Hydrologic Data for the Weldon Spring Chemical Plant Site and Vicinity Property, St. Charles County, Missouri—1989–95

By MICHAEL J. KLEESCHULTE

U.S. GEOLOGICAL SURVEY
Open-File Report 95–463

Prepared in cooperation with the
U.S. Department of Energy

Rolla, Missouri
1995

U.S. DEPARTMENT OF THE INTERIOR
BRUCE BABBITT, Secretary

U.S. GEOLOGICAL SURVEY
Gordon P. Eaton, Director

For additional information write to:

District Chief
U.S. Geological Survey
1400 Independence Road
Mail Stop 200
Rolla, MO 65401

Copies of this report may be purchased from:

U.S. Geological Survey
Earth Science Information Center
Open-File Reports Section
Box 25286, MS 517
Denver Federal Center
Denver, CO 80225

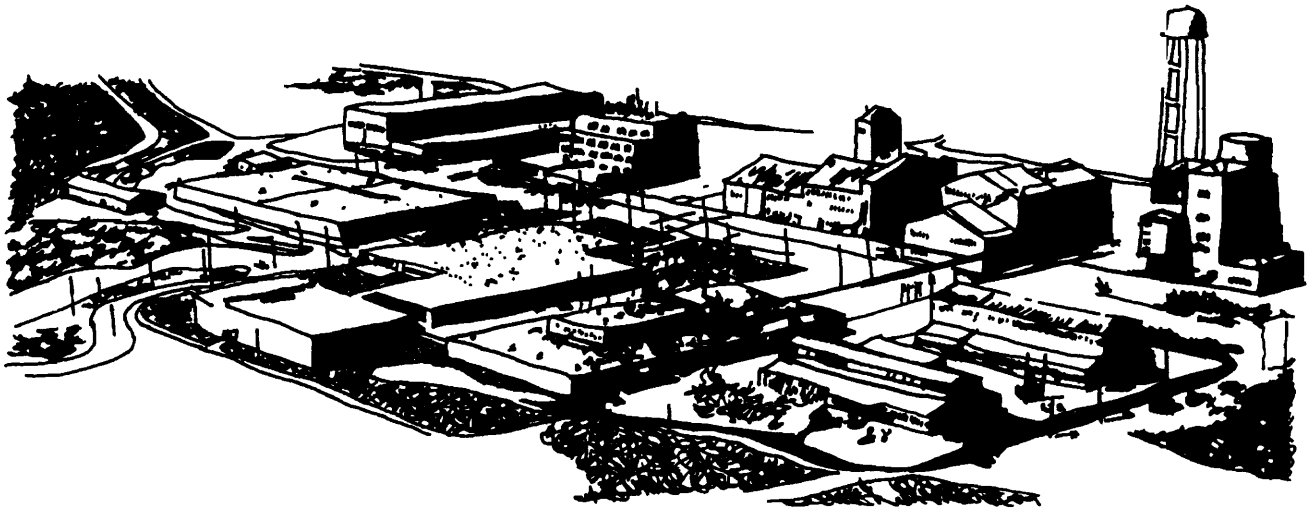
CONTENTS

FIGURES

TABLES

Hydrologic Data for the Weldon Spring Chemical Plant Site and Vicinity Property, St. Charles County, Missouri—1989–95

U.S. GEOLOGICAL SURVEY
Open-File Report 95–463



Prepared in cooperation with the
U.S. Department of Energy

Hydrologic Data for the Weldon Spring Chemical Plant Site and Vicinity Property, St. Charles County, Missouri—1989–95

By Michael J. Kleeschulte

Abstract

This report contains the water-quality sampling methodology and hydrologic data collected from October 1, 1989, through September 30, 1995, at the Weldon Spring chemical plant and vicinity property. Water-quality data are from 7 selected locations at the Weldon Spring chemical plant site and 10 surface-water sites, 18 monitoring wells, and 6 springs on vicinity property. Also included are daily mean specific conductance and discharge data for Burgermeister spring and water-level measurements for 120 wells at the Weldon Spring chemical plant site and vicinity property.

Water-quality data from sampling sites at the chemical plant site indicated concentrations of several chemical constituents are larger than background concentrations. The constituents detected with elevated concentrations include (maximum concentrations are in parenthesis):

- Major cations and anions (in milligrams per liter)—calcium (250), magnesium (49), sodium (610), sulfate (710), and chloride (1,300);
- Nutrients (in milligrams per liter)—nitrite plus nitrate as nitrogen (40); and
- Trace elements (in micrograms per liter)—boron (640), lithium (20), strontium (740), vanadium (79), and uranium (4,200).

Water-quality data from 10 surface-water locations on vicinity property indicate that, in general, the maximum constituent concentrations were less offsite than the concentrations that were detected onsite. However, concentrations of several constituents were elevated above background concentrations. The constituents detected with elevated concentrations include (maximum concentrations are in parenthesis):

- Major cations and anions (in milligrams per liter)—calcium (130), sodium (69), sulfate (280), and chloride (120);
- Nutrients (in milligrams per liter)—nitrite plus nitrate as nitrogen (34); and
- Trace element concentrations (in micrograms per liter)—lithium (37), manganese (15,000), strontium (360), and uranium (570).

Water-quality data from 1 monitoring well at the chemical plant site (MW 3023) and 17 monitoring wells on vicinity property indicate that most of these wells have background concentrations for the analyzed constituents. However, samples from wells MW 3023, MW 4013, and MW 4014 typically had elevated concentrations of several constituents. Samples from well MW 3023 consistently had larger constituent concentrations than the wells on vicinity property. The constituents detected with elevated concentrations include (maximum concentrations from well MW 3023 and from wells on vicinity property are in parenthesis):

- Major cations and anions (in milligrams per liter)—calcium (450; 140), magnesium (100; 51), sodium (270; 37), and sulfate (250; 41);
- Nutrients (in milligrams per liter)—nitrite plus nitrate as nitrogen (410; 74); and

- Trace elements (in micrograms per liter)—lithium (1,100; 68), strontium (950; 1,500), and uranium (8.9; 6.8).

Discharge and water-quality data were collected for six springs on vicinity property. Four springs to the south of the chemical plant and two springs north of the chemical plant were sampled.

The specific conductance and discharge of water from Burgermeister spring were monitored from October 1, 1989, through September 30, 1995. The daily mean specific conductance varied over time and during different climatic conditions and ranged from a minimum of 180 microsiemens per centimeter at 25 degrees Celsius on November 12, 1992, to 1,130 microsiemens per centimeter at 25 degrees Celsius on most days (8 of 9) between August 27 and September 4, 1991. The daily mean discharge from October 1, 1989, through September 30, 1995, ranged from 0.04 cubic foot per second, which occurred on several days throughout the period, to a maximum of 0.92 cubic foot per second.

Water-level measurements were made in 120 monitoring wells from November 1, 1989, through October 7, 1993. Depth to water ranged from 221.8 feet in well MWGS 02 (completed in the St. Peter Sandstone) to several wells that had flowing water. Several shallow wells were dry.

INTRODUCTION

A uranium processing plant was operated for the U.S. Atomic Energy Commission from 1957 to 1966 at the site of a former chemical plant near Weldon Spring in St. Charles County, Missouri. Uranium ore concentrate and recycled scrap were converted to pure uranium trioxide, uranium tetrafluoride, and uranium metal (Weidner and Boback, 1982). Some thorium residues also were processed. Low-level radioactive wastes from the operation were pumped as a slurry to four raffinate pits near the plant (Lenhard and others, 1967). The wastes presently (1995) are being stored in these four pits, which have a combined surface area of about 26 acres. For the purpose of this report, the Weldon Spring chemical plant site refers to about 228 acres that contain the abandoned chemical plant and raffinate pits area (fig. 1). Land comprising the Weldon Spring ordnance works that is not owned by the U.S. Department of Energy together with the area between the ordnance works and Dardenne Creek is referred to as vicinity property.

The U.S. Geological Survey began an initial Phase I study in 1983 to determine the extent and magnitude of surface- and ground-water contamination caused by the radioactive and associated wastes stored at the chemical plant. Data collected during this study confirmed that seepage from the raffinate pits had entered the ground-water system near the pits (Kleeschulte and Emmett, 1987). Water from Burgermeister spring located 1.5 mi (miles) north of the site on the August A. Busch Memorial Wildlife Area contained elevated concentrations of nitrate, lithium, and uranium that indicated that the spring receives recharge from sources possibly as far away as the Weldon Spring chemical plant site (Kleeschulte and Emmett, 1987). The full extent of the areal and vertical contamination from the site was not completely determined at the end of the initial study.

During 1987, the U.S. Geological Survey started work on a Phase II study in the Weldon Spring area in cooperation with the U.S. Department of Energy. The primary objective of this study was to better define the extent and magnitude of contamination of the water resources in the vicinity of the Weldon Spring chemical plant site. Other objectives included determination of effects of climatic conditions on surface- and ground-water systems. Data collected during this study indicated the most probable migration route for surface water from the raffinate pit area is downward seepage through surficial deposits. On its downward migration, this water reaches zones of greater permeability, such as the residuum and weathered carbonate bedrock, that are capable of more rapidly transporting water to the water table. Troughs in the top of bedrock between the chemical plant site and Burgermeister spring have potential to channel contaminated ground water to the spring (Kleeschulte and Imes, 1994).

Tributaries receiving part of their flow from the chemical plant site are tributary 5300 (southeast drainage), Schote Creek (tributary 6200), including both the west and east tributaries, and tributary 6300 (fig. 2). Elevated concentrations of uranium [4 µg/L (micrograms per liter)] have been detected in the mainstem of Dardenne Creek near Cottleville during low-flow conditions. Analyses of water samples from five springs located in drainage basins 5300 and 6300 (fig. 2) indicated they also receive recharge from the chemical

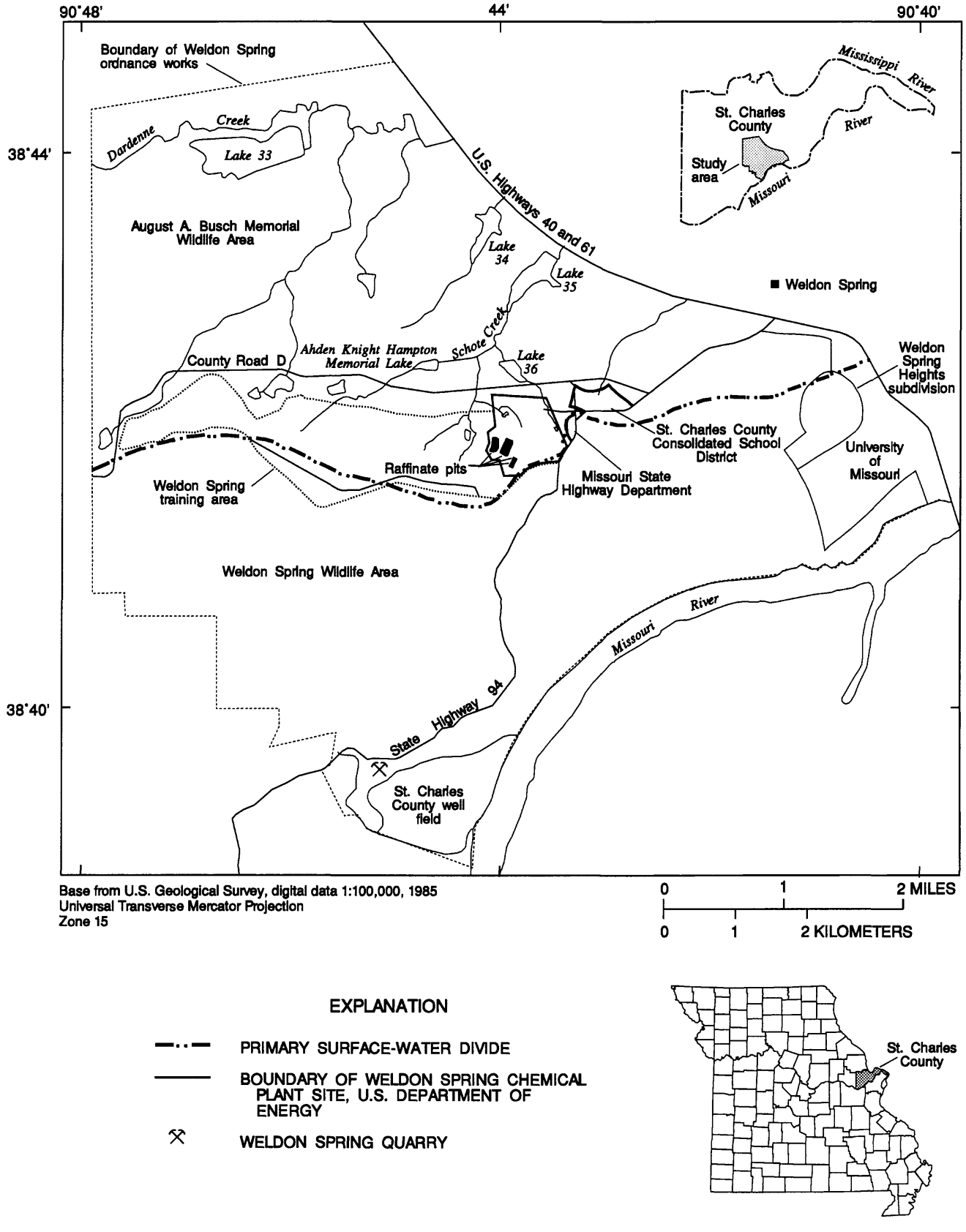


Figure 1. Location of the Weldon Spring chemical plant site and vicinity property near Weldon Spring, Missouri.

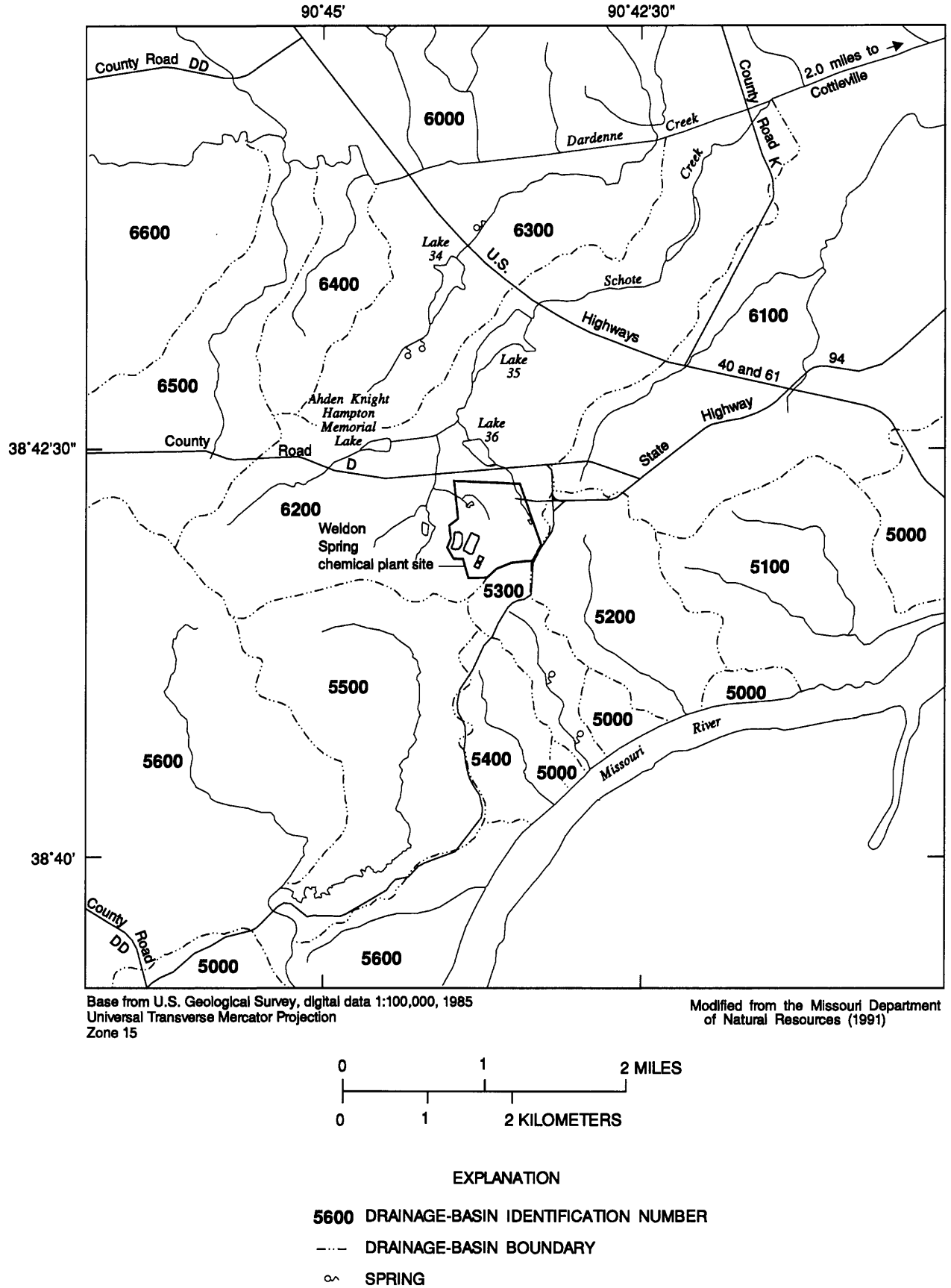


Figure 2. Drainage-basin numbering system.

plant site (Kleeschulte and Imes, 1994). As a result of the Phase II work, the water-quality sites that were determined to be affected by the chemical plant site were monitored to determine seasonal variations in water quality.

This report contains hydrologic data collected as part of the Phase II study from October 1, 1989, through September 30, 1995. It also includes water-quality data from locations on the Weldon Spring chemical plant site and surface-water sites, springs, and wells on vicinity property. Also included are daily mean specific conductance and discharge data for Burgermeister spring and construction data and water-level measurements for monitoring wells at the Weldon Spring chemical plant site and vicinity property.

STUDY AREA

The study area consists of 17,232 acres in St. Charles County in eastern Missouri near Weldon Spring. This property was owned by the U.S. Department of the Army during World War II when it was the site of the Weldon Spring ordnance works (fig. 1). After the land was declared surplus in 1946, the ownership of all but 1,858 acres was transferred to other owners. Currently (1995) the U.S. Department of Energy owns 228 acres consisting of the abandoned chemical plant, raffinate pits, and the Weldon Spring quarry.

The Weldon Spring chemical plant site is located on a ridge that is a surface-water divide for the Missouri and Mississippi River Basins. The surface water draining north off the site flows into tributaries of Schote Creek, onto the August A. Busch Memorial Wildlife Area, then eventually into Dardenne Creek, which drains into the Mississippi River. The surface water draining to the south of the site flows into steep-gradient streams on the Weldon Spring Wildlife Area that drain directly into the Missouri River about 1.5 mi away.

The chemical plant site is underlain by typically thin surficial deposits ranging from 0 to 59 ft (feet) thick. These deposits include a residuum layer ranging from 0 to 26 ft onsite; this residuum is characterized by cobbles and boulders of limestone and chert in a silty, sandy, clay matrix. The unconsolidated materials overlie the Burlington-Keokuk Limestone[1], which is a cherty limestone that locally is fractured and contains solution channels and cavities, springs, losing streams, and fractures (Kleeschulte and Imes, 1994). These features exist both north and south of the Weldon Spring chemical plant site.

[1]Nomenclature from the Missouri Division of Geology and Land Survey.

SAMPLING METHODOLOGY

Generally, "grab" samples were collected at the surface-water and spring sites, and discharge was determined by measuring the depth and width of the channel and estimating the velocity through the measured channel reach. These methods were used because of the small discharges associated with many of these sites. Water in the stream or spring channel typically was too shallow to use depth-integrating samplers or current meters. The "grab" sample at stream sites was collected using a small polyethylene sample bottle near the centroid of the flowing section on a riffle. Springs were sampled similarly and were sampled at or near the orifice. Impoundments were sampled by submerging the sample bottle at a point about 3 ft from the bank.

Water collected in the polyethylene sample bottle was composited into a polyethylene churn splitter. The notable exceptions to this method were the two sampling sites on the mainstem of Dardenne Creek, where samples were collected using the equal width increment method. This method consists of dividing the stream into about 10 sampling verticals of equal width. Water samples were collected at each sampling vertical using a hand-held, depth integrating, epoxy-coated sampler containing a glass bottle. The sampler was raised and lowered using the same transit rate at each vertical, and the amount of water collected in the sample bottle was a function of flow velocity and depth of water at the vertical. The water sample from each vertical was composited into a polyethylene churn splitter. Transit rates were determined using methods described by Edwards and Glysson (1988). Discharge at these sites was determined using a current meter and the general methods adopted by the U.S. Geological Survey described by Carter and Davidian (1968).

The water-quality samples collected from the USGS, MWGS, and MW series wells were obtained by using a submersible pump with a 5/8-in. (inch) internal diameter polyethylene hose for a discharge line. All wells were purged and water samples were collected when specific conductance, pH, and temper-

ature of the water that was discharged stabilized. This usually occurred after a minimum of two well volumes of water was removed from the wells. This procedure was not followed on several of the USGS series wells because of their slow recharge rates. These wells were pumped dry, then allowed to recharge to within 10 ft of their initial static water level before pumping them dry again. The water sample was then collected in a polyethylene churn splitter as the well was recharging the second time.

The sample bottles were rinsed onsite before adding the water sample from the churn splitter or filter. Raw samples were extracted directly from the churn splitter using the techniques described in a report by the U.S. Geological Survey (1993). Chemical constituents referred to as "dissolved" were determined from samples that were filtered onsite through a 0.45-µm (micrometer) cellulose-nitrate membrane filter located between Lucite[2] plates. The sample was forced through the filter using a peristaltic pump as the pressure source. Samples to be analyzed for total constituent concentrations were collected as raw or unfiltered samples. Samples for dissolved cations were placed in acid-washed polyethylene bottles and preserved with ultrapure nitric acid to a pH less than 2. Samples for dissolved anions were placed into polyethylene bottles with no preservatives. Dissolved nutrient samples (nitrogen and phosphorus species) were collected in 100-mL (milliliters) amber polyethylene bottles and preserved by adding 1 mL of 10^{-4} molar mercuric chloride and chilling to 4 °C (degrees Celsius). Total organic carbon samples were collected in 250-mL amber glass bottles and preserved by chilling to 4 °C.

All water samples were analyzed by laboratories of the U.S. Geological Survey. Samples were analyzed for inorganic constituents according to methods described by Fishman and Friedman (1989), organic compounds according to methods described by Wershaw and others (1983), and radiochemical substances according to methods described by Thatcher and others (1977).

Specific conductance, pH, water temperature, dissolved oxygen concentrations, and alkalinity were determined onsite at the sampling locations. Specific conductance values were measured using a portable conductivity meter with temperature compensation designed to express readings in microsiemens per centimeter at 25 °C. The pH was measured with a portable pH meter. Water temperature was measured with either a mercury thermometer or thermistor to the nearest 0.5 °C. Dissolved oxygen concentrations were measured with a portable dissolved oxygen meter at the surface-water and spring sites. Dissolved oxygen concentrations were determined at wells by colorimetry to the nearest 0.05 mg/L (milligram per liter) using a diethylene glycol and rhodazine-D method developed by Chemetrics. Alkalinity was determined by incremental titration past the inflection point with 0.1600 normal sulfuric acid.

WATER-QUALITY DATA

During the Phase II study, selected surface-water sites, wells, and springs were monitored on the Weldon Spring chemical plant site and vicinity property to document the water quality of the area before remediation. Many of these sites were chosen because they typically have elevated concentrations of chemical constituents associated with the chemical plant site. Water-quality samples were collected biannually from most of these sites during both low-base and high-base flow periods. The samples were analyzed for major cations and anions, nutrients, and trace elements, including uranium.

Discharge and water-quality data for seven sites sampled at the chemical plant (fig. 3) are listed in table 1, at the back of this report. Water from these sites either flows off the site or has the potential to flow off the site during runoff conditions. These sites include two locations in the headwaters of tributary 5300 (southeast drainage); one is in the east fork (site 1) and the other is in the west fork (site 2). The other onsite locations include a seep located at the base of the west levee of raffinate pit 4 (site 3), the diversion pond (site 4), Ash pond outflow (site 5), Frog pond when the pond has no outflow (site 6), and Frog pond outflow (site 7) during periods of runoff.

Water-quality data from the sampling locations at the chemical plant site indicated elevated concentrations of several constituents based on the background chemical constituent concentrations determined by Kleeschulte and Imes (1994). The constituents detected with elevated concentrations include (maximum concentrations are in parenthesis):

[2]Use of brand or trade names in this report is for identification purposes only and does not constitute endorsement by the U.S. Geological Survey.

