DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 8, 2021

TO: Christopher J. Roscetti, Technical Director
FROM: Matthew Duncan and Brandon Weathers, Resident Inspectors
SUBJECT: Oak Ridge Activity Report for Week Ending January 8, 2021

Building 9215: On December 26, Y-12 fire department personnel responded to Building 9215 for a pressure switch activation on a credited wet-pipe fire suppression system. They did not find evidence of smoke or fire, but the audible water motor gong had activated (indicating that the system was discharging water). They searched the facility and located the affected area. Facility personnel entered the applicable limiting conditions of operation prior to isolating the problematic system and initiated the required fire patrols. Three additional fire suppression systems—one of which was a credited dry-pipe system—were impacted due to this isolation. CNS filed an occurrence report for performance degradation of a safety significant system.

Y-12 Utilities: Y-12 experienced a temporary loss of potable water to the site during a planned outage to de-energize a power supply line. The programmable logic controller that controls the operation of site water towers automatically closed the main discharge valve to the site. The loss of water supply caused low water pressure alarms for credited fire suppression systems in Building 9212 and a pump to start at Building 9720-82. Due to issues with this controller in the past, the utilities organization had an operator at the water towers in case of an abnormal event. The operator quickly noticed the low water pressure and put the discharge valve under local control to open it and reestablish the potable water supply to the site. CNS filed an occurrence report for performance degradation of the credited fire suppression systems.

Continued Safe Operability Oversight Team (CSOOT): The CNS CSOOT issued a report documenting its annual evaluation of the adequacy of Buildings 9212, 9215, and 9204-2E to sustain continued reliable and safe operations. The team did not identify any safety concern that would currently provide reason to limit enriched uranium operations in those buildings. The report discussed ongoing efforts to reduce material-at-risk and the continuation of extended life program activities. The team noted that the Area 5 material-at-risk reduction efforts exceeded the fiscal year 2020 target. In Building 9212, CNS remained on track to disposition the backlog of briquettes by fiscal year 2022 and resumed ultrasonic chip cleaning operations (see 8/14/20 report). The team was concerned with delays for the electrorefining, calciner, and direct chip melt projects. The team acknowledged improvements on a 2016 CSOOT recommendation regarding the need to improve maintenance support. However, they left the recommendation open because it was too early to determine the effectiveness of the improvements.

Nuclear Criticality Safety: CNS issued a standing order to provide administrative direction to nuclear criticality safety engineers, criticality safety officers, maintenance, and operations personnel for conducting corrective maintenance activities in Building 9212. Over the past year, there have been multiple nuclear criticality safety deficiencies due to failure to properly implement nuclear criticality safety controls and guidance during maintenance activities in Building 9212 (see 7/17/20, 9/11/20, and 12/4/20 reports). The standing order included direction to prevent waste accumulation, implement prerequisite nuclear criticality safety controls, and involve the criticality safety officer prior to maintenance activities being performed.