

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 14, 2025

TO: Technical Director
FROM: Savannah River Site Resident Inspectors
SUBJECT: Savannah River Site Activity Report for Week Ending March 14, 2025

Saltstone: Last month, an operator noticed a gap between the tank wall and roof of Saltstone Disposal Unit (SDU) 6 (see 2/14/2025 report). Initially, the facility's review of similar style SDUs that have been constructed, SDUs 7, 8, and 9, did not show any similar gaps. However, it was later discovered through camera footage that there are gaps through the gasket in SDU 7 and 8 as well, albeit smaller than in SDU 6. Engineering personnel performed a settlement analysis on SDU 6, which showed very little settling. They are evaluating material condition and will determine what repairs will need to be made going forward. Saltstone personnel plan to process radioactive waste in SDU 7 with the small gaps and plan on revising the SDU 7 operations procedures to require exhaust ventilation while operating to provide additional protection. Radiological protection personnel have placed air samplers around SDUs 6, 7, and 8 and have increased radiological surveying.

Savannah River National Laboratory (SRNL): The resident inspector observed demonstrations during the contractor readiness assessment (CRA) for the Mk-18A target material recovery program (see 3/7/2025 report). During performance of the nitric acid transfer, the operators and supervisors demonstrated less than ideal conduct of operations on a few occasions. While setting up the facility for the transfer using the reader/worker method and a "use every time" procedure, the operators performed steps without direction and/or out of sequence without acknowledgement or stopping work twice. Later in the evolution, the team failed to call a timeout and stop work for nearly 20 minutes after the nitric acid transfer pump failed to start. The operators attempted to start the pump again, then multiple personnel including the principal investigator, the subject matter expert, and the first line manager simultaneously provided additional troubleshooting guidance, which the operators followed prior to stopping and suspending the procedure. While the initial minor troubleshooting (checking cords and switches) was appropriate, the lack of command and control and procedurally allowed real time manipulation of malfunctioning equipment (adjusting the speed setting while the pump was energized) did not adhere to conduct of operations requirements. The CRA team did not comment on these issues.

Defense Waste Processing Facility (DWPF): A DWPF first line manager (FLM) and operator demonstrated poor conduct of operations while attempting to move a filled radioactive glass canister into the weld test cell, resulting in the 4500-pound canister tipping over and resting at a 40° angle on a guard rail. The task requires two operators per procedure, but only one (who had never performed the task) was assigned. The procedure requires a second operator stationed at the smear test station window to ensure proper grapple engagement due to a previous dropped canister event. The workers also did not perform a pre-job brief as required. When the operator requested assistance during the evolution, the FLM took over control of the crane and was engaging the grapple when the canister tipped over. During the issue investigation, the FLM stated that operators routinely perform this operation solo. Following the investigation, DWPF operations righted the canister, which will be inspected for damage prior to further processing.