DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 5, 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 5, 2022

Savannah River National Laboratory (SRNL): In November 2021, SRNL personnel erroneously switched a salt batch sample with another, which led to them reporting incorrect data to the liquid waste organization regarding the qualification of Salt Batch 5 for the Salt Waste Processing Facility (SWPF). The analytical results SRNL reports are used to ensure that the material sent from Tank Farms to SWPF is within the latter's Waste Acceptance Criteria. This error was identified by SRNL personnel in July, approximately 2 weeks before SWPF was planning to receive Salt Batch 5 material.

SRNL continues to struggle with their conduct of issue investigations. For the salt batch issue (above), they failed to appropriately define the problem statement and focused a significant amount of time on menial items, such as reading multiple pages of the draft report verbatim out loud and assigning specific causal codes, rather than having meaningful discussions to determine the proper problem statement or appropriately understanding the implications of this error.

The resident inspectors (RI) conducted a walkdown of the SRNL facility and discovered multiple items of concern, such as a punctured radiological waste bag and sealed 3013 containers (designed to store plutonium) staged on the floor without markings such as "Training Use Only" or "Empty." These two items were brought up to SRNL management and corrected on the spot. SRNL personnel verified that the 3013 containers were empty, but how the 3013 containers ended up unlabeled in the field remains unclear. Housekeeping continues to be an issue in multiple areas of the facility with dozens of radiological waste bags being staged on the floor and construction material outside of barricades that present tripping hazards.

SRNS: The RI attended an issue investigation (II) discussing the improper procurement of High Flux Isotope Reactor core carriers. Although the engineering specifications listed 6063-T6 aluminum as the required construction material for all future carriers, this lot was ordered and fabricated using 6061-T6 aluminum. L-Area engineering personnel discovered the error during their acceptance review of the recently received carriers. SRNS personnel missed multiple opportunities to identify the error prior to shipment. These included the vendor quote listing 6061-T6 aluminum and Quality Assurance (QA) personnel noting the material disparity during an on-site inspection, but resolving the issue based on the design change form that allowed both materials (to account for carriers currently in use). The II quality was diminished due to not collecting a statement from the QA Source Surveillance Representative prior to the meeting.

F-Tank Farm (FTF): The RI observed the removal of a submersible transfer pump that prematurely failed from Tank 44. During the job, personnel discovered that the weight for the critical lift of the riser covers was incorrect and appropriately called a timeout. The lift plan was revised, and the job continued the next day. Later, personnel paused when they saw the manifold plate had more lifting bales that the drawing showed. They proceeded after getting direction on which three bales to use and successfully transferred the pump to a B50 container.