

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 8, 2024

TO: Timothy J. Dwyer, Technical Director
FROM: L. Lin and E.P. Richardson, Resident Inspectors
SUBJECT: Savannah River Site Activity Report for Week Ending November 8, 2024

DNFSB Staff Activity: D. Campbell and R. Eul were on site to observe the contractor readiness assessment (CRA) at the Savannah River National Laboratory (SRNL) for the Mk-18A Target Material Recovery Program.

NNSA: A resident inspector observed the final qualification oral board for a facility representative candidate. Feedback was provided to NNSA management.

SRNL Mk-18A: The CRA team, consisting of an interdisciplinary group from across the DOE complex, performed the onsite portion of its assessment this week. The review included observations of operational evolutions, demonstrations, drills, personnel interviews, system walkdowns, along with extensive document reviews related to the new Mk-18A program. SRNL will receive a total of 65 Mk-18A targets over the next decade, currently stored in L-Basin, and recover plutonium, americium, and curium isotopes for nonproliferation and medical applications. The CRA team is still consolidating its observations and final conclusions but determined that it had not seen sufficient demonstrations to complete the readiness assessment at this time. In-scope activities such as refilling the Mk-18A Tank-107 Concentrated Nitric Acid Supply were unable to be completed as planned this week. The team tentatively indicated that the on-site portion of the CRA would be resumed in late-January 2025, though it is unclear how this will impact the schedule for the federal readiness assessment, which is also currently planned for January 2025.

Salt Waste Processing Facility (SWPF): SWPF generated nonconformance reports (NCR) for two spare pumps that did not meet the design requirements upon receipt. Personnel issued and installed quality assurance (QA) hold tags on these general service pumps. Maintenance personnel generated work orders to correct the nonconformance and completed the repair in September. However, the responsible manager had not verified the repair, so the QA hold tags were not removed. In October, mechanics were performing corrective maintenance to replace a pump. They noted that there was a QA hold tag on the spare pump to be installed and contacted their first line manager (FLM). The FLM directed the mechanics to install the pump and that the hold tag would be removed the following week. Personnel performed a post-maintenance test (PMT) on the pump, and it was placed in-service. A week later, during a surveillance, personnel noted that the installed pump had QA hold tags on it, contacted operations management, and the pump was declared out of service (OOS). The pump was not used between the PMT and when it was declared OOS. During the issue investigation, personnel discussed whether going forward, general service equipment should not have an NCR generated, which is usually used by the rest of the site for safety significant and safety class nonconforming equipment. Personnel also noted that the work package for repairing the two pumps did not have a step to contact QA, though the NCR was referenced in the package. The FLM involved was not present in the issue investigation due to being on night shift. SWPF personnel are developing corrective actions, including evaluating the NCR and QA process for improvements.