

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 29, 2023

TO: Timothy J. Dwyer, Acting Technical Director
FROM: Clinton Jones and Frank Harshman, Resident Inspectors
SUBJECT: Oak Ridge Activity Report for Week Ending September 29, 2023

Staff Activity: R. Eul, D. Minnema, J. Jarvis, B. Weathers, and D. Andersen traveled to Y-12 as part of a DOE complex-wide nuclear criticality safety (NCS) program review. The primary objective of this review is to evaluate the overall health of NCS programs at defense nuclear facilities, which includes site visits to the Los Alamos National Laboratory, Savannah River Site, and Y-12. The DNFSB staff was supported full-time by the resident inspectors for the duration of the review. The review team met with CNS and NPO personnel to discuss several aspects of the Y-12 NCS program. Discussions covered the general NCS program, ANSI/ANS-8 standards implementation, NCS controls and assumptions, criticality safety evaluations (CSEs), oversight, and staffing. The resident inspectors provided insight into processes at Y-12 and discuss specific examples of past NCS issues during the meetings. The review team also conducted interviews with criticality safety officers, criticality safety analysts, non-supervisory fissile material handlers, and operations supervisors.

The NCS review team chose select operations to observe in Building 9212 and the Highly Enriched Uranium Materials Facility (HEUMF). The staff specifically chose these operations based on a previously completed detailed review of CSEs for those operations. At Building 9212, the staff and resident inspectors discussed denitrator, ultrasonic chip cleaning, briquette generation/processing, and tray dissolver operations, and observed some of these activities, including the pre-job briefings. At HEUMF, the staff and resident inspectors observed special nuclear material vehicle unloading activities. The staff also toured the material access area of HEUMF, discussed the facility layout, and examined NCS postings throughout the facility. Specific NCS comments on these operations will be included in the review team's final report. The resident inspectors and site cognizant engineer also performed a walkdown of select processes in Building 9215, separate from the NCS review, as part of continued site familiarization. Facility operations management personnel provided excellent support for the walkdown and provided detailed information on current issues that are impacting the facility.