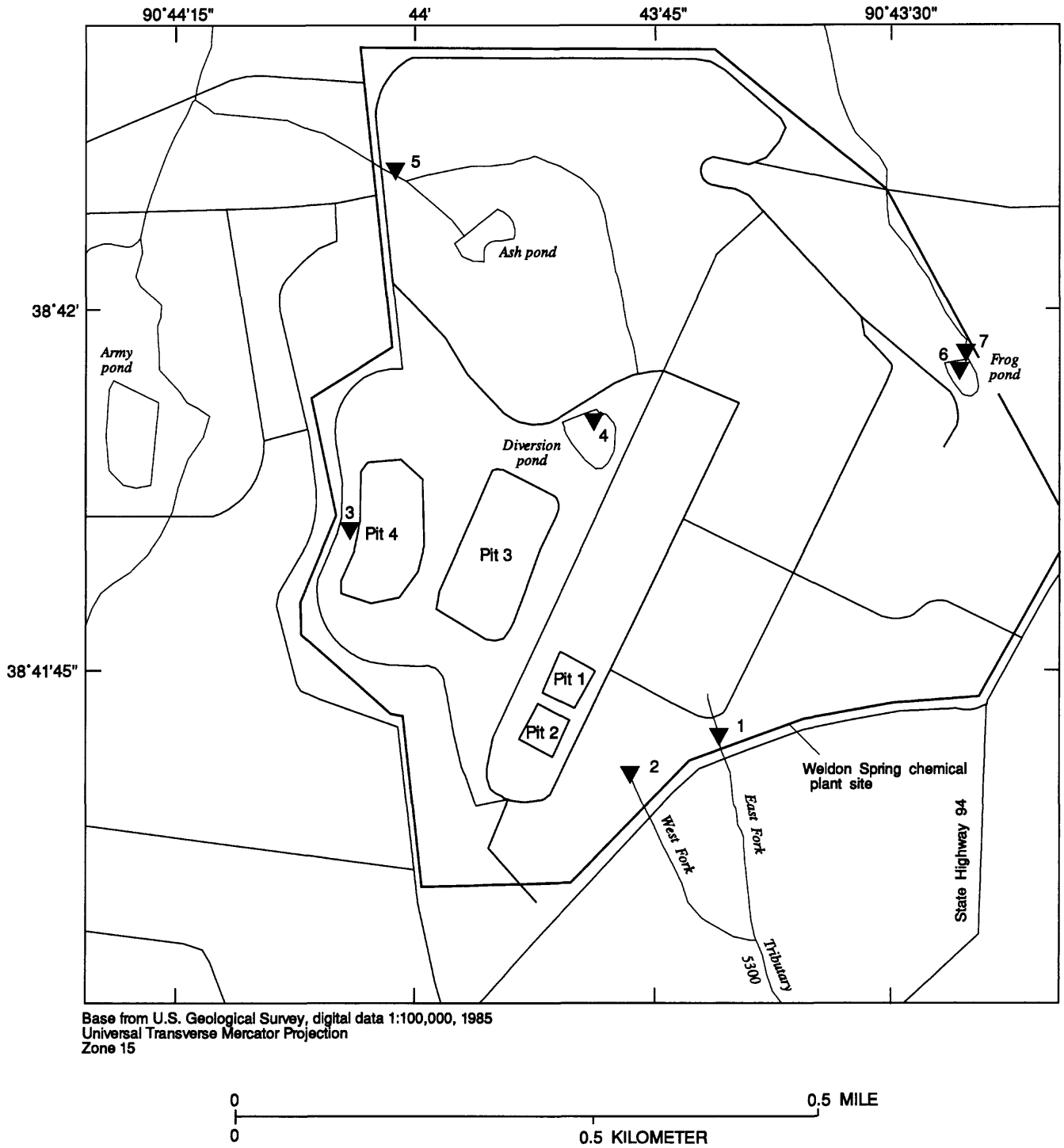


Figure 3. Selected sampling sites at the Weldon Spring chemical plant site.

- Major cations and anions (in milligrams per liter)—calcium (250), magnesium (49), sodium (610), sulfate (710), and chloride (1,300);
- Nutrients (in milligrams per liter)—nitrite plus nitrate as nitrogen (40); and
- Trace elements (in micrograms per liter)—boron (64), lithium (20), strontium (740), vanadium (79), and uranium (4,200).

Discharge and surface-water-quality data for 10 sampling locations on vicinity property are listed in table 2, at the back of this report. These sites are located in the Weldon Spring Wildlife Area between the chemical plant and the Missouri River, and in the August A. Busch Memorial Wildlife Area between the chemical plant and Dardenne Creek (fig. 4). Sampling sites south of the chemical plant include the mouths of tributary 5200 and tributary 5300 (sites 1 and 2). Sampling sites north of the chemical plant include two sites on the mainstem of Dardenne Creek (sites 3 and 10), two sites in tributary 6300 basin (sites 4 and 5), and four sites in Schote Creek (tributary 6200) Basin (sites 6 to 9). The quality assurance sample analyses also are included in this table.

Water-quality data from these surface-water locations on vicinity property generally indicated the chemical constituent concentrations were less than the concentrations detected at the chemical plant site. However, elevated concentrations of several constituents were detected. The constituents detected with elevated concentrations include (maximum concentrations are in parenthesis):

- Major cations and anions (in milligrams per liter)—calcium (130), sodium (69), sulfate (280), and chloride (120);
- Nutrients (in milligrams per liter)—nitrite plus nitrate as nitrogen (34); and
- Trace elements (in micrograms per liter)—lithium (37), manganese (15,000), strontium (360), and uranium (570).

Water-quality data for 18 monitoring wells are listed in table 3, at the back of this report. The USGS series wells, MWGS 03, and the three MW series wells (fig. 5) are completed in the Burlington-Keokuk Limestones. Wells MWGS 01 and MWGS 04 are completed in the Kimmswick Limestone, and wells MWGS 02 and MWGS 05 are completed in the St. Peter Sandstone. The USGS series wells and wells MWGS 03, MWGS 04, MWGS 05, MW 4013, and MW 4014 are located on the August A. Busch Memorial Wildlife Area north of the chemical plant site. Wells MWGS 01 and MWGS 02 are located south of the chemical plant on the Weldon Spring Wildlife Area. Well MW 3023 is the only well at the chemical plant site.

Most of these wells were sampled once and water-quality data indicated that many of the wells on vicinity property have background concentrations for the analyzed constituents based on the background chemical constituent concentrations determined by Kleeschulte and Imes (1994). However, wells MW 3023, MW 4013, and MW 4014 typically have elevated concentrations of several constituents with the largest concentrations in samples from well MW 3023. The constituents detected with elevated concentrations include (maximum concentrations from well MW 3023 and from wells on vicinity property are in parenthesis):

- Major cations and anions (in milligrams per liter)—calcium (450; 140), magnesium (100; 51), sodium (270; 37), and sulfate (250; 41);
- Nutrients (in milligrams per liter)—nitrite plus nitrate as nitrogen (410; 74); and
- Trace elements (in micrograms per liter)—lithium (1,100; 68), strontium (950; 1,500), and uranium (8.9; 6.8).

Discharge and water-quality data for six springs on vicinity property are listed in table 4, at the back of this report. Four springs were sampled to the south of the chemical plant (fig. 4) and include spring 5201, spring 5202, spring 5303, and spring 5304 (sites 1 to 4). Sampled springs north of the chemical plant site include Burgermeister spring and spring 6303 (sites 5 and 6).

QUALITY ASSURANCE AND QUALITY CONTROL

Blank samples were collected at the same time as the environmental samples during this study beginning in May 1992. Water used for blank samples was supplied by the U.S. Geological Survey National Water Quality Laboratory and the quality of the blank water was such that it had no inorganic chemical constituent concentrations greater than the reporting level. These blank samples were subjected to all aspects of sample collection, processing, preservation, transportation, and laboratory handling as the environmental samples and are considered both a sampler and filter blank. The blank samples were analyzed for common

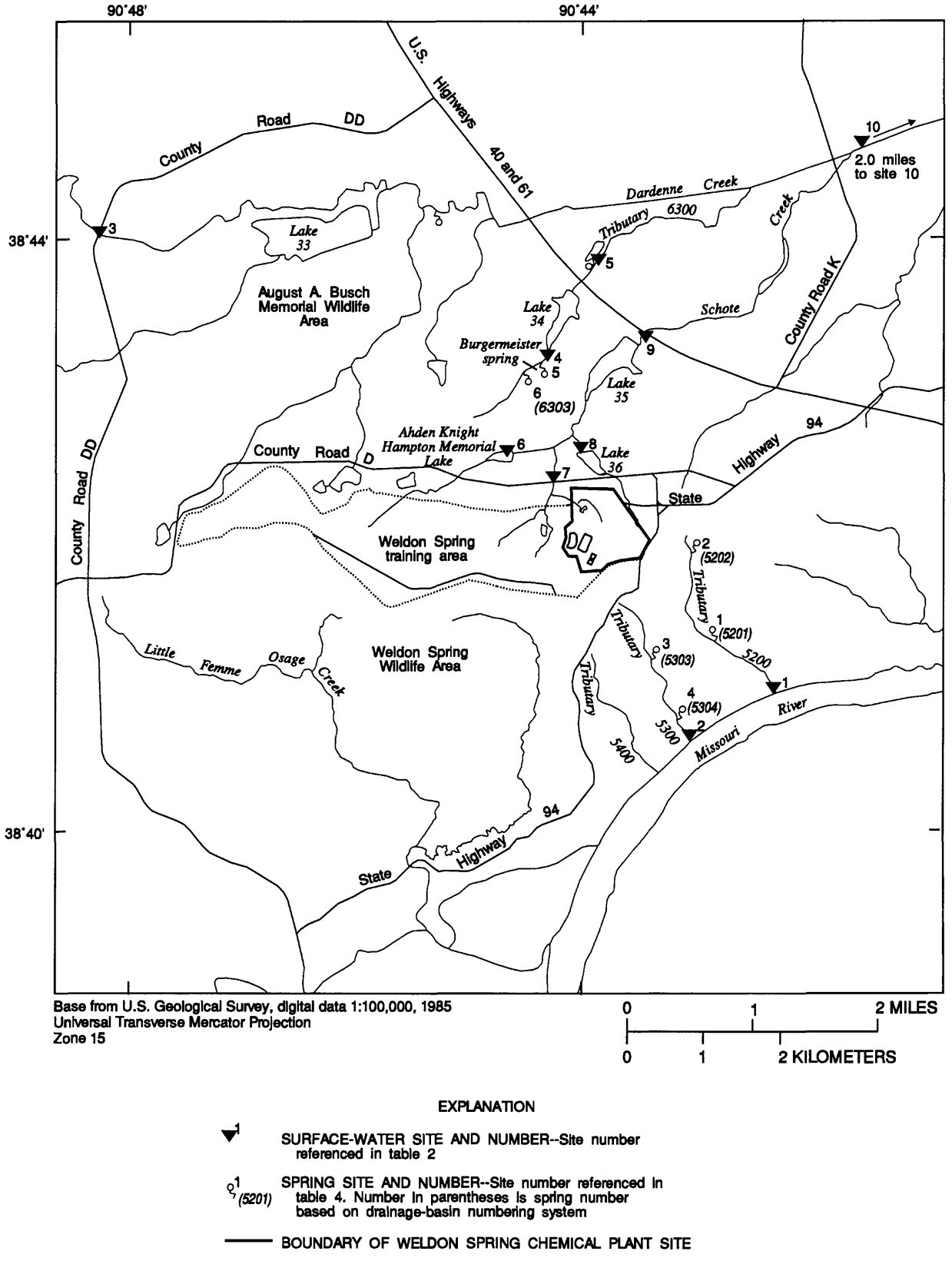


Figure 4. Location of surface-water and spring sites sampled on vicinity property near the Weldon Spring chemical plant site.

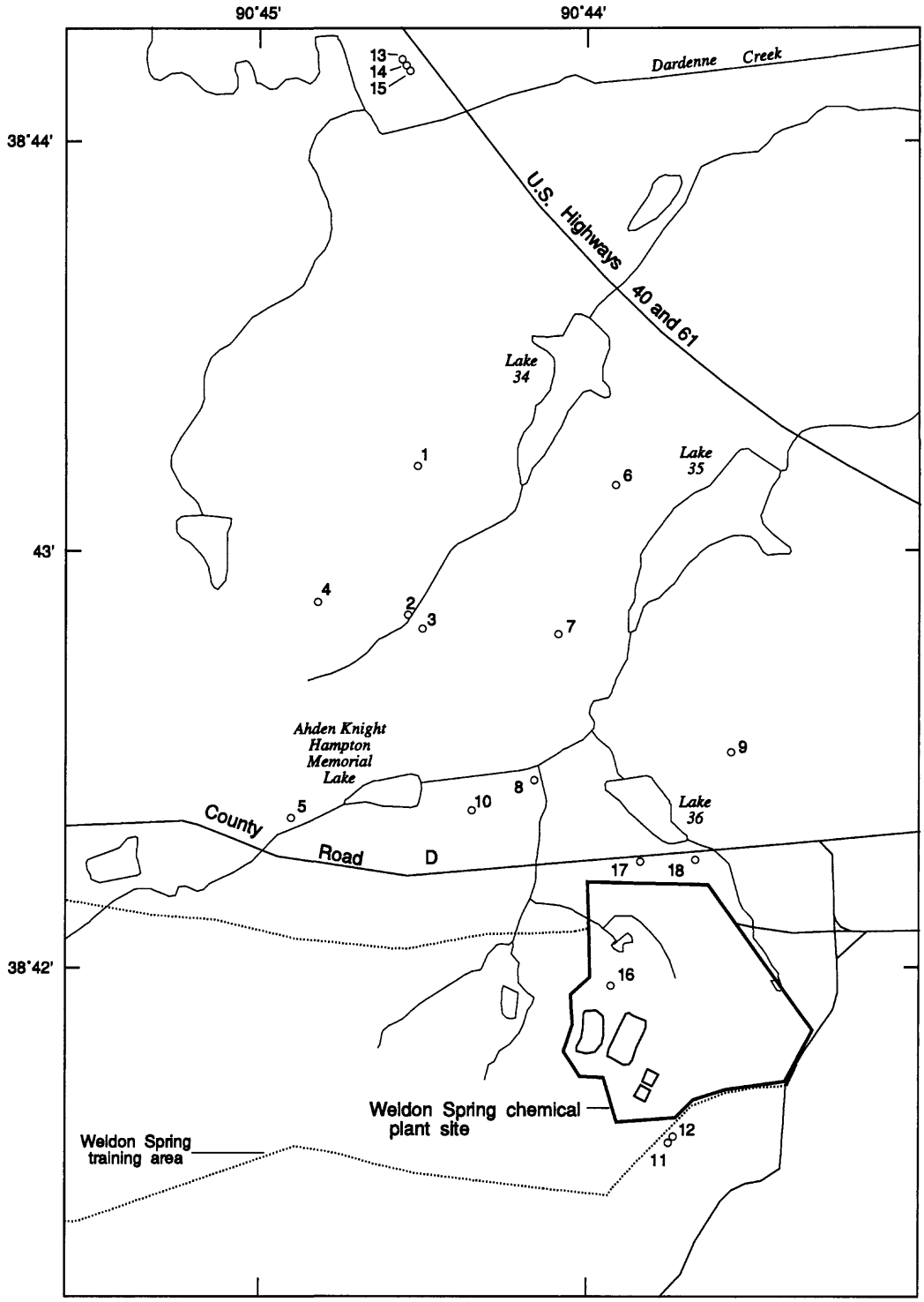


Figure 5. Location of wells sampled at the Weldon Spring chemical plant site and on vicinity property.

anions and cations, nutrients, and trace elements—the same as the environmental samples. The analytes detected in the blank sample were introduced as a result of the onsite sampling process.

BURGERMEISTER SPRING MINI-MONITOR DATA

A minimonitor was operated at Burgermeister spring (fig. 4) from October 1, 1989, through September 30, 1995. This device continually recorded the specific conductance of the water at the spring orifice at 30-minute intervals. Specific conductance measures the ability of a water to conduct an electrical current. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids concentration of the water (Hem, 1985). The daily mean specific conductance values for Burgermeister spring are listed in table 5, at the back of this report. Daily mean specific conductance values for Burgermeister spring before October 1, 1989, are in the report by Kleeschulte and Cross (1990). Specific conductance was measured to make estimates of the water-quality variation over time and during different climatic conditions. The daily mean specific conductance ranged from a minimum of 180 µS/cm (microsiemens per centimeter at 25 °C) on November 12, 1992, to 1,130 µS/cm on most days (8 of 9) between August 27 and September 4, 1991.

BURGERMEISTER SPRING DISCHARGE DATA

A 90-degree sharp-crested V-notch weir was constructed across the spring branch of Burgermeister spring and stage was continually recorded by a digital recorder every 15 minutes at the weir. The stage-discharge relation for the spring was defined by the weir formula (Anderson, 1971):

$$Q = 2.4381\ H^{5/2},$$

where Q is discharge of water, in cubic feet per second, and H is hydraulic head of water above the base of the notch (stage), in feet. This stage-discharge relation was verified by occasional discharge measurements. Daily mean discharge data collected at Burgermeister spring between October 1, 1989, and September 30, 1995, are presented in table 6, at the back of this report. Daily mean discharge data for Burgermeister spring prior to October 1, 1989, can be found in the report by Kleeschulte and Cross (1990).

The accuracy of discharge data depends on the stability of the stage-discharge relation, the accuracy of observations of stage and measurements of discharge, and interpretations of records. The degree of accuracy of these records is defined as: "excellent," which means that about 95 percent of the daily discharge measurements are within 5 percent; "good," within 10 percent; and "fair," within 15 percent. "Poor" means that daily discharge measurements have less than "fair" accuracy. The record for Burgermeister spring is rated good except for periods of intense rainfall when water in a nearby creek flows out of its banks and enters the Burgermeister spring branch. The runoff from the creek mixes with the spring discharge and increases the measured stage recorded downstream at the weir. This increased stage affects the calculated discharge for the spring. This normally occurs at the higher stage, thereby making the record for calculated discharges larger than approximately 0.70 ft^3/s (cubic foot per second) poor. A nearby wet-weather spring, which is hydraulically connected to Burgermeister spring, also flows during storms, and the discharge of this spring can exceed the discharge of Burgermeister spring by as much as five times (Kleeschulte and Emmett, 1987). The daily mean discharge for October 1989 through September 1995 ranged from 0.04 ft^3/s, which occurred on several days throughout this period, to a maximum of 0.92 ft^3/s on April 11, 1994.

WELL DATA AND WATER-LEVEL MEASUREMENTS

Data for wells in the study area are listed in table 7, at the back of this report. Altitude of land surface and height of measuring point for most of the wells were determined by surveys and are accurate to 0.01 ft. Wells with reported land-surface altitudes to the nearest foot were determined from topographic maps and are accurate to one-half of the contour interval.

Water-level measurements made in the 120 monitoring wells from November 1, 1989, through October 7, 1993, are listed in table 8, at the back of this report. The location of these wells is shown in figures 6 and 7. Several wells shown in figure 6 as a single well are well clusters (for example, well 86 actually is MWS–13 and MWV–13). The wells that are closely spaced on and in the vicinity of the Weldon Spring chemical plant site are shown in more detail in

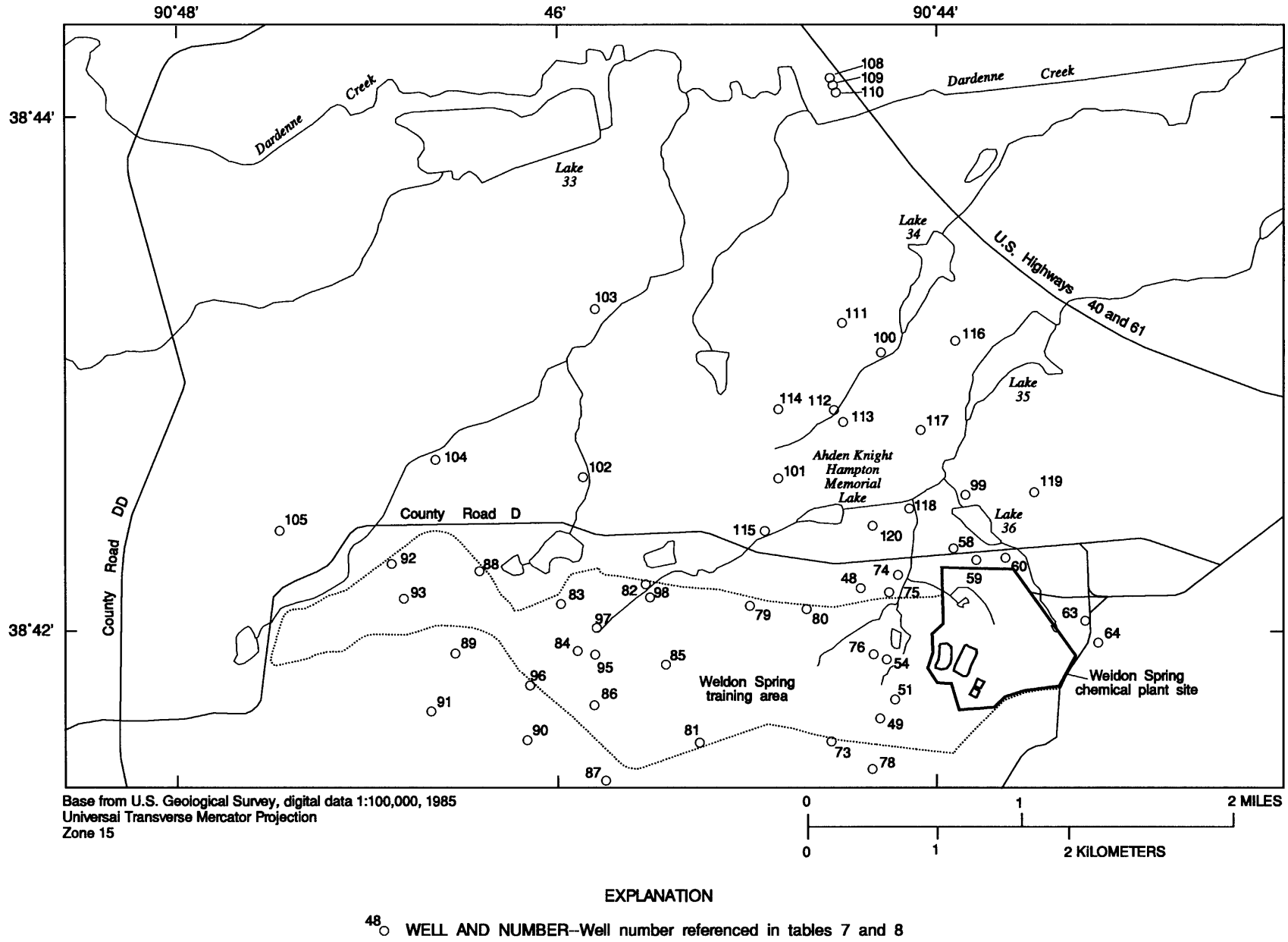


Figure 6. Location of wells with water-level measurements at the Weldon Spring chemical plant site and vicinity property.

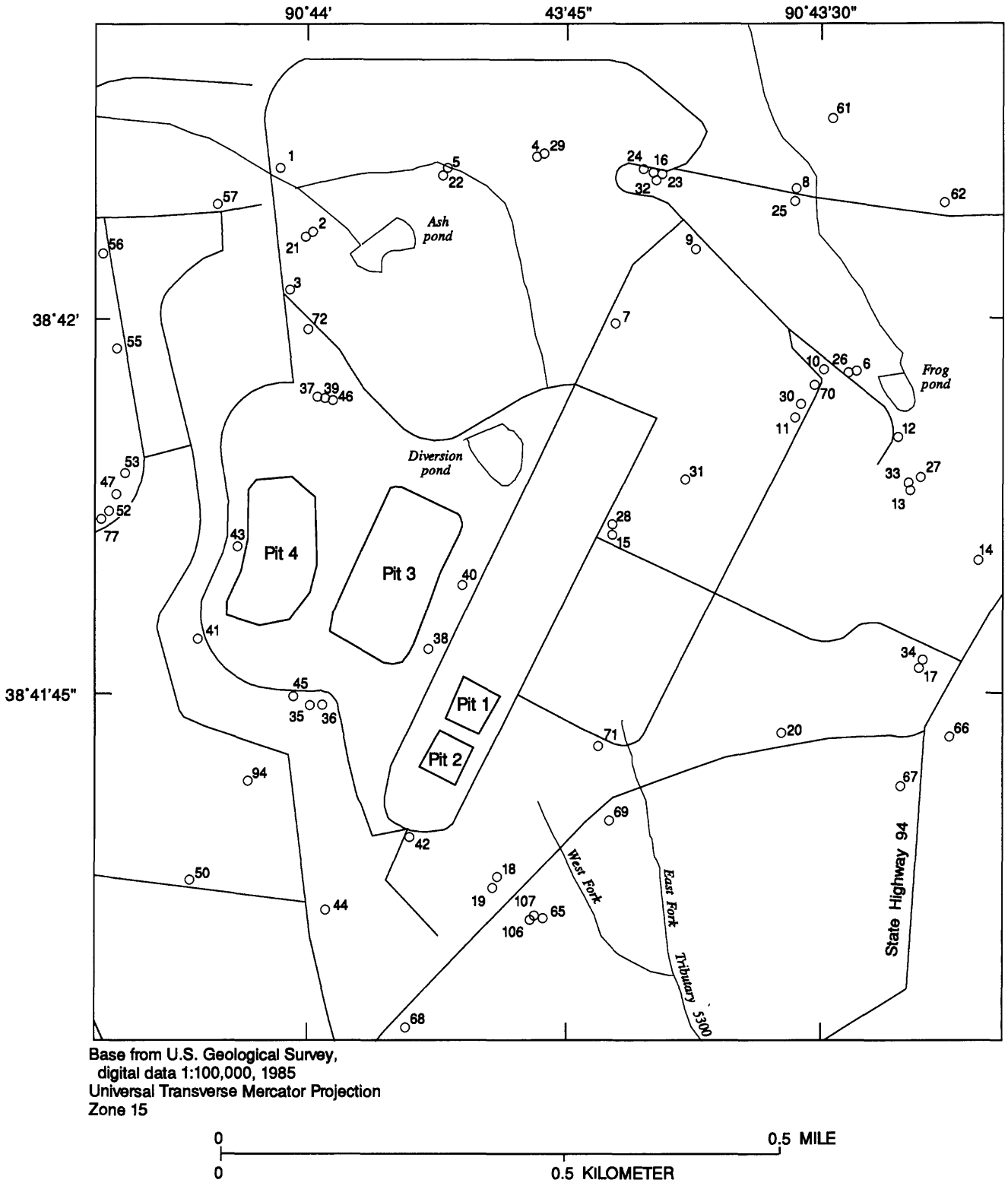


Figure 7. Location of wells with water-level measurements at the Weldon Spring chemical plant site.

in figure 7. Water levels were measured in feet below the measuring point, which usually was the top of casing. In wells where water was less than 100 ft below the measuring point, a steel tape was lowered into the wells and the depth to water was read to the nearest 0.01 ft. In wells where water was more than 100 ft below the measuring point, an electric tape was used and water-level measurements were read to the nearest 0.1 ft. Because of the number of wells that were measured, it was difficult to measure the water levels in all the wells during 1 day and, therefore, part of a second day was required. The date reported in table 8 is the date the water-level measurements were begun. Depth to water ranged from 221.8 ft in well MWGS 02 (completed in the St. Peter Sandstone) to wells that were flowing at the time they were measured. Several shallow wells were dry. Water-level measurements made in the study area before November 1, 1989, can be found in the report by Kleeschulte and Cross (1990).

REFERENCES CITED

Anderson, K.E., 1971, Water well handbook (3d ed.): Missouri Water Well and Pump Contractors Association Inc., 281 p.

Carter, R.W., and Davidian, Jacob, 1968, General procedure for gaging streams: U.S. Geological Survey Techniques of Water Resources Investigations, Book 3, Chap. A6, 13 p.

Edwards, T.K., and Glysson, G.D., 1988, Field methods for measurement of fluvial sediment: U.S. Geological Survey Open-File Report 86–531, 118 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.

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.

Kleeschulte, M.J., and Cross, P.C., 1990, Hydrologic data for the Weldon Spring chemical plant site and vicinity property, St. Charles County, Missouri—1986–89: U.S. Geological Survey Open-File Report 90–552, 117 p.

