DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 2, 2024

TO: Timothy J. Dwyer, Technical Director
FROM: Frank Harshman and Clinton Jones, Resident Inspectors
SUBJECT: Oak Ridge Activity Report for Week Ending August 2, 2024

Building 9720-5: Y-12 previously experienced an unplanned power outage that impacted several buildings on site (see 7/26/2024 report). During the outage, an emergency diesel generator did not function as designed resulting in a loss of backup power to the building's criticality accident alarm system (CAAS) and loss of functionality of the system. It was later determined that the cause of the emergency diesel generator failure was a coolant leak that resulted in the engine overheating. CNS entered a limiting condition for operation (LCO) and established the required restricted access to the building. At that time, CNS did not file an occurrence report for the degradation of a safety system. CAAS power was reestablished after three hours when normal site power to the facility was restored. The shift manager (SM) attempted to perform the surveillance requirements (SR) to reestablish system operability but could not access all of the CAAS detector locations and did not complete an operability determination that the remaining CAAS detection stations were operable. The SM collapsed the restricted access boundary to the areas of the detectors that the SR was unable to be performed on and restored normal access to the other areas. Collapsing the boundary to those detectors was a misapplication of the LCO resulting in a technical safety requirements (TSR) violation for failure to complete a required LCO action. CNS did not recognize the missed LCO action or that it constituted a violation of the TSR for the building. The next business day the required SRs were completed on the remaining detectors. CNS then exited the LCO and restored normal access to the entire facility.

A resident inspector (RI) was reviewing the facility logs several days after the power loss event and was unable to locate a corresponding occurrence report for the degraded safety system that occurred when the emergency diesel generator failed to power the CAAS system. The RI raised the issue with the YFO facility representative (FR) for the building. The YFO FR then discussed the matter with CNS. As a result, CNS filed an occurrence report for degradation of a safety significant system for the loss of power after discussions with the YFO FR. The YFO FR further reviewed the circumstances around the CAAS LCO actions and restoration of the system. Based on the logs, the YFO FR concluded that a TSR violation had occurred. CNS reviewed the circumstances, declared a TSR violation, filed an occurrence report, and convened an event investigation. The RI attended the event investigation that covered both the failure of the emergency diesel generator and the separate TSR violation. CNS will conduct a critique of the event and preform a causal analysis. The RI intends to closely oversee these efforts to ensure adequate resolution of the underlying causes.

Uranium Processing Facility (UPF): A RI attended the UPF commissioning summit being led by the federal Y-12 acquisition and project management office (APMO). The purpose of the summit was to provide an update on recommendations, improvements, and lessons learned applicable to later phases of the UPF project with the goal of improving UPF project delivery. Topics included commissioning overview, startup summary, federal oversight strategy, affirmations process, and readiness approach. The summit was attended by CNS, APMO, YFO, DOE HQ, and other managers from across the DOE complex.