

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 9, 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 9, 2024

Defense Waste Processing Facility (DWPF): A shift manager (SM) noticed that the previous shift did not perform the required actions of a limiting condition for operation (LCO) related to ventilation system sand filter inlet plenum pressure twice. The safety basis requires operations personnel to take this reading once every six hours, but the implementing procedure requires every three hours. More than six hours passed, but watchstanders were able to take the LCO required readings prior to expiration of the grace period, thus avoiding a Technical Surveillance Requirement violation. Factors leading to this event included the team failing to adhere to operating procedures, the SM not properly logging the LCO entry, a lack of notification to the control room operator, and the Shift Technical Engineer not tracking the requirement.

Tank Farms: While performing corrective maintenance on the Tank 42 telescoping transfer pump (TTP) speed controller, workers were unaware of an uncontrolled source of hazardous electrical energy. Tank farms personnel installed a temporary modification that routed power from the Tank 51 TTP to the Tank 42 TTP, but it was not completed in official databases. Therefore, the work planners for the mechanical work did not realize the Tank 42 TTP had power. Mechanics completed the electrical and mechanical work on the Tank 42 TTP under different work packages that didn't properly refer to each other, which allowed operations to remove the electrical lockout with the mechanical work still in progress potentially exposing workers to hazardous energy. Management identified the issue during paperwork closeout.

H-Canyon: H-Canyon personnel performed the first dissolution of Fast Critical Assembly (FCA) fuel utilizing the electrolytic dissolver. This operation followed months of corrective maintenance on the electrical bus bars and re-performance of some readiness activities (see 6/28/24 and 7/26/24 reports). The team successfully worked through multiple unanticipated issues to load and dissolve the first two cans of FCA material last week. Post-dissolution sampling showed a lower-than-expected plutonium concentration, which required an additional extended dissolution. Management is modifying processes and procedures to improve future dissolution runs based on the lessons learned during this initial campaign.

L-Area: During inspections of the 70-ton crane superstructure, Operations personnel were unaware that the work was being performed per a technical work document (TWD). Thus, they failed to properly document completion of criticality prerequisites prior to commencing work and did not complete the TWD during the inspection. The team performed an informal instead of a formal pre-job brief even though the work package required it. Similar contributing factors recently led to procedural errors during a surveillance on basin rulers (see 8/2/2024 report).

Savannah River Tritium Enterprise (SRTE): SRNS personnel commenced their readiness assessment (RA) of the Combined Tritium Facilities safety basis, which is expected to continue through the beginning of September. NNSA-SRFO is performing a concurrent implementation verification review.