Kleeschulte, M.J., and Emmett, L.F., 1987, Hydrology and water quality at the Weldon Spring radioactive waste-disposal sites, St. Charles County, Missouri: U.S. Geological Survey Water-Resources Investigations Report 87–4169, 65 p.

Kleeschulte, M.J., and Imes, J.L., 1994, Geohydrology, water quality, and simulation of ground-water flow at the Weldon Spring chemical plant and vicinity, St. Charles County, Missouri, 1987–90: U.S. Geological Survey Open-File Report 93–648, 106 p.

Lenhard, L.A., Belcher, F.H., and Holt, J.N., 1967, Weldon Spring raffinate pits and quarry task force report: Oak Ridge, Tennessee, U.S. Department of Energy, 21 p.

Missouri Department of Natural Resources, 1991, Shallow ground water investigations at Weldon Spring, Missouri, final report for fiscal years 1988–1990: Rolla, Missouri Division of Geology and Land Survey, 36 p. with appendices and plates.

Thatcher, L.L., Janzer, V.J., and Edwards, K.W., 1977, Methods for determination of radioactive substances in water and fluvial sediments: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 5, Chap. A5, 95 p.

U.S. Geological Survey, 1993, Water-quality field techniques for ground-water monitoring: Ocala, Florida, U.S. Geological Survey, Quality Water Service Unit Manual, 164 p.

TABLES

ABBREVIATIONS USED IN TABLES 1 to 4

Q	Instantaneous discharge, in cubic feet per second
Cond	Specific conductance, in microsiemens per centimeter at 25 degrees Celsius
pH	In standard units
Temp	Water temperature, in degrees Celsius
Ca	Dissolved calcium, in milligrams per liter
Mg	Dissolved magnesium, in milligrams per liter
Na	Dissolved sodium, in milligrams per liter
K	Dissolved potassium, in milligrams per liter
HCO_3	Bicarbonate, in milligrams per liter
CO_3	Carbonate, in milligrams per liter
Alk	Alkalinity as calcium carbonate, in milligrams per liter
SO_4	Dissolved sulfate, in milligrams per liter
Cl	Dissolved chloride, in milligrams per liter
F	Dissolved fluoride, in milligrams per liter
Br	Dissolved bromide, in milligrams per liter
SiO_2	Dissolved silica, in milligrams per liter
DS	Dissolved solids, residue at 180 degrees Celsius, in milligrams per liter
NO_2	Dissolved nitrite as nitrogen, in milligrams per liter
NO_2+NO_3	Dissolved nitrite plus nitrate as nitrogen, in milligrams per liter
NH_3	Dissolved ammonia as nitrogen, in milligrams per liter
P	Dissolved phosphorous, in milligrams per liter
P ortho	Dissolved orthophosphate as phosphorus, in milligrams per liter
Al	Dissolved aluminum, in micrograms per liter
As	Dissolved arsenic, in micrograms per liter
Ba	Dissolved barium, in micrograms per liter
Be	Dissolved beryllium, in micrograms per liter
B	Dissolved boron, in micrograms per liter
Cd	Dissolved cadmium, in micrograms per liter
Cr	Dissolved chromium, in micrograms per liter
Co	Dissolved cobalt, in micrograms per liter
Cu	Dissolved copper, in micrograms per liter
Fe	Dissolved iron, in micrograms per liter
Pb	Dissolved lead, in micrograms per liter
Li	Dissolved lithium, in micrograms per liter
Mn	Dissolved manganese, in micrograms per liter
Mo	Dissolved molybdenum, in micrograms per liter
Ni	Dissolved nickel, in micrograms per liter
Se	Dissolved selenium, in micrograms per liter
Ag	Dissolved silver, in micrograms per liter
Sr	Dissolved strontium, in micrograms per liter
V	Dissolved vanadium, in micrograms per liter
Zn	Dissolved zinc, in micrograms per liter
U	Dissolved uranium, in micrograms per liter
TOC	Total organic carbon, in milligrams per liter
TD	Total depth of well, in feet
>	Greater than
<	Less than
~	Approximately
--	No data available

Table 1. Discharge and water-quality data for selected sampling sites at the Weldon Spring chemical plant site

Site number (fig. 3)	Name	Date	Q	Cond	pH	Temp	Ca	Mg	Na	K
1	Drainage ditch near	01–10–90	<0.01	518	7.2	3.0	80	18	13	4.2
	building 301	03–29–90	.07	252	7.1	8.5	36	8.2	6.5	3.0
		02–14–91	.02	458	7.4	8.5	61	14	22	2.9
2	Seep upstream of sew-	01–10–90	<.01	407	7.2	6.0	61	11	10	4.8
	age treatment facility	03–29–90	.20	442	7.5	8.0	66	11	13	4.2
		02–13–91	.02	910	7.8	8.0	130	23	38	2.9
		08–19–92	.03	476	7.6	24.0	53	12	30	3.9
		05–11–93	.06	320	8.2	19.5	42	8.3	9.0	2.9
		08–17–93	.01	250	7.6	29.5	35	6.5	5.7	1.6
3	Seep at west levee pit 4	01–10–90	<.01	1,030	7.1	3.0	150	49	17	3.9
		03–29–90	.05	601	7.4	8.0	93	25	6.9	3.9
		02–14–91	.01	604	8.1	2.0	89	27	9.4	1.8
		07–24–91	.01	574	8.4	22.0	73	31	8.3	.6
		05–27–92	.01	581	8.1	12.0	88	35	9.4	.5
		08–19–92	.01	757	8.0	24.0	110	42	15	.6
		05–11–93	.03	464	8.0	21.5	66	16	4.5	11
		08–17–93	<.01	504	8.4	28.4	50	20	4.8	.4
4	Weldon Spring site	11–03–89	--	494	8.7	8.5	43	19	32	4.2
	diversion pond	01–10–90	--	400	8.3	4.5	37	15	27	3.9
		03–29–90	no flow	380	8.8	9.0	43	12	20	3.9
		02–14–91	.07	755	8.0	3.0	75	18	50	3.4
		07–24–91	no flow	299	8.7	28.0	22	8.9	31	7.7
		05–26–92	no flow	538	9.5	18.5	71	22	15	4.5
		08–19–92	no flow	400	8.3	29.5	36	18	24	6.5
		05–11–93	.30	318	9.5	23.0	23	12	23	3.1
		08–17–93	no flow	1,390	8.5	32.5	250	21	28	6.3
5	Ash pond outflow	02–14–91	.05	357	7.4	4.0	54	10	8.4	4.8
		05–26–92	.01	325	7.4	15.5	47	12	12	5.6
		05–11–93	.07	454	7.8	20.0	65	11	9.4	6.2
		08–17–93	.50	303	8.0	28.0	45	5.2	4.3	2.2
6	Frog pond	11–03–89	no flow	822	9.0	9.0	35	10	110	3.8
		07–24–91	no flow	646	7.5	27.0	41	9.1	77	4.7
7	Frog pond outflow	01–10–90	--	990	8.6	4.5	50	12	130	5.4
		02–14–91	.20	3,560	8.2	7.0	94	17	610	8.5
		05–26–92	.10	648	7.0	18.5	62	16	62	5.7
		08–19–92	.01	562	7.2	20.0	45	13	51	5.9
		05–11–93	.90	651	8.1	20.0	39	9.8	65	5.9
		08–17–93	.05	494	9.0	34.0	44	12	33	5.3

Table 1. Discharge and water-quality data for selected sampling sites at the Weldon Spring chemical plant site—Continued

Site number (fig. 3)	Date	HCO_3	CO_3	Alk	SO_4	Cl	F	Br	SiO_2	DS
1	01-10-90	224	0	183	120	4.3	2.5	--	4.7	377
	03-29-90	131	0	107	15	1.0	.6	--	4.6	163
	02-14-91	221	0	181	69	4.7	1.5	0.02	5.4	275
2	01-10-90	168	0	138	70	8.1	.5	--	7.1	269
	03-29-90	180	0	147	37	4.4	<.1	--	9.8	313
	02-13-91	309	0	254	89	8.7	.5	.04	8.4	610
	08-19-92	135	0	110	120	15	.7	<.01	7.0	319
	05-11-93	156	0	128	37	3.8	.5	--	8.2	196
	08-17-93	109	0	89	30	1.5	.3	<.01	4.5	145
3	01-10-90	185	0	151	460	5.4	.7	.02	9.7	831
	03-29-90	197	0	161	180	3.3	<.1	--	8.3	440
	02-14-91	216	0	177	180	3.7	.4	<.01	5.8	403
	07-24-91	116	5	103	220	.8	.3	<.01	7.9	387
	05-27-92	156	0	128	230	1.7	.5	<.01	4.8	473
	08-19-92	213	0	174	300	3.5	.6	<.01	8.2	615
	05-11-93	243	0	199	30	7.1	3.0	.10	10	348
	08-17-93	112	11	109	100	.6	.3	<.01	10	272
4	11-03-89	150	9	137	86	21	.5	.04	8.2	294
	01-10-90	136	0	112	82	17	.3	<.01	7.8	264
	03-29-90	115	9	108	53	7.1	.1	--	7.6	264
	02-14-91	175	0	144	68	7.9	<.1	.02	1.7	484
	07-24-91	135	8	124	21	9.5	.7	<.01	9.4	179
	05-26-92	3	16	30	230	11	.5	--	3.9	407
	08-19-92	178	0	154	54	11	.8	<.01	1.7	265
	05-11-93	88	24	112	43	5.0	.6	--	3.2	201
	08-17-93	45	12	57	710	14	.6	<.01	10	1,120
5	02-14-91	129	0	106	73	3.6	.4	.01	19	253
	05-26-92	194	0	159	30	3.1	.7	--	4.2	218
	05-11-93	194	0	159	78	3.5	1.1	--	7.4	295
	08-17-93	89	0	73	76	1.6	.3	<.01	3.9	178
6	11-03-89	68	10	72	52	180	.3	<.01	.35	456
	07-24-91	136	0	112	48	110	.2	<.01	11	377
7	01-10-90	87	4	78	66	230	.3	<.01	.69	575
	02-14-91	131	0	107	67	1,300	.2	.14	.80	2,060
	05-26-92	226	0	185	68	86	.5	.01	6.1	428
	08-19-92	116	0	95	88	69	.4	<.01	.97	339
	05-11-93	127	0	104	53	110	.3	--	1.7	353
	08-17-93	55	16	72	110	39	.3	<.01	8.1	301

Table 1. Discharge and water-quality data for selected sampling sites at the Weldon Spring chemical plant site—Continued

Site number (fig. 3)	Date	NO_2	NO_2+NO_3	NH_3	P	P ortho	Al	As	Ba	Be
1	01-10-90	<0.01	0.19	0.07	0.01	--	20	<1	79	0.8
	03-29-90	<.01	.30	.02	.01	--	<10	<1	40	<.5
	02-14-91	<.01	.20	<.01	.01	<0.01	<10	<1	61	<.5
2	01-10-90	.03	.67	.10	.02	--	<10	<1	68	<.5
	03-29-90	<.01	10	.02	.05	--	30	<1	62	<.5
	02-13-91	.01	40	.02	.01	.02	<10	<1	120	<.5
	08-19-92	<.01	.12	.04	.05	.04	<10	2	84	<10
	05-11-93	.02	.06	.04	.03	.03	450	<1	66	<.5
	08-17-93	<.01	.05	.04	.05	<.01	40	2	58	<.5
3	01-10-90	.01	.17	.06	.02	--	10	<1	49	<.5
	03-29-90	<.01	.40	.01	.03	--	<10	<1	74	<.5
	02-14-91	<.01	1.2	.01	.01	<.01	<10	<1	51	<.5
	07-24-91	<.01	1.0	.18	.02	<.01	10	<1	35	<.5
	05-27-92	<.01	.67	.02	.02	<.01	<10	<1	16	<10
	08-19-92	<.01	.09	.04	<.01	<.01	<10	<1	43	<10
	05-11-93	.01	.11	.08	.47	.40	40	15	100	.5
	08-17-93	<.01	.12	.03	.03	<.01	<10	<1	24	<.5
4	11-03-89	<.01	<.10	<.01	<.01	--	10	<1	57	<.5
	01-10-90	<.01	<.10	.01	<.01	--	10	<1	68	<.5
	03-29-90	.09	7.5	.02	.02	--	40	<1	46	<.5
	02-14-91	.17	39	.02	<.01	<.01	<10	<1	130	<.5
	07-24-91	<.01	<.05	.11	.03	<.01	40	2	69	.6
	05-26-92	.06	1.2	.05	.02	<.01	<10	<1	11	<10
	08-19-92	<.01	<.05	.05	.02	<.01	<10	3	170	<10
	05-11-93	.26	2.1	.10	.01	<.01	40	2	20	<.5
	08-17-93	<.01	<.05	.07	.04	<.01	10	2	120	<.5
5	02-14-91	<.01	<.10	<.01	.01	<.01	<10	<1	60	<.5
	05-26-92	<.01	.15	.02	.05	.01	<10	2	48	<10
	05-11-93	<.01	<.05	.04	.02	.01	30	2	77	<.5
	08-17-93	<.01	.14	.04	.05	.02	20	1	46	<.5
6	11-03-89	<.01	<.10	<.01	<.01	--	20	<1	59	<.5
	07-24-91	<.01	<.05	.08	.04	<.01	20	3	79	.6
7	01-10-90	.01	.11	.02	<.01	--	<10	<1	70	<.5
	02-14-91	<.01	.20	.02	<.01	<.01	<10	<1	200	<10
	05-26-92	<.01	<.05	.15	.04	<.01	<10	1	96	<10
	08-19-92	.01	.32	.15	.05	.03	<10	2	87	<10
	05-11-93	<.01	.07	.02	<.01	<.01	30	1	26	<.5
	08-17-93	<.01	<.05	.04	.04	<.01	10	2	65	<.5

Table 1. Discharge and water-quality data for selected sampling sites at the Weldon Spring chemical plant site—Continued

Site number (fig. 3)	Date	B	Cd	Cr	Co	Cu	Fe	Pb	Li	Mn
1	01-10-90	10	3.0	<1	<3	<10	21	10	7	26
	03-29-90	30	3.0	5	<3	<10	19	<10	<4	14
	02-14-91	<10	<1.0	2	<3	2	55	<1	7	4
2	01-10-90	20	<1.0	1	<3	<10	21	<10	<4	78
	03-29-90	40	2.0	<5	<3	<10	35	<10	12	6
	02-13-91	40	<1.0	5	<3	1	3	<1	17	2
	08-19-92	60	<1.0	<1	<3	<1	11	<1	4	99
	05-11-93	40	<1.0	<5	<3	<10	350	<10	<4	51
	08-17-93	20	<1.0	<5	<3	<10	41	<10	<4	43
3	01-10-90	50	<1.0	<1	<3	<10	45	<10	7	390
	03-29-90	60	<1.0	<5	<3	<10	93	<10	5	95
	02-14-91	20	<1.0	1	<3	1	19	<1	8	18
	07-24-91	40	<1.0	1	<3	<1	15	<1	7	9
	05-27-92	20	<1.0	<1	<3	<1	9	<1	7	24
	08-19-92	50	<1.0	<1	<3	<1	17	<1	<4	50
	05-11-93	50	<1.0	<5	<3	<10	150	<10	<4	86
	08-17-93	40	<1.0	<5	<3	<10	31	<10	<4	15
4	11-03-89	60	<1.0	<1	<3	<1	9	<1	15	46
	01-10-90	50	<1.0	<1	<3	<10	8	<10	15	29
	03-29-90	40	2.0	<5	<3	<10	47	20	5	4
	02-14-91	30	<1.0	2	<3	2	25	<1	13	52
	07-24-91	70	<1.0	<1	<3	<1	88	<1	8	15
	05-26-92	130	<1.0	<1	<3	<1	<3	<1	11	3
	08-19-92	30	<1.0	<1	<3	<1	31	<1	<4	690
	05-11-93	40	<1.0	<5	<3	<10	85	<10	<4	73
	08-17-93	120	<1.0	<5	<3	<10	50	10	11	95
5	02-14-91	540	<1.0	<1	<3	1	130	<1	14	85
	05-26-92	640	<1.0	1	<3	<1	48	<1	17	11
	05-11-93	350	<1.0	<5	<3	<10	46	<10	14	140
	08-17-93	40	<1.0	<5	<3	<10	22	20	<4	7
6	11-03-89	60	<1.0	1	<3	2	4	<1	5	4
	07-24-91	90	<1.0	1	<3	<1	18	<1	4	150
7	01-10-90	30	<1.0	<1	<3	<10	8	<10	6	7
	02-14-91	40	<1.0	<1	<1	2	10	<1	20	30
	05-26-92	70	<1.0	<1	<3	<1	25	<1	9	180
	08-19-92	90	<1.0	1	<3	1	19	<1	4	7
	05-11-93	50	<1.0	<5	<3	<10	22	<10	4	41
	08-17-93	50	<1.0	<5	<3	<10	37	<10	<4	15

Table 1. Discharge and water-quality data for selected sampling sites at the Weldon Spring chemical plant site—Continued

Site number (fig. 3)	Date	Mo	Ni	Se	Ag	Sr	V	Zn	U	TOC
1	01-10-90	<10	<10	2	4.0	160	79	1,100	310	--
	03-29-90	<10	<10	<1	1.0	78	<6	300	950	--
	02-14-91	<10	2	<1	<1.0	130	<6	410	4,200	2.9
2	01-10-90	<10	<10	1	2.0	140	<6	11	310	--
	03-29-90	10	<10	1	1.0	140	<6	47	1,100	--
	02-13-91	<10	1	3	<1.0	300	<6	18	1,700	4.1
	08-19-92	<10	2	<1	<1.0	230	<6	<10	140	--
	05-11-93	<10	<10	<1	<1.0	140	<6	27	24	--
	08-17-93	<10	<10	<1	<1.0	120	<6	11	28	2.8
3	01-10-90	30	<10	1	1.0	360	<6	20	14	--
	03-29-90	20	20	2	<1.0	280	<6	64	8.0	--
	02-14-91	40	2	8	<1.0	180	<6	12	12	5.1
	07-24-91	70	14	9	<1.0	170	<6	14	8.3	3.5
	05-27-92	60	13	12	<1.0	180	<6	<10	13	2.2
	08-19-92	50	10	4	<1.0	230	<6	20	5.4	3.8
	05-11-93	20	10	1	<1.0	170	<6	29	19	69
	08-17-93	50	<10	4	<1.0	120	<6	4	7.6	3.4
4	11-03-89	10	2	<1	<1.0	220	<6	18	31	--
	01-10-90	<10	<10	<1	<1.0	180	<6	3	79	--
	03-29-90	<10	20	1	2.0	140	<6	6	480	--
	02-14-91	10	<1	2	<1.0	260	<6	39	500	5.9
	07-24-91	<10	<1	<1	<1.0	100	<6	13	83	21
	05-26-92	<10	1	<1	<1.0	440	<6	<10	8.7	4.0
	08-19-92	<10	2	<1	<1.0	240	<6	<10	800	30
	05-11-93	20	<10	<1	<1.0	81	<6	<3	450	15
	08-17-93	<10	<10	<1	<1.0	690	<6	<3	500	12
5	02-14-91	10	1	1	<1.0	140	<6	47	4,100	6.4
	05-26-92	<10	2	<1	<1.0	150	<6	10	870	4.1
	05-11-93	<10	<10	<1	<1.0	200	<6	13	150	10
	08-17-93	10	<10	<1	<1.0	120	<6	6	190	4.3
6	11-03-89	<10	1	1	<1.0	170	<6	13	200	--
	07-24-91	<10	2	<1	<1.0	190	<6	<3	130	14
7	01-10-90	<10	<10	1	<1.0	200	<6	5	310	--
	02-14-91	1	1	<1	<1.0	740	20	20	260	5.3
	05-26-92	<10	1	<1	<1.0	260	<6	<10	300	7.8
	08-19-92	<10	1	<1	<1.0	220	<6	<10	2,000	6.8
	05-11-93	<10	<10	<1	<1.0	170	<6	6	410	9.3
	08-17-93	<10	<10	<1	<1.0	180	<6	<3	350	8.2

Table 2. Discharge and water-quality data for surface-water sites on vicinity property near the Weldon Spring chemical plant site

Site number (fig. 4)	Name	Date	Q	Cond	pH	Temp	Ca	Mg	Na	K
1	Tributary 5200 at mouth	01–09–90	--	568	8.1	11.0	100	18	8.2	1.9
		03–28–90	0.50	540	7.4	8.0	81	15	13	2.0
		05–13–92	.40	443	7.3	13.0	78	13	7.5	1.8
		08–20–92	.03	578	7.8	17.5	100	19	12	3.2
2	Tributary 5300 near mouth	01–09–90	--	535	7.5	5.0	84	13	16	2.5
		03–28–90	.30	418	7.6	9.0	62	10	13	2.3
		02–13–91	.40	505	7.9	8.5	74	12	10	1.8
		07–25–91	.01	492	7.1	20.0	78	12	13	3.1
		05–13–92	.40	411	7.6	12.5	73	11	8.9	1.9
		05–11–93	.39	472	7.5	12.0	75	11	6.9	1.8
3	Dardenne Creek at County	11–03–89	.20	424	7.5	5.5	69	12	6.7	2.5
	Road DD	01–26–90	.40	393	7.9	4.0	59	11	7.6	1.9
		03–28–90	25	322	7.8	9.5	44	6.9	12	3.4
		06–25–90	3.1	401	7.9	27.5	63	9.4	8.8	2.6
		02–13–91	8.0	351	7.7	7.0	52	7.9	11	2.4
		07–25–91	.86	396	7.3	20.5	60	9.1	10	3.2
		05–11–92	3.2	393	7.8	19.5	62	9.6	11	2.7
		08–18–92	.12	374	8.0	24.0	61	10	9.1	3.0
		05–10–93	10	381	7.9	19.5	55	7.7	9.0	2.5
		08–16–93	11	341	7.6	27.5	51	7.1	8.3	3.4
4	Tributary 6300 upstream of	01–25–90	.15	661	8.0	7.0	75	21	30	3.1
	lake 34	03–28–90	1.2	368	7.2	10.5	46	11	14	2.5
		02–14–91	1.5	298	6.9	7.0	39	7.6	9.6	2.5
		07–25–91	.30	804	7.7	16.0	95	24	35	2.8
5	Tributary 6300 downstream of	11–03–89	.70	371	7.4	10.5	41	11	13	2.5
	U.S. Highways 40 and 61	01–26–90	.30	360	7.5	7.0	40	11	13	1.9
		03–28–90	1.5	363	7.5	9.5	43	11	16	3.1
		06–26–90	2.0	264	7.5	25.5	35	6.6	8.6	2.6
		02–15–91	3.0	254	7.5	3.0	35	6.8	9.6	2.4
		07–25–91	.80	325	7.1	22.0	39	8.8	14	3.0
		05–11–92	2.0	293	7.1	19.5	38	8.0	11	2.6
		08–18–92	.30	350	7.2	18.0	42	11	13	2.6
		05–10–93	3.8	252	7.8	21.0	30	6.2	7.7	2.8
		08–16–93	4.8	231	7.3	30.5	29	6.2	7.1	3.0
6	Ahden Knight Hampton	11–02–89	--	237	8.2	12.0	33	4.8	5.3	3.9
	Memorial Lake	01–25–90	no flow	260	7.6	6.5	37	5.8	8.2	4.1
		03–28–90	--	253	8.1	10.0	35	5.6	9.1	4.0

Table 2. Discharge and water-quality data for surface-water sites on vicinity property near the Weldon Spring chemical plant site—Continued

Site number (fig. 4)	Name	Date	Q	Cond	pH	Temp	Ca	Mg	Na	K
7	Tributary of Schote Creek	11–02–89	0.06	438	7.6	8.5	26	16	31	4.9
	near County Road D	03–29–90	3.0	208	7.3	8.0	31	6.2	5.5	3.4
		02–13–91	.01	246	6.7	8.5	27	8.2	10	2.1
		05–13–92	.04	278	6.4	12.0	35	9.3	9.7	2.8
		05–11–93	.03	370	8.1	17.0	55	10	11	5.4
		08–17–93	.07	796	8.2	27.0	130	15	13	3.8
8	Outflow lake 36	11–02–89	.05	587	7.1	9.5	30	9.8	63	3.4
		01–25–90	.02	452	7.3	6.5	15	6.1	59	3.3
		03–28–90	.01	526	7.0	10.0	14	6.4	69	3.5
		02–14–91	.20	425	7.2	4.5	20	4.4	44	2.9
		07–25–91	.02	482	7.1	22.5	24	7.0	51	3.6
		05–11–92	.01	351	7.3	20.0	24	5.3	36	3.3
		08–18–92	.02	493	7.1	18.0	27	8.6	50	3.2
		05–10–93	.09	287	7.8	24.5	23	4.2	22	3.0
		08–17–93	.05	239	7.9	31.5	21	4.2	17	3.5
9	Schote Creek at U.S. High-	11–03–89	.05	348	7.3	9.5	33	9.2	13	1.9
	ways 40 and 61	01–26–90	.05	348	7.3	9.0	32	9.0	13	1.7
		03–29–90	.07	379	7.2	9.5	37	10	15	1.8
		02–15–91	.07	341	7.0	6.0	36	9.3	15	1.7
		07–25–91	.08	364	6.9	16.5	34	9.5	15	1.8
		05–11–92	.03	339	7.0	17.5	34	9.2	14	1.6
		08–18–92	.05	330	7.2	17.5	32	9.3	14	2.1
		05–10–93	.07	372	7.4	16.5	38	9.0	13	1.9
		08–16–93	.43	190	7.3	29.5	26	3.7	5.3	2.6
10	Dardenne Creek near Cottle-	11–03–89	2.0	453	7.4	5.0	57	16	19	4.7
	ville	01–26–90	1.8	469	7.6	2.0	49	14	26	3.1
		03–28–90	35	398	7.9	9.5	48	9.6	19	3.4
		06–26–90	9.1	352	8.2	26.0	51	9.3	10	2.7
		02–15–91	20	341	7.6	0.0	47	8.8	17	3.0
		07–25–91	3.0	374	7.4	22.5	52	10	14	4.1
		05–11–92	11	406	7.7	20.5	56	12	16	2.7
		08–19–92	.40	408	8.1	24.5	51	14	19	3.8
		05–10–93	13	376	8.2	20.5	47	8.8	11	2.5
		08–18–93	25	329	8.0	27.0	43	8.0	9.7	3.6
11	Weldon Spring field	05–27–92	--	--	--	--	.06	<.01	<.2	<.1
	blank	08–19–92	--	--	--	--	.03	<.01	<.2	<.1
		05–11–93	--	--	--	--	.06	<.01	<.2	<.1
		08–18–93	--	--	--	--	.04	.01	<.2	<.1

