

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 29, 2024

TO: Timothy J. Dwyer, Technical Director
FROM: Frank Harshman and Clinton Jones, Resident Inspectors
SUBJECT: Oak Ridge Activity Report for Week Ending November 29, 2024

Conduct of Operations: A resident inspector (RI) attended the recent Consolidated Nuclear Solutions (CNS) trend analysis and problem prevention (TAPP) meeting that was focused on the five technical safety requirements (TSR) violations in the past six months. CNS violated two different TSR specific administrative controls (SAC) in Building 9212 (see 5/10/2024 and 9/13/2024 reports), missed two TSR surveillances in Buildings 9212 and 9215 (see 8/16/2024 report), and incorrectly applied a limiting condition for operation (LCO) action in Building 9720-5 (see 8/2/2024 report). CNS reported this as a statistically significant increase due to exceeding the average of 1.6 violations per year over the past ten-year period. During the event investigation for the last Building 9212 TSR SAC violation, the Y-12 Field Office (YFO) raised questions about the adequacy of the content and implementation of the current directive-action (DA) SACs. As a result, YFO requested CNS to perform a review of all 21 DA SACs. CNS determined two of the DA SACs to be inadequately implemented and will revise them prior to resuming the affected operations. CNS also identified many opportunities for improvement in other DA SACs.

After the most recent TSR violation in Building 9212, CNS evaluated the five violations for common causes and associated broad-scope preventative actions. CNS identified common causes such as poorly written DA SACs, lack of programmatic peer review on entry and exit of LCOs, and a lack of formal and continuing training on application of LCOs, SRs, and operability determinations. CNS proposed preventative actions for the causes including a re-write of all Y-12 DA SACs by the end of fiscal year 2025, peer checking or independent verification on compliance documentation, and a reinstitution of continuing training for facility operations management personnel. The RIs regularly provide oversight of the TAPP and conduct of operations continuum meetings to track the progress of conduct of operations issue resolution on the site as the RIs have a longstanding concern on the topic.

Building 9204-2E: CNS successfully performed the annual TSR surveillance for the legacy criticality accident alarm system (CAAS), removing it from the grace period (see 11/22/2024 report). CNS is focused on troubleshooting the water leak and path forward to complete implementation of the new CAAS 3S.

Aging Infrastructure: CNS repaired the potable water system rupture that occurred between Buildings 9204-2E and 9215. The rupture resulted in the loss of multiple building fire suppression systems and caused flooding in both buildings (see 11/15/2024 report). CNS restored the water supply to the affected fire systems, performed the required surveillances, and exited fire patrols after determining the systems were operable. An RI attended the critique of the event investigation. During the critique, the YFO maintenance program manager identified that CNS is procedurally required to complete an engineering evaluation (EE) of the failure. The EE is required due to the impacts the rupture had on safety basis credited system. CNS previously scheduled replacement of at-risk piping and does not intend to accelerate that replacement due to other competing mission and safety priorities.