DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 24, 2019

TO: Christopher J. Roscetti, Technical Director
FROM: Matthew Duncan and Brandon Weathers, Resident Inspectors
SUBJECT: Oak Ridge Activity Report for Week Ending May 24, 2019

Building 9215: On Monday, a fire occurred at a transformer for a salt bath used to heat depleted uranium prior to metalworking. The system engineer, who had stepped away from the salt bath while it was slowly heating to a new temperature set point, noticed the fire after re-entering the area after a supervisor told him about an unusual odor. The system engineer called 911 and all personnel evacuated the immediate area. The fire department responded. The supervisor discussed with the firefighters that using water in the area near the salt bath might cause a problem given the extremely high temperature of the salt. The firefighters extinguished the fire using a dry chemical extinguishing agent. The fire had lasted for no more than approximately 25 minutes. There were no injuries. No depleted uranium was in process at the time of the fire. Radiological control personnel determined no respirator use was required in the area after performing air sampling and surface swipes. Damage appeared to be limited to the transformer. CNS held a fact finding meeting and a hot wash. No significant issues were identified during the fact finding meeting. No decision regarding the need for a critique had been made at the time of this report.

Building 9212: NPO issued a safety evaluation report approving the justification for continued operation and evaluation of the safety of the situation for the high capacity evaporator potential inadequacy in the documented safety analysis (see 5/17/19 report). No conditions of approval were identified by NPO. The justification for continued operation actions are to update the isolation valve response time to reflect the new, lower value and perform the associated surveillance requirement to confirm that the isolation valve actuates within the new response time. Additionally, the new information process evaluation of the intermediate evaporator mentioned in the May 17 report was determined to not be a potential inadequacy in the documented safety analysis.

Fire Protection: CNS personnel completed the extent of condition evaluation related to the amount of combustible or flammable liquids that can be stored in a single fire area. This extent of condition was conducted in response to the Building 9204-2E quarterly fire safety inspection finding that Class IIIB combustible liquids were not being counted against the storage requirements in the Y-12 Fire Protection Manual (see 3/15/19 report). The extent of condition evaluation consisted of re-performing the fire safety inspections for all production facilities in light of the issues identified in Building 9204-2E. Three facilities were found to have similar combustible or flammable liquid storage issues; none were in enriched uranium areas. Actions have been developed to disposition the material or procure appropriate storage equipment.

Safety Basis: As discussed in the May 3 report, CNS implemented a new formal process for evaluating and dispositioning potential inadequacies in technical safety requirements (PITSRs). CNS had originally intended to submit changes to the technical safety requirements for NPO approval to address all known PITSRs by June 2020. CNS now intends to do so by the end of the year.