

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 19, 2025

**TO:** Technical Director  
**FROM:** Oak Ridge Resident Inspectors  
**SUBJECT:** Oak Ridge Activity Report for Week Ending December 19, 2025

**Staff Activities:** Two DNFSB technical staff review teams traveled to the Y-12 National Security Complex this week. The Board's staff teams are reviewing the Uranium Processing Facilities' (UPF) quality assurance program and conducting a separate review of CNS's extended life program (ELP). The CNS ELP is CNS's systematic approach to assess facility conditions and make targeted improvements to extend the life of its production facilities beyond the original design lifespan. As part of the ELP review, the team conducted walkdowns of Buildings 9204-2E and 9215 to assess the condition of the structures. The other team met with the federal Y-12 project management office and UPF project team to discuss the quality assurance program and conduct walkdowns. During the walkdown, a resident inspector identified two missing foreign material covers on the recovery evaporator process piping. The UPF project team noted the location and later corrected the condition.

**Building 9215:** CNS entered an argon outage to perform maintenance on the electrorefining (ER) glovebox and allowed the contents of the electrorefining cell to solidify. Prior to entering the outage, CNS placed a cover on the electrorefining cell before the atmosphere in the glovebox is allowed to go out of moisture and oxygen content specification. During a routine observation of the new process, the YFO nuclear criticality safety subject matter expert asked CNS if they had analyzed the loss of atmosphere condition for a normal maintenance shutdown due to this state not being included in the criticality safety evaluation (CSE) except for abnormal conditions. CNS entered the potential nuclear criticality safety issue (PNI) process to evaluate the issue. After a review of a 2014 report titled *Deliquescence of DER ER Salt Baths*, CNS concluded short duration exposure to the typical relative humidity in Oak Ridge, TN would not enable the salt to absorb enough water to be able to moderate the mixture and result in a criticality event. Based on the referenced report, CNS stated it would take over five years to reach that state with conservative assumptions. CNS closed the PNI and committed to add a change to a future revision of the CSE addressing the effects of humid air entry into the electrorefining cell from short duration outage and maintenance activities.

**Direct Chip Melt (DCM) Project:** YFO is no longer requiring a DOE readiness assessment be performed for the DCM Project. The CNS DCM project was previously listed as a checklist contractor readiness assessment followed by a DOE readiness assessment. YFO directed the performance of a DOE readiness assessment due to the expectation that the electrorefining project would complete after the DCM project. YFO re-evaluated the need for a DOE readiness assessment, and determined it was not needed since the electrorefining project has been granted startup authorization (see 09/26/25 report).

**Uranium Processing Facility (UPF):** CNS originally listed the startup authorization authority (SAA) for the UPF project, as the NNSA administrator. YFO identified the need to align the SAA with the latest revision to DOE Order 425.1, *Verification of Readiness to Start Up or Restart Nuclear Facilities*, which designates the Cognizant Secretarial Office as the SAA for initial startup of a newly constructed Hazard Category 2 nuclear facility.