

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 9, 2020

TO: Christopher J. Roscetti, Technical Director
FROM: M. T. Sautman and Z. C. McCabe, Resident Inspectors
SUBJECT: Savannah River Site Activity Report for Week Ending October 9, 2020

Salt Waste Processing Facility (SWPF): After the Startup Review Board verified that the SWPF startup prerequisites were complete, the plant manager authorized the startup and notified DOE. The startup process involves several hold points and SWPF is currently authorized to process 0.1 Ci/gal waste feed. Parsons began hot operations with the transfer of ~4000 gallons of salt waste from Tank 49 in H-Tank Farms (HTF). During and after the transfer, radiological control technicians performed shielding verification surveys. After sampling, Parsons performed an alpha strike with monosodium titanate. The resident inspectors (RI) have been overseeing the above activities. During the alpha strike preparations, the control room operator (CRO) marked a conditional step not applicable (N/A), which encompassed 10 additional sub-steps that spread over two pages. However, the CRO continued the procedure at the top of the next page not realizing he was still under the N/Aed step until the RI pointed it out as the CRO was beginning to perform a calculation. In addition, the initial analytical results for Cs-137 had the correct “number” but incorrectly listed the units as pCi/ml versus the correct Ci/gal so the printed value was off by a factor of 264 million. The shift technical engineer (STE) quickly identified the error and had it fixed.

Saltstone/Tank Farms: SRR transferred decontaminated salt solution from Tank 50 in HTF to both of the salt solution receipt tanks at Saltstone. SRR performed grouting operations in parallel with the second transfer. SRR had not conducted these operations previously in 2020. A RI oversaw these activities. During the second transfer, a Saltstone operator enabled the HTF to Saltstone Transfer Permissive switch. A later Saltstone procedure step has the Saltstone CRO request that the HTF CRO start the Tank 50 transfer pump. In parallel, the Tank Farms procedure states “[w]hen the Z-Area CRO request for Tank 50 Transfer Pump to be started, then START [pump].” However, the Tank Farms CRO mistakenly believed that enabling the permissive satisfied the request step and he started the transfer pump before Saltstone formally requested it. The Saltstone shift operations manager (SOM) recognized the error when the Tank Farms CRO notified Saltstone that they had started the pump, but decided to let the pump run. This error was poor conduct of operations, but did not cause a physical safety problem.

Savannah River Tritium Enterprise (SRTE): The RIs have been providing feedback to management regarding their observations on the inconsistent conduct and grading of STE, Shift Manager, and SOM oral boards. As a result, SRTE management is developing training to improve the conduct and consistency and is planning to issue the training next week. Additionally, SRTE has begun a six week period of requiring senior management oversight at all of the boards for the aforementioned positions.

Emergency Preparedness: The RIs observed a field drill for a simulated fire at the Tritium Extraction Facility, an in-person tabletop drill at HTF for a seismic event, and virtual tabletop drill at H-Canyon and Savannah River National Laboratory, although there were audibility issues at the H-Canyon drill.