DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 6, 2025

TO: Technical Director
FROM: Savannah River Site Resident Inspectors
SUBJECT: Savannah River Site Activity Report for Week Ending June 6, 2025

Staff Activity: The DNFSB Associate Technical Director for Nuclear Material Processing and Stabilization and a member of the DNFSB staff were onsite to augment resident inspector oversight coverage.

H-Canyon: Facility personnel failed to follow the site hazardous energy control process when removing a lockout/tagout on a steam system. Construction personnel were signed onto a lockout to support steam repairs, which initially included cutting and capping steam and caustic piping. A couple of weeks later, prior to resuming work, construction personnel noticed a steam leak inside the established system boundary. They appropriately called a timeout and notified management, who determined the path forward: leave the valve positions as-is, remove the old lockout, and develop a new lockout with an expanded boundary. The shift operations manager on the next shift approved removing the lockout while multiple personnel were still signed onto the lockout/tagout and prior to the new boundary being established. This constituted a breach of hazardous energy control processes, since all lockout holders must be signed off the lockout/tagout before it can be removed to ensure no personnel are exposed to hazardous energy. Following this event, facility personnel walked down all lockout/tagouts in H-Canyon and outside facilities and identified additional issues with damaged or faded tags. Facility personnel are evaluating corrective actions.

Savannah River National Laboratory (SRNL): A DOE team commenced the federal readiness assessment of the Mk-18A Target Material Recovery Program at SRNL. This follows completion of the associated contractor readiness assessment (see 11/8/2024 and 3/14/2025 reports). Notably, operational demonstrations included in-cell caustic dissolution and operation of other in-cell separations equipment, which had not been included in the scope of the contractor readiness assessment. This inclusion addressed an open staff concern regarding the scope of the contractor readiness assessment.

The work control documents governing in-cell operations include both research and development (R&D) directions and technical procedures. Development, review, and control of R&D directions are less formal and rigorous than those for technical procedures. Staff observed several instances where the R&D directions for caustic dissolution required correction for executability or clarification, indicating that these instructions might benefit from a more rigorous approach. It is unclear to the staff whether the work control document selection process was appropriately applied to Mk-18A activities, which more closely align with production activities than with R&D.

The contractor submitted their Justification for Continued Operations (JCO) to DOE as part of the unreviewed safety question process, after discovering they had exceeded their inventory limit (see 1/24/2025 report). The JCO incorporates new accident analysis calculations and revises a material-at-risk (MAR) case that allows for more solid MAR and less liquid MAR, and that bounds the current inventory.