

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 9, 2018

**TO:** S. A. Stokes, Technical Director  
**FROM:** M. T. Sautman and Z. C. McCabe, Resident Inspectors  
**SUBJECT:** Savannah River Site Resident Inspector Report for Week Ending March 9, 2018

**Defense Waste Processing Facility (DWPF):** SRR violated a Technical Safety Requirement (TSR) early Saturday morning when they failed to return a ventilation interlock to operable within 7 days or enter a different Limiting Condition for Operation (LCO) for not meeting the first condition. Approximately five hours after the expiration, operations staff on the next shift identified the error and entered the proper LCO condition. The SOM informed the operations manager of the expired LCO, but SRR did not take any action to declare the violation or report it until Monday when DOE facility representatives questioned facility management. Prior to the violation, shift turnovers by the shift operations manager (SOM), shift technical engineer (STE), and control room manager (CRM) ignored the upcoming expiration even though the DWPF operations summary and the SOM/CRM auto-generated shift turnover checklists clearly identified the expiration time and the LCO status board highlighted this condition in red. The violation was initially ignored when the SOM and CRM turnover checklists listed the condition as expired and past due. The SOM, STE, and CRM ignored their training on how to manage TSRs. The SOM, STE, and CRM of three of the four rotating DWPF shift crews knew of the violation, but took no action beyond a logbook entry although they understood management's expectations and process requirements. SRR management shut down all work that was not related to safety or recovery from a water leak. SRR is also dealing with the execution issues and established a Deliberate Operation Plan. All shift turnovers will be assessed for the first 2+ weeks and then shift turnovers involving a new oncoming shift crew afterwards.

**NNSA-SRFO:** NNSA-SRFO sent a letter to SRNS formally transmitting their comments on the proposed Tritium Facilities safety basis SRNS submitted on July 26, 2017. The letter notes that multiple credible events result in high dose consequences to the collocated worker and requests SRNS to develop a strategy to reduce those consequences. This was a topic of discussion during recent Board member visits to SRS (see 10/27/17 and 1/12/18 reports). Further, the resident inspectors expressed similar concerns (see 11/10/2016 and 3/10/17 reports) as did the Board's staff in a safety basis review agenda submitted to NNSA-SRFO on November 14, 2017.

**Savannah River National Laboratory (SRNL):** SRNL personnel are unable to find any documented references identifying the radiological material holdup on several old strainers left on the floor in the high activity waste (HAW) piping gallery (a high radiation area last accessed in 2008) in the Sample Returns Handling Facility. An engineer first raised a concern that the holdup could exceed the facility's current Hazard Category (HazCat), HazCat 3, maximum in 2015, which was dismissed because a document referenced in the original safety documentation from 1993 described the holdup as "insignificant." However, until 2003 the facility was HazCat 2 and permitted to have significantly more material. A recent event led SRNL personnel to further investigate the strainers' holdup documentation to no avail. This lack of documentation has led them to determine a positive unreviewed safety question exists because of the currently unknown amount of material in the HAW pipe gallery. SRNL personnel are planning to enter the pipe gallery with a neutron detector and other equipment to better characterize the material.