

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 31, 2024

TO: Timothy J. Dwyer, Technical Director
FROM: Frank Harshman and Clinton Jones, Resident Inspectors
SUBJECT: Oak Ridge Activity Report for Week Ending May 31, 2024

Building 9995: The resident inspector (RI) completed a review of various aspects of the fire protection program at Y-12. During that review, the RI identified that Building 9995 was not meeting the requirements of the Y-12 fire protection manual. The Y-12 fire protection manual stipulates that facilities management complete a monthly walkdown. These walkdowns are intended, at a minimum, to locate unnecessary transient combustibles, identify uncontrolled ignition sources, and detect obstructions to the means of egress. The RI found that there is no monthly facility specific walkdown or surveillance associated with Building 9995. The Y-12 fire department performs a walkdown of the facility, however these surveillances are annual, not monthly, and required by a different section of the Y-12 Fire protection manual. The RI met with the building's operations manager (OM) to discuss his review. The OM agreed with the RI's assessment that the facility was not meeting the requirements, and based on the RI's assessment is taking positive actions to return the facility to compliance. These actions include the creation of a monthly surveillance, a facility specific inspection form, and facility specific procedure.

Building 9720-05: CNS entered the potential inadequacy of the documented safety analysis (PISA) process for a discrepant as found condition due to a discovery of approximately 10 additional vent pipes that were not properly connected to the lightning protection system (LPS). The vent pipes were covered with roofing material and then the clamps connecting the LPS were placed on top of the rubber insulating material, rendering the connection ineffective. The additional walkdown was prompted by a previous walkdown of the system by the RI (see 4/19/2024 report) and was attended by a fire protection engineer, facility systems engineer, design authority representative, the building manager, the shift technical advisors, and the OM. After the walkdown, CNS revised the original operability determination (OD) to include the newly discovered discrepancies in the safety basis credited system and stated that the system was operable because it could still provide a low resistance path to ground for a potential lightning strike, although it was not in compliance with the code of record. Based on the revised OD, CNS determined that this discrepant as found condition was not a PISA.

Building 9215: The RI observed post maintenance testing (PMT) for the mechanical floor scrubber (MFS) transfer station pump replacement and system modification. The MFS transfer station is a non-fissile system which has the potential to contain fissile material in the dirty MFS water. CNS has experienced difficulties with implementing nuclear criticality safety (NCS) controls in work packages for non-fissile systems in the past (see 05/05/2023 report). CNS operators utilized the normal operating procedure to conduct the PMT with personnel assigned to check for leaks during the transfer. Operators filled the MFS with water per procedure and then loaded it into the MFS transfer system in preparation for transfer. The supervisor determined that the MFS procedure filled the clean water tank and not the dirty return tank, which the MFS transfer station was designed to empty. The operators appropriately placed the worksite in a safe condition, paused work, and contacted the shift manager. The work will remain paused until a revision to the PMT can be completed.