

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 12, 2022

TO: Christopher J. Roscetti, Technical Director
FROM: A. Z. Kline, L. Lin, Z. C. McCabe, and E. P. Richardson, resident inspectors
SUBJECT: Savannah River Site Activity Report for Week Ending August 12, 2022

K-Area: K-Area personnel successfully completed the downblend processing of the first container of high heat load plutonium oxide on 8/9/22. These containers required expedited processing due to degradation of the polyvinyl chloride bags external to the convenience cans from the heat and radiation effects. The resident inspector (RI) observed the team effectively execute the evolution, which included the packaging and transfer of the downblend containers. Additionally, the Facility Radiological Assessment Team meeting, pre-job brief, radiological protection coverage, and conduct of operations demonstrated thorough preparation by the team.

H-Outside Facilities (H-OF): Following an extensive investigation, SRNS has concluded that the radioactive liquid spilled on the asphalt in H-Area (see 7/15/22 report) was inadvertently siphoned from one of the temporary tanks when an operator placed the end of a transfer hose on the ground inside the containment dike and left the area. SRNS identified that there was a lack of rigor, formality, and technical control regarding the temporary system used; less than adequate oversight and risk recognition; and an inability to repair degrading equipment in H-OF due to the lack of investment into infrastructure and human capital. Another contributing factor was the repeated use of an outdated standard form to pump the sump vice an approved procedure or work package. Additionally, no formal hazard analysis or screening for safety basis impacts was completed until after the issues were noted. Remediation of the spill site was completed this week through decontamination and adding a new layer of asphalt over the area.

Salt Waste Processing Facility (SWPF): The RI observed a Shift Operations Manager oral board on 8/8/22, which was the first conducted at SWPF in several years. The overall conduct of the board was adequate, but a few opportunities for improvement were noted, including the members' lack of knowledge of the facility oral board instruction, process system posters on the wall of the room that answered questions asked to the candidate, and the lack of independent grading by the panel at the conclusion of the board.

Emergency Management: The RIs and members of the Board's technical staff discussed the May 10, 2022, annual site exercise (see 5/13/22 report) and After-Action Report with DOE and contractor personnel from the emergency management team. The emergency management team provided some additional details that was not in the report and indicated that they are developing corrective actions to address deficiencies.

P-100 Filters: The Respiratory Equipment Facility (REF) tests samples of P-100 filters used in respirators. Dating back to September 2021, several pallets received yielded unacceptable results. REF personnel drafted a non-conformance report (NCR) and did not use any failed filters. The NCR was not immediately communicated to the Containment Fabrication Facility (CFF), which also use P-100 filters in containments (e.g., glovebags). REF personnel identified that several of the CFF filters in storage were unacceptable as well. Additionally, site personnel took action to test fielded filters based on the list of completed work orders at the CFF.