DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 23, 2024

TO: Timothy J. Dwyer, Technical Director
FROM: L. Lin, Z.C. McCabe, and E.P. Richardson, Resident Inspectors
SUBJECT: Savannah River Site Activity Report for Week Ending August 23, 2024

Federal Oversight: A Resident Inspector (RI) observed the final qualification walkdown for a facility representative. The RI provided extensive feedback.

Savannah River Tritium Enterprise (SRTE): SRTE conducted their annual emergency preparedness (EP) exercise, which consisted of a vehicle accident which also impacted personnel moving a cart of tritium filled reservoirs. The scenario consisted of multiple injuries and a fire at the main scene, a critical injury at a different facility, and a loss of ventilation at a third facility.

Following further investigation into the blown rupture disk in the sample assay system (SAS) (see 7/5/24 report), SRTE determined that the H-Area New Manufacturing (HANM) shift manager silenced the alarm during a facility tour incorrectly assuming that it was an alarm that frequently comes in overnight when the SAS room is de-staffed. Additional issues identified were a decade's old material condition deficiency which resulted in complacency in operations silencing alarms in the SAS room, lack of SAS specific training for HANM operations personnel, and SAS personnel failing to use the required turnover checklist.

E-Area Annual Exercise: SRNS and DOE-SR graded the E-Area annual EP exercise as passing while acknowledging and documenting the overall poor performance demonstrated. The evaluation team appropriately identified numerous findings in the after-action report (AAR), including that the incident scene coordinator (ISC) did not use the required checklist and established the command post directly downwind of the simulated release while failing to identify the location of injured personnel. The AAR also identified that the radiological protection team did not know how many firefighters were combating the fire. Further, the AAR stated that the ISC failed to report to the incident commander when requested, which resulted in them providing conflicting directions from the command post and forward operating base, further delaying the response. SRNS has been working on their exercise grading system. While some of the changes look promising, the current process can result in an overall grade that is out of sync with observations. For example, the overall grade for this annual exercise was a pass despite several significant breakdowns in the emergency response.

Tank Farms: Electrical and Instrumentation (E&I) mechanics took a timeout when performing work when they realized that the scope of work included in their technical work document was incorrect. Specifically, their work package did not accurately depict the location of several termination points. They called a timeout and informed the shift operations manager and engineering. With authorization, the E&I mechanics investigated other junction boxes in attempts to find the other termination points. During the investigation they discovered that one line was energized at 120 volts and should have been the subject of a lockout. The issue investigation identified multiple work planning errors that led to this event; however, Tank Farms personnel struggled to accurately define the problem statement.