

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 14, 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 June 14, 2024

Savannah River National Laboratory (SRNL): The original scope of SRNL's Implementation Verification Review (IVR) for revision 3 of the safety basis did not include field demonstrations for any of a dozen plus new Specific Administrative Controls (SAC). After discussions with DOE-SR, SRNL management re-engaged their implementation efforts by performing several demonstrations (see 5/24/24 report). The IVR process is intended to verify readiness rather than to provide coaching to achieve readiness at the review's conclusion. However, SRNL management have stated that many personnel that may be relied upon to perform these activities after implementation have not been exposed to the implementing documents unless they were directly involved in the development process. The resident inspectors (RI) observed three of the four demonstrations completed thus far. Two of the three involved personnel unfamiliar with the applicable technical work documents, which resulted in a time-out for each event. The other demonstration introduced a suspect level of artificiality and revealed unfamiliarity with response to a simulated abnormal event. Additionally, the RI observed several instances of coaching during the readiness demonstrations. SRNL personnel's inability to successfully perform these demonstrations revealed that their previous declaration of readiness was premature. Therefore, prior to performing the other scheduled demonstrations, SRNL management paused the efforts to better prepare their personnel.

H-Canyon: H-Canyon personnel conducted a facility radiological assessment team (FRAT) meeting to ensure that all hazards have been identified and controls established to mitigate or eliminate hazards for the work to be performed on replacing the anode and cathode thru-wall connectors for the electrolytic dissolver (see 4/19/24 report). The work will involve removing the plates and bolts on the hot gang valve corridor side of the thru-wall connectors and then using the crane in the hot canyon to pull the connectors through. The new thru-wall connectors will be staged inside the canyon and then installed. While the thru-wall portion of the hot gang valve corridor is open to the hot canyon, the expected dose rates at the opening before controls are implemented is 1.5 R/hr. H-Canyon personnel will construct a hut and install lead blankets for shielding around the thru-wall connectors in the corridor, which will decrease the expected dose rates to below 100 mrem/hr. The FRAT reviewed the job-specific radiological work permit and the work instructions. The area inside the hut will be posted as an airborne radiological area/high contamination area/high radiation area and workers inside the hut will either be in plastic suits with supplied breathing air or powered air-purifying respirators. Radiological protection department personnel will set up air sampling locations and will continuously monitor radiation, contamination, and airborne radioactivity levels throughout the job.

Tank Farms: In November 2023, a chromate cooling water header on the east hill failed and needed to be replaced. The facility has been placing concrete and installing anchors for new above ground piping. After the placement, personnel discovered that one of the concrete piers was approximately 18 inches too tall. Construction had proceeded with the placement before changes to the design documents (needed to correct elevation discrepancy) was issued.