

Training, Education, Technology Transfer and Cost-Benefit Analysis for the
Water Technology Partnership

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As a part of the Arsenic Partnership Program, WERC will serve the primary role for achieving the goal of evaluating the cost effectiveness of arsenic removal technologies and providing education, training, and technology transfer for the partnership. Where appropriate, WERC will also support the technology development and demonstration initiatives through the design contest. The specific steps of WERC's participation are three-fold: 1) perform an economic analysis; 2) host a task at the Design Contest; and 3) develop a technology transfer/outreach program.

A life cycle cost analysis using economic and performance data for both the bench, as well as pilot scale demonstrations will be performed. The analysis will include areas such as engineering, operation, maintenance, long-term performance, installation, monitoring, disposal of by-products, and training of personnel. Information sharing of the life cycle cost and performance analysis will also be achieved by use of a database driven, interactive web page with appropriate security in place.

As a complementary part of the program, WERC will utilize its existing Design Contest in order to obtain new innovative arsenic removal technologies. The Design Contests, now in its fourteenth year is an internationally recognized environmental competition. This unique and innovative contest challenges the participating universities to solve real-world environmental problems. Plausible and effective technologies resulting from the arsenic removal task currently included in the 2003 Design Contest will be evaluated. A task focusing on innovative arsenic removal technologies will also be included in the up-coming 2004 Contest.

The technologies demonstrated from both the bench-scale and pilot programs will be transferred to the water supply community. Technology transfer outreach will be carried out using new and proven techniques. These include education and training, short courses, hands-on training, video, web-based education and others. In each of the cases, WERC will develop a specific training and education based on the technology and the user community. The training will describe the cost performance advantage, the disadvantage or the arsenic removal technologies as well as best engineering practices for installing and maintaining the system. An arsenic web site providing technology performance, cost and point-of-contact information to facilitate technology transfer on a broad scale shall be developed by the partnership and maintained by WERC.