

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 14, 2024

TO: Timothy J. Dwyer, Technical Director
FROM: Clinton Jones, Resident Inspector
SUBJECT: Oak Ridge Activity Report for Week Ending June 14, 2024

Nuclear Criticality Safety: The resident inspector (RI) reviewed the Y-12 Field Office (YFO) *Assessment of Nuclear Criticality Safety General Requirements Implementation, Non-Compliances and Corrective Actions* report results. YFO concluded the report and out brief during the same week that the DOE Office of Enterprise Assessments (DOE-EA) released their report, *Independent Assessment of Nuclear Criticality Safety Program and Controls at the Y-12 Security Complex*. Although the overall objectives were different, both assessments found common performance problems in CNS' the ability to effectively implement job specific administrative nuclear criticality safety (NCS) controls into procedures in a clear and precise manner in accordance with programmatic procedures.

DOE-EA conducted an independent assessment to evaluate the effectiveness of CNS' activities to manage and maintain an appropriate NCS program, controls implementation, and operating practices in Buildings 9215 and 9204-2E. EA also evaluated the federal oversight provided by YFO relating to NCS. DOE-EA noted four observations, two performance problems and one finding. The DOE-EA finding identified a CNS procedure that allows NCS engineers in training to qualify on, and independently perform, NCS tasks without required supervision by a fully qualified NCS engineer. DOE-EA also concluded that YFO has effectively performed Federal oversight of the Y-12 NCSP in accordance with DOE Order 226.1B, *Implementation of Department of Energy Oversight Policy*.

YFO conducted their NCS assessment as a follow up to multiple issues starting in November 2022 (see 11/4/2022 report) where production personnel were not using the lengthy administrative procedure, *Nuclear Criticality Safety General Requirements*, correctly or in tandem with the specific work control documents for specific areas. YFO documented four performance problems, one observation, and one noteworthy practice. The RI discussed the performance problems with the YFO NCS program manager as the RI has made several similar observations associated with one of the performance problems. The YFO identified performance problem states, in part "The action execution for long term, preventative actions fell short of CNS's own stated expectations or was otherwise inadequate to prevent recurrence of the event." In the RI's opinion, the process would be more effective if the responsible managers involved in the event investigation process took more accountability in developing corrective actions that would prevent recurrence and ensured closure evidence for those actions was clear and identifiable by any person or organization that is reviewing those actions.

Building 9212: CNS completed the final reduction run based on the planned shutdown of the reduction process (see 1/27/2023 report). CNS is currently evaluating a disposition path for the remaining low quality green salt and plans to remove uranium holdup in the system prior to transitioning the system to cold standby. CNS is required to revise the criticality safety evaluation to reflect the state of the system prior to transitioning to cold standby mode.