

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 2, 2016

TO: Steven Stokes, Technical Director  
FROM: William Linzau and Rory Rauch, Site Representatives  
SUBJECT: Oak Ridge Activity Report for Week Ending September 2, 2016

Staff member R. Jackson was at Y-12 to observe a peer review of the NNSA uranium program. The peer review team is a continuation of the review conducted by the UPF "Red Team" in 2014 (see 1/24/14 and 5/9/14 reports). The staff also toured the UPF construction site and met with UPO to discuss the staff reviews scheduled for fiscal year (FY) 2017.

**Building 9215/Nuclear Criticality Safety (NCS):** NCS engineers performed an extent-of-condition review for the potential inadequacy in the safety analysis involving concerns that a coolant flow control valve was throttled in a manner that called into question the validity of a surveillance activity (see 8/12/16 and 8/19/16 reports). The review identified five additional valves that presented the same concern. This week, CNS reported these conditions as a positive unreviewed safety question. As a compensatory measure to allow the affected lathes to return to service, the Building 9215 shift manager issued a standing order placing the valves in question under shift manager control. Fabrication Operations personnel plan to re-perform the surveillance activity at a maximum flow setting for each valve in question to determine whether the overflow design feature on certain chip pans can continue to perform its credited safety function.

**Building 9212/Aging Infrastructure:** Several Building 9212 enriched uranium (EU) accountability and recovery systems are currently inoperable or on hold due to a variety of issues. Holden Gas Furnace operations are on hold while production and maintenance personnel clean the exhaust ventilation system that supports furnace operations. The cleaning evolution, which began this week, was undertaken to reduce the fissile loading in the ventilation system ductwork below NCS mass limits (see 5/23/16 report). Following the cleaning activity, CNS plans to re-perform non-destructive assays of the ventilation system to determine whether additional actions are needed before returning the system to service. The site reps reviewed the work control documentation for the evolution and found that the documentation effectively coordinated the work activities for each of the organizations involved.

The primary extraction (PX) system remains out of service to accommodate the Metal Production Improvement Project (MPIP) outage (see 6/3/16 report). This week, during an outage-related maintenance activity, a piece of temporary scaffolding contacted and broke one of the glass columns on the PX system, causing approximately 30 L of solution (primarily organic solvent) to spill on the floor. NCS personnel provided guidance to support cleanup of the spill. CNS plans to hold a fact-finding meeting on the event next week.

The actions required to fix the cracked column will further extend the PX system outage and the MPIP, which was already approximately three months behind schedule. The CNS MPIP manager is currently revising the FY17 outage schedule to balance completion of the MPIP with increased EU metal production goals in FY17. This week, the CNS Enriched Uranium Operations organization met its FY16 programmatic deliverable of 200 kg of purified EU metal.

Other Building 9212 systems currently unavailable for operational use include the oxide conversion facility (due to issues with a flow transmitter for the dock scrubber and communication issues between various process controllers and the control area work station) and the denitrator (due to high differential pressure readings on the system's exhaust filters).