

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 23, 2017

TO: S. A. Stokes, Technical Director
FROM: Z. C. McCabe, Resident Inspector
SUBJECT: Savannah River Site Resident Inspector Report for Week Ending June 23, 2017

Waste Treatment: In light of recent events including three technical safety requirement (TSR) violations (see 5/26/17 report and below) and a contamination event (see 6/9/17 report) the Defense Waste Processing Facility (DWPF) and Saltstone began a period of Deliberate Operations (DO) effective June 20, 2017. DO will be utilized to provide temporary compensatory measures to address the recent trend of poor TSR administration, and will apply to all work performed on safety class (SC), safety significant (SS) and all SC/SS supporting equipment. Additionally, all SS/SC related field work will be released by a management team.

DWPF: DWPF had two TSR violations this week due to less than adequate limiting conditions for operation (LCO) administration and knowledge of the TSRs. The first TSR violation occurred when DWPF personnel failed to enter an LCO condition and complete the required actions (RA) associated with removing two safety class level indicators (LIs) from service on one of six nitrogen purge tanks. Before releasing work to lock out the LIs, the shift operations manager (SOM) evaluated two separate conditions of the applicable LCO for applicability. The SOM determined that the total nitrogen inventory exceeded the TSR-required minimum amount when excluding the nitrogen in the tank with the out-of-service LIs. Although the SOM knew the LIs were included in the list of equipment required to be operable, the SOM failed to identify the appropriate entry criteria. The SOM then incorrectly determined no LCO entry was required. Additionally, the SOM did not discuss this decision with the shift technical engineer or with DWPF management. Although it is not easily discerned from the TSR or TSR Bases, DWPF personnel later determined that the LCO condition should have been entered and DWPF personnel failed to complete the RA of verifying adequate purge to the vessels within one hour.

The second TSR violation occurred when DWPF personnel failed to recognize that an LCO condition should have been entered when they were troubleshooting issues with Zone 2 ventilation. DWPF personnel were swapping the temporary air compressors when Zone 2 ventilation was lost. After restoring the ventilation, a SS interlock tripped which shut down Zone 2 ventilation a second time. However, DWPF personnel were able to confirm that plenum pressure was reading lower than the interlock set point. DWPF personnel then reset the interlock, which tripped again despite the plenum pressure still being below the set point. The SOM then directed operations personnel to bypass the interlock. DWPF personnel were then able to restore Zone 2 ventilation, but they failed to recognize that bypassing the SS interlock required entry into an LCO condition.

Solid Waste Management Facility (SWMF): SWMF personnel were recently made aware of an error with the TRU portion of the Waste Inventory Tracking System (WITS) (see 6/9/17 report) and conditionally released the software with supplemental guidance for the users. Since then, they were informed of another software issue that was caused by the same error. SRNS has subsequently suspended all TRU shipments to SWMF until a revision of WITS is released and all TRU database changes since the erroneous version was released on May 25 are validated.