, are the Chicot equivalent

System	Series	Stratigraphic Unit		Hydrogeologic Unit: Central Louisiana — Aquifer system or confining unit	Southwestern Louisiana — Aquifer system or confining unit	Southwestern Louisiana — Aquifer or confining unit: Lake Charles area	Southwestern Louisiana — Aquifer or confining unit: Rice-growing area	Southeastern Louisiana — Aquifer system or confining unit		Southeastern Louisiana — Aquifer or confining unit[2]: Baton Rouge area	Southeastern Louisiana — Aquifer or confining unit[2]: St. Tammany, Tangipahoa, and Washington Parishes	Southwestern Mississippi — Aquifer
Quaternary	Pleistocene	Red River alluvial deposits Mississippi River alluvial deposits Northern Louisiana terrace deposits Unnamed Pleistocene deposits		Alluvial aquifer, undifferentiated or surficial confining unit Prairie aquifer Montgomery aquifer Williana-Bentley aquifer	Chicot aquifer system or surficial confining unit	"200-foot" sand "500-foot" sand "700-foot" sand	Upper sand unit Lower sand unit	Southern Hills Regional Aquifer System[1]	Chicot equivalent aquifer system or surficial confining unit	Mississippi River alluvial aquifer or surficial confining unit Shallow sand "400-foot" sand "600-foot" sand	Upland terrace aquifer Upper Ponchatoula aquifer	Alluvial deposits ? Citronelle Formation
Tertiary	Pliocene ? Miocene	Fleming Formation	Blounts Creek Member	Evangeline aquifer or surficial confining unit					Evangeline equivalent aquifer system or surficial confining unit	"800-foot" sand "1,000-foot" sand "1,200-foot" sand "1,500-foot" sand "1,700-foot" sand (Zone 1[3])	Lower Ponchatoula aquifer Big Branch aquifer Kentwood aquifer Abita aquifer Covington aquifer Slidell aquifer	Graham Ferry Formation ? Pascagoula Formation
			Castor Creek Member	Castor Creek confining unit					Unnamed confining unit	"2,000-foot" sand "2,400-foot" sand "2,800-foot" sand	Tchefuncte aquifer Hammond aquifer Amite aquifer Ramsay aquifer Franklinton aquifer	Hattiesburg Formation
			Williamson Creek Member Dough Hills Member Carnahan Bayou Member	Jasper aquifer system or surficial confining unit	Williamson Creek aquifer Dough Hills confining unit Carnahan Bayou aquifer				Jasper equivalent aquifer system or surficial confining unit			

Modified from Lovelace and Lovelace, 1995, p. 10, and Buono, 1983, p. 13.

[1]The Southern Hills regional aquifer system includes the Chicot equivalent, Evangeline equivalent, Jasper equivalent, and Catahoula equivalent aquifer systems. The Catahoula equivalent aquifer system is not shown.

[2]Clay units separating aquifers in southeastern Louisiana are discontinuous, unnamed, and not listed.

[3]Zone 1 Florida Parishes and Pointe Coupee Parish.

Figure 2. Selected hydrogeologic units in southern Louisiana and southwestern Mississippi.

aquifer system, Evangeline equivalent aquifer system, Jasper equivalent aquifer system, and Catahoula equivalent aquifer system (not shown in fig. 2). These four aquifer systems are referred to as the Southern Hills regional aquifer system.

The Chicot equivalent aquifer system (fig. 2) consists of the Mississippi River alluvial aquifer and the shallow, “400-foot,” and “600-foot” sands of the Baton Rouge area, the upland terrace and upper Ponchatoula aquifers east of the Baton Rouge area in southeastern Louisiana, and alluvial deposits and the Citronelle Formation in southwestern Mississippi (Buono, 1983; Lovelace and Lovelace, 1995). Wells located in the outcrop area are generally considered to be under unconfined or semi-confined conditions, and wells located south of the outcrop area are generally considered to be under confined conditions (fig. 3).

Land Use, Water Use, and Population

The primary land uses in southern Louisiana and southwestern Mississippi are agriculture and forestry (fig. 4). In southwestern Louisiana, most land is used for agriculture, followed by forestry and urban development. The Atchafalaya River borders southwestern Louisiana to the east, and wetlands and coastal marshes border this area to the south. In southeastern Louisiana and southwestern Mississippi, most land is used for forestry, followed by agriculture and urban development. Southeastern Louisiana and southwestern Mississippi are bordered by the Mississippi River to the west and by wetlands and coastal marshes and open water to the south.

The Chicot aquifer system was the most heavily pumped aquifer system in southwestern Louisiana, and also was the most heavily pumped in the State. In 1999-2000, the Chicot aquifer system supplied about 798 Mgal/d of water (Sargent, 2002). About 542 Mgal/d was used for irrigation, of which about 537 Mgal/d was used for rice irrigation, and about 89 Mgal/d was used for public supply.

The Chicot equivalent, Evangeline equivalent, and Jasper equivalent aquifer systems were used as sources for ground water in southeastern Louisiana and southwestern Mississippi. In 1999-2000, the Chicot equivalent aquifer system supplied about 77 Mgal/d for industrial, domestic use, public supply, and other uses (Sargent, 2002). The Evangeline equivalent aquifer system supplied about 86 Mgal/d, and the Jasper equivalent aquifer system supplied more than 128 Mgal/d mainly for public supply and industrial use.

In 2000, the total population in the southwestern part of the study area was about 889,000 people (U.S. Census Bureau, 2002). The city of Lafayette (population about 110,000) had the largest population in this area, followed by Lake Charles (population about 72,000) and Opelousas (population about 23,000).

In 2000, the total population in the southeastern part of the study area was about 940,000 people (U.S. Census Bureau, 2002). Baton Rouge (population about 228,000) had the largest population in the study area, followed by Hammond (population about 18,000).

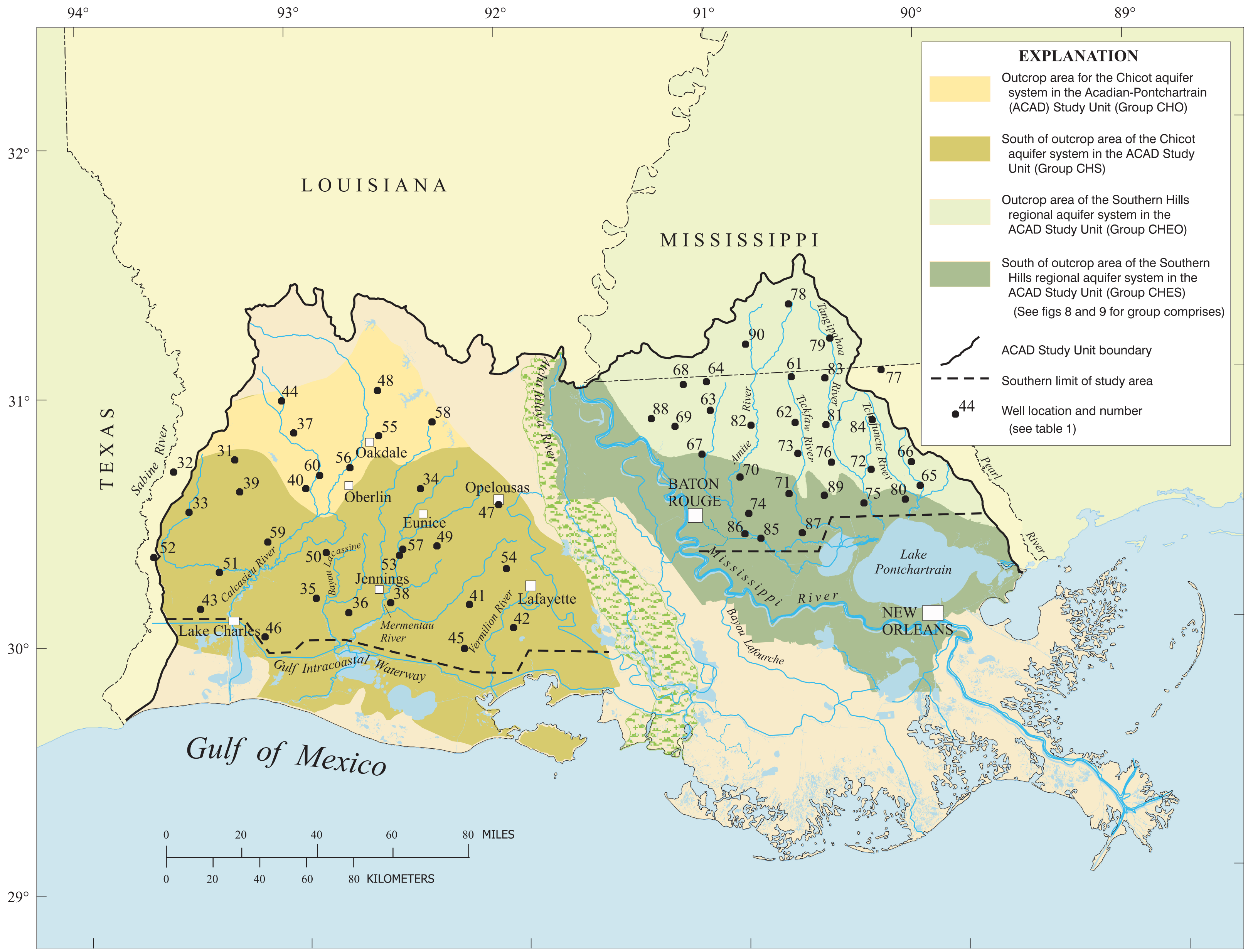
METHODS

The NAWQA guidelines used to design the study discussed in this report are described in Gilliom and others (1995). NAWQA ground-water protocols (Lapham and others, 1997; Koterba, 1998) were followed during data collection. Standardization of data-collection protocols was intended to produce a nationally consistent data base for statistically valid interpretations. The following sections describe how the protocols were applied.

Well Site Selection

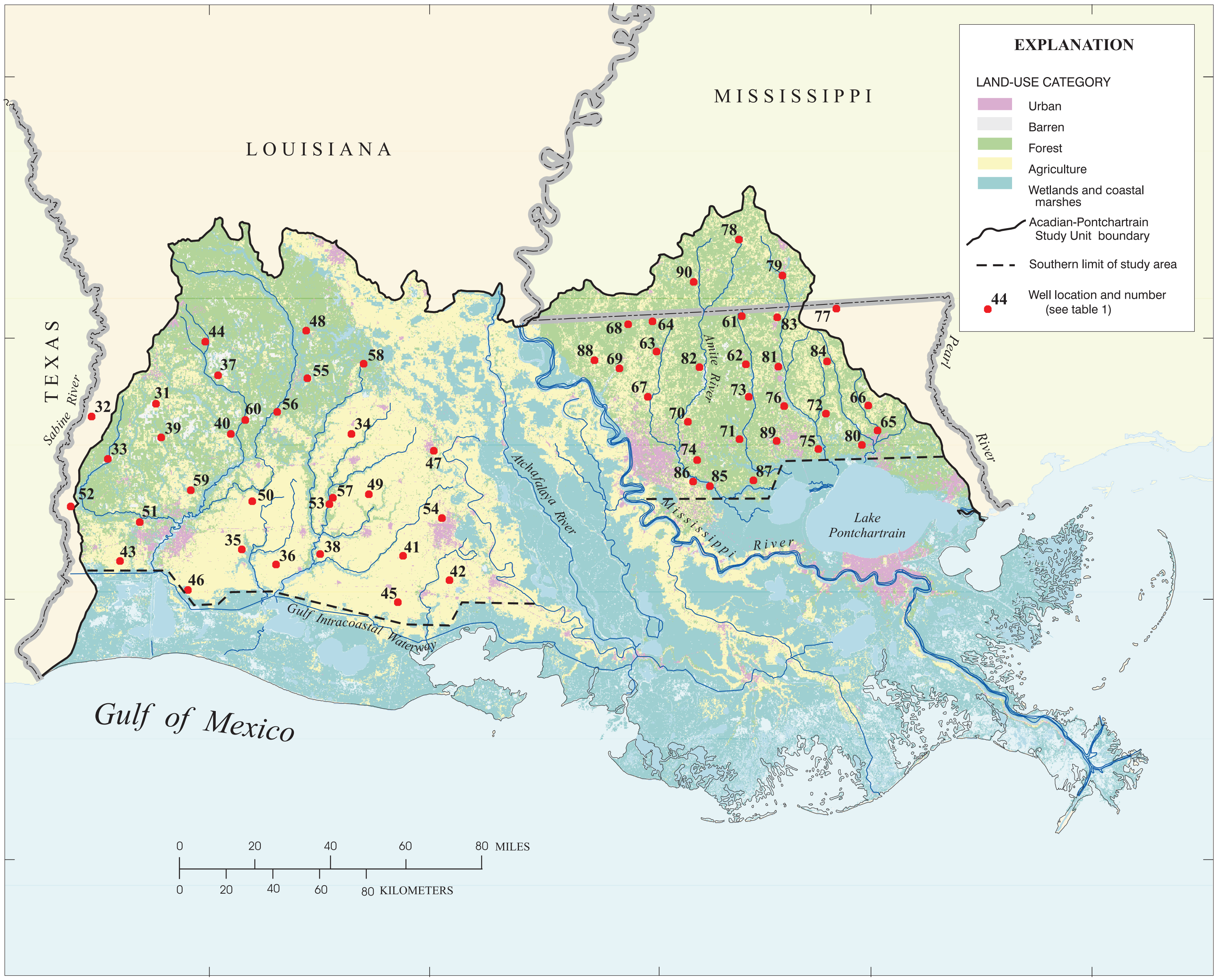
Well site selection criteria followed those published in Lapham and others (1997) and Koterba (1998). The main criterion used for site selection was that the site be located in outcrop areas of or areas overlying the Chicot aquifer system and Chicot equivalent aquifer system. The goal of the well site selection process was to select a total of 60 randomly spaced wells used for domestic supply, 30 in shallow sands in southwestern Louisiana and 30 in shallow sands in southeastern Louisiana and southwestern Mississippi. A computer generated program (Scott, 1990) was used to divide each of the two areas into 30 equal-area cells. The program then randomly selected wells used for domestic supply in each cell. Well-construction and geologic information were reviewed for each potential site. Each well was then located in the field and evaluated for inclusion in the sampling network. The wells were checked for accessibility, construction integrity, and site identification.

Three wells were located outside the study area. These wells were selected because they satisfied the main NAWQA criterion and were located near computer-generated cells.



Modified from J.K. Lovelace, 1999, and J.M. Griffith, U.S. Geological Survey, written commun., 2002

Figure 3. Chicot aquifer system, Southern Hills regional aquifer system, and selected domestic well locations in southern Louisiana and southwestern Mississippi.



Modified from J.K. Lovelace, 1999, and J.M. Griffith, U.S. Geological Survey, written commun., 2002

Figure 4. Major land-use types and selected domestic well locations in southern Louisiana and southwestern Mississippi.

Well Construction

A summary of well-construction information for the sampled wells is listed in table 1. Site and well construction information were obtained from well registration forms and well owners. Most wells (51) were constructed of polyvinyl chloride (PVC). Three wells were constructed of steel, and six wells were constructed of material not identified (unknown). The wells ranged in depth from 40 to 340 feet below land surface, with a median depth of 120 feet. Well casings were 2 to 4 inches in diameter. Screened intervals ranged from 5 to 30 feet in length, with a median length of 10 feet. Land-surface elevation for the wells ranged from 10 to 412 feet above NGVD 29.

Sample Collection and Analysis

Sixty domestic wells were sampled in southern Louisiana and southwestern Mississippi from June 2000 through September 2001. Water samples were collected near the wellhead and before the pressure tank or any treatment, if possible. Wells were purged of three casing volumes to remove possible stagnant water. After the stagnant water was removed, measurements of dissolved oxygen, specific conductance, pH, and temperature were monitored about every 5 minutes in a closed-cell, flow-through chamber until stable readings were obtained. After stable readings were obtained for physicochemical properties, water was redirected to the clean sampling chamber, and sample water was immediately collected for analysis.

Samples were collected and processed according to parts-per-billion-level protocols described in Koterba and others (1995). To minimize the risk of contamination, all sample collection and preservation took place in chambers consisting of clear polyethylene bags supported by a PVC frame. The polyethylene bags that formed the sample-collection and -preservation chambers were replaced between each sample-collection site. After all samples were collected at a site, sampling equipment was cleaned thoroughly using a progression of nonphosphate detergent wash, tap-water rinse, and a final deionized-water rinse. A final methanol rinse was used to clean the pesticide sampling equipment. All sampling equipment was stored in clean plastic bags or containers between sample-collection sites. Ground-water samples were chilled as required by USGS guidelines and shipped to the USGS National Water Quality Laboratory (NWQL) in Lakewood, Colorado, for analysis. CFC's and selected stable isotope samples were collected according to USGS guidelines and analyzed at the USGS Laboratory in Reston, Virginia. Methods used to analyze the water samples are listed in table 2. Water-quality data are tabulated in appendixes at the back of the report.

The USEPA has established drinking-water standards for physicochemical properties and chemical constituents that might have adverse effects on human health or affect the odor, appearance, or desirability of water (U.S. Environmental Protection Agency, 2002a). Comparisons were made between concentrations of selected constituents and USEPA Maximum Contaminant Levels (MCL's), Secondary Maximum Contaminant Levels (SMCL's), and Health Advisories (HA's). An MCL is the maximum permissible level of a contaminant that is allowed in drinking water and is an enforceable standard for public drinking-water supplies. An SMCL is a nonenforceable guideline regarding aesthetic effects (such as taste, odor, or color) or cosmetic effects (such as tooth or skin discoloration) caused by drinking water. An HA is a nonenforceable guideline that serves as an estimate of acceptable concentrations of a chemical based on health effects information and serves as technical guidance to assist Federal, State, and local officials. Although the domestic wells sampled for the study described in this report are not used for a public-supply source of drinking water, concentrations of selected constituents in the water were compared to the USEPA MCL's, SMCL's, and HA's to provide a frame of reference.

Quality-Control Data

Quality-control (QC) data were collected to test sample-collection procedures, sample processing, and laboratory analysis. QC samples collected included field-blank samples, replicate environmental samples, and field- and laboratory-spiked samples (Mueller and others, 1997). Field-blank samples were collected to verify that cleaning procedures were sufficient and that collection and analysis procedures did not contaminatethe sample. Replicate environmental samples were collected to assess the effects of sample-collection methods and laboratory-analysis procedures on measurement variability. The spiked samples (field and laboratory) were environmental samples injected with a known concentration of the analyte(s) of interest to determine the accuracy and precision of organic analyses, the stability of analytes during typical holding times, and whether characteristics of the environmental samples might interfere with the analysis of the analytes.

Table 1. Site and construction information for selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001

[ACAD, Acadian-Pontchartrain Study Unit of the National Water-Quality Assessment Program; P, plastic; U, unknown; S, steel; Chicot aquifer system: 112CHCT, undifferentiated; 112CHCTU, upper sand unit; 112CHCTS, shallow sand unit; 11202LC, "200-foot" sand of Lake Charles area; Chicot equivalent aquifer system: 112UPTC, upland terrace aquifer; 11204BR, "400-foot sand of Baton Rouge area; 12101FP, Zone 1 Florida Parishes and Pointe Coupee Parish; 112SLBR, shallow sands of Baton Rouge area; 121CRNL, Citronelle formation (Mississippi); 112PNCLU, upper Ponchatoula aquifer; 122MOCN, Miocene series]

ACAD well number (fig. 1)	Local well number	Date well constructed	Casing material	Aquifer code	Depth of well (feet)	Diameter of well (inches)	Depth to top of screen (feet)	Depth to bottom of screen (feet)	Altitude above land-surface datum NGVD 29 (feet)
31	Be-6084Z	6-04-1996	P	112CHCT	197	2	187	197	174
32	Be-5928Z	3-08-1991	P	112CHCT	90	2	80	90	82
33	Be-6065Z	8-08-1995	P	112CHCT	250	2	245	250	89
34	Ev-5500Z	U	U	112CHCT	43	2	38	43	57
35	JD-5177Z	10-03-1983	P	112CHCTU	100	4	90	100	11
36	JD-5371Z	1-27-1985	P	112CHCTU	230	4	220	230	18
37	Be-5764Z	4-05-1989	P	112CHCT	150	2	140	150	140
38	Ac-6896Z	1975	P	112CHCTU	96	2	86	96	10
39	Be-6077Z	9-04-1995	P	112CHCT	180	2	175	180	103
40	Al-5243Z	4-07-1989	P	112CHCT	105	2	95	105	60
41	Ve-7436Z	1-29-1988	U	112CHCTU	160	2	154	160	20
42	Ve- 170	1948	U	112CHCTS	70	2	50	70	U
43	Cu-7082Z	8-15-1988	P	11202LC	260	4	240	260	13
44	V-8701Z	10-19-1970	P	112CHCT	60	3	50	60	200
45	Ve-9241Z	6-19-1996	P	112CHCTS	90	2	80	90	10
46	Cn-5874Z	10-20-76	S	11202LC	340	2	334	340	10
47	SL-6924Z	U	S	112CHCTC	50	2	40	50	60
48	R-5964Z	7-07-1995	P	112CHCT	110	4	80	110	160
49	Ac-6998Z	1973	P	112CHCTU	200	4	190	200	37
50	JD-5938Z	9-25-89	P	112CHCT	145	4	140	145	35
51	Cu-7967Z	9-24-91	P	11202LC	220	2	210	220	19
52	Cu-7410Z	U	S	112CHCT	220	2	210	220	32
53	Ac-6112Z	3-10-88	P	112CHCTU	170	2	160	170	20
54	Lf-9803Z	U	P	112CHCTU	100	2	U	U	45
55	Al-5167Z	6-02-92	P	112CHCT	91	2	81	91	121
56	Al-5506Z	U	P	112CHCT	105	U	U	U	85
57	Ac-6512Z	8-23-90	P	112CHCT	185	2	179	185	30
58	Ev-5508Z	U	P	112CHCT	140	2	130	140	140
59	Cu-5250Z	7--05-83	U	11202LC	140	2	128	138	20
60	Al-5240Z	11-19-88	P	112CHCT	100	2	90	100	76

Table 1. Site and construction information for selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001—Continued

ACAD well number (fig. 1)	Local well number	Date well constructed	Casing material	Aquifer code	Depth of well (feet)	Diameter of well (inches)	Depth to top of screen (feet)	Depth to bottom of screen (feet)	Altitude above land-surface datum NGVD 29 (feet)
61	SH-5527Z	5-06-94	P	112UPTC	70	4	60	70	316
62	SH-5460Z	11-28-92	P	112UPTC	90	4	80	90	188
63	EF-5282Z	5-0-94	P	112UPTC	120	4	110	120	210
64	EF-5422Z	9-23-98	P	112UPTC	80	4	70	80	280
65	ST-6753Z	10-17-91	P	112UPTC	108	4	98	108	32
66	ST-8617Z	9-27-93	P	112UPTC	90	4	80	90	125
67	EB-6257Z	10-11-91	P	11204BR	210	2	200	210	100
68	EF-5348Z	11-04-96	P	12101FP	140	4	130	140	200
69	EF-5450Z	10-15-99	P	112UPTC	160	4	150	160	200
70	Li-7429Z	5-15-01	P	112SLBR	40	2	30	40	72
71	Li-7282Z	5-04-00	P	11204BR	310	2	257	267	40
72	Ta-8435Z	10-18-95	P	112UPTC	110	4	100	110	91
73	SH-5344Z	1-18-90	P	112UPTC	190	4	180	190	120
74	Li-7148Z	6-03-99	P	112SLBR	126	2	116	126	30
75	Ta-7292Z	2-19-93	P	112UPTC	210	2	200	210	25
76	Ta-788	4-16-92	P	112UPTC	60	4	30	60	80
77	Wa-7324Z	1973	P	112UPTC	110	4	100	110	320
78	MS.AM-D016	10-14-68	P	121CRNL	85	4	79	85	412
79	MS.PK-G021	4-22-64	U	121CRNL	120	4	113	120	292
80	ST-6940Z	4-13-90	P	112UPTC	160	4	150	160	20
81	Ta-9622Z	10-06-98	P	112UPTC	100	4	80	100	136
82	EF-5228Z	11-14-90	P	112UPTC	80	4	70	80	165
83	Ta-815	12-30-92	P	112UPTC	80	4	70	80	237
84	Ta-6551Z	4-16-92	P	112UPTC	93	4	83	93	206
85	Li-6487Z	5-30-92	U	112SLBR	200	2	190	200	15
86	EB-8065Z	8-24-98	P	112SLBR	180	2	170	180	20
87	Li-6203Z	6-10-92	P	112SLBR	90	2	80	90	11
88	WF-5115Z	12-13-91	P	112UPTC	150	4	120	150	200
89	Ta-7401Z	4-22-93	P	112PNCLU	320	4	300	320	35
90	MS.AM-M006	4-06-71	P	122MOCN	124	4	118	124	360

Table 2. Methods used to determine selected chemical constituents in water from domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001

[AA, atomic absorption spectrometry; ICP, inductively-coupled plasma; MS, mass spectrometry; C, carbon; ^{2}H, deuterium; ^{1}H, hydrogen; ^{18}O, oxygen-18; ^{16}O, oxygen-16; GC, gas chromatography; UV, ultraviolet]

Constituent	Analytical method	Reference
Major inorganic ions	AA, Colorimetry, or ICP	Fishman and Friedman (1989) and Fishman (1993)
Trace elements	AA or ICP-MS	Faires (1993), Garbarino (1999), and McLain (1993)
Radon	Liquid scintillation	American Society for Testing and Materials (1996)
Chlorofluorocarbons	GC with electron capture device	Busenberg and Plummer (1992)
$^{2}H/^{1}H$	Hydrogen equilibrium and MS	Coplen and others (1991)
$^{18}O/^{16}O$	Carbon dioxide equilibrium and MS	Epstein and Mayeda (1953)
Nutrients	Colorimetry	Fishman (1993), Patton and Truitt (2000), and U.S. Environmental Protection Agency (1993)
Dissolved organic carbon	UV-persulfate oxidation and infrared spectrometry	Brenton and Arnett (1993)
Pesticides and degradation products	Solid-phase extraction using a C-18 cartridge and GC/MS	Zaugg and others (1995)
	Determination of low concentrations of acetochlor in water by automated solid-phase extraction and GC with mass selective detection	Lindley and others (1996)
	Graphitized carbon-based solid-phase extraction and high-performance liquid chromatography/MS	Furlong and others (2001)
Volatile organic compounds	Purge and trap capillary GC/MS	Rose and Schroeder (1995)

Field-blank samples were collected and analyzed at five sites for concentrations of major inorganic ions, trace elements, nutrients, DOC, pesticides, and VOC's. The source solution for field-blank samples was organic-free or inorganic-free water passed through all sampling equipment in the field and placed in the appropriate bottles. Few water-quality constituents analyzed were detected in the field-blank samples. Major-inorganic-ion concentrations were less than the method detection limit (MDL) or estimated values, and most trace-element concentrations were at or less than the MDL. Aluminum, copper, lead, nickel, selenium, and zinc were all detected once at concentrations slightly greater than the MDL. Arsenic and strontium were detected once at estimated values slightly less than the MDL. No nutrients, pesticides, or VOC's were detected in the field-blank samples. DOC was detected in three blank samples at concentrations slightly greater than the MDL. Results of field-blank analyses indicated cleaning procedures were adequate to prevent on-site and site-to-site contamination.

Replicate environmental samples for all constituents were collected at six sites. The relative percent difference between the environmental sample and corresponding replicate sample was calculated using 100 multiplied by the absolute value of the difference in replicate concentrations divided by the summation of replicate concentrations. The variability between the environmental samples and the corresponding replicate samples was typically less than 5 percent. Results of replicate environmental sample analyses indicated an acceptable degree of laboratory precision and data collection reproducibility.

Field-spiked samples were collected from eight wells and laboratory-spiked samples were collected from four wells. Field-spiked samples were collected by adding known amounts of pesticides to environmental samples and replicate environmental samples at the time of sampling. Laboratory-spiked samples were collected by adding known amounts of pesticides to environmental samples at NWQL. VOC's were spiked using the same procedure. Mean recovery of pesticides and VOC's from spiked samples ranged from 72 to 119 percent. Mean recovery of pesticides and VOC's from spiked samples were within the NWQL control limits, indicating the sampling and analysis procedures adequately detected the compounds analyzed and that there were no major matrix interferences. Quality-control samples, which included field blanks, replicates, and field and laboratory spikes, indicated no bias in ground-water data from collection procedures or analyses.

Statistical Techniques

The Spearman rank correlation (SAS Institute Inc., 1990) with an alpha value of 0.05 was used to determine significant correlations between depth to top of screen and selected constituents in ground water used for domestic supply. Concentrations of major inorganic ions and trace elements less than the reporting level were assigned a value of one-half the reporting level so they would not have a rank equal to that of a measured value. Correlation analysis assesses not only the relation between two continuous variables, but also the strength of the relation (Helsel and Hirsch, 1993, p. 210-217). The Spearman rank correlation was selected because water-quality data are usually not normally distributed and the number of samples was greater than 20 (Helsel and Hirsch, 1993, p. 217-218). Scatter plots were made of all parameters to determine whether there was a monotonic correlation (Helsel and Hirsch, 1993 p. 209-211) between the top of screen and the selected constituents.

Correlation tests calculate a probability statistic (p-value) and a correlation coefficient (rho). The probability statistic relates to the confidence level. The 95-percent confidence level used in this report indicated a 95-percent probability (p equal to or less than 0.05) that a correlation was statistically significant. The correlation coefficient describes the strength of the correlation and how the correlated parameters (physical properties and physicochemical and chemical constituents) vary. For this report, constituents with a correlation coefficient of 0.6 or greater are considered strongly correlated, parameters with correlation coefficients between 0.4 and 0.6 are considered moderately correlated, parameters with a correlation coefficient of 0.4 and less are considered weakly correlated, and parameters with a correlation coefficient less than 0.2 are considered to have little or no correlation. A positive correlation coefficient means that as the value of one parameter increases, the value of the other parameter also increases. A negative or inverse correlation coefficient means that as the value of one parameter decreases, the value of the other parameter increases (Helsel and Hirsch, 1993, p. 209-211).

The Mann-Whitney rank-sum test (SAS Institute Inc., 1990) with an alpha value of 0.05 was used to compare depth to top of screen and selected physicochemical properties and chemical constituents (specific conductance, pH, calcium, sodium, bicarbonate, chloride, dissolved solids, iron, and radon) between wells in two aquifer systems--the Chicot and Chicot equivalent. Wells were placed into six groups. Group CH includes 30 wells in the Chicot aquifer system in southwestern Louisiana, Group CHO includes 9 wells in the outcrop area, Group CHS includes 21 wells south of the outcrop area, Group CHE includes 30 wells in the Chicot equivalent aquifer system in southeastern Louisiana and southwestern Mississippi, Group CHEO includes 20 wells in the outcrop area, and Group CHES includes 10 wells south of the outcrop area. Wells 32, 52, and 77 were located outside the study area (fig. 3). Well number 32 was placed in Group CHO, well number 52 was placed in Group CHS, and well number 77 was placed in Group CHEO. Five comparisons were made between the groups: CH wells were compared to CHE wells, CHO wells were compared to CHS wells, CHEO wells were compared to CHES wells, CHO wells were compared to CHEO wells, and CHS wells were compared to CHES wells.

QUALITY OF WATER IN DOMESTIC WELLS

Water-quality data were collected from 60 wells used for domestic supply in southern Louisiana and southwestern Mississippi. The water-quality data are grouped by type: physicochemical properties; dissolved solids and major inorganic ions; trace elements, radon, chlorofluorocarbons, and stable isotopes; nutrients and DOC; pesticides and degradation products; and VOC’s.

Physicochemical Properties

Physicochemical properties, including specific conductance, pH, air and water temperature, and alkalinity, were used to determine ground-water conditions, such as acidity and buffering capacity, at the time of sample collection. A statistical summary with applicable USEPA standards for these properties is listed in table 3. Specific conductance ranged from 17 to 1,420 μS/cm, and had a median value of 122 μS/cm. The SMCL for pH is 6.5 to 8.5 standard units (U.S. Environmental Protection Agency, 2002b), and pH for 35 of the 60 wells sampled was less than 6.5 standard units. The alkalinity, as calcium carbonate, ranged from 4.0 to 360 mg/L. Values for specific conductance, pH, and alkalinity were typical for the Chicot aquifer and the Chicot equivalent aquifer systems (Nyman, 1989; Buono, 1983; Nyman and Fayard, 1978). Physicochemical properties for all wells sampled are listed in appendix 1.

Dissolved Solids and Major Inorganic Ions

Dissolved-solids concentrations ranged from 16 to 858 mg/L (table 3). The median dissolved-solids concentration was 108 mg/L, far less than the 500 mg/L SMCL (U.S. Environmental Protection Agency, 2002b). Samples from two wells had concentrations of dissolved solids greater than the SMCL. Although ground water containing more than 500 mg/L dissolved solids is undesirable for drinking water and irrigation, such water is used in many areas of the country where less mineralized water is not available. Concentrations of dissolved solids are listed in appendix 2.