Table 2. Discharge and water-quality data for surface-water sites on vicinity property near the Weldon Spring chemical plant site—Continued

Site number (fig. 4)	Date	HCO_3	CO_3	Alk	SO_4	Cl	F	Br	SiO_2	DS
1	01–09–90	344	0	282	43	10	0.1	0.03	13	364
	03–28–90	226	0	186	46	35	<.1	<.01	12	347
	05–13–92	282	0	231	38	8.2	<.1	.03	13	282
	08–20–92	360	0	295	45	12	.2	.05	16	373
2	01–09–90	274	0	225	64	11	.3	<.01	12	355
	03–28–90	189	0	155	33	12	.1	<.01	11	263
	02–13–91	245	0	196	39	8.5	.2	.02	9.8	253
	07–25–91	226	0	185	45	6.9	.3	.02	15	283
	05–13–92	256	0	210	35	7.1	.1	.01	12	276
	05–11–93	270	0	221	32	4.6	.2	.01	13	277
3	11–03–89	250	0	205	13	10	.1	.06	9.7	249
	01–26–90	217	0	178	19	9.3	.1	<.01	5.7	233
	03–28–90	124	0	102	29	23	.1	--	7.1	208
	06–25–90	215	0	176	30	16	.2	.02	8.0	238
	02–13–91	154	0	126	33	19	<.1	.04	5.6	198
	07–25–91	210	0	172	21	14	.2	.03	9.1	214
	05–11–92	204	0	167	33	20	.1	.03	3.4	246
	08–18–92	221	0	181	16	15	.2	.05	9.0	230
	05–10–93	188	0	154	28	11	.2	<.01	5.9	218
	08–16–93	170	0	139	16	8.9	<.1	<.01	11	203
4	01–25–90	230	0	188	57	24	.1	.03	11	430
	03–28–90	141	0	115	34	13	<.1	<.01	8.9	239
	02–14–91	113	0	93	33	8.3	.1	.02	8.1	178
	07–25–91	274	0	225	37	22	<.1	.06	11	492
5	11–03–89	207	0	170	6.0	13	.3	.02	11	209
	01–26–90	207	0	170	12	14	.3	--	9.0	206
	03–28–90	179	0	147	22	19	<.1	--	5.0	217
	06–26–90	133	0	109	19	14	.3	.01	8.3	153
	02–15–91	122	0	100	22	9.3	.1	.02	6.9	149
	07–25–91	177	0	145	14	11	.2	<.01	8.5	176
	05–11–92	136	0	111	20	17	.2	.01	5.6	192
	08–18–92	214	0	175	5.7	14	.3	<.01	11	199
	05–10–93	113	0	93	20	7.7	.2	<.01	6.8	144
	08–16–93	105	0	86	13	6.3	<.1	<.01	8.4	137
6	11–02–89	110	0	87	13	4.8	.3	<.01	2.7	146
	01–25–90	120	0	98	28	6.6	.1	--	.13	163
	03–28–90	106	0	87	22	9.0	<.1	--	2.6	171

Table 2. Discharge and water-quality data for surface-water sites on vicinity property near the Weldon Spring chemical plant site—Continued

Site number (fig. 4)	Date	HCO_3	CO_3	Alk	SO_4	Cl	F	Br	SiO_2	DS
7	11–02–89	97	0	80	99	17	0.2	0.03	18	250
	03–29–90	99	0	81	25	1.8	.2	--	11	151
	02–13–91	84	0	69	37	5.9	.1	.02	9.1	150
	05–13–92	123	0	101	42	4.6	.2	<.01	9.8	185
	05–11–93	190	0	156	50	3.2	.5	--	3.1	252
	08–17–93	152	0	125	280	5.9	.4	<.01	7.9	561
8	11–02–89	198	0	162	<1.0	90	.5	.02	10	287
	01–25–90	43	0	36	30	97	.2	<.01	3.1	423
	03–28–90	40	0	33	28	120	<.1	<.01	2.4	296
	02–14–91	58	0	48	22	71	.2	.02	4.8	198
	07–25–91	132	0	108	5.7	67	.2	<.01	6.6	225
	05–11–92	72	0	59	27	63	.2	.07	3.0	201
	08–18–92	197	0	162	<.1	73	.4	.06	9.9	267
	05–10–93	71	0	58	21	36	.2	<.01	5.0	163
	08–17–93	63	0	52	23	22	.2	<.01	6.2	138
9	11–03–89	207	0	170	<1.0	11	.4	.02	10	187
	01–26–90	215	0	176	2.0	11	.4	--	9.3	185
	03–29–90	211	0	173	6.0	21	<.1	--	9.5	216
	02–15–91	221	0	181	14	10	.3	<.01	9.8	192
	07–25–91	217	0	178	.8	11	.4	.21	11	181
	05–11–92	226	0	186	1.4	16	.3	<.01	9.4	188
	08–18–92	211	0	173	.4	12	.4	<.01	10	180
	05–10–93	216	0	177	4.0	10	.3	<.01	9.1	195
	08–16–93	88	0	72	9.4	6.0	.2	<.01	5.7	114
10	11–03–89	260	0	213	12	17	.3	.03	9.9	273
	01–26–90	222	0	182	26	30	.2	<.01	2.3	253
	03–28–90	151	0	124	34	29	<.1	--	5.2	236
	06–26–90	189	0	155	23	16	.2	.02	8.0	196
	02–15–91	143	0	117	28	23	.1	.03	6.9	216
	07–25–91	205	0	168	19	15	.2	.02	8.2	205
	05–11–92	217	0	178	30	24	.2	.04	2.9	253
	08–19–92	226	0	185	19	20	.2	.03	3.9	235
	05–10–93	174	0	142	25	13	.1	<.01	3.3	204
	08–18–93	150	0	123	15	9.2	<.1	<.01	9.8	184
11	05–27–92	--	--	--	.2	<.1	<.1	<.01	.03	6
	08–19–92	--	--	--	.2	<.1	<.1	.01	.03	1
	05–11–93	--	--	--	.2	<.1	<.1	<.01	<.01	<1
	08–18–93	--	--	--	.2	.1	.1	<.01	.05	1

Table 2. Discharge and water-quality data for surface-water sites on vicinity property near the Weldon Spring chemical plant site—Continued

Site number (fig. 4)	Date	NO_2	NO_2+NO_3	NH_3	P	P ortho	Al	As	Ba	Be
1	01–09–90	0.01	0.22	0.03	0.05	--	20	<1	140	<0.5
	03–28–90	<.01	.20	<.01	.03	--	<10	<1	110	<.5
	05–13–92	<.01	.27	.02	.03	0.05	<10	<1	110	<10
	08–20–92	<.01	.07	.07	.07	.06	20	1	190	<10
2	01–09–90	<.01	1.1	.02	.09	--	<10	<1	93	<.5
	03–28–90	<.01	1.4	<.01	.05	--	<20	<1	75	<.5
	02–13–91	<.01	1.0	.01	.04	.04	<10	<1	77	<.5
	07–25–91	<.01	.79	.01	.11	.08	<10	<1	110	.6
	05–13–92	<.01	1.2	.03	.05	.06	<10	<1	81	<10
	05–11–93	<.01	.24	.01	.04	.05	30	<1	84	<.5
3	11–03–89	<.01	<.10	.04	<.01	--	<10	<1	130	<.5
	01–26–90	<.01	<.10	.02	<.01	--	<10	<1	100	<.5
	03–28–90	.01	.40	<.01	.01	--	40	<1	70	<.5
	06–25–90	.01	.39	.02	<.01	<.01	--	<1	130	<.5
	02–13–91	<.01	.90	.03	<.01	<.01	<10	<1	84	<.5
	07–25–91	<.01	<.05	.03	.01	<.01	10	<1	140	<.5
	05–11–92	.01	.53	.02	<.01	<.01	<10	<1	110	<10
	08–18–92	<.01	.11	.02	.01	<.01	<10	2	110	<10
	05–10–93	<.01	.33	.02	<.01	<.01	20	1	110	<.5
	08–16–93	<.01	.29	.04	.06	<.01	<10	1	100	.5
4	01–25–90	.01	22	.03	.05	--	<10	<1	110	<.5
	03–28–90	<.01	5.0	.01	.01	--	<10	<1	82	<.5
	02–14–91	<.01	3.9	<.01	.01	.01	40	<1	72	<.5
	07–25–91	<.01	34	.02	.04	.02	<10	<1	150	.6
5	11–03–89	.01	<.10	2.0	.06	--	<10	2	360	<.5
	01–26–90	<.01	.15	.91	<.01	--	<10	<1	370	<.5
	03–28–90	.02	.80	.27	<.01	--	60	1	160	<.5
	06–26–90	.03	.41	.12	<.01	<.01	--	1	120	<.5
	02–15–91	.01	1.2	.11	<.01	<.01	10	<1	110	<.5
	07–25–91	.02	.15	.33	.01	<.01	<10	2	210	<.5
	05–11–92	.02	.93	.14	<.01	<.01	<10	1	130	<10
	08–18–92	.01	.12	.90	<.01	<.01	<10	4	380	<10
	05–10–93	.03	.83	.09	<.01	<.01	50	<1	91	<.5
	08–16–93	.02	.36	.11	.05	<.01	50	3	97	<.5
6	11–02–89	<.01	<.10	<.01	<.01	--	30	<1	71	<.5
	01–25–90	<.01	<.10	.18	.01	--	20	<1	82	.7
	03–28–90	<.01	<.10	.03	<.01	--	40	1	38	<.5

Table 2. Discharge and water-quality data for surface-water sites on vicinity property near the Weldon Spring chemical plant site—Continued

Site number (fig. 4)	Date	NO_2	NO_2+NO_3	NH_3	P	P ortho	Al	As	Ba	Be
7	11-02-89	<0.01	<0.10	<0.01	<0.01	--	10	<1	77	<0.5
	03-29-90	<.01	.40	.04	.01	--	160	<1	61	<.5
	02-13-91	<.01	1.1	.03	<.01	<0.01	40	<1	70	<.5
	05-13-92	<.01	1.1	.04	<.01	.02	60	<1	80	<10
	05-11-93	<.01	.26	.06	.02	.02	40	1	73	<.5
	08-17-93	<.01	<.05	.04	.06	<.01	10	1	140	<.5
8	11-02-89	.01	.13	3.8	<.01	--	<10	1	250	<.5
	01-25-90	<.01	.10	.04	<.01	--	120	<1	69	<.5
	03-28-90	<.01	.10	.06	<.01	--	70	<1	70	<.5
	02-14-91	<.01	1.0	.07	<.01	<.01	50	<1	58	<.5
	07-25-91	.04	.27	.98	<.01	<.01	<10	<1	140	.6
	05-11-92	<.01	.17	.05	<.01	<.01	<10	<1	63	<10
	08-18-92	<.01	<.05	1.3	<.01	<.01	<10	1	380	<10
	05-10-93	.01	.24	.12	<.01	<.01	160	<1	68	<.5
	08-17-93	<.01	.05	.08	.03	<.01	30	1	56	<.5
9	11-03-89	<.01	<.10	2.5	<.01	--	<10	3	560	<.5
	01-26-90	.01	<.10	2.6	<.01	--	<10	3	590	<.5
	03-29-90	<.01	.10	1.8	<.01	--	<10	4	520	<.5
	02-15-91	<.01	<.10	1.9	<.01	<.01	<10	5	580	<.5
	07-25-91	<.01	<.05	2.3	.02	.01	<10	5	650	<.5
	05-11-92	<.01	<.05	2.1	<.01	<.01	10	4	600	<10
	08-18-92	<.01	<.05	2.4	<.01	<.01	<10	2	640	<10
	05-10-93	<.01	<.05	1.8	<.01	<.01	30	2	480	<.5
	08-16-93	.02	.23	.13	.05	<.01	60	1	87	<.5
10	11-03-89	<.01	<.10	.01	.05	--	<10	2	120	<.5
	01-26-90	.01	.14	.04	.02	--	10	<1	100	<.5
	03-28-90	.02	.40	.03	.01	--	30	<1	91	<.5
	06-26-90	<.01	.26	<.01	.01	<.01	--	<1	120	<.5
	02-15-91	.01	1.1	<.01	.04	.01	40	<1	90	<.5
	07-25-91	<.01	.15	.03	.03	.01	<10	1	130	<.5
	05-11-92	.02	.49	.04	.01	<.01	<10	<1	120	<10
	08-19-92	<.01	.13	.07	.02	.01	<10	2	130	<10
	05-10-93	.01	.34	.04	<.01	<.01	30	<1	96	<.5
	08-18-93	<.01	.34	.03	.03	.03	10	1	99	<.5
11	05-27-92	<.01	<.05	<.01	.02	<.01	<10	<1	4	<10
	08-19-92	<.01	<.05	.05	<.01	<.01	<10	<1	<2	<10
	05-11-93	<.01	<.05	.02	<.01	<.01	20	<1	<2	<.5
	08-18-93	<.01	<.05	.02	<.01	<.01	<10	<1	<2	<.5

Table 2. Discharge and water-quality data for surface-water sites on vicinity property near the Weldon Spring chemical plant site—Continued

Site number (fig. 4)	Date	B	Cd	Cr	Co	Cu	Fe	Pb	Li	Mn
1	01-09-90	20	<1.0	<1	<3	<10	<3	<10	5	61
	03-28-90	30	<1.0	<5	<3	<10	4	30	<4	<1
	05-13-92	30	<1.0	<1	<3	<1	<3	<1	6	2
	08-20-92	50	<1.0	<1	<3	<1	10	<1	4	1,000
2	01-09-90	20	<1.0	1	<3	<10	<3	<10	14	1
	03-28-90	40	<1.0	<5	<3	<10	9	<10	9	82
	02-13-91	30	<1.0	1	<3	1	<3	1	11	<1
	07-25-91	50	<1.0	1	<3	<1	<3	<1	12	7
	05-13-92	30	<1.0	<1	<3	1	6	<1	10	27
	05-11-93	30	<1.0	<5	<3	<10	<3	<10	6	1
3	11-03-89	30	<1.0	<1	<3	<1	10	<1	<4	250
	01-26-90	20	<1.0	<1	<3	<10	11	<10	<4	96
	03-28-90	30	<1.0	<5	<3	<10	83	<10	<4	65
	06-25-90	30	1.0	<5	<3	<10	<3	<10	6	210
	02-13-91	30	<1.0	<1	<3	1	17	<1	<4	120
	07-25-91	30	<1.0	<1	<3	2	8	<1	<4	300
	05-11-92	20	<1.0	<1	<3	1	11	<1	5	130
	08-18-92	30	<1.0	<1	<3	<1	9	<1	<4	290
	05-10-93	40	<1.0	<5	<3	<10	9	<10	<4	130
	08-16-93	30	<1.0	<5	<3	<10	35	<10	<4	140
4	01-25-90	30	<1.0	1	<3	<10	4	<10	25	7
	03-28-90	30	2.0	<5	<3	<10	23	<10	8	11
	02-14-91	40	<1.0	<1	<3	1	40	2	7	6
	07-25-91	50	<1.0	<1	<3	1	3	<1	37	4
5	11-03-89	50	<1.0	<1	4	<1	330	<1	<4	8,300
	01-26-90	30	<1.0	<1	9	<10	730	10	<4	8,500
	03-28-90	40	<1.0	<5	<3	<10	110	<10	5	2,700
	06-26-90	40	<1.0	<5	<3	<10	3	<10	5	1,000
	02-15-91	30	<1.0	<1	<3	1	200	<1	4	1,100
	07-25-91	40	<1.0	<1	<3	<1	68	<1	<4	3,200
	05-11-92	40	<1.0	<1	<3	<1	20	<1	6	1,400
	08-18-92	40	<1.0	<1	7	<1	770	<1	<4	8,000
	05-10-93	40	<1.0	<5	<3	<10	29	<10	<4	570
	08-16-93	40	<1.0	<5	<3	<10	160	<10	<4	580
6	11-02-89	70	<1.0	<1	<3	2	20	1	<4	34
	01-25-90	40	<1.0	1	<3	<10	28	<10	<4	57
	03-28-90	50	<1.0	<5	<3	<10	84	<10	<4	180

Table 2. Discharge and water-quality data for surface-water sites on vicinity property near the Weldon Spring chemical plant site—Continued

Site number (fig. 4)	Date	B	Cd	Cr	Co	Cu	Fe	Pb	Li	Mn
7	11–02–89	80	<1.0	<1	<3	2	12	<1	21	2
	03–29–90	50	<1.0	<5	<3	<10	210	<10	<4	18
	02–13–91	30	<1.0	1	<3	1	31	1	<4	10
	05–13–92	40	<1.0	<1	<3	2	41	<1	5	13
	05–11–93	160	<1.0	<5	<3	<10	21	<10	7	4
	08–17–93	80	<1.0	<5	<3	<10	10	10	7	6
8	11–02–89	70	<1.0	<1	9	<1	6,000	1	<4	6,700
	01–25–90	60	<1.0	<1	<3	<10	80	<10	<4	9
	03–28–90	60	2.0	<5	<3	<10	67	<10	<4	24
	02–14–91	40	<1.0	<1	<3	4	290	<1	<4	130
	07–25–91	60	<1.0	<1	<3	1	340	<1	<4	2,100
	05–11–92	50	<1.0	<1	<3	2	59	<1	5	49
	08–18–92	50	<1.0	<1	20	<1	1,800	<1	<4	11,000
	05–10–93	40	<1.0	<5	<3	<10	260	<10	<4	220
	08–17–93	50	<1.0	<5	<3	<10	190	<10	<4	100
9	11–03–89	40	<1.0	<1	8	<1	2,500	1	<4	14,000
	01–26–90	20	2.0	1	30	<10	6,000	<10	<4	15,000
	03–29–90	20	<1.0	<5	30	<10	4,000	<10	<4	13,000
	02–15–91	30	<1.0	<1	3	1	5,100	<1	<4	13,000
	07–25–91	30	<1.0	<1	4	<1	4,300	<1	<4	14,000
	05–11–92	30	<1.0	<1	<6	<1	4,100	<1	<8	13,000
	08–18–92	30	<1.0	<1	5	<1	1,000	<1	<4	13,000
	05–10–93	20	<1.0	<5	4	<10	820	<10	<4	10,000
	08–16–93	30	<1.0	<5	<3	<10	250	<10	<4	580
10	11–03–89	50	<1.0	<1	<3	2	230	1	4	430
	01–26–90	40	<1.0	<1	<3	<10	13	<10	<4	220
	03–28–90	30	<1.0	<5	<3	<10	35	<10	<4	200
	06–26–90	30	<1.0	<5	<3	<10	<3	<10	6	67
	02–15–91	30	<1.0	<1	<3	1	42	<1	4	250
	07–25–91	40	<1.0	<1	<3	1	4	<1	<4	58
	05–11–92	30	<1.0	<1	<3	<1	9	<1	5	130
	08–19–92	40	<1.0	<1	<3	1	7	<1	<4	270
	05–10–93	30	<1.0	<5	<3	<10	11	<10	<4	91
	08–18–93	30	<1.0	<5	<3	<10	52	<10	<4	25
11	05–27–92	<10	<1.0	1	<3	<1	16	<1	<4	<1
	08–19–92	<10	<1.0	<1	<3	<1	4	<1	<4	2
	05–11–93	<10	<1.0	<5	<3	<10	<3	<10	<4	<1
	08–18–93	<10	<1.0	<5	<3	<10	6	<10	<4	<1

Table 2. Discharge and water-quality data for surface-water sites on vicinity property near the Weldon Spring chemical plant site—Continued

Site number (fig. 4)	Date	Mo	Ni	Se	Ag	Sr	V	Zn	U	TOC
1	01-09-90	<10	<10	<1	<1.0	140	<6	<3	<1.0	--
	03-28-90	<10	<10	<1	<1.0	98	<6	<3	<1.0	--
	05-13-92	<10	<1	<1	<1.0	96	<6	<10	1.1	2.1
	08-20-92	<10	1	<1	<1.0	250	<6	<10	2.9	23
2	01-09-90	10	<10	2	2.0	130	<6	<3	160	--
	03-28-90	20	<10	<1	1.0	93	<6	<3	140	--
	02-13-91	10	1	<1	<1.0	93	<6	<3	150	2.0
	07-25-91	30	<1	<1	<1.0	120	<6	5	190	2.5
	05-13-92	10	<1	<1	<1.0	94	<6	140	120	4.5
	05-11-93	10	<10	<1	<1.0	95	<6	<3	110	2.3
3	11-03-89	<10	2	<1	<1.0	130	<6	6	<1.0	--
	01-26-90	<10	<10	<1	<1.0	110	<6	<3	<1.0	--
	03-28-90	<10	<10	<1	<1.0	84	<6	4	<1.0	--
	06-25-90	<10	<10	<1	<1.0	120	<6	<3	1.1	2.9
	02-13-91	<10	1	<1	<1.0	96	<6	<3	1.6	2.8
	07-25-91	<10	1	<1	<1.0	120	<6	4	1.5	3.0
	05-11-92	<10	<1	<1	<1.0	120	<6	<10	1.3	2.2
	08-18-92	<10	1	<1	<1.0	120	<6	<10	<1.0	--
	05-10-93	<10	<10	<1	<1.0	110	<6	10	4.5	--
	08-16-93	<10	<10	<1	<1.0	99	<6	6	1.1	4.6
4	01-25-90	<10	10	<1	<1.0	150	<6	4	37	--
	03-28-90	<10	<10	<1	<1.0	110	<6	<3	48	--
	02-14-91	<10	1	<1	<1.0	94	<6	<3	30	3.9
	07-25-91	<10	<1	1	<1.0	200	<6	10	76	2.1
5	11-03-89	10	3	1	<1.0	150	<6	5	1.3	--
	01-26-90	<10	<10	<1	1.0	150	<6	<3	2.6	--
	03-28-90	<10	<10	<1	<1.0	120	<6	4	22	--
	06-26-90	<10	<10	<1	<1.0	98	<6	<3	8.9	6.9
	02-15-91	<10	<1	<1	<1.0	89	<6	<3	14	3.9
	07-25-91	<10	<1	<1	<1.0	120	<6	10	7.2	5.3
	05-11-92	<10	1	<1	<1.0	110	<6	<10	19	4.1
	08-18-92	<10	2	<1	<1.0	150	<6	<10	1.2	3.4
	05-10-93	<10	<10	<1	<1.0	86	<6	4	6.0	18
	08-16-93	<10	<10	<1	<1.0	84	<6	<3	7.5	5.5
6	11-02-89	<10	1	<1	<1.0	89	<6	5	<1.0	--
	01-25-90	<10	<10	<1	<1.0	99	<6	<3	1.0	--
	03-28-90	<10	<10	<1	<1.0	89	<6	13	<1.0	--

Table 2. Discharge and water-quality data for surface-water sites on vicinity property near the Weldon Spring chemical plant site—Continued

Site number (fig. 4)	Date	Mo	Ni	Se	Ag	Sr	V	Zn	U	TOC
7	11–02–89	10	1	<1	<1.0	160	<6	8	<1.0	--
	03–29–90	<10	10	<1	<1.0	91	<6	12	15	--
	02–13–91	<10	1	<1	<1.0	96	<6	12	15	2.8
	05–13–92	<10	2	<1	<1.0	120	<6	10	21	6.0
	05–11–93	10	<10	<1	<1.0	180	<6	25	46	13
	08–17–93	<10	<10	<1	<1.0	360	<6	6	570	5.7
8	11–02–89	<10	1	<1	<1.0	200	<6	13	1.7	--
	01–25–90	<10	<10	<1	<1.0	91	<6	<3	6.9	--
	03–28–90	<10	10	<1	<1.0	98	<6	8	20	--
	02–14–91	<10	1	<1	<1.0	82	<6	4	19	4.6
	07–25–91	<10	<1	<1	<1.0	140	<6	3	5.4	5.7
	05–11–92	<10	<1	<1	<1.0	94	<6	<10	60	7.6
	08–18–92	<10	<1	<1	<1.0	190	<6	<10	<1.0	6.3
	05–10–93	<10	<10	<1	<1.0	80	<6	12	31	10
	08–17–93	<10	<10	<1	<1.0	73	<6	7	27	6.5
9	11–03–89	20	3	<1	<1.0	230	<6	<3	<1.0	--
	01–26–90	20	<10	<1	3.0	230	<6	<3	<1.0	--
	03–29–90	20	<10	<1	<1.0	220	<6	<3	1.9	--
	02–15–91	20	3	<1	<1.0	220	<6	<3	<1.0	3.4
	07–25–91	20	1	<1	<1.0	240	<6	12	<1.0	4.7
	05–11–92	<20	2	<1	<1.0	220	<12	<10	<1.0	4.2
	08–18–92	30	2	<1	<1.0	240	<6	<10	<1.0	4.8
	05–10–93	20	10	<1	2.0	210	<6	<3	4.3	4.1
	08–16–93	<10	<10	<1	<1.0	76	<6	9	6.0	6.7
10	11–03–89	20	2	<1	<1.0	160	<6	17	15	--
	01–26–90	<10	<10	<1	<1.0	140	<6	<3	<1.0	--
	03–28–90	<10	<10	<1	<1.0	110	<6	5	1.8	--
	06–26–90	<10	<10	<1	<1.0	120	<6	<3	3.1	4.8
	02–15–91	<10	1	<1	<1.0	100	<6	<3	2.1	4.7
	07–25–91	<10	2	<1	<1.0	130	<6	<3	4.7	5.0
	05–11–92	<10	<1	<1	<1.0	130	<6	<10	4.1	3.8
	08–19–92	<10	1	<1	<1.0	140	<6	<10	2.0	4.8
	05–10–93	<10	<10	<1	<1.0	110	<6	<3	1.9	4.2
	08–18–93	<10	<10	<1	<1.0	100	<6	5	2.1	9.9
11	05–27–92	<10	<1	<1	<1.0	<1	<6	<10	<1.0	--
	08–19–92	<10	<1	<1	<1.0	<1	<6	<10	<1.0	--
	05–11–93	<10	<10	<1	<1.0	<1	<6	4	<1.0	.5
	08–18–93	<10	<10	<1	<1.0	<1	<6	<3	<1.0	--

Table 3. Depth and water-quality data for wells at the Weldon Spring chemical plant site and vicinity property

