

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 5, 2024

**TO:** Katherine R. Herrera, Acting Technical Director  
**FROM:** Frank Harshman and Clinton Jones, Resident Inspectors  
**SUBJECT:** Oak Ridge Activity Report for Week Ending January 5, 2024

**Building 9204-2E:** A resident inspector (RI) and the NPO facility representative (FR) walked through the building to inspect for combustible loading compliance. During the walkdown, several issues were identified including drums of flammable liquid that had open ports, excessive cardboard packing material, and a large bag of Styrofoam packaging peanuts adjacent to an electrical cabinet. After the walkdown, the RI and NPO FR reviewed the monthly fire safety inspection performed by facility personnel and discovered the unsatisfactory conditions were documented, causing the facility to fail the inspection based on exceeding the limits for both liquid combustibles and transient combustibles. CNS did not establish compensatory measures or remove the material until after the holiday break, allowing this condition to remain unresolved for approximately two weeks. In the RI's opinion, the facility is showing a negative trend in combustible material loading and demonstrating a general lack of sensitivity in managing the ingress and egress of combustible materials to the facility.

In October, the fire department performed a monthly wet pipe system surveillance that verifies the water supply pressure on the gauge is greater than or equal to the minimum supply pressure required by the safety basis and noticed that one of four pressure gauges on the system was slow to respond. This anomaly was reported to the shift manager. The shift manager discussed the issue with the CNS fire protection engineer and the decision was made to have all four gauges on wet pipe system risers replaced. Due to an issue with the isolation valve in the riser that contained the slow to respond gauge, it was not able to be replaced without isolating all fire water supply to the facility. The replacement of that gauge was delayed for approximately two months. Although the gauge was not responding properly, no operability determination was documented to accept the degradation. The operations management team decided the system was operable based on the gauge obtaining the same reading as the other three gauges on the common header, even though it responded slower. This week, when the gauge was replaced, remnants of Teflon tape and dark colored water were observed exiting the tubing that fed the gauge. This wet pipe system gauge has been fouled previously due to foreign material in the sensing line. During that instance the gauge did not fluctuate as expected resulting in a limiting condition for operation entry and an occurrence report.

**Cold weather preparations:** The RIs completed a multi-week review of cold weather preparations across multiple facilities at Y-12. The RIs reviewed documents governing response to cold weather and actions taken as a result of the previous year's freeze event (see 12/30/2022 report). In the RI's opinion there is still room for improvement in several key areas. For example, the cold weather plan for Building 9995, the plant lab, relies heavily on temperature and equipment monitoring by personnel during periods of cold weather and lacks proactive measures. Examples such as repositioning or inventorying of equipment that may be needed for temporary heating, proactively draining of at risk systems, temperature dependent alternate ventilation lineups could not be identified in the current lab cold weather plan.