



## Anderson Regional Joint Water System, Hartwell Lake Filter Plant

Anderson SC PWSID #SC0420011

### **2005 Annual Water-Quality Report**

Developed March 01, 2006

Anderson Regional Joint Water System (ARJWS), Hartwell Lake Filter Plant is committed to providing residents with a safe and reliable supply of high-quality drinking water. We test our water using sophisticated equipment and advanced procedures. Your water meets state and federal standards for both appearance and safety. This annual "Consumer Confidence Report," required by the Safe Drinking Water Act (SDWA), tells you where your water comes from, what our tests show about it, and other things you should know about drinking water.

**Anderson Regional Joint Water System, Hartwell Lake Filter Plant's drinking water meets or surpasses all federal and state drinking water standards.**

#### Water Source

Anderson Regional Joint Water System, Hartwell Lake Filter Plant is supplied by surface water from the U.S. Army Corps of Engineers' Hartwell Lake Reservoir, lying along the border of Upstate South Carolina and Georgia. The plant operates 24 hours per day, every day of the year. During 2005, the plant treated just over 6.5 billion gallons of water. The plant is operated by highly trained, state certified operators.

#### **An Explanation of the Water-Quality Data Table**

The table shows the results of our water-quality analyses. This report is based upon tests conducted in the year 2005 by Anderson Regional Joint Water System's Hartwell Lake Filter Plant. In addition to continuous monitoring of some water quality parameters, the operators perform over 200 laboratory tests daily. The data presented in this report is from the most recent testing done in accordance with State and Federal regulations. Every regulated contaminant that we detected in the water, even in the minutest traces, is listed here. The table contains the name of each substance, the highest level allowed by regulation (MCL), the ideal goals for public health, the amount detected, the usual sources of such contamination, footnotes explaining our findings, and a key to units of measurement. Definitions of MCL and MCLG are important.

Terms used in the Water-Quality Table and in other parts of this report are defined here.

**Maximum Contaminant Level or (MCL):** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

**Maximum Contaminant Level Goal or (MCLG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

**Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

**Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.

**Maximum Residual Disinfectant Level or (MRDL):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial Contaminants.

**Maximum Residual Disinfectant Level Goal or (MRDLG):** The level of a drinking water disinfectant below which there is not known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

The data presented in this report is from the most recent testing done in accordance with regulations.

**☐ Informe contiene informacion importante sobre la calidad del agua en su comunidad. Traduzcalo o hable con alguien que lo entienda bien.**

**Key To Table**

AL = Action Level	
MCL = Maximum Contaminant Level	pci/l = picocuries per liter (a measure of radioactivity)
MCLG = Maximum Contaminant Level Goal	ppm - parts per million, or milligrams per liter (mg/l) (this compares to one penny in \$10,000)
MFL = Million fibers per liter	ppb - parts per billion, or micrograms per liter (µg/l) (this compares to one penny in \$10,000,000)
mrem/year = millirems per year-- (a measure of radiation absorbed by the body)	ppt = parts per trillion, or nanograms per liter
MRDL = Maximum Residual Disinfectant Level	ppq = parts per quadrillion, or picograms per liter
MRDLG = Maximum Residual Disinfectant Level Goal	RAA = Running Annual Average
NTU = Nephelometric Turbidity Units	TT = Treatment Technique

**SECONDARY STANDARDS:** These tests indicate results that may affect the appearance, odors, and tastes in the drinking water.

<b>Constituent</b>	<b>Annual Average</b>	<b>MCL</b>
pH	7.2 (Units)	6.5-8.5 units
Alkalinity	10.45 mg/L	N/A
Chlorine	1.35 mg/L	4.0 mg/L
Hardness	3.40 mg/L	N/A
Iron	<0.010 mg/L	0.30 mg/L
Manganese	<0.005 mg/L	0.05 mg/L
Sodium	8.4 mg/L	N/A
Sulfate	7.0 mg/L	250 mg/L

**SOURCE WATER ASSESSMENT AND PROTECTION PLANS**

Source Water Assessment and Protection Plans (SWAP) were completed for all public water systems in South Carolina in May, 2003. SWAPs, among other things, identify potential sources of contamination to drinking water supplies. The SC Department of Health and Environmental Control has completed the plans for all SC public water systems. A copy of this assessment report can be obtained by contacting the Bureau of Water in Columbia, South Carolina at (803)898-4300 or on the web at <http://www.scdhec.net/water>.

**CORRECTIONS TO OUR 2004 CONSUMER CONFIDENCE REPORT**

Reported incorrectly were the lead and copper results. The following results are the correct numbers.

Lead	ND (non detect)
Copper	0.1060 ppm

## Table of Detected Contaminants

<b>Contaminant</b>	<b>Date Tested</b>	<b>Unit</b>	<b>MCL</b>	<b>MCLG</b>	<b>Average or Level*</b>	<b>Range</b>	<b>Major Sources</b>	<b>Violation</b>
<b>Microbiological Contaminants</b>								
Total Coliform Bacteria	2005	0	0	0			Coliforms are bacteria that are naturally present in the environment & are used as an indicator that other, potentially-harmful, bacteria may be present. If coliforms were found in more samples than allowed & this was a warning of potential problems.	NO
Fecal Coliform and <i>E. coli</i>	2005	0	0	0			Fecal coliforms & <i>E. coli</i> are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely-compromised immune systems.	NO
Lead Copper	Jun.-Sep., 2004 Jun.-Sep., 2004		90 <sup>th</sup> Percentile 90 <sup>th</sup> Percentile		ND ppb 0.1060 ppm			
Turbidity	2005	NTU	0.5	<.10	0.06	0.04--.18	Soil Runoff	NO
<b>Volatile Organic Contaminants</b>								
TTHMs (Total Trihalomethanes)	2005	ppb	80	0	56	.023-.095 mg/L	By-product of drinking water chlorination.	NO

