

Nestle Training Center, Carnation, Washington

New Arsenic Standards Cause Customer to Seek Treatment Solution to Ensure EPA Compliance

In January 2006, The Environmental Protection Agency (EPA) reduced the Maximum Contaminant Level (MCL) for arsenic presence in drinking water from 50 ppb to 10 ppb. The Nestle Training Center in Carnation, Washington has always operated their water system within drinking guidelines and needed to now treat the on site well. They initiated an investigation to find a solution for reducing the arsenic and remaining in compliance with the new requirements.

The local Siemens Water Technologies office, formerly USFilter, was contacted by Nestle's local operations personnel. Since Siemens Water Technologies has 80 offices throughout the United States we were able to rapidly send personnel to the site to perform an inspection of the well system and collect samples of the water for complete analysis. The results of the water testing were then analyzed using our proprietary arsenic modeling software. This software program analyzes all the major medias currently available for the arsenic removal, including iron chemistry, titanium chemistry, ion exchange resins and reverse osmosis.

This is a critical step in the engineering design phase since the selection of the media is site chemistry and operations needs dependent. The proper media selection will minimize both the capital cost and the life cycle operating cost.

The Siemens solution provided four (4) IX-48 model, carbon steel vessels containing Purolite's ARSENXnp[®] arsenic removal resin. These vessels feature the company's proprietary septa underdrain distribution system and have slurry capabilities which allow easy installation and removal of the media. Additionally, bag filtration was placed ahead of the media vessels

to significantly reduce the backwash requirements for the system.

The slurring capability was needed at this site since space requirements were tight and it was important that the periodic replacement of media be performed quickly with minimum operating staff from the customer.

Significant Accomplishments

Siemens Water Technologies relationship with the leading manufacturers of arsenic removal medias allows an unbiased selection of the best media for the process. We determine which media will provide the customer with the advantages of cost value versus operating results.

| | |
|-------------------|---|
| Facility | Institutional |
| Application | Arsenic contamination |
| Technology | Arsenic Removal Resin, ArsenXnp [®] |
| Scope of Services | System design Installation Start-up training Field support |
| Start Date | March 2006 |

48" carbon steel vessels containing arsenic removal resin





Siemens Water Technologies North America Service Network

North America Service Network

Our North America service network is backed by more than 80 offices staffed with certified technicians and applications experts who can solve your problems. In addition, Siemens Water Technologies provides response flexibility through either a lease or capital purchase option, and the company offers assured liability protection through environmentally safe waste destruction.

Services Available

- Activated carbon supply, removal and reactivation services
- Filter media supply and removal
- Ion exchange resin supply
- Membrane supply and cleaning programs
- Parts and expendables
- Service contracts
- Temporary/emergency water systems

Technologies Available

- Reverse Osmosis (RO) membrane filtration
- Conventional clarification and filtration
- Oil/Water separation
- Granular activated carbon adsorption
- Demineralization
- Inorganic metals removal
- Chemical addition

Siemens Water Technologies delivers cost-effective, reliable systems guaranteed for quality, safety, and compliance. Our trained service staff is available to make sure your systems is running at peak performance and to your specification. For your water treatment system, choose the partner that is committed to taking care of the world's water...and yours.

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