

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 26, 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 26, 2024

Tritium Extraction Facility (TEF): Maintenance personnel were preparing to swap a breaker in an automatic transfer switch by bringing the standby diesel online and then opening the breaker prior to racking it out. While the breaker was still energized, a maintenance mechanic was preparing by staging tools and donning a 40-kcal suit. As part of the preparation, the mechanic erroneously attempted to open the racking window, which is interlocked with a trip bar that must be depressed to open the breaker. While the mechanic only moved the window slightly, the breaker opened. The uninterruptable power supply and diesel generator came online as designed, but this resulted in a brief loss of power to some equipment. During the issue investigation, TEF personnel identified potential concerns with the potential malfunction of the interlock mechanism in the breaker and the classification of the racking procedure (i.e., if a reference procedure is appropriate). Although the informal pre-job brief as discussed in the issue investigation appeared adequate, TEF management wants to ensure an appropriate amount of rigor to future pre-job briefs until further corrective actions are completed and so will require formal pre-job briefs for all electrical breaker work as a compensatory measure.

Defense Waste Processing Facility (DWPF): While performing maintenance in the Contact Decontamination and Maintenance Cell, a recently qualified breathing air manifold operator secured air to a mechanic working in a plastic suit when they closed their air supply valve while attempting to open a different one. The mechanic immediately recognized the issue and successfully completed an emergency egress with radiological personnel assistance. They were not contaminated or injured during this event, but they were put at unnecessary risk. While qualified to operate the breathing air manifold as a standalone task, the new breathing air manifold operator had no training in facility operations such as processes, equipment, and hazards and therefore lacked the appropriate knowledge to perform this role in a nuclear facility. The resident inspector's later observation of the training confirmed that the non-facility personnel are administratively qualified to operate the breathing air system without performing the task under instruction in real world conditions or receiving any facility operational training.

H-Canyon: DOE concluded their federal readiness assessment (FRA) on revision 18 of the H-Canyon safety basis after the initial FRA was suspended back in February (see 3/1/24 report). They identified 6 findings and 2 opportunities for improvement. All pre-start findings were resolved, and the facility implemented revision 18 of the safety basis this week.

Tritium Finishing Facility (TFF): NNSA authorized SRNS to utilize the funds provided to the project in fiscal year 2024 to further the TFF project. The directing letter requested a Baseline

Change Package by August 30; authorized completion of the process design to 60% design completed; and requested an update to the preliminary consolidated hazard analysis focusing on the facility worker analysis and associated safety significant controls based on 60% design completed. Of note, SRNS will continue their efforts to develop a Preliminary Documented Safety Analysis based on the 30% design completed.