Background

Service water system fouling, which is addressed by U.S. Nuclear Regulatory Commission (NRC) Generic Letter 89-13, is just one of many issues faced by aging plants. Scaling, biological fouling, sediments and corrosion product sludge accumulations reduce heat exchanger and piping performance.

Using chemical cleaning solutions can help avoid time-consuming disassembly and manual cleaning methods. Frequently, heat exchangers in redundant trains can be cleaned with the plant online.

Description

Westinghouse’s service center in Richland, Wash. offers a “total service” approach to plant support that includes using chemical solvent processes originally developed for steam generator secondary side cleaning and primary system decontamination to mitigate or address plant performance problems.

Westinghouse will design and assemble the necessary cleaning equipment, train plant personnel, and manage the entire cleaning process to perform the following:

- Remove sludge and corrosion products
- Maximize plant operation time
- Improve operational efficiency
- Achieve as-low-as-reasonably-achievable (ALARA) radiation levels
- Minimize waste volumes

Westinghouse ultrasonic and chemical mix tank component cleaning systems

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Benefits
Westinghouse chemical cleaning provides the following advantages:

• Restores heat transfer and improves heat exchanger performance
• Restores system flow to flow-restricted components
• Removes harmful corrosion products and extends system

Experience
Westinghouse can perform chemical cleaning services on most plant systems, including:

• Service water
• Reactor building closed cooling water
• Component cooling water

Westinghouse’s experienced personnel, in combination with field-proven equipment and qualified chemical solvents are able to remove corrosion deposits, biological material and silt from systems.

Westinghouse is able to support system cleanings for both radioactive and non-radioactive systems.

When plant fouling problems are unique, Westinghouse offers analytical laboratory and custom cleaning testing capabilities at our Richland, Wash., facility.