

## 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 February 21, 2014

**Aging Infrastructure:** Last week, B&W finalized the Building 9212 Transition Evaluation (see 9/13/13 and 2/14/14 reports). Of note, the evaluation recommends a transition strategy that is not explicitly linked to the schedule for the Uranium Processing Facility (UPF) project, which is a key change from previous strategies. This would primarily be accomplished by leveraging other existing Y-12 facilities as a bridging strategy until UPF is operational. For example, the evaluation recommends shutting down Building 9212 oxide conversion facility and reduction processes when an electrorefining capability is operational in Building 9215. This is currently scheduled to occur in fiscal year 2021. The new strategy also seeks to reduce the safety risk of continued operation in Building 9212 by emphasizing material-at-risk (MAR) reduction. This would be accomplished by reducing the number of hazardous processes in the facility (as discussed above), and strictly limiting the MAR inventory for those processes, such as casting, that are currently planned to remain in Building 9212 until UPF is operational. MAR reduction would also be accomplished by processing legacy materials for transfer out of Building 9212. B&W plans to submit an implementation plan for this strategy by mid-March.

**Transuranic Waste Processing Center (TWPC):** Last month, the Oak Ridge Office of Environmental Management (OREM) sent a letter to Wastren Advantage, Inc. (WAI) that provided clarification on WAI's ongoing effort to update the site-specific dispersion analysis for TWPC (see 7/12/13 report). OREM agreed with WAI's decision to use the approach outlined in the Nuclear Regulatory Commission's Regulatory Guide 1.145. OREM then directed WAI to use a modified set of input assumptions for the new approach. OREM also provided its expectation that the new analysis should be incorporated into an upcoming revision to the TWPC Documented Safety Analysis (DSA). This revision will support operations in the new metal oxidation glovebox that will be used to process Solid Waste Storage Area 5 (SWSA-5) materials (see 6/21/13 report). The processing of the SWSA-5 materials is scheduled to complete by the end of May.

In early February, WAI issued a letter indicating that implementation of the new dispersion analysis direction provided by OREM would significantly increase the postulated offsite and onsite unmitigated dose consequences in the TWPC DSA. The letter states that the preliminary results of the application of the new dispersion analysis indicate that postulated consequences would require changes to existing controls and crediting additional safety-significant and potentially safety-class controls. WAI safety analysts are aggressively working to complete the DSA revision incorporating the new dispersion analysis by mid-April. In the meantime, WAI requested OREM concurrence on several actions that could be taken to mitigate the impacts of the new dispersion analysis on TWPC's ability to meet certain processing milestones. These actions include redistributing or reducing MAR, processing high-MAR containers, and evaluating opportunities to reduce conservatism in the consequence analysis of the TWPC DSA.

**Lightning Protection:** The site rep walked down the lightning protection system (LPS) for Building 9720-5 with the responsible B&W engineer and NPO subject matter expert. The major components of this safety-significant LPS include air terminals (vertical metal rods) on the roof connected together with aluminum lightning protection conductors that lead to a grounding cable buried around the perimeter of the building. The site rep observed that the installed components accurately matched the drawings with no obvious signs of degradation.