

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 12, 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 July 12, 2024

Savannah River Field Office (SRFO): SRFO sent a letter to SRNS management directing them to re-perform the potential inadequacy in the safety analysis (PISA) resulting from the inadvertent tritium stack release on 1/30/22 where tritium was drawn back into the facility through its ventilation system. SRFO re-evaluated the previous PISA determination and concluded that SRNS's technical bases were insufficient to support a negative determination. Additionally, SRFO directed SRNS to re-evaluate the adequacy of the combined tritium facilities consolidated hazards analysis and evaluate the application of the contractor assurance system (CAS) to this PISA determination to identify any opportunities for improvement to ensure continued CAS effectiveness. The Board sent a letter detailing their safety concerns on 8/11/22.

Savannah River Tritium Enterprise (SRTE): During assembly of tritium transfer system components, a process quality operator (PQO) punctured their left middle finger with lockwire. A PQO trainee was having difficulty properly routing the wire, so the qualified operator took over to pull it through a fitting using needle nose pliers. As a result, the qualified operator was out of their normal position and placed their off hand on the work bench for support so when they freed the wire, it punctured their finger through a nitrile glove. The PQO immediately stopped work and notified their first line manager (FLM). The unsupervised trainee removed the lockwire from the unit and placed the work area in a safe condition. The FLM escorted the PQO to site medical where they were cleared to return to work with no restrictions. No personnel were contaminated and there was no radiological uptake associated with the puncture.

SRS Emergency Management: The site emergency management department, working along with the site drill team, continue to develop and execute larger and more complicated scenarios across the site (see 5/24/24 report). These two teams, along with support from numerous other site organizations and SRTE subject matter experts, collaborated to successfully run a large-scale tritium release drill from the Tritium Extraction Facility. Adding further complexity, the drill was initiated via a cyberattack from an insider threat, which is the first time this type of initiator has been utilized. Although multiple weaknesses were observed during this scenario, the resident inspectors are optimistic of the progress being demonstrated by the emergency management department and site drill teams.

H-Canyon: After replacing the anode through-wall connector, the facility attempted to remove the cathode through-wall connector from the hot canyon for replacement (see 6/28/24 report). After pulling it partially out with the crane and removal tool, the crane operators could not move it any further. They determined that part of the electrolytic dissolver condenser was in the way. While investigating, facility personnel discovered a note in the engineering drawing that indicated the lifting bail on the condenser had to be in a different position to remove the cathode. However, another component was in the way of moving the lifting bail completely. The facility developed work packages for removing the condenser, after which the cathode through-wall assembly was replaced, and the condenser and its jupers reinstalled.