DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 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 April 26, 2024

Site Maintenance Training: On two occasions, resident inspectors (RIs) observed inadequate conduct of fall protection classroom training and job performance measures (JPMs). The instructor allowed one trainee in each event to complete their JPM during class as a guided demonstration prior to completing the pre-requisite written exam. Later, the instructor read nearly all the questions and answers immediately prior to issuing the exam to the class. All trainees donned their harnesses simultaneously and were directed to peer check each other, contrary to the requirement of the instructor conducting one on one evaluations. These instructional technique deficiencies are analogous to issues identified by the RIs during multiple regulatory training sessions in 2022 (see 8/19/22 report) indicating that the corrective actions were not effectively applied across all site training programs. Upon notification, the Site Training Director took meaningful actions to prevent recurrence.

Savannah River National Laboratory (SRNL): On April 8, SRNL temporarily lost power from feeder 6 without backup power to a majority of the facility due to an overcurrent caused by animal intrusion. The 773-A standby diesel generator has been out of service for a significant time due to difficulties with procuring replacement batteries, while the 754-13A standby diesel generator was out of service due to scheduled maintenance. The remaining standby diesel, 794-A, was in service but only supplies a portion of the SRNL nuclear facilities with backup power, such as the Off-Gas Exhaust and Central Hood Exhaust fans. During the event, the control room lost lighting, but several systems, such as the distributed control system and alarm panels, remained functional as they are powered by an uninterruptable power supply (UPS) with an approximate capacity of 100 minutes. E, F, and D Wings lost power and ventilation. Additionally, the control room lost communication capabilities, and personnel responded to the control room to assist the shift operations manager (SOM) in responding and maintaining a safe facility configuration. SRNL personnel were able to restore power after approximately 90 minutes. SRNL personnel are still evaluating improvements that they can make to their response procedures and equipment configuration. For instance, the loss of power resulted in a loss of the public address and radio systems, which may be reconfigured to be powered by the UPS.

In a separate event, maintenance personnel removed a breaker for replacement without operations manipulating the appropriate manual transfer switch to an alternate feed. This caused another loss of power event, which was not as significant as the previous event as it only impacted a portion of the facility which included Cell Block A exhaust fans. When maintenance personnel first opened the breaker, they noticed a fan shut off and some lights nearby lose power, which was not discussed prior to the evolution nor was it an expected result of opening the breaker. Rather than stop working, maintenance personnel sent someone to the control room to check to see if there was an issue while personnel in the field continued working. The SOM was able to respond to the scene and direct maintenance personnel to reinstall the breaker. The impacted portion of the facility was without power for approximately six minutes.