

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 10, 2025

TO: R. T. Davis, Acting Technical Director
FROM: Frank Harshman and Clinton Jones, Resident Inspectors
SUBJECT: Oak Ridge Activity Report for Week Ending January 10, 2025

Y-12 Field Office Oversight: The YFO Maintenance Program Manager performed an assessment of CNS's maintenance program requirements for maintenance history and compliance with DOE Order 433.1B Chg 1, *Nuclear Maintenance Management Program (NMMP) for Nuclear Facilities*. The YFO maintenance program manager and associated team members conducted a records review, interviews, and attended event investigations and follow-on critiques of component failures. This review resulted in one finding and six performance problems that were identified for specific non-compliances with maintenance history requirements. CNS implements the requirements from DOE O 433.1B Chg 1 via procedure E-SD-2008, *CNS Nuclear Maintenance Management Program*, which contains high level requirements for maintenance history and is applied site-wide on a graded approach. While analyzing the flow down of requirements from DOE O 433.1B, the YFO team identified that CNS's processes and procedures do not implement the DOE O 433.1B requirements related to failure analysis, resulting in the finding written in the assessment. Order 433.1B specifically requires analysis of problems to determine root causes of unplanned occurrences related to maintenance. YFO's assessment specified four criteria to perform this review, including "Maintenance history is used in the evaluation of root causes of unplanned equipment failures and the development of effective corrective actions." During two recent event investigations concerning safety significant systems being declared inoperable, CNS personnel stated that no root cause analysis was going to be performed when asked by YFO. The resident inspectors performed a limited scope review of closure evidence in the CNS contractor assurance system in August 2024 that resulted in multiple issues with incomplete documentation or inconclusive corrective actions. Due to the issues YFO discovered in this assessment and the YFO contractor assurance system assessment that was recently performed, the resident inspectors plan to perform a follow up review of the CNS contractor assurance system with a broader scope to verify the extent of causal analysis performed and recurrence rate of issues.

Building 9212: The building's fire protection engineer and a shift technical advisor performed walkdowns of the fire suppression systems in preparation for forecasted inclement weather. During the walkdown, it was discovered that a portion of a credited fire suppression system had fallen below 32 degrees Fahrenheit. The building's shift manager declared the system inoperable, entered the limiting condition for operation (LCO), and performed the required LCO actions which included the initiation of fire patrols. The building has had similar occurrences of fire suppression systems falling below required temperatures in other areas resulting in their inoperability. CNS filed an occurrence report for the performance degradation of a safety system and entered the issue into the contractor assurance system. The shift manager directed additional temporary heating installation which restored temperatures to permissible levels. Once temperatures were restored the shift manager completed the required surveillances, declared the system operable, and exited fire patrols.