

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 1, 2023

**TO:** Timothy J. Dwyer, Acting Technical Director  
**FROM:** A.Z. Kline, L. Lin, Z.C. McCabe, and E.P. Richardson, Resident Inspectors  
**SUBJECT:** Savannah River Site Activity Report for Week Ending September 1, 2023

**Staff Activity:** J. Jarvis, P. Natividad, and M. Randby of the Board's technical staff were on site this week for familiarization activities associated with an ongoing review of the Savannah River Tritium Enterprise's (SRTE) Co-located Worker Dose Reduction Strategy efforts. D. Brown and D. Montierth were onsite and performed a walkdown of SRTE with the staff team. Associate Technical Director for Field Operations, M. Sautman, along with D. Brown, J. Jarvis, P. Natividad, and M. Randby observed the SRTE evaluated emergency preparedness exercise.

**SRTE:** The resident inspectors (RIs) and members of the Board's staff observed the annual evaluated emergency preparedness exercise at the tritium facilities. The scenario initiated with a simulated earthquake, followed by several simulated upset conditions. In the H-Area New Manufacturing, a facility maintenance technician fell from a rolling ladder, pulled out a thermocouple vacuum gauge from a mix tank along with a glovebox glove, and injured their ankle. This resulted in a hydrogen deflagration and a significant release of tritium oxide. The injured person and two others were contaminated. In the Tritium Extraction Facility, two people were trapped in an elevator, and one of the individuals simulated heart attack symptoms. In the H-Area Old Manufacturing, facility personnel responded to a simulated ventilation upset. The RIs and members of the Board's staff observed the response from the three control rooms, incident scenes, operational support center, and technical support room. SRNS, NNSA-SRFO, and DOE-SR personnel are evaluating the response to the simulated events.

**Defense Waste Processing Facility (DWPF):** DWPF personnel declared a Technical Safety Requirements (TSR) violation this week when they identified that a required surveillance for the Decontamination Waste Treatment Tank (DWTT) purge was not performed within the required frequency plus grace period while it was in limited processing mode. The DWPF TSRs include multiple surveillances on the same equipment that are mode-dependent for certain components, including the DWTT purge instrumentation. DWPF personnel recently implemented a change to the electronic rounds that combined surveillance requirements on the same equipment into a single reading to avoid marking TSR Surveillance Requirements as "Not Applicable" on a regular basis. The combined rounds for the DWTT purge included notes that provided information regarding which surveillance requirements implemented by the single step applied in operation mode and in limited processing/standby/shutdown mode. However, DWPF personnel did not adequately communicate the change of the electronic rounds to operations personnel. The operator that first performed the revised rounds was unaware of the change until they began the procedure. While performing the rounds, the operator only read the part of the note visible without scrolling, which stated that the surveillance is applicable in operation mode, and marked the step as "Not Applicable." Had the operator scrolled further, they would have identified that the reading was still required in limited processing mode. During the issue investigation, DWPF personnel noted that the First Line Manager (FLM) did not identify this error, nor did the following shift when they performed the rounds incorrectly as well. DWPF management has initiated an effort to perform oversight of 100% of the rounds and FLM reviews.