

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 23, 2024

TO: Katherine R. Herrera, Acting Technical Director
FROM: Frank Harshman and Clinton Jones, Resident Inspectors
SUBJECT: Oak Ridge Activity Report for Week Ending February 23, 2024

Building 9212: CNS declared a potential inadequacy in the safety analysis and subsequently declared a positive unreviewed safety question after the second failure of a level detection system on the building's dry vacuum system (see 7/17/2020, 2/2/2024 reports). CNS Reliability Engineering performed an evaluation to determine the cause of the failure, whether other failures were related, and evaluated the overall reliability of the dry vacuum level detection system. CNS determined insufficient data exists to determine whether this failure indicates a change in reliability of the equipment but concluded that there is a potential increased failure rate of the level detector. An operational restriction remains in-place requiring a TSR surveillance requirement functional test when placing the dry vacuum system in service.

Highly Enriched Uranium Materials Facility (HEUMF): The resident inspector (RI) walked down the perimeter of HEUMF including the area of the newly constructed connector structure that will allow passage between the Uranium Processing Facility (UPF) and HEUMF when complete. The RI noted two lightning protection grounding wires leading from the roof of HEUMF were not connected to what appeared to be newer grounding wire protruding from the ground. The RI notified facility operations management (FOM) and walked the issue down with a shift technical advisor. The operations manager led an additional walkdown of the building's roof to inspect the ground wire connections to the roof grid with no additional issues noted. Members of FOM followed up with the RI and found that the ground wires were disconnected during the removal of a concrete pad as part of added scope to the construction work associated with the connector structure. The RI continues to discuss the issue with FOM as it is not readily apparent what would direct the reconnection of those grounds to the building. In addition, the RI continues to evaluate if the added work scope was properly evaluated as an unreviewed safety question since these changes were made after the interface control document, which outlines how grounding connections to HEUMF will be affected during UPF construction, was issued.

Qualification Board: The RI attended a shift technical advisor final oral qualification board. In advance of the qualification board, the RI attended the pre-board meeting where question selection was performed. FOM assembled personnel from engineering, criticality safety, shift manager and shift technical advisor staff, and a NPO facility representative to provide feedback on the selection and content of the oral board questions. In the RI's opinion, including oversight in this process proves to be effective at engaging personnel involved both in the administration and oversight of the board prior to performance, where questions may arise. During the board, the members of the board asked appropriate follow-on questions to determine the candidate's level of knowledge without leading the candidate to a specific answer. The members of this board have incorporated feedback given on previous boards to enhance the qualification process. Overall, the qualification board was performed per the procedure and tested the candidate at the expected level of discipline for the position.