HAA (Haloacetic Acids)	2005	ppb	60	0	40	.013-.053 mg/L	Naturally present in the environment.	NO
Chlorine	2005	ppm			RAA = 1.35	.9-1.7	Water additives used to control microbes.	NO
<b>Radioactive Contaminants</b>								
Combined Radium	2001	pCi/l	5	0	ND		Erosion of natural deposits	NO

**Water-Quality Table Footnote**

As you can see from the above table, our system had no violations. The above table shows only the contaminants that had detections. Many other regulated and unregulated contaminants were tested for but no detectable levels were found in the drinking water. We are pleased to report that your drinking water meets or exceeds all Federal and State requirements.

<b>TOC TEST RESULTS 2005</b>						
Contaminant	Violation Y/N	Level <u>Detected</u> % removal required	Range	Sample Frequency	MCL	Likely Source of Contamination
Total Organic Carbon	N	37.81 % <u>removal</u> 35% required	1.0 - 1.34 mg/L removal	monthly	TT Step 1	Naturally present in the environment

## **Contaminants not detected**

We were monitored for four (4) consecutive quarters during calendar year 2001 for the parameters required of the Unregulated Contaminants Monitoring Regulations (UCMR), and there were no detections found.

The following is a list of contaminants that were tested for but not detected in the drinking water:

Arsenic, Cadmium, Chromium, Cyanide(total), Mercury, Nickel, Nitrate, Nitrite, Selenium, Gross Alpha(Radioactive), Hexachlorocyclopentadiene, Propachlor, Hexachlorobenzene, Lindane, Heptachlor, Aldrin, Alachlor, Heptachlor Epoxide, Chlordane, Metolachlor, Butachlor, Dieldrin, Endrin, Methoxychlor, Toxaphene, Simazine, Atrazine, Metribuzin, Di-2-(Ethylhexyl) Adipate, Di-2-(Ethylhexyl) Phthalate, Aldicarb Sulfoxide, Aldicarb Sulfone, Oxamyl (Vydate), Methomyl, 3-Hydroxycarbofuran, Aldicarb, Carbofuran, Carbaryl(Sevin), Dalapon, Dicamba, 2,4-D, Pentachlorophenol, Silvex, Dinoseb, Picloram, PCB as Decachlorobiphenyl, Benzo(a)Pyrene, p-Isopropyltoluene, Chloromethane, Dichlorodifluoromethane, Bromomethane, Chloroethane, Fluorotrichloromethane, Hexachlorobutadiene, Naphthalene, 1,2,4- Trichlorobenzene, Cis-1,2-Dichloroethylene, Dibromomethane, 1,1-Dichloropropene, 1,3-Dichloropropane, 1,3-Dichloropropene, 1,2,3-Trichloropropane, 2,2-Dichloropropane, 1,2,4-Trimethylbenzene, 1,2,3-Trichlorobenzene, n-Butylbenzene, 1,3,5- Trimethylbenzene, Tert-Butylbenzene, Sec-Butylbenzene, Bromochloromethane, Bromoform, Chlorodibromomethane, Xylenes(total), Dichloromethane, o-Chlorotoluene, p-Chlorotoluene, m-Dichlorobenzene, o-Dichlorobenzene, p-Dichlorobenzene, Vinyl Chloride, 1,1-Dichloroethylene, 1,1-Dichloroethane, Trans-1,2-Dichloroethylene, 1,2-Dichloroethane, 1,1,1-Trichloroethane, Carbon Tetrachloride, 1,2-Dichloropropane, Trichloroethylene, 1,1,2-Trichloroethane, 1,1,1,2-Tetrachloroethane, Tetrachloroethylene, 1,1,2,2-Tetrachloroethane, Chlorobenzene, Benzene, Toluene, Ethylbenzene, Bromobenzene, Isopropylbenzene, Styrene, n-Propylbenzene, Barium, 2,4-dinitrotoluene, 2,6-dinitrotoluene, Acetochlor, DCPA mono-acid degradate\*/DCPA di-acid degradate\*; 4,4'-DDE, EPTC, Molinate, MTBE, Nitrobenzene, Perchlorate, Terbacil.

\*DCPA degradates are not separately determined by these methods; therefore, they will be reported as the sum of both degradates.

## **Required Additional Health Information**

To ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes limits on the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. The MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

The sources of drinking water (both tap water and bottled water) included rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

**Contaminants that may be present in source water include:**

- (A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- (B) Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- (C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, stormwater runoff, and residential uses.
- (D) Organic chemical contaminants, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff and septic systems.
- (E) Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities. In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

## **National Primary Drinking Water Regulation Compliance**

This report was prepared using CCRbuilder and technical assistance provided by the American Water Works Association. If you have any questions concerning this report, please contact David Melton at 864/226-9676.

We'll be happy to answer any questions about Anderson Regional Joint Water System, Hartwell Lake Filter Plant and our water quality. Call the Water Plant Superintendent, David Melton at 864/226-9676.

Water Quality Data for community water systems throughout the United States is available at [www.waterdata.com](http://www.waterdata.com).

We are members of the American Water Works Association (AWWA), the Water Environmental Association of South Carolina (WEASC), and the South Carolina Rural Water Association.

### **ANDERSON REGIONAL JOINT WATER SYSTEM, HARTWELL LAKE FILTER PLANT**