DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 13, 2025

TO: Technical Director
FROM: Savannah River Site (SRS) Resident Inspectors
SUBJECT: Savannah River Site Activity Report for Week Ending June 13, 2025

Staff Activity: A Hanford resident inspector (RI) was on site to augment the SRS RI.

H-Canyon: The SRNS emergency preparedness organization conducted a drill at H-Canyon, simulating a worker being splashed with high-activity waste solution after a misrouted transfer to the Outside Facilities. An RI observed the drill from the Incident Command Post (ICP). Shortly after starting, the drill was paused when the SRS Fire Department was summoned for an actual emergency. The drill resumed with players filling in for the responders. The initial take-cover alarm was not prompt, and the Incident Scene Coordinator (ISC) and first aid personnel were inadvertently contaminated when they approached the contaminated worker, preventing them from reaching the ICP. The Incident Commander appointed another player to act as the ISC. During the drill hotwash, personnel noted that the event scene responders were not wearing booties or gloves, which could have prevented their contamination. Additionally, they identified that there were significant communication issues hampering the timely exchange of information between the control room, scene responders, and ICP. The discussion during the hotwash was open and self-critical, with a demonstrated desire to identify needed performance improvements.

Defense Waste Processing Facility (DWPF): After a transfer line from the Salt Waste Processing Facility to 511-S at DWPF failed an in-service leak test, workers attempted to replace the jumper gaskets on that line using a modified torque pattern. This was a relatively challenging activity due to the steps involved and significant airborne radiation levels. The radiological support for the work was excellent, and the RI notes that the use of real-time monitored electronic personal dosimetry provided a significant enhancement to worker safety. Personnel completed the work, and a subsequent in-service leak test was satisfactory.

H-Area New Manufacturing: Operators hung a lockout/tagout on a system to replace an ion chamber (i.e., tritium detector) in the purge stripper system. The lockout has to be performed in a specific sequence to open the bypass line before isolating the lines connected to the ion chamber. The shift manager performed an informal pre-job briefing with the lockout installer, but not with the independent verifier. The installer had to be on a ladder to reach the valves in the sash hood to be locked out. Due to the very high airflow in that sash hood, it would be difficult for him to move the lockout tags up to the valves by himself. Therefore, the shift manager asked another operator—who was also supposed to be the independent verifier—to hand the installer the tags. The independent verifier was not aware the lockout had to be installed in a specific order when he handed the installer the tags. The installer installed them in the order he was given the tags, closing a line connected to the ion chamber before opening the bypass valve, resulting in glovebox pressures increasing and blowing a rupture disc. After investigating the blown rupture disc, personnel discovered the installer also hung the lockout devices rather than the verifier. Therefore, the verifier had not independently verified the lockout (i.e., separated by time and distance) as required by procedure.