

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 15, 2021

TO: Christopher J. Roscetti, Technical Director
FROM: Matthew Duncan and Brandon Weathers, Resident Inspectors
SUBJECT: Oak Ridge Activity Report for Week Ending January 15, 2021

Y-12 Fire Department: Last week, Y-12 had an inadvertent loss of the site water supply for approximately six minutes (see 1/8/21 report). Fire department personnel responded to the Highly Enriched Uranium Materials Facility (HEUMF) due to the automatic startup of the electric-driven and diesel-driven fire water pumps. The fire department response was to ensure adequate water pressure was supplied to the fire water distribution system and to manually shut down the pumps if adequate water pressure was restored. Once the water pressure was restored, fire department personnel shut down the pumps and notified the HEUMF shift manager of the response actions. CNS entered an opportunity for improvement in the event investigation database for fire department personnel to notify facility management prior to manipulating the fire pumps.

The resident inspectors have reported on two recent events where there have been communication issues between fire department personnel and facility management. In one event, a fire department captain was leading the inspection and testing of credited fire dampers in HEUMF. Neither the fire department captain nor the building manager, who was escorting personnel, made a timely notification to the shift manager that one of the fire dampers was inoperable (see 11/20/20 report). In the second event, fire department personnel took a non-credited fire suppression system out of service in Building 9215 without notifying the shift manager (see 12/18/20 report). CNS corrective actions involved briefing personnel, assigning training to personnel, and updating command media such as work checklists and forms.

Nuclear Criticality Safety: Nuclear criticality safety personnel have responded to several small leaks that occurred near the base of two-cylinder chip dollies in Buildings 9215 and 9212 (see 6/25/20 and 8/14/20 reports). As a result, CNS established a bi-weekly surveillance to visually inspect the dollies in those facilities. Recently, personnel discovered a similar leak in a dolly stored in Building 9204-2E and established administrative control of the area. Nuclear criticality safety personnel provided guidance to clean and dispose of the liquid. CNS has an active project to disposition the 9204-2E chip dollies. However, that project has had several delays.

Building 9204-2E: CNS installed a redesigned barrier (chip guard) on a lathe to prevent machine turnings from migrating and accumulating in an adjacent portion of the glovebox. Personnel installed the original barrier in early 2020, but removed it due to interference with the operation of the glovebox equipment (see 5/1/20 report). After the new barrier was installed, CNS cancelled the existing standing order that provided additional actions to verify that the glovebox had been cleaned of machine turnings after operating the lathe without the barrier.

Building 9212: CNS completed the permanent isolation of out of service muffle furnace equipment. CNS revised the work package for this job to incorporate lessons learned from an earlier maintenance activity where nuclear criticality safety controls and guidance were not properly implemented (see 12/4/20). No issues were reported with the execution of this activity.