



Arsenic Water Technology Partnership Program

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Arsenic Water Technology Partnership Program

- \$4M Funded by Congress through DOE
- Additional \$750,000 from AwwaRF
- Partnership Administration by AwwaRF
- Partners- WERC, Sandia, DOE, AwwaRF



Program Objectives

- Using a peer-reviewed, cost-shared research program, develop and demonstrate innovative technologies for removal and disposal of arsenic from drinking water



Objectives (Cont.)

- Focus on small systems-
 - 40% of resources directed to rural and Native American utility needs
- Reduce energy consumption
- Minimize costs- capital, operating, maintenance
- Minimize residual quantities & disposal costs

Program Components

- Bench-Scale Studies (AwwaRF)
- Demonstration Studies (Sandia)
- Economic Analysis (WEREC)
- Technology Transfer (WEREC)





Awwa
Research
Foundation

Awwa Research Foundation & Arsenic Bench-Scale Studies

AwwaRF's Mission: Advancing the science of water to improve the quality of life

- Centralized research program
for the drinking water supply community
- >1,000 subscribers
- International organization

AwwaRF's History of Arsenic Research

- 31 projects starting in 1993
- \$7 million (\$10 million value)
- Arsenic Research Partnership with EPA and ACWA

Objectives of Bench-Scale Studies

- Reduce cost, minimize operational requirements & residuals, reduce energy consumption
- Investigative Approach
 - new/innovative technologies
 - modifications to existing treatment
 - other (monitoring or management technologies)

Bench-Scale Process

- Identify specific and/or general topics
- Open and competitive process
 - Solicit proposals
 - 25% in-kind contractor match
 - Review and selection by PAC
- Progress reports/ Final reports

Expert Workshop 8/2003

- WS Research Needs Identified
 - **Arsenic residuals**: stabilization, arsenic extraction from residuals, characterization & disposal of POU/POE residuals
 - **Non-treatment alternatives**: well rehab & modification, blending for Rule compliance
 - **In Situ Treatment**: immobilization in aquifer, aquifer storage and recovery

■ WS Research Needs Identified

- Development of a continuous on-line arsenic monitor
- Development of new removal media
- Innovative/combined treatment processes
- Methods to reduce competitive effects
- Innovative pH control strategies
- Impacts of intermittent operation
- Utility evaluation test protocol
- Solid state oxidant



Arsenic Water Technology Partnership Program Thank you

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