

AVANTech-Richland, formerly Mid Columbia Engineering (MCE), has been providing Commercial Grade Dedication (CGD) services for the nuclear industry for over a decade. As a full-service company performing design, fabrication, and testing of specialty equipment, AVANTech is uniquely qualified to perform CGD services through the entire process from technical evaluation and planning, to final reporting and acceptance. Our CGD team includes experienced engineers and quality personnel with specialty CGD training, working alongside trained inspectors, procurement specialists, and document control personnel.

AVANTech's quality program and procedures are based on ASME NQA-1 requirements and incorporate the guidance of Revision 1 to EPRI NP-5652 and TR-102260 in addition to EPRI TR-017218-R1.

AVANTech performs technical evaluations to determine critical characteristics and acceptance criteria on Design-Build projects where AVANTech is the design agent. For Build-to-Print projects, AVANTech utilizes the client's technical evaluation input to perform the dedication process, providing interpretation and guidance to assist in implementation. AVANTech utilizes in-house testing/inspection capabilities along with independent testing performed by qualified laboratories and certified Non-Destructive Examination (NDE) providers.

AVANTech has provided CGD services for a variety of clients and projects and is continually expanding and enhancing the CGD program. AVANTech's program has the capability to use all four CGD methods: Inspections/Tests/Analysis, Commercial Grade Survey, Source Verification, and Acceptable Supplier/Item Performance Record.

AVANTech has developed over 200 CGD plans and reports that have been approved by customers and implemented. Examples include fasteners, pipe and fittings, valves, instruments, bearings, material, shielding, gaskets, O-rings, and electrical cable.



*AVANTech-Richland Facility
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WRPS PBM Valves CGD

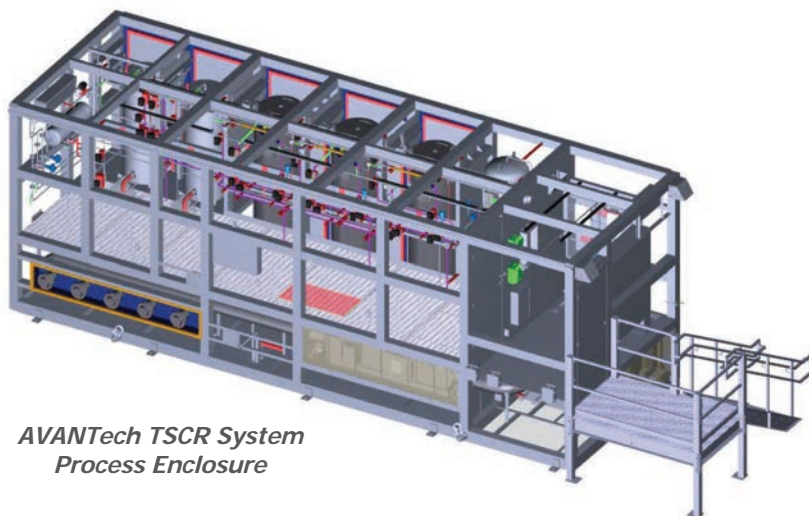
WRPS contracted AVANTech to procure, inspect, test, and commercially dedicate four variations of ball valves.

Inspections and testing included PMI, pressure, hardness, dimensional, chemical, and physical. AVANTech collaborated with WRPS on the critical characteristics, then completed the CGD plan, reports, and conducted appropriate oversight and testing at the vendor's facility. All valves were successfully accepted by WRPS.

Hanford TSCR Project

Currently, AVANTech is contracted by Washington River Protection Solutions (WRPS) to design, fabricate, assemble, and test a Tank-Side Cesium Removal (TSCR) System for the DOE Hanford Site. AVANTech has worked directly with WRPS on the project CGD development and approach. AVANTech has provided daily support for WRPS activities such as PRHA, Equipment FMEA, and Functional and Technical Requirement Documentation at the WRPS facility.

AVANTech has supported WRPS in development of failure modes associated with safety related equipment and detailed functional requirements documents that outline the safety function, CGD technical evaluation, critical characteristics, and acceptance criteria of the equipment. In addition, detailed procurement strategies have been developed to ensure customer expectation and supplier procurement and dedication approach were aligned. In addition, AVANTech is developing adequate procurement controls to provide reasonable assurance minimizing impacts on cost and schedule. To date, AVANTech has developed over 20 CGD plans for this project, which include structuring material, pipe and fittings, fasteners, flow instruments, instrument display, instrument enclosures, and lead shielding. In addition, testing procedures and inspection processes have been established to support CGD acceptance testing with the AVANTech-Columbia facility.



*AVANTech TSCR System
Process Enclosure*

Hanford WTP Autosampling Systems

AVANTech was contracted by EnergySolutions to fabricate, assemble, and test an autosampling system (ASX) for ultimate end use by Bechtel National at the Hanford Waste Treatment Immobilization Plant (WTP). AVANTech engineering design and CGD support were also provided throughout the project due to the highly sophisticated nature of the equipment. The ASX data packages were successfully approved by DOE in a multi-pass detailed review process to be enacted on future major Hanford data packages.

The ASX CGD included:

- ✓ Glove box, gloves, and bulkheads
- ✓ Lead, tungsten, and steel shielding
- ✓ Custom process valves, manual valves, and actuators
- ✓ Check valves
- ✓ Pipe, tubing, and fittings
- ✓ Fasteners, hinges, brackets, and supports
- ✓ ISOLOK samplers
- ✓ O-rings, gaskets, and seal material
- ✓ Glass and polycarbonate windows
- ✓ Ball bearings
- ✓ Heat treatment services
- ✓ Electrical components, junction boxes, terminal blocks, DIN rail structuring steel
- ✓ Weld wire



*AVANTech Fabricated
Shielded ASX Transfer Station*