Well number (fig. 5)	Name	TD	Date	Cond	pH	Temp	Ca	Mg	Na	K
1	USGS WELL 1	107	04–05–93	602	7.3	14.5	79	18	29	1.0
2	USGS WELL 2	50	04–05–93	499	7.4	13.5	57	23	18	.9
3	USGS WELL 2A	107	04–05–93	540	7.5	13.5	56	32	5.7	.6
4	USGS WELL 3	80	04–05–93	592	7.2	13.5	72	28	12	.6
5	USGS WELL 4	107	04–06–93	546	7.6	14.0	58	32	6.6	.9
6	USGS WELL 5	87	11–27–90	669	7.2	14.5	87	40	7.6	.4
			07–23–91	610	7.2	15.0	71	38	8.1	.3
			04–06–93	617	7.4	14.0	66	35	6.5	.5
7	USGS WELL 6	107	11–27–90	532	7.5	14.5	64	32	8.3	.6
			07–23–91	544	7.4	15.0	64	32	8.6	.4
			04–06–93	553	7.4	14.0	62	30	8.2	.5
8	USGS WELL 7	107	04–05–93	490	7.5	13.5	41	35	5.0	.7
9	USGS WELL 8	107	11–28–90	562	7.6	14.0	66	34	10	3.6
			04–06–93	640	7.6	14.0	66	34	9.0	2.0
10	USGS WELL 9	90	04–05–93	485	7.6	13.5	54	24	8.4	1.4
11	MWGS 01	320	04–14–93	506	8.0	14.5	38	28	11	11
12	MWGS 02	661.5	04–07–93	526	7.6	15.5	48	29	16	9.8
13	MWGS 03	98.5	04–07–93	542	7.4	13.5	55	37	7.5	1.3
14	MWGS 04	310	04–16–93	514	7.5	13.0	53	29	5.7	3.4
15	MWGS 05	638.0	04–15–93	620	7.4	15.0	56	29	23	7.9
16	MW 3023	48.0	06–14–90	3,960	7.0	16.0	450	100	270	4.8
			07–24–91	3,350	6.7	17.5	390	88	250	3.4
17	MW 4013	59.5	07–23–91	1,170	6.8	15.0	140	51	37	7.4
18	MW 4014	65.0	07–23–91	654	7.6	15.5	63	41	6.8	.5

Table 3. Depth and water-quality data for wells at the Weldon Spring chemical plant site and vicinity property—Continued

Well number (fig. 5)	Date	HCO_3	CO_3	Alk	SO_4	Cl	F	Br	SiO_2	DS
1	04–05–93	391	0	321	17	3.6	0.2	0.13	13	359
2	04–05–93	356	0	292	4.5	.9	.3	.03	12	272
3	04–05–93	364	0	298	8.9	1.0	.3	.04	7.5	281
4	04–05–93	407	0	334	20	1.8	.3	.05	12	346
5	04–06–93	330	0	270	25	2.1	.1	.03	7.7	284
6	11–27–90	451	0	369	11	4.9	.3	.03	9.0	368
	07–23–91	429	0	351	7.5	3.8	<.1	.03	8.2	319
	04–06–93	411	0	337	9.1	1.1	.2	.04	7.9	322
7	11–27–90	337	0	276	15	4.6	.4	.03	13	293
	07–23–91	353	0	290	17	3.8	.4	.04	13	283
	04–06–93	350	0	287	17	1.8	.4	.06	12	296
8	04–05–93	310	0	254	21	1.3	.3	.04	7.3	262
9	11–28–90	352	0	289	15	5.5	.2	.03	8.1	314
	04–06–93	394	0	323	20	2.3	.1	.06	7.7	329
10	04–05–93	283	0	232	19	4.2	.1	.05	8.5	257
11	04–14–93	317	0	260	15	5.9	1.8	.04	7.1	255
12	04–07–93	330	0	270	34	2.7	1.1	.03	7.3	304
13	04–07–93	397	0	326	18	2.1	1.0	.06	7.2	302
14	04–16–93	333	0	273	16	1.6	.7	.03	7.3	272
15	04–15–93	376	0	308	35	4.1	.9	.06	7.2	346
16	06–14–90	305	0	250	130	18	<.1	.07	12	3,810
	07–24–91	332	0	272	250	14	.2	.11	11	2,850
17	07–23–91	395	0	324	41	8.2	<.1	.41	8.6	824
18	07–23–91	369	0	302	26	5.8	<.1	.21	7.9	318

Table 3. Depth and water-quality data for wells at the Weldon Spring chemical plant site and vicinity property—Continued

Well number (fig. 5)	Date	NO_2	NO_2+NO_3	NH_3	P	P ortho	Al	As	Ba	Be
1	04–05–93	<0.01	0.83	0.01	0.02	0.02	110	<1	210	<0.5
2	04–05–93	<.01	<.05	.03	<.01	<.01	50	<1	300	<.5
3	04–05–93	<.01	<.05	.01	<.01	<.01	<10	<1	240	<.5
4	04–05–93	<.01	.74	.01	<.01	.01	10	<1	210	<.5
5	04–06–93	.01	.80	<.01	<.01	<.01	30	<1	120	<.5
6	11–27–90	<.01	.20	.08	.02	<.01	200	<1	210	<.5
	07–23–91	<.01	.11	.08	<.01	<.01	<10	1	210	.6
	04–06–93	<.01	.08	.14	<.01	<.01	20	<1	170	<.5
7	11–27–90	<.01	.50	.08	.03	.02	<10	<1	260	<.5
	07–23–91	.01	.57	<.01	.02	<.01	10	<1	250	.6
	04–06–93	<.01	.63	<.01	<.01	.01	20	<1	250	<.5
8	04–05–93	<.01	<.05	.01	<.01	<.01	<10	<1	96	<.5
9	11–28–90	.01	2.9	.09	.02	.01	<10	<1	120	<.5
	04–06–93	--	--	--	--	--	<10	<1	120	<.5
10	04–05–93	--	--	--	--	--	30	<1	96	<.5
11	04–14–93	<.01	<.05	.03	.02	<.01	<10	<1	43	<.5
12	04–07–93	<.01	<.05	.39	<.01	<.01	30	<1	65	<.5
13	04–07–93	<.01	<.05	.02	<.01	<.01	20	<1	130	<.5
14	04–16–93	<.01	<.05	.04	.02	<.01	<10	<1	51	<.5
15	04–15–93	<.01	<.05	.25	.02	<.01	<10	<1	58	<.5
16	06–14–90	1.1	410	<.01	.03	<.01	<10	<1	<100	<10
	07–24–91	1.5	240	.04	.03	<.01	20	<1	<100	<10
17	07–23–91	<.01	74	.01	.05	.02	10	<1	150	<.5
18	07–23–91	<.01	4.2	.02	.03	<.01	10	<1	110	.5

Table 3. Depth and water-quality data for wells at the Weldon Spring chemical plant site and vicinity property—Continued

Well number (fig. 5)	Date	B	Cd	Cr	Co	Cu	Fe	Pb	Li	Mn
1	04–05–93	<10	<1.0	<5	<3	<10	71	<10	5	8
2	04–05–93	<10	<1.0	<5	<3	<10	17	<10	<4	480
3	04–05–93	<10	<1.0	<5	<3	<10	53	10	<4	5
4	04–05–93	<10	<1.0	<5	<3	<10	<3	10	5	<1
5	04–06–93	<10	<1.0	<5	<3	<10	<3	<10	5	4
6	11–27–90	<10	1.0	<1	<3	10	32	5	5	12
	07–23–91	<10	<1.0	<1	8	3	18	3	6	140
	04–06–93	<10	<1.0	<5	<3	<10	94	<10	<4	150
7	11–27–90	<10	<1.0	2	<3	2	<3	1	<4	1
	07–23–91	<10	<1.0	1	<3	2	<3	<1	5	<1
	04–06–93	<10	<1.0	<5	<3	<10	4	<10	<4	<1
8	04–05–93	20	<1.0	<5	<3	<10	9	<10	<4	<1
9	11–28–90	<10	<1.0	<1	<3	8	16	2	13	5
	04–06–93	<10	<1.0	<5	<3	<10	7	<10	<4	<1
10	04–05–93	<10	<1.0	<5	<3	<10	7	<10	<4	<1
11	04–14–93	330	<1.0	<5	<3	<10	<3	<10	23	21
12	04–07–93	470	<1.0	<5	<3	<10	100	<10	30	11
13	04–07–93	30	<1.0	<5	<3	<10	10	<10	5	10
14	04–16–93	60	<1.0	<5	<3	<10	2,000	<10	8	54
15	04–15–93	500	<1.0	<5	<3	<10	670	<10	26	19
16	06–14–90	20	<1.0	3	1	7	30	1	1,100	30
	07–24–91	20	<1.0	2	1	2	<10	<1	960	20
17	07–23–91	90	<1.0	<1	<3	4	<3	<1	68	1
18	07–23–91	<10	<1.0	<1	<3	<1	52	<1	6	54

Table 3. Depth and water-quality data for wells at the Weldon Spring chemical plant site and vicinity property—Continued

Well number (fig. 5)	Date	Mo	Ni	Se	Ag	Sr	V	Zn	U	TOC
1	04–05–93	<10	<10	<1	<1.0	140	<6	<3	1.4	4.2
2	04–05–93	<10	<10	<1	<1.0	190	<6	4	<1.0	.6
3	04–05–93	<10	<10	<1	<1.0	150	<6	3	<1.0	4.2
4	04–05–93	<10	<10	<1	<1.0	210	<6	5	1.6	7.8
5	04–06–93	<10	20	<1	<1.0	120	<6	21	4.8	.8
6	11–27–90	<10	24	<1	<1.0	170	<6	200	3.7	1.0
	07–23–91	<10	48	<1	<1.0	160	<6	25	3.3	1.7
	04–06–93	<10	20	<1	<1.0	150	<6	16	6.8	.9
7	11–27–90	<10	1	<1	<1.0	180	<6	8	2.8	.1
	07–23–91	10	<1	<1	<1.0	180	<6	5	2.6	.2
	04–06–93	<10	<10	<1	<1.0	180	<6	8	3.3	.3
8	04–05–93	<10	<10	<1	<1.0	140	<6	<3	<1.0	.9
9	11–28–90	<10	8	1	<1.0	88	<6	140	1.1	1.6
	04–06–93	10	30	1	<1.0	77	<6	18	3.2	--
10	04–05–93	<10	<10	<1	<1.0	72	<6	4	<1.0	--
11	04–14–93	<10	<10	<1	<1.0	1,500	<6	210	<1.0	.5
12	04–07–93	<10	<10	<1	<1.0	1,100	<6	<3	1.3	.4
13	04–07–93	<10	<10	<1	<1.0	210	<6	<3	1.5	1.1
14	04–16–93	<10	<10	<1	<1.0	380	<6	25	<1.0	.5
15	04–15–93	<10	<10	<1	<1.0	710	<6	<3	<1.0	.7
16	06–14–90	10	2	12	<1.0	950	1	90	6.7	4.2
	07–24–91	80	2	11	<1.0	770	2	<10	8.9	3.8
17	07–23–91	<10	<1	1	<1.0	160	<6	7	1.9	.8
18	07–23–91	<10	<1	<1	<1.0	160	<6	5	<1.0	.2

Table 4. Discharge and water-quality data for springs on vicinity property near the Weldon Spring chemical plant site

Site number (fig. 4)	Name	Date	Q	Cond	pH	Temp	Ca	Mg	Na	K
1	Spring 5201	11–02–89	0.02	584	7.4	13.0	73	21	22	2.7
		01–09–90	--	617	7.3	12.0	68	21	35	2.9
		03–28–90	.15	550	7.1	10.0	65	15	29	2.7
		08–20–92	.03	554	7.2	15.5	75	20	27	2.7
		05–12–93	.51	426	7.5	10.5	56	11	9.5	2.3
		08–17–93	.06	567	7.0	15.5	82	17	9.9	1.9
2	Spring 5202	11–03–89	.01	791	7.8	12.0	93	42	11	1.4
		01–25–90	.01	725	7.8	7.5	86	40	15	1.7
3	Spring 5303	01–09–90	--	557	7.4	11.5	66	18	26	3.5
4	Spring 5304	01–09–90	--	564	7.2	11.5	81	16	20	2.9
		03–28–90	.15	414	7.2	9.5	61	10	13	2.4
		02–13–91	.30	458	7.2	8.0	75	12	9.9	1.7
		05–13–92	.30	403	6.7	10.0	69	11	9.7	2.2
		05–11–93	.34	470	7.3	10.5	73	11	7.2	1.8
		08–18–93	.10	604	7.8	14.0	98	15	8.3	2.3
5	Burgermeister	11–02–89	.09	802	6.9	12.5	81	22	37	3.0
	spring	01–25–90	.06	763	7.6	12.0	84	23	38	2.9
		03–28–90	.50	364	6.8	11.5	45	11	15	2.7
		02–14–91	.39	296	6.8	9.0	39	7.7	10	2.5
		07–25–91	.06	955	7.0	14.0	110	27	44	3.5
		05–11–92	.14	658	6.6	11.5	88	20	29	2.9
		08–18–92	.04	970	7.0	14.0	120	31	49	3.0
		05–10–93	.36	414	7.1	11.0	48	12	13	2.5
		08–17–93	.31	327	6.9	16.5	44	8.7	7.9	2.9
6	Spring 6303	11–02–89	.03	625	6.9	13.0	67	21	22	2.5
		01–25–90	.04	575	7.1	12.0	68	21	20	2.3
		03–28–90	.15	351	6.7	12.5	42	12	13	2.3
		02–14–91	.15	291	6.9	12.0	39	9.6	9.3	1.9
		07–25–91	.10	578	6.9	13.5	71	20	16	1.9
		05–11–92	.06	450	6.7	12.0	63	15	13	2.2
		08–18–92	.01	670	7.0	14.5	94	28	21	2.1
		05–10–93	.07	345	6.9	12.0	43	9.8	8.3	2.0
		08–18–93	.05	322	7.0	13.0	41	9.8	7.1	2.1

Table 4. Discharge and water-quality data for springs on vicinity property near the Weldon Spring chemical plant site—Continued

Site number (fig. 4)	Date	HCO_3	CO_3	Alk	SO_4	Cl	F	Br	SiO_2	DS
1	11–02–89	260	0	213	78	15	0.2	0.05	15	365
	01–09–90	231	0	189	71	52	.2	.02	13	378
	03–28–90	184	0	151	37	45	<.1	--	12	355
	08–20–92	253	0	207	80	22	.2	.07	14	368
	05–12–93	213	0	175	31	10	<.1	.01	13	239
	08–17–93	290	0	238	33	7.6	<.1	.03	15	320
2	11–03–89	452	0	371	22	14	.1	.05	9.6	320
	01–25–90	451	0	370	26	25	.1	.03	9.3	322
3	01–09–90	219	0	180	94	18	.4	<.01	10	358
4	01–09–90	263	0	215	72	14	.3	.01	12	361
	03–28–90	190	0	156	33	12	.1	<.01	11	263
	02–13–91	246	0	202	37	7.8	.2	.02	10	258
	05–13–92	237	0	194	35	8.1	.1	.02	12	276
	05–11–93	259	0	212	30	5.1	.2	<.01	12	266
	08–18–93	295	0	242	55	4.5	<.1	.02	15	362
5	11–02–89	215	0	176	63	30	.2	.07	12	454
	01–25–90	232	0	190	60	34	.2	.05	11	515
	03–28–90	137	0	112	35	15	<.1	<.01	9.0	229
	02–14–91	106	0	87	31	9.9	.1	.01	7.8	166
	07–25–91	293	0	240	46	31	<.1	.07	11	593
	05–11–92	247	0	202	43	21	.2	.06	10	461
	08–18–92	308	0	252	63	33	.2	.10	11	680
	05–10–93	162	0	132	38	--	<.1	.02	10	260
	08–17–93	136	0	111	35	3.9	<.1	<.01	11	206
6	11–02–89	226	0	186	57	10	.2	.06	12	365
	01–25–90	244	0	200	49	9.0	.1	.03	11	370
	03–28–90	136	0	111	29	9.1	<.1	<.01	9.2	222
	02–14–91	123	0	100	30	5.7	.1	.02	9.6	166
	07–25–91	249	0	204	25	6.0	.2	.04	11	337
	05–11–92	202	0	166	32	5.2	<.1	.04	9.8	281
	08–18–92	321	0	263	31	7.4	.1	.05	11	457
	05–10–93	149	0	122	34	3.3	<.1	.02	9.8	209
	08–18–93	137	0	112	27	2.3	<.1	<.01	13	188

Table 4. Discharge and water-quality data for springs on vicinity property near the Weldon Spring chemical plant site—Continued

Site number (fig. 4)	Date	NO_2	NO_2+NO_3	NH_3	P	P ortho	Al	As	Ba	Be
1	11–02–89	<0.01	<0.10	0.01	<0.01	--	<10	<1	120	<0.5
	01–09–90	<.01	<.10	.02	.02	--	10	<1	100	<.5
	03–28–90	<.01	.20	<.01	.02	--	<10	<1	96	<.5
	08–20–92	<.01	<.05	.02	.02	0.01	<10	<1	120	<10
	05–12–93	<.01	.09	.01	.02	.03	30	<1	83	<.5
	08–17–93	<.01	.17	.02	.02	.03	<10	<1	110	<.5
2	11–03–89	<.01	.85	.01	<.01	--	<10	<1	240	<.5
	01–25–90	<.01	.56	.01	<.01	--	<10	<1	240	<.5
3	01–09–90	<.01	3.1	.02	.04	--	<10	<1	80	<.5
4	01–09–90	.02	1.8	.03	.03	--	20	<1	96	<.5
	03–28–90	<.01	1.5	.02	.02	--	<10	<1	72	<.5
	02–13–91	<.01	1.4	<.01	.03	.03	<10	<1	74	<.5
	05–13–92	<.01	1.3	.02	.04	.04	<10	<1	79	<10
	05–11–93	<.01	.32	.02	.02	.04	30	<1	79	.6
	08–18–93	<.01	.55	.02	.05	.04	<10	<1	110	<.5
5	11–02–89	<.01	27	.02	.03	--	<10	1	130	<.5
	01–25–90	<.01	28	<.01	.03	--	<10	<1	120	<.5
	03–28–90	<.01	5.8	<.01	.03	--	20	<1	81	<.5
	02–14–91	<.01	4.5	<.01	.02	.01	20	<1	73	<.5
	07–25–91	<.01	45	.02	.04	.02	<10	<1	160	.6
	05–11–92	<.01	29	.02	.08	.03	<10	<1	130	<10
	08–18–92	<.01	51	.02	.03	.03	<10	<1	160	<10
	05–10–93	<.01	9.3	.02	<.01	.02	40	<1	<100	<10
	08–17–93	<.01	4.9	.04	.07	.02	20	<1	89	<.5
6	11–02–89	.02	13	.02	.03	--	<10	<1	140	<.5
	01–25–90	.04	13	<.01	.03	--	<10	<1	130	<.5
	03–28–90	<.01	4.0	<.01	.02	--	<30	<1	88	<.5
	02–14–91	.02	4.0	.02	.01	.02	20	<1	79	<.5
	07–25–91	<.01	16	.02	.03	.01	<10	<1	140	.6
	05–11–92	<.01	14	.02	.02	.02	<10	<1	110	<10
	08–18–92	.01	29	.03	.02	.03	<10	<1	160	<10
	05–10–93	<.01	4.7	.02	<.01	.02	20	<1	85	<.5
	08–18–93	<.01	3.0	.02	.02	.02	20	<1	92	<.5

Table 4. Discharge and water-quality data for springs on vicinity property near the Weldon Spring chemical plant site—Continued

Site number (fig. 4)	Date	B	Cd	Cr	Co	Cu	Fe	Pb	Li	Mn
1	11–02–89	60	<1.0	<1	<3	2	7	<1	10	26
	01–09–90	40	<1.0	<1	<3	<10	<3	<10	9	2
	03–28–90	30	1.0	<5	<3	<10	9	<10	<4	1
	08–20–92	<10	<1.0	<1	<3	<1	9	<1	6	3
	05–12–93	40	<1.0	<5	<3	<10	11	<10	<4	<1
	08–17–93	40	<1.0	<5	<3	<10	6	<10	<4	4
2	11–03–89	<10	<1.0	<1	<3	<1	5	1	7	13
	01–25–90	10	<1.0	<1	<3	<10	4	<10	5	3
3	01–09–90	40	<1.0	<1	<3	<10	<3	<10	13	2
4	01–09–90	40	<1.0	1	<3	<10	<3	<10	14	25
	03–28–90	40	<1.0	<5	<3	<10	10	<10	7	2
	02–13–91	20	<1.0	2	<3	1	<3	1	10	<1
	05–13–92	40	<1.0	<1	<3	1	11	<1	9	2
	05–11–93	30	<1.0	<5	<3	<10	<3	<10	5	1
	08–18–93	30	<1.0	<5	<3	<10	<3	<10	7	1
5	11–02–89	60	<1.0	1	<3	2	8	2	34	2
	01–25–90	40	<1.0	1	<3	<10	3	<10	37	<1
	03–28–90	30	<1.0	<5	<3	<10	41	<10	9	2
	02–14–91	30	<1.0	<1	<3	1	38	<1	5	1
	07–25–91	60	<1.0	<1	<3	<1	<3	<1	54	1
	05–11–92	40	<1.0	<1	<3	<1	8	<1	39	6
	08–18–92	60	<1.0	<1	<3	<1	<3	<1	62	2
	05–10–93	30	<1.0	<1	<1	<1	<10	<1	<10	<10
	08–17–93	50	<1.0	<5	<3	<10	26	10	<4	1
6	11–02–89	40	<1.0	2	<3	2	4	1	11	26
	01–25–90	20	<1.0	2	<3	<10	4	<10	10	6
	03–28–90	30	<1.0	<5	<3	<10	34	<10	4	3
	02–14–91	20	<1.0	<1	<3	3	18	1	4	3
	07–25–91	30	<1.0	1	<3	<1	10	<1	7	7
	05–11–92	20	<1.0	<1	<3	1	11	<1	7	7
	08–18–92	20	<1.0	<1	<3	<1	5	<1	9	12
	05–10–93	20	<1.0	<5	<3	<10	7	<10	<4	4
	08–18–93	40	<1.0	<5	<3	<10	23	20	<4	4

Table 4. Discharge and water-quality data for springs on vicinity property near the Weldon Spring chemical plant site—Continued

Site number (fig. 4)	Date	Mo	Ni	Se	Ag	Sr	V	Zn	U	TOC
1	11–02–89	<10	1	<1	<1.0	130	<6	21	<1.0	--
	01–09–90	<10	<10	<1	<1.0	140	<6	5	<1.0	--
	03–28–90	<10	<10	<1	1.0	110	<6	7	<1.0	--
	08–20–92	10	<1	<1	<1.0	140	<6	<10	<1.0	1.3
	05–12–93	<10	<10	<1	<1.0	92	<6	<3	3.4	4.5
	08–17–93	<10	<10	<1	<1.0	110	<6	4	1.4	2.4
2	11–03–89	<10	2	2	<1.0	120	<6	12	--	--
	01–25–90	<10	<10	1	<1.0	120	<6	4	<1.0	--
3	01–09–90	20	<10	<1	<1.0	150	<6	6	210	--
4	01–09–90	20	<10	<1	<1.0	130	<6	<3	220	--
	03–28–90	20	<10	<1	<1.0	97	<6	4	200	--
	02–13–91	10	1	<1	<1.0	94	<6	<3	180	2.0
	05–13–92	10	<1	<1	<1.0	96	<6	<10	170	4.0
	05–11–93	20	<10	<1	<1.0	93	<6	3	45	2.2
	08–18–93	20	<10	<1	<1.0	120	<6	<3	120	2.9
5	11–02–89	<10	2	1	<1.0	170	<6	37	63	--
	01–25–90	<10	<10	1	<1.0	170	<6	4	100	--
	03–28–90	<10	<10	<1	<1.0	110	<6	8	57	--
	02–14–91	<10	<1	<1	<1.0	93	<6	10	48	--
	07–25–91	<10	<1	2	<1.0	220	<6	10	200	1.5
	05–11–92	<10	<1	2	<1.0	190	<6	<10	120	2.4
	08–18–92	<10	<1	1	<1.0	240	<6	<10	100	.7
	05–10–93	<1	1	<1	<1.0	120	<1	<10	31	2.7
	08–17–93	10	<10	<1	<1.0	110	<6	4	41	4.1
6	11–02–89	<10	1	1	<1.0	140	<6	17	7.9	--
	01–25–90	<10	<10	<1	<1.0	140	<6	<3	3.6	--
	03–28–90	<10	<10	<1	<1.0	100	<6	8	1.2	--
	02–14–91	<10	1	<1	<1.0	99	<6	<3	1.3	2.9
	07–25–91	<10	2	<1	<1.0	150	<6	7	3.7	3.0
	05–11–92	<10	<1	<1	<1.0	140	<6	<10	6.5	3.5
	08–18–92	<10	<1	<1	<1.0	170	<6	<10	4.4	1.8
	05–10–93	<10	<10	<1	<1.0	110	<6	<3	<1.0	4.9
	08–18–93	<10	<10	<1	1.0	96	<6	<3	1.3	5.0

Table 5. Daily mean specific conductance values for Burgermeister spring, October 1989 through September 1995

[Mean values in microsiemens per centimeter at 25 degrees Celsius; --, no data available]

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
October 1989 through September 1990 (Water year 1990)												
1	765	764	727	923	859	539	309	306	337	765	890	943
2	765	761	725	873	864	420	298	319	346	786	903	946
3	765	757	720	835	850	443	315	297	393	819	839	949
4	760	752	710	841	800	522	334	273	420	830	356	952
5	760	746	707	860	711	574	336	296	456	779	463	951
6	746	744	715	875	711	610	347	322	370	373	505	955
7	748	742	710	843	671	646	350	343	232	506	513	891
8	737	742	722	803	668	692	353	388	217	622	616	350
9	735	743	724	820	692	731	385	424	239	698	695	406
10	712	745	734	837	727	682	342	437	251	760	748	489
11	720	748	751	848	750	622	283	444	270	806	801	298
12	730	751	786	857	767	635	321	337	300	856	847	379
13	737	748	811	856	778	650	315	269	332	856	862	452
14	747	747	832	862	793	683	243	291	371	825	867	289
15	752	747	845	872	757	396	292	322	400	822	879	364
16	755	747	849	874	463	327	308	224	421	826	887	501
17	759	754	853	878	492	333	317	276	446	856	888	673
18	765	754	858	886	518	355	342	295	479	864	810	788
19	762	733	854	896	538	375	344	307	508	864	747	854
20	757	723	862	881	573	410	374	316	527	882	768	889
21	755	721	874	836	602	436	318	348	550	882	802	900
22	757	720	877	800	491	472	285	343	563	816	844	916
23	751	728	876	746	324	496	284	312	583	741	874	923
24	747	729	874	744	401	538	297	331	621	774	882	928
25	754	728	873	772	460	564	300	363	645	804	893	932
26	745	726	874	796	488	411	313	215	656	798	904	941
27	750	727	877	812	510	388	313	225	684	844	914	954
28	751	726	881	827	532	372	270	239	703	876	922	952
29	752	729	887	844	--	315	282	254	721	868	928	959
30	759	728	892	845	--	288	300	293	742	887	932	975
31	761	--	897	849	--	318	--	312	--	883	938	--
Mean	**750**	**740**	**812**	**842**	**635**	**492**	**316**	**314**	**459**	**793**	**797**	**757**
Maximum	**765**	**764**	**897**	**923**	**864**	**731**	**385**	**444**	**742**	**887**	**938**	**975**
Minimum	**712**	**720**	**707**	**744**	**324**	**288**	**243**	**215**	**217**	**373**	**356**	**289**
Water Year		**Mean 643**				**Maximum 975**					**Minimum 215**	