Table 3. Summary statistics and Federal guidelines and standards for selected water-quality data from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001

[All chemical constituents are dissolved unless otherwise noted. MCL, Maximum Contaminant Level; SMCL, Secondary Maximum Contaminant Level; HA, Health Advisory; USEPA, U.S. Environmental Protection Agency; µS/cm, microsiemens per centimeter at 25 degrees Celsius; --, no value available; ^{o}C, degrees Celsius; mg/L, milligrams per liter; E, estimated; <, less than; µg/L, micrograms per liter; ND, not detected; pCi/L, picocuries per liter]

Property or constituent	Number of detections/ number of samples	Analytical reporting level	Median of all samples	Minimum detection	Maximum detection	Federal guideline or standard[a]			Number of wells exceeding USEPA drinking-water standard
						MCL	SMCL	HA	
Physicochemical properties									
Specific conductance, field, in µS/cm	58/58	1	122	17	1,420	--	--	--	--
pH, field, in standard units	60/60	.1	6.2	4.7	8.1	--	6.5-8.5	--	[b]35
Air temperature, in °C	54/54	.1	28.8	6.5	40	--	--	--	--
Water temperature, in °C	57/57	.1	21.8	14	28.4	--	--	--	--
Alkalinity, as $CaCO_3$, field, in mg/L	60/60	1	42	4.0	360	--	--	--	--
Dissolved solids and major inorganic ions, in mg/L									
Dissolved solids, residue on evaporation, 180°C	58/58	10	108	16	858	--	500	--	2
Calcium, as Ca	60/60	.01	4.68	.10	129	--	--	--	--
Magnesium, as Mg	60/60	.01	1.68	.290	39.5	--	--	--	--
Sodium, as Na	60/60	.10	14.4	1.9	111	--	--	--	--
Potassium, as K	60/60	.1	1.40	E.08	3.55	--	--	--	--
Bicarbonate, as HCO_3 (calculated)	60/60	1	40	3	439	--	--	--	--
Sulfate, as SO_4	60/60	.30	.45	.1	24.1	--	250	--	0
Chloride, as Cl	60/60	.30	7.5	2.6	264	--	250	--	1
Fluoride, as F	60/60	.1	<.2	.10	.5	4.0	2.0	--	0
Bromide, as Br	60/60	.03	.04	.01	1.10	--	--	--	--
Silica, as S	60/60	.13	24.8	8.6	62.5	--	--	--	--
Trace elements, in µg/L									
Aluminum, as Al	21/60	1.0	<1.0	1.0	77	--	50-200	--	1
Antimony, as Sb	13/60	.048	<1.0	E.03	.06	6	--	--	0
Arsenic, as As	31/60	.18	E.1	E.1	55.3	10	--	--	1
Barium, as Ba	60/60	1.0	6.5	8.0	587	2,000	--	--	0
Beryllium, as Be	11/60	.06	<.06	E.03	.37	4	--	--	0
Boron, as B	60/60	7.0	14.0	E4.0	177	--	--	600	0
Cadmium, as Cd	9/60	0.037	<.04	E.02	0.14	5	--	--	0
Chromium, as Cr	15/60	.8	<.8	E.4	5.4	[c]100	--	--	0

Table 3. Summary statistics and Federal guidelines and standards for selected water-quality data from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001--Continued

Property or constituent	Number of detections/ number of samples	Analytical reporting level	Median of all samples	Minimum detection	Maximum detection	Federal guideline or standard[a]			Number of wells exceeding USEPA drinking-water standard
						MCL	SMCL	HA	
Trace elements, in µg/L—Continued									
Cobalt, as Co	43/60	0.015	0.04	E.02	4.65	--	--	--	--
Copper, as Cu	46/60	.23	.9	E.1	196	[d]1,300	1,000	--	0
Iron, as Fe	43/60	10	55	10	8,670	--	300	--	22
Lead, as Pb	32/60	.08	.08	E.04	5.33	15	--	--	0
Lithium, as Li	58/60	.30	4.0	E.2	36.6	--	--	--	--
Manganese, as Mn	40/60	2.2	12.4	1.0	481	--	50	--	26
Mercury, total, as Hg	0/19	.011	ND	ND	ND	2	--	--	0
Molybdenum, as Mo	19/60	.2	<1.0	E.1	7.6	--	--	40	0
Nickel, as Ni	40/60	.06	.25	.06	13.5	--	--	100	0
Selenium, as Se	17/60	.33	<.3	E.2	7.2	50	--	--	0
Silver, as Ag	0/60	1.0	ND	ND	ND	--	100	--	0
Strontium, as Sr	60/60	.08	63	2.84	889	--	--	4,000	0
Thallium, as Tl	9/60	.041	<.9	E.01	.45	2	--	0.5	0
Uranium, as U	18/60	.018	<.04	.02	8.6	[e]20	--	--	0
Vanadium, as V	26/60	.21	<1.0	.02	4.8	--	--	--	--
Zinc, as Zn	55/60	1.0	4.5	1.0	585	--	5,000	2,000	0
Radon, in pCi/L									
Radon	50/50	26	225	27	1,320	[f]300	--	--	9
Nutrients and dissolved organic carbon, in mg/L									
Ammonia, as N	29/60	.041	<.041	.022	2.56	--	--	30	0
Ammonia plus organic nitrogen, as N	25/60	.10	<.10	E.05	2.7	--	--	--	--
Nitrite plus nitrate, as N	34/60	.047	E.034	E.028	2.3	10	--	--	0
Nitrite, as N	7/60	.008	<.006	E.003	.017	1.0	--	--	0
Phosphorus, as P	50/60	.0044	.058	E.004	.88	--	--	--	--
Orthophosphate, as P	48/60	.018	.040	E.011	.8	--	--	--	--
Dissolved organic carbon, as C	51/60	.33	E.30	E.16	9.9	--	--	--	--

[a]U.S. Environmental Protection Agency (2002b): [b]number of values less than 6.5 standard units; [c]total concentration; [d]U.S. Environmental Protection Agency Maximum Contaminant Level goal (MCLG); [e]under review; and [f]The USEPA has an MCL for radon in ground water of 300 pCi/L for states without a Multimedia Mitigation Program and an alternate Maximum Contaminant Level of 4,000 pCi/L for states with an Multimedia Mitigation Program.

Major inorganic ions were the primary constituents of dissolved solids in ground-water samples. Major inorganic ions consisted of the positively charged cations: calcium, magnesium, potassium, and sodium; the negatively charged anions: bicarbonate, sulfate, chloride, fluoride, and bromide; and one uncharged ion: silica. A statistical summary for the dissolved solids and major inorganic ions is listed in table 3 with applicable drinking-water standards. Water samples collected from one well exceeded the SMCL of 250 mg/L for chloride (U.S. Environmental Protection Agency, 2002b). Fluoride and sulfate did not exceed USEPA established drinking-water standards in any well sampled. Concentrations of major inorganic ions are listed in appendix 2.

Water types were classified by the percentages of major inorganic ions in the water samples. Because potassium concentrations were low, those concentrations were added to sodium concentrations before classifying the water types. Sodium (50 wells) and calcium (10 wells) were the dominant cations, and bicarbonate (44 wells) and chloride (16 wells) were the dominant anions. Water types were classified as follows: 1 well, sodium chloride; 5 wells, sodium bicarbonate; 1 well, mixed cation chloride; 13 wells, mixed cation bicarbonate; 30 wells, mixed cation mixed anion; and 10 wells, sodium mixed anion. Mixed cation types had two or more cations for which the percent of each was greater than 20 percent of the total cations. Mixed anion types had two or more anions for which the percent of each was greater than 20 percent of the total anions. Sulfate concentrations were low in most of the ground-water samples. The many different water types in the study area reflect the variability of lithology in the shallow aquifers in the study area.

Trace Elements

Trace elements occur naturally in water at concentrations less than 1,000 μg/L (Drever, 1988, p. 326). Most of the trace elements detected in ground water are metals or semi-metallic elements produced from the weathering of minerals. Concentrations of all 24 trace elements analyzed, except for one iron concentration, were less than 1,000 μg/L (table 3). Of the trace elements analyzed, 12 have MCL's and only 1 concentration was greater than the MCL. Arsenic exceeded the MCL of 10 μg/L in water from one well, with a concentration of 55.3 μg/L. Six of the trace elements analyzed have established SMCL's, and three had concentrations greater than these SMCL's. Water in one well had an aluminum concentration of 77 μg/L and was within the SMCL range of 50 to 200 μg/L. Concentrations of iron exceeded the SMCL of 300 μg/L in samples from 22 wells; the maximum concentration was 8,670 μg/L. Concentrations of manganese exceeded the SMCL of 50 μg/L in samples from 26 wells, with a maximum concentration of 481 μg/L. HA's were established for six of the trace elements analyzed; no concentrations were greater than these nonenforceable standards (U.S. Environmental Protection Agency, 2002b). Barium, boron, and strontium were the only trace elements detected in all 60 samples, and two of the trace elements analyzed, mercury and silver, were not detected in any of the ground-water samples. Concentrations of all trace elements analyzed are listed in appendix 3.

Radon, Chlorofluorocarbons, and Stable Isotopes

Radon is a naturally occurring radioactive element that produces a radioactive isotope, radon-222 (radon), as a gas. Radon is a by-product of the natural decay of uranium that is present in small quantities in certain rock and sediment types. Radon gas is soluble in water and is transported in ground water. When radon gas is exposed to air, as occurs when ground water is pumped out of an aquifer and used for domestic purposes, the radon diffuses into the air where it can be inhaled (U.S. Environmental Protection Agency, 2002a). The USEPA recommends treating ground water with radon concentrations greater than 300 pCi/L. Radon concentrations in 9 of the 50 wells sampled (table 3) were greater than the MCL of 300 pCi/L for states without a Multimedia Mitigation Program, but less than the alternate MCL of 4,000 pCi/L for states with an Multimedia Mitigation Program (U.S. Environmental Protection Agency, 2000). Radon concentrations ranged from 27 to 1,320 pCi/L; the median concentration was 225 pCi/L. Concentrations of radon for wells sampled are listed in appendix 4.

Concentrations of chlorofluorocarbons, including CFC-11, CFC-113, and CFC-12, and concentrations of stable isotopes of hydrogen ($^{2}H/^{1}H$) and oxygen ($^{18}O/^{16}O$) were determined in water from seven wells in the Chicot aquifer system (appendix 4). CFC's were used to determine apparent age of water. The presence of measurable concentrations of CFC's in water from the seven wells indicated the samples contained some post-1940 water. Chemical processes, such as microbial degradation and sorption during transit, and physical processes such as mixing with older water, can affect the concentration of CFC's; thus the term "apparent" is used to qualify the age term. The apparent age of water from these wells ranged from 31 to 55 years (appendix 4), possibly indicating ground water in these wells was recharged in the late 1940's or after.

Nutrients

Only four nutrient concentrations were greater than 2 mg/L, a level that might indicate effects from anthropogenic activities (Mueller and Helsel, 1996). Six nutrient constituents analyzed and summary statistics for these constituents are listed in table 3. Ammonia was detected in 29 of 60 wells, and concentrations ranged from 0.022 to 2.56 mg/L. Ammonia plus organic nitrogen was detected in 25 of the 60 wells sampled, and concentrations ranged from an estimated 0.05 to 2.7 mg/L. Nitrite plus nitrate was detected in 34 of 60 wells sampled, and concentrations ranged from an estimated 0.028 to 2.3 mg/L. The median concentration of nitrite plus nitrate was an estimated 0.034 mg/L. Nitrite as nitrogen was detected in seven samples with a median of <0.006 mg/L and maximum concentration of 0.017 mg/L. Concentrations of phosphorus and orthophosphate were detected in 50 and 48 wells, respectively. Phosphorus concentrations ranged from an estimated 0.004 to 0.88 mg/L, and orthophosphate concentrations ranged from an estimated 0.011 to 0.8 mg/L. No USEPA drinking-water standards for nutrients were exceeded in the wells sampled. Nutrient concentrations are listed in appendix 5.

Dissolved Organic Carbon

Concentrations of DOC were detected in 51 of 60 wells sampled (table 3). Concentrations of DOC ranged from an estimated 0.16 to 9.9 mg/L; the median concentration was estimated at 0.30 mg/L. The amount of organic carbon present in ground water can have a substantial influence on microbial communities in an aquifer and in turn affect the concentration of redox-sensitive species such as dissolved oxygen, trace elements, and nutrients (Hem, 1985, p. 151-152). According to Drever (1997, p. 107), DOC concentrations typically occur naturally in ground water at concentrations of about 0.5 mg/L. The median concentration of estimated 0.30 mg/L indicated naturally occurring DOC conditions in ground water in the study area. Concentrations of DOC are listed in appendix 5.

Pesticides and Degradation Products

Pesticides and degradation products analyzed for and detected are listed in table 4. Pesticides listed in italics were analyzed by a new method (Furlong and others, 2001). Although the analytical method did not change following approval by the USGS in 2001, data analyzed before method approval are considered provisional. Of the 92 pesticides and 17 degradation products analyzed, 8 pesticides and 2 degradation products were detected in ground-water samples from 5 wells. Of the 10 compounds detected, only three compounds were detected more than once: atrazine, metolachlor, and deethylatrazine (fig. 5). Concentrations of all pesticides and degradation products were at or less than 0.252 μg/L (table 5). Pesticides were detected in four wells (fig. 6): one well had only one compound detected, one well had only two compounds detected, one well had three compounds detected, and one well had five compounds detected. Degradation products were detected in four wells, with only one degradation product detected in each well. Atrazine was the most frequently detected pesticide (three wells), with a maximum concentration of 0.056 μg/L. Deethylatrazine, a degradation product of atrazine, was the most frequently detected degradation product (three wells), with a maximum concentration of an estimated 0.007 μg/L. Concentrations of pesticides are listed in appendix 6, and concentrations of degradation products are listed in appendix 7. Concentrations of all pesticides were below USEPA drinking-water standards (table 5) (U.S. Environmental Protection Agency, 2002b).

Volatile Organic Compounds

VOC’s analyzed for and detected are listed in table 6. Twenty-four of the 85 VOC’s were detected in the samples, and 12 of these compounds were detected more than once (table 6; fig. 7). Only 7 VOC’s were detected at concentrations greater than estimated (E). Chloroform was the most frequently detected VOC (31 out of 60 wells) and had a maximum concentration of 1.6 μg/L. Carbon disulfide was the second most frequently detected compound (8 samples) and had a maximum concentration of 0.81 μg/L. Concentrations of all VOC’s analyzed were at or less than 70 μg/L (table 5). VOC’s were detected in 44 of the wells sampled: 26 wells had only one compound detected; 11 wells had only 2 compounds detected; 4 wells had 3 compounds detected; one well had 4 compounds detected; one well had 5 compounds detected; and one well had 11 compounds detected. Concentrations of all VOC’s were below USEPA drinking-water standards (U.S. Environmental Protection Agency, 2002b). VOC concentrations are listed in appendix 8.

Table 4. Pesticides and degradation products analyzed for and detected in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001

[Pesticides in italics were analyzed before analytical method approval and are considered provisional. Compounds in purple were detected.]

Parent compound

Acetochlor	*2,4-D*	*Imazethapyr*	Pendimethalin
Acifluorfen	Dacthal (DCPA)	*Imidacloprid*	cis-Permethrin
Alachlor	Dacthal monoacid	Lindane	Phorate
Aldicarb	*2,4-DB*	Linuron	***Picloram***
Atrazine	**Diazinon**	Malathion	Prometon
Azinphos-methyl	*Dicamba*	*MCPA*	*Pronamide*
Bendiocarb	*Dichlorprop*	*MCPB*	Propachlor
Benfluralin	Dieldrin	*Metalaxyl*	Propanil
Benomyl	*Dinoseb*	*Methiocarb*	Propargite
Bensulfuron methyl	*Diphenamid*	*Methomyl*	*Propham*
Bentazon	Disulfoton	*Methyl parathion*	*Propiconazole*
Bromacil	*Diuron*	**Metolachlor**	*Propoxur*
Bromoxynil	*2,4-D methyl ester*	**Metribuzin**	*Siduron*
Butylate	EPTC	*Metsulfuron methyl*	Simazine
Carbaryl	Ethalfluralin	Molinate	*Sulfometuron methyl*
Carbofuran	Ethopropos	Napropamide	**Tebuthiuron**
Chloramben methyl ester	*Fenuron*	*Neburon*	Terbacil
Chlorimuron	Fipronil	*Nicosulfuron*	Terbufos
Chlorothalonil	*Flumetsulam*	*Norflurazon*	Thiobencarb
Chlorpyrifos	*Fluometuron*	*Oryzalin*	Tri-allate
Clopyralid	Fonofos	*Oxamyl*	*Tribenuron methyl*
Cyanazine	HCH, alpha	Parathion	*Triclopyr*
Cycloate	*Imazaquin*	Pebulate	Trifluralin

Degradation product

Aldicarb sulfone	**Deethylatrazine**	Desulfinylfipronil	*2-Hydroxyatrazine*
Aldicarb sulfoxide	*Deethyldeisopropylatrazine*	*Fipronil RPA 105048*	*3-Ketocarbofuran*
3-hydroxycarbofuran	*Deisopropylatrazine*	Fipronil sulfide	*Methomyl oxime*
DDE, p,p´	2,6-diethylaniline	Fipronil sulfone	*3 (4-chlorophenyl)-1-Methyl urea*
			Oxamyl oxime

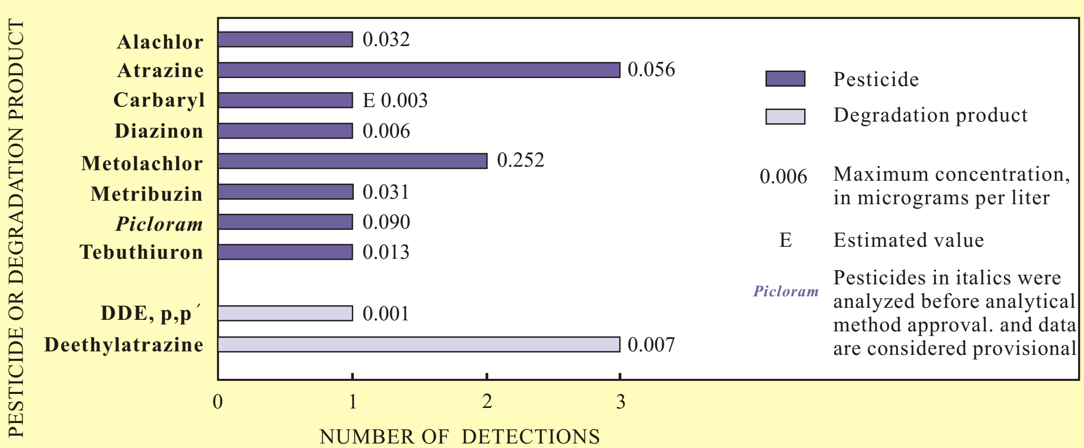


Figure 5. Pesticides and degradation products detected in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001.

Table 5. Summary statistics and Federal guidelines and standards for pesticides and degradation products and volatile organic compounds detected in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001

[All concentrations are in micrograms per liter. USEPA, U.S. Environmental Protection Agency; MCL, Maximum Contaminant Level; E, estimated; HA, Health Advisory; DP, degradation product; --, no value available; DWA, drinking water advisory]

Constituent	Number of detections/ samples	Analytical reporting level	Minimum detection	Maximum detection	Drinking water standard	Type of standard[1]	Number of wells exceeding USEPA drinking-water standard
			Pesticide				
Alachlor	1/60	0.0045	0.032	0.032	2.0	MCL	0
Atrazine	3/60	.009	E.004	.056	3.0	MCL	0
Carbaryl	1/60	.028	E.003	E.003	700	HA	0
Diazinon	1/60	.005	.006	.006	.6	HA	0
Metolachlor	2/60	.013	.032	.252	100	HA	0
Metribuzin	1/60	.006	.031	.031	200	HA	0
Picloram	1/60	.019	.090	.090	500	MCL, HA	0
Tebuthiuron	1/60	.0062	.013	.013	500	HA	0
			Degradation product				
DDE, p,p ′ (DP of DDT)	1/60	.006	E.001	E.001	--	--	--
Deethylatrazine (DP of atrazine)	3/60	.002	E.002	E.007	--	--	--
			Volatile organic compound				
Benzene	3/60	.021	E.01	E.04	5.0	MCL	0
Bromodichloromethane	2/60	.048	E.02	E.06	8.0	MCL	0
Carbon disulfide	8/60	.07	E.02	.81	--	--	--
Chloroform	31/60	.024	E.01	1.60	80	MCL	0
Chloromethane (Methyl chloride)	1/60	.17	E.10	E.10	3.0	HA	0
1,4-Dichlorobenzene	1/60	.050	E.01	E.01	75.0	MCL	0
Dichlorodifluoromethane	2/60	.18	E.20	E.30	1,000	HA	0
Dichloromethane (Methylene chloride)	2/60	.16	E.04	E.10	5.0	MCL	0
Ethylbenzene	1/60	.030	E.04	E.04	700	MCL	0
o-Ethyl toluene	1/60	.06	E.02	E.02	--	--	0
MTBE (Methyl tert-butyl ether)	2/60	.17	.30	.40	40 (taste) 20 (odor)	DWA	0
2-Butanone (Methyl ethyl keton)	1/60	5.0	70	70	4,000	HA	0
tert-Pentyl methyl ether	1/60	.08	E.03	E.03	--	--	--
Naphthalene	1/60	.5	.3	.3	100	HA	0
Tetrahydrofuran	3/60	2.2	E 1.0	29	--	--	--
1,2,3,5-Tetramethylbenzene (Isodurene)	1/60	.20	E.02	E.02	--	--	--
Trichloroethylene (TCE)	5/60	.038	E.02	.11	5.0	MCL	0
Trichlorofluoromethane	1/60	.09	E 1.33	E 1.33	2,000	HA	0
1,2,3-Trimethylbenzene	1/60	.12	E.02	E.02	--	--	--
1,2,4-Trimethylbenzene	2/60	.056	E.02	E.10	--	--	--
1,3,5-Trimethylbenzene	1/60	.044	E.02	E.02	--	--	--
Toluene	5/60	.05	E.01	E.07	1,000	MCL, HA	0
m- and p-Xylene	1/60	.06	E.01	E.12	10,000	MCL, HA	0
o-Xylene	2/60	.07	E.06	E.06	10,000	MCL, HA	0

[1]U.S. Environmental Protection Agency (2002b).

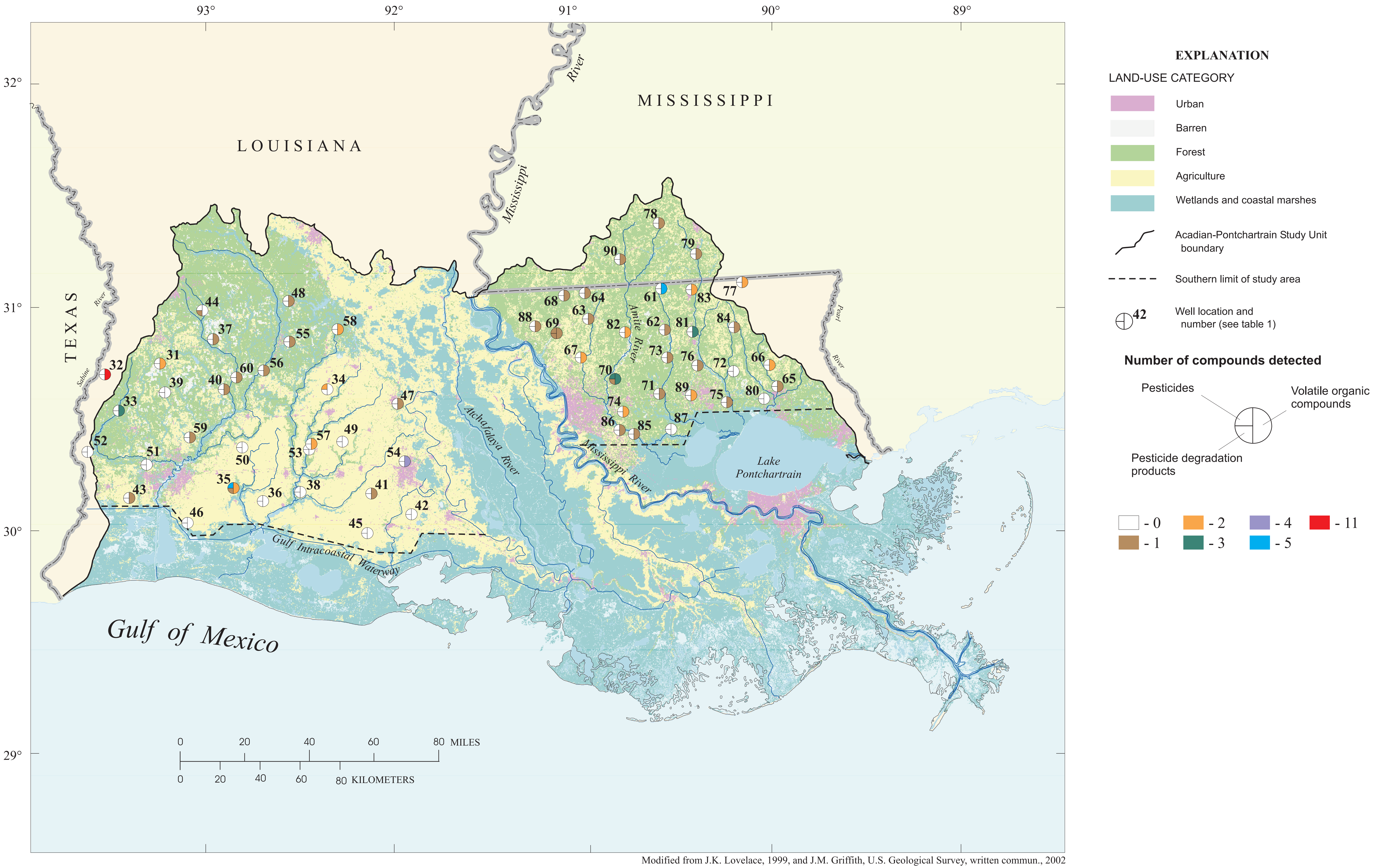


Figure 6. Number of pesticides and degradation products and volatile organic compounds detected in water from selected wells in southern Louisiana and southwestern Mississippi, 2000-2001.

Table 6. Volatile organic compounds analyed for and detected in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001

[Compounds in purple were detected.]

Volatile Organic Compounds

Acetone (2-propanone)	1,1-Dichloroethane	Methyl iodide (Iodomethane)
Acrylonitrile (2-Propenenitrile)	1,2-Dichloroethane	4-Methyl-2-pentanone (Methyl isobutyl ketone)
Benzene	1,1-Dichloroethylene	Methyl methacrylate
Bromobenzene	cis-1,2-Dichloroethylene	**tert-Pentyl methyl ether**
Bromochloromethane	trans-1,2-Dichloroethylene	**Naphthalene**
Bromodichloromethane	**Dichloromethane (Methylene chloride)**	n-Propylbenzene
Bromoethene (Vinyl bromide)	1,2-Dichloropropane	Styrene (Ethenyl-benzene)
Bromoform	1,3-Dichloropropane	1,1,1,2-Tetrachloroethane
Bromomethane (Methyl bromide)	1,2-Dichloropropane	1,1,2,2-Tetrachloroethane
Butylbenzene	2,2-Dichloropropane	Tetrachloroethylene
sec-Butylbenzene	1,1-Dichloropropene	Tetrachloromethane
tert-Butylbenzene	cis-1,3-Dichloropropene	**Tetrahydrofuran**
Carbon disulfide	trans-1,3-Dichloropropene	1,2,3,4-Tetramethylbenzene (Prehnitene)
Chlorobenzene	Diethyl ether	**1,2,3,5-Tetramethylbenzene (Isodurene)**
Chloroethane	Diisopropyl ether	1,2,3-Trichlorobenzene
Chloroform (Trichloromethane)	**Ethylbenzene**	1,2,4-Trichlorobenzene
Chloromethane (Methyl chloride)	Ethyl tert-butyl ether (ETBE)	1,1,1-Trichloroethane
3-Chloropropene	Ethyl methacrylate	1,1,2-Trichloroethane
2-Chlorotoluene	**o-Ethyl toluene**	**Trichloroethylene (TCE)**
4-Chlorotoluene	Hexachlorobutadiene	**Trichlorofluoromethane**
Dibromochloromethane	Hexachloroethane	1,2,3-Trichloropropane
1,2-Dibromo-3-chloropropane	2-Hexanone	1,1,2-Trichlorotrifluoroethane (Freon 113)
1,2-Dibromoethane	Isopropylbenzene	**1,2,3-Trimethylbenzene**
Dibromomethane	4-Isopropyl-1-methylbenzene	**1,2,4-Trimethylbenzene**
1,2-Dichlorobenzene	(p-Isopropyltoluene)	**1,3,5-Trimethylbenzene**
1,3-Dichlorobenzene	Methyl acrylate	**Toluene**
1,4-Dichlorobenzene	Methyl acrylonitrile	Vinyl chloride
trans-1,4-Dichloro-2-butene	**Methyl tert-butyl ether (MTBE)**	**m- and p-Xylene**
Dichlorodifluoromethane	**2-Butanone (Methyl ethyl keton)**	**o-Xylene**

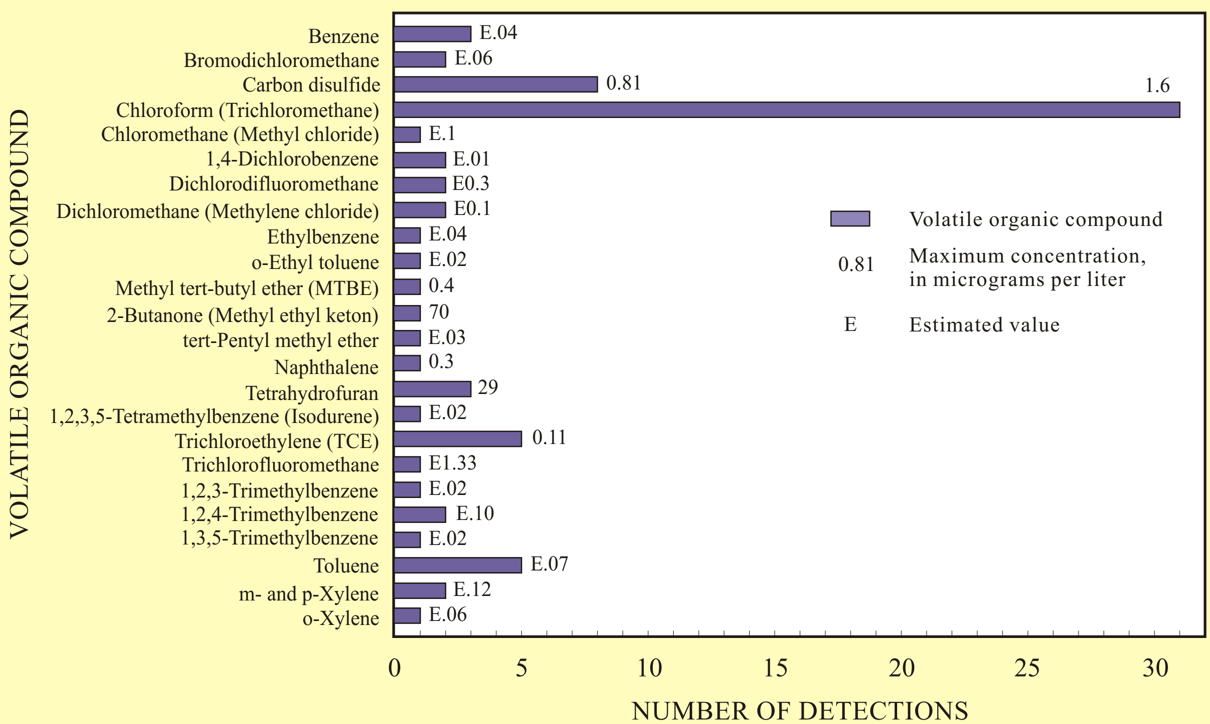


Figure 7. Volatile organic compounds detected in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001.

STATISTICAL ANALYSIS OF GROUND-WATER-QUALITY DATA

Correlation Between Depth to Top of Screen and Selected Physicochemical Properties and Chemical Constituents

Correlations listed in table 7 indicate relations between depth to top of screen and the selected physicochemical properties and chemical constituents in ground water in southern Louisiana and southwestern Mississippi. Depth to top of screen was weakly correlated to the number of pesticides detected. This relation was inversely correlated, indicating that more pesticides were detected in shallower wells than in deeper wells. Little to no correlation was detected between depth to top of screen and number of VOC's. Depth to top of screen was weakly correlated to specific conductance, dissolved solids, calcium, sodium, bicarbonate, and sulfate; and depth to top of screen was moderately correlated to pH, potassium, silica, barium, and strontium. These relations were positively correlated, indicating that deeper wells generally had higher concentrations of selected chemical constituents. There was little or no correlation between depth to top of screen and radon.

Comparison Between Depth to Top of Screen and Selected Physicochemical Properties and Chemical Constituents in the Chicot Aquifer System and the Chicot Equivalent Aquifer System

Chemistry of water in CH wells was significantly different from that in CHE wells for most of the compared constituents (fig. 8). Values of specific conductance, pH, calcium, sodium, bicarbonate, chloride, dissolved solids, and iron were typically greater in CH wells than in CHE wells. There were no significant differences in depth to top of screen and radon between CH and CHE wells. Though these two groups had similar physical properties, such as depth to top of screen, ground water in these areas appeared to be chemically different. The differences between the two groups of wells might be due to the spatial distribution of wells. Fewer wells were located in the outcrop area of the Chicot aquifer system in southwestern Louisiana than in the outcrop area of the Southern Hills regional aquifer system in southeastern Louisiana and southwestern Mississippi.

