

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 20, 2023

TO: Timothy J. Dwyer, Acting Technical Director
FROM: L. Lin, Z.C. McCabe, and E.P. Richardson, Resident Inspectors
SUBJECT: Savannah River Site Activity Report for Week Ending October 20, 2023

Savannah River Tritium Enterprise (SRTE): Last week, SRTE had two events where the lockout package did not specify all the impacts to equipment. In H-Area New Manufacturing (HANM), engineering reviewed the lockout and performed walkdowns, but missed that safety significant tritium air monitors (TAM) would be impacted by locking out the panel. When the work began, the control room received the alarms for the TAMs and entered the proper limiting conditions of operation. In H-Area Old Manufacturing (HAOM), engineering personnel missed that two air handling units (AHU) and an air monitor would be impacted by locking out a panel. During routing of the lockout, SRTE personnel identified additional necessary reviewers and added them to the lockout the day of the lockout placement. The oversight of the system impacts led to alarms for loss of ventilation and air monitoring. The impacted process rooms were evacuated and barricaded. During the issue investigation, personnel noted that one of the AHUs shut down as expected when the power to the pressure switch was impacted, but the other one did not. This is currently under investigation. In both the HANM and HAOM events, reviewers made assumptions and did not fully review the engineering drawings. As a compensatory measure, SRTE is requiring additional management review of lockout system impacts while further corrective actions are being developed.

Savannah River National Laboratory (SRNL): A technician was setting up a glovebox to analyze contaminated 3013 containers when they saw a spark. Upon further investigation, the technician noticed that a small stand (a lid holder) fell into a small gap between an electrical receptacle and a plug that was not fully in the receptacle. The technician requested another nearby technician to turn off power to the glovebox lights and receptacles. The technician was then able to “wiggle” the power cord and free the stand before removing the plug. The technician then informed their management and operations management, who barricaded the affected areas. SRNL personnel are working towards restoring the electrical utilities in the glovebox.

Defense Waste Processing Facility (DWPF): Prior to beginning work to install a new length of piping and place an air compressor out of service, construction personnel noticed that a portion of the pressurized air line system within the scope of work was not controlled via the recently determined lockout. Construction personnel then raised this concern to operations management who confirmed the issue and halted the task. Specifically, the area of concern was a planned tie-in location that consisted of a closed valve with a plug. The design modification clearly showed the valve as the location for the tie-in, but the work order governing the work was not as clear. The applicable work order section title clearly included the valve in question; however, the actual steps only directed the user to install the new segment of piping. The lockout order also did not include the valve. The DWPF management team has instituted a compensatory measure requiring the use of a lockout determination checklist followed by shift operations manager review. DWPF personnel will perform a casual analysis and determine further corrective actions.