Table 5. Daily mean specific conductance values for Burgermeister spring, October 1989 through September 1995—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
October 1990 through September 1991 (Water year 1991)												
1	963	844	346	220	413	400	461	576	604	1,000	1,040	1,130
2	967	858	348	244	434	369	483	608	642	880	1,060	1,120
3	955	870	215	263	376	342	508	528	694	394	1,070	1,130
4	971	891	229	286	304	350	527	274	746	553	1,090	1,130
5	955	489	247	318	257	361	542	277	798	661	825	1,110
6	967	432	268	342	252	374	544	277	840	732	292	1,040
7	510	358	290	356	256	393	559	303	870	802	391	1,020
8	469	469	312	372	269	420	580	374	896	852	549	1,030
9	522	541	334	387	278	448	602	385	914	867	736	1,060
10	372	611	358	389	296	479	606	407	928	321	869	868
11	345	673	380	405	299	518	624	436	938	250	938	283
12	428	726	399	267	307	542	633	462	942	253	974	361
13	494	760	412	252	316	548	623	485	948	273	995	517
14	527	789	432	273	319	524	375	517	958	309	1,010	705
15	577	814	453	245	306	492	258	550	966	352	1,030	863
16	659	833	448	231	332	478	260	580	970	404	1,040	958
17	627	852	403	233	339	353	272	575	978	467	1,060	1,030
18	403	872	271	237	351	257	296	377	982	536	1,070	1,010
19	384	873	315	241	362	262	318	272	985	601	1,090	976
20	342	872	325	234	340	277	333	286	988	661	1,110	971
21	470	882	298	232	345	297	348	315	993	718	1,100	990
22	545	891	250	246	343	324	369	348	998	784	1,110	990
23	626	892	259	270	366	279	400	385	1,000	845	1,120	832
24	604	898	281	286	372	280	434	457	1,010	889	1,120	597
25	335	895	303	304	376	296	463	488	974	927	1,120	696
26	418	886	327	328	381	318	482	504	984	955	1,120	765
27	560	739	353	351	389	338	504	497	999	971	1,130	817
28	685	279	375	374	395	356	524	515	1,000	986	1,130	865
29	758	322	219	388	--	384	528	549	1,010	997	1,130	914
30	801	343	199	405	--	413	543	588	1,010	1,010	1,130	961
31	828	--	205	402	--	439	--	584	--	1,030	1,130	--
Mean	**615**	**715**	**318**	**303**	**335**	**384**	**467**	**444**	**919**	**686**	**986**	**891**
Maximum	**971**	**898**	**453**	**405**	**434**	**548**	**633**	**608**	**1,010**	**1,030**	**1,130**	**1,130**
Minimum	**335**	**279**	**199**	**220**	**252**	**257**	**258**	**272**	**604**	**250**	**292**	**283**
Water Year		**Mean 589**				**Maximum 1,130**					**Minimum 199**	

Table 5. Daily mean specific conductance values for Burgermeister spring, October 1989 through September 1995—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
						October 1991 through September 1992 (Water year 1992)						
1	1,000	369	369	399	627	405	242	434	812	980	970	810
2	810	383	367	416	652	426	262	451	843	979	980	853
3	742	448	336	434	683	467	283	469	864	732	990	892
4	729	481	313	447	701	523	310	486	878	582	960	920
5	598	521	328	462	709	545	332	511	888	632	960	946
6	548	571	350	482	730	564	354	538	893	671	970	873
7	620	632	377	500	757	572	378	552	903	729	990	828
8	695	683	404	511	787	571	405	575	911	783	1,000	860
9	685	723	437	536	819	584	421	599	918	836	1,010	758
10	749	754	475	531	862	604	457	615	929	809	1,010	446
11	779	793	504	532	904	629	483	649	929	689	1,010	348
12	823	852	542	546	932	656	497	697	930	718	1,010	423
13	867	879	549	567	950	683	514	574	935	775	980	480
14	917	606	482	583	718	717	539	530	943	818	900	560
15	966	307	450	588	247	750	567	558	944	989	867	673
16	1,000	401	466	550	247	770	587	607	946	747	882	715
17	1,030	563	494	538	264	793	599	520	951	734	920	727
18	1,040	729	551	557	246	622	537	310	957	756	950	771
19	1,050	654	572	589	248	264	238	324	960	807	970	823
20	1,060	292	518	619	260	251	200	400	966	856	968	879
21	1,070	283	269	639	281	264	297	409	967	900	972	932
22	1,080	301	272	663	298	287	322	442	973	940	979	949
23	1,090	321	284	662	318	300	350	502	977	950	988	923
24	1,090	359	278	542	340	328	375	540	979	940	992	933
25	1,100	389	292	487	347	366	392	568	978	910	990	950
26	1,050	447	311	495	330	388	391	606	980	796	989	960
27	845	517	329	526	339	404	403	644	981	815	991	900
28	598	546	355	552	357	422	424	639	984	860	988	920
29	371	555	378	569	382	428	450	698	991	910	914	940
30	373	440	380	585	--	271	430	742	986	930	849	950
31	391	--	385	604	--	238	--	780	--	960	768	--
Mean	**831**	**527**	**401**	**539**	**529**	**487**	**401**	**547**	**937**	**824**	**959**	**798**
Maximum	**1,100**	**879**	**572**	**663**	**950**	**793**	**599**	**780**	**991**	**989**	**1,010**	**960**
Minimum	**371**	**283**	**269**	**399**	**246**	**238**	**200**	**310**	**812**	**582**	**768**	**348**
Water Year		**Mean 649**				**Maximum 1,100**					**Minimum 200**	

Table 5. Daily mean specific conductance values for Burgermeister spring, October 1989 through September 1995—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
						October 1992 through September 1993 (Water year 1993)						
1	950	834	313	446	387	348	313	350	563	321	679	808
2	970	798	328	447	401	284	302	366	565	330	640	846
3	940	744	338	423	432	211	304	376	576	380	674	711
4	920	350	355	259	452	200	313	382	616	419	708	522
5	870	390	376	234	441	210	320	388	634	447	748	491
6	890	430	396	255	443	214	329	403	529	485	692	510
7	920	470	417	263	455	213	345	313	258	326	689	557
8	950	430	439	270	479	224	354	339	302	264	711	610
9	980	390	422	304	500	239	321	375	324	296	810	664
10	1,000	300	407	312	522	263	321	408	362	345	867	718
11	1,010	200	368	340	517	284	336	432	378	371	673	782
12	1,020	180	363	372	524	303	353	403	280	380	296	782
13	1,020	200	362	338	423	315	243	296	323	390	253	809
14	1,030	310	364	281	381	332	222	293	382	316	267	411
15	1,030	300	260	290	388	360	215	335	435	298	297	249
16	1,040	320	210	309	393	370	243	378	478	271	319	259
17	1,040	340	236	322	378	280	267	401	511	278	330	285
18	1,050	350	242	318	385	278	276	331	534	316	351	292
19	1,050	360	266	340	403	298	276	285	482	343	385	294
20	1,040	370	279	323	419	276	267	306	375	353	411	258
21	1,030	200	318	201	392	260	280	348	373	353	435	266
22	1,020	210	296	213	232	271	289	385	422	373	466	305
23	1,040	214	300	223	246	244	301	409	458	378	512	211
24	1,040	232	314	225	270	251	327	420	493	364	558	223
25	1,020	246	348	243	291	258	226	436	352	389	587	229
26	1,020	292	388	262	290	271	242	448	279	405	612	244
27	1,020	284	386	283	306	282	257	465	343	439	646	256
28	1,030	283	450	306	325	301	287	475	383	487	677	281
29	1,030	295	410	319	--	326	309	486	272	531	708	313
30	1,040	297	434	341	--	349	329	511	291	577	740	340
31	1,040	--	433	371	--	341	--	534	--	626	774	--
Mean	**1,000**	**354**	**349**	**304**	**396**	**279**	**292**	**390**	**419**	**382**	**565**	**451**
Maximum	**1,050**	**834**	**450**	**447**	**524**	**370**	**354**	**534**	**634**	**626**	**867**	**846**
Minimum	**870**	**180**	**210**	**201**	**232**	**200**	**215**	**285**	**258**	**264**	**253**	**211**
Water Year		**Mean 431**				**Maximum 1,050**					**Minimum 180**	

Table 5. Daily mean specific conductance values for Burgermeister spring, October 1989 through September 1995—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
						October 1993 through September 1994 (Water year 1994)						
1	357	515	341	533	367	349	441	228	632	719	965	1,040
2	378	536	280	542	399	316	461	273	607	792	976	966
3	395	562	258	550	424	325	457	312	591	830	985	761
4	412	579	283	554	444	337	463	340	586	874	989	743
5	430	595	283	534	458	352	425	362	582	909	996	754
6	452	618	298	541	469	378	308	381	601	937	1,000	816
7	467	651	341	536	483	358	316	340	602	958	1,010	870
8	485	675	365	533	494	305	352	293	571	937	1,010	918
9	507	692	372	544	511	348	384	336	566	540	1,020	959
10	514	703	386	562	512	376	287	380	590	632	1,020	989
11	499	691	405	579	536	387	225	403	617	710	1,020	1,010
12	507	643	439	444	568	406	221	434	647	780	1,030	1,020
13	530	635	442	400	591	423	250	457	678	852	1,040	1,030
14	555	280	299	408	604	422	274	477	706	848	1,040	1,040
15	570	229	294	434	612	436	273	341	741	837	1,040	1,040
16	524	237	296	467	615	455	267	339	775	876	1,030	1,050
17	271	217	324	518	613	478	293	406	811	910	1,000	1,050
18	258	236	352	540	604	496	321	447	841	942	1,010	1,060
19	298	252	356	560	594	474	342	491	875	965	996	1,060
20	313	281	369	591	517	488	382	527	906	920	889	1,060
21	248	306	384	620	376	503	419	549	926	373	874	1,060
22	266	336	396	651	364	500	426	568	941	459	901	1,060
23	297	360	411	591	272	524	443	584	949	532	942	1,060
24	327	382	435	393	272	544	463	602	954	600	977	1,060
25	354	396	448	292	283	563	478	624	959	663	1,000	1,070
26	382	350	456	276	315	542	494	623	958	737	1,020	1,070
27	408	312	472	284	339	358	508	643	951	806	1,030	1,050
28	426	318	459	289	357	338	286	656	881	859	1,040	979
29	445	320	474	303	--	376	210	649	878	897	1,040	1,000
30	471	332	500	318	--	400	219	659	829	927	1,050	1,030
31	491	--	521	339	--	417	--	656	--	949	1,050	--
Mean	**414**	**441**	**379**	**475**	**464**	**419**	**356**	**464**	**758**	**793**	**1,000**	**989**
Maximum	**570**	**703**	**521**	**651**	**615**	**563**	**508**	**659**	**959**	**965**	**1,050**	**1,070**
Minimum	**248**	**217**	**258**	**276**	**272**	**305**	**210**	**228**	**566**	**373**	**874**	**743**
Water Year		**Mean 580**				**Maximum 1,070**					**Minimum 210**	

Table 5. Daily mean specific conductance values for Burgermeister spring, October 1989 through September 1995—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
						October 1994 through September 1995 (Water year 1995)						
1	1,030	1,010	501	511	296	365	388	266	373	774	884	962
2	1,040	1,010	518	534	301	392	401	262	271	795	909	969
3	1,050	989	536	549	252	410	398	280	287	807	926	975
4	1,050	962	561	565	217	436	413	281	324	830	929	981
5	1,050	538	586	587	233	457	437	279	367	854	898	987
6	1,050	288	609	609	265	453	469	306	399	873	876	990
7	1,050	322	639	629	293	232	491	315	423	887	303	991
8	1,050	360	671	648	318	223	496	308	445	898	320	993
9	1,050	336	706	668	353	246	478	282	473	902	387	997
10	940	289	735	691	350	254	509	307	484	907	424	999
11	859	336	765	706	301	272	541	320	440	910	442	992
12	861	366	807	709	300	298	562	356	449	910	475	1,000
13	884	382	843	367	319	328	582	364	480	919	530	1,010
14	922	397	873	202	336	351	592	352	513	923	582	1,010
15	968	421	897	217	347	382	603	384	546	928	647	1,010
16	977	437	775	242	337	404	615	414	565	933	590	1,010
17	858	446	571	276	333	422	623	251	580	935	529	1,020
18	880	458	506	298	343	438	624	214	600	894	559	1,020
19	707	472	498	235	359	458	537	240	617	806	566	1,020
20	568	399	459	221	371	469	316	278	625	851	562	1,010
21	624	254	296	240	374	471	264	316	636	893	648	1,020
22	687	305	246	264	370	399	310	339	656	817	724	1,020
23	708	361	262	286	369	400	333	360	667	732	782	1,020
24	760	372	295	320	364	447	265	354	677	747	831	1,020
25	810	396	325	350	379	470	289	322	675	802	869	1,020
26	864	417	354	367	391	470	319	305	682	801	894	1,020
27	913	437	383	336	386	285	336	326	685	693	912	1,010
28	948	457	419	212	334	265	359	276	700	717	925	1,020
29	973	486	452	220	--	295	381	272	731	756	936	1,020
30	990	496	472	252	--	337	266	309	757	799	947	1,020
31	1,000	--	490	289	--	362	--	347	--	845	956	--
Mean	**907**	**473**	**550**	**406**	**328**	**371**	**440**	**309**	**538**	**843**	**702**	**1,000**
Maximum	**1,050**	**1,010**	**897**	**709**	**391**	**471**	**624**	**414**	**757**	**935**	**956**	**1,020**
Minimum	**568**	**254**	**246**	**202**	**217**	**223**	**264**	**214**	**271**	**693**	**303**	**962**
Water Year		**Mean 574**				**Maximum 1,050**					**Minimum 202**	

Table 6. Daily mean discharge for Burgermeister spring, October 1989 through September 1995
[Mean values, in cubic foot per second; --, no data available]

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
October 1989 through September 1990 (Water year 1990)												
1	0.11	0.09	0.10	0.06	0.05	0.18	0.49	0.41	0.42	0.10	0.09	0.08
2	.11	.09	.10	.05	.09	.31	.45	.41	.42	.10	.09	.08
3	.10	.09	.10	.05	.10	.14	.41	.53	.47	.09	.24	.08
4	.10	.09	.10	.06	.10	.09	.38	.59	.49	.09	.70	.08
5	.10	.09	.10	.06	.11	.07	.36	.49	.46	.19	.58	.08
6	.12	.10	.10	.06	.10	.07	.33	.44	.59	.31	.34	.08
7	.14	.10	.09	.05	.08	.07	.27	.43	.67	.14	.21	.19
8	.13	.10	.08	.05	.07	.09	.20	.42	.66	.10	.12	.22
9	.12	.10	.07	.05	.07	.13	.16	.41	.53	.09	.10	.09
10	.11	.09	.06	.05	.06	.12	.36	.40	.47	.08	.10	.21
11	.11	.10	.06	.05	.06	.10	.47	.36	.43	.09	.10	.26
12	.10	.10	.06	.05	.06	.10	.41	.50	.41	.10	.10	.10
13	.10	.10	.05	.05	.06	.09	.43	.57	.39	.10	.10	.22
14	.10	.10	.05	.05	.05	.10	.56	.48	.37	.08	.11	.29
15	.10	.10	.05	.05	.26	.38	.46	.52	.37	.09	.10	.09
16	.10	.10	.05	.05	.24	.26	.42	.79	.37	.08	.11	.08
17	.10	.10	.05	.05	.15	.23	.40	.73	.34	.07	.14	.07
18	.10	.10	.05	.06	.12	.21	.39	.54	.30	.07	.13	.07
19	.10	.10	.05	.06	.10	.19	.39	.49	.27	.07	.10	.07
20	.10	.10	.04	.09	.08	.17	.37	.49	.24	.08	.09	.07
21	.10	.10	.04	.08	.07	.15	.50	.44	.22	.13	.09	.07
22	.11	.10	.04	.07	.30	.14	.46	.45	.21	.17	.08	.07
23	.10	.10	.04	.06	.32	.12	.42	.45	.19	.14	.08	.08
24	.10	.10	.04	.06	.23	.12	.40	.41	.17	.11	.08	.08
25	.10	.10	.04	.05	.17	.17	.39	.41	.16	.09	.08	.08
26	.10	.10	.04	.05	.15	.45	.39	.74	.15	.08	.08	.08
27	.10	.10	.04	.05	.14	.41	.39	.56	.14	.08	.08	.08
28	.09	.10	.05	.05	.13	.42	.60	.48	.13	.08	.08	.08
29	.09	.10	.05	.05	--	.57	.47	.44	.12	.08	.08	.07
30	.09	.10	.06	.05	--	.52	.43	.41	.11	.08	.08	.07
31	.10	--	.06	.05	--	.44	--	.41	--	.09	.08	--
Mean	**.10**	**.10**	**.06**	**.06**	**.13**	**.21**	**.41**	**.49**	**.34**	**.10**	**.15**	**.11**
Maximum	**.14**	**.10**	**.10**	**.09**	**.32**	**.57**	**.60**	**.79**	**.67**	**.31**	**.70**	**.29**
Minimum	**.09**	**.09**	**.04**	**.05**	**.05**	**.07**	**.16**	**.36**	**.11**	**.07**	**.08**	**.07**
Water Year		**Mean 0.19**				**Maximum 0 .79**					**Minimum 0.04**	

Table 6. Daily mean discharge for Burgermeister spring, October 1989 through September 1995—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
October 1990 through September 1991 (Water year 1991)												
1	0.07	0.07	0.24	0.45	0.33	0.38	0.34	0.32	0.14	0.15	0.05	0.05
2	.07	.08	.18	.44	.34	.40	.29	.27	.12	.29	.05	.05
3	.10	.08	.53	.43	.35	.40	.24	.42	.10	.30	.05	.06
4	.08	.09	.48	.42	.38	.40	.23	.60	.09	.16	.07	.07
5	.08	.38	.43	.42	.49	.38	.23	.47	.08	.13	.25	.06
6	.08	.35	.40	.41	.48	.38	.22	.44	.08	.12	.23	.05
7	.35	.29	.37	.39	.45	.37	.20	.40	.07	.11	.07	.05
8	.30	.15	.34	.39	.43	.35	.20	.38	.07	.11	.06	.05
9	.37	.10	.27	.37	.42	.29	.18	.36	.07	.15	.06	.06
10	.43	.09	.21	.36	.42	.23	.16	.36	.07	.56	.05	.22
11	.38	.08	.17	.41	.41	.20	.14	.33	.06	.49	.05	.23
12	.29	.07	.14	.47	.40	.19	.14	.30	.06	.48	.05	.09
13	.21	.06	.12	.43	.41	.23	.21	.26	.06	.44	.05	.05
14	.15	.06	.11	.42	.42	.28	.47	.22	.06	.41	.05	.05
15	.10	.06	.10	.52	.41	.31	.59	.19	.07	.35	.05	.05
16	.08	.07	.09	.54	.40	.30	.49	.20	.06	.24	.05	.06
17	.10	.06	.16	.53	.40	.51	.44	.25	.06	.17	.05	.07
18	.37	.06	.43	.51	.40	.59	.41	.42	.06	.14	.05	.09
19	.33	.06	.43	.52	.39	.49	.40	.45	.06	.11	.05	.07
20	.27	.06	.41	.53	.39	.43	.38	.41	.06	.09	.05	.06
21	.12	.06	.48	.48	.38	.41	.38	.39	.07	.08	.05	.06
22	.09	.06	.51	.42	.38	.48	.36	.36	.11	.07	.05	.11
23	.08	.06	.46	.39	.38	.49	.36	.36	.13	.06	.05	.17
24	.18	.06	.42	.39	.38	.46	.34	.34	.12	.07	.05	.10
25	.19	.06	.40	.36	.38	.43	.32	.28	.13	.06	.05	.06
26	.09	.06	.38	.34	.37	.40	.29	.33	.12	.06	.05	.06
27	.08	.31	.36	.34	.37	.41	.27	.28	.12	.06	.05	.05
28	.07	.47	.35	.33	.37	.41	.26	.22	.13	.06	.05	.05
29	.07	.37	.65	.33	--	.39	.26	.19	.12	.06	.05	.05
30	.07	.31	.60	.35	--	.38	.27	.24	.12	.05	.05	.05
31	.07	--	.47	.35	--	.37	--	.20	--	.05	.05	--
Mean	**.17**	**.14**	**.34**	**.42**	**.40**	**.38**	**.30**	**.33**	**.09**	**.18**	**.06**	**.08**
Maximum	**.43**	**.47**	**.65**	**.54**	**.49**	**.59**	**.59**	**.60**	**.14**	**.56**	**.25**	**.23**
Minimum	**.07**	**.06**	**.09**	**.33**	**.33**	**.19**	**.14**	**.19**	**.06**	**.05**	**.05**	**.05**
Water Year		**Mean 0.24**			**Maximum 0.65**						**Minimum 0.05**	

Table 6. Daily mean discharge for Burgermeister spring, October 1989 through September 1995—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
						October 1991 through September 1992 (Water year 1992)						
1	0.14	0.34	0.32	0.32	0.11	0.38	0.47	0.37	0.12	0.10	0.05	0.05
2	.19	.29	.33	.32	.10	.34	.45	.34	.12	.10	.05	.05
3	.21	.26	.37	.30	.10	.36	.44	.30	.12	.29	.05	.05
4	.21	.19	.34	.28	.10	.36	.42	.27	.12	.20	.05	.05
5	.30	.14	.32	.25	.09	.35	.40	.24	.11	.13	.05	.22
6	.18	.10	.31	.23	.09	.34	.40	.20	.10	.11	.05	.19
7	.11	.09	.30	.21	.08	.28	.40	.18	.10	.10	.05	.17
8	.16	.08	.27	.20	.07	.22	.38	.17	.10	.10	.06	.31
9	.11	.06	.21	.22	.06	.20	.37	.16	.10	.15	.06	.36
10	.08	.06	.17	.22	.06	.17	.37	.15	.10	.14	.06	.38
11	.07	.06	.18	.19	.06	.15	.31	.14	.10	.11	.07	.31
12	.05	.06	.25	.18	.06	.14	.28	.20	.10	.11	.10	.24
13	.05	.08	.30	.16	.06	.12	.25	.31	.10	.10	.09	.11
14	.05	.31	.29	.16	.27	.12	.23	.23	.10	.11	.07	.08
15	.05	.22	.25	.18	.60	.12	.23	.17	.10	.18	.07	.12
16	.05	.08	.20	.18	.50	.12	.22	.14	.10	.14	.06	.07
17	.04	.07	.19	.16	.47	.12	.26	.30	.10	.10	.06	.08
18	.04	.12	.18	.14	.54	.27	.62	.43	.10	.09	.06	.13
19	.04	.21	.14	.12	.49	.65	.62	.41	.10	.08	.06	.06
20	.04	.49	.20	.11	.44	.62	.65	.39	.10	.08	.05	.06
21	.04	.45	.50	.11	.42	.53	.56	.35	.10	.07	.05	.07
22	.05	.37	.42	.12	.40	.46	.53	.29	.10	.07	.05	.06
23	.10	.35	.43	.23	.40	.43	.46	.32	.10	.06	.05	.07
24	.17	.32	.42	.26	.38	.40	.44	.21	.14	.10	.05	.07
25	.17	.31	.37	.24	.40	.38	.44	.16	.15	.08	.05	.06
26	.19	.31	.35	.19	.40	.38	.42	.16	.14	.06	.05	.05
27	.33	.28	.35	.16	.40	.38	.41	.23	.10	.06	.07	.07
28	.27	.22	.34	.15	.38	.38	.40	.14	.10	.06	.09	.06
29	.38	.18	.34	.14	.38	.39	.40	.13	.10	.05	.08	.05
30	.34	.32	.34	.13	--	.72	.39	.12	.10	.05	.06	.06
31	.31	--	.32	.12	--	.59	--	.12	--	.05	.05	--
Mean	**.15**	**.21**	**.30**	**.19**	**.27**	**.34**	**.41**	**.24**	**.11**	**.10**	**.06**	**.12**
Maximum	**.38**	**.49**	**.50**	**.32**	**.60**	**.72**	**.65**	**.43**	**.15**	**.29**	**.10**	**.38**
Minimum	**.04**	**.06**	**.14**	**.11**	**.06**	**.12**	**.22**	**.12**	**.10**	**.05**	**.05**	**.05**
Water Year		**Mean 0.21**				**Maximum 0.72**					**Minimum 0 .04**	

