

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 29, 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 March 29, 2024

DNFSB Staff Activity: Member of the Board's staff M. Randby was onsite.

H-Canyon: SRNS conducted an issue investigation on H-Canyon readiness assessment activities after a federal Readiness Assessment (RA) on the Fast Critical Assembly (FCA) was paused due to the issues found regarding the Nuclear Safety Documentation and Criticality Safety functional areas (see 3/1/24 report). Prior to this, SRNS and DOE had approved the safety basis revision, and the facility had performed an independent verification review (IVR) and a contractor RA. After the pause, an extent of condition (EOC) was performed on revision 18 of the H-Canyon Documented Safety Analysis (DSA) and Technical Safety Requirements (TSR). The EOC teams found numerous errors with procedures, surveillance tracking system records, and linking document database records that need to be revised. Several of these were not included in the safety basis change summary, which meant implementation reviews would not know to review those items. In addition, many of the items identified should have been in revision 17 of the H-Canyon safety basis, the currently implemented safety basis. The discussions mainly revolved around the immediate issues, and personnel at the investigation were not able to reach a consensus on how the facility reached the federal RA stage without identifying these issues. SRNS will perform a causal analysis and evaluate corrective actions.

DOE-SR developed a plan of action for improvement of their review of safety basis documentation. Further guidance and expectations are being communicated to the nuclear material division's facility engineers and criticality safety engineers. Both the contractor and DOE are performing reviews of other nuclear material facilities' safety basis documentation to identify any similar weaknesses.

Savannah River Tritium Enterprise (SRTE): SRTE conducted an issue investigation for manipulation of an incorrect transfer switch during installation of a lockout/tagout at H-Area Old Manufacturing, which caused several air monitors to alarm and the exhaust ventilation crossover damper to open. The first line manager instructed the operator to return the switch to its original position and then initiated a time out. The shift operations manager followed the appropriate procedure for responding to alarms including instructing personnel to evacuate process rooms. SRNS personnel identified that certain human performance improvement tools were not properly implemented, including the pre-job brief and point-read-operate. Further, the shift operations manager increased the priority of this work order due to speculation of equipment malfunction.

SRTE personnel are conducting a facility self-assessment (FSA) to prepare for upcoming open glovebox maintenance at the Tritium Extraction Facility. This activity is unique to SRTE in that the glovebox (immediately downstream of the extraction furnaces) contains the potential for contamination beyond tritium. Further, the components that require replacement will require the removal of a significant number of other components. The FSA includes document reviews, interviews, and walkdowns to identify gaps in the planning for this work and to ensure readiness.