Dominion Engineering, Inc.

Chemical Decontamination & Waste Treatment

Overview

With more than 40 years of continuous chemical cleaning and decontamination experience in the nuclear industry, DEI provides specialty equipment and process consulting to utilities and researchers in support of a variety of chemical cleaning and decontamination activities. Our chemical engineering expertise covers a wide range of applications from chemical decontamination of nuclear systems for operational dose reduction and decommissioning to cleaning of heat exchangers to mitigate corrosion and regain heat transfer efficiency.

DEI has developed a number of its own patented chemical processes, and also assists utilities by performing independent qualifications of processes developed by others. Drawing from our materials and environmental expertise, we help utilities ensure that these processes are applied without exceeding corrosion allowances for the nuclear components being cleaned, and we also assist utilities in developing and qualifying processes to manage the contaminated resins and liquid waste from these cleaning applications.
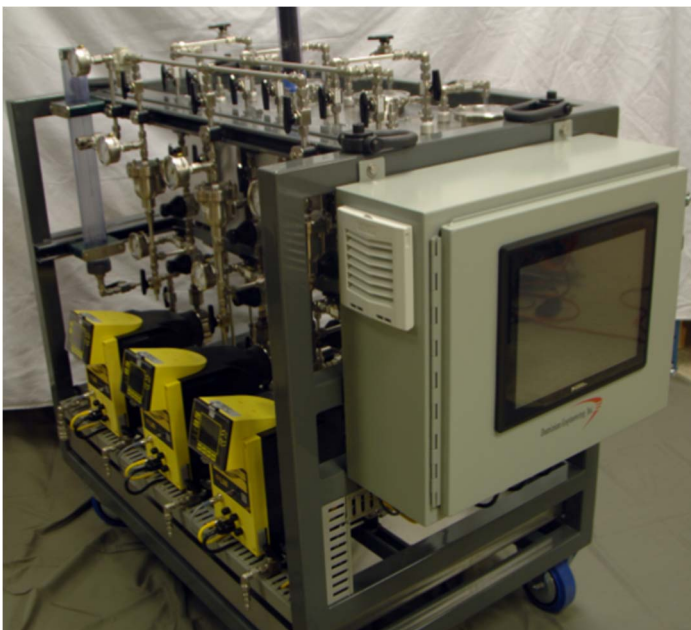

Biological waste treatment system

Chemical Process Expertise

- Development and qualification of chemical cleaning and decontamination processes for nuclear systems
- Corrosion and environmental studies
- Electrochemical synthesis of specialty chemicals for nuclear system decontamination
- Post-decontamination chemical passivation processes
- Ultrasonically-enhanced chemical decontamination
- Steam generator chemical cleaning

Waste Treatment Expertise

- Development and qualification of waste treatment processes
- Destruction of radioactive waste streams from chemical cleaning and decontamination processes such as resins and organic liquids
- Biological waste treatment
- Supercritical water oxidation
- Electrochemical waste destruction
- Reverse osmosis and ion exchange

For more information, contact Mike Little (*mlittle@domeng.com*), or Peter Krull (*pkrull@domeng.com*)

Post-decontamination passivation system