Chemistry of water in CHO wells was significantly different from CHS wells for all constituents except radon. Depth to top of screen and values of specific conductance, pH, calcium, sodium, bicarbonate,

Table 7. Results of Spearman rank correlation test between depth to top of screen and selected physicochemical properties and chemical constituents in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001

[-, inversely correlated; VOC's, volatile organic compounds; <, less than]

Variables Depth to top of screened interval and indicated physicochemical property or chemical constituent:	**Number of sample pairs**	**Probability, statistic**	**Correlation coefficient**
Number of pesticides detected	58	0.034	- 0.28
Top of screened interval and number of VOC's detected	58	.404	-.11
Specific conductance	58	.004	.37
pH	58	.002	.41
Dissolved solids	56	.007	.36
Calcium	58	.008	.35
Sodium	58	.003	.38
Potassium	58	<.001	.46
Bicarbonate	58	.004	.37
Sulfate	58	.047	.26
Silica	58	<.001	.52
Barium	58	.001	.42
Strontium	58	.001	.42
Radon	48	.690	.06

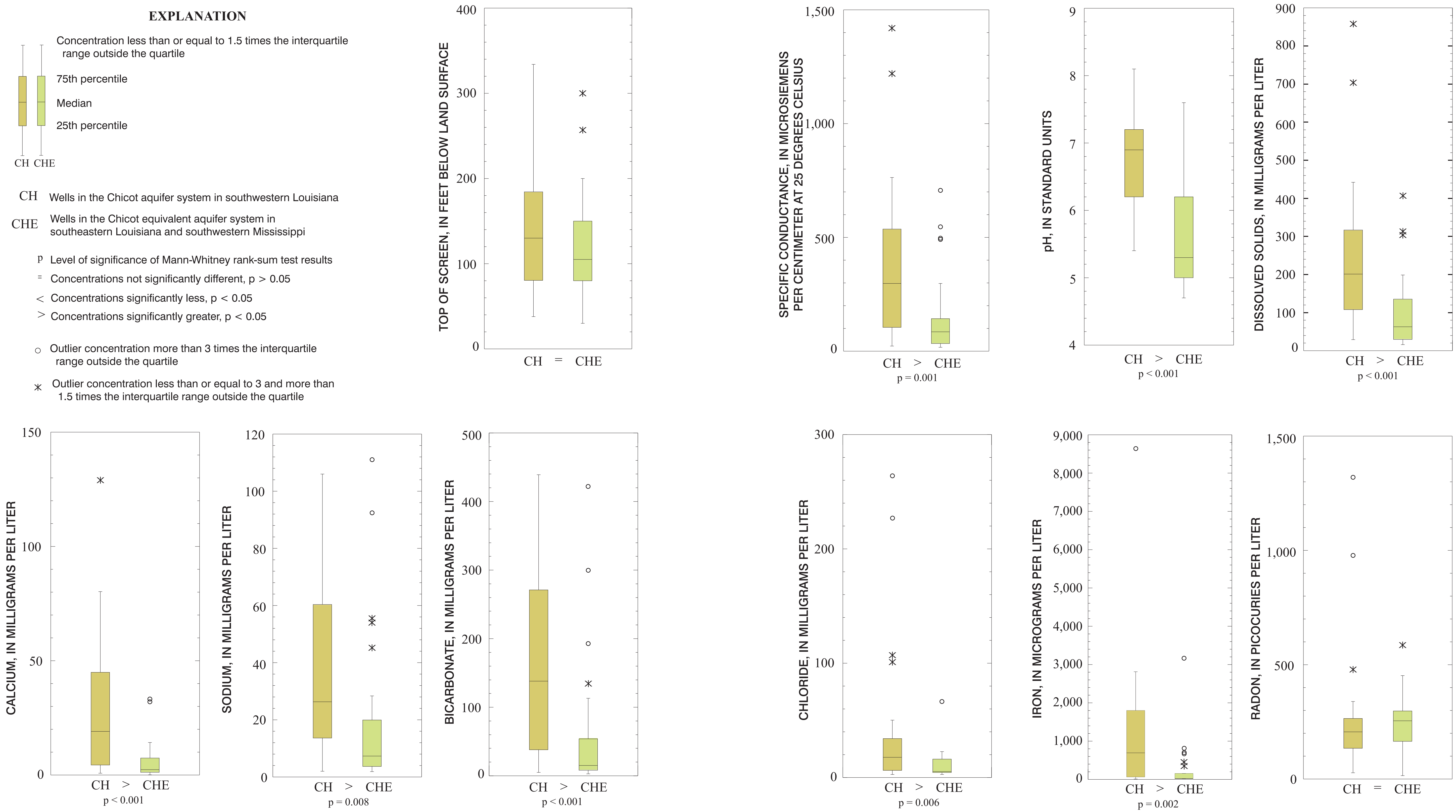


Figure 8. Comparison of depth to top of screen and selected physicochemical properties and chemical constituents between wells in the Chicot aquifer system in southwestern Louisiana and wells in the Chicot equivalent aquifer system in southeastern Louisiana and southwestern Mississippi, 2000-2001.

chloride, dissolved solids, and iron were lower in CHO wells than in CHS wells (fig. 9). Chemistry of water in CHEO wells was significantly different from CHES wells for all constituents except chloride and radon. Depth to top of screen and values of specific conductance, pH, calcium, sodium, bicarbonate, dissolved solids, and iron were less in CHEO wells than in CHES wells. Ground-water movement is generally to the south in the Chicot aquifer system in southwestern Louisiana (Harder and others, 1967), and south to southwest in the Chicot equivalent aquifer system in southeastern Louisiana and southwestern Mississippi (Buono, 1983). The increase in concentrations of many of the selected physicochemical and chemical constituents south of the outcrop areas of the Chicot and Chicot equivalent aquifer systems are considered normal, because dissolved solids and other constituents generally increase along ground-water flow paths (Nyman, 1989). As water moves through an aquifer system, acidic waters react with aquifer materials, thus increasing the concentrations of dissolved ions down gradient**.** Depth to top of screen, specific conductance, dissolved solids, calcium, chloride, sodium, and iron were not significantly different between CHO and CHEO wells (fig. 9). Values for pH and bicarbonate were higher in CHO wells, and radon was higher in CHEO wells. Depth to top of screen, pH, specific conductance, bicarbonate, dissolved solids, sodium, iron, and radon were not significantly different between CHS and CHES wells. Calcium and chloride were higher in CHS wells than in CHES wells. Though the chemistry of water from wells in the Chicot aquifer system appeared to be different from the chemistry of water from wells in the Chicot equivalent aquifer system, similarities existed between the chemistry of water from wells in the outcrop areas and areas south of the outcrop areas. The lack of significant differences between CHO and CHEO wells, the lack of significant differences between CHS and CHES wells, the statistical differences between CHO wells and CHS wells, and the statistical differences between CHEO and CHES wells, indicated that chemistry of water in a well is influenced by the location of the well relative to the outcrop area.

SUMMARY AND CONCLUSIONS

In 2000-2001, water-quality data were collected from 60 randomly selected domestic wells in the Acadian-Pontchartrain Study Unit, as part of the National Water-Quality Assessment Program. The data were collected and analyzed to (1) describe the quality of water in wells that are screened in major aquifer systems and used for domestic supply and (2) relate that water quality to natural and anthropogenic factors in southern Louisiana and southwestern Mississippi. The wells were screened in shallow sands (less than 350 feet below land surface) in two major aquifer systems--the Chicot aquifer system in southwestern Louisiana and the Chicot equivalent aquifer system in southeastern Louisiana and southwestern Mississippi. The Chicot equivalent aquifer system is part of the Southern Hills regional aquifer system, and both the Chicot aquifer system and the Southern Hills regional aquifer systems are designated as sole-source aquifers by the U.S. Environmental Protection Agency (USEPA).

The well depths ranged from 40 to 340 feet, with a median depth of 120 feet. The ground-water-quality data included 5 physicochemical properties, dissolved solids, 9 major inorganic ions, 24 trace elements, 6 nutrients, dissolved organic carbon, 109 pesticides and degradation products, and 85 volatile organic compounds (VOC’s); and a subset of the wells were sampled for radon, chlorofluorocarbons, and stable isotopes.

Quality-control samples, including field-blank samples, replicate environmental samples, and field- and laboratory-spiked samples, were collected to test sample-collection procedures, sample processing, and laboratory analyses. Few water-quality constituents analyzed were detected in the field-blank samples, indicating cleaning and sampling procedures were adequate to prevent on-site and site-to-site contamination. Variance between the environmental samples and the corresponding replicate samples was typically less than 5 percent, indicating an acceptable degree of laboratory precision and data collection reproducibility. Mean recovery of pesticides and volatile organic compounds from spiked samples ranged from 72 to 119 percent and were within laboratory control limits.

Water from 35 of the 60 wells sampled had pH values less than the USEPA Secondary Maximum Contaminant Level (SMCL) range of 6.5 to 8.5 standard units. Specific conductance ranged from 17 to 1,420 microsiemens per centimeter at 25 degrees Celsius. The alkalinity as calcium carbonate ranged from 4.0 to 360 mg/L (milligrams per liter). Values for specific conductance, pH, and alkalinity were typical for the Chicot and the Chicot equivalent aquifer systems.

Dissolved-solids concentrations ranged from 16 to 858 mg/L. Only two wells had dissolved-solids concentrations greater than the SMCL of 500 mg/L. Major inorganic ions were the primary constituents of dissolved solids in ground-water samples. Sodium (50 wells) and calcium (10 wells) were the dominant cations, and bicarbonate (44 wells) and chloride (16 wells) were the dominant anions. The chloride concentration (264 mg/L) in water sampled from one well exceeded the SMCL of 250 mg/L.

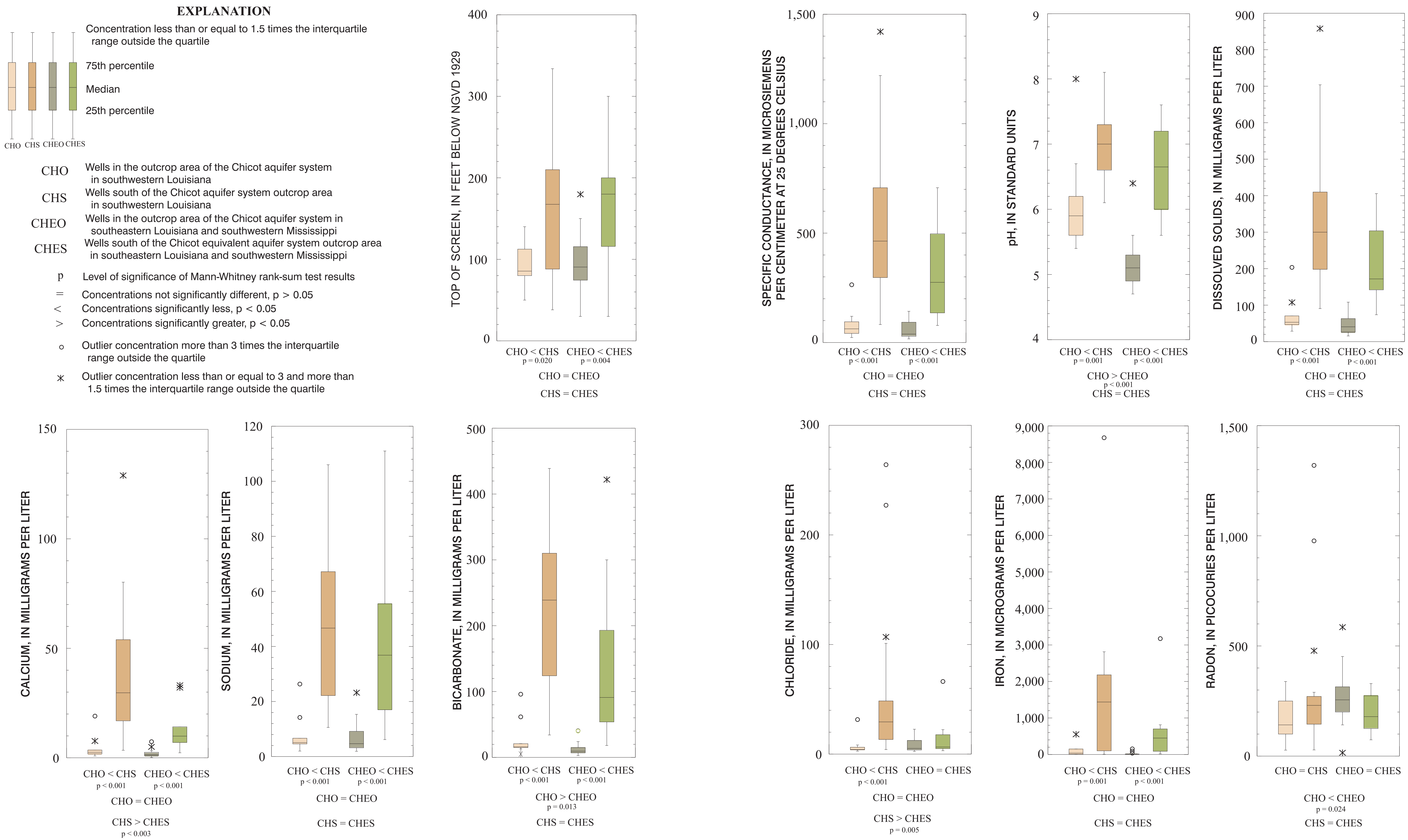


Figure 9. Comparison of depth to top of screen and selected physicochemical properties and chemical constituents between wells in the outcrop areas of the Chicot and Chicot equivalent aquifer systems and wells south of the outcrop areas in southern Louisiana and southwestern Mississippi, 2000-2001.

Concentrations of all 24 trace elements analyzed, except one iron value, were less than 1,000 µg/L (micrograms per liter). Iron exceeded the SMCL of 300 µg/L in samples from 22 wells and had a maximum concentration of 8,670 µg/L. One sample of arsenic (55.3 µg/L) exceeded the USEPA Maximum Contaminant Level (MCL) of 10 µg/L. Water from one well had an aluminum concentration of 77 µg/L and was within the SMCL of 50 to 200 µg/L. Manganese exceeded the SMCL of 50 µg/L in samples from 26 wells and had a maximum concentration of 481 µg/L. Health Advisories have been established for six of the trace elements analyzed; no concentrations were greater than these nonenforceable standards. The USEPA recommends treating ground water with radon concentrations greater than 300 picocuries per liter (pCi/L). Concentrations of radon ranged from 27 to 1,320 pCi/L, and 9 of the 50 wells sampled were greater than the MCL of 300 pCi/L, but less than the alternate MCL of 4,000 pCi/L.

Concentrations of ammonia, ammonia plus organic nitrogen, and nitrite plus nitrate in water from four wells were greater than 2 mg/L, a level that might indicate effects from anthropogenic activities. Concentrations of ammonia ranged from 0.022 to 2.56 mg/L. Concentrations of ammonia plus organic nitrogen ranged from an estimated 0.05 to 2.7 mg/L. Concentrations of nitrite plus nitrate ranged from an estimated 0.028 to 2.3 mg/L. Nitrite as nitrogen was detected in only seven samples and had a maximum concentration of 0.017 mg/L. Concentrations of phosphorus and orthophosphate ranged from an estimated 0.004 to 0.88 mg/L. No nutrient concentration exceeded USEPA drinking-water standards in the wells sampled.

Concentrations of dissolved organic carbon (DOC) ranged from an estimated 0.16 to 9.9 mg/L. DOC typically occurs naturally in ground water at concentrations of about 0.5 mg/L or less. The median concentration of DOC was an estimated 0.30 mg/L, which indicated naturally occurring DOC conditions in ground water in the study area.

Concentrations of all 92 pesticides analyzed were below USEPA drinking-water standards, and concentrations of all 92 pesticides and 17 degradation products were less than or equal to 0.252 µg/L. Only 8 pesticides and 2 degradation products were detected in ground-water samples from five wells. Atrazine, its degradation product deethylatrazine, and metolachlor were the most frequently detected pesticides. Atrazine had a maximum concentration of 0.056 µg/L, and deethylatrazine had a maximum concentration of an estimated 0.007 µg/L.

Concentrations of all 85 VOC's analyzed were at less than USEPA drinking-water standards and concentrations were less than or equal to 70 µg/L. Twenty-four VOC's were detected in ground-water samples, and only seven VOC's were detected at concentrations greater than estimated values. Chloroform was the most frequently detected VOC and had a maximum concentration of 1.6 µg/L. Carbon disulfide was the second most frequently detected compound and had a maximum concentration of 0.81 µg/L.

Depth to top of screen was weakly correlated to specific conductance, dissolved solids, calcium, sodium, bicarbonate, and sulfate; and depth to top of screen was moderately correlated to pH, potassium, silica, barium, and strontium. These relations were positively correlated, indicating that deeper wells generally had higher concentrations of the selected chemical constituents. Depth to top of screen was inversely correlated to the number of pesticides detected, indicating shallower wells generally had more pesticides detected than deeper wells. VOC's were detected in 44 of the 60 wells sampled, most of which had only one compound detected. There was little to no correlation between depth to top of screen and number of VOC's detected.

The Mann-Whitney rank-sum test was used to compare depth to top of screen and selected physicochemical and chemical constituents between six groups of wells. Five comparisons were made between the groups. Values for the selected constituents were typically greater in samples from wells located in the Chicot aquifer system in southwestern Louisiana than in samples from wells located in the Chicot equivalent aquifer system in southeastern Louisiana and southwestern Mississippi. Values for specific conductance, pH, calcium, sodium, bicarbonate, chloride, dissolved solids, and iron were typically greater in wells located south of the outcrop areas in the Chicot and Chicot equivalent aquifer systems. The increase in concentrations of many of the selected physicochemical and chemical constituents south of the outcrop areas of the Chicot and Chicot equivalent aquifer systems are considered normal because dissolved solids and other constituents generally increase along ground-water flow paths. Most constituents were not significantly different between the two outcrop areas or the two areas south of the outcrop areas. The lack of significant differences between wells in the outcrop areas and the statistical differences between wells in the outcrop areas and wells south of the outcrop areas indicated that water quality in a well is influenced by the location of the well relative to the outcrop area.

SELECTED REFERENCES

American Society for Testing and Materials, 1992, Annual book of ASTM standards, section 11--Water and environmental technology: West Conshohocken, Pa., American Society for Testing and Materials, v. 11.02, D-5072-92, p. 674-676.

Brenton, R.W., and Arnett, T.L., 1993, Methods of analysis by the U.S. Geological Survey National Water Quality Laboratory--Determination of dissolved organic carbon by UV-promoted persulfate oxidation and infrared spectrometry: U.S. Geological Survey Open-File Report 92-480, 12 p.

Buono, Anthony, 1983, The Southern Hills regional aquifer system of southeastern Louisiana and southwestern Mississippi: U.S. Geological Survey Water-Resources Investigations Report 83-4189, 38 p.

Busenberg, Eurybiades, and Plummer, L.N., 1992, Use of chlorofluoromethanes (CCl_3F and CCl_2F_2) as hydrologic tracers and age-dating tools, Example--The alluvium and terrace system of central Oklahoma: Water Resources Research, v. 28, p. 2257-2283.

Childress, C.J.O., Foreman, W.T., Connor, B.F., and Maloney, T.J., 1999, New reporting procedures based on long-term method detection levels and some considerations for interpretations of water-quality data provided by the U.S. Geological Survey National Water Quality Laboratory: U.S. Geological Survey Open-File Report 99-193, 19 p.

Coplen, T.B., Wildman, J.D., and Chen, J., 1991, Improvements in the gaseous hydrogen-water equilibrium technique for hydrogen isotope analysis: Analytical Chemistry, v. 63, p. 910-912.

Drever, J.I., 1988, The geochemistry of natural waters (2d ed.): Englewood Cliffs, N.J., Prentice Hall, 437 p.

———1997, The geochemistry of natural waters (3d ed.): Upper Saddle River, N.J., Prentice Hall, 436 p.

Epstein, Samuel, and Mayeda, T.K., 1953, Variation of ^{18}O content of water from natural sources: Geochimica et Cosmochimica Acta, v. 4, p. 213-224.

Faires, L.M., 1993, Methods of analysis by the U.S. Geological Survey National Water Quality Laboratory--Determination of metals in water by inductively coupled plasma-mass spectrometry: U.S. Geological Survey Open-File Report 92-634, 28 p.

Faure, Gunter, 1986, Principles of isotope geology (2d ed.): New York, John Wiley & Sons, 589 p.

Fetter, C.W., 1988, Applied hydrology (2d ed.): New York, MacMillan Publishing Company, 592 p.

Fishman, M.J., 1993, Methods of analysis by the U.S. Geological Survey National Water Quality Laboratory--Determination of inorganic and organic constituents in water and fluvial sediments: U.S. Geological Survey Open-File Report 93-125, 217 p.

Fishman, M.J., and Friedman, L.C., 1989, Methods for determination of inorganic substances in water and fluvial sediments: U.S. Geological Survey Techniques of Water-Resources Investigations, book 5, chap. A1, 545 p.

Furlong, E.T., Anderson, B.D., Werner, S.L., Soliven, P.P., Coffey, L.J., and Burkhardt, M.R., 2001, Methods of analysis by the U.S. Geological Survey National Water Quality Laboratory--Determination of pesticides in water by graphitized carbon-based solid-phase extraction and high-performance liquid chromatography/mass spectrometry: U.S. Geological Survey Water-Resources Investigations Report 01-4134, 73 p.

Garbarino, J.R., 1999, Methods of analysis by the U.S. Geological Survey National Water Quality Laboratory -- Determination of dissolved arsenic, boron, lithium, selenium, strontium, thallium, and vanadium using inductively coupled plasma-mass spectrometry: U.S. Geological Survey Open-File Report 99-093, 31 p.

Gilliom, R.J., Alley, W.M., and Gurtz, M.E., 1995, Design of the National Water-Quality Assessment Program--Occurrence and distribution of water-quality conditions: U.S. Geological Survey Circular 1112, 33 p.

Gilliom, R.J., Mueller, D.K., and Nowell, L.H., 1998, Methods for comparing water-quality conditions among National Water-Quality Assessment study units, 1992-1995: U.S. Geological Survey Open-File Report 97-589, 54 p.

Harder, A.H., Kilburn, Chabot, Whitman, H.M., and Rogers, S.M., 1967, Effects of ground-water withdrawals on water levels and saltwater encroachment in southwestern Louisiana: Department of Conservation, Louisiana Geological Survey, and Louisiana Department of Public Works Water Resources Bulletin no. 10, 56 p.

Helsel, D.R., and Hirsch, R.M., 1993, Statistical methods in water resources: Amsterdam, The Netherlands, Elsevier, 529 p.

Hem, J.D., 1985, Study and interpretation of the chemical characteristics of natural water (3d ed.): U.S. Geological Survey Water-Supply Paper 2254, 264 p.

Hirsch, R.M., Alley, W.M., and Wilber, W.G., 1988, Concepts for a National Water-Quality Assessment Program; U.S. Geological Survey Circular 1021, 42 p.

Koterba, M.T., 1998, Ground-water data-collection protocols and procedures for the National Water-Quality Assessment Program--Required site, well, subsurface, and landscape data for wells: U.S. Geological Survey Water-Resources Investigations Report 98-4107, 91 p.

Koterba, M.T., Wilde, F.D., and Lapham, W.W., 1995, Ground-water data-collection protocols and procedures for the National Water-Quality Assessment Program; collection and documentation of water-quality samples and related data: U.S. Geological Survey Open-File Report 95-399, 113 p.

Lapham, W.W., Wilde, F.D., and Koterba, M.T., 1997, Guidelines and standard procedures for studies of ground-water quality; selection and installation of wells, and supporting documentation: U.S. Geological Survey Water-Resources Investigations Report 96-4233, 110 p.

Lindley, C.E., Stewart, J.T., and Sandstrom, M.W., 1996, Determination of low concentrations of acetochlor in water by automated solid-phase extraction and gas chromatography with mass selective detection: Journal of AOAC International, v. 79, no. 4, p. 962-966.

Louisiana Department of Environmental Quality, 1990, 1990 Louisiana state indoor radon survey in homes: accessed October 23, 2002, at URL http://www.deq.state.la.us/laboratory/radonrep.htm

Louisiana Department of Environmental Quality and Louisiana Department of Transportation and Development, 2000, Construction of geotechnical boreholes and groundwater monitoring systems handbook, 31 p.: accessed October 22, 2002, at URL http://www2.dotd.state.la.us/wells/handbook.pdf

Lovelace, J.K., 1999, Distribution of saltwater in the Chicot aquifer system of southwestern Louisiana, 1995-96: Louisiana Department of Transportation and Development Water Resources Technical Report no. 66, 61 p.

Lovelace, J.K., Fontenot, J.W., and Frederick, C.P., 2002, Louisiana ground-water map no. 14: Potentiometric surface, January 2001, and water-level changes, June 2000 to January 2001, of the Chicot aquifer system in southwestern Louisiana: U.S. Geological Survey Water-Resources Investigations Report 02-4088, 2 sheets.

Lovelace, J.K., and Lovelace, W.M., 1995, Hydrogeologic unit nomenclature and computer codes for aquifers and confining units in Louisiana: Louisiana Department of Transportation and Development Water Resources Special Report no. 9, 12 p.

McLain, Betty, 1993, Methods of analysis by the U.S. Geological Survey National Water Quality Laboratory--Determination of chromium in water by graphite furnace atomic absorption spectrophotometry: U.S. Geological Survey Open-File Report 93-449, 16 p.

Mueller, D.K., Hamilton, P.A., Helsel, D.R., Hitt, K.J., and Ruddy, B.C., 1995, Nutrients in ground water and surface water of the United States--An analysis of data through 1992: U.S. Geological Survey Water-Resources Investigations Report 95-4031, 74 p.

Mueller, D.K., and Helsel, D.R., 1996, Nutrients in the nation’s water; too much of a good thing?: U.S. Geological Survey Circular 1136, 15 p.

Mueller, D.K, Martin, J.D., and Lopes, T.J., 1997, Quality-control design for surface-water sampling in the National Water-Quality Assessment Program: U.S. Geological Survey Open-File Report 97-223, 17 p.

National Oceanic and Atmospheric Administration, 2001, Climatography of the United States no. 81, Monthly normals of temperature, precipitation, and heating and cooling degree days: Asheville, N.C., National Climatic Data Center, 25 p.

Nyman, D.J., 1984, The occurrence of high concentrations of chloride in the Chicot aquifer system of southwestern Louisiana: Louisiana Department of Transportation and Development, Office of Public Works Water Resources Technical Report no. 33, 75 p.

———1989, Quality of water in freshwater aquifers in southwestern Louisiana: Louisiana Department of Transportation and Development Water-Resources Technical Report no. 42, 22 p.

Nyman, D.J., and Fayard, L.D., 1978, Ground-water resources of Tangipahoa and St. Tammany Parishes, southeastern Louisiana: Louisiana Department of Transportation and Development, Office of Public Works Water Resources Technical Report no. 15, 76 p.

Nyman, D.J., Halford, K.J., and Martin, Angel, Jr., 1990, Geohydrology and simulation of flow in the Chicot aquifer system of southwestern Louisiana: Louisiana Department of Transportation and Development Water-Resources Technical Report no. 50, 58 p.

Patton, C.J., and Truitt, E.P., 2000, Methods of analysis by the U.S. Geological Survey National Water Quality Laboratory--Determination of ammonium plus organic nitrogen by a Kjeldahl digestion method and an automated photometric finish that includes digest cleanup by gas diffusion: U.S. Geological Survey Open-File Report 00-170, 31 p.

Plummer, L.N., and Friedman, L.C., 1999, Tracing and dating young ground water: U.S. Geological Survey Fact Sheet FS-134-99, 4 p.

Rose, D.L., and Schroeder, M.P., 1995, Methods of analysis by the U.S. Geological Survey National Water Quality Laboratory--Determination of volatile organic compounds in water by purge and trap capillary gas chromatography/mass spectrometry: U.S. Geological Survey Open-File Report 94-708, 26 p.

Sargent, B. Pierre, 2002, Water use in Louisiana, 2000: Louisiana Department of Transportation and Development Water Resources Special Report no. 15, 133 p.

SAS Institute Inc., 1990, SAS procedures guide, version 6 (3d ed.): Cary, N.C., SAS Institute Inc., 705 p.

Scott, J.C., 1990, Computerized stratified random site-selection approaches for design of a ground-water-quality sampling network: U.S. Geological Survey Water-Resources Investigation Report 90-4101, 109 p.

Strickland, D.J., Fendick, R.B., Jr., Bednar, G.A., and Everett, D.E., 1987, A reconnaissance study to relate land use and ground-water quality in the Gulf Coastal Plain of Louisiana and Mississippi: U.S. Geological Survey Water-Resources Investigations Report 86-4325, 20 p.

U.S. Census Bureau, 2002, United States census 2000, Your gateway to census 2000: U.S. Census Bureau, accessed October 18, 2002, at URL http://www.census.gov/main/www/cen2000.html

U.S. Environmental Protection Agency, 1993, Methods for the determination of inorganic substances in environmental samples: Cincinnati, Ohio, Environmental Monitoring and Support Laboratory, EPA/600/R-93/100, August 1993, p. 79

———2000, Proposed radon in drinking water rule *in* Ground water & drinking water: U.S. Environmental Protection Agency, EPA 815-F-99-009, accessed October 17, 2002, at URL http://www.epa.gov/safewater/radon/proposal.html

———2002a, Air - Indoor air, radon: U.S. Environmental Protection Agency, accessed October 22, 2002, at URL http://www.epa.gov/iaq/radon

———2002b, Ground water and drinking water, Current drinking water standards: U.S. Environmental Protection Agency, EPA 816-F-02-013, accessed October 22, 2002, at URL http://www.epa.gov/safewater/mcl.html

———2002c, Source water protection, Designated sole source aquifer in EPA Region VI: U.S. Environmental Protection Agency, accessed October 17, 2002, at URL http://www.epa.gov/safewater/swp/ssa/reg6.html

U.S. Geological Survey, 1999a, Index of /pub/data/landcover/states: accessed October 23, 2002, at URL http://edcwww.cr.usgs.gov/pub/data/landcover/stats

———1999b, Strategic directions for the U.S. Geological Survey ground-water resources program--A report to Congress, November 30, 1998: Reston, Va., U.S. Geological Survey Office of Ground Water, 14 p.

Wanty, R.B. and Nordstrom, D.K., 1993, Natural radionuclides, chap. 17 *of* Alley, W.M., ed., Regional Ground Water Quality: New York, Van Nostrand Reinhold, p. 423-441.

Zaugg, S.D., Sandstrom, M.W., Smith, S.G., and Fehlberg, K.M., 1995, Methods of analysis by the U.S. Geological Survey National Water Quality Laboratory-Determination of pesticides in water by C-18 solid phase extraction and capillary-column gas chromatography/mass spectrometry with selected-ion monitoring: U.S. Geological Survey Open-File Report 95-181, 60 p.

