

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 29, 2025

TO: Technical Director
FROM: Savannah River Site Resident Inspectors
SUBJECT: Savannah River Site Activity Report for Week Ending August 29, 2025

DNFSB Staff Activity: A resident inspector (RI) from Los Alamos National Laboratory was on site this week and observed an emergency preparedness drill at the Tritium Extraction Facility (TEF), attended an H-Canyon shift operations manager qualification board, walked down the K-Area Complex, and discussed aspects of site operations and maintenance with site management.

Savannah River Tritium Enterprise (SRTE): SRTE held an emergency preparedness drill at the TEF. The simulated drill scenario involved damage to a glovebox, a tritium release, and a worker injury. The RIs observed the drill from the incident scene, the control room, and the incident command post. The drill team held a debrief afterward and discussed the results, including several opportunities for improvements that were in line with the RI observations. One issue identified by the drill team included the number of workers who were not exempt from the drill and were observed outdoors when they were required to remain indoors as part of drill protective actions. Additionally, the drill team identified issues with decontamination practices and communication practices that did not meet expectations.

Savannah River National Laboratory (SRNL): SRNL revised its procedure for implementation of the compensatory measures for exceeding inventory control limits (see 1/24/2025 and 7/25/2025 reports). In January, when the facility first identified the Potential Inadequacy in the Safety Analysis (PISA), they implemented compensatory measures and controls, including a requirement to conduct fire patrols of SRNL every four hours. After further analysis, they determined in their Evaluation of the Safety of the Situation (ESS) that the fire patrols were no longer needed. After facility personnel identified additional legacy material that was above de minimis values (i.e., requires tracking of the material) in June, fire patrols were re-instituted. However, this was only established in a standing order and the procedure implementing the compensatory measures for the PISA did not indicate the fire patrols were a safety basis level control as it did for the other compensatory measures. SRNL submitted a revision to the ESS to reinstitute the fire patrols, and they are revising the implementing procedure to include the fire patrols as a safety basis level of control.

The facility continues to work through their extent-of-condition (EOC) review to identify any material that has not been accounted for in their inventory tracking software. For the E-wing shielded cells, maintenance needs to repair the cell crane before they can continue their EOC review in the last two shielded cells. Personnel obtained dose measurements in the F-wing shielded cells to help identify items that might have material at risk and have returned limited functionality of manipulators and trolleys to support nondestructive analysis characterization of suspect items. Upon discovery of the issue, engineering performed a calculation based on actual tracked inventory to determine what margin they had before exceeding their safety analysis. The calculation showed a margin of 60 Pu-239 equivalent curies (PEC) of solid material at risk, and, at this time, their EOC review has identified approximately 5 PEC of material that had not been accounted for. They will have to consider suspect material in other forms as well (e.g., liquid).