

ARSENIC WATER TECHNOLOGY PARTNERSHIP PROGRAM

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The goal of this program is to enable water utilities, particularly those serving small rural communities and Indian tribes, to implement the most cost effective solutions for arsenic removal.

Background

On January 22, 2001, the USEPA published a revised standard for arsenic in drinking water that reflects an 80 percent reduction of the standard (from 50 ppb to 10 ppb). All public water systems will need to come into compliance 5 years after the publication of the rule and the single largest costs will be associated with the need for small water systems to install and operate treatment processes. In many cases, this will require building new treatment facilities. Therefore, there will be a great opportunity to employ new and innovative technologies that can minimize cost, are easy to operate, and are robust.

This program will bring new and innovative technologies from the laboratory into the “real world.” Laboratory and bench-scale studies will be combined with demonstration-scale studies to provide performance and economic information under actual operating conditions. This data will provide stakeholders with the information necessary to make sound decisions on arsenic treatment.

The Partnership

The program is a partnership between the Department of Energy (DOE) as the primary funding agency, Awwa Research Foundation (AwwaRF), Sandia National Laboratories (SNL), and WERC (a Consortium for Environmental Education and Technology Development) and will use the specialized talents of each organization in achieving the program’s objectives.

AwwaRF is a nonprofit, international, member-supported organization that conducts research to help water utilities, public health agencies, and other professionals provide safe and affordable drinking water to consumers. AwwaRF will provide the overall management for the program, facilitate oversight committees and administer the laboratory/bench-scale studies.

SNL is a national laboratory with extensive scientific and technological expertise in a variety of fields related to water safety, sustainability and security. SNL will administer and conduct the pilot-scale demonstrations.

WERC has extensive experience in technology transfer through its commercialization program, technology deployment, peer reviews, and technology assistance to communities. WERC will perform the education, training, economic analysis, and outreach activities associated with this program.

Bench-Scale Studies

The objectives of the AwwaRF-lead research component are the:

- Investigation of new/innovative technologies for arsenic removal from drinking water,
- Development of a new/innovative techniques for minimizing residuals (waste products) resulting from arsenic water treatment, and
- Investigation of modifications to existing arsenic water treatment technologies and new technologies that reduce costs, improve operations and reduce energy consumption.

The Arsenic Water Technology Program will result in arsenic removal technology development and deployment, education, training, economic analysis, and outreach activities.