APPENDIXES

1. Physicochemical properties of water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001

2. Dissolved-solids and major inorganic ion concentrations in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001

3. Trace-element concentrations in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001

4. Radon, chlorofluorocarbons, and stable isotope concentrations in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001

5. Nutrients and dissolved organic carbon concentrations in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001

6 Pesticide concentrations in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001

7. Concentrations of pesticide degradation products in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001

8. Volatile organic compounds in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001

Appendix 1. Physicochemical properties of water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001

[ACAD, Acadian–Pontchartrain Study Unit of the National Water Quality Assessment Program; DOTD, Louisiana Department of Transportation and Development; USGS, U.S. Geological Survey; µS/cm, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter;--, no data]

ACAD well number (fig. 1)	DOTD local well number	USGS site identification number	Sample date	Specific conductance, field (µS/cm)	Specific conductance, laboratory (µS/cm)	pH, field (standard units)	pH, laboratory (standard units)	Air temperature (°C)	Water temperature (°C)	Alkalinity, incremental titration, field (mg/L as $CaCO_3$)
31	Be-6084Z	304409093171801	6-06-2000	82	86	6.4	6.7	29.0	22.7	28
32	Be-5928Z	304140093343502	6-07-2000	66	69	6.2	7.3	29.0	23.5	17
33	Be-6065Z	303153093303201	6-08-2000	105	110	6.3	6.6	27.0	21.5	31
34	Ev-5500Z	303550092252401	7-10-2000	1,220	1,210	7.2	7.2	40.0	22.2	257
35	JD-5177Z	301009092554501	7-18-2000	1,420	1,420	7.0	7.3	34.5	28.4	302
36	JD-5371Z	300627092464302	7-12-2000	763	750	7.3	7.5	31.0	23.5	214
37	Be-5764Z	305020093003001	7-19-2000	42	44	5.6	6.2	36.5	22.2	12
38	Ac-6896Z	300825092350001	7-21-2000	741	750	7.4	7.6	35.5	25.8	226
39	Be-6077Z	303626093161201	7-26-2000	158	158	6.1	6.5	--	22.1	53
40	Al-5243Z	303647092573301	7-27-2000	45	48	5.7	6.1	31.0	25.0	15
41	Ve-7436Z	300718092125801	8-02-2000	686	686	7.2	7.4	34.0	25.2	339
42	Ve- 170	300121092005701	8-03-2000	300	277	6.9	6.8	34.0	21.9	138
43	Cu-7082Z	300816093280501	8-16-2000	408	411	8.1	8.1	36.5	22.0	200
44	V-8701Z	305810093034001	8-17-2000	23	25	5.9	6.2	32.0	22.0	4
45	Ve-9241Z	295640092144801	8-18-2000	739	729	6.8	7.4	35.5	21.7	360
46	Cn-5874Z	300111093101601	9-07-2000	537	533	7.6	8.0	26.5	23.4	222
47	SL-6924Z	303112092034001	9-11-2000	519	511	7.1	7.5	31.0	22.8	254
48	R-5964Z	305949092363001	9-19-2000	40	43	5.4	5.9	32.5	24.3	13
49	Ac-6998Z	302145092212501	9-26-2000	707	711	7.0	7.5	22.0	21.3	324
50	JD-5938Z	302109092523101	11-14-2000	297	293	6.5	6.9	17.5	21.7	99
51	Cu-7967Z	301707093223202	11-15-2000	298	295	6.9	7.0	15.0	19.1	113
52	Cu-7410Z	302108093405103	11-21-2000	--	242	6.6	7.2	--	--	102
53	Ac-6112Z	301947092320101	11-20-2000	--	526	7.3	7.8	17.0	17.4	189
54	Lf-9803Z	301538092021301	11-29-2000	196	200	6.3	6.4	--	14.0	52
55	Al-5167Z	304857092363601	12-12-2000	264	289	8.0	7.3	11.6	16.0	79
56	Al-5506Z	304128092450401	12-14-2000	95	52	6.7	7.2	8.0	16.7	13
57	Ac-6512Z	302121092310201	1-10-2001	464	525	7.4	7.6	6.5	20.1	196
58	Ev-5508Z	305150092213101	1-11-2001	120	129	6.1	6.3	--	--	50
59	Cu-5250Z	302403093084601	1-18-2001	442	445	7.1	7.2	13.0	19.5	174
60	Al-5240Z	303947092534101	2-06-2001	63	57	5.5	5.8	29.0	21.8	10

Appendix 1. Physicochemical properties of water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001—Continued

ACAD well number (fig. 1)	DOTD local well number	USGS site identification number	Sample date	Specific conductance, field (µS/cm)	Specific conductance, laboratory (µS/cm)	pH, field (standard units)	pH, laboratory (standard units)	Air temperature (°C)	Water temperature (°C)	Alkalinity, incremental titration, field (mg/L as $CaCO_3$)
61	SH-5527Z	305840090393801	2-14-2001	31	37	5.3	5.5	23.0	20.8	4
62	SH-5460Z	304727090392001	2-15-2001	28	32	5.1	5.8	28.0	20.8	7
63	EF-5282Z	305130091025701	3-01-2001	101	102	5.6	5.8	19.0	20.2	11
64	EF-5422Z	305834091033701	5-09-2001	42	41	5.2	5.7	--	22.1	8
65	ST-6753Z	303032090051701	5-10-2001	61	62	5.5	6.0	32.5	21.6	20
66	ST-8617Z	303623090071601	5-24-2001	29	29	5.3	6.1	25.5	19.5	6
67	EB-6257Z	304118091055201	6-04-2001	135	150	5.9	7.3	26.0	23.1	44
68	EF-5348Z	305808091101701	6-14-2001	93	99	6.4	6.5	31.0	--	33
69	EF-5450Z	304811091130701	6-28-2001	51	50	5.1	6.3	--	24.1	8
70	Li-7429Z	303506090554101	6-14-2001	78	--	5.6	6.0	30.0	20.5	18
71	Li-7282Z	303026090420301	6-20-2001	492	147	6.0	6.7	28.6	22.0	57
72	Ta-8435Z	303506090184101	6-21-2001	35	35	5.0	5.7	28.5	23.3	6
73	SH-5344Z	304001090390101	6-27-2001	143	143	5.5	7.2	26.9	21.0	33
74	Li-7148Z	302608090534101	7-12-2001	546	541	6.6	7.3	28.3	22.7	159
75	Ta-7292Z	302711090211801	7-19-2001	252	248	7.2	7.8	31.8	24.2	111
76	Ta- 788	303728090294301	8-02-2001	95	93	4.9	5.6	26.2	20.7	7
77	Wa-7324Z	305908090140901	7-26-2001	20	21	4.8	6.8	27.8	19.0	3
78	MS.AM-D016	311613090392001	8-07-2001	25	28	4.7	5.6	29.2	21.3	6
79	MS.PK-G021	310722090280801	8-08-2001	36	38	5.3	6.2	28.6	21.6	13
80	ST-6940Z	302725090094101	8-09-2001	136	146	6.2	6.8	27.4	21.5	54
81	Ta-9622Z	304636090303601	8-16-2001	28	31	4.7	5.6	31.9	22.7	4
82	EF-5228Z	304727090513901	9-11-2001	45	54	5.0	6.2	31.1	21.2	10
83	Ta- 815	305750090301101	9-19-2001	92	93	5.1	5.5	33.0	23.6	8
84	Ta-6551Z	304707090173301	9-20-2001	17	18	4.8	5.7	34.0	20.0	2
85	Li-6487Z	301959090504201	9-21-2001	298	295	7.3	8.0	35.0	24.5	14
86	EB-8065Z	302119090550802	9-25-2001	707	710	7.2	7.6	28.0	21.8	346
87	Li-6203Z	302049090390401	9-25-2001	497	499	7.6	7.7	25.0	21.3	246
88	WF-5115Z	305013091194001	9-26-2001	124	132	4.9	6.0	27.0	20.4	15
89	Ta-7401Z	302934090321901	9-27-2001	200	199	6.7	7.0	30.0	21.5	93
90	MS.AM-M006	310700090520001	9-28-2001	34	34	5.1	5.9	26.0	21.9	6

Appendix 2. Dissolved-solids and major inorganic ion concentrations in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001

[Numbers below the chemical names are the Chemical Abstracts Service (CAS) numbers. ACAD, Acadian-Pontchartrain Study Unit of the National Water Quality Assessment Program; DOTD, Louisiana Department of Transportation and Development; USGS, U.S. Geological Survey; ^{o}C, temperature in degrees Celsius; mg/L, milligrams per liter; E, estimated; <, less than; --, no data]

ACAD well number (fig. 1)	DOTD local well number	USGS site identification number	Sample date	Dissolved residue at 180^{o}C (mg/L) no CAS number	Calcium (mg/L as Ca) 7440-70-2	Magnesium (mg/L as Mg) 7439-95-4	Sodium (mg/L as Na) 7440-23-5	Potassium (mg/L as K) 7440-09-7	Bicarbonate (mg/L as HCO_3)	Sulfate (mg/L as SO_4) 14808-79-8	Chloride (mg/L as Cl) 16887-00-6	Fluoride (mg/L as F) 16984-48-8	Bromide (mg/L as Br) 24959-67-9	Silica (mg/L as SiO_2) 7631-86-9
31	Be-6084Z	304409093171801	6-06-2000	91	3.5	1.3	11	1.6	34	2.8	6.8	<0.1	0.03	52
32	Be-5928Z	304140093343502	6-07-2000	71	3.5	.9	6.7	1.5	20	5.5	4.3	<.1	.02	33
33	Be-6065Z	303153093303201	6-08-2000	123	4.4	1.5	14	2.4	38	2.0	8.2	<.1	.03	60
34	Ev-5500Z	303550092252401	7-10-2000	704	80	32	106	1.3	329	2.7	227	.3	1.10	25
35	JD-5177Z	301009092554501	7-18-2000	858	129	40	76	1.7	368	24	264	.4	1.06	24
36	JD-5371Z	300627092464302	7-12-2000	440	60	17	63	1.7	261	5.8	107	.2	.39	42
37	Be-5764Z	305020093003001	7-19-2000	47	1.8	.5	4.3	1.6	15	.4	2.7	<.1	.03	28
38	Ac-6896Z	300825092350001	7-21-2000	422	43	12	90	2.2	276	<.3	101	.2	.18	34
39	Be-6077Z	303626093161201	7-26-2000	141	9.0	3.4	14	2.0	65	4.9	11	.2	.11	62
40	Al-5243Z	303647092573301	7-27-2000	53	1.9	.7	5.1	.9	18	.9	4.0	<.1	.02	30
41	Ve-7436Z	300718092125801	8-02-2000	401	54	22	54	2.9	414	E.2	18	<.1	.02	34
42	Ve- 170	300121092005701	8-03-2000	201	24	8.9	19	1.3	168	<.3	4.2	.2	.26	47
43	Cu-7082Z	300816093280501	8-16-2000	240	17	5.2	67	1.2	244	<.3	11	<.1	.02	18
44	V-8701Z	305810093034001	8-17-2000	29	.8	.5	2.0	.9	5	.4	3.3	<.1	.01	15
45	Ve-9241Z	295640092144801	8-18-2000	442	49	14	93	1.6	439	E.2	32	.2	.06	37
46	Cn-5874Z	300111093101601	9-07-2000	313	20	6.5	91	1.3	271	E.2	32	.1	.06	23
47	SL-6924Z	303112092034001	9-11-2000	300	54	18	23	1.6	310	<.3	16	.2	.08	35
48	R-5964Z	305949092363001	9-19-2000	46	1.3	.7	4.8	1.2	16	.4	4.1	<.1	.02	24
49	Ac-6998Z	302145092212501	9-26-2000	410	59	19	60	2.2	395	<.3	35	.2	.09	36
50	JD-5938Z	302109092523101	11-14-2000	198	13	5.6	38	1.5	121	2.8	29	.3	.32	54
51	Cu-7967Z	301707093223202	11-15-2000	200	20	7.3	26	2.2	138	2.8	22	.2	.39	55
52	Cu-7410Z	302108093405103	11-21-2000	182	18	5.5	22	1.6	124	3.0	13	.2	.28	54
53	Ac-6112Z	301947092320101	11-20-2000	317	42	9.6	49	1.4	231	<.1	50	.2	.19	42
54	Lf-9803Z	301538092021301	11-29-2000	152	16	4.4	15	1.4	63	7.3	20	.3	.13	46
55	Al-5167Z	304857092363601	12-12-2000	204	19	7.0	26	1.5	96	3.6	31	E.2	.17	50
56	Al-5506Z	304128092450401	12-14-2000	47	2.9	1.0	4.6	1.0	16	.3	4.6	<.2	.02	23
57	Ac-6512Z	302121092310201	1-10-2001	306	45	11	47	1.5	239	<.1	49	E.2	.19	42
58	Ev-5508Z	305150092213101	1-11-2001	108	7.7	2.5	14	.7	62	.6	8.3	E.1	.03	47
59	Cu-5250Z	302403093084601	1-18-2001	266	30	12	46	1.7	212	5.2	34	.2	.14	38
60	Al-5240Z	303947092534101	2-06-2001	68	2.6	.7	5.4	1.6	13	2.2	6.2	<.2	.03	26

Appendix 2. Dissolved-solids and major inorganic ion concentrations in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001—Continued

ACAD well number (fig. 1)	DOTD local well number	USGS site identification number	Sample date	Dissolved residue at 180°C (mg/L) no CAS number	Calcium (mg/L as Ca) 7440-70-2	Magnesium (mg/L as Mg) 7439-95-4	Sodium (mg/L as Na) 7440-23-5	Potassium (mg/L as K) 7440-09-7	Bicarbonate (mg/L as HCO_3)	Sulfate (mg/L as SO_4) 14808-79-8	Chloride (mg/L as Cl) 16887-00-6	Fluoride (mg/L as F) 16984-48-8	Bromide (mg/L as Br) 24959-67-9	Silica (mg/L as SiO_2) 7631-86-9
61	SH-5527Z	305840090393801	2-14-2001	25	0.6	0.83	4.0	0.4	5	E0.1	5.2	<.2	0.03	9.8
62	SH-5460Z	304727090392001	2-15-2001	27	1.0	.44	3.7	.4	9	.4	4.3	<.2	.03	9.6
63	EF-5282Z	305130091025701	3-01-2001	73	2.1	.70	15	.6	14	1.3	17	<.2	.14	14
64	EF-5422Z	305834091033701	5-09-2001	41	1.3	.54	5.2	.7	10	.2	5.1	<.2	.02	15
65	ST-6753Z	303032090051701	5-10-2001	57	2.6	1.16	7.0	1.8	24	1.5	4.9	<.2	.03	21
66	ST-8617Z	303623090071601	5-24-2001	18	1.1	.56	3.0	E.1	7	.2	4.3	<.2	.02	9.0
67	EB-6257Z	304118091055201	6-04-2001	--	7.5	2.99	17	2.0	54	1.1	18	E.1	.14	25
68	EF-5348Z	305808091101701	6-14-2001	108	7.4	2.06	7.5	2.4	40	.9	5.3	<.2	.03	55
69	EF-5450Z	304811091130701	6-28-2001	53	1.7	.62	6.0	.8	10	.8	5.8	<.2	.03	17
70	Li-7429Z	303506090554101	6-14-2001	74	2.3	1.26	6.2	2.2	21	3.0	4.5	<.2	.1	8.6
71	Li-7282Z	303026090420301	6-20-2001	129	10	3.34	11	3.6	69	6.0	5.1	E.1	.03	45
72	Ta-8435Z	303506090184101	6-21-2001	41	1.2	.54	4.1	.2	7	.2	5.2	<.2	.01	12
73	SH-5344Z	304001090390101	6-27-2001	86	3.3	1.35	23	.7	40	2.6	21	<.2	.11	10
74	Li-7148Z	302608090534101	7-12-2001	312	33	14	56	1.2	193	.2	66	.3	.28	24
75	Ta-7292Z	302711090211801	7-19-2001	172	2.7	.57	54	1.0	135	9.9	3.2	.3	.03	37
76	Ta- 788	303728090294301	8-02-2001	64	2.4	1.18	12	.8	9	20	16	<.2	.08	16
77	Wa-7324Z	305908090140901	7-26-2001	26	.5	.39	1.9	.3	4	.2	3.0	<.2	<.01	8.6
78	MS.AM-D016	311613090392001	8-07-2001	28	.7	.42	3.4	.5	7	.2	3.3	<.2	.05	11
79	MS.PK-G021	310722090280801	8-08-2001	51	1.9	.88	2.9	1.5	16	.4	2.7	<.2	.03	19
80	ST-6940Z	302725090094101	8-09-2001	148	7.0	2.12	20	2.5	66	4.1	6.7	<.2	.04	59
81	Ta-9622Z	304636090303601	8-16-2001	--	.9	.46	3.3	.2	5	.2	4.3	<.2	<.01	9.6
82	EF-5228Z	304727090513901	9-11-2001	31	1.8	.72	7.1	.5	12	.5	9.0	<.2	.05	12
83	Ta- 815	305750090301101	9-19-2001	62	2.8	1.17	11	1.2	10	.3	16	<.2	.07	14
84	Ta-6551Z	304707090173301	9-20-2001	16	.1	.29	2.0	.4	3	.1	2.6	<.2	.02	9.5
85	Li-6487Z	301959090504201	9-21-2001	199	13	4.56	45	1.8	18	3.5	6.3	E.1	.04	47
86	EB-8065Z	302119090550802	9-25-2001	406	32	11	111	1.9	422	<.1	22	.3	.11	24
87	Li-6203Z	302049090390401	9-25-2001	304	14	5.45	92	1.4	300	E.1	11	.5	.04	22
88	WF-5115Z	305013091194001	9-26-2001	88	5.0	1.89	15	1.2	18	2.4	23	<.2	.17	24
89	Ta-7401Z	302934090321901	9-27-2001	142	9.6	2.59	28	2.5	113	3.4	5.6	<.2	.07	49
90	MS.AM-M006	310700090520001	9-28-2001	26	1.2	.49	3.0	.6	8	.2	3.4	<.2	.04	13

Appendix 3. Trace-element concentrations in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001

[Numbers below the chemical names are the Chemical Abstracts Service (CAS) numbers. ACAD, Acadian-Pontchartrain Study Unit of the National Water Quality Assessment Program; DOTD, Louisiana Department of Transportation and Development; USGS, U.S. Geological Survey; µg/L, micrograms per liter; <, less than; E, estimated; --, no data; M, verified but not quantified]

ACAD well number (fig. 1)	DOTD local well number	USGS site identification number	Sample date	Aluminum (µg/L as Al) 7429-90-5	Antimony (µg/L as Sb) 7440-36-0	Arsenic (µg/L as As) 7440-38-2	Barium (µg/L as Ba) 7440-39-3	Beryllium (µg/L as Be) 7440-41-7	Boron (µg/L as B) 7440-42-8
31	Be-6084Z	304409093171801	6-06-2000	<1	<1.00	0.9	46	<1.00	13
32	Be-5928Z	304140093343502	6-07-2000	8	<1.00	E.5	31	<1.00	E11
33	Be-6065Z	303153093303201	6-08-2000	<7	<1.00	1.1	94	<1.00	13
34	Ev-5500Z	303550092252401	7-10-2000	3	<1.00	1.3	344	<1.00	45
35	JD-5177Z	301009092554501	7-18-2000	<1	<1.00	1.0	491	<1.00	48
36	JD-5371Z	300627092464302	7-12-2000	7	<1.00	<.9	301	<1.00	19
37	Be-5764Z	305020093003001	7-19-2000	<1	<1.00	<.9	60	<1.00	13
38	Ac-6896Z	300825092350001	7-21-2000	7	<1.00	E.5	587	<1.00	67
39	Be-6077Z	303626093161201	7-26-2000	5	<1.00	2.1	105	<1.00	19
40	Al-5243Z	303647092573301	7-27-2000	4	<1.00	<.9	23	<1.00	E10
41	Ve-7436Z	300718092125801	8-02-2000	<1	<1.00	<.9	345	<1.00	102
42	Ve-170	300121092005701	8-03-2000	<1	<1.00	7.7	282	<1.00	32
43	Cu-7082Z	300816093280501	8-16-2000	7	<1.00	1.0	139	<1.00	58
44	V-8701Z	305810093034001	8-17-2000	1	<1.00	<.9	28	<1.00	E10
45	Ve-9241Z	295640092144801	8-18-2000	<1	<1.00	55.3	104	<1.00	69
46	Cn-5874Z	300111093101601	9-07-2000	<1	<1.00	<.9	204	<1.00	66
47	SL-6924Z	303112092034001	9-11-2000	<1	<1.00	<.9	164	<1.00	44
48	R-5964Z	305949092363001	9-19-2000	<1	<1.00	<.9	32	<1.00	E9.0
49	Ac-6998Z	302145092212501	9-26-2000	<1	<1.00	<.9	396	<1.00	105
50	JD-5938Z	302109092523101	11-14-2000	<1	E.04	1.2	116	<.06	24
51	Cu-7967Z	301707093223202	11-15-2000	<1	.05	<.2.	171	<.06	23
52	Cu-7410Z	302108093405103	11-21-2000	<1	<.05	.5	134	<.06	24
53	Ac-6112Z	301947092320101	11-20-2000	<1	E.03	.4	281	<.06	57
54	Lf-9803Z	301538092021301	11-29-2000	<1	E.04	1.3	61	<.06	15
55	Al-5167Z	304857092363601	12-12-2000	<1	0.06	.2	121	<.06	17
56	Al-5506Z	304128092450401	12-14-2000	<1	<.05	E.1	47	E.03	14
57	Ac-6512Z	302121092310201	1-10-2001	<1	<.05	.3	282	<.06	51
58	Ev-5508Z	305150092213101	1-11-2001	<1	<.05	1.0	38	<.06	14
59	Cu-5250Z	302403093084601	1-18-2001	<1	<.05	.5	195	<.06	33
60	Al-5240Z	303947092534101	2-06-2001	<1	E.03	<.2	57	.37	13

Appendix 3. Trace-element concentrations in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001—Continued

ACAD well number (fig. 1)	DOTD local well number	UUSGS site identification number	Sample date	Aluminum (µg/L as Al) 7429-90-5	Antimony (µg/L as Sb) 7440-36-0	Arsenic (µg/L as As) 7440-38-2	Barium (µg/L as Ba) 7440-39-3	Beryllium (µg/L as Be) 7440-41-7	Boron (µg/L as B) 7440-42-8
61	SH-5527Z	305840090393801	2-14-2001	5	E0.04	<0.2	26	<0.06	15
62	SH-5460Z	304727090392001	2-15-2001	2	E.04	<.2	18	<.06	11
63	EF-5282Z	305130091025701	3-01-2001	<1	<.05	<.2	23	<.06	E5.0
64	EF-5422Z	305834091033701	5-09-2001	<1	<.05	<.2	23	<.06	7.0
65	ST-6753Z	303032090051701	5-10-2001	<1	<.05	E.2	44	<.06	9.0
66	ST-8617Z	303623090071601	5-24-2001	1	<.05	<.2	8	<.06	9.0
67	EB-6257Z	304118091055201	6-04-2001	<1	<.05	<.2	164	E.04	11
68	EF-5348Z	305808091101701	6-14-2001	1	<.05	1.6	101	<.06	11
69	EF-5450Z	304811091130701	6-28-2001	2	<.05	<.2	20	.06	11
70	Li-7429Z	303506090554101	6-14-2001	77	E.03	4.3	13	.08	24
71	Li-7282Z	303026090420301	6-20-2001	<1	<.05	E.2	246	<.06	10
72	Ta-8435Z	303506090184101	6-21-2001	1	E.04	<.2	12	E.04	8.0
73	SH-5344Z	304001090390101	6-27-2001	1	<.05	<.2	27	<.06	E7.0
74	Li-7148Z	302608090534101	7-12-2001	<1	<.05	1.1	227	<.06	41
75	Ta-7292Z	302711090211801	7-19-2001	<1	<.05	2.2	37	E.04	47
76	Ta- 788	303728090294301	8-02-2001	2	<.05	<.2	19	.09	12
77	Wa-7324Z	305908090140901	7-26-2001	1	<.05	<.2	8	<.06	8.2
78	MS.AM-D016	311613090392001	8-07-2001	<1	<.05	<.2	15	E.04	E6.0
79	MS.PK-G021	310722090280801	8-08-2001	<1	E.04	0.2	53	<.06	E7.0
80	ST-6940Z	302725090094101	8-09-2001	<1	<.05	0.5	123	<.06	18
81	Ta-9622Z	304636090303601	8-16-2001	1	E.04	<.2	11	<.06	E6.0
82	EF-5228Z	304727090513901	9-11-2001	1	E.03	<.2	20	E.06	11
83	Ta- 815	305750090301101	9-19-2001	<1	<.05	<.2	50	.06	12
84	Ta-6551Z	304707090173301	9-20-2001	2	<.05	<.2	9	<.06	10
85	Li-6487Z	301959090504201	9-21-2001	<1	<.05	E.1	145	<.06	32
86	EB-8065Z	302119090550802	9-25-2001	<1	<.05	4.4	233	<.06	114
87	Li-6203Z	302049090390401	9-25-2001	<1	<.05	6.6	170	<.06	177
88	WF-5115Z	305013091194001	9-26-2001	<1	<.05	<.2	49	<.06	13
89	Ta-7401Z	302934090321901	9-27-2001	<1	<.05	1.4	204	<.06	25
90	MS.AM-M006	310700090520001	9-28-2001	<1	<.05	<.2	14	<.06	E4.0

Appendix 3. Trace-element concentrations in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001—Continued

ACAD well number (fig. 1)	Cadmium (µg/L as Cd) 7440-43-9	Chromium (µg/L as Cr) 740-47-3	Cobalt (µg/L as Co) 7440-48-4	Copper (µg/L as Cu) 7440-50-8	Iron (µg/L as Fe) 7439-89-6	Lead (µg/L as Pb) 7439-92-1	Lithium (µg/L as Li) 7439-93-2	Manganese (µg/L as Mn) 7439-96-5	Mercury, total (µg/L as Hg) 7439-37-6
31	<1.00	<0.8	<1.00	<1.0	<10	<1.00	5.9	<2.2	<0.3
32	<1.00	<.8	4.65	<1.0	560	<1.00	2.6	14	<.3
33	<1.00	<.8	<1.00	<1.0	70	<1.00	5.8	28	<.3
34	<1.00	<.8	<1.00	1.6	<10	<1.00	37	148	<.3
35	<1.00	<.8	<1.00	4.2	10	<1.00	26	130	<.3
36	<1.00	<.8	<1.00	<1.0	660	<1.00	23	325	<.3
37	<1.00	.9	<1.00	12	5.1	1.10	.8	<2.2	<.3
38	<1.00	<.8	<1.00	<1.0	1,160	<1.00	16	53	<.3
39	<1.00	<.8	<1.00	<1.0	1,440	<1.00	23	70	<.3
40	<1.00	E.7	<1.00	7.4	<10	<1.00	3.4	<2.2	<.3
41	<1.00	<.8	<1.00	<1.0	1,680	<1.00	12	94	<.3
42	<1.00	<.8	2.64	<1.0	8,670	<1.00	8.5	458	<.3
43	<1.00	<.8	<1.00	<1.0	40	<1.00	8.3	76	<.3
44	<1.00	<.8	<1.00	<1.0	<10	<1.00	1.5	<2.2	<.3
45	<1.00	<.8	<1.00	<1.0	1,540	<1.00	8.0	105	<.3
46	<1.00	<.8	<1.00	<1.0	100	<1.00	14	53	<.3
47	<1.00	<.8	<1.00	<1.0	2,180	<1.00	11	140	<.3
48	<1.00	1.1	<1.00	3.5	9.8	<1.00	1.7	E1.4	<.3
49	<1.00	<.8	<1.00	1.0	2,190	<1.00	20	90	<.3
50	<.04	<.8	.02	<.2	2,620	<.08	12	369	--
51	<.04	<.8	.03	E.2	2,810	E.05	18	289	--
52	<.04	E.4	.03	E.1	2,580	<.08	18	239	--
53	<.04	<.8	.11	.2	1,810	.26	14	154	--
54	.05	5.4	.04	.8	880	E.04	12	11	--
55	.07	<.8	.26	.3	70	<.08	13	481	--
56	E.03	1.9	.31	3.8	<10	.15	1.5	E2.2	--
57	<.04	<.8	.08	.3	1,790	<.08	12	131	--
58	.14	2.8	.03	7.2	9.0	.25	5.4	<3.2	--
59	<.04	<.8	.09	E.2	690	<.08	30	418	--
60	<.04	<.8	.68	22	150	.46	1.4	8.5	--

Appendix 3. Trace-element concentrations in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001—Continued

ACAD well number (fig. 1)	Cadmium (µg/L as Cd) 7440-43-9	Chromium (µg/L as Cr) 740-47-3	Cobalt (µg/L as Co) 7440-48-4	Copper (µg/L as Cu) 7440-50-8	Iron (µg/L as Fe) 7439-89-6	Lead (µg/L as Pb) 7439-92-1	Lithium (µg/L as Li) 7439-93-2	Manganese (µg/L as Mn) 7439-96-5	Mercury, total (µg/L as Hg) 7439-37-6
61	<0.04	<0.8	0.39	6.7	30	0.66	E0.3	E3.2	--
62	<.04	<.8	.08	5.3	<10	.45	.4	<3.0	--
63	<.04	<.8	.07	19	<10	1.76	.7	<3.2	--
64	<.04	<.8	.11	8.8	<10	.28	.7	E2.8	--
65	<.04	<.8	.02	8.4	<10	.52	2.5	<3.2	--
66	<.04	E.6	.09	4.6	<10	.48	.5	<3.0	--
67	<.04	E.8	.03	3.8	20	.32	1.2	<3.0	--
68	E.03	1.2	.02	34	E9.2	.32	5.4	<3.0	--
69	<.04	<.8	.11	9.0	<10	.77	.6	<3.0	--
70	<.04	1.1	.97	.3	3,170	.14	<.3	368	--
71	<.04	3.7	.02	6.1	E7.9	.87	<.3	<3.0	--
72	<.04	E.4	.14	18	10	.95	E.3	<3.0	--
73	<.04	<.8	.03	8.3	140	.91	E.2	<3.0	--
74	<.04	<.8	.08	.3	810	<.08	4.6	282	--
75	<.04	<.8	.03	E.1	70	<.08	14	36	--
76	E.03	1.3	.17	12	<10	.60	1.0	14	--
77	<.04	<.8	.05	2.0	<10	3.00	E.2	1.0	--
78	<.04	<.8	.07	19	80	1.52	E.3	5.2	--
79	<.04	E.7	.13	.3	<10	<.08	1.2	<3.0	--
80	<.04	<.8	.17	.7	90	.30	7.8	86	--
81	<.04	<.8	.08	4.3	<10	.22	E.2	<3.0	--
82	<.04	<.8	.04	55	10	3.52	.5	<3.0	--
83	<.04	<.8	.09	34	E6.0	2.12	.8	<3.0	--
84	.04	<.8	.17	3.5	E5.9	.55	.3	E1.6	--
85	<.04	<.8	.01	E.1	350	.11	27	218	--
86	E.02	<.8	.20	E.2	670	.24	8.6	74	--
87	E.02	<.8	.06	E.1	450	<.08	2.9	55	--
88	<.04	<.8	.08	2.6	<10	.23	1.3	<3.0	--
89	<.04	<.8	.02	E.2	700	<.08	8.0	182	--
90	<.04	<.8	.07	196	<10	5.33	.4	E1.0	--

Appendix 3. Trace-element concentrations in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001—Continued

ACAD well number (fig. 1)	Molybdenum (µg/L as Mo) 7439-98-7	Nickel (µg/L as Ni) 7440-02-0	Selenium (µg/L as Se) 7782-49-2	Silver (µg/L as Ag) 7440-22-4	Strontium (µg/L as Sr) 7440-24-6	Thallium (µg/L as Tl) 7440-28-0	Vanadium (µg/L as V) 7440-62-2	Zinc (µg/L as Zn) 7440-66-6	Uranium (µg/L as U) 7440-61-0
31	<1.0	2.84	3.7	<1.0	62	<0.90	<1.0	2	<1.00
32	<1.0	14	<.7	<1.0	59	<.90	<1.0	8	<1.00
33	<1.0	3.26	<.7	<1.0	87	<.90	<1.0	<5	<1.00
34	1.3	2.26	2.5	<1.0	356	<.90	1.4	16	1.27
35	2.6	3.09	7.2	<1.0	889	<.90	3.2	1	8.60
36	<1.0	<1.00	E.5	<1.0	235	<.90	<1.0	28	<1.00
37	<1.0	<1.00	<.7	<1.0	23	<.90	<1.0	4	<1.00
38	<1.0	3.00	E.5	<1.0	460	<.90	<1.0	4	<1.00
39	<1.0	2.87	<.7	<1.0	123	<.90	<1.0	101	<1.00
40	<1.0	<1.00	E.5	<1.0	28	<.90	<1.0	6	<1.00
41	<1.0	<1.00	<.7	<1.0	358	<.90	<1.0	<1	<1.00
42	<1.0	1.08	<.7	<1.0	90	<.90	<1.0	3	<1.00
43	3.4	<1.00	<.7	<1.0	204	<.90	<1.0	3	<1.00
44	<1.0	<1.00	<.7	<1.0	6.7	<.90	<1.0	2	<1.00
45	1.4	<1.00	<.7	<1.0	218	<.90	1.3	3	<1.00
46	2.7	<1.00	<.7	<1.0	231	<.90	<1.0	1	<1.00
47	<1.0	<1.00	<.7	<1.0	202	<.90	2.0	204	<1.00
48	<1.0	1.11	<.7	<1.0	17	<.90	<1.0	84	<1.00
49	<1.0	<1.00	<.7	<1.0	367	<.90	2.8	308	<1.00
50	.3	<.06	<.3	<1.0	70	<.04	.2	3	<.02
51	.3	<.06	<.3	<1.0	171	.45	E.2	2	<.02
52	.4	<.06	<.3	<1.0	144	<.04	<.2	3	<.02
53	.4	.07	<.3	<1.0	177	<.04	.5	112	<.02
54	.2	3.45	1.1	<1.0	83	<.04	3.4	5	<.02
55	E.1	1.10	<.3	<1.0	125	<.04	.6	2	.02
56	<.2	.71	<.3	<1.0	28	E.03	.3	3	E.02
57	.4	<.06	<.3	<1.0	179	<.04	1.0	7	<.02
58	<.2	1.11	E.3	<1.0	44	<.04	3.1	274	<.02
59	1.0	<.06	<.3	<1.0	243	<.04	2.1	9	<.02
60	<.2	2.23	.9	<1.0	28	<.04	.3	20	<.02

Appendix 3. Trace-element concentrations in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001—Continued

ACAD well number (fig. 1)	Molybdenum (µg/L as Mo) 7439-98-7	Nickel (µg/LasNi) 7440-02-0	Selenium (µg/L as Se) 7782-49-2	Silver (µg/L as Ag) 7440-22-4	Strontium (µg/L as Sr) 7440-24-6	Thallium (µg/L as Tl) 7440-28-0	Vanadium (µg/L as V) 7440-62-2	Zinc (µg/L as Zn) 7440-66-6	Uranium (µg/L as U) 7440-61-0
61	<0.2	0.52	<0.3	<1.0	8.4	<0.04	0.3	2	<0.02
62	<.2	.24	<.3	<1.0	5.3	<.04	.7	1	<.02
63	<.2	.26	E.3	<1.0	12	<.04	.8	3	.02
64	<.2	.32	<.3	<1.0	12	<.04	.7	1	E.02
65	<.2	.13	<.3	<1.0	36	<.04	.8	2	<.02
66	<.2	.16	<.3	<1.0	4.8	E.03	E.2	5	<.02
67	<.2	.63	<.3	<1.0	64	<.04	E.2	13	.04
68	<.2	.59	E.3	<1.0	87	<.04	1.4	136	.09
69	<.2	.37	<.3	<1.0	15	E.03	<.2	7	<.02
70	<.2	1.31	.4	<1.0	25	.05	4.8	2	.09
71	0.4	.34	.7	<1.0	190	E.03	4.1	585	.04
72	<.2	1.07	<.3	<1.0	4.4	<.04	<.2	11	<.02
73	<.2	.43	.4	<1.0	11	E.02	<.2	28	.02
74	1.0	<.06	<.3	<1.0	245	<.04	<.2	117	<.02
75	1.1	<.06	<.3	<1.0	41	<.04	<.2	<1	E.01
76	<.2	.91	.8	<1.0	17	<.04	<.2	22	.04
77	<.2	.09	E.2	<1.0	5.4	<.04	<.2	7	<.02
78	<.2	.22	<.3	<1.0	5.5	<.04	<.2	3	<.02
79	<.2	.99	<.3	<1.0	14	<.04	<.2	26	.04
80	0.2	.06	<.3	<1.0	132	<.04	<.2	2	<.02
81	<.2	.07	<.3	<1.0	5.2	<.04	<.2	2	<.02
82	<.2	.38	<.3	<1.0	8.5	<.04	<.2	8	.02
83	<.2	.81	<.3	<1.0	13.4	<.04	<.2	18	.02
84	<.2	.2	<.3	<1.0	2.8	E.04	<.2	2	E.01
85	<.2	<.06	<.3	<1.0	130	<.04	.4	23	<.02
86	7.6	<.06	<.3	<1.0	249	<.04	<.2	5	<.02
87	5.8	<.06	<.3	<1.0	115	.05	<.2	<1	<.02
88	<.2	.62	E.3	<1.0	28	<.04	<.2	1	.03
89	<.2	.10	<.3	<1.0	151	<.04	<.2	<1	<.02
90	<.2	.33	<.3	<1.0	5.9	<.04	<.2	13	<.02

Appendix 4. Radon, chlorofluorocarbons, and stable isotope concentrations in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001

[Numbers below the chemical names are the Chemical Abstracts Service (CAS) numbers. ACAD, Acadian-Pontchartrain Study Unit of the National Water Quality Assessment Program; DOTD, Louisiana Department of Transportation and Development; USGS, U.S. Geological Survey; pCi/L, picocuries per liter; g/kg, grams per kilogram; per mil, parts per thousand; --, no data; <, less than]

