

## 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 27, 2014

Z. Beauvais was at Y-12 to augment site rep coverage.

**Contractor Transition:** This week, Consolidated Nuclear Security (CNS) held several meetings associated with the completion of transition activities. CNS and NPO personnel met to clarify the lines of communication and points of contact between the two organizations. Separately, B&W personnel provided CNS and NPO management a briefing on the open issues and commitments that CNS will be required to address after transition. B&W personnel clearly communicated the issues and it appeared that the CNS representatives were familiar with them from previous discussions with their B&W counterparts.

Lastly, key CNS managers conducted an all-day briefing to NPO personnel that provided an accounting of the completed actions to support next week's transition. Both parties agreed that CNS is ready to assume responsibility as the Y-12 and Pantex prime contractor. At the end of the meeting, NPO personnel provided a number of areas of interest that they plan to monitor after transition, which included: the stability of the CNS organization considering that almost half of the key managers changed during transition, the functional cohesiveness of the heavily matrixed CNS organization, the changes in the scope of the Uranium Processing Facility, and the execution of cost savings initiatives.

**Nuclear Criticality Safety (NCS):** B&W recently provided its response to the NPO letter that expressed concern regarding (1) the frequency of abnormal NCS-related events during casting operations in Building 9212 and (2) Enriched Uranium Production's (EUP's) difficulty producing pressed uranium briquettes that provide adequate feedstock for casting operations (see 4/18/14 report). In response to the first concern, EUP plans to develop new metrics to enhance its monitoring of abnormal casting events. For example, EUP is evaluating ways to monitor the amount of spillage or "pallet scrap" following a pour. In addition, engineering staff are evaluating process parameter and mold design changes that would minimize the potential for abnormal NCS-related events during casting operations. Finally, B&W has committed to perform an evaluation of the feasibility of reducing casting masses below the ANSI/ANS-8.1 single parameter limit of 20.1 kg <sup>235</sup>U.

In response to the second concern, B&W implemented a new process step to rinse uranium chips with demineralized water prior to packing (see 6/13/14 report). This week, EUP used uranium briquettes formed from the first batch of pre-rinsed chips as casting feedstock. Visual inspection indicates that the new process step has had a positive impact as the casting appears to have produced relatively low yields of uranium oxide.

**Building 9212:** EUP personnel resumed reduction operations this week, producing the first purified uranium metal button since September 2013. The visiting Board staff member observed firing and knockout operations and communicated a few procedure improvement opportunities to engineering and EUP staff.