

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

TO: Steven Stokes, Technical Director  
FROM: William Linzau and Rory Rauch, Site Representatives  
SUBJECT: Oak Ridge Activity Report for Week Ending June 13, 2014

D. Boyd, T. Hunt, and R. Oberreuter were at Y-12 for a conduct of maintenance review.

**Aging Infrastructure:** Last week, while reviewing analysis supporting the seismic performance of the Building 9215 structure, members of the Board's staff identified a potential discrepant as-found condition. Specifically, the analysis accounted for a lateral brace that was not present in the facility. The site reps communicated this observation to site personnel. The Building 9215 Operations Manager determined the discovery of the missing brace was not a potential inadequacy of the safety analysis (PISA) because B&W structural engineers concluded that the presence or absence of the brace has no discernable impact on the conclusions of the natural phenomena hazard analysis. B&W structural engineers are planning to conduct an extent-of-condition review by inspecting all the braces in the facility to ensure that they are accurately represented in the structural drawings and analysis. B&W is also trying to determine how this discrepancy was introduced.

Facilities, Infrastructure, and Services (FI&S) recently updated the Y-12 Utility Migration Plan (UMP), which provides the state of utility systems and the plans to maintain these systems for the next ten years. The UMP lists 16 different utility systems and notes that four systems are appraised as poor with none of the systems graded as good. The UMP evaluates the probability of a system disruption over the next five years as likely to very likely, and that the consequences of a failure may have health and safety impacts and may adversely affect regulatory compliance.

Late last week, workers in Building 9204-2 noted cracks and delamination of a concrete beam in the container refurbishment area and notified the shift manager, who cordoned off the area. B&W structural engineers had previously noted the cracks but on re-examination determined the amount of delamination and the size of the cracks had increased. The engineers are planning further inspections to determine the significance of the degradation and path forward.

**Building 9215:** Earlier this year, B&W's nuclear criticality safety organization identified several issues related to the adherence of residual machining coolant on enriched uranium chips (see 1/31/14 report). This week, as part of the effort to address these issues, B&W conducted a level zero (B&W's lowest level) readiness assessment (RA) of a new step to be used during the processing of uranium chips. The new step in the process allows the chips to be rinsed with a limited amount of demineralized water to reduce the adhered coolant before packing and briquetting operations. The RA team did not have findings or observations, but the site rep did question if more attention should be given to radiological control practices during the operation.

**Oxide Conversion Facility (OCF):** This week, Enriched Uranium Production (EUP) personnel successfully completed an OCF hydrofluorination bed (HFB) run, producing UF<sub>4</sub> for the first time since last August. Earlier in the week, operators facilitated resumption of HFB operations by clearing an obstruction in the HFB line. To support removal of the obstruction, engineering developed a procedure that allowed operators to agitate the HFB piping with a rubber mallet. After attempts to dislodge the obstruction with the rubber mallet were unsuccessful, an operator began agitating the HFB piping with a 4-inch stainless steel pin. This action dislodged the obstruction, but the pin was not approved for use in the procedure. The EUP manager plans to issue a lessons learned on this procedure adherence issue. The HFB piping subsequently passed an inspection to ensure that the integrity of the vessel was not compromised.