ACAD well number (fig. 1)	DOTD local well number	USGS site identification number	Sample date	Radon 222, total (pCi/L) 14859-67-7	Radon-222, 2-sigma precision estimate (pCi/L)	CFC-11 trichlorofluoromethane (g/kg) 75-69-4	CFC-113 trichlorotrifluoroethane (g/kg) 76-13-1	CFC-12 dichlorodifluoromethane (g/kg) 75-71-8	Apparent ground-water age (years)	Hydrogen, 2 / 1 ratio per mil, no CAS number	Oxygen, 18 / 16 ratio per mil, no CAS number
31	Be-6084Z	304409093171801	6-06-2000	71	14	--	--	--	--	--	--
32	Be-5928Z	304140093343502	6-07-2000	100	33	--	--	--	--	--	--
33	Be-6065Z	303153093303201	6-08-2000	260	32	--	--	--	--	--	--
34	Ev-5500Z	303550092252401	7-10-2000	978	36	--	--	--	--	--	--
35	JD-5177Z	301009092554501	7-18-2000	1320	36	--	--	--	--	--	--
36	JD-5371Z	300627092464302	7-12-2000	479	30	--	--	--	--	--	--
37	Be-5764Z	305020093003001	12-13-2000	133	17	--	--	--	--	--	--
39	Be-6077Z	303626093161201	12-13-2000	32	15	--	--	--	--	--	--
39	Be-6077Z	303626093161201	4-03-2001	--	--	30	5.4	50	31	-20.6	-4.2
40	Al-5243Z	303647092573301	2-01-2001	266	19	--	--	--	--	--	--
41	Ve-7436Z	300718092125801	8-02-2000	142	18	--	--	--	--	--	--
42	Ve- 170	300121092005701	8-03-2000	225	20	--	--	--	--	--	--
43	Cu-7082Z	300816093280501	8-16-2000	138	18	--	--	--	--	--	--
44	V-8701Z	305810093034001	8-17-2000	28	14	--	--	--	--	--	--
45	Ve-9241Z	295640092144801	8-18-2000	265	25	--	--	--	--	--	--
45	Ve-9241Z	295640092144801	3-09-2001	--	--	0.7	0	2.3	55	-14.7	-3.55
46	Cn-5874Z	300111093101601	9-07-2000	203	17	--	--	--	--	--	--
47	SL-6924Z	303112092034001	9-11-2000	206	22	--	--	--	--	--	--
47	SL-6924Z	303112092034001	4-05-2001	--	--	0.8	0	1.4	51	-16.4	-3.77
48	R-5964Z	305949092363001	9-19-2000	275	19	--	--	--	--	--	--
49	Ac-6998Z	302145092212501	9-26-2000	157	17	--	--	--	--	--	--
50	JD-5938Z	302109092523101	11-14-2000	157	17	--	--	--	--	--	--
50	JD-5938Z	302109092523101	3-06-2001	--	--	0.2	0	0	51	-19.1	-3.9
51	Cu-7967Z	301707093223202	11-15-2000	236	19	--	--	--	--	--	--
51	Cu-7967Z	301707093223202	4-03-2001	--	--	0.8	0	10	52	-18.4	-3.88
52	Cu-7410Z	302108093405103	11-21-2000	152	17	--	--	--	--	--	--
53	Ac-6112Z	301947092320101	11-20-2000	129	16	--	--	--	--	--	--
53	Ac-6112Z	301947092320101	3-07-2001	--	--	2.7	0	5.7	51	-18.5	-3.87
54	Lf-9803Z	301538092021301	11-29-2000	290	19	--	--	--	--	--	--
54	Lf-9803Z	301538092021301	3-08-2001	--	--	85	2.6	44	32	-19.8	-3.91
55	Al-5167Z	304857092363601	12-12-2000	27	14	--	--	--	--	--	--

Appendix 4. Radon, chlorofluorocarbons, and stable isotope concentrations in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001—Continued

ACAD well number (fig. 1)	DOTD local well number	USGS site identification number	Sample date	Radon 222, total (pCi/L) 14859-67-7	Radon-222, 2-sigma precision estimate (pCi/L)	CFC-11 trichlorofluoromethane (g/kg) 75-69-4	CFC-113 trichlorotrifluoroethane (g/kg) 76-13-1	CFC-12 dichlorodifluoromethane (g/kg) 75-71-8	Apparent ground-water age (years)	Hydrogen, 2 / 1 ratio per mil, no CAS number	Oxygen, 18 / 16 ratio per mil, no CAS number
56	Al-5506Z	304128092450401	12-14-2000	31	14	--	--	--	--	--	--
57	Ac-6512Z	302121092310201	1-10-2001	134	17	--	--	--	--	--	--
58	Ev-5508Z	305150092213101	1-11-2001	339	23	--	--	--	--	--	--
59	Cu-5250Z	302403093084601	1-18-2001	257	19	--	--	--	--	--	--
60	Al-5240Z	303947092534101	2-06-2001	250	18	--	--	--	--	--	--
61	SH-5527Z	305840090393801	2-14-2001	142	16	--	--	--	--	--	--
62	SH-5460Z	304727090392001	2-15-2001	419	22	--	--	--	--	--	--
63	EF-5282Z	305130091025701	3-01-2001	586	24	--	--	--	--	--	--
64	EF-5422Z	305834091033701	5-09-2001	332	20	--	--	--	--	--	--
65	ST-6753Z	303032090051701	5-10-2001	264	18	--	--	--	--	--	--
66	ST-8617Z	303623090071601	5-24-2001	210	17	--	--	--	--	--	--
67	EB-6257Z	304118091055201	6-04-2001	206	18	--	--	--	--	--	--
68	EF-5348Z	305808091101701	6-14-2001	165	18	--	--	--	--	--	--
69	EF-5450Z	304811091130701	6-28-2001	255	20	--	--	--	--	--	--
70	Li-7429Z	303506090554101	6-21-2001	74	17	--	--	--	--	--	--
71	Li-7282Z	303026090420301	6-20-2001	329	22	--	--	--	--	--	--
72	Ta-8435Z	303506090184101	6-21-2001	255	21	--	--	--	--	--	--
73	SH-5344Z	304001090390101	6-27-2001	274	20	--	--	--	--	--	--
74	Li-7148Z	302608090534101	7-12-2001	152	18	--	--	--	--	--	--
75	Ta-7292Z	302711090211801	7-19-2001	274	19	--	--	--	--	--	--
76	Ta- 788	303728090294301	8-02-2001	<30	18	--	--	--	--	--	--
77	Wa-7324Z	305908090140901	7-26-2001	195	18	--	--	--	--	--	--
78	MS.AM-D016	311613090392001	8-07-2001	205	20	--	--	--	--	--	--
79	MS.PK-G021	310722090280801	8-08-2001	298	20	--	--	--	--	--	--
80	ST-6940Z	302725090094101	8-09-2001	125	20	--	--	--	--	--	--
81	Ta-9622Z	304636090303601	8-16-2001	452	23	--	--	--	--	--	--

Appendix 5. Nutrients and dissolved organic carbon concentrations in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001

[Numbers below the chemical names are the Chemical Abstracts Service (CAS) numbers. ACAD, Acadian-Pontchartrain Study Unit of the National Water Quality Assessment Program; DOTD, Louisiana Department of Transportation and Development; USGS, U.S. Geological Survey; mg/L, milligrams per liter; <, less than; E, estimated; --, no data]

ACAD well number (fig. 1)	DOTD local well number	USGS site identification number	Sample date	Nitrogen, ammonia, (mg/L as N) 7664-41-7	Nitrogen, ammonia plus organic nitrogen, (mg/L as N) 17778-88-0	Nitrogen, nitrite plus nitrate, (mg/L as N) no CAS number	Nitrogen, nitrite (mg/L as N) 14797-65-0	Phosphorus, (mg/L as P) 7732-14-0	Orthophosphate, (mg/L as P) 14265-44-2	Carbon, organic, (mg/L as C) no CAS number
31	Be-6084Z	304409093171801	6-06-2000	0.02	<0.10	<0.05	<0.010	0.035	0.026	E0.20
32	Be-5928Z	304140093343502	6-07-2000	<.02	<.10	<.05	<.010	.134	.111	E.33
33	Be-6065Z	303153093303201	6-08-2000	<.02	<.10	<.05	<.010	.066	.053	<.33
34	Ev-5500Z	303550092252401	7-10-2000	.17	.20	2.30	<.010	.091	.081	.56
35	JD-5177Z	301009092554501	7-18-2000	<.02	<.10	.26	<.010	.049	.045	.81
36	JD-5371Z	300627092464302	7-12-2000	.16	.17	<.05	<.010	--	.207	.48
37	Be-5764Z	305020093003001	7-19-2000	<.02	<.10	.72	<.010	<.006	<.010	<.33
38	Ac-6896Z	300825092350001	7-21-2000	1.03	1.10	<.05	<.010	--	.143	.92
39	Be-6077Z	303626093161201	7-26-2000	.03	E.05	<.05	<.010	.880	.800	.34
40	Al-5243Z	303647092573301	7-27-2000	<.02	<.10	.05	<.010	.023	.021	<.33
41	Ve-7436Z	300718092125801	8-02-2000	2.56	2.70	<.05	<.010	.445	--	1.70
42	Ve- 170	300121092005701	8-03-2000	.50	.52	<.05	.017	.236	.030	.48
43	Cu-7082Z	300816093280501	8-16-2000	.33	.36	<.05	<.010	.181	.175	.78
44	V-8701Z	305810093034001	8-17-2000	<.02	<.10	.21	<.010	<.006	<.010	<.33
45	Ve-9241Z	295640092144801	8-18-2000	.48	.61	<.05	<.010	.727	.583	1.10
46	Cn-5874Z	300111093101601	9-07-2000	.60	.68	<.05	<.010	.221	.215	.73
47	SL-6924Z	303112092034001	9-11-2000	.17	.21	<.05	<.010	.072	.158	.91
48	R-5964Z	305949092363001	9-19-2000	<.02	<.10	.08	<.010	.009	<.010	E.16
49	Ac-6998Z	302145092212501	9-26-2000	1.41	1.60	<.05	<.010	--	.180	1.10
50	JD-5938Z	302109092523101	11-14-2000	.06	E.07	<.05	<.006	.541	.401	.53
51	Cu-7967Z	301707093223202	11-15-2000	E.03	<.10	<.05	.007	.223	.198	.38
52	Cu-7410Z	302108093405103	11-21-2000	.05	.11	<.05	E.003	.370	.308	E.22
53	Ac-6112Z	301947092320101	11-20-2000	.79	.84	<.05	<.006	.044	.056	.70
54	Lf-9803Z	301538092021301	11-29-2000	<.04	<.10	.71	E.003	.616	.598	E.32
55	Al-5167Z	304857092363601	12-12-2000	<.04	<.10	<.05	<.006	.162	.157	E.29
56	Al-5506Z	304128092450401	12-14-2000	<.04	<.10	.68	<.006	<.006	<.018	E.19
57	Ac-6512Z	302121092310201	1-10-2001	.67	.76	<.05	<.006	.074	.032	.68
58	Ev-5508Z	305150092213101	1-11-2001	<.04	<.10	.18	<.006	.280	.260	E.31
59	Cu-5250Z	302403093084601	1-18-2001	.10	.12	<.05	<.006	.241	.234	.38
60	Al-5240Z	303947092534101	2-06-2001	<.04	<.10	.34	E.003	<.006	<.018	E.28

Appendix 5. Nutrients and dissolved organic carbon concentrations in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001--Continued

ACAD well number (fig. 1)	DOTD local well number	USGS site identification number	Sample date	Nitrogen, ammonia, (mg/L as N) 7664-41-7	Nitrogen, ammonia plus organic nitrogen, (mg/L as N) 17778-88-0	Nitrogen, nitrite plus nitrate, (mg/L as N) no CAS number	Nitrogen, nitrite (mg/L as N) 14797-65-0	Phosphorus, (mg/L as P) 7732-14-0	Orthophosphate, (mg/L as P) 14265-44-2	Carbon organic (mg/L as C) no CAS number
61	SH-5527Z	305840090393801	2-14-2001	<0.04	<0.10	0.72	<0.006	<0.006	<0.018	E0.23
62	SH-5460Z	304727090392001	2-15-2001	<.04	<.10	.20	<.006	<.006	<.020	E.19
63	EF-5282Z	305130091025701	3-01-2001	<.04	<.10	.82	<.006	<.006	<.018	E.26
64	EF-5422Z	305834091033701	5-09-2001	<.04	<.10	.77	<.006	<.006	<.018	E.29
65	ST-6753Z	303032090051701	5-10-2001	<.04	<.10	E.03	<.006	.038	.034	<.33
66	ST-8617Z	303623090071601	5-24-2001	<.04	<.10	.11	<.006	.013	<.020	<.30
67	EB-6257Z	304118091055201	6-04-2001	<.04	<.10	E.03	<.006	.021	E.011	<.30
68	EF-5348Z	305808091101701	6-14-2001	<.04	<.10	E.03	<.006	.087	.083	E.29
69	EF-5450Z	304811091130701	6-28-2001	E.04	<.10	.95	E.004	<.006	<.020	E.19
70	Li-7429Z	303506090554101	6-14-2001	.55	.91	<.05	<.006	.192	.181	9.90
71	Li-7282Z	303026090420301	6-20-2001	<.04	.10	E.04	<.006	.036	.028	.35
72	Ta-8435Z	303506090184101	6-21-2001	<.04	<.10	.08	<.006	<.006	<.020	E.26
73	SH-5344Z	304001090390101	6-27-2001	E.04	<.10	E.03	.006	<.006	<.020	E.27
74	Li-7148Z	302608090534101	7-12-2001	.38	.42	<.05	<.006	.215	.245	.87
75	Ta-7292Z	302711090211801	7-19-2001	<.04	E.08	<.05	<.006	.233	.231	2.40
76	Ta- 788	303728090294301	8-02-2001	<.04	<.10	1.19	<.006	<.006	<.020	E.23
77	Wa-7324Z	305908090140901	7-26-2001	E.03	<.10	.06	<.006	<.006	<.020	.36
78	MS.AM-D016	311613090392001	8-07-2001	E.02	<.10	.25	<.006	<.006	<.020	E.18
79	MS.PK-G021	310722090280801	8-08-2001	<.04	<.10	E.04	<.006	.010	<.020	E.18
80	ST-6940Z	302725090094101	8-09-2001	E.03	E.05	E.03	<.006	.109	.103	<.30
81	Ta-9622Z	304636090303601	8-16-2001	<.04	<.10	.25	<.006	<.006	<.020	.43
82	EF-5228Z	304727090513901	9-11-2001	<.04	<.10	.08	<.006	<.006	<.020	.45
83	Ta- 815	305750090301101	9-19-2001	<.04	<.10	1.34	<.006	<.006	<.020	<.30
84	Ta-6551Z	304707090173301	9-20-2001	<.04	<.10	.05	<.006	<.006	<.020	E.21
85	Li-6487Z	301959090504201	9-21-2001	.22	.28	<.05	<.006	.152	.148	.35
86	EB-8065Z	302119090550802	9-25-2001	1.95	2.40	E.04	<.006	.436	.457	2.10
87	Li-6203Z	302049090390401	9-25-2001	.44	.56	<.05	<.006	.409	.397	2.20
88	WF-5115Z	305013091194001	9-26-2001	<.04	<.10	.13	<.006	E.004	<.020	E.18
89	Ta-7401Z	302934090321901	9-27-2001	.21	.19	<.05	<.006	.146	.122	E.16
90	MS.AM-M006	310700090520001	9-28-2001	<.04	<.10	.45	<.006	<.006	<.020	E.16

Appendix 6. Pesticide concentrations in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001

[Numbers below the chemical names are the Chemical Abstracts Service (CAS) numbers. All concentrations are in micrograms per liter. ACAD, Acadian-Pontchartrain Study Unit of the National Water Quality Assessment Program; DOTD, Louisiana Department of Transportation and Development; USGS, U.S. Geological Survey.; H, herbicide; I, insecticide; F, fungicide; <, less than; E, estimated; --, no data]

ACAD well no. (fig. 1)	DOTD local well number	USGS site identification number	Sample date	Acetochlor H 34256-82-1	Acifluorfen H 50594-66-6	Alachlor H 15972-60-8	Aldicarb I 116-06-3	Atrazine H 1912-24-9	Azinphos-methyl I 86-50-0	Bendiocarb I 22781-23-3
31	Be-6084Z	304409093171801	6-06-2000	<0.002	<0.06	<0.002	<0.08	<0.001	<0.001	<0.061
32	Be-5928Z	304140093343502	6-07-2000	<.002	<.06	<.002	<.08	<.001	<.001	<.061
33	Be-6065Z	303153093303201	6-08-2000	<.002	<.06	<.002	<.08	<.001	<.001	<.061
34	Ev-5500Z	303550092252401	7-10-2000	<.002	<.06	<.002	<.08	<.001	<.001	<.061
35	JD-5177Z	301009092554501	7-18-2000	<.002	<.06	.032	<.08	.056	<.001	<.061
36	JD-5371Z	300627092464302	7-12-2000	<.002	<.06	<.002	<.08	<.001	<.001	<.061
37	Be-5764Z	305020093003001	7-19-2000	<.002	<.06	<.002	<.08	<.001	<.001	<.061
38	Ac-6896Z	300825092350001	7-21-2000	<.002	<.06	<.002	<.08	<.001	<.001	<.061
39	Be-6077Z	303626093161201	7-26-2000	<.002	<.06	<.002	<.08	<.001	<.001	<.061
40	Al-5243Z	303647092573301	7-27-2000	<.002	<.06	<.002	<.08	<.001	<.001	<.061
41	Ve-7436Z	300718092125801	8-02-2000	<.002	<.06	<.002	<.08	<.001	<.001	<.061
42	Ve-170	300121092005701	8-03-2000	<.002	<.06	<.002	<.08	<.001	<.001	<.061
43	Cu-7082Z	300816093280501	8-16-2000	<.002	<.06	<.002	<.08	<.001	<.001	<.061
44	V-8701Z	305810093034001	8-17-2000	<.002	<.06	<.002	<.08	<.001	<.001	<.061
45	Ve-9241Z	295640092144801	8-18-2000	<.002	<.06	<.002	<.08	<.001	<.001	<.061
46	Cn-5874Z	300111093101601	9-07-2000	<.002	<.06	<.002	<.08	<.001	<.001	<.061
47	SL-6924Z	303112092034001	9-11-2000	--	<.06	--	<.08	--	--	<.061
48	R-5964Z	305949092363001	9-19-2000	--	<.06	--	<.08	--	--	<.061
49	Ac-6998Z	302145092212501	9-26-2000	<.002	<.06	<.002	<.08	--	<.001	<.061
50	JD-5938Z	302109092523101	11-14-2000	<.004	<.06	<.002	<.08	<.007	<.050	<.061
51	Cu-7967Z	301707093223202	11-15-2000	<.004	<.06	<.002	<.08	<.007	<.050	<.061
52	Cu-7410Z	302108093405103	11-21-2000	<.004	<.06	<.002	<.08	<.007	<.050	<.061
53	Ac-6112Z	301947092320101	11-20-2000	<.004	<.06	<.002	<.08	<.007	<.050	<.061
54	Lf-9803Z	301538092021301	11-29-2000	<.004	<.06	<.002	<.08	<.007	<.050	<.061
55	Al-5167Z	304857092363601	12-12-2000	<.004	<.06	<.002	<.08	<.007	<.050	<.061
56	Al-5506Z	304128092450401	12-14-2000	<.004	<.06	<.002	<.08	<.007	<.050	<.061
57	Ac-6512Z	302121092310201	1-10-2001	<.004	<.06	<.002	<.08	<.007	<.050	<.061
58	Ev-5508Z	305150092213101	1-11-2001	<.004	<.06	<.002	<.08	<.007	<.050	<.061
59	Cu-5250Z	302403093084601	1-18-2001	<.004	<.06	<.002	<.08	<.007	<.050	<.061
60	Al-5240Z	303947092534101	2-06-2001	<.004	<.06	<.002	<.08	<.007	<.050	<.061

Appendix 6. Pesticide concentrations in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001—Continued

ACAD well number (fig. 1)	DOTD local well number	USGS site identification number	Sample date	Acetochlor H 34256-82-1	Acifluorfen H 50594-66-6	Alachlor H 15972-60-8	Aldicarb I 116-06-3	Atrazine H 1912-24-9	Azinphos-methyl I 86-50-0	Bendiocarb I 22781-23-3
61	SH-5527Z	305840090393801	2-14-2001	<0.004	<0.06	<0.002	<0.08	<0.007	<0.050	<0.061
62	SH-5460Z	304727090392001	2-15-2001	--	<.06	--	<.08	<.074	--	<.061
63	EF-5282Z	305130091025701	3-01-2001	<.004	<.06	<.002	<.08	<.007	<.050	<.061
64	EF-5422Z	305834091033701	5-09-2001	<.004	<.06	<.002	<.08	<.007	<.050	<.061
65	ST-6753Z	303032090051701	5-10-2001	<.004	<.06	<.002	<.08	<.007	<.050	<.061
66	ST-8617Z	303623090071601	5-24-2001	<.004	<.007	<.002	<.04	<.007	<.050	<.025
67	EB-6257Z	304118091055201	6-04-2001	<.004	<.007	<.002	<.04	<.007	<.050	<.025
68	EF-5348Z	305808091101701	6-14-2001	<.004	<.007	<.002	<.04	<.007	<.050	<.025
69	EF-5450Z	304811091130701	7-05-2001	<.004	<.007	<.002	<.04	E.004	<.050	<.025
70	Li-7429Z	303506090554101	6-14-2001	<.004	<.007	<.002	<.04	E.006	<.050	<.025
71	Li-7282Z	303026090420301	6-20-2001	<.004	<.007	<.002	<.04	<.007	<.050	<.025
72	Ta-8435Z	303506090184101	6-21-2001	<.004	<.007	<.002	<.04	<.007	<.050	<.025
73	SH-5344Z	304001090390101	7-05-2001	<.004	<.007	<.002	<.04	<.007	<.050	<.025
74	Li-7148Z	302608090534101	7-12-2001	<.004	<.007	<.002	<.04	<.007	<.050	<.025
75	Ta-7292Z	302711090211801	7-19-2001	<.004	<.007	<.002	<.04	<.007	<.050	<.025
76	Ta- 788	303728090294301	8-02-2001	<.004	<.007	<.002	<.04	<.007	<.050	<.025
77	Wa-7324Z	305908090140901	7-26-2001	<.004	<.007	<.002	<.04	<.007	<.050	<.025
78	MS.AM-D016	311613090392001	8-07-2001	<.004	<.007	<.002	<.04	<.007	<.050	<.025
79	MS.PK-G021	310722090280801	8-08-2001	<.004	<.007	<.002	<.04	<.007	<.050	<.025
80	ST-6940Z	302725090094101	8-09-2001	<.004	<.007	<.002	<.04	<.007	<.050	<.025
81	Ta-9622Z	304636090303601	8-16-2001	<.004	<.007	<.002	<.04	<.007	<.050	<.025
82	EF-5228Z	304727090513901	9-11-2001	<.004	<.007	<.002	<.04	<.007	<.050	<.025
83	Ta- 815	305750090301101	9-19-2001	<.004	<.007	<.002	<.04	<.007	<.050	<.025
84	Ta-6551Z	304707090173301	9-20-2001	<.004	<.007	<.002	<.04	<.009	<.050	<.025
85	Li-6487Z	301959090504201	9-21-2001	<.004	<.007	<.002	<.04	<.007	<.050	<.025
86	EB-8065Z	302119090550802	9-25-2001	<.004	<.007	<.002	<.04	<.007	<.050	<.025
87	Li-6203Z	302049090390401	9-25-2001	<.004	<.007	<.002	<.04	<.007	<.050	<.025
88	WF-5115Z	305013091194001	9-26-2001	<.004	<.007	<.002	<.04	<.007	<.050	<.025
89	Ta-7401Z	302934090321901	9-27-2001	<.004	<.007	<.002	<.04	<.007	<.050	<.025
90	MS.AM-M006	310700090520001	9-28-2001	<.004	<.007	<.002	<.04	<.007	<.050	<.025

Appendix 6. Pesticide concentrations in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001—Continued

ACAD well number (fig. 1)	Benfluralin H 1861-40-1	Benomyl F 17804-35-2	Bensulfuron methyl 83055-99-6	Bentazon H 25057-89-0	Bromacil H 314-40-9	Bromoxynil H 1689-84-5	Butylate H 2008-41-5	Carbaryl I 63-25-2	Carbofuran I 1563-66-2	Chloramben methyl ester H 133-90-4
31	<0.002	<0.022	<0.0482	<0.02	<0.08	<0.06	<0.002	<0.003	<0.003	<0.11
32	<.002	<.022	<.0482	<.02	<.08	<.06	<.002	<.003	<.003	<.11
33	<.002	<.022	<.0482	<.02	<.08	<.06	<.002	<.003	<.003	<.11
34	<.002	<.022	<.0482	<.02	<.08	<.06	<.002	<.003	<.003	<.11
35	<.002	<.022	<.0482	<.02	<.08	<.06	<.002	<.003	<.003	<.11
36	<.002	<.022	<.0482	<.02	<.08	<.06	<.002	<.003	<.003	<.11
37	<.002	<.022	<.0482	<.02	<.08	<.06	<.002	<.003	<.003	<.11
38	<.002	<.022	<.0482	<.02	<.08	<.06	<.002	<.003	<.003	<.11
39	<.002	<.022	<.0482	<.02	<.08	<.06	<.002	<.003	<.003	<.11
40	<.002	<.022	<.0482	<.02	<.08	<.06	<.002	<.003	<.003	<.11
41	<.002	<.022	<.0482	<.02	<.08	<.06	<.002	<.003	<.003	<.11
42	<.002	<.022	<.0482	<.02	<.08	<.06	<.002	<.003	<.003	<.11
43	<.002	<.022	<.0482	<.02	<.08	<.06	<.002	<.003	<.003	<.11
44	<.002	<.022	<.0482	<.02	<.08	<.06	<.002	<.003	<.003	<.11
45	<.002	<.022	<.0482	<.02	<.08	<.06	<.002	<.003	<.003	<.11
46	<.002	<.022	<.0482	<.02	<.08	<.06	<.002	<.003	<.003	<.11
47	--	<.022	<.0482	<.02	<.08	<.06	--	--	--	<.11
48	--	<.022	<.0482	<.02	<.08	<.06	--	--	--	<.11
49	<.002	<.022	<.0482	<.02	<.08	<.06	<.002	<.003	<.003	<.11
50	<.010	<.022	<.0482	<.02	<.08	<.06	<.002	<.041	<.020	<.11
51	<.010	<.022	<.0482	<.02	<.08	<.06	<.002	<.041	<.020	<.11
52	<.010	<.022	<.0482	<.02	<.08	<.06	<.002	<.041	<.020	<.11
53	<.010	<.022	<.0482	<.02	<.08	<.06	<.002	<.041	<.020	<.11
54	<.010	<.022	<.0482	<.02	<.08	<.06	<.002	<.041	<.020	<.11
55	<.010	<.022	<.0482	<.02	<.08	<.06	<.002	<.041	<.020	<.11
56	<.010	<.022	<.0482	<.02	<.08	<.06	<.002	<.041	<.020	<.11
57	<.010	<.022	<.0482	<.02	<.08	<.06	<.002	<.041	<.020	<.11
58	<.010	<.022	<.0482	<.02	<.08	<.06	<.002	<.041	<.020	<.11
59	<.010	<.022	<.0482	<.02	<.08	<.06	<.002	<.041	<.020	<.11
60	<.010	<.022	<.0482	<.02	<.08	<.06	<.002	<.041	<.020	<.11

Appendix 6. Pesticide concentrations in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001—Continued

ACAD well number (fig. 1)	Benfluralin H 1861-40-1	Benomyl F 17804-35-2	Bensulfuron methyl 83055-99-6	Bentazon H 25057-89-0	Bromacil H 314-40-9	Bromoxynil H 1689-84-5	Butylate H 2008-41-5	Carbaryl I 63-25-2	Carbofuran I 1563-66-2	Chloramben methyl ester H 133-90-4
61	<0.010	<0.022	<0.0482	<0.02	<0.08	<0.06	<0.002	<0.041	<0.020	<0.11
62	--	<.022	<.0482	<.02	<.08	<.06	--	--	--	<.11
63	<.010	<.022	<.0482	<.02	<.08	<.06	<.002	<.041	<.020	<.11
64	<.010	<.022	<.0482	--	<.08	<.06	<.002	<.041	<.020	<.11
65	<.010	<.022	<.0482	--	<.08	<.06	<.002	<.041	<.020	<.11
66	<.010	<.004	<.0158	<.01	<.03	<.02	<.002	<.041	<.020	<.02
67	<.010	<.004	<.0158	<.01	<.03	<.02	<.002	<.041	<.020	<.02
68	<.010	<.004	<.0158	<.01	<.03	<.02	<.002	<.041	<.020	<.02
69	<.010	<.004	<.0158	<.01	<.03	<.02	<.002	<.041	<.020	<.02
70	<.010	<.004	<.0158	<.01	<.03	<.02	<.002	E.003	<.020	<.02
71	<.010	<.004	<.0158	<.01	<.03	<.02	<.002	<.041	<.020	<.02
72	<.010	<.004	<.0158	<.01	<.03	<.02	<.002	<.041	<.020	<.02
73	<.010	<.004	<.0158	<.01	<.03	<.02	<.002	<.041	<.020	<.02
74	<.010	<.004	<.0158	<.01	<.03	<.02	<.002	<.041	<.020	<.02
75	<.010	<.004	<.0158	<.01	<.03	<.02	<.002	<.041	<.020	<.02
76	<.010	<.004	<.0158	<.01	<.03	<.02	<.002	<.041	<.020	<.02
77	<.010	<.004	<.0158	<.01	<.03	<.02	<.002	<.041	<.020	<.02
78	<.010	<.004	<.0158	<.01	<.03	<.02	<.002	<.041	<.020	<.02
79	<.010	<.004	<.0158	<.01	<.03	<.02	<.002	<.041	<.020	<.02
80	<.010	<.004	<.0158	<.01	<.03	<.02	<.002	<.041	<.020	<.02
81	<.010	<.004	<.0158	<.01	<.03	<.02	<.002	<.041	<.020	<.02
82	<.010	<.004	<.0158	<.01	<.03	<.02	<.002	<.041	<.020	<.02
83	<.010	<.004	<.0158	<.01	<.03	<.02	<.002	<.041	<.020	<.02
84	<.010	<.004	<.0158	<.01	<.03	<.02	<.002	<.041	<.020	<.02
85	<.010	<.004	<.0158	<.01	<.03	<.02	<.002	<.041	<.020	<.02
86	<.010	<.004	<.0158	<.01	<.03	<.02	<.002	<.041	<.020	<.02
87	<.010	<.004	<.0158	<.01	<.03	<.02	<.002	<.041	<.020	<.02
88	<.010	<.004	<.0158	<.01	<.03	<.02	<.002	<.041	<.020	<.02
89	<.010	<.004	<.0158	<.01	<.03	<.02	<.002	<.041	<.020	<.02
90	<.010	<.004	<.0158	<.01	<.03	<.02	<.002	<.041	<.020	<.02

Appendix 6. Pesticide concentrations in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001—Continued

ACAD well number (fig. 1)	Chlorimuron H 90982-32-4	Chlorothalonil F 1897-45-6	Chlorpyrifos I 2921-88-2	Clopyralid H 1702-17-6	Cyanazine H 21725-46-2	Cycloate H 1134-23-2	2,4-D H 94-75-7	Dacthal (DCPA) H 1861-32-1	Dacthal monoacid H 887-54-7	2,4-DB H 94-82-6
31	<0.037	<0.05	<0.004	<0.04	<0.004	<0.05	<0.08	<0.002	<0.07	<0.05
32	<.037	<.05	<.004	<.04	<.004	<.05	<.08	<.002	<.07	<.05
33	<.037	<.05	<.004	<.04	<.004	<.05	<.08	<.002	<.07	<.05
34	<.037	<.05	<.004	<.04	<.004	<.05	<.08	<.002	<.07	<.05
35	<.037	<.05	<.004	<.04	<.004	<.05	<.08	<.002	<.07	<.05
36	<.037	<.05	<.004	<.04	<.004	<.05	<.08	<.002	<.07	<.05
37	<.037	<.05	<.004	<.04	<.004	<.05	<.08	<.002	<.07	<.05
38	<.037	<.05	<.004	<.04	<.004	<.05	<.08	<.002	<.07	<.05
39	<.037	<.05	<.004	<.04	<.004	<.05	<.08	<.002	<.07	<.05
40	<.037	<.05	<.004	<.04	<.004	<.05	<.08	<.002	<.07	<.05
41	<.037	<.05	<.004	<.04	<.004	<.05	<.08	<.002	<.07	<.05
42	<.037	<.05	<.004	<.04	<.004	<.05	<.08	<.002	<.07	<.05
43	<.037	<.05	<.004	<.04	<.004	<.05	<.08	<.002	<.07	<.05
44	<.037	<.05	<.004	<.04	<.004	<.05	<.08	<.002	<.07	<.05
45	<.037	<.05	<.004	<.04	<.004	<.05	<.08	<.002	--	<.05
46	<.037	<.05	<.004	<.04	<.004	<.05	<.08	<.002	<.07	<.05
47	<.037	<.05	--	<.04	--	<.05	<.08	--	<.07	<.05
48	<.037	<.05	--	<.04	--	<.05	<.08	--	<.07	<.05
49	<.037	<.05	<.004	<.04	<.004	<.05	<.08	<.002	<.07	<.05
50	<.037	<.05	<.005	<.04	<.018	<.05	<.08	<.003	<.07	<.05
51	<.037	<.05	<.005	<.04	<.018	<.05	<.08	<.003	<.07	<.05
52	<.037	<.05	<.005	<.04	<.018	<.05	<.08	<.003	<.07	<.05
53	<.037	<.05	<.005	<.04	<.018	<.05	<.08	<.003	<.07	<.05
54	<.037	<.05	<.005	<.04	<.018	<.05	<.08	<.003	<.07	<.05
55	<.037	<.05	<.005	<.04	<.018	<.05	<.08	<.003	<.07	<.05
56	<.037	<.05	<.005	<.04	<.018	<.05	<.08	<.003	<.07	<.05
57	<.037	<.05	<.005	<.04	<.018	<.05	<.08	<.003	<.07	<.05
58	<.037	<.05	<.005	<.04	<.018	<.05	<.08	<.003	<.07	<.05
59	<.037	<.05	<.005	<.04	<.018	<.05	<.08	<.003	<.07	<.05
60	<.037	<.05	<.005	<.04	<.018	<.05	<.08	<.003	<.07	<.05

