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Technology Solutions Experience

AVANTech Helps Implement Fukushima Accumulated Water Treatment System

AVANTech, Inc. in conjunction with Toshiba and Shaw Global Services, LLC, a Shaw Group company has developed the process, mechanical, and electrical design of a highly specialized patent-pending water treatment system for use at TEPCO's Fukushima Daiichi Nuclear Power Station in support of recovery efforts associated with the Great East Japan Earthquake that took place on March 11, 2011. Under a contract with the Toshiba Corp., Avantech and Shaw also fabricated the treatment system piping components and initial cesium adsorption equipment as well as providing personnel to support mobilization, installation and startup assistance. The system is identified by TEPCO as the Simplified Active Water Retrieval and Recovery System (SARRY) or Second Cesium Adsorption Instrument and utilizes Honeywell's UOP specialty ion exchange materials. The system technology is patent pending. Avantech implemented this work scope as part of the Shaw and Toshiba team. The treatment system was developed to maximize radionuclide loading and decontamination factors while minimizing personnel exposure and secondary radwaste generation. Avantech in cooperation with The Babcock & Wilcox Company also designed and manufactured an integral remote sampling station with on-line detectors capable of measuring the amount of radioactivity entering and exiting key components as well as cesium accumulation in the adsorption modules. Since startup on August 18th SARRY has achieved more than 90% online availability treating approximately 65,000 tons (17.2 million gallons) of accumulated high activity water by the end of November. To date SARRY has achieved decontamination factors of greater than 10⁶, thus producing product water with radionuclide concentrations below TEPCO's detection limit. "Avantech's diverse engineering and manufacturing skills enabled us to respond quickly to this emergency with a high quality product that ensured successful results for TEPCO. Our combination of engineering skills, manufacturing capabilities, knowledge, and experience make us unique to this marketplace." stated AVANTech Vice President and SARRY process developer Tracy Barker.

AVANTech is an engineering and manufacturing company with a commitment to providing service second to none! AVANTech was founded in 1999 and has expanded its business by applying the exceptional talents of its technical team. AVANTech's approach to integrated water treatment services makes us uniquely qualified to provide turnkey services. Our personnel have extensive experience in the planning, design, manufacturing and operation of water-treatment systems for nuclear, industrial and government clients. AVANTech technologies have enabled facilities to establish zero liquid discharge operations by completely recycling all of their wastewater.

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