

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 27, 2020

**TO:** Christopher J. Roscetti, Technical Director  
**FROM:** Matthew Duncan and Brandon Weathers, Resident Inspectors  
**SUBJECT:** Oak Ridge Activity Report for Week Ending November 27, 2020

**Highly Enriched Uranium Materials Facility (HEUMF):** CNS evaluated the apparent discrepant as-found condition regarding an inoperable fire damper at HEUMF (see 11/20/20 report) using the suspect potential inadequacy of the safety analysis (PISA) process. CNS determined there was no PISA using the following basis. The documented safety analysis and technical safety requirements state that the credited fire barriers are credited for design basis fires. Though the fire damper was originally thought to be credited as safety significant, there is currently no design basis fire for that location, so CNS now believes that fire damper is not actually safety significant. In addition, the CNS PISA process does not require declaring a PISA for discrepant as-found conditions where the resolution is to correct it to specifications described in the documented safety analysis, and that is the current plan.

**Nuclear Criticality Safety:** The CNS management team that supports the Extended Life Program (ELP) for Buildings 9204-2E and 9215 recently concurred with a recommendation to incorporate plans for addressing out-of-service equipment uranium holdup into the ELP safety strategy document. This addition to the safety strategy helps CNS ensure that the nuclear criticality safety risk ranking evaluations that were performed earlier this year are used to inform ELP actions (see 10/9/20 report). Prior to this change, the ELP covered only a few of the Building 9215 out-of-service systems. The resident inspectors note that incorporating this information into the ELP safety strategy will help ensure longer term actions to address out-of-service equipment are clearly documented for the next Y-12 contractor.

CNS is in the process of revising the Building 9215 out-of-service evaluation report to reflect non-destructive assay measurements for the salt bath system that was reported as a nuclear criticality safety deficiency (see 9/4/20 report). The results indicated that the uranium hold-up in that system is less than the ANSI/ANS-8.1 single parameter limit of 700 grams U-235.

As of last week, all remaining bagged HEPA filters in the storage array with liquid from a likely roof leak have been placed on pallets, as recommended by nuclear criticality safety engineers (see 11/13/20 report).

**Transuranic Waste Processing Center (TWPC):** There was an ORPS reportable failure of a flow indicator instrument loop for a blower of the safety significant Process Building Ventilation System. TWPC personnel entered the appropriate limiting condition of operation and later restored operability after replacing the damaged components.

**Building 9995:** A chemical analyst in the radiochemistry laboratory poured water into a previously used 30-gallon waste drum. As the analyst added liquid waste—a mixture of nitric and hydrochloric acid—to the drum, the analyst unexpectedly observed what looked like fog emitting from the liquid. While there ended up being no negative consequences resulting from the event, the critique included good discussion and improvement actions regarding the response.