Appendix 6. Pesticide concentrations in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001—Continued

ACAD well number (fig. 1)	Chlorimuron H 90982-32-4	Chlorothalonil F 1897-45-6	Chlorpyrifos I 2921-88-2	Clopyralid H 1702-17-6	Cyanazine H 21725-46-2	Cycloate H 1134-23-2	2,4-D H 94-75-7	Dacthal (DCPA) H 1861-32-1	Dacthal monoacid H 887-54-7	2,4-DB H 94-82-6
61	<0.037	<0.05	<0.005	<0.04	<0.018	<0.05	<0.08	<0.003	<0.07	<0.05
62	<.037	<.05	--	<.04	--	<.05	<.08	--	<.07	<.05
63	<.037	<.05	<.005	<.04	<.018	<.05	<.08	<.003	<.07	<.05
64	<.037	<.05	<.005	<.04	<.018	<.05	<.08	<.003	<.07	<.05
65	<.037	<.05	<.005	<.04	<.018	<.05	<.08	<.003	<.07	<.05
66	<.010	<.04	<.005	<.01	<.018	<.01	<.02	<.003	<.01	<.02
67	<.010	<.04	<.005	<.01	<.018	<.01	<.02	<.003	<.01	<.02
68	<.010	<.04	<.005	<.01	<.018	<.01	<.02	<.003	<.01	<.02
69	<.010	<.04	<.005	<.01	<.018	<.01	<.02	<.003	<.01	<.02
70	<.010	<.04	<.005	<.01	<.018	<.01	<.02	<.003	<.01	<.02
71	<.010	<.04	<.005	<.01	<.018	<.01	<.02	<.003	<.01	<.02
72	<.010	<.04	<.005	<.01	<.018	<.01	<.02	<.003	<.01	<.02
73	<.010	<.04	<.005	<.01	<.018	<.01	<.02	<.003	<.01	<.02
74	<.010	<.04	<.005	<.01	<.018	<.01	<.02	<.003	<.01	<.02
75	<.010	<.04	<.005	<.01	<.018	<.01	<.02	<.003	<.01	<.02
76	<.010	<.04	<.005	<.01	<.018	<.01	<.02	<.003	<.01	<.02
77	<.010	<.04	<.005	<.01	<.018	<.01	<.02	<.003	<.01	<.02
78	<.010	<.04	<.005	<.01	<.018	<.01	<.02	<.003	<.01	<.02
79	<.010	<.04	<.005	<.01	<.018	<.01	<.02	<.003	<.01	<.02
80	<.010	<.04	<.005	<.01	<.018	<.01	<.02	<.003	<.01	<.02
81	<.010	<.04	<.005	<.01	<.018	<.01	<.02	<.003	<.01	<.02
82	<.010	<.04	<.005	<.01	<.018	<.01	<.02	<.003	<.01	<.02
83	<.010	<.04	<.005	<.01	<.018	<.01	<.02	<.003	<.01	<.02
84	<.010	<.04	<.005	<.01	<.018	<.01	<.02	<.003	<.01	<.02
85	<.010	<.04	<.005	<.01	<.018	<.01	<.02	<.003	<.01	<.02
86	<.010	<.04	<.005	<.01	<.018	<.01	<.02	<.003	<.01	<.02
87	<.010	<.04	<.005	<.01	<.018	<.01	<.02	<.003	<.01	<.02
88	<.010	<.04	<.005	<.01	<.018	<.01	<.02	<.003	<.01	<.02
89	<.010	<.04	<.005	<.01	<.018	<.01	<.02	<.003	<.01	<.02
90	<.010	<.04	<.005	<.01	<.018	<.01	<.02	<.003	<.01	<.02

Appendix 6. Pesticide concentrations in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001—Continued

ACAD well number (fig. 1)	Diazinon I 333-41-5	Dicamba H 1918-00-9	Dichlorprop H 120-36-5	Dieldrin I 60-57-1	Dinoseb H 88-85-7	Diphenamid H 957-51-7	Disulfoton I 298-04-4	Diuron H 330-54-1	2,4-D methyl ester H 1928-38-7	EPTC H 759-94-4	Ethalfluralin H 55283-68-6
31	<0.002	<0.10	<0.05	<0.001	<0.04	<0.06	<0.017	<0.08	<0.086	<0.002	<0.004
32	<.002	<.10	<.05	<.001	<.04	<.06	<.017	<.08	<.086	<.002	<.004
33	<.002	<.10	<.05	<.001	<.04	<.06	<.017	<.08	<.086	<.002	<.004
34	<.002	<.10	<.05	<.001	<.04	<.06	<.017	<.08	<.086	<.002	<.004
35	<.002	<.10	<.05	<.001	<.04	<.06	<.017	<.08	<.086	<.002	<.004
36	<.002	<.10	<.05	<.001	<.04	<.06	<.017	<.08	<.086	<.002	<.004
37	<.002	<.10	<.05	<.001	<.04	<.06	<.017	<.08	<.086	<.002	<.004
38	<.002	<.10	<.05	<.001	<.04	<.06	<.017	<.08	<.086	<.002	<.004
39	<.002	<.10	<.05	<.001	<.04	<.06	<.017	<.08	<.086	<.002	<.004
40	<.002	<.10	<.05	<.001	<.04	<.06	<.017	<.08	<.086	<.002	<.004
41	<.002	<.10	<.05	<.001	<.04	<.06	<.017	<.08	<.086	<.002	<.004
42	<.002	<.10	<.05	<.001	<.04	<.06	<.017	<.08	<.086	<.002	<.004
43	<.002	<.10	<.05	<.001	<.04	<.06	<.017	<.08	<.086	<.002	<.004
44	<.002	<.10	<.05	<.001	<.04	<.06	<.017	<.08	<.086	<.002	<.004
45	<.002	<.10	<.05	<.001	<.04	<.06	<.017	<.08	<.086	<.002	<.004
46	<.002	<.10	<.05	<.001	<.04	<.06	<.017	<.08	<.086	<.002	<.004
47	--	<.10	<.05	--	<.04	<.06	--	<.08	<.086	--	--
48	--	<.10	<.05	--	<.04	<.06	--	<.08	<.086	--	--
49	<.002	<.10	<.05	<.001	<.04	<.06	<.017	<.08	<.086	<.002	<.004
50	<.005	<.10	<.05	<.005	<.04	<.06	<.021	<.08	<.086	<.002	<.009
51	<.005	<.10	<.05	<.005	<.04	<.06	<.021	<.08	<.086	<.002	<.009
52	<.005	<.10	<.05	<.005	<.04	<.06	<.021	<.08	<.086	<.002	<.009
53	<.005	<.10	<.05	<.005	<.04	<.06	<.021	<.08	<.086	<.002	<.009
54	<.005	<.10	<.05	<.005	<.04	<.06	<.021	<.08	<.086	<.002	<.009
55	<.005	<.10	<.05	<.005	<.04	<.06	<.021	<.08	<.086	<.002	<.009
56	<.005	<.10	<.05	<.005	<.04	<.06	<.021	<.08	<.086	<.002	<.009
57	<.005	<.10	<.05	<.005	<.04	<.06	<.021	<.08	<.086	<.002	<.009
58	<.005	<.10	<.05	<.005	<.04	<.06	<.021	<.08	<.086	<.002	<.009
59	<.005	<.10	<.05	<.005	<.04	<.06	<.021	<.08	<.086	<.002	<.009
60	<.005	<.10	<.05	<.005	<.04	<.06	<.021	<.08	<.086	<.002	<.009

Appendix 6. Pesticide concentrations in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001—Continued

ACAD well number (fig. 1)	Diazinon I 333-41-5	Dicamba H 1918-00-9	Dichlorprop H 120-36-5	Dieldrin I 60-57-1	Dinoseb H 88-85-7	Diphenamid H 957-51-7	Disulfoton I 298-04-4	Diuron H 330-54-1	2,4-D methyl ester H 1928-38-7	EPTC H 759-94-4	Ethalfluralin H 55283-68-6
61	<0.005	<0.10	<0.05	<0.005	<0.04	<0.06	<0.021	<0.08	<0.086	<0.002	<0.009
62	--	<.10	<.05	--	<.04	<.06	--	<.08	<.086	--	--
63	<.005	<.10	<.05	<.005	<.04	<.06	<.021	<.08	<.086	<.002	<.009
64	<.005	<.10	<.05	<.005	<.04	<.06	<.021	<.08	<.086	<.002	<.009
65	<.005	<.10	<.05	<.005	<.04	<.06	<.021	<.08	<.086	<.002	<.009
66	<.005	<.01	<.01	<.005	<.01	<.03	<.021	<.01	<.009	<.002	<.009
67	<.005	<.01	<.01	<.005	<.01	<.03	<.021	<.01	<.009	<.002	<.009
68	<.005	<.01	<.01	<.005	<.01	<.03	<.021	<.01	<.009	<.002	<.009
69	<.005	<.01	<.01	<.005	<.01	<.03	<.021	<.01	<.009	<.002	<.009
70	.006	<.01	<.01	<.005	<.01	<.03	<.021	<.01	<.009	<.002	<.009
71	<.005	<.01	<.01	<.005	<.01	<.03	<.021	<.01	<.009	<.002	<.009
72	<.005	<.01	<.01	<.005	<.01	<.03	<.021	<.01	<.009	<.002	<.009
73	<.005	<.01	<.01	<.005	<.01	<.03	<.021	<.01	<.009	<.002	<.009
74	<.005	<.01	<.01	<.005	<.01	<.03	<.021	<.01	<.009	<.002	<.009
75	<.005	<.01	<.01	<.005	<.01	<.03	<.021	<.01	<.009	<.002	<.009
76	<.005	<.01	<.01	<.005	<.01	<.03	<.021	<.01	<.009	<.002	<.009
77	<.005	<.01	<.01	<.005	<.01	<.03	<.021	<.01	<.009	<.002	<.009
78	<.005	<.01	<.01	<.005	<.01	<.03	<.021	<.01	<.009	<.002	<.009
79	<.005	<.01	<.01	<.005	<.01	<.03	<.021	<.01	<.009	<.002	<.009
80	<.005	<.01	<.01	<.005	<.01	<.03	<.021	<.01	<.009	<.002	<.009
81	<.005	<.01	<.01	<.005	<.01	<.03	<.021	<.01	<.009	<.002	<.009
82	<.005	<.01	<.01	<.005	<.01	<.03	<.021	<.01	<.009	<.002	<.009
83	<.005	<.01	<.01	<.005	<.01	<.03	<.021	<.01	<.009	<.002	<.009
84	<.005	<.01	<.01	<.005	<.01	<.03	<.021	<.01	<.009	<.002	<.009
85	<.005	<.01	<.01	<.005	<.01	<.03	<.021	<.01	<.009	<.002	<.009
86	<.005	<.01	<.01	<.005	<.01	<.03	<.021	<.01	<.009	<.002	<.009
87	<.005	<.01	<.01	<.005	<.01	<.03	<.021	<.01	<.009	<.002	<.009
88	<.005	<.01	<.01	<.005	<.01	<.03	<.021	<.01	<.009	<.002	<.009
89	<.005	<.01	<.01	<.005	<.01	<.03	<.021	<.01	<.009	<.002	<.009
90	<.005	<.01	<.01	<.005	<.01	<.03	<.021	<.01	<.009	<.002	<.009

Appendix 6. Pesticide concentrations in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001—Continued

ACAD well number (fig. 1)	Ethopropos I 13194-48-4	Fenuron H 101-42-8	Fipronil I 120068-37-3	Flumetsulam H 98967-40-9	Fluometuron H 2164-17-2	Fonofos I 944-22-9	HCH, alpha I 319-84-6	Imazaquin H 81335-37-7	Imazethapyr H 81335-77-5	Imidacloprid I 13826-41-3	Lindane I 58-89-9
31	<0.003	<0.07	<0.004	<0.0866	<0.06	<0.003	<0.002	<0.103	<0.088	<0.106	<0.004
32	<.003	<.07	<.004	<.0866	<.06	<.003	<.002	<.103	<.088	<.106	<.004
33	<.003	<.07	<.004	<.0866	<.06	<.003	<.002	<.103	<.088	<.106	<.004
34	<.003	<.07	<.004	<.0866	<.06	<.003	<.002	<.103	<.088	<.106	<.004
35	<.003	<.07	<.004	<.0866	<.06	<.003	<.002	<.103	<.088	<.106	<.004
36	<.003	<.07	<.004	<.0866	<.06	<.003	<.002	<.103	<.088	<.106	<.004
37	<.003	<.07	<.004	<.0866	<.06	<.003	<.002	<.103	<.088	<.106	<.004
38	<.003	<.07	<.004	<.0866	<.06	<.003	<.002	<.103	<.088	<.106	<.004
39	<.003	<.07	<.004	<.0866	<.06	<.003	<.002	<.103	<.088	<.106	<.004
40	<.003	<.07	<.004	<.0866	<.06	<.003	<.002	<.103	<.088	<.106	<.004
41	<.003	<.07	<.004	<.0866	<.06	<.003	<.002	<.103	<.088	<.106	<.004
42	<.003	<.07	<.004	<.0866	<.06	<.003	<.002	<.103	<.088	<.106	<.004
43	<.003	<.07	<.004	<.0866	<.06	<.003	<.002	<.103	<.088	<.106	<.004
44	<.003	<.07	<.004	<.0866	<.06	<.003	<.002	<.103	<.088	<.106	<.004
45	<.003	<.07	<.004	<.0866	<.06	<.003	<.002	<.103	<.088	<.106	<.004
46	<.003	<.07	<.004	<.0866	<.06	<.003	<.002	<.103	<.088	<.106	<.004
47	--	<.07	<.004	<.0866	<.06	--	--	<.103	<.088	<.106	--
48	--	<.07	<.004	<.0866	<.06	--	--	<.103	<.088	<.106	--
49	<.003	<.07	<.004	<.0866	<.06	<.003	<.002	<.103	<.088	<.106	<.004
50	<.005	<.07	<.004	<.0866	<.06	<.003	<.005	<.103	<.088	<.106	<.004
51	<.005	<.07	<.004	<.0866	<.06	<.003	<.005	<.103	<.088	<.106	<.004
52	<.005	<.07	<.004	<.0866	<.06	<.003	<.005	<.103	<.088	<.106	<.004
53	<.005	<.07	<.004	<.0866	<.06	<.003	<.005	<.103	<.088	<.106	<.004
54	<.005	<.07	<.004	<.0866	<.06	<.003	<.005	<.103	<.088	<.106	<.004
55	<.005	<.07	<.004	<.0866	<.06	<.003	<.005	<.103	<.088	<.106	<.004
56	<.005	<.07	<.004	<.0866	<.06	<.003	<.005	<.103	<.088	<.106	<.004
57	<.005	<.07	--	<.0866	<.06	<.003	<.005	<.103	<.088	<.106	<.004
58	<.005	<.07	<.004	<.0866	<.06	<.003	<.005	<.103	<.088	<.106	<.004
59	<.005	<.07	<.004	<.0866	<.06	<.003	<.005	<.103	<.088	<.106	<.004
60	<.005	<.07	<.004	<.0866	<.06	<.003	<.005	<.103	<.088	<.106	<.004

Appendix 6. Pesticide concentrations in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001—Continued

ACAD well number (fig. 1)	Ethopropos I 13194-48-4	Fenuron H 101-42-8	Fipronil I 120068-37-3	Flumetsulam H 98967-40-9	Fluometuron H 2164-17-2	Fonofos I 944-22-9	HCH, alpha I 319-84-6	Imazaquin H 81335-37-7	Imazethapyr H 81335-77-5	Imidacloprid I 13826-41-3	Lindane I 58-89-9
61	<0.005	<0.07	--	<0.087	<0.06	<0.003	<0.005	<0.103	<0.088	<0.106	<0.004
62	--	<.07	--	<.087	<.06	--	--	<.103	<.088	<.106	--
63	<.005	<.07	--	<.087	<.06	<.003	<.005	<.103	<.088	<.106	<.004
64	<.005	<.07	--	<.087	<.06	<.003	<.005	<.103	<.088	<.106	<.004
65	<.005	<.07	--	<.087	<.06	<.003	<.005	<.103	<.088	<.106	<.004
66	<.005	<.03	--	<.011	<.03	<.003	<.005	<.016	<.017	<.007	<.004
67	<.005	<.03	--	<.011	<.03	<.003	<.005	<.016	<.017	<.007	<.004
68	<.005	<.03	--	<.011	<.03	<.003	<.005	<.016	<.017	<.007	<.004
69	<.005	<.03	--	<.011	<.03	<.003	<.005	<.016	<.017	<.007	<.004
70	<.005	<.03	--	<.011	<.03	<.003	<.005	<.016	<.017	<.007	<.004
71	<.005	<.03	<.004	<.011	<.03	<.003	<.005	<.016	<.017	<.007	<.004
72	<.005	<.03	<.004	<.011	<.03	<.003	<.005	<.016	<.017	<.007	<.004
73	<.005	<.03	<.004	<.011	<.03	<.003	<.005	<.016	<.017	<.007	<.004
74	<.005	<.03	<.004	<.011	<.03	<.003	<.005	<.016	<.017	<.007	<.004
75	<.005	<.03	<.004	<.011	<.03	<.003	<.005	<.016	<.017	<.007	<.004
76	<.005	<.03	<.004	<.011	<.03	<.003	<.005	<.016	<.017	<.007	<.004
77	<.005	<.03	<.004	<.011	<.03	<.003	<.005	<.016	<.017	<.007	<.004
78	<.005	<.03	--	<.011	<.03	<.003	<.005	<.016	<.017	<.007	<.004
79	<.005	<.03	--	<.011	<.03	<.003	<.005	<.016	<.017	<.007	<.004
80	<.005	<.03	--	<.011	<.03	<.003	<.005	<.016	<.017	<.007	<.004
81	<.005	<.03	--	<.011	<.03	<.003	<.005	<.016	<.017	<.007	<.004
82	<.005	<.03	--	<.011	<.03	<.003	<.005	<.016	<.017	<.007	<.004
83	<.005	<.03	--	<.011	<.03	<.003	<.005	<.016	<.017	<.007	<.004
84	<.005	<.03	--	<.011	<.03	<.003	<.005	<.016	<.017	<.007	<.004
85	<.005	<.03	--	<.011	<.03	<.003	<.005	<.016	<.017	<.007	<.004
86	<.005	<.03	--	<.011	<.03	<.003	<.005	<.016	<.017	<.007	<.004
87	<.005	<.03	--	<.011	<.03	<.003	<.005	<.016	<.017	<.007	<.004
88	<.005	<.03	--	<.011	<.03	<.003	<.005	<.016	<.017	<.007	<.004
89	<.005	<.03	--	<.011	<.03	<.003	<.005	<.016	<.017	<.007	<.004
90	<.005	<.03	--	<.011	<.03	<.003	<.005	<.016	<.017	<.007	<.004

Appendix 6. Pesticide concentrations in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001—Continued

ACAD well number (fig. 1)	Linuron H 330-55-2	Malathion I 121-75-5	MCPA H 94-74-6	MCPB H 94-81-5	Metalaxyl F 57837-19-1	Methiocarb I 2032-65-7	Methomyl I 16752-77-5	Methyl parathion I 298-00-0	Metolachlor H 51218-45-2	Metribuzin H 21087-64-9
31	<0.002	<0.005	<0.06	<0.06	<0.057	<0.08	<0.08	<0.006	<0.002	<0.004
32	<.002	<.005	<.06	<.06	<.057	<.08	<.08	<.006	<.002	<.004
33	<.002	<.005	<.06	<.06	<.057	<.08	<.08	<.006	<.002	<.004
34	<.002	<.005	<.06	<.06	<.057	<.08	<.08	<.006	.032	<.004
35	<.002	<.005	<.06	<.06	<.057	<.08	<.08	<.006	.252	.031
36	<.002	<.005	<.06	<.06	<.057	<.08	<.08	<.006	<.002	<.004
37	<.002	<.005	<.06	<.06	<.057	<.08	<.08	<.006	<.002	<.004
38	<.002	<.005	<.06	<.06	<.057	<.08	<.08	<.006	<.002	<.004
39	<.002	<.005	<.06	<.06	<.057	<.08	<.08	<.006	<.002	<.004
40	<.002	<.005	<.06	<.06	<.057	<.08	<.08	<.006	<.002	<.004
41	<.002	<.005	<.06	<.06	<.057	<.08	<.08	<.006	<.002	<.004
42	<.002	<.005	<.06	<.06	<.057	<.08	<.08	<.006	<.002	<.004
43	<.002	<.005	<.06	<.06	<.057	<.08	<.08	<.006	<.002	<.004
44	<.002	<.005	<.06	<.06	<.057	<.08	<.08	<.006	<.002	<.004
45	<.002	<.005	<.06	<.06	<.057	<.08	<.08	<.006	<.002	<.004
46	<.002	<.005	<.06	<.06	<.057	<.08	<.08	<.006	<.002	<.004
47	--	--	<.06	<.06	<.057	<.08	<.08	--	--	--
48	--	--	<.06	<.06	<.057	<.08	<.08	--	--	--
49	<.002	<.005	<.06	<.06	<.057	<.08	<.08	<.006	<.002	<.004
50	<.035	<.027	<.06	<.06	<.057	<.08	<.08	<.006	<.013	<.006
51	<.035	<.027	<.06	<.06	<.057	<.08	<.08	<.006	<.013	<.006
52	<.035	<.027	<.06	<.06	<.057	<.08	<.08	<.006	<.013	<.006
53	<.035	<.027	<.06	<.06	<.057	<.08	<.08	<.006	<.013	<.006
54	<.035	<.027	<.06	<.06	<.057	<.08	<.08	<.006	<.013	<.006
55	<.035	<.027	<.06	<.06	<.057	<.08	<.08	<.006	<.013	<.006
56	<.035	<.027	<.06	<.06	<.057	<.08	<.08	<.006	<.013	<.006
57	<.035	<.027	<.06	<.06	<.057	<.08	<.08	<.006	<.013	<.006
58	<.035	<.027	<.06	<.06	<.057	<.08	<.08	<.006	<.013	<.006
59	<.035	<.027	<.06	<.06	<.057	<.08	<.08	<.006	<.013	<.006
60	<.035	<.027	<.06	<.06	<.057	<.08	<.08	<.006	<.013	<.006

Appendix 6. Pesticide concentrations in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001—Continued

ACAD well number (fig. 1)	Linuron H 330-55-2	Malathion I 121-75-5	MCPA H 94-74-6	MCPB H 94-81-5	Metalaxyl F 57837-19-1	Methiocarb I 2032-65-7	Methomyl I 16752-77-5	Methyl parathion I 298-00-0	Metolachlor H 51218-45-2	Metribuzin H 21087-64-9
61	<0.035	<0.027	<0.06	<0.06	<0.057	<0.08	<0.08	<0.006	<0.013	<0.006
62	--	--	<.06	<.06	<.057	<.08	<.08	--	--	--
63	<.035	<.027	<.06	<.06	<.057	<.08	<.08	<.006	<.013	<.006
64	<.035	<.027	<.06	<.06	<.057	<.08	<.08	<.006	<.013	<.006
65	<.035	<.027	<.06	<.06	<.057	<.08	<.08	<.006	<.013	<.006
66	<.035	<.027	<.02	<.01	<.020	<.008	<.004	<.006	<.013	<.006
67	<.035	<.027	<.02	<.01	<.020	<.008	<.004	<.006	<.013	<.006
68	<.035	<.027	<.02	<.01	<.020	<.008	<.004	<.006	<.013	<.006
69	<.035	<.027	<.02	<.01	<.020	<.008	<.004	<.006	<.013	<.006
70	<.035	<.027	<.02	<.01	<.020	<.008	<.004	<.006	<.013	<.006
71	<.035	<.027	<.02	<.01	<.020	<.008	<.004	<.006	<.013	<.006
72	<.035	<.027	<.02	<.01	<.020	<.008	<.004	<.006	<.013	<.006
73	<.035	<.027	<.02	<.01	<.020	<.008	<.004	<.006	<.013	<.006
74	<.035	<.027	<.02	<.01	<.020	<.008	<.004	<.006	<.013	<.006
75	<.035	<.027	<.02	<.01	<.020	<.008	<.004	<.006	<.013	<.006
76	<.035	<.027	<.02	<.01	<.020	<.008	<.004	<.006	<.013	<.006
77	<.035	<.027	<.02	<.01	<.020	<.008	<.004	<.006	<.013	<.006
78	<.035	<.027	<.02	<.01	<.020	<.008	<.004	<.006	<.013	<.006
79	<.035	<.027	<.02	<.01	<.020	<.008	<.004	<.006	<.013	<.006
80	<.035	<.027	<.02	<.01	<.020	<.008	<.004	<.006	<.013	<.006
81	<.035	<.027	<.02	<.01	<.020	<.008	<.004	<.006	<.013	<.006
82	<.035	<.027	<.02	<.01	<.020	<.008	<.004	<.006	<.013	<.006
83	<.035	<.027	<.02	<.01	<.020	<.008	<.004	<.006	<.013	<.006
84	<.035	<.027	<.02	<.01	<.020	<.008	<.004	<.006	<.013	<.006
85	<.035	<.027	<.02	<.01	<.020	<.008	<.004	<.006	<.013	<.006
86	<.035	<.027	<.02	<.01	<.020	<.008	<.004	<.006	<.013	<.006
87	<.035	<.027	<.02	<.01	<.020	<.008	<.004	<.006	<.013	<.006
88	<.035	<.027	<.02	<.01	<.020	<.008	<.004	<.006	<.013	<.006
89	<.035	<.027	<.02	<.01	<.020	<.008	<.004	<.006	<.013	<.006
90	<.035	<.027	<.02	<.01	<.020	<.008	<.004	<.006	<.013	<.006

Appendix 6. Pesticide concentrations in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001—Continued

ACAD well number (fig. 1)	Metsulfuron methyl H 74223-64-6	Molinate H 2212-67-1	Napropamide H 15299-99-7	Neburon H 555-37-3	Nicosulfuron H 111991-09-4	Norflurazon H 27314-13-2	Oryzalin H 19044-88-3	Oxamyl I 23135-22-0	Parathion I 56-38-2	Pebulate H 1114-71-2
31	<0.114	<0.004	<0.003	<0.07	<0.065	<0.08	<0.07	<0.02	<0.004	<0.004
32	<.114	<.004	<.003	<.07	<.065	<.08	<.07	<.02	<.004	<.004
33	<.114	<.004	<.003	<.07	<.065	<.08	<.07	<.02	<.004	<.004
34	<.114	<.004	<.003	<.07	<.065	<.08	<.07	<.02	<.004	<.004
35	<.114	<.004	<.003	<.07	<.065	<.08	<.07	<.02	<.004	<.004
36	<.114	<.004	<.003	<.07	<.065	<.08	<.07	<.02	<.004	<.004
37	<.114	<.004	<.003	<.07	<.065	<.08	<.07	<.02	<.004	<.004
38	<.114	<.004	<.003	<.07	<.065	<.08	<.07	<.02	<.004	<.004
39	<.114	<.004	<.003	<.07	<.065	<.08	<.07	<.02	<.004	<.004
40	<.114	<.004	<.003	<.07	<.065	<.08	<.07	<.02	<.004	<.004
41	<.114	<.004	<.003	<.07	<.065	<.08	<.07	<.02	<.004	<.004
42	<.114	<.004	<.003	<.07	<.065	<.08	<.07	<.02	<.004	<.004
43	<.114	<.004	<.003	<.07	<.065	<.08	<.07	<.02	<.004	<.004
44	<.114	<.004	<.003	<.07	<.065	<.08	<.07	<.02	<.004	<.004
45	<.114	<.004	<.003	<.07	<.065	<.08	<.07	<.02	<.004	<.004
46	<.114	<.004	<.003	<.07	<.065	<.08	<.07	<.02	<.004	<.004
47	<.114	--	--	<.07	<.065	<.08	<.07	<.02	--	--
48	<.114	--	--	<.07	<.065	<.08	<.07	<.02	--	--
49	<.114	<.004	<.003	<.07	<.065	<.08	<.07	<.02	<.004	<.004
50	<.114	<.002	<.007	<.07	<.065	<.08	<.07	<.02	<.007	<.002
51	<.114	<.002	<.007	<.07	<.065	<.08	<.07	<.02	<.007	<.002
52	<.114	<.002	<.007	<.07	<.065	<.08	<.07	<.02	<.007	<.002
53	<.114	<.002	<.007	<.07	<.065	<.08	<.07	<.02	<.007	<.002
54	<.114	<.002	<.007	<.07	<.065	<.08	<.07	<.02	<.007	<.002
55	<.114	<.002	<.007	<.07	<.065	<.08	<.07	<.02	<.007	<.002
56	<.114	<.002	<.007	<.07	<.065	<.08	<.07	<.02	<.007	<.002
57	<.114	<.002	<.007	<.07	<.065	<.08	<.07	<.02	<.007	<.002
58	<.114	<.002	<.007	<.07	<.065	<.08	<.07	<.02	<.007	<.002
59	<.114	<.002	<.007	<.07	<.065	<.08	<.07	<.02	<.007	<.002
60	<.114	<.002	<.007	<.07	<.065	<.08	<.07	<.02	<.007	<.002

Appendix 6. Pesticide concentrations in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001—Continued

ACAD well number (fig. 1)	Metsulfuron methyl H 74223-64-6	Molinate H 2212-67-1	Napropamide H 15299-99-7	Neburon H 555-37-3	Nicosulfuron H 111991-09-4	Norflurazon H 27314-13-2	Oryzalin H 19044-88-3	Oxamyl I 23135-22-0	Parathion I 56-38-2	Pebulate H 1114-71-2
61	<0.114	<0.002	<0.007	<0.07	<0.065	<0.08	<0.07	<0.02	<0.007	<0.002
62	<.114	--	--	<.07	<.065	<.08	<.07	<.02	--	--
63	<.114	<.002	<.007	<.07	<.065	<.08	<.07	<.02	<.007	<.002
64	<.114	<.002	<.007	<.07	<.065	<.08	<.07	<.02	<.007	<.002
65	<.114	<.002	<.007	<.07	<.065	<.08	<.07	<.02	<.007	<.002
66	<.025	<.002	<.007	<.01	<.013	<.02	<.02	<.01	<.007	<.002
67	<.025	<.002	<.007	<.01	<.013	<.02	<.02	<.01	<.007	<.002
68	<.025	<.002	<.007	<.01	<.013	<.02	<.02	<.01	<.007	<.002
69	<.025	<.002	<.007	<.01	<.013	<.02	<.02	<.01	<.007	<.002
70	<.025	<.002	<.007	<.01	<.013	<.02	<.02	<.01	<.007	<.002
71	<.025	<.002	<.007	<.01	<.013	<.02	<.02	<.01	<.007	<.002
72	<.025	<.002	<.007	<.01	<.013	<.02	<.02	<.01	<.007	<.002
73	<.025	<.002	<.007	<.01	<.013	<.02	<.02	<.01	<.007	<.002
74	<.025	<.002	<.007	<.01	<.013	<.02	<.02	<.01	<.007	<.002
75	<.025	<.002	<.007	<.01	<.013	<.02	<.02	<.01	<.007	<.002
76	<.025	<.002	<.007	<.01	<.013	<.02	<.02	<.01	<.007	<.002
77	<.025	<.002	<.007	<.01	<.013	<.02	<.02	<.01	<.007	<.002
78	<.025	<.002	<.007	<.01	<.013	<.02	<.02	<.01	<.007	<.002
79	<.025	<.002	<.007	<.01	<.013	<.02	<.02	<.01	<.007	<.002
80	<.025	<.002	<.007	<.01	<.013	<.02	<.02	<.01	<.007	<.002
81	<.025	<.002	<.007	<.01	<.013	<.02	<.02	<.01	<.007	<.002
82	<.025	<.002	<.007	<.01	<.013	<.02	<.02	<.01	<.007	<.002
83	<.025	<.002	<.007	<.01	<.013	<.02	<.02	<.01	<.007	<.002
84	<.025	<.002	<.007	<.01	<.013	<.02	<.02	<.01	<.007	<.002
85	<.025	<.002	<.007	<.01	<.013	<.02	<.02	<.01	<.007	<.002
86	<.025	<.002	<.007	<.01	<.013	<.02	<.02	<.01	<.007	<.002
87	<.025	<.002	<.007	<.01	<.013	<.02	<.02	<.01	<.007	<.002
88	<.025	<.002	<.007	<.01	<.013	<.02	<.02	<.01	<.007	<.002
89	<.025	<.002	<.007	<.01	<.013	<.02	<.02	<.01	<.007	<.002
90	<.025	<.002	<.007	<.01	<.013	<.02	<.02	<.01	<.007	<.002

Appendix 6. Pesticide concentrations in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001—Continued

