

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 4, 2025

TO: Technical Director
FROM: Savannah River Site Resident Inspectors
SUBJECT: Savannah River Site Activity Report for Week Ending July 4, 2025

Savannah River National Laboratory (SRNL): Personnel were handling uranium inside a fume hood that was posted as a contamination area. Upon exiting, one of the individuals found contamination on their lab coat sleeves while performing a self-frisk. Radiological Protection Department (RPD) personnel measured 8,000 dpm alpha on one lab coat sleeve and 2,000 dpm alpha on the other, notified the SOM, and barricaded the room. Later, RPD discovered that the samples had come from a glovebox in HB-Line, which also handled plutonium. The analysis of the lab coat indicated the contamination was mostly plutonium-238, rendering the contamination level a reportable quantity. During the issue investigation, personnel noted that if they had discussed that this material had been in HB-Line with RPD, RPD would likely have identified that this material should be handled in a high-contamination-area fume hood, which would also have changed the required personal protective equipment. SRNL is planning a radiological refocus with radiological workers to discuss lessons learned.

SRNL personnel discovered legacy radiological materials that were not identified during the extent-of-condition (EOC) review performed earlier this year as part of the Potential Inadequacy in the Safety Analysis (PISA) process (see 1/24/2025 report). SRNL had entered the PISA process for exceeding their inventory control limit in November 2024 (see 11/15/2024 and 12/13/2024 reports). Upon discovery of the new legacy material, they reinstated compensatory measures to perform hourly facility fire patrols. The November 2024 PISA was revised to include the newly discovered material, and it is noted that SRNL discussed this methodology with DOE and other site authorities. The resident inspectors note that revising a PISA and associated documentation after implementation is not a common practice. SRNL personnel are awaiting assay and analytical characterization results of the recently discovered material and are developing the immediate path forward, which will include another detailed EOC, and a re-evaluation of all assumptions made during the previous EOC regarding the need for additional physical verification. Assay results should also inform the need to identify additional controls. DOE-SR plans to increase their oversight of ongoing characterization and disposition activities.

H-Tank Farm: While personnel were making repairs to a containment hut in H-Tank Farms, a worker inside the contamination area was injured when a 10-foot fiberglass ladder fell, striking them in the head. Personnel at the scene informed the SOM, who requested emergency medical services from the Savannah River Site operations center. During the issue investigation, personnel noted that the ladder was not being used at the time of the incident and that it had been improperly stored (i.e., vertically propped against the inside wall of the contamination hut). SRMC personnel performed an EOC walkdown of other ladders in the area to ensure that all were properly stored and briefed the immediate lessons learned on proper ladder storage at the next pre-job brief. SRMC plans to conduct a causal analysis.