

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 5, 2025

TO: Technical Director
FROM: Oak Ridge Resident Inspectors
SUBJECT: Oak Ridge Activity Report for Week Ending September 5, 2025

Building 9204-2E: CNS filed an occurrence report for a near-miss after security personnel discovered parts of a drainpipe on the ground in front of the shift manager's office. A shift manager arrived onsite and read an operations center turnover log, where security reported finding pieces of a cast iron drainpipe that had fallen from the ceiling—a height of approximately twenty-five feet. Although security reported this issue to the operations center, the operations center did not notify the on-call shift manager of the event. The drainpipe pieces were part of a P-trap connected to a condensate line drain from one of several chiller units for the building. The system engineer had entered a work request to have it repaired in September 2021 due to leaks that appeared every summer; however, the work request was not prioritized on the maintenance schedule. The same chiller unit has two other P-traps, one of which leaks in a similar condition to the one that failed, and all this piping is original to the building. As a result of the failure, the system engineer performed an extent-of-condition look at similar condensate drain piping and determined that none of the other four chiller units posed the same falling risk due to piping location. YFO has been engaging with CNS to investigate whether they have a comprehensive strategy to mitigate the safety risks posed by degrading structures or equipment. CNS has filed occurrence reports on five other near-misses related to degrading structures or equipment since October 2024, with three occurring in defense nuclear facilities. CNS is actively working on a falling objects surveillance checklist to capture the types of deficiencies observed after these near-miss events and during the most recent extent-of-condition performed for the production facilities. CNS is also evaluating possible solutions to manage the large active maintenance backlog of items through the use of new planning software, a plantwide integrated schedule, and a reorganization of planning personnel.

Highly Enriched Uranium Material Facility (HEUMF): CNS completed a significant upgrade to HEUMF's aging Criticality Accident Alarm System (CAAS). CNS initiated the upgrade to replace several obsolete system parts. CNS replaced the existing criticality incident detection and alarm system panel; installed a new detection and logic panel, audio panel, Uninterruptible Power Supply (UPS) panel, and four disconnect switches; and reconfigured three independent UPSs into two redundant UPSs. Various conduits were removed, installed, or modified to support the installation of the new cabinets. In addition, CNS retrofitted the beacons for the Noisy Area Warning Lights (NAWLs) and the NAWLs panel to support a change to a 48 VDC system. Structural engineers evaluated the impact of the penetrations to the HEUMF structure, with no issues identified. CNS entered a Limiting Condition for Operation for the duration of the upgrades. During the Post-Maintenance Testing (PMT), CNS identified issues with the non-credited portion of the NAWLs system, filed a nonconformance report, and is evaluating a repair path forward. Also, during the PMT, CNS identified an issue with a Detector Power Supply (DPS) potentially caused by shipping. CNS replaced the DPS, completed the required CAAS surveillances, declared the system operable, and exited the Limiting Condition for Operation.