

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 9, 2025

**TO:** Technical Director  
**FROM:** Oak Ridge Resident Inspectors  
**SUBJECT:** Oak Ridge Activity Report for Week Ending May 9, 2025

**Building 9212:** CNS declared two technical safety requirements (TSR) violations this week. Responding to a low-pressure alarm, a shift manager (SM) and shift technical advisors were sent to check pressures on the various fire suppression systems in the building. When the SM checked the pressure on Wet Pipe System (WPS)-6, a safety-class fire suppression system, he noticed a momentary pressure drop below the TSR required limit. The gauge and sensing line that connect to the riser are safety class components that are credited with displaying system pressure. WPS-6 also shares the same source piping as WPS-7, another safety class fire suppression system. The SM incorrectly determined that WPS-6 remained operable based on a stable reading above the minimum required pressure at the WPS-7 pressure gauge and created a log entry stating that the WPS-6 momentary pressure drop was likely a gauge line issue. Approximately one hour later, the SM approved a work package authorizing the fire department to perform a partial surveillance to confirm operability. The fire department completed the surveillance and confirmed that the gauge was not functioning properly. Since this gauge is required by the TSR to verify pressure in the system, the SM entered the limiting condition for operation (LCO) due to a suspected blockage of the gauge. Although the SM entered the LCO and declared the system inoperable, the time of discovery occurred earlier when the SM observed the original gauge problem, and LCO actions should have been taken then. Based on the time taken to verify the problem by performing a modified surveillance, CNS declared a TSR violation due to a failure to establish fire patrols within two hours of the time of discovery.

CNS initiated the required fire patrols while waiting for the WPS-6 gauge replacement to be completed the following day. During this time, CNS experienced a security situation that required a site lockdown. As a result of the lockdown, personnel performing fire patrols did not complete the required walkdowns. Based on missing required walkdowns, CNS declared a subsequent TSR violation for failing to comply with an LCO action statement.

CNS experienced similar issues with WPS pressure gauges in the past and did not adequately document or resolve them in the contractor assurance system (CAS). CNS did not enter an issue in the CAS for an event in October 2023, in which a gauge was slow to respond (see 1/5/2024 report). Also, the same gauge malfunctioned previously in January 2021, and at that time, CNS did enter the event into the CAS based on an LCO entry; however, a subsequent resident inspector review identified that no closure evidence was attached to document completion of the two required actions for the latter event. These actions were to replace the gauge and evaluate the cause of the failure.

**Building 9204-2E:** CNS performed further post-maintenance testing on the conduit penetrations for the CAAS-3S<sup>TM</sup> bunker (see 4/18/2025 report). During the testing, engineering personnel witnessed water ingress into the main power panels. Due to evidence of continued water entry, CNS isolated power to the bunker and the new CAAS-3S<sup>TM</sup> system. CNS's latest projected timeline for system implementation is now pushed out to the end of October.