DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 22, 2025

TO: Technical Director

FROM: Oak Ridge Resident Inspectors

SUBJECT: Oak Ridge Activity Report for Week Ending August 22, 2025

Staff Activities: The DNFSB emergency management lead, along with a resident inspector (RI), observed an Oak Ridge National Laboratory (ORNL) functional exercise. The exercise scenario involved a forklift failure during a drum transfer between storage buildings at the Transuranic Waste Processing Center (TWPC). The failure resulted in a pallet of drums striking the ground, igniting hydrogen gas inside, and causing an explosion. The Laboratory Shift Superintendent classified the resultant explosion as a site area emergency in accordance with the building's emergency action levels. The exercise participants mainly consisted of UT-Battelle and DOE Office of Science personnel at Oak Ridge National Laboratory. UT-Battelle tested new emergency response capabilities, including deployable drones and robotic dogs, during the exercise. Although the scenario involved TWPC, only two representatives from the facility participated in the exercise at the alternate emergency operations center while the facility itself remained under normal operations. The RI noted that this was a missed opportunity to test facility contractor interfaces. ORNL completed a post-exercise hotwash and debrief the following day. ORNL will issue a final report detailing lessons learned and corrective actions.

TWPC: DOE conducted a Federal Readiness Assessment (FRA) at TWPC. The FRA's purpose was to verify the operational readiness of United Cleanup Oak Ridge, LLC (UCOR) to conduct oxide waste processing operations. UCOR assumed operations of the TWPC facility in 2022 (see 11/4/2022 report). The FRA team's final report concluded that all functional areas were met and that TWPC is prepared for oxide waste processing operations. The FRA team identified one post-start finding in maintenance and six observations in emergency management, quality assurance, radiation protection, and training. The FRA team also identified nine opportunities for improvement in conduct of operations, nuclear safety, and radiation protection. The post-start finding will require federal approval of proposed corrective actions to validate closure, and all other issues will be managed and resolved by UCOR. The FRA Team concluded the issues identified were sufficiently manageable to recommend the startup of TWPC oxide waste processing operations. The FRA included operational demonstrations, interviews, and emergency operations as part of the review. The RI conducted an independent review of documentation. The RI's questioning during the FRA directly led to the identification of one of the FRA opportunities for improvement concerning the linking of procedure steps to safety basis requirements. The RI found that the finding and other observations captured in the final report were consistent with the RI's observations made during the FRA. The RI plans to review the corrective actions from the issues identified by the FRA to evaluate their adequacy.

Building 9206: CNS completed the downgrade of Building 9206 from a nuclear hazard category II facility to less than a hazard category III facility. CNS will place the building into its legacy facility stewardship program and will maintain the building until it is transferred to DOE's Office of Environmental Management for eventual demolition.