

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 16, 2022

TO: Katherine R. Herrera, Acting Technical Director
FROM: Frank Harshman and Clinton Jones, Resident Inspectors
SUBJECT: Oak Ridge Activity Report for the Week Ending December 16, 2022

Staff Activity: Mark Sautman, the Associate Technical Director for Field Operations (ATD-FO), traveled to Oak Ridge this week. On the Y-12 site, the ATD-FO and resident inspectors (RIs) observed the final qualification oral board for a Building 9215 shift technical advisor. The ATD-FO accompanied the RIs on a walkdown of Building 9204-2 and Building 9204-2E to review preparations for an upcoming Building 9204-2E power outage that required an alternate power feed to the criticality accident alarm system and compensatory measures for the credited fire suppression systems due to the duration of the outage. At the Transuranic Waste Processing Center, he observed waste processing operations in the box breakdown area and discussed overall facility operations with the OREM facility representative.

Building 9212: CNS placed the accountable steam condensate (ASC) system in warm standby mode following its failed semiannual surveillance requirement (SR) for the leak test of a credited flow isolation valve (see 12/02/2022 report). CNS diagnosed the credited isolation valve and determined that there was a leak in the valve packing. CNS repaired the valve by tightening the packing. CNS reperformed the SR as part of post-maintenance testing by pressurizing the boundary for 10 minutes to verify that the system could hold pressure with less than a 1 psi pressure drop. CNS also retested the valve closure timing to ensure that the packing adjustment did not affect the required system isolation time. The isolation valve is credited to prevent fissile material from entering the storm sewer in the event of a barrier breach in upstream process systems. As the leak was determined to be from the packing, leaving the isolation function of the valve intact, CNS rescinded the occurrence report and performed a follow-up operability determination to document system operability.

Building 2026: DOE Oak Ridge Office of Environmental Management approved revision three of the Documented Safety Analysis (DSA) and Technical Safety Requirements for the Building 2026 Initial Processing Campaign (IPC). Isotek's changes to the IPC DSA involved the incorporation of the thorium polishing operations into the new P4 Hot Cell; clarifications made to the facility boundary extension for the transfer of material between Building 2026 and Building 3019; text changes for addressing two opportunities for improvement identified during the recent DOE Operational Readiness Review; clarifications made to Limiting Condition for Operation for the K-2 Confinement Ventilation System; and organizational reporting changes. Isotek revised the DSA to address the inclusion of the P4 Hot Cell as an existing hot cell that will now be used in the IPC. This hot cell is currently part of the hot cell bank in Building 2026 but was considered a spare cell not used in the original IPC scope. Thorium polishing is currently performed in the processing cells, but operational changes will relocate this activity to the newly identified P4 Hot Cell. Isotek will conduct a management readiness assessment utilizing a readiness assessment checklist for the activities associated with thorium polishing in the P4 Hot Cell. Isotek chose to conduct a management readiness assessment based on the identical performance of thorium polishing in the P4 Hot Cell with current polishing activities in the other process cells.