Table 6. Daily mean discharge for Burgermeister spring, October 1989 through September 1995—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
October 1992 through September 1993 (Water year 1993)												
1	0.08	0.06	0.30	0.24	0.32	0.37	0.40	0.38	0.28	0.34	0.24	0.11
2	.10	.08	.32	.22	.33	.50	.40	.38	.31	.34	.25	.11
3	.11	.09	.29	.22	.34	.58	.38	.38	.26	.32	.21	.29
4	.07	.27	.22	.63	.33	.59	.38	.38	.24	.32	.19	.32
5	.05	.17	.16	.56	.32	.57	.38	.38	.22	.30	.23	.31
6	.05	.10	.15	.47	.32	.55	.38	.38	.29	.28	.29	.26
7	.05	.08	.14	.41	.31	.53	.38	.41	.39	.40	.25	.19
8	.05	.12	.18	.39	.28	.50	.39	.38	.34	.37	.17	.14
9	.06	.16	.21	.37	.25	.45	.38	.38	.34	.34	.20	.12
10	.06	.29	.23	.36	.24	.41	.38	.38	.33	.32	.31	.10
11	.06	.54	.37	.35	.24	.38	.38	.38	.33	.32	.31	.15
12	.06	.59	.34	.35	.34	.36	.38	.39	.34	.32	.52	.11
13	.05	.54	.31	.39	.36	.36	.49	.44	.32	.32	.38	.12
14	.05	.41	.25	.38	.36	.35	.52	.42	.32	.34	.35	.46
15	.05	.37	.54	.36	.34	.34	.51	.39	.31	.36	.32	.45
16	.08	.35	.62	.36	.34	.36	.45	.38	.30	.37	.32	.37
17	.07	.35	.49	.36	.34	.38	.42	.38	.29	.34	.32	.34
18	.07	.34	.42	.36	.34	.36	.40	.42	.29	.32	.31	.34
19	.06	.33	.39	.34	.34	.37	.41	.41	.32	.32	.31	.33
20	.07	.34	.40	.42	.34	.44	.43	.38	.33	.32	.31	.41
21	.06	.51	.38	.53	.42	.41	.42	.38	.32	.32	.30	.54
22	.06	.52	.38	.48	.51	.41	.41	.36	.32	.32	.27	.59
23	.06	.49	.36	.45	.42	.48	.41	.36	.30	.33	.24	.64
24	.05	.41	.37	.42	.38	.44	.41	.36	.29	.31	.22	.53
25	.05	.40	.35	.38	.38	.42	.52	.34	.37	.31	.20	.50
26	.05	.37	.34	.36	.38	.41	.45	.34	.35	.31	.17	.45
27	.05	.36	.34	.36	.36	.40	.42	.34	.34	.29	.15	.41
28	.05	.35	.32	.36	.36	.39	.41	.35	.33	.26	.13	.42
29	.05	.34	.30	.35	--	.38	.40	.34	.37	.22	.13	.50
30	.05	.32	.27	.34	--	.38	.39	.34	.34	.19	.11	.53
31	.06	--	.25	.34	--	.40	--	.31	--	.18	.12	--
Mean	**.06**	**.32**	**.32**	**.38**	**.34**	**.43**	**.42**	**.38**	**.32**	**.31**	**.25**	**.34**
Maximum	**.11**	**.59**	**.62**	**.63**	**.51**	**.59**	**.52**	**.44**	**.39**	**.40**	**.52**	**.64**
Minimum	**.05**	**.06**	**.14**	**.22**	**.24**	**.34**	**.38**	**.31**	**.22**	**.18**	**.11**	**.10**
Water Year		**Mean 0.32**			**Maximum 0.64**						**Minimum 0.05**	

Table 6. Daily mean discharge for Burgermeister spring, October 1989 through September 1995—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
October 1993 through September 1994 (Water year 1994)												
1	0.38	0.30	0.49	0.40	0.47	0.43	0.47	0.65	0.34	0.19	0.08	0.11
2	.34	.28	.60	.39	.47	.45	.47	.60	.36	.15	.10	.09
3	.32	.26	.57	.40	.45	.44	.46	.56	.34	.13	.13	.08
4	.32	.26	.57	.41	.44	.44	.47	.53	.40	.12	.14	.08
5	.32	.24	.55	.41	.44	.42	.54	.51	.34	.12	.15	.08
6	.32	.21	.54	.43	.44	.42	.64	.51	.32	.12	.16	.08
7	.32	.19	.52	.43	.43	.48	.59	.57	.41	.12	.19	.08
8	.32	.17	.50	.40	.42	.48	.52	.57	.42	.32	.11	.07
9	.31	.17	.49	.32	.40	.44	.52	.54	.33	.36	.09	.07
10	.32	.18	.49	.30	.35	.43	.79	.54	.27	.19	.09	.07
11	.32	.17	.47	.41	.30	.42	.92	.51	.25	.15	.08	.07
12	.31	.19	.47	.47	.27	.40	.89	.49	.22	.14	.08	.07
13	.29	.35	.48	.47	.26	.41	.76	.48	.20	.19	.08	.06
14	.27	.62	.53	.47	.24	.42	.64	.49	.18	.14	.09	.07
15	.27	.50	.53	.45	.24	.41	.62	.57	.16	.13	.08	.07
16	.29	.44	.50	.40	.24	.40	.59	.51	.15	.13	.08	.08
17	.44	.52	.47	.35	.24	.40	.53	.47	.13	.12	.08	.07
18	.38	.45	.47	.32	.25	.41	.54	.47	.11	.12	.08	.06
19	.34	.43	.46	.32	.28	.41	.50	.45	.11	.13	.13	.06
20	.39	.42	.44	.23	.37	.40	.48	.43	.11	.17	.13	.06
21	.42	.40	.44	.21	.40	.40	.47	.40	.11	.52	.16	.07
22	.38	.40	.42	.19	.49	.39	.47	.37	.11	.41	.14	.07
23	.34	.42	.42	.28	.63	.37	.47	.36	.12	.25	.12	.06
24	.32	.42	.42	.56	.54	.33	.47	.35	.12	.15	.11	.06
25	.32	.42	.42	.64	.48	.28	.47	.37	.12	.10	.10	.08
26	.32	.44	.44	.63	.43	.28	.47	.35	.14	.09	.10	.07
27	.33	.47	.47	.62	.42	.61	.48	.33	.16	.09	.09	.06
28	.32	.47	.47	.62	.42	.53	.77	.32	.14	.08	.09	.06
29	.32	.46	.46	.53	--	.50	.74	.32	.22	.08	.09	.06
30	.32	.47	.42	.50	--	.49	.69	.32	.29	.08	.10	.06
31	.31	--	.40	.49	--	.48	--	.33	--	.08	.11	--
Mean	**.33**	**.36**	**.48**	**.42**	**.39**	**.42**	**.58**	**.46**	**.22**	**.17**	**.11**	**.07**
Maximum	**.44**	**.62**	**.60**	**.64**	**.63**	**.61**	**.92**	**.65**	**.42**	**.52**	**.19**	**.11**
Minimum	**.27**	**.17**	**.40**	**.19**	**.24**	**.28**	**.46**	**.32**	**.11**	**.08**	**.08**	**.06**
Water Year		**Mean 0.33**				**Maximum 0.92**					**Minimum 0.06**	

Table 6. Daily mean discharge for Burgermeister spring, October 1989 through September 1995—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
October 1994 through September 1995 (Water year 1995)												
1	0.06	0.08	0.29	0.23	0.42	0.40	0.39	0.62	0.45	0.08	0.07	0.06
2	.06	.08	.24	.20	.42	.39	.40	.59	.53	.08	.09	.06
3	.06	.08	.20	.18	.55	.39	.39	.53	.47	.07	.10	.06
4	.07	.21	.18	.15	.57	.35	.40	.54	.44	.07	.09	.06
5	.06	.59	.15	.14	.47	.33	.38	.54	.42	.07	.08	.06
6	.05	.68	.13	.14	.42	.37	.36	.48	.42	.07	.09	.06
7	.06	.52	.12	.12	.42	.75	.35	.47	.42	.07	.59	.06
8	.13	.50	.11	.11	.41	.60	.37	.53	.47	.06	.46	.06
9	.14	.59	.10	.10	.41	.47	.33	.56	.44	.06	.43	.05
10	.10	.55	.09	.10	.42	.42	.27	.52	.42	.06	.46	.05
11	.07	.50	.09	.10	.42	.40	.25	.48	.42	.06	.41	.05
12	.07	.48	.10	.22	.40	.39	.24	.47	.39	.06	.24	.06
13	.06	.47	.09	.66	.40	.38	.22	.48	.35	.06	.15	.06
14	.06	.45	.09	.83	.38	.36	.20	.47	.31	.06	.13	.06
15	.13	.49	.09	.59	.40	.36	.20	.44	.28	.06	.22	.06
16	.09	.47	.25	.47	.40	.36	.18	.46	.25	.07	.37	.06
17	.07	.45	.42	.45	.37	.36	.18	.85	.22	.16	.34	.06
18	.18	.37	.37	.43	.33	.35	.26	.89	.20	.10	.34	.06
19	.30	.31	.29	.59	.31	.34	.40	.70	.20	.08	.26	.06
20	.21	.51	.29	.54	.31	.35	.64	.54	.19	.09	.10	.08
21	.15	.75	.60	.47	.32	.36	.65	.48	.17	.15	.08	.09
22	.09	.60	.66	.44	.33	.39	.57	.45	.16	.17	.07	.10
23	.06	.53	.51	.42	.36	.37	.60	.43	.15	.11	.06	.07
24	.06	.50	.45	.42	.32	.34	.69	.45	.15	.09	.06	.06
25	.05	.47	.43	.41	.28	.30	.60	.46	.15	.14	.06	.06
26	.05	.40	.42	.40	.27	.29	.57	.45	.14	.20	.06	.06
27	.07	.35	.41	.47	.40	.56	.58	.45	.12	.13	.06	.06
28	.06	.36	.41	.60	.42	.46	.44	.55	.11	.09	.06	.07
29	.06	.40	.39	.54	--	.42	.48	.49	.10	.08	.06	.06
30	.06	.38	.32	.45	--	.40	.59	.45	.09	.07	.06	.07
31	.08	--	.26	.43	--	.40	--	.44	--	.07	.06	--
Mean	**.09**	**.44**	**.28**	**.37**	**.39**	**.40**	**.41**	**.52**	**.29**	**.09**	**.18**	**.06**
Maximum	**.30**	**.75**	**.66**	**.83**	**.57**	**.75**	**.69**	**.89**	**.53**	**.20**	**.59**	**.10**
Minimum	**.05**	**.08**	**.09**	**.10**	**.27**	**.29**	**.18**	**.43**	**.09**	**.06**	**.06**	**.05**
Water Year		**Mean 0.29**				**Maximum 0.89**					**Minimum 0.05**	

Table 7. Data for wells at the Weldon Spring chemical plant site and vicinity property
[Latitude and longitude in degrees, minutes, and seconds; N, north; W, west; --, no data available]

Site number (figs. 6 and 7)	Well name	Latitude	Longitude	Altitude of land surface (feet)	Depth of well (feet)	Height of measuring point (feet)	Date of well construction
1	MW 2001	38 42 08 N	90 44 01 W	611.75	59.0	613.44	07–26–86
2	MW 2002	38 42 05 N	90 43 59 W	623.83	59.0	625.75	07–22–86
3	MW 2003	38 42 03 N	90 44 01 W	637.07	59.0	638.78	07–21–86
4	MW 2004	38 42 10 N	90 43 49 W	642.83	79.1	644.64	07–28–86
5	MW 2005	38 42 08 N	90 43 52 W	635.69	78.5	637.38	07–28–86
6	MW 2006	38 41 59 N	90 43 29 W	634.17	60.1	635.92	07–21–86
7	MW 2007	38 42 01 N	90 43 42 W	651.93	94.0	653.60	07–25–86
8	MW 2008	38 42 07 N	90 43 35 W	622.71	56.5	624.71	07–25–86
9	MW 2009	38 42 04 N	90 43 37 W	636.31	58.6	638.60	07–16–86
10	MW 2010	38 41 59 N	90 43 32 W	642.90	59.0	644.67	07–21–86
11	MW 2011	38 41 57 N	90 43 33 W	653.22	68.3	655.28	07–18–86
12	MW 2012	38 41 56 N	90 43 27 W	634.84	59.0	636.61	07–17–86
13	MW 2013	38 41 54 N	90 43 28 W	645.38	69.0	647.13	07–16–86
14	MW 2014	38 41 52 N	90 43 24 W	647.58	51.1	649.37	07–14–86
15	MW 2015	38 41 52 N	90 43 43 W	657.72	78.5	659.99	07–30–86
16	MW 2016	38 42 08 N	90 43 42 W	635.71	140.5	637.00	03–11–83
17	MW 2017	38 41 46 N	90 43 26 W	657.86	64.0	659.84	07–15–86
18	MW 2018	38 41 36 N	90 43 52 W	661.69	64.0	663.50	07–16–86
19	MW 2019	38 41 36 N	90 43 52 W	661.50	116	663.24	06–16–86
20	MW 2020	38 41 43 N	90 43 35 W	655.10	119.6	656.77	03–16–83
21	MW 2021	38 42 05 N	90 43 59 W	624.57	111.0	626.19	06–16–88
22	MW 2022	38 42 08 N	90 43 53 W	636.07	126.0	637.24	06–20–88
23	MW 2023	38 42 08 N	90 43 41 W	635.83	90.5	637.29	06–23–88
24	MW 2024	38 42 08 N	90 43 42 W	634.95	150	636.70	--
25	MW 2025	38 42 07 N	90 43 35 W	622.24	107.0	624.03	06–21–88
26	MW 2026	38 41 59 N	90 43 29 W	634.76	118.0	637.22	06–20–88
27	MW 2027	38 41 54 N	90 43 28 W	644.29	122.0	646.83	05–15–88
28	MW 2028	38 41 52 N	90 43 43 W	657.80	131.0	659.74	05–24–88
29	MW 2029	38 42 10 N	90 43 48 W	643.11	101.3	645.28	06–28–88
30	MW 2030	38 41 57 N	90 43 33 W	652.86	59.0	654.63	07–11–89

Table 7. Data for wells at the Weldon Spring chemical plant site and vicinity property—Continued

Site number (figs. 6 and 7)	Well name	Latitude	Longitude	Altitude of land surface (feet)	Depth of well (feet)	Height of measuring point (feet)	Date of well construction
31	MW 2031	38 41 53 N	90 43 38 W	660.60	67.5	662.08	07–21–89
32	MW 2032	38 42 08 N	90 43 41 W	635.81	--	637.48	08–15–89
33	MW 2033	38 41 54 N	90 43 28 W	644.84	46.3	647.51	08–08–89
34	MW 2034	38 41 46 N	90 43 26 W	658.17	59.5	660.83	08–11–89
35	MW 3001	38 41 45 N	90 43 59 W	664.30	75.0	666.45	06–23–88
36	MW 3002	38 41 45 N	90 43 58 W	664.70	147.5	666.73	06–22–88
37	MW 3003	38 41 59 N	90 44 01 W	645.53	89.5	646.96	04–14–88
38	MW 3004	38 41 46 N	90 43 54 W	654.00	21.8	655.52	04–08–83
39	MW 3006	38 41 59 N	90 44 00 W	645.90	135.0	647.13	05–23–88
40	MW 3008	38 41 49 N	90 43 51 W	645.17	101.0	646.37	04–22–83
41	MW 3009	38 41 49 N	90 44 08 W	644.30	99.4	647.26	04–18–83
42	MW 3010	38 41 40 N	90 43 57 W	665.02	90.7	667.01	04–19–83
43	MW 3018	38 41 52 N	90 44 06 W	631.04	29.6	633.15	02–21–83
44	MW 3019	38 41 35 N	90 44 00 W	660.14	83.7	662.03	04–01–88
45	MW 3022	38 41 44 N	90 44 02 W	656.86	51	658.92	07–28–89
46	MW 3023	38 41 59 N	90 44 00 W	645.86	48.0	648.07	08–04–89
47	MW 4001	38 41 53 N	90 44 12 W	621.13	40.0	622.83	12–05–86
48	MW 4002	38 42 08 N	90 44 26 W	635.32	84.7	635.20	04–04–83
49	MW 4003	38 41 34 N	90 44 23 W	669.43	108.1	671.52	03–28–83
50	MW 4004	38 41 37 N	90 44 10 W	651.70	75.0	653.19	03–30–88
51	MW 4005	38 41 40 N	90 44 18 W	656.40	78.6	657.25	04–26–88
52	MW 4006	38 41 53 N	90 44 11 W	621.67	28.5	622.95	04–06–83
53	MW 4007	38 41 53 N	90 44 11 W	621.50	89.6	624.13	05–24–88
54	MW 4008	38 41 52 N	90 44 21 W	635.50	83.0	637.47	03–21–88
55	MW 4009	38 41 57 N	90 44 10 W	624.20	76.8	625.89	04–25–88
56	MW 4010	38 42 04 N	90 44 11 W	629.10	77.1	630.70	03–23–88
57	MW 4011	38 42 07 N	90 44 05 W	626.96	75.8	628.16	03–15–88
58	MW 4012	38 42 17 N	90 44 02 W	615.48	75.5	617.38	05–02–88
59	MW 4013	38 42 16 N	90 43 51 W	606.73	59.5	608.73	05–20–88
60	MW 4014	38 42 16 N	90 43 42 W	607.30	65.0	609.30	07–06–88
61	MW 4015	38 42 10 N	90 43 31 W	617.78	63.2	619.58	06–27–88

Table 7. Data for wells at the Weldon Spring chemical plant site and vicinity property—Continued

Site number (figs. 6 and 7)	Well name	Latitude	Longitude	Altitude of land surface (feet)	Depth of well (feet)	Height of measuring point (feet)	Date of well construction
62	MW 4016	38 42 06 N	90 43 26 W	642.83	83.9	643.91	04–19–88
63	MW 4017	38 42 00 N	90 43 20 W	649.29	84.5	651.75	07–01–88
64	MW 4018	38 41 53 N	90 43 16 W	647.73	74.5	649.93	04–21–88
65	MW 4019	38 41 33 N	90 43 51 W	645.34	59.0	647.34	12–09–86
66	MW 4020	38 41 42 N	90 43 24 W	657.71	77.0	659.17	04–27–88
67	MW 4021	38 41 39 N	90 43 34 W	649.91	71.0	651.91	06–30–88
68	MW 4022	38 41 29 N	90 43 58 W	666.27	89.0	667.98	07–07–88
69	MW 4023	38 41 37 N	90 43 44 W	646.64	53.0	648.53	07–07–88
70	PW 1	38 41 59 N	90 43 33 W	647.20	90.3	650.50	07–11–88
71	PW 2	38 41 42 N	90 43 44 W	657.00	84.5	659.80	07–07–88
72	PW 3	38 42 01 N	90 44 00 W	638.60	82.5	640.80	08–08–88
73	ARMY WELL	38 41 30 N	90 44 41 W	670	235	670.60	06–01–38
74	MWS–01	38 42 10 N	90 44 15 W	595.93	44.6	597.83	01–17–89
	MWV–01	38 42 10 N	90 44 15 W	595.84	17.4	597.84	01–18–89
75	MWD–02	38 42 05 N	90 44 17 W	604.08	26.2	605.88	01–09–89
	MWS–02	38 42 05 N	90 44 17 W	603.93	57.1	605.25	01–10–89
	MWV–02	38 42 05 N	90 44 16 W	603.07	18.1	604.57	01–11–89
76	MWS–03	38 41 53 N	90 44 26 W	633.69	64.6	635.39	12–17–89
77	MWS–04	38 41 52 N	90 44 14 W	622.54	38.3	624.09	01–21–89
78	MWD–05	38 41 19 N	90 44 30 W	599.08	117.2	600.68	11–06–88
	MWS–05	38 41 19 N	90 44 30 W	599.05	64.1	600.60	11–08–88
79	MWD–06	38 42 06 N	90 45 04 W	619.91	131.1	621.56	11–29–88
	MWS–06	38 42 06 N	90 45 04 W	619.77	58.9	621.32	12–03–88
80	MWS–07	38 42 04 N	90 44 47 W	639.36	61.8	641.49	12–14–88
81	MWS–08	38 41 30 N	90 45 19 W	688.91	43.5	690.36	11–04–88
	MWV–08	38 41 30 N	90 45 19 W	688.80	25.7	690.15	11–06–88
82	MWD–09	38 42 10 N	90 45 35 W	634.58	144.1	636.08	11–21–88
	MWS–09	38 42 10 N	90 45 35 W	634.22	48.5	635.37	11–19–88
	MWV–09	38 42 10 N	90 45 35 W	634.49	27.4	635.79	11–18–88
83	MWS–10	38 42 10 N	90 46 00 W	652.53	44.1	654.19	11–08–88
84	MWS–11	38 41 56 N	90 46 01 W	674.80	57.2	676.35	01–06–89

Table 7. Data for wells at the Weldon Spring chemical plant site and vicinity property—Continued

Site number (figs. 6 and 7)	Well name	Latitude	Longitude	Altitude of land surface (feet)	Depth of well (feet)	Height of measuring point (feet)	Date of well construction
85	MWS–12	38 41 51 N	90 45 32 W	655.01	50.2	657.11	01–31–89
86	MWS–13	38 41 43 N	90 45 57 W	690.18	69.5	692.18	12–21–88
	MWV–13	38 41 43 N	90 45 57 W	690.34	43.7	692.39	01–04–89
87	MWS–14	38 41 24 N	90 45 50 W	702.82	43.9	705.07	01–23–89
88	MWD–15	38 42 13 N	90 46 24 W	654.31	134.1	655.76	11–19–88
	MWS–15	38 42 13 N	90 46 24 W	654.72	49.5	656.72	11–21–88
89	MWS–16	38 41 54 N	90 46 36 W	649.69	67.1	651.24	12–19–88
	MWV–16	38 41 54 N	90 46 36 W	649.48	41.7	651.78	01–03–89
90	MWS–17	38 41 36 N	90 46 17 W	657.70	49.5	659.60	12–06–88
	MWV–17	38 41 35 N	90 46 17 W	658.53	19.1	660.28	12–13–88
91	MWD–18	38 41 38 N	90 46 43 W	599.80	131.4	601.55	12–01–88
	MWS–18	38 41 38 N	90 46 43 W	600.21	74.4	601.91	12–03–88
	MWV–18	38 41 39 N	90 46 43 W	599.61	21.4	601.43	12–04–88
92	MWS–19	38 42 18 N	90 46 55 W	646.76	62.2	648.66	01–21–89
93	MWS–20	38 42 08 N	90 46 52 W	667.18	62.0	668.48	01–24–89
94	MWS–21	38 41 40 N	90 44 03 W	641.00	51.2	642.27	05–07–92
95	MWS–22	38 41 56 N	90 45 54 W	661.90	55.9	664.14	10–22–92
	MWV–22	38 41 56 N	90 45 54 W	661.88	38.9	663.80	05–04–92
96	MWS–23	38 41 49 N	90 46 16 W	707.00	71.2	710.33	04–30–92
97	MWS–24	38 41 50 N	90 45 42 W	654.60	53.9	657.23	10–20–92
	MWV–24	38 41 50 N	90 45 42 W	655.00	55.0	657.05	11–01–92
98	MWV–24R	38 42 07 N	90 45 36 W	640	39.0	642.19	04–27–93
99	MWD–105	38 42 30 N	90 43 55 W	573.65	150	575.45	11–21–89
	MWS–105	38 42 30 N	90 43 55 W	573.68	67.3	575.48	11–28–89
100	MWD–106	38 43 06 N	90 44 17 W	530.98	150.2	532.03	12–03–89
	MWS–106	38 43 06 N	90 44 17 W	530.68	50.1	532.93	01–05–90
101	MWS–107	38 42 35 N	90 44 55 W	607.24	87.2	608.99	11–19–89
102	MWS–108	38 42 35 N	90 45 48 W	604.36	87.6	606.56	11–06–89
103	MWD–109	38 43 19 N	90 45 44 W	550.41	141.2	552.31	12–17–89
	MWS–109	38 43 19 N	90 45 44 W	550.32	77.0	552.17	12–19–89
104	MWS–110	38 42 43 N	90 46 41 W	604.83	91.2	607.03	11–16–89

Table 7. Data for wells at the Weldon Spring chemical plant site and vicinity property—Continued

Site number (figs. 6 and 7)	Well name	Latitude	Longitude	Altitude of land surface (feet)	Depth of well (feet)	Height of measuring point (feet)	Date of well construction
105	MWS–111	38 42 27 N	90 47 39 W	620.80	78.9	622.90	11–14–89
106	MWGS 01	38 41 34 N	90 43 49 W	647.68	320	649.99	09–27–88
107	MWGS 02	38 41 34 N	90 43 49 W	647.07	661.5	649.39	08–22–88
108	MWGS 03	38 44 13 N	90 44 33 W	485	98.5	486.77	09–30–88
109	MWGS 04	38 44 13 N	90 44 33 W	484.69	310	487.11	09–29–88
110	MWGS 05	38 44 13 N	90 44 33 W	485.31	638.0	487.51	09–23–88
111	USGS WELL 1	38 43 14 N	90 44 33 W	589	107	591	02–17–86
112	USGS WELL 2	38 42 52 N	90 44 35 W	554	50	555	01–28–86
113	USGS WELL 2A	38 42 52 N	90 44 34 W	559	107	560	02–26–86
114	USGS WELL 3	38 42 54 N	90 44 53 W	585	80	586	02–21–86
115	USGS WELL 4	38 42 23 N	90 44 59 W	601	107	602	02–24–86
116	USGS WELL 5	38 43 10 N	90 43 57 W	580	87	581	02–08–86
117	USGS WELL 6	38 42 48 N	90 44 08 W	590	107	591	02–27–86
118	USGS WELL 7	38 42 28 N	90 44 11 W	570	107	571	02–27–86
119	USGS WELL 8	38 42 30 N	90 43 36 W	625	107	626	02–17–86
120	USGS WELL 9	38 42 23 N	90 44 25 W	590	90	591	02–13–86

Table 8. Water-level measurements for wells at the Weldon Spring chemical plant site and vicinity property, November 1989 through October 1993

[Water levels are in feet below measuring point; --, no data available; F, flowing]

Site number (figs. 6 and 7)	Well name	11-01-89	12-20-89	03-28-90	05-30-90	11-06-90	01-28-91	04-08-91	07-23-91
1	MW 2001	25.47	25.49	24.99	24.28	25.14	24.46	24.67	24.92
2	MW 2002	33.10	33.19	32.87	31.54	32.83	31.75	31.85	31.97
3	MW 2003	41.04	41.00	40.88	39.50	41.08	40.27	40.62	40.42
4	MW 2004	61.14	61.22	61.10	61.08	61.30	61.08	61.02	61.08
5	MW 2005	49.90	49.92	49.81	49.62	49.92	49.54	49.50	49.50
6	MW 2006	36.62	--	36.12	35.44	36.41	35.69	35.66	35.84
7	MW 2007	60.89	--	61.02	60.94	61.08	60.85	60.85	60.70
8	MW 2008	36.36	35.43	36.54	36.30	36.55	36.35	36.15	36.13
9	MW 2009	42.60	43.00	43.36	43.49	43.49	43.40	42.23	41.73
10	MW 2010	44.87	--	44.77	44.00	44.57	44.21	44.23	44.20
11	MW 2011	54.55	--	54.60	54.40	54.56	54.46	54.54	54.47
12	MW 2012	33.01	--	31.20	28.81	31.80	30.53	30.64	31.34
13	MW 2013	42.62	43.16	42.26	40.16	41.90	40.32	40.54	40.86
14	MW 2014	45.79	45.81	45.77	45.34	45.82	45.16	44.98	45.19
15	MW 2015	56.28	--	56.07	56.38	56.53	55.98	56.02	56.07
16	MW 2016	--	--	--	--	--	--	--	--
17	MW 2017	54.94	55.05	55.15	55.00	55.44	54.85	54.54	54.64
18	MW 2018	49.35	--	49.50	49.60	49.87	49.16	48.89	48.80
19	MW 2019	72.84	--	73.33	72.17	72.56	71.87	71.44	71.46
20	MW 2020	47.28	--	46.37	46.28	47.29	46.24	45.90	46.60
21	MW 2021	37.47	37.48	37.15	36.28	37.28	36.29	36.46	36.75
22	MW 2022	51.93	51.98	51.80	51.42	51.96	51.34	51.35	51.56
23	MW 2023	54.75	54.85	54.78	54.81	55.04	54.68	54.60	54.63
24	MW 2024	68.54	68.78	68.58	67.68	68.35	67.36	67.27	67.51
25	MW 2025	40.67	40.78	40.64	40.49	40.89	40.46	40.29	40.58
26	MW 2026	46.32	--	46.26	45.93	46.43	45.82	45.72	45.96
27	MW 2027	54.92	54.98	54.93	54.46	55.00	54.38	54.24	54.46
28	MW 2028	64.45	--	64.44	64.22	64.64	64.06	63.98	64.16
29	MW 2029	62.84	62.96	62.87	62.84	63.07	62.78	62.63	62.79