ACAD well number (fig. 1)	Pendimethalin H 40487-42-1	cis-Permethrin I 52341-33-0	Phorate I 298-02-2	Picloram H 1918-02-1	Prometon H 1610-18-0	Pronamide H 23950-58-5	Propachlor H 1918-16-7	Propanil H 709-98-8	Propargite I 2312-35-8	Propham H 122-42-9	Propiconazole F 60207-90-1
31	<0.004	<0.005	<0.002	<0.07	<0.018	<0.003	<0.007	<0.004	<0.013	<0.07	<0.064
32	<.004	<.005	<.002	<.07	<.018	<.003	<.007	<.004	<.013	<.07	<.064
33	<.004	<.005	<.002	<.07	<.018	<.003	<.007	<.004	<.013	<.07	<.064
34	<.004	<.005	<.002	<.07	<.018	<.003	<.007	<.004	<.013	<.07	<.064
35	<.004	<.005	<.002	.09	<.018	<.003	<.007	<.004	<.013	<.07	<.064
36	<.004	<.005	<.002	<.07	<.018	<.003	<.007	<.004	<.013	<.07	<.064
37	<.004	<.005	<.002	<.07	<.018	<.003	<.007	<.004	<.013	<.07	<.064
38	<.004	<.005	<.002	<.07	<.018	<.003	<.007	<.004	<.013	<.07	<.064
39	<.004	<.005	<.002	<.07	<.018	<.003	<.007	<.004	<.013	<.07	<.064
40	<.004	<.005	<.002	<.07	<.018	<.003	<.007	<.004	<.013	<.07	<.064
41	<.004	<.005	<.002	<.07	<.018	<.003	<.007	<.004	<.013	<.07	<.064
42	<.004	<.005	<.002	<.07	<.018	<.003	<.007	<.004	<.013	<.07	<.064
43	<.004	<.005	<.002	<.07	<.018	<.003	<.007	<.004	<.013	<.07	<.064
44	<.004	<.005	<.002	<.07	<.018	<.003	<.007	<.004	<.013	<.07	<.064
45	<.004	<.005	<.002	<.07	<.018	<.003	<.007	<.004	<.013	<.07	<.064
46	<.004	<.005	<.002	<.07	<.018	<.003	<.007	<.004	<.013	<.07	<.064
47	--	--	--	<.07	--	--	--	--	--	<.07	<.064
48	--	--	--	<.07	--	--	--	--	--	<.07	<.064
49	<.004	<.005	<.002	<.07	<.018	<.003	<.007	<.004	<.013	<.07	<.064
50	<.010	<.006	<.011	<.07	<.015	<.004	<.010	<.011	<.023	<.07	<.064
51	<.010	<.006	<.011	<.07	<.015	<.004	<.010	<.011	<.023	<.07	<.064
52	<.010	<.006	<.011	<.07	<.015	<.004	<.010	<.011	<.023	<.07	<.064
53	<.010	<.006	<.011	<.07	<.015	<.004	<.010	<.011	<.023	<.07	<.064
54	<.010	<.006	<.011	<.07	<.015	<.004	<.010	<.011	<.023	<.07	<.064
55	<.010	<.006	<.011	<.07	<.015	<.004	<.010	<.011	<.023	<.07	<.064
56	<.010	<.006	<.011	<.07	<.015	<.004	<.010	<.011	<.023	<.07	<.064
57	<.010	<.006	<.011	<.07	<.015	<.004	<.010	<.011	<.023	<.07	<.064
58	<.010	<.006	<.011	<.07	<.015	<.004	<.010	<.011	<.023	<.07	<.064
59	<.010	<.006	<.011	<.07	<.015	<.004	<.010	<.011	<.023	<.07	<.064
60	<.010	<.006	<.011	<.07	<.015	<.004	<.010	<.011	<.023	<.07	<.064

Appendix 6. Pesticide concentrations in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001—Continued

ACAD well number (fig. 1)	Pendimethalin H 40487-42-1	cis-Permethrin I 52341-33-0	Phorate I 298-02-2	Picloram H 1918-02-1	Prometon H 1610-18-0	Pronamide H 23950-58-5	Propachlor H 1918-16-7	Propanil H 709-98-8	Propargite I 2312-35-8	Propham H 122-42-9	Propiconazole F 60207-90-1
61	<0.010	<0.006	<0.011	<0.07	<0.015	<0.004	<0.010	<0.011	<0.023	<0.07	<0.064
62	--	--	--	<.07	--	--	--	--	--	<.07	<.064
63	<.010	<.006	<.011	<.07	<.015	<.004	<.010	<.011	<.023	<.07	<.064
64	<.010	<.006	<.011	<.07	<.015	<.004	<.010	<.011	<.023	<.07	<.064
65	<.010	<.006	<.011	<.07	<.015	<.004	<.010	<.011	<.023	<.07	<.064
66	<.010	<.006	<.011	<.02	<.015	<.004	<.010	<.011	<.023	<.01	<.021
67	<.010	<.006	<.011	<.02	<.015	<.004	<.010	<.011	<.023	<.01	<.021
68	<.010	<.006	<.011	<.02	<.015	<.004	<.010	<.011	<.023	<.01	<.021
69	<.010	<.006	<.011	<.02	<.015	<.004	<.010	<.011	<.023	<.01	<.021
70	<.010	<.006	<.011	<.02	<.015	<.004	<.010	<.011	<.023	<.01	<.021
71	<.010	<.006	<.011	<.02	<.015	<.004	<.010	<.011	<.023	<.01	<.021
72	<.010	<.006	<.011	<.02	<.015	<.004	<.010	<.011	<.023	<.01	<.021
73	<.010	<.006	<.011	<.02	<.015	<.004	<.010	<.011	<.023	<.01	<.021
74	<.010	<.006	<.011	<.02	<.015	<.004	<.010	<.011	<.023	<.01	<.021
75	<.010	<.006	<.011	<.02	<.015	<.004	<.010	<.011	<.023	<.01	<.021
76	<.010	<.006	<.011	<.02	<.015	<.004	<.010	<.011	<.023	<.01	<.021
77	<.010	<.006	<.011	<.02	<.015	<.004	<.010	<.011	<.023	<.01	<.021
78	<.010	<.006	<.011	<.02	<.015	<.004	<.010	<.011	<.023	<.01	<.021
79	<.010	<.006	<.011	<.02	<.015	<.004	<.010	<.011	<.023	<.01	<.021
80	<.010	<.006	<.011	<.02	<.015	<.004	<.010	<.011	<.023	<.01	<.021
81	<.010	<.006	<.011	<.02	<.015	<.004	<.010	<.011	<.023	<.01	<.021
82	<.010	<.006	<.011	<.02	<.015	<.004	<.010	<.011	<.023	<.01	<.052
83	<.010	<.006	<.011	<.02	<.015	<.004	<.010	<.011	<.023	<.01	<.021
84	<.010	<.006	<.011	<.02	<.015	<.004	<.010	<.011	<.023	<.01	<.021
85	<.010	<.006	<.011	<.02	<.015	<.004	<.010	<.011	<.023	<.01	<.021
86	<.010	<.006	<.011	<.02	<.015	<.004	<.010	<.011	<.023	<.01	<.021
87	<.010	<.006	<.011	<.02	<.015	<.004	<.010	<.011	<.023	<.01	<.021
88	<.010	<.006	<.011	<.02	<.015	<.004	<.010	<.011	<.023	<.01	<.021
89	<.010	<.006	<.011	<.02	<.015	<.004	<.010	<.011	<.023	<.01	<.021
90	<.010	<.006	<.011	<.02	<.015	<.004	<.010	<.011	<.023	<.01	<.021

Appendix 6. Pesticide concentrations in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001—Continued

ACAD well number (fig. 1)	Propoxur I 204-043-8	Siduron H 1982-49-6	Simazine H 122-34-9	Sulfometuron methyl H 74222-97-2	Tebuthiuron H 34014-18-1	Terbacil H 5902-51-2	Terbufos I 13071-79-9	Thiobencarb H 28249-77-6	Tri-allate H 2303-17-5	Tribenuron methyl H 101200-48-0	Triclopyr H 55335-06-3	Trifluralin H 1582-09-8
31	<0.06	<0.093	<0.005	<0.039	<0.010	<0.10	<0.013	<0.002	<0.001	--	<0.10	<0.002
32	<.06	<.093	<.005	<.039	<.010	<.10	<.013	<.002	<.001	<.07	<.10	<.002
33	<.06	<.093	<.005	<.039	<.010	<.10	<.013	<.002	<.001	<.07	<.10	<.002
34	<.06	<.093	<.005	<.039	0.013	<.10	<.013	<.002	<.001	<.07	<.10	<.002
35	<.06	<.093	<.005	<.039	<.010	<.10	<.013	<.002	<.001	<.07	<.10	<.002
36	<.06	<.093	<.005	<.039	<.010	<.10	<.013	<.002	<.001	<.07	<.10	<.002
37	<.06	<.093	<.005	<.039	<.010	<.10	<.013	<.002	<.001	<.07	<.10	<.002
38	<.06	<.093	<.005	<.039	<.010	<.10	<.013	<.002	<.001	<.07	<.10	<.002
39	<.06	<.093	<.005	<.039	<.010	<.10	<.013	<.002	<.001	<.07	<.10	<.002
40	<.06	<.093	<.005	<.039	<.010	<.10	<.013	<.002	<.001	<.07	<.10	<.002
41	<.06	<.093	<.005	<.039	<.010	<.10	<.013	<.002	<.001	<.07	<.10	<.002
42	<.06	<.093	<.005	<.039	<.010	<.10	<.013	<.002	<.001	<.07	<.10	<.002
43	<.06	<.093	<.005	<.039	<.010	<.10	<.013	<.002	<.001	<.07	<.10	<.002
44	<.06	<.093	<.005	<.039	<.010	<.10	<.013	<.002	<.001	<.07	<.10	<.002
45	<.06	<.093	<.005	<.039	<.010	<.10	<.013	<.002	<.001	<.07	<.10	<.002
46	<.06	<.093	<.005	<.039	<.010	<.10	<.013	<.002	<.001	<.07	<.10	<.002
47	<.06	<.093	--	<.039	--	--	--	--	--	<.07	<.10	--
48	<.06	<.093	--	<.039	--	--	--	--	--	<.07	<.10	--
49	<.06	<.093	<.005	<.039	--	<.10	<.013	<.002	<.001	<.07	<.10	<.002
50	<.06	<.093	<.011	<.039	<.016	<.10	<.017	<.005	<.002	<.07	<.10	<.009
51	<.06	<.093	<.011	<.039	<.016	<.10	<.017	<.005	<.002	<.07	<.10	<.009
52	<.06	<.093	<.011	<.039	<.016	<.10	<.017	<.005	<.002	<.07	<.10	<.009
53	<.06	<.093	<.011	<.039	<.016	<.10	<.017	<.005	<.002	<.07	<.10	<.009
54	<.06	<.093	<.011	<.039	<.016	<.10	<.017	<.005	<.002	<.07	<.10	<.009
55	<.06	<.093	<.011	<.039	<.016	<.10	<.017	<.005	<.002	<.07	<.10	<.009
56	<.06	<.093	<.011	<.039	<.016	<.10	<.017	<.005	<.002	<.07	<.10	<.009
57	<.06	<.093	<.011	<.039	<.016	<.10	<.017	<.005	<.002	<.07	<.10	<.009
58	<.06	<.093	<.011	<.039	<.016	<.10	<.017	<.005	<.002	<.07	<.10	<.009
59	<.06	<.093	<.011	<.039	<.016	<.10	<.017	<.005	<.002	<.07	<.10	<.009
60	<.06	<.093	<.011	<.039	<.016	<.10	<.017	<.005	<.002	<.07	<.10	<.009

Appendix 6. Pesticide concentrations in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001—Continued

ACAD well number (fig. 1)	Propoxur I 204-043-8	Siduron H 1982-49-6	Simazine H 122-34-9	Sulfometuron methyl H 74222-97-2	Tebuthiuron H 34014-18-1	Terbacil H 5902-51-2	Terbufos I 13071-79-9	Thiobencarb H 28249-77-6	Triallate H 2303-17-5	Tribenuron methyl H 101200-48-0	Triclopyr H 55335-06-3	Trifluralin H 1582-09-8
61	<0.06	<0.093	<0.011	<0.039	<0.016	<0.10	<0.017	<0.005	<0.002	<0.07	<0.10	<0.009
62	<.06	<.093	--	<.039	<.077	<.10	--	--	--	<.07	<.10	--
63	<.06	<.093	<.011	<.039	<.016	<.10	<.017	<.005	<.002	<.07	<.10	<.009
64	<.06	<.093	<.011	<.039	<.016	<.10	<.017	<.005	<.002	--	<.10	<.009
65	<.06	<.093	<.011	<.039	<.016	<.10	<.017	<.005	<.002	--	<.10	<.009
66	<.01	<.017	<.011	<.009	<.016	<.010	<.017	<.005	<.002	<.01	<.02	<.009
67	<.01	<.017	<.011	<.009	<.016	<.010	<.017	<.005	<.002	<.01	<.02	<.009
68	<.01	<.017	<.011	<.009	<.016	<.010	<.017	<.005	<.002	<.01	<.02	<.009
69	<.01	<.017	<.011	<.009	<.016	<.010	<.017	<.005	<.002	<.01	<.02	<.009
70	<.01	<.017	<.011	<.009	<.016	<.010	<.017	<.005	<.002	<.01	<.02	<.009
71	<.01	<.017	<.011	<.009	<.016	<.010	<.017	<.005	<.002	<.01	<.02	<.009
72	<.01	<.017	<.011	<.009	<.016	<.010	<.017	<.005	<.002	<.01	<.02	<.009
73	<.01	<.017	<.011	<.009	<.016	<.010	<.017	<.005	<.002	<.01	<.02	<.009
74	<.01	<.017	<.011	<.009	<.016	<.010	<.017	<.005	<.002	<.01	<.02	<.009
75	<.01	<.017	<.011	<.009	<.016	<.010	<.017	<.005	<.002	<.01	<.02	<.009
76	<.01	<.017	<.011	<.009	<.016	<.010	<.017	<.005	<.002	<.01	<.02	<.009
77	<.01	<.017	<.011	<.009	<.016	<.010	<.017	<.005	<.002	<.01	<.02	<.009
78	<.01	<.017	<.011	<.009	<.016	<.010	<.017	<.005	<.002	<.01	<.02	<.009
79	<.01	<.017	<.011	<.009	<.016	<.010	<.017	<.005	<.002	<.01	<.02	<.009
80	<.01	<.017	<.011	<.009	<.016	<.010	<.017	<.005	<.002	<.01	<.02	<.009
81	<.01	<.017	<.011	<.009	<.016	<.010	<.017	<.005	<.002	<.01	<.02	<.009
82	<.01	<.017	<.011	<.009	<.016	<.010	<.017	<.005	<.002	<.01	<.02	<.009
83	<.01	<.017	<.011	<.009	<.016	<.010	<.017	<.005	<.002	<.01	<.02	<.009
84	<.01	<.017	<.011	<.009	<.016	<.010	<.017	<.005	<.002	<.01	<.02	<.009
85	<.01	<.017	<.011	<.009	<.016	<.010	<.017	<.005	<.002	<.01	<.02	<.009
86	<.01	<.017	<.011	<.009	<.016	<.010	<.017	<.005	<.002	<.01	<.02	<.009
87	<.01	<.017	<.011	<.009	<.016	<.010	<.017	<.005	<.002	<.01	<.02	<.009
88	<.01	<.017	<.011	<.009	<.016	<.010	<.017	<.005	<.002	<.01	<.02	<.009
89	<.01	<.017	<.011	<.009	<.016	<.010	<.017	<.005	<.002	<.01	<.02	<.009
90	<.01	<.017	<.011	<.009	<.016	<.010	<.017	<.005	<.002	<.01	<.02	<.009

Appendix 7. Concentrations of pesticide degradation products in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001

[Numbers below the chemical names are the Chemical Abstracts Service (CAS) numbers. All concentrations are in micrograms per liter. ACAD, Acadian-Pontchartrain Study Unit of the National Water Quality Assessment Program; DOTD, Louisiana Department of Transportation and Development; USGS, U.S. Geological Survey; DP, degradation product; <, less than; E, estimated; --, no data]

ACAD well no. (fig. 1)	DOTD local well number	USGS site identification number	Sample date	Aldicarb sulfone DP (aldicarb) 1646-88-4	Aldicarb sulfoxide DP (aldicarb) 1646-87-3	3-hydroxycarbofuran DP (carbofuran) 16655-82-6	DDE, p,p′ DP (DDT) 72-55-9	Deethylatrazine DP (atrazine) 6190-65-4	Deethyldeisopropylatrazine DP (atrazine) 3397-62-4	Deisopropylatrazine DP (atrazine) 1007-28-9
31	Be-6084Z	304409093171801	6-06-2000	<0.16	<0.03	<0.06	<0.006	<0.001	<0.06	<0.07
32	Be-5928Z	304140093343502	6-07-2000	<.16	<.03	<.06	<.006	<.001	<.06	<.07
33	Be-6065Z	303153093303201	6-08-2000	<.16	<.03	<.06	<.006	<.001	<.06	<.07
34	Ev-5500Z	303550092252401	7-10-2000	<.16	<.03	<.06	<.006	<.001	<.06	<.07
35	JD-5177Z	301009092554501	7-18-2000	<.16	<.03	<.06	<.006	E.056	<.06	<.07
36	JD-5371Z	300627092464302	7-12-2000	<.16	<.03	<.06	<.006	<.001	<.06	<.07
37	Be-5764Z	305020093003001	7-19-2000	<.16	<.03	<.06	<.006	<.001	<.06	<.07
38	Ac-6896Z	300825092350001	7-21-2000	<.16	<.03	<.06	<.006	<.001	<.06	<.07
39	Be-6077Z	303626093161201	7-26-2000	<.16	<.03	<.06	<.006	<.001	<.06	<.07
40	Al-5243Z	303647092573301	7-27-2000	<.16	<.03	<.06	<.006	<.001	<.06	<.07
41	Ve-7436Z	300718092125801	8-02-2000	<.16	<.03	<.06	<.006	<.001	<.06	<.07
42	Ve- 170	300121092005701	8-03-2000	<.16	<.03	<.06	<.006	<.001	<.06	<.07
43	Cu-7082Z	300816093280501	8-16-2000	<.16	<.03	<.06	<.006	<.001	<.06	<.07
44	V-8701Z	305810093034001	8-17-2000	<.16	<.03	<.06	E.001	<.001	<.06	<.07
45	Ve-9241Z	295640092144801	8-18-2000	<.16	<.03	<.06	<.006	<.001	<.06	<.07
46	Cn-5874Z	300111093101601	9-07-2000	<.16	<.03	<.06	<.006	<.001	<.06	<.07
47	SL-6924Z	303112092034001	9-11-2000	<.16	<.03	<.06	--	--	<.06	<.07
48	R-5964Z	305949092363001	9-19-2000	<.16	<.03	<.06	--	--	<.06	<.07
49	Ac-6998Z	302145092212501	9-26-2000	<.16	<.03	<.06	<.006	--	<.06	<.07
50	JD-5938Z	302109092523101	11-14-2000	<.16	<.03	<.06	<.003	<.007	<.06	<.07
51	Cu-7967Z	301707093223202	11-15-2000	<.16	<.03	<.06	<.003	<.007	<.06	<.07
52	Cu-7410Z	302108093405103	11-21-2000	<.16	<.03	<.06	<.003	<.007	<.06	<.07
53	Ac-6112Z	301947092320101	11-20-2000	<.16	<.03	<.06	<.003	<.007	<.06	<.07
54	Lf-9803Z	301538092021301	11-29-2000	<.16	<.03	<.06	<.003	<.007	<.06	<.07
55	Al-5167Z	304857092363601	12-12-2000	<.16	<.03	<.06	<.003	<.007	<.06	<.07
56	Al-5506Z	304128092450401	12-14-2000	<.16	<.03	<.06	<.003	<.007	<.06	<.07
57	Ac-6512Z	302121092310201	1-10-2001	<.16	<.03	<.06	<.003	<.007	<.06	<.07
58	Ev-5508Z	305150092213101	1-11-2001	<.16	<.03	<.06	<.003	<.007	<.06	<.07
59	Cu-5250Z	302403093084601	1-18-2001	<.16	<.03	<.06	<.003	<.007	<.06	<.07
60	Al-5240Z	303947092534101	2-06-2001	<.16	<.03	<.06	<.003	<.007	<.06	<.07

Appendix 7. Concentrations of pesticide degradation products in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001—Continued

ACAD well no. (fig. 1)	DOTD local well number	USGS site identification number	Sample date	Aldicarb sulfone DP (aldicarb) 1646-88-4	Aldicarb sulfoxide DP (aldicarb) 1646-87-3	3-hydroxycarbofuran DP (carbofuran) 16655-82-6	DDE, p,p′ DP (DDT) 72-55-9	Deethylatrazine DP (atrazine) 6190-65-4	Deethyldeisopropylatrazine DP (atrazine) 3397-62-4	Deisopropylatrazine DP (atrazine) 1007-28-9
61	SH-5527Z	305840090393801	2-14-2001	<0.16	<0.03	<0.06	<0.003	<0.007	<0.06	<0.07
62	SH-5460Z	304727090392001	2-15-2001	<.16	<.03	<.06	--	<.07	<.06	<.07
63	EF-5282Z	305130091025701	3-01-2001	<.16	<.03	<.06	<.003	<.007	<.06	<.07
64	EF-5422Z	305834091033701	5-09-2001	<.16	<.03	<.06	<.003	<.007	<.06	<.07
65	ST-6753Z	303032090051701	5-10-2001	<.16	<.03	<.06	<.003	<.007	<.06	<.07
66	ST-8617Z	303623090071601	5-24-2001	<.02	<.008	<.0006	<.003	<.007	<.01	<.04
67	EB-6257Z	304118091055201	6-04-2001	<.02	<.008	<.0006	<.003	<.007	<.01	<.04
68	EF-5348Z	305808091101701	6-14-2001	<.02	<.008	<.0006	<.003	<.007	<.01	<.04
69	EF-5450Z	304811091130701	7-05-2001	<.02	<.008	<.0006	<.003	E.004	<.01	<.04
70	Li-7429Z	303506090554101	6-14-2001	<.02	<.008	<.0006	<.003	E.006	<.01	<.04
71	Li-7282Z	303026090420301	6-20-2001	<.02	<.008	<.0006	<.003	<.007	<.01	<.04
72	Ta-8435Z	303506090184101	6-21-2001	<.02	<.008	<.0006	<.003	<.007	<.01	<.04
73	SH-5344Z	304001090390101	7-05-2001	<.02	<.008	<.0006	<.003	<.007	<.01	<.04
74	Li-7148Z	302608090534101	7-12-2001	<.02	<.008	<.0006	<.003	<.007	<.01	<.04
75	Ta-7292Z	302711090211801	7-19-2001	<.02	<.008	<.0006	<.003	<.007	<.01	<.04
76	Ta- 788	303728090294301	8-02-2001	<.02	<.008	<.0006	<.003	<.007	<.01	<.04
77	Wa-7324Z	305908090140901	7-26-2001	<.02	<.008	<.0006	<.003	<.007	<.01	<.04
78	MS.AM-D016	311613090392001	8-07-2001	<.02	<.008	<.0006	<.003	<.007	<.01	<.04
79	MS.PK-G021	310722090280801	8-08-2001	<.02	<.008	<.0006	<.003	<.007	<.01	<.04
80	ST-6940Z	302725090094101	8-09-2001	<.02	<.008	<.0006	<.003	<.007	<.01	<.04
81	Ta-9622Z	304636090303601	8-16-2001	<.02	<.008	<.0006	<.003	<.007	<.01	<.04
82	EF-5228Z	304727090513901	9-11-2001	<.02	<.008	<.0006	<.003	<.007	<.01	<.04
83	Ta- 815	305750090301101	9-19-2001	<.02	<.008	<.0006	<.003	<.007	<.01	<.04
84	Ta-6551Z	304707090173301	9-20-2001	<.02	<.008	<.0006	<.003	<.007	<.01	<.04
85	Li-6487Z	301959090504201	9-21-2001	<.02	<.008	<.0006	<.003	<.007	<.01	<.04
86	EB-8065Z	302119090550802	9-25-2001	<.02	<.008	<.0006	<.003	<.007	<.01	<.04
87	Li-6203Z	302049090390401	9-25-2001	<.02	<.008	<.0006	<.003	<.007	<.01	<.04
88	WF-5115Z	305013091194001	9-26-2001	<.02	<.008	<.0006	<.003	<.007	<.01	<.04
89	Ta-7401Z	302934090321901	9-27-2001	<.02	<.008	<.0006	<.003	<.007	<.01	<.04
90	MS.AM-M006	310700090520001	9-28-2001	<.02	<.008	<.0006	<.003	<.007	<.01	<.04

Appendix 7. Concentrations of pesticide degradation products in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001—Continued

ACAD well number (fig. 1)	2,6-diethylaniline DP (alachlor) 579-66-8	Desulfinylfipronil DP (fipronil) no CAS number	Fipronil RPA 105048 DP (fipronil) no CAS number	Fipronil sulfide DP (fipronil) 120067-83-6	Fipronil sulfone DP (fipronil) 120068-36-2	2-Hydroxyatrazine DP (atrazine) 2163-68-0	3-Ketocarbofuran DP (carbofuran) 16709-30-1	Methomyl oxime DP (methomyl) 16752-77-5	3-(4-chlorophenyl)-1-methyl urea DP (neburon) 5352-88-5	Oxamyl oxime DP (oxamyl) 23135-22-0
31	<0.003	<0.010	<0.005	<0.010	<0.001	<0.193	<0.072	<0.077	<0.092	<0.064
32	<.003	<.010	<.005	<.010	<.001	<.193	<.072	<.077	<.092	<.064
33	<.003	<.010	<.005	<.010	<.001	<.193	<.072	<.077	<.092	<.064
34	<.003	<.010	<.005	<.010	<.001	<.193	<.072	<.077	<.092	<.064
35	<.003	<.010	<.005	<.010	<.001	<.193	<.072	<.077	<.092	<.064
36	<.003	<.010	<.005	<.010	<.001	<.193	<.072	<.077	<.092	<.064
37	<.003	<.010	<.005	<.010	<.001	<.193	<.072	<.077	<.092	<.064
38	<.003	<.010	<.005	<.010	<.001	<.193	<.072	<.077	<.092	<.064
39	<.003	<.010	<.005	<.010	<.001	<.193	<.072	<.077	<.092	<.064
40	<.003	<.010	<.005	<.010	<.001	<.193	<.072	<.077	<.092	<.064
41	<.003	<.010	<.005	<.010	<.001	<.193	<.072	<.077	<.092	<.064
42	<.003	<.010	<.005	<.010	<.001	<.193	<.072	<.077	<.092	<.064
43	<.003	<.010	<.005	<.010	<.001	<.193	<.072	<.077	<.092	<.064
44	<.003	<.010	<.005	<.010	<.001	<.193	<.072	<.077	<.092	<.064
45	<.003	<.010	<.005	<.010	<.001	<.193	<.072	<.077	<.092	<.064
46	<.003	<.010	<.005	<.010	<.001	<.193	<.072	<.077	<.092	<.064
47	--	<.010	<.005	<.010	<.001	<.193	<.072	<.077	<.092	<.064
48	--	<.010	<.005	<.010	<.001	<.193	<.072	<.077	<.092	<.064
49	<.003	<.010	<.005	<.010	<.001	<.193	<.072	<.077	<.092	<.064
50	<.002	<.010	<.005	<.010	<.001	<.193	<.072	<.077	<.092	<.064
51	<.002	<.010	<.005	<.010	<.001	<.193	<.072	<.077	<.092	<.064
52	<.002	<.010	<.005	<.010	<.001	<.193	<.072	<.077	<.092	<.064
53	<.002	<.010	<.005	<.010	<.001	<.193	<.072	<.077	<.092	<.064
54	<.002	<.010	<.005	<.010	<.001	<.193	<.072	<.077	<.092	<.064
55	<.002	<.010	<.005	<.010	<.001	<.193	<.072	<.077	<.092	<.064
56	<.002	<.010	<.005	<.010	<.001	<.193	<.072	<.077	<.092	<.064
57	<.002	--	--	--	--	<.193	<.072	<.077	<.092	<.064
58	<.002	<.010	<.005	<.010	<.001	<.193	<.072	<.077	<.092	<.064
59	<.002	<.010	<.005	<.010	<.001	<.193	<.072	<.077	<.092	<.064
60	<.002	<.010	<.005	<.010	<.001	<.193	<.072	<.077	<.092	<.064

Appendix 7. Concentrations of pesticide degradation products in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001—Continued

ACAD well number (fig. 1)	2,6-diethyaniline DP (alachlor) 579-66-8	Desulfinylfipronil DP (fipronil) no CAS number	Fipronil RPA 105048 DP (fipronil) no CAS number	Fipronil sulfide DP (fipronil) 120067-83-6	Fipronil sulfone DP (fipronil) 120068-36-2	2-Hydroxyatrazine DP (atrazine) 2163-68-0	3-Ketocarbofuran DP (carbofuran) 16709-30-1	Methomyl oxime DP (methomyl) 16752-77-5	3-(4-chlorophenyl)-1-methyl urea DP (neburon) 5352-88-5	Oxamyl oxime DP (oxamyl) 23135-22-0
61	<0.002	--	--	--	--	<0.193	<0.072	<0.077	<0.092	<0.064
62	--	--	--	--	--	<.193	<.072	<.077	<.092	<.064
63	<.002	--	--	--	--	<.193	<.072	<.077	<.092	<.064
64	<.002	--	--	--	--	<.193	<.072	<.077	<.092	<.064
65	<.002	--	--	--	--	<.193	<.072	<.077	<.092	<.064
66	<.002	--	--	--	--	<.008	<1.50	<.004	<.024	<.013
67	<.002	--	--	--	--	<.008	<1.50	<.004	<.024	<.013
68	<.002	--	--	--	--	<.008	<1.50	<.004	<.024	<.013
69	<.002	--	--	--	--	<.008	<1.50	<.004	<.024	<.013
70	<.002	--	--	--	--	<.008	<1.50	<.004	<.024	<.013
71	<.002	<0.010	<0.005	<0.010	<0.001	<.008	<1.50	<.004	<.024	<.013
72	<.002	<.010	<.005	<.010	<.001	<.008	<1.50	<.004	<.024	<.013
73	<.002	<.010	<.005	<.010	<.001	<.008	<1.50	<.004	<.024	<.013
74	<.002	<.010	<.005	<.010	<.001	<.008	<1.50	<.004	<.024	<.013
75	<.002	<.010	<.005	<.010	<.001	<.008	<1.50	<.004	<.024	<.013
76	<.002	<.010	<.005	<.010	<.001	<.008	<1.50	<.004	<.001	<.013
77	<.002	<.010	<.005	<.010	<.001	<.008	<1.50	<.004	<.024	<.013
78	<.002	--	--	--	--	<.008	<1.50	<.004	<.024	<.013
79	<.002	--	--	--	--	<.008	<1.50	<.004	<.001	<.013
80	<.002	--	--	--	--	<.008	<1.50	<.004	<.001	<.013
81	<.002	--	--	--	--	<.008	<1.50	<.004	<.024	<.013
82	<.002	--	--	--	--	<.008	<1.50	<.004	<.024	<.013
83	<.002	--	--	--	--	<.008	<1.50	<.004	<.024	<.013
84	<.002	--	--	--	--	<.008	<1.50	<.004	<.024	<.013
85	<.002	--	--	--	--	<.008	<1.50	<.004	<.024	<.013
86	<.002	--	--	--	--	<.008	<1.50	<.004	<.024	<.013
87	<.002	--	--	--	--	<.008	<1.50	<.004	<.024	<.013
88	<.002	--	--	--	--	<.008	<1.50	<.004	<.024	<.013
89	<.002	--	--	--	--	<.008	<1.50	<.004	<.024	<.013
90	<.002	--	--	--	--	<.008	<1.50	<.004	<.024	<.013

Appendix 8. Volatile organic compounds in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001

[Numbers below the chemical names are the Chemical Abstracts Service (CAS) numbers. All concentrations are in micrograms per liter. ACAD, Acadian-Pontchartrain Study Unit of the National Water Quality Assessment Program; DOTD, Louisiana Department of Transportation and Development; USGS, U.S. Geological Survey; <, less than; E, estimated]

ACAD well number (fig. 1)	DOTD local well number	USGS site identification number	Sample date	Acetone (2-propanone) 67-64-1	Acrylonitrile (2-propenenitrile) 107-13-1	Benzene 71-43-2	Bromobenzene 108-86-1	Bromochloromethane 74-97-5	Bromodichloromethane 75-27-4	Bromoethene (Vinyl bromide) 593-60-2
31	Be-6084Z	304409093171801	6-06-2000	<7	<1	<0.04	<0.04	<0.04	<0.05	<0.1
32	Be-5928Z	304140093343502	6-07-2000	<7	<1	E.01	<.04	<.04	<.05	<.1
33	Be-6065Z	303153093303201	6-08-2000	<7	<1	<.04	<.04	<.04	<.05	<.1
34	Ev-5500Z	303550092252401	7-10-2000	<7	<1	<.04	<.04	<.04	<.05	<.1
35	JD-5177Z	301009092554501	7-18-2000	<7	<1	<.04	<.04	<.04	<.05	<.1
36	JD-5371Z	300627092464302	7-12-2000	<7	<1	<.04	<.04	<.04	<.05	<.1
37	Be-5764Z	305020093003001	7-19-2000	<7	<1	<.04	<.04	<.04	<.05	<.1
38	Ac-6896Z	300825092350001	7-21-2000	<7	<1	<.04	<.04	<.04	<.05	<.1
39	Be-6077Z	303626093161201	7-26-2000	<7	<1	<.04	<.04	<.04	<.05	<.1
40	Al-5243Z	303647092573301	7-27-2000	<7	<1	<.04	<.04	<.04	<.05	<.1
41	Ve-7436Z	300718092125801	8-02-2000	<7	<1	<.04	<.04	<.04	<.05	<.1
42	Ve- 170	300121092005701	8-03-2000	<7	<1	<.04	<.04	<.04	<.05	<.1
43	Cu-7082Z	300816093280501	8-16-2000	<7	<1	<.04	<.04	<.04	<.05	<.1
44	V-8701Z	305810093034001	8-17-2000	<7	<1	<.04	<.04	<.04	<.05	<.1
45	Ve-9241Z	295640092144801	8-18-2000	<7	<1	<.04	<.04	<.04	<.05	<.1
46	Cn-5874Z	300111093101601	9-07-2000	<7	<1	<.04	<.04	<.04	<.05	<.1
47	SL-6924Z	303112092034001	9-11-2000	<7	<1	<.04	<.04	<.04	E.02	<.1
48	R-5964Z	305949092363001	9-19-2000	<7	<1	<.04	<.04	<.04	<.05	<.1
49	Ac-6998Z	302145092212501	9-26-2000	<7	<1	<.04	<.04	<.04	<.05	<.1
50	JD-5938Z	302109092523101	11-14-2000	<7	<1	<.04	<.04	<.04	<.05	<.1
51	Cu-7967Z	301707093223202	11-15-2000	<7	<1	<.04	<.04	<.04	<.05	<.1
52	Cu-7410Z	302108093405103	11-21-2000	<7	<1	<.04	<.04	<.04	<.05	<.1
53	Ac-6112Z	301947092320101	11-20-2000	<7	<1	<.04	<.04	<.04	<.05	<.1
54	Lf-9803Z	301538092021301	11-29-2000	<7	<1	<.04	<.04	<.04	<.05	<.1
55	Al-5167Z	304857092363601	12-12-2000	<7	<1	<.04	<.04	<.04	<.05	<.1
56	Al-5506Z	304128092450401	12-14-2000	<7	<1	<.04	<.04	<.04	<.05	<.1
57	Ac-6512Z	302121092310201	1-10-2001	<7	<1	<.04	<.04	<.04	<.05	<.1
58	Ev-5508Z	305150092213101	1-11-2001	<7	<1	<.04	<.04	<.04	<.05	<.1
59	Cu-5250Z	302403093084601	1-18-2001	<7	<1	<.04	<.04	<.04	<.05	<.1
60	Al-5240Z	303947092534101	2-06-2001	<7	<1	<.04	<.04	<.04	<.05	<.1

