

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 31, 2023

**TO:** Christopher J. Roscetti, Technical Director  
**FROM:** Frank Harshman and Clinton Jones, Resident Inspectors  
**SUBJECT:** Oak Ridge Activity Report for Week Ending March 31, 2023

**Staff Activities:** R. Csillag and Z. Demeke attended the Maintenance Manager Working Group Meeting hosted at Y-12 this week. During the visit, they also conducted walkdowns with the resident inspectors to observe current processes in Building 9204-2E 9212 and 9215.

**Building 9212:** On March 14, 2023, CNS engineering revised the Headhouse Fan Room Wet Vacuum Trap System Annual Surveillance procedure to eliminate pre-conditioning of the isolation valves before recording timed openings for both data collection and performance of the annual technical safety requirements (TSR) surveillance. The resident inspector brought the issue of pre-conditioning of TSR credited isolation valves to CNS engineering and CNS management (see 1/20/2023 report) after attending a critique on the wet vacuum system due to a conduct of operations issue. The resident inspectors discussed the changes and performed walkdown of the system with the process and system engineers; the resident inspectors have no further concerns with the data collection techniques utilized for the isolation valves in the wet vacuum system.

**Nuclear Criticality Safety:** The resident inspectors reviewed the Reactive Assessment of Nuclear Criticality Safety General Requirements (NCSGR) Non-Compliances and Corrective Actions released by NPO on March 14, 2023. This assessment was prompted by CNS's discovery of multiple non-compliantly loaded birdcages in October of 2022 (see 10/28/2022, 11/4/2022, and 11/11/2022 reports). NPO reviewed the adequacy of NCSGR implementation in Buildings 9204-2E, 9212, and 9215 and reviewed the immediate corrective actions taken by CNS to address the NCSGR non-compliances related to birdcage loading and movement. One performance problem and one noteworthy practice were identified. The performance problem identified was ineffective implementation of criticality safety evaluation requirements. The specific CSE requirements identified were the excessive use of plastic in fissile material containers, fissile container dimension verification, and container loading verification requirements. The noteworthy practice identified was the event recovery process following the discovery of the first non-compliantly loaded birdcage. The resident inspectors agree with the initial results of the assessment and the assessment's concerns that the effectiveness of the enhanced oversight plan in Building 9204-2E is limited. Further work is needed to drive long-term and sustained improvement by providing data on procedure modifications necessary to improve verbatim compliance. NPO plans to review procedure modifications from CNS corrective actions. The resident inspectors will continue to evaluate CNS actions and the subsequent NPO review.

**Building 9720-5:** The resident inspectors conducted a walk down with NPO and CNS nuclear criticality engineers in the materials storage areas in Building 9720-5. CNS highlighted recent posting changes that resulted from comments the resident inspectors made previously noting that several of the criticality safety postings were severely faded due to age (see 2/17/2022 report). The resident inspectors did not note any NCS discrepancies during the walkdown.