DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 28, 2025

TO: Technical Director
FROM: Savannah River Site Resident Inspectors
SUBJECT: Savannah River Site Activity Report for Week Ending March 28, 2025

Staff Activity: A member of the Board's staff was on site for routine oversight activities.

Tank Farms: Last week, prior to a planned decontaminated salt solution transfer from the Salt Waste Processing Facility to Tank Farms, operators failed to properly perform the associated valve lineup, leaving two valves out of position. Upon commencement of the transfer, the control rooms for both facilities observed that tank level indications did not change as expected, secured the transfer, and discovered the improper lineup. The issue investigation meeting revealed that significant conduct-of-operations issues contributed to the event, including failure to adhere to the valve lineup procedure and failure to properly conduct the required independent verification. Additionally, first-line supervision did not provide the necessary oversight due to competing priorities during the shift and a handoff of responsibilities. Although a pre-job brief was conducted prior to the transfer evolution, the associated field operators were not involved. The first-line manager (FLM) conducted an informal pre-job brief with the assigned operators. The Board's staff is evaluating the contribution of informal pre-job briefs to operational issues across the site. At a minimum, they appear to be conducted in an inconsistent manner and may not be achieving the intended functions of a formal pre-job brief.

Defense Waste Processing Facility (DWPF): The SRMC drill team conducted a drill at DWPF to evaluate DWPF's response to a radiological and chemical spill, including a contaminated person. The drill initiation added limited training value by not requiring the operators to assess the simulated field condition. Instead, they were provided a verbal brief by the drill controllers and a written summary of the conditions to include in the initial report. Personnel response at the scene exhibited deficiencies in communications, command and control, and overall ability to coordinate execution of immediate actions. The source of the spill was a system leak that was not isolated until approximately 80 minutes into the drill. Contributing to the slow overall response, personnel reporting to the scene subsequently left the radiological buffer area without conducting required monitoring, creating an actual potential spread of contamination concern that required action by radiological protection personnel to survey affected areas. During the debrief, the controllers identified that insufficient drill control may have contributed to this issue.

Savannah River Tritium Enterprise (SRTE): SRTE operations improperly manipulated the tritium process stripper system, resulting in a protective rupture disk bursting. An operator inadvertently marked procedure steps as complete, causing valves to be out of their required positions, and trapping gas in the system. After noticing the error, the operator and FLM chose to continue with the procedure and attempted to correct the abnormal condition rather than calling a timeout. The excess system pressure caused the pump to interlock off twice, but on the third attempt to start the pump, it continued running and ruptured the protective disk. The issue investigation meeting identified that multiple opportunities to call a timeout were missed, with other causes being poor communication and excessive workload on the single control room operator.