

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 28, 2017

**TO:** S. A. Stokes, Technical Director  
**FROM:** Z. C. McCabe, Resident Inspector  
**SUBJECT:** Savannah River Site Resident Inspector Report for Week Ending April 28, 2017

### **Savannah River Tritium Enterprise (SRTE) Technical Safety Requirement (TSR)**

**Violation:** SRTE committed their fourth TSR violation in 2017. SRTE personnel conservatively entered a limiting condition for operation (LCO) due to some potential deficiencies identified during the TSR required fire suppression system surveillance requirement in two facilities. The LCO condition requires an immediate fire patrol (FP) for the two buildings affected and subsequently every six hours after until the LCO condition is exited. The operator that performed the second FP failed to document the patrol of one of the two facilities in the data sheet used for the FP. The data sheet that was left blank listed 29 separate rooms and locations, each requiring a check mark once that portion of the FP is completed. After all locations are inspected the operator is required to initial the data sheet and return it to the control room for the shift manager (SM) to review and initial. Because the LCO tracking database timer for the FP was reset to zero before the FP began (the standard practice at SRTE facilities), and the operator failed to return the data sheet to the control room as required by the procedure for SM review and initial, the error was not identified until after the next FP, over six hours later. Discussions during a fact finding meeting revealed that the operator did not have a pre-job briefing before beginning the FP, and this was the operator's first time performing this FP with this procedure.

**SRTE Deliberate Operations (DO):** In light of the four recent TSR violations and conduct of operations (ConOps) issues (see below and 1/13/17, 1/20/17 and 4/14/17 reports), SRTE has entered DO effective at 8:00am on April 27 to reinforce ConOps fundamentals and SRTE management expectations. As part of DO, SRTE management has established that all work performed at SRTE, including routine rounds and surveillances, will require a pre-task and post-task discussion with the applicable SRTE manager.

**235-F Annual Exercise:** Staff members M. Helfrich, J. Deplitch, L. Lin, and D. Burnfield were onsite this week to observe the 235-F annual exercise. The exercise scenario consisted of a simulated fire initiated during routine work in cell 1. As part of the scenario, one of the operators evacuating the area fell, injured themselves and became unresponsive. This is the first time this scenario has been used for the annual exercise. The staff team identified improvements from the previous exercises such as recovery plan development. Additionally, they noted several opportunities for improvement including multiple instances of exercise artificiality, poor radiological protection (RP) practices by operators, and poor control room communications with the incident scene.

**Target Residue Material (TRM):** During the second evolution, RP measured the location of the previously identified hotspot (see 4/21/17 report) at greater than 100 mrem/hr at 30 cm, which constitutes a High Radiation Area (HRA). After they measured the dose rate, TRM personnel moved the container so the hotspot would be facing the wall. Because of the potential to encounter HRA dose rates during container handling, the resident inspector believes it would have been prudent to invoke HRA controls during subsequent activities.