The Future of Training Arrives at SRS Tritium Facilities

AIKEN, S.C. (Dec. 2, 2020) – The future of training has arrived at the Savannah River Site’s (SRS) Tritium Facilities through virtual reality (VR). Three VR programs covering Operations, Maintenance and Radiation Control (RadCon) were developed to facilitate training for employees supporting the nation’s nuclear deterrent.

SRS is the only place that prepares and ships tritium-loaded containers, called reservoirs, to the Department of Defense, where they are installed in weapons. Training is vital to ensure the Site’s continued support of the nation’s nuclear deterrent. VR provides new opportunities not possible through conventional classroom instruction and on-the-job-training.

“Employees can train in situations that would be too hazardous, complex, expensive or occur too infrequently to conventionally train,” said Adam Reese, Knowledge Preservation Management and VR Programs Manager, who led the effort to implement VR training.

The Operations program virtually guides employees through an internal process as if it were real, creating random errors they must identify and resolve. The training is different each time an employee goes through it, ensuring they pay strict attention to detail. The Maintenance program guides employees through a virtual rebuild of a $70,000 equipment piece. VR allows employees to repeatedly rebuild the equipment while being evaluated, at no additional cost and without concern of damaging the real equipment. Lastly, the RadCon
program is a virtual room where technicians take smears and surveys of contaminated surfaces, enabling them to practice detecting contamination while remaining in a completely safe, non-radioactive environment.

Virtual environments for the three programs were created in partnership with the Savannah River National Laboratory, who coded the programs and built the Computer Aided Design files.

“These programs are just the beginning of the possibilities with VR training,” said Mark Davis, Savannah River Nuclear Solutions Senior Vice President - National Nuclear Security Administration Operations and Programs. “They ensure we continue to execute our missions safely and proficiently, keeping us the backbone of deterrence in support of peace.”

Established by Congress in 2000, NNSA is a semi-autonomous agency within the U.S. Department of Energy responsible for enhancing national security through the military application of nuclear science. NNSA maintains and enhances the safety, security, and effectiveness of the U.S. nuclear weapons stockpile; works to reduce the global danger from weapons of mass destruction; provides the U.S. Navy with safe and militarily effective nuclear propulsion; and responds to nuclear and radiological emergencies in the U.S. and abroad.