DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 6, 2023

TO: Katherine R. Herrera, Acting 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 January 6, 2023

Defense Waste Processing Facility (DWPF): The resident inspectors (RIs) observed a gloved operator reach across a Contamination Area (CA) boundary to operate a valve, remove their arm from the CA without frisking for alpha or beta-gamma contamination, and operate other valves outside of the CA while wearing the same glove. When questioned, the operations (OPS) and radiological protection department (RPD) first line managers (FLMs) independently stated that continuous RPD coverage was required, but the RPD inspector had to leave temporarily. The OPS FLM also stated that prior to the RPD inspector leaving, they surveyed the valves for contamination and determined the valves were clean. However, the radiological work permit (RWP) still requires workers to remove their glove and frisk their hands and forearms immediately upon exiting the CA. DWPF management stated later that the RPD inspector had directed the operator to remove their glove and frisk their hand and forearm after each exit.

Protective Force: The protective force contractor implemented a new weapon caliber carried by their personnel prior to K-Area engineering completing the required unreviewed safety question (USQ) screening. Miscommunication and assumptions by Centerra and K-Area personnel contributed to the issue where both parties thought the other understood the changeover date of December 1, 2022 and the status of the USQ. This change was directed by DOE-SR and is not limited to K-Area. Based on conversations with representatives from other organizations, the RIs determined that this security change with potential impacts to several safety basis documents across the site was not adequately communicated. The other organizations including Savannah River Tritium Enterprise, Savannah River National Laboratory, and Savannah River Mission Completion were not included in the issue investigation discussions.

Tank Farms: Construction personnel were removing a hose-in-hose transfer line on Tank 10 riser 4 when they discovered the inner core hose was missing from the jacket hose. The hose-in-hose transfer line extends between riser 4 and the center riser of the tank connecting to the transfer pump. The facility determined that the core hose likely slid into the tank when an earlier cut was made. The instructions for the task performed earlier on the center riser did not require securing the hose. Instead, there is a step during the subsequent task near riser 4 to secure the hose to prevent the core hose from falling into the tank. During the issue investigation, engineering personnel discussed that they expected the sequence of work to cut the hose and secure it near riser 4 before making the cut near the center riser. However, that was not the sequence written in the work package. Personnel did not remember if the specific sequence of tasks was covered during the pre-job brief for the entire work package in late November. Not all personnel that were part of the job were not in attendance during the issue investigation that may have helped answer some of the questions. The issue investigation also discussed that the workers took a timeout when they did not see the core hose, but they did not notify the shift operations manager immediately. Further, the method of securing the hose near riser 4 was incorrect. Corrective actions are being developed to perform an extent of condition and to eliminate sequencing issues for hose-in-hose removal activities.