

## Integrated Systems for to Treat Water, Wastewater, and Wet Wastes

Our streamlined **D**esign, **B**uild, **O**perate, and **M**aintain (DBOM) approach uses standardized and proven technologies, minimizes cost and schedule, and delivers guaranteed performance without capital expense. By incorporating a variety of treatment technologies, AVANTech tailors its DBOM service to all your water treatment applications.

### Why DBOM?

At one time, industrial, power, and government facilities owned and operated all of their equipment. Today, they're rethinking that strategy in light of some key concerns:

#### Increasing Costs

With DBOM, AVANTech reduces your outsourcing costs with saving initiatives such as standardized design and manufacturing of process components, remote monitoring, and personnel multi-tasking.

#### Stringent Treatment Requirements

Requirements for quality and regulatory compliance of water keep increasing, even when budgets don't. AVANTech can provide capital for financing new equipment, and can help you to implement upgrades that aren't in your long-term capital budget.

#### Lack of Qualified Personnel

It takes dedicated specialists to operate and maintain processing equipment at peak performance. AVANTech improves performance and reliability with a proven training and safety program that focuses on processing, equipment maintenance, theory and principles, configuration control, and regulatory compliance.

### AVANTech Provides:

- ✓ Process equipment, instrumentation, and controls - capital equipment with no client outlay for capital expenditures
- ✓ Staffing (management, operations, technical support) - dedicated personnel to perform all operations and maintenance, ensuring reliability and successful operations
- ✓ Consumables (filters, resin, chemicals)
- ✓ Maintenance (parts, tools, labor)
- ✓ Analyses (process and product parameters)
- ✓ Infrastructure (procedures, QC/QA, training)
- ✓ **GUARANTEED PERFORMANCE**



# AVANTech Design, Build, Operate, and Maintain Treatment Services are the Right Answer for a Wide Range of Clients

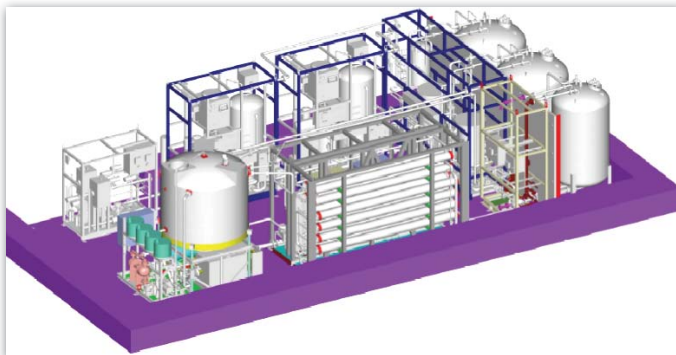
## River Bend Nuclear Station, Louisiana

AVANTech installed new equipment under a DBOM contract for to treat and recycle liquid radioactive waste. The equipment, which incorporates AVANTech's proprietary Ultrex™ ozonation and reverse osmosis processes, became fully operational in June 2004.

AVANTech still operates and maintains the equipment and provides all the associated consumables, allowing River Bend's staff to focus on producing power.

With our help, River Bend has achieved these performance gains:

- ✓ Reduced generation of solid radioactive waste associated with liquid waste processing by a factor of ~10 from 2,200 to 231 ft<sup>3</sup> (62.3 to 6.5 m<sup>3</sup>)
- ✓ Increased processing rate from 50 to 150 gpm (11.36 to 34.10 m<sup>3</sup>/hr)
- ✓ Improved quality of recycled water (salts <2 ppb, organics <20 ppb, radionuclides <1E-06 µCi/ml)



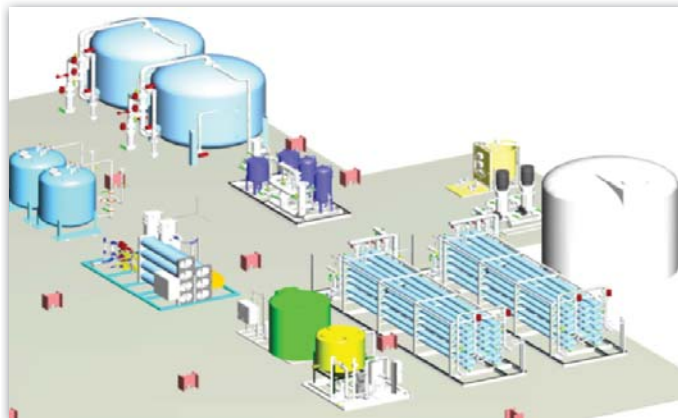
## McEntire Produce, South Carolina

Under a DBOM contract, AVANTech provides equipment to recycle 75% of the facility's wastewater. The system delivers recycled high quality sanitized and hygienic pure water for vegetable washing and plant operations. Benefits of recycling water include savings in capital costs and O&M expenses, as well as lower charges for water and sewer service.

## Farley Nuclear Power Station, Alabama

Under a new DBOM contract, AVANTech will deliver 550 gpm (125 m<sup>3</sup>/hr) of high purity makeup water. The AVANTech system includes depth filter, cartridge filters, double-pass reverse osmosis, permeate storage tank, transfer pumps, membrane degasification, electrodeionization, and lead/lag polishing mixed beds.

A central PLC station provides a simple user interface for control of the integrated equipment system. System effluent consistently meets/exceeds EPRI quality guidelines for power plant primary makeup water.



## Mayaguez Gas Turbine Power Plant, Puerto Rico

AVANTech was awarded a Design/Building/Commission contract for a makeup water treatment system for purification of well water. The system is rated at 366 gpm (~83 m<sup>3</sup>/hr) and consists of multi-media filtration, cartridge filtration, anti-scalant addition, reverse osmosis, electrodeionization, and clean-in-place equipment.

Our work scope requires full integration of the makeup treatment facility, including automated controls, interconnecting piping, and startup support services.

System design, engineering, and fabrication will be validated with a full system test at our manufacturing facility in Columbia, South Carolina, before delivery to the site.