Appendix 8. Volatile organic compounds in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001--Continued

ACAD well number (fig. 1)	DOTD local well number	USGS site identification number	Sample date	Acetone (2-propanone) 67-64-1	Acrylonitrile (2-propenenitrile) 107-13-1	Benzene 71-43-2	Bromobenzene 108-86-1	Bromochloromethane 74-97-5	Bromodichloromethane 75-27-4	Bromoethene (Vinyl bromide) 593-60-2
61	SH-5527Z	305840090393801	2/14/2001	<7	<1	E0.03	<0.04	<0.04	<0.05	<0.1
62	SH-5460Z	304727090392001	2/15/2001	<7	<1	<.04	<.04	<.04	<.05	<.1
63	EF-5282Z	305130091025701	3/01/2001	<7	<1	<.04	<.04	<.04	<.05	<.1
64	EF-5422Z	305834091033701	5/09/2001	<7	<1	<.04	<.04	<.04	<.05	<.1
65	ST-6753Z	303032090051701	5/10/2001	<7	<1	<.04	<.04	<.04	<.05	<.1
66	ST-8617Z	303623090071601	5/24/2001	<7	<1	<.04	<.04	<.04	<.05	<.1
67	EB-6257Z	304118091055201	6/04/2001	<7	<1	<.04	<.04	<.04	<.05	<.1
68	EF-5348Z	305808091101701	6/14/2001	<7	<1	<.04	<.04	<.04	<.05	<.1
69	EF-5450Z	304811091130701	7/05/2001	<7	<1	<.04	<.04	<.04	<.05	<.1
70	Li-7429Z	303506090554101	6/14/2001	<7	<1	<.04	<.04	<.04	<.05	<.1
71	Li-7282Z	303026090420301	6/20/2001	<7	<1	<.04	<.04	<.04	<.05	<.1
72	Ta-8435Z	303506090184101	6/21/2001	<7	<1	<.04	<.04	<.04	<.05	<.1
73	SH-5344Z	304001090390101	7/05/2001	<7	<1	<.04	<.04	<.04	<.05	<.1
74	Li-7148Z	302608090534101	7/12/2001	<7	<1	<.04	<.04	<.04	<.05	<.1
75	Ta-7292Z	302711090211801	7/19/2001	<7	<1	<.04	<.04	<.04	<.05	<.1
76	Ta- 788	303728090294301	8/02/2001	<7	<1	<.04	<.04	<.04	<.05	<.1
77	Wa-7324Z	305908090140901	7/26/2001	<7	<1	<.04	<.04	<.04	<.05	<.1
78	MS.AM-D016	311613090392001	8/07/2001	<7	<1	<.04	<.04	<.04	<.05	<.1
79	MS.PK-G021	310722090280801	8/08/2001	<7	<1	<.04	<.04	<.04	<.05	<.1
80	ST-6940Z	302725090094101	8/09/2001	<7	<1	<.04	<.04	<.04	<.05	<.1
81	Ta-9622Z	304636090303601	8/16/2001	<7	<1	E.04	<.04	<.04	<.05	<.1
82	EF-5228Z	304727090513901	9/11/2001	<7	<1	<.04	<.04	<.04	E.06	<.1
83	Ta- 815	305750090301101	9/19/2001	<7	<1	<.04	<.04	<.04	<.05	<.1
84	Ta-6551Z	304707090173301	9/20/2001	<7	<1	<.04	<.04	<.04	<.05	<.1
85	Li-6487Z	301959090504201	9/21/2001	<7	<1	<.04	<.04	<.04	<.05	<.1
86	EB-8065Z	302119090550802	9/25/2001	<7	<1	<.04	<.04	<.04	<.05	<.1
87	Li-6203Z	302049090390401	9/25/2001	<7	<1	<.04	<.04	<.04	<.05	<.1
88	WF-5115Z	305013091194001	9/26/2001	<7	<1	<.04	<.04	<.04	<.05	<.1
89	Ta-7401Z	302934090321901	9/27/2001	<7	<1	<.04	<.04	<.04	<.05	<.1
90	MS.AM-M006	310700090520001	9/28/2001	<7	<1	<.04	<.04	<.04	<.05	<.1

Appendix 8. Volatile organic compounds in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001--Continued

ACAD well number (fig. 1)	Bromoform (Tribromomethane) 75-25-2	Bromomethane (Methyl bromide) 74-83-9	Butylbenzene 104-51-8	sec-Butylbenzene 135-98-8	tert-Butylbenzene 98-06-6	Carbon disulfide 75-15-0	Chlorobenzene 108-90-7	Chloroethane 75-00-3	Chloroform (Trichloromethane) 67-66-3	Chloromethane (Methyl chloride) 74-87-3
31	<0.06	<0.3	<0.2	<0.03	<0.06	<0.07	<0.03	<0.1	E0.01	<0.5
32	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	<.05	<.5
33	<.06	<.3	<.2	<.03	<.06	E.04	<.03	<.1	<.05	E.1
34	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	<.05	<.5
35	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	<.05	<.5
36	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	<.05	<.5
37	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	E.03	<.5
38	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	<.05	<.5
39	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	<.05	<.5
40	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	E.03	<.5
41	<.06	<.3	<.2	<.03	<.06	E.03	<.03	<.1	<.05	<.5
42	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	<.05	<.5
43	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	E.01	<.5
44	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	<.05	<.5
45	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	<.05	<.5
46	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	<.05	<.5
47	<.06	<.3	<.2	<.03	<.06	E.02	<.03	<.1	0.13	<.5
48	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	E.02	<.5
49	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	<.05	<.5
50	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	<.02	<.2
51	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	<.02	<.2
52	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	<.02	<.2
53	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	<.02	<.2
54	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	<.02	<.2
55	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	<.02	<.2
56	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	E.03	<.2
57	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	<.02	<.2
58	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	0.37	<.2
59	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	<.02	<.2
60	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	<.02	<.2

Appendix 8. Volatile organic compounds in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001--Continued

ACAD well number (fig. 1)	Bromoform (Tribromomethane) 75-25-2	Bromomethane (Methyl bromide) 74-83-9	Butylbenzene 104-51-8	sec-Butylbenzene 135-98-8	tert-Butylbenzene 98-06-6	Carbon disulfide 75-15-0	Chlorobenzene 108-90-7	Chloroethane 75-00-3	Chloroform (Trichloromethane) 67-66-3	Chloromethane (Methyl chloride) 74-87-3
61	<0.06	<0.3	<0.2	<0.03	<0.06	<0.07	<0.03	<0.1	E0.03	<0.2
62	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	0.18	<.2
63	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	0.28	<.2
64	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	0.21	<.2
65	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	E.04	<.2
66	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	E.05	<.2
67	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	0.90	<.2
68	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	0.71	<.2
69	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	E.05	<.2
70	<.06	<.3	<.2	<.03	<.06	0.26	<.03	<.1	<.02	<.2
71	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	E.07	<.2
72	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	<.02	<.2
73	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	0.26	<.2
74	<.06	<.3	<.2	<.03	<.06	E.08	<.03	<.1	E.01	<.2
75	<.06	<.3	<.2	<.03	<.06	0.81	<.03	<.1	<.02	<.2
76	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	E.02	<.2
77	<.06	<.3	<.2	<.03	<.06	E.04	<.03	<.1	E.02	<.2
78	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	0.20	<.2
79	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	0.26	<.2
80	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	<.02	<.2
81	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	E.04	<.2
82	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	1.60	<.2
83	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	E.04	<.2
84	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	E.02	<.2
85	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	E.03	<.2
86	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	<.02	<.2
87	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	<.02	<.2
88	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	0.29	<.2
89	<.06	<.3	<.2	<.03	<.06	E.02	<.03	<.1	<.02	<.2
90	<.06	<.3	<.2	<.03	<.06	<.07	<.03	<.1	0.14	<.2

Appendix 8. Volatile organic compounds in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001--Continued

ACAD well number (fig. 1)	3-Chloropropene 107-05-1	2-Chlorotoluene 95-49-8	4-Chlorotoluene 106-43-4	Dibromochloromethane 124-48-1	1,2-Dibromo-3-chloropropane 96-12-8	1,2-Dibromoethane 106-93-4	Dibromomethane 74-95-3	1,2-Dichlorobenzene 95-50-1	1,3-Dichlorobenzene 541-73-1	1,4-Dichlorobenzene 106-46-7
31	<0.2	<0.04	<0.06	<0.2	<0.2	<0.04	<0.05	<0.05	<0.05	<0.05
32	<.2	<.04	<.06	<.2	<.2	<.04	<.05	<.05	<.05	<.05
33	<.2	<.04	<.06	<.2	<.2	<.04	<.05	<.05	<.05	<.05
34	<.2	<.04	<.06	<.2	<.2	<.04	<.05	<.05	<.05	<.05
35	<.2	<.04	<.06	<.2	<.2	<.04	<.05	<.05	<.05	<.05
36	<.2	<.04	<.06	<.2	<.2	<.04	<.05	<.05	<.05	<.05
37	<.2	<.04	<.06	<.2	<.2	<.04	<.05	<.05	<.05	<.05
38	<.2	<.04	<.06	<.2	<.2	<.04	<.05	<.05	<.05	<.05
39	<.2	<.04	<.06	<.2	<.2	<.04	<.05	<.05	<.05	<.05
40	<.2	<.04	<.06	<.2	<.2	<.04	<.05	<.05	<.05	<.05
41	<.2	<.04	<.06	<.2	<.2	<.04	<.05	<.05	<.05	<.05
42	<.2	<.04	<.06	<.2	<.2	<.04	<.05	<.05	<.05	<.05
43	<.2	<.04	<.06	<.2	<.2	<.04	<.05	<.05	<.05	<.05
44	<.2	<.04	<.06	<.2	<.2	<.04	<.05	<.05	<.05	<.05
45	<.2	<.04	<.06	<.2	<.2	<.04	<.05	<.05	<.05	<.05
46	<.2	<.04	<.06	<.2	<.2	<.04	<.05	<.05	<.05	<.05
47	<.2	<.04	<.06	<.2	<.2	<.04	<.05	<.05	<.05	<.05
48	<.2	<.04	<.06	<.2	<.2	<.04	<.05	<.05	<.05	<.05
49	<.2	<.04	<.06	<.2	<.2	<.04	<.05	<.05	<.05	<.05
50	<.07	<.03	<.06	<.2	<.2	<.04	<.05	<.03	<.03	<.05
51	<.07	<.03	<.06	<.2	<.2	<.04	<.05	<.03	<.03	<.05
52	<.07	<.03	<.06	<.2	<.2	<.04	<.05	<.03	<.03	<.05
53	<.07	<.03	<.06	<.2	<.2	<.04	<.05	<.03	<.03	<.05
54	<.07	<.03	<.06	<.2	<.2	<.04	<.05	<.03	<.03	<.05
55	<.07	<.03	<.06	<.2	<.2	<.04	<.05	<.03	<.03	E.01
56	<.07	<.03	<.06	<.2	<.2	<.04	<.05	<.03	<.03	<.05
57	<.07	<.03	<.06	<.2	<.2	<.04	<.05	<.03	<.03	E.01
58	<.07	<.03	<.06	<.2	<.2	<.04	<.05	<.03	<.03	<.05
59	<.07	<.03	<.06	<.2	<.2	<.04	<.05	<.03	<.03	<.05
60	<.07	<.03	<.06	<.2	<.2	<.04	<.05	<.03	<.03	<.05

Appendix 8. Volatile organic compounds in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001--Continued

ACAD well number (fig. 1)	3-Chloropropene 107-05-1	2-Chlorotoluene 95-49-8	4-Chlorotoluene 106-43-4	Dibromochloromethane 124-48-1	1,2-Dibromo-3-chloropropane 96-12-8	1,2-Dibromoethane 106-93-4	Dibromomethane 74-95-3	1,2-Dichlorobenzene 95-50-1	1,3-Dichlorobenzene 541-73-1	1,4-Dichlorobenzene 106-46-7
61	<0.07	<0.03	<0.06	<0.2	<0.2	<0.04	<0.05	<0.03	<0.03	<0.05
62	<.07	<.03	<.06	<.2	<.2	<.04	<.05	<.03	<.03	<.05
63	<.07	<.03	<.06	<.2	<.2	<.04	<.05	<.03	<.03	<.05
64	<.07	<.03	<.06	<.2	<.2	<.04	<.05	<.03	<.03	<.05
65	<.07	<.03	<.06	<.2	<.2	<.04	<.05	<.03	<.03	<.05
66	<.07	<.03	<.06	<.2	<.2	<.04	<.05	<.03	<.03	<.05
67	<.07	<.03	<.06	<.2	<.2	<.04	<.05	<.03	<.03	<.05
68	<.07	<.03	<.06	<.2	<.2	<.04	<.05	<.03	<.03	<.05
69	<.07	<.03	<.06	<.2	<.2	<.04	<.05	<.03	<.03	<.05
70	<.07	<.03	<.06	<.2	<.2	<.04	<.05	<.03	<.03	<.05
71	<.07	<.03	<.06	<.2	<.2	<.04	<.05	<.03	<.03	<.05
72	<.07	<.03	<.06	<.2	<.2	<.04	<.05	<.03	<.03	<.05
73	<.07	<.03	<.06	<.2	<.2	<.04	<.05	<.03	<.03	<.05
74	<.07	<.03	<.06	<.2	<.2	<.04	<.05	<.03	<.03	<.05
75	<.07	<.03	<.06	<.2	<.2	<.04	<.05	<.03	<.03	<.05
76	<.07	<.03	<.06	<.2	<.2	<.04	<.05	<.03	<.03	<.05
77	<.07	<.03	<.06	<.2	<.2	<.04	<.05	<.03	<.03	<.05
78	<.07	<.03	<.06	<.2	<.5	<.04	<.05	<.03	<.03	<.05
79	<.07	<.03	<.06	<.2	<.5	<.04	<.05	<.03	<.03	<.05
80	<.07	<.03	<.06	<.2	<.5	<.04	<.05	<.03	<.03	<.05
81	<.07	<.03	<.06	<.2	<.5	<.04	<.05	<.03	<.03	<.05
82	<.07	<.03	<.06	<.2	<.5	<.04	<.05	<.03	<.03	<.05
83	<.07	<.03	<.06	<.2	<.5	<.04	<.05	<.03	<.03	<.05
84	<.07	<.03	<.06	<.2	<.5	<.04	<.05	<.03	<.03	<.05
85	<.07	<.03	<.06	<.2	<.5	<.04	<.05	<.03	<.03	<.05
86	<.07	<.03	<.06	<.2	<.5	<.04	<.05	<.03	<.03	<.05
87	<.07	<.03	<.06	<.2	<.5	<.04	<.05	<.03	<.03	<.05
88	<.07	<.03	<.06	<.2	<.5	<.04	<.05	<.03	<.03	<.05
89	<.07	<.03	<.06	<.2	<.5	<.04	<.05	<.03	<.03	<.05
90	<.07	<.03	<.06	<.2	<.5	<.04	<.05	<.03	<.03	<.05

Appendix 8. Volatile organic compounds in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001--Continued

ACAD well number (fig. 1)	trans-1,4-Dichloro-2-butene 110-57-6	Dichloro-difluoromethane 75-71-8	1,1-Dichloroethane 75-34-3	1,2-Dichloroethane 107-06-2	1,1-Dichloroethylene 75-35-4	cis-1,2-Dichloroethylene 156-59-2	trans-1,2-Dichloroethylene 156-60-5	Dichloromethane (Methylene chloride) 75-09-2	1,2-Dichloropropane 78-87-5	1,3-Dichloropropane 142-28-9
31	<0.7	<0.27	<0.07	<0.1	<0.04	<0.04	<0.03	<0.4	<0.07	<0.1
32	<.7	<.27	<.07	<.1	<.04	<.04	<.03	<.4	<.07	<.1
33	<.7	<.27	<.07	<.1	<.04	<.04	<.03	<.4	<.07	<.1
34	<.7	<.27	<.07	<.1	<.04	<.04	<.03	<.4	<.07	<.1
35	<.7	<.27	<.07	<.1	<.04	<.04	<.03	<.4	<.07	<.1
36	<.7	<.27	<.07	<.1	<.04	<.04	<.03	<.4	<.07	<.1
37	<.7	<.27	<.07	<.1	<.04	<.04	<.03	<.4	<.07	<.1
38	<.7	<.27	<.07	<.1	<.04	<.04	<.03	<.4	<.07	<.1
39	<.7	<.27	<.07	<.1	<.04	<.04	<.03	<.4	<.07	<.1
40	<.7	<.27	<.07	<.1	<.04	<.04	<.03	<.4	<.07	<.1
41	<.7	<.27	<.07	<.1	<.04	<.04	<.03	<.4	<.07	<.1
42	<.7	<.27	<.07	<.1	<.04	<.04	<.03	<.4	<.07	<.1
43	<.7	<.27	<.07	<.1	<.04	<.04	<.03	<.4	<.07	<.1
44	<.7	<.27	<.07	<.1	<.04	<.04	<.03	<.4	<.07	<.1
45	<.7	<.27	<.07	<.1	<.04	<.04	<.03	<.4	<.07	<.1
46	<.7	<.27	<.07	<.1	<.04	<.04	<.03	<.4	<.07	<.1
47	<.7	<.27	<.07	<.1	<.04	<.04	<.03	<.4	<.07	<.1
48	<.7	<.27	<.07	<.1	<.04	<.04	<.03	<.4	<.07	<.1
49	<.7	<.27	<.07	<.1	<.04	<.04	<.03	<.4	<.07	<.1
50	<.7	<.27	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1
51	<.7	<.27	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1
52	<.7	<.27	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1
53	<.7	<.27	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1
54	<.7	<.27	<.04	<.1	<.04	<.04	<.03	E.1	<.03	<.1
55	<.7	<.27	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1
56	<.7	<.27	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1
57	<.7	<.27	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1
58	<.7	<.27	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1
59	<.7	<.27	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1
60	<.7	<.27	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1

Appendix 8. Volatile organic compounds in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001--Continued

ACAD well number (fig. 1)	trans-1,4-Dichloro-2-butene 110-57-6	Dichloro-difluoromethane 75-71-8	1,1-Dichloroethane 75-34-3	1,2-Dichloroethane 107-06-2	1,1-Dichloroethylene 75-35-4	cis-1,2-Dichloroethylene 156-59-2	trans-1,2-Dichloroethylene 156-60-5	Dichloromethane (Methylene chloride) 75-09-2	1,2-Dichloropropane 78-87-5	1,3-Dichloropropane 142-28-9
61	<0.7	<0.27	<0.04	<0.1	<0.04	<0.04	<0.03	<0.2	<0.03	<0.1
62	<.7	<.27	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1
63	<.7	<.27	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1
64	<.7	<.27	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1
65	<.7	<.27	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1
66	<.7	E.18	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1
67	<.7	<.27	<.04	<.1	<.04	<.04	<.03	E.04	<.03	<.1
68	<.7	<.27	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1
69	<.7	<.27	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1
70	<.7	<.27	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1
71	<.7	<.27	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1
72	<.7	<.27	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1
73	<.7	<.27	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1
74	<.7	<.27	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1
75	<.7	<.27	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1
76	<.7	<.27	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1
77	<.7	<.27	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1
78	<.7	<.27	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1
79	<.7	<.27	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1
80	<.7	<.27	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1
81	<.7	<.27	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1
82	<.7	<.27	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1
83	<.7	E.34	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1
84	<.7	<.27	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1
85	<.7	<.27	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1
86	<.7	<.27	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1
87	<.7	<.27	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1
88	<.7	<.27	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1
89	<.7	<.27	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1
90	<.7	<.27	<.04	<.1	<.04	<.04	<.03	<.2	<.03	<.1

Appendix 8. Volatile organic compounds in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001--Continued

ACAD well number (fig. 1)	2,2-Dichloropropane 594-20-7	1,1-Dichloropropene 563-58-6	cis-1,3-Dichloropropene 10061-01-5	trans-1,3-Dichloropropene 10061-02-6	Diethyl ether 60-29-7	Diisopropyl ether 108-20-3	Ethylbenzene 100-41-4	Ethyl tert-butyl ether (ETBE) 637-92-3	Ethyl methacrylate 97-63-2	o-Ethyl toluene 611-14-3
31	<0.05	<0.03	<0.09	<0.09	<0.2	<0.1	<0.03	<0.05	<0.2	<0.06
32	<.05	<.03	<.09	<.09	<.2	<.1	E.04	<.05	<.2	E.02
33	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
34	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
35	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
36	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
37	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
38	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
39	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
40	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
41	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
42	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
43	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
44	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
45	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
46	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
47	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
48	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
49	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
50	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
51	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
52	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
53	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
54	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
55	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
56	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
57	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
58	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
59	<.05	<.03	<.09	<.09	<.2	--	<.03	<.05	<.2	<.06
60	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06

Appendix 8. Volatile organic compounds in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001--Continued

ACAD well number (fig. 1)	2,2-Dichloropropane 594-20-7	1,1-Dichloropropene 563-58-6	cis-1,3-Dichloropropene 10061-01-5	trans-1,3-Dichloropropene 10061-02-6	Diethyl ether 60-29-7	Diisopropyl ether 108-20-3	Ethylbenzene 100-41-4	Ethyl tert-butyl ether (ETBE) 637-92-3	Ethyl methacrylate 97-63-2	o-Ethyl toluene 611-14-3
61	<0.05	<0.03	<0.09	<0.09	<0.2	<0.1	<0.03	<0.05	<0.2	<0.06
62	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
63	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
64	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
65	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
66	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
67	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
68	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
69	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
70	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
71	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
72	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
73	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
74	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
75	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
76	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
77	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
78	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
79	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
80	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
81	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
82	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
83	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
84	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
85	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
86	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
87	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
88	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
89	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06
90	<.05	<.03	<.09	<.09	<.2	<.1	<.03	<.05	<.2	<.06

Appendix 8. Volatile organic compounds in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001--Continued

ACAD well number (fig. 1)	Hexachlorobutadiene 87-68-3	Hexachloroethane 67-72-1	2-Hexanone (Methyl butyl ketone) 591-78-6	Isopropylbenzene 98-82-8	4-Isopropyl-1-methylbenzene (p-Isopropyltoluene) 99-87-6	Methyl acrylate 96-33-3	Methyl acrylonitrile 126-98-7	Methyl tert-butyl ether (MTBE) 1634-04-4	2-Butanone (Methyl ethyl keton) 78-93-3
31	<0.1	<0.2	<0.7	<0.03	<0.07	<1.4	<0.6	<0.2	<1.6
32	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
33	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
34	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
35	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
36	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
37	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
38	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
39	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
40	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
41	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
42	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
43	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
44	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
45	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
46	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
47	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
48	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
49	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
50	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
51	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
52	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
53	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
54	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
55	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
56	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
57	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
58	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
59	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
60	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6

Appendix 8. Volatile organic compounds in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001--Continued

ACAD well number (fig. 1)	Hexachlorobutadiene 87-68-3	Hexachloroethane 67-72-1	2-Hexanone (Methyl butyl ketone) 591-78-6	Isopropylbenzene 98-82-8	4-Isopropyl-1-methylbenzene (p-Isopropyltoluene) 99-87-6	Methyl acrylate 96-33-3	Methyl acrylonitrile 126-98-7	Methyl tert-butyl ether (MTBE) 1634-04-4	2-Butanone (Methyl ethyl keton) 78-93-3
61	<0.1	<0.2	<0.7	<0.03	<0.07	<1.4	<0.6	0.4	<1.6
62	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
63	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
64	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
65	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
66	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
67	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
68	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
69	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
70	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	70
71	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
72	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
73	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
74	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
75	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
76	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
77	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
78	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
79	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
80	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
81	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	0.3	<1.6
82	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
83	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
84	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
85	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
86	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
87	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
88	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
89	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6
90	<.1	<.2	<.7	<.03	<.07	<1.4	<.6	<.2	<1.6

Appendix 8. Volatile organic compounds in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001--Continued

ACAD well number (fig. 1)	Methyl iodide (Iodo-methane) 74-88-4	4-Methyl-2-pentanone (Methyl isobutyl ketone) 108-10-1	Methyl methacrylate 80-62-6	tert-Pentyl methyl ether 994-05-8	Naphthalene 91-20-3	n-Propylbenzene 103-65-1	Styrene (Ethenyl-benzene) 100-42-5	1,1,1,2-Tetrachloroethane 630-20-6	1,1,2,2-Tetrachloroethane 79-34-5	Tetrachloroethylene 127-18-4
31	<0.1	<0.4	<0.3	<0.1	<0.2	<0.04	<0.04	<0.03	<0.09	<0.1
32	<.1	<.4	<.3	<.1	.3	<.04	<.04	<.03	<.09	<.1
33	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
34	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
35	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
36	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
37	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
38	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
39	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
40	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
41	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
42	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
43	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
44	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
45	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
46	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
47	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
48	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
49	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
50	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
51	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
52	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
53	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
54	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
55	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
56	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
57	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
58	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
59	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
60	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1

Appendix 8. Volatile organic compounds in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001--Continued

ACAD well number (fig. 1)	Methyl iodide (Iodo-methane) 74-88-4	4-Methyl-2-pentanone (Methyl isobutyl ketone) 108-10-1	Methyl methacrylate 80-62-6	tert-Pentyl methyl ether 994-05-8	Naphthalene 91-20-3	n-Propylbenzene 103-65-1	Styrene (Ethenyl-benzene) 100-42-5	1,1,1,2-Tetrachloroethane 630-20-6	1,1,2,2-Tetrachloroethane 79-34-5	Tetrachloroethylene 127-18-4
61	<0.1	<0.4	<0.3	E0.03	<0.2	<0.04	<0.04	<0.03	<0.09	<0.1
62	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
63	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
64	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
65	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
66	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
67	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
68	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
69	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
70	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
71	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
72	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
73	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
74	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
75	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
76	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
77	<.1	<.4	<.3	<.1	<.2	<.04	<.04	<.03	<.09	<.1
78	<.1	<.4	<.3	<.1	<.5	<.04	<.04	<.03	<.09	<.1
79	<.1	<.4	<.3	<.1	<.5	<.04	<.04	<.03	<.09	<.1
80	<.1	<.4	<.3	<.1	<.5	<.04	<.04	<.03	<.09	<.1
81	<.1	<.4	<.3	<.1	<.5	<.04	<.04	<.03	<.09	<.1
82	<.1	<.4	<.3	<.1	<.5	<.04	<.04	<.03	<.09	<.1
83	<.1	<.4	<.3	<.1	<.5	<.04	<.04	<.03	<.09	<.1
84	<.1	<.4	<.3	<.1	<.5	<.04	<.04	<.03	<.09	<.1
85	<.1	<.4	<.3	<.1	<.5	<.04	<.04	<.03	<.09	<.1
86	<.1	<.4	<.3	<.1	<.5	<.04	<.04	<.03	<.09	<.1
87	<.1	<.4	<.3	<.1	<.5	<.04	<.04	<.03	<.09	<.1
88	<.1	<.4	<.3	<.1	<.5	<.04	<.04	<.03	<.09	<.1
89	<.1	<.4	<.3	<.1	<.5	<.04	<.04	<.03	<.09	<.1
90	<.1	<.4	<.3	<.1	<.5	<.04	<.04	<.03	<.09	<.1

Appendix 8. Volatile organic compounds in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001--Continued

ACAD well number (fig. 1)	Tetrachloromethane 56-23-5	Tetrahydrofuran 109-99-9	1,2,3,4-Tetramethylbenzene (Prehnitene) 488-23-3	1,2,3,5-Tetramethylbenzene (Isodurene) 527-53-7	1,2,3-Trichlorobenzene 87-61-6	1,2,4-Trichlorobenzene 120-82-1	1,1,1-Trichloroethane 71-55-6	1,1,2-Trichloroethane 79-00-5	Trichloroethylene (TCE) 79-01-6
31	<0.06	<2	<0.2	<0.2	<0.3	<0.2	<0.03	<0.06	<0.04
32	<.06	<2	<.2	E.02	<.3	<.2	<.03	<.06	<.04
33	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
34	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
35	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
36	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
37	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
38	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
39	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
40	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
41	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
42	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
43	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
44	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
45	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
46	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
47	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
48	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
49	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
50	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
51	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
52	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
53	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
54	<.06	E1	<.2	<.2	<.3	<.2	<.03	<.06	<.04
55	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
56	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
57	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	E.02
58	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	0.11
59	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	E.03
60	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	E.02

Appendix 8. Volatile organic compounds in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001--Continued

ACAD well number (fig. 1)	Tetrachloromethane 56-23-5	Tetrahydrofuran 109-99-9	1,2,3,4-Tetramethylbenzene (Prehnitene) 488-23-3	1,2,3,5-Tetramethylbenzene (Isodurene) 527-53-7	1,2,3-Trichlorobenzene 87-61-6	1,2,4-Trichlorobenzene 120-82-1	1,1,1-Trichloroethane 71-55-6	1,1,2-Trichloroethane 79-00-5	Trichloroethylene (TCE) 79-01-6
61	<0.06	<2	<0.2	<0.2	<0.3	<0.2	<0.03	<0.06	<0.04
62	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
63	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
64	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
65	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
66	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
67	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
68	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
69	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
70	<.06	29	<.2	<.2	<.3	<.2	<.03	<.06	<.04
71	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
72	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
73	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
74	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
75	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
76	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
77	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
78	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
79	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
80	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
81	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
82	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
83	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
84	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
85	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
86	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	E.02
87	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
88	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04
89	<.06	E.616	<.2	<.2	<.3	<.2	<.03	<.06	<.04
90	<.06	<2	<.2	<.2	<.3	<.2	<.03	<.06	<.04

Appendix 8. Volatile organic compounds in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001--Continued

ACAD well number (fig. 1)	Trichlorofluoromethane 75-69-4	1,2,3-Trichloropropane 96-18-4	1,1,2-Trichlorotrifluoroethane (Freon 113) 76-13-1	1,2,3-Trimethylbenzene 526-73-8	1,2,4-Trimethylbenzene 95-63-6	1,3,5-Trimethylbenzene 108-67-8	Toluene 108-88-3	Vinyl chloride 75-01-4	m- and p-Xylene no CAS number	o-Xylene 95-47-6
31	<0.09	<0.16	<0.06	<0.1	<0.06	<0.04	E0.01	<0.1	<0.06	<0.04
32	<.09	<.16	<.06	E.02	E.10	E.02	E.07	<.1	E.12	E.06
33	<.09	<.16	<.06	<.1	<.06	<.04	E.01	<.1	<.06	<.04
34	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
35	E1.33	<.16	<.06	<.1	<.06	<.04	E.01	<.1	<.06	<.04
36	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
37	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
38	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
39	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
40	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
41	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
42	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
43	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
44	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
45	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
46	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
47	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
48	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
49	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
50	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
51	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
52	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
53	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
54	<.09	<.16	<.06	<.1	E.02	<.04	<.05	<.1	E.01	<.04
55	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
56	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
57	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
58	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
59	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
60	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04

Appendix 8. Volatile organic compounds in water from selected domestic wells in southern Louisiana and southwestern Mississippi, 2000-2001--Continued

ACAD well number (fig. 1)	Trichlorofluoromethane 75-69-4	1,2,3-Trichloropropane 96-18-4	1,1,2-Trichlorotrifluoroethane (Freon 113) 76-13-1	1,2,3-Trimethylbenzene 526-73-8	1,2,4-Trimethylbenzene 95-63-6	1,3,5-Trimethylbenzene 108-67-8	Toluene 108-88-3	Vinyl chloride 75-01-4	m- and p-Xylene no CAS number	o-Xylene 95-47-6
61	<0.09	<0.16	<0.06	<0.1	<0.06	<0.04	E0.02	<0.1	<0.06	<0.04
62	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
63	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
64	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
65	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
66	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
67	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
68	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
69	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
70	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
71	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
72	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
73	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
74	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
75	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
76	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
77	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
78	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
79	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
80	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
81	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
82	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
83	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
84	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
85	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
86	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
87	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
88	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
89	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04
90	<.09	<.16	<.06	<.1	<.06	<.04	<.05	<.1	<.06	<.04