

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 13, 2022

TO: Christopher J. Roscetti, Technical Director
FROM: L. Lin, Z. C. McCabe, E. P. Richardson Resident Inspectors
SUBJECT: Savannah River Site Activity Report for Week Ending May 13, 2022

DNFSB Activity: Vice Chairman Thomas Summers, Executive Director of Operations (EDO) Joel Spangenberg, Associate Technical Director of Field Operations Mark Sautman, and Douglas Brown, David Campbell, Anthony Hutain, and Michael Dunleavy of the Board's Technical Staff visited SRS from 5/9-5/11. They met with representatives SRNS, SRMC, BSRA, DOE-SR, NNSA-SRFO and discussed recent issues, including the Savannah River Tritium Enterprise (SRTE) 296-H stack, the January 30th tritium stack release, and the Savannah River National Laboratory (SRNL) safety basis update. They observed the Annual Site Exercise and walked down the K-Area Complex, SRTE, Salt Waste Processing Facility, H-Area Tank Farms, and SRNL. The Vice Chairman and EDO also met with SRS Watch, a local public interest group.

Tank Farms: SRNL personnel returned approximately 10 years' worth of dried radioactive samples to the Tanks Farms to be deposited into the Tank 51 riser. Due to the high activity level of the sample material, Tank Farms personnel, with assistance from SRNL, mocked up the evolution several times and completed a Facility Radiological Action Team meeting regarding the hazards and technical work documents associated with the effort. Tank Farms personnel were able to successfully place four containers into Tank 51 without any issues this week. The actual radiological dose rates were lower than anticipated, yet still measured 200 mrem/hr at 30 cm through shielding. The use of mock-ups and rigorous planning appeared to enhance Tank Farms personnel's ability to perform this evolution efficiently.

Defense Waste Processing Facility (DWPF): On 5/4/22, personnel were entering the Crane Maintenance Area (CMA), an airborne radioactivity area and high contamination area, to perform inspections on a crane when one of the breathing air hoses was severed. The rigger who lost air immediately notified radiological protection, proceeded to the airlock and doffed their suit top and surveyed out with no issues. The airlock doors have pass-throughs for the hoses. Prior to the shield door closing, one of the radiological protection inspectors noticed that a hose seemed to be out of the pass-through holder and placed it in the holder. During the issue investigation, personnel discussed that the air hose had been in two holders (i.e., one going into the CMA and one out of the CMA), and one end was on the floor going back into the CMA and was severed when the shield door between the CMA and the airlock was closed. The facility has issued a shift order to check the number of hoses in the holders compared to the number of personnel making entries and to ensure nothing is crossing the door closure path.

SRTE: The annual site-level exercise scenario consisted of a deflagration in a glovebox with a tritium release from the Tritium Extraction Facility (TEF). It included full participation from the H-Area Emergency Response Organization, Savannah River Site Operations Center, and SRS Fire Department. The exercise involved two injured workers at the scene who were exposed to tritium and required transportation to an offsite medical facility. Additionally, the exercise involved initiation of bioassay protocols for potentially affected workers and first responders.