Table 8. Water-level measurements for wells at the Weldon Spring chemical plant site and vicinity property, November 1989 through October 1993—Continued

Site number (figs. 6 and 7)	Well name	11–01–89	12–20–89	03–28–90	05–30–90	11–06–90	01–28–91	04–08–91	07–23–91
30	MW 2030	53.83	--	53.86	53.65	53.83	53.88	53.80	53.65
31	MW 2031	--	--	--	59.27	--	--	--	--
32	MW 2032	54.28	--	54.07	54.24	54.29	54.04	54.23	54.24
33	MW 2033	--	--	41.80	39.52	41.81	40.31	40.71	41.14
34	MW 2034	--	--	55.01	55.12	55.73	55.16	54.84	55.03
35	MW 3001	54.44	54.48	54.13	54.26	54.06	53.20	52.87	52.67
36	MW 3002	69.27	71.90	71.66	70.73	71.16	70.28	69.98	70.14
37	MW 3003	47.95	47.98	47.64	47.32	47.78	47.07	47.10	47.30
38	MW 3004	21.03	20.40	19.83	19.28	18.16	17.49	17.30	17.18
39	MW 3006	55.95	55.90	55.49	55.45	55.18	52.82	54.26	54.28
40	MW 3008	36.73	37.28	37.46	37.63	34.30	33.99	33.91	33.60
41	MW 3009	41.30	41.48	40.54	39.00	40.37	39.36	38.82	38.37
42	MW 3010	55.28	55.41	55.15	55.16	55.14	54.33	54.04	--
43	MW 3018	23.47	23.59	22.72	22.34	22.11	20.89	20.41	20.32
44	MW 3019	56.87	57.26	57.26	57.80	56.93	56.20	55.71	55.75
45	MW 3022	--	--	--	46.43	46.33	45.89	45.40	45.07
46	MW 3023	45.51	--	45.30	--	45.54	44.27	45.23	45.19
47	MW 4001	21.15	22.24	21.20	19.22	20.88	19.32	19.42	20.03
48	MW 4002	66.31	66.37	60.91	47.34	--	53.14	62.20	66.66
49	MW 4003	60.85	61.63	62.32	60.10	60.34	58.85	58.50	58.64
50	MW 4004	42.64	42.83	42.72	41.72	42.09	41.50	41.48	41.46
51	MW 4005	48.90	49.24	49.55	48.55	48.84	48.17	48.00	48.16
52	MW 4006	20.80	20.77	19.99	19.33	20.58	19.22	19.17	19.63
53	MW 4007	29.00	29.00	29.24	27.48	28.71	27.42	27.83	28.08
54	MW 4008	40.74	40.79	41.00	39.86	40.83	39.90	39.98	40.15
55	MW 4009	32.03	32.13	32.29	30.65	31.78	30.57	31.03	31.28
56	MW 4010	42.26	42.20	41.23	39.57	41.93	40.17	41.09	41.57
57	MW 4011	38.68	38.63	38.66	36.90	38.26	37.29	37.85	38.01
58	MW 4012	68.38	46.74	48.23	45.85	46.56	45.80	45.88	46.32
59	MW 4013	48.20	48.22	48.29	48.21	48.13	48.23	48.19	48.22

Table 8. Water-level measurements for wells at the Weldon Spring chemical plant site and vicinity property, November 1989 through October 1993—Continued

Site number (figs. 6 and 7)	Well name	11–01–89	12–20–89	03–28–90	05–30–90	11–06–90	01–28–91	04–08–91	07–23–91
60	MW 4014	47.82	47.88	47.82	47.57	47.76	47.74	49.22	47.83
61	MW 4015	38.53	38.59	38.31	37.31	38.72	37.90	37.61	38.26
62	MW 4016	54.78	54.88	54.86	54.70	55.15	54.82	54.63	54.63
63	MW 4017	58.60	58.63	58.57	58.69	58.91	58.44	58.28	58.46
64	MW 4018	52.79	52.76	52.64	52.18	52.61	51.86	51.34	51.85
65	MW 4019	35.81	35.87	36.05	36.12	36.13	35.80	35.83	35.82
66	MW 4020	54.65	54.79	55.06	54.49	54.73	53.33	54.07	53.78
67	MW 4021	44.09	44.07	44.63	44.07	44.32	43.76	44.08	44.10
68	MW 4022	75.89	75.62	--	75.75	74.66	74.41	73.69	72.95
69	MW 4023	36.12	36.46	37.19	36.56	36.43	35.16	34.37	34.22
70	PW 1	48.10	--	50.65	--	50.75	50.39	50.42	50.40
71	PW 2	42.12	--	48.21	--	48.33	47.65	47.33	--
72	PW 3	--	--	41.77	--	42.07	--	41.48	--
73	ARMY WELL	64.70	66.34	67.53	62.45	64.10	61.69	59.87	58.69
74	MWS–01	16.38	16.66	15.16	12.85	15.49	14.44	15.51	16.44
	MWV–01	13.77	15.56	10.48	10.05	12.49	14.27	15.83	Dry
75	MWD–02	22.57	22.38	21.99	18.79	21.97	19.52	20.66	21.82
	MWS–02	23.40	22.70	22.45	18.18	22.59	19.53	21.26	22.83
	MWV–02	16.60	Dry	14.80	14.70	16.68	16.70	17.20	17.25
76	MWS–03	40.57	40.37	40.90	40.47	40.84	40.49	40.44	40.64
77	MWS–04	21.78	21.74	21.26	18.12	21.78	20.44	20.59	21.27
78	MWD–05	22.65	23.08	23.13	21.18	22.14	21.20	20.60	20.99
	MWS–05	35.22	35.25	34.77	33.16	34.96	34.28	34.59	34.80
79	MWD–06	20.14	20.32	20.97	20.13	20.72	20.39	19.86	19.79
	MWS–06	20.02	20.23	20.89	20.15	20.76	20.55	20.11	19.95
80	MWS–07	44.53	44.65	45.15	44.60	45.07	45.01	44.68	44.33
81	MWS–08	37.68	38.57	39.45	34.17	36.98	35.09	34.29	35.49
	MWV–08	Dry	Dry	Dry	19.42	Dry	Dry	23.69	Dry
82	MWD–09	17.68	17.67	17.99	17.61	18.04	17.81	17.70	17.88
	MWS–09	16.61	16.69	16.56	15.92	16.69	16.20	15.83	16.50
	MWV–09	18.27	18.50	18.20	17.46	18.30	17.74	17.42	18.09

Table 8. Water-level measurements for wells at the Weldon Spring chemical plant site and vicinity property, November 1989 through October 1993—Continued

Site number (figs. 6 and 7)	Well name	11–01–89	12–20–89	03–28–90	05–30–90	11–06–90	01–28–91	04–08–91	07–23–91
83	MWS–10	24.71	24.63	24.58	23.77	25.34	26.25	26.44	27.08
84	MWS–11	28.89	29.26	29.80	29.15	29.61	29.37	28.78	28.79
85	MWS–12	21.69	21.86	21.80	21.03	21.84	21.44	21.15	21.20
86	MWS–13	41.29	41.73	42.36	41.94	42.31	42.10	41.47	41.17
	MWV–13	41.32	Dry	Dry	Dry	Dry	Dry	41.39	41.54
87	MWS–14	38.87	39.26	40.02	38.09	39.53	37.61	37.20	36.99
88	MWD–15	32.76	33.00	33.30	30.63	32.83	31.25	31.03	32.68
	MWS–15	33.05	33.56	33.90	30.43	33.09	30.93	30.58	32.97
89	MWS–16	25.06	25.92	26.93	23.27	25.14	22.97	21.28	22.48
	MWV–16	24.89	25.85	26.70	22.91	24.90	22.67	20.91	22.20
90	MWS–17	24.25	24.33	23.40	20.32	23.34	20.99	21.33	22.77
	MWV–17	Dry	--	Dry	13.00	Dry	Dry	Dry	Dry
91	MWD–18	24.39	23.17	25.72	25.74	24.58	25.69	25.85	25.43
	MWS–18	60.21	68.77	64.74	60.37	67.80	63.52	58.30	70.2
	MWV–18	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
92	MWS–19	26.14	26.60	25.88	22.44	25.86	23.38	21.94	24.35
93	MWS–20	37.76	38.30	39.02	37.64	38.40	37.72	37.08	37.18
94	MWS–21	--	--	--	--	--	--	--	--
95	MWS–22	--	--	--	--	--	--	--	--
	MWV–22	--	--	--	--	--	--	--	--
96	MWS–23	--	--	--	--	--	--	--	--
97	MWS–24	--	--	--	--	--	--	--	--
	MWV–24	--	--	--	--	--	--	--	--
98	MWV–24R	--	--	--	--	--	--	--	--
99	MWD–105	--	--	--	--	--	--	--	--
	MWS–105	--	--	20.83	19.29	20.75	20.18	19.95	20.34
100	MWD–106	--	--	F	F	F	F	F	F
	MWS–106	--	--	2.54	1.09	3.05	--	1.95	3.11
101	MWS–107	--	--	--	26.28	26.84	26.06	25.37	25.45
102	MWS–108	--	--	--	--	--	--	--	--

Table 8. Water-level measurements for wells at the Weldon Spring chemical plant site and vicinity property, November 1989 through October 1993—Continued

Site number (figs. 6 and 7)	Well name	11–01–89	12–20–89	03–28–90	05–30–90	11–06–90	01–28–91	04–08–91	07–23–91
103	MWD–109	--	--	--	--	8.75	7.63	7.42	8.20
	MWS–109	--	--	--	--	8.87	8.44	8.39	8.98
104	MWS–110	--	--	--	58.60	59.44	59.26	59.39	60.28
105	MWS–111	--	--	--	--	--	--	--	--
106	MWGS 01	144.4	144.78	143.5	142.7	140.5	141.1	140.6	138.8
107	MWGS 02	216.7	216.30	217.3	218.55	217.7	218.1	217.1	216.2
108	MWGS 03	4.52	[a].00	1.46	F	2.08	.00	.00	.3
109	MWGS 04	.00	4.57	F	F	.00	--	.00	.00
110	MWGS 05	87.45	89.05	94.37	88.58	87.15	87.67	85.50	91.8
111	USGS WELL 1	48.73	48.82	48.90	48.79	48.29	47.76	47.45	47.29
112	USGS WELL 2	5.32	5.43	5.07	3.82	5.21	3.89	3.85	4.76
113	USGS WELL 2A	10.05	10.23	9.42	7.86	9.92	8.27	8.24	9.43
114	USGS WELL 3	23.24	23.30	23.43	23.29	23.51	23.20	22.98	22.95
115	USGS WELL 4	15.92	16.28	16.69	14.93	16.57	15.21	14.27	14.92
116	USGS WELL 5	44.12	44.40	45.00	44.41	43.77	42.26	41.63	41.63
117	USGS WELL 6	58.13	58.28	58.50	57.66	58.01	56.60	56.37	57.13
118	USGS WELL 7	26.37	26.10	26.48	26.06	26.30	26.28	26.19	25.68
119	USGS WELL 8	54.85	54.65	55.03	54.60	54.73	54.52	54.38	54.57
120	USGS WELL 9	19.02	20.78	16.86	14.37	17.05	14.82	15.37	16.39

Table 8. Water-level measurements for wells at the Weldon Spring chemical plant site and vicinity property, November 1989 through October 1993—Continued

Site number (figs. 6 and 7)	Well name	11–14–91	03–03–92	06–09–92	09–23–92	12–16–92	03–22–93	06–15–93	10–07–93
1	MW 2001	25.00	24.69	24.96	25.37	24.37	24.07	24.49	24.36
2	MW 2002	31.65	32.00	31.81	32.85	32.38	31.22	31.40	31.02
3	MW 2003	40.78	40.63	40.59	40.98	40.62	40.06	40.18	39.70
4	MW 2004	61.04	61.07	61.05	61.31	61.13	60.89	60.48	60.96
5	MW 2005	49.66	49.33	49.52	49.87	49.71	49.37	49.41	50.84
6	MW 2006	35.98	35.79	35.68	36.18	35.91	35.25	35.32	35.05
7	MW 2007	60.80	61.18	60.77	60.94	60.90	60.64	60.71	60.67
8	MW 2008	36.32	36.17	36.02	36.38	36.34	35.87	35.80	35.73
9	MW 2009	42.60	42.16	41.32	42.07	42.49	41.55	41.05	40.99
10	MW 2010	44.66	44.34	44.10	44.60	--	--	43.79	43.65
11	MW 2011	54.53	54.48	54.41	54.51	--	54.30	54.32	54.27
12	MW 2012	31.31	30.62	30.80	31.18	--	29.49	29.89	29.48
13	MW 2013	41.56	40.63	40.96	41.9	41.37	39.41	39.68	38.94
14	MW 2014	45.41	45.11	44.81	45.56	45.30	44.59	44.37	44.33
15	MW 2015	55.96	56.13	56.11	56.45	56.00	55.82	56.11	55.97
16	MW 2016	--	--	--	--	--	--	--	--
17	MW 2017	54.84	54.66	54.10	54.96	54.84	54.30	53.83	53.81
18	MW 2018	48.67	48.63	48.23	48.48	48.20	47.77	47.86	47.71
19	MW 2019	71.76	71.40	70.95	71.66	71.42	70.82	70.29	70.04
20	MW 2020	--	46.06	45.91	47.01	45.98	45.48	45.71	--
21	MW 2021	36.83	36.58	36.58	37.28	36.69	35.93	36.11	35.85
22	MW 2022	51.62	51.54	51.57	51.95	51.64	51.19	51.28	51.19
23	MW 2023	56.20	54.64	54.58	55.00	54.94	54.66	54.65	54.57
24	MW 2024	67.68	67.50	67.27	67.80	67.52	66.84	66.80	66.73
25	MW 2025	--	40.48	40.43	40.79	40.52	40.17	40.18	40.19
26	MW 2026	46.12	45.96	45.79	46.28	46.07	45.64	45.55	45.51
27	MW 2027	54.54	54.42	54.24	54.83	54.60	54.15	54.00	53.95
28	MW 2028	64.22	64.22	64.08	64.53	64.20	63.89	63.84	63.76
29	MW 2029	62.62	62.77	62.72	63.05	62.80	62.56	62.65	64.97
30	MW 2030	53.80	53.72	53.68	53.75	--	53.60	53.56	53.52

Table 8. Water-level measurements for wells at the Weldon Spring chemical plant site and vicinity property, November 1989 through October 1993—Continued

Site number (figs. 6 and 7)	Well name	11–14–91	03–03–92	06–09–92	09–23–92	12–16–92	03–22–93	06–15–93	10–07–93
31	MW 2031	--	--	--	--	--	--	--	--
32	MW 2032	54.22	54.24	54.25	54.28	54.27	54.21	54.21	54.23
33	MW 2033	41.55	40.75	40.95	41.85	41.36	39.56	40.00	39.28
34	MW 2034	55.26	55.05	54.50	55.30	55.12	54.70	54.18	54.14
35	MW 3001	52.44	52.50	--	--	--	--	--	--
36	MW 3002	70.34	70.03	--	--	--	--	--	--
37	MW 3003	47.17	47.16	47.20	47.70	47.38	46.84	47.07	46.79
38	MW 3004	17.21	17.03	17.06	17.27	17.29	17.17	16.99	16.54
39	MW 3006	54.29	53.91	54.09	54.60	54.06	53.13	53.27	52.90
40	MW 3008	33.67	33.67	33.57	33.56	33.65	33.59	33.65	33.69
41	MW 3009	38.36	38.30	37.80	39.7	38.56	37.59	37.79	37.77
42	MW 3010	--	--	--	--	--	--	--	--
43	MW 3018	20.30	20.11	19.67	20.16	20.00	19.45	20.17	20.43
44	MW 3019	55.51	55.51	55.19	55.81	55.29	54.63	54.46	55.31
45	MW 3022	--	--	--	--	--	--	--	--
46	MW 3023	45.20	45.23	45.27	45.31	45.28	45.10	45.20	45.15
47	MW 4001	20.43	19.35	19.43	20.42	19.98	18.22	18.86	18.90
48	MW 4002	66.32	56.24	66.29	66.33	52.55	47.30	56.45	52.60
49	MW 4003	59.68	58.67	57.87	60.10	60.05	57.56	56.56	56.43
50	MW 4004	41.50	41.10	40.93	41.62	41.35	40.44	40.20	40.26
51	MW 4005	48.28	47.99	47.49	48.64	48.55	47.21	46.49	46.47
52	MW 4006	20.03	19.16	19.00	20.04	19.89	18.30	18.50	18.56
53	MW 4007	28.25	27.54	27.76	28.49	28.11	26.55	26.83	26.66
54	MW 4008	40.36	40.11	40.01	40.80	40.58	39.27	39.18	39.06
55	MW 4009	31.45	30.85	31.06	31.77	31.30	29.85	30.10	30.07
56	MW 4010	41.79	40.70	41.43	42.28	41.21	39.20	40.05	39.71
57	MW 4011	38.23	37.83	37.94	38.63	37.91	37.05	--	32.06
58	MW 4012	46.34	46.10	50.18	46.84	46.38	45.62	45.89	45.70
59	MW 4013	48.74	48.28	48.17	48.27	48.25	48.14	48.14	48.13
60	MW 4014	47.95	47.77	47.68	47.85	47.86	47.68	47.69	47.71
61	MW 4015	38.48	37.65	37.94	38.56	38.25	36.95	37.50	37.73

Table 8. Water-level measurements for wells at the Weldon Spring chemical plant site and vicinity property, November 1989 through October 1993—Continued

Site number (figs. 6 and 7)	Well name	11–14–91	03–03–92	06–09–92	09–23–92	12–16–92	03–22–93	06–15–93	10–07–93
62	MW 4016	54.73	54.82	54.68	55.00	54.93	54.12	54.35	55.18
63	MW 4017	58.43	58.50	58.42	58.61	58.65	58.10	58.33	58.20
64	MW 4018	52.24	41.80	51.50	52.55	52.39	51.21	51.02	51.02
65	MW 4019	35.55	35.65	35.34	35.58	35.30	34.94	34.89	34.54
66	MW 4020	54.13	53.66	53.28	54.26	54.36	53.44	52.64	52.89
67	MW 4021	44.03	44.22	43.95	44.43	44.37	43.92	43.82	43.72
68	MW 4022	73.58	73.25	74.22	72.69	73.10	72.92	70.86	70.23
69	MW 4023	34.36	33.88	33.23	33.43	33.59	33.16	33.06	32.92
70	PW 1	--	50.43	--	--	--	--	--	--
71	PW 2	--	--	--	--	--	--	--	--
72	PW 3	--	41.60	--	--	--	--	--	--
73	ARMY WELL	60.28	58.20	57.80	62.88	62.92	59.1	56.90	56.64
74	MWS–01	16.45	15.29	16.42	16.51	13.98	12.81	14.52	14.34
	MWV–01	Dry	14.19	Dry	14.54	14.04	10.49	14.07	14.17
75	MWD–02	21.79	20.14	21.74	22.32	21.30	18.21	19.97	19.04
	MWV–02	Dry	17.34	17.10	17.14	16.38	14.95	17.19	15.98
	MWS–02	22.83	20.29	22.77	23.30	21.04	17.81	19.93	19.08
76	MWS–03	40.45	40.46	40.48	40.96	40.56	40.10	39.95	39.90
77	MWS–04	21.39	20.53	20.73	22.02	21.64	19.89	20.49	20.49
78	MWD–05	21.58	26.77	24.30	22.52	22.21	20.84	19.59	19.58
	MWS–05	34.82	34.36	34.74	35.33	33.58	34.02	34.88	35.14
79	MWD–06	20.39	20.00	19.47	20.39	20.76	19.69	18.73	18.30
	MWS–06	20.49	19.98	19.53	20.51	--	19.79	18.98	18.57
80	MWS–07	44.75	44.66	44.14	46.52	44.87	44.42	43.50	43.12
81	MWS–08	37.33	35.40	35.47	37.00	38.06	34.21	34.32	34.31
	MWV–08	25.53	Dry	Dry	Dry	Dry	Dry	Dry	Dry
82	MWD–09	18.32	18.08	17.89	18.75	18.68	18.07	17.58	17.33
	MWS–09	16.87	16.39	16.25	17.40	17.12	16.32	15.92	15.72
82	MWV–09	18.42	17.77	17.75	18.86	18.60	17.80	17.64	17.59
83	MWS–10	27.85	27.78	26.87	27.52	27.40	25.54	24.97	24.46
84	MWS–11	29.70	29.57	28.89	34.92	30.24	28.94	27.64	27.28

Table 8. Water-level measurements for wells at the Weldon Spring chemical plant site and vicinity property, November 1989 through October 1993—Continued

Site number (figs. 6 and 7)	Well name	11–14–91	03–03–92	06–09–92	09–23–92	12–16–92	03–22–93	06–15–93	10–07–93
85	MWS–12	21.73	21.29	21.06	21.92	22.00	21.25	20.84	20.52
86	MWS–13	42.13	41.87	41.09	42.15	42.60	40.70	39.82	39.37
	MWV–13	42.50	42.30	40.70	42.07	42.17	41.03	40.50	40.40
87	MWS–14	38.58	38.46	37.98	38.82	38.15	37.32	37.25	37.14
88	MWD–15	33.77	33.00	32.72	34.28	34.01	28.73	29.27	29.26
	MWS–15	34.13	33.53	32.80	34.73	34.78	29.14	18.12	28.48
89	MWS–16	25.64	24.21	21.65	25.50	25.80	20.51	17.02	17.49
	MWV–16	25.45	23.94	21.34	25.33	25.60	19.31	16.38	16.95
90	MWS–17	23.06	21.85	21.96	23.30	21.90	20.31	21.17	20.48
	MWV–17	Dry	Dry	Dry	Dry	15.42	14.45	Dry	Dry
91	MWD–18	26.09	26.48	25.41	25.84	25.90	27.00	25.50	26.98
	MWS–18	64.33	73.38	72.75	70.8	70.50	72.73	70.80	69.09
	MWV–18	21.05	Dry	Dry	Dry	18.00	20.26	Dry	Dry
92	MWS–19	25.68	23.06	23.02	26.61	25.48	21.96	20.88	20.34
93	MWS–20	38.56	38.11	37.13	38.6	39.03	37.14	35.53	35.32
94	MWS–21	--	--	--	27.93	28.04	27.56	27.80	28.10
95	MWS–22	--	--	--	--	--	17.47	16.15	15.99
	MWV–22	--	--	--	18.22	--	17.12	16.47	15.67
96	MWS–23	--	--	--	--	--	54.43	54.62	54.66
97	MWS–24	--	--	--	--	24.48	23.65	23.47	23.23
	MWV–24	--	--	--	--	--	23.92	--	--
98	MWV–24R	--	--	--	--	--	--	21.44	21.29
99	MWD–105	--	--	--	--	--	--	--	--
	MWS–105	20.50	20.14	20.13	20.85	20.43	19.76	19.98	20.39
100	MWD–106	F	F	2.97	F	.01	.01	F	F
	MWS–106	3.16	2.08	[a].00	4.14	2.33	1.24	1.82	1.90
101	MWS–107	26.33	25.56	24.92	26.35	26.17	24.78	24.44	23.75
102	MWS–108	--	--	--	--	21.53	20.20	20.64	20.02
103	MWD–109	8.60	7.88	7.88	--	8.36	6.63	--	5.74
	MWS–109	9.23	8.47	8.45	--	8.46	7.00	6.96	6.08
104	MWS–110	60.17	60.56	60.42	--	59.03	58.49	10.14	58.40

Table 8. Water-level measurements for wells at the Weldon Spring chemical plant site and vicinity property, November 1989 through October 1993—Continued

Site number (figs. 6 and 7)	Well name	11–14–91	03–03–92	06–09–92	09–23–92	12–16–92	03–22–93	06–15–93	10–07–93
105	MWS–111	--	--	--	--	--	--	2.17	0.16
106	MWGS 01	139.8	139.8	138.4	138.6	140.3	139.1	139.4	137.6
107	MWGS 02	220.95	221.3	218.8	219.7	221.8	218.2	221.8	219.0
108	MWGS 03	.6	.01	[a].00	2.24	.01	F	F	F
109	MWGS 04	[a].00	.01	F	F	F	F	F	F
110	MWGS 05	95.73	94.93	92.55	93.49	93.06	91.94	94.25	99.82
111	USGS WELL 1	47.40	47.37	47.06	47.66	47.77	47.08	46.60	46.03
112	USGS WELL 2	4.84	3.82	4.19	5.52	4.56	3.51	3.44	3.12
113	USGS WELL 2A	9.71	8.19	8.95	9.94	8.64	--	7.68	7.27
114	USGS WELL 3	23.18	23.02	22.77	23.29	23.43	24.08	22.84	22.47
115	USGS WELL 4	16.07	14.88	14.28	16.20	16.24	14.19	13.35	12.58
116	USGS WELL 5	42.51	43.54	42.73	44.07	43.70	41.47	40.75	40.25
117	USGS WELL 6	57.82	57.72	56.82	57.98	58.23	54.95	55.57	55.76
118	USGS WELL 7	26.17	26.30	26.48	26.36	26.36	26.47	26.49	26.55
119	USGS WELL 8	54.52	54.59	54.27	54.95	54.65	54.33	54.30	54.17
120	USGS WELL 9	16.62	15.19	16.97	18.07	15.52	14.27	14.79	14.42

[a] Water level of 0.00 represents water level at top of casing, but not flowing.