

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 11, 2010

TO: Timothy Dwyer, Technical Director  
FROM: Donald Owen and David Kupferer, Oak Ridge Site Representatives  
SUBJECT: Activity Report for Week Ending June 11, 2010

Mr. Kupferer was out of the office. Staff member Andrews visited Y-12 to augment site rep. coverage. Staff member Blackman visited Y-12 to review seismic/structural design analyses for the Uranium Processing Facility. Staff members Abrefah, Bamdad and MacSleyne visited Y-12 for discussions on B&W's research effort on airborne release fraction (ARF) for uranium metal.

**Highly Enriched Uranium Materials Facility (HEUMF).** The site reps. observed the first use of the can recontainerization procedure. In this evolution, HEUMF personnel transferred a single primary storage can from a Rackable Can Storage Box (RCSB) to a second RCSB. The pre-job briefing was done in a very professional and structured manner. The work crew demonstrated strong procedural compliance and level of knowledge. Although the workers had paper copies of the procedure in hand, the computer-based operator aid (see the 1/29/10 site rep. report) was used and worked well. B&W conducted a post-job briefing where various participants discussed some minor observations for improvement.

B&W has performed an extent-of-condition review on other HEUMF safety systems for the situation where electrical wiring for the secondary confinement system (SCS) was found to be routed through conduit and junction boxes that also house non-safety wiring (see the 6/4/10 and 5/14/10 site rep. reports). For the other safety systems (criticality alarm, fire suppression and back-up power), B&W did not find any such non-conformance; however, B&W did identify an additional non-conformance for the SCS. This additional non-conformance is under evaluation.

**Uranium Processing Facility (UPF).** In April, NNSA Headquarters personnel performed an Independent Project Review (IPR) focused on the first Critical Decision-2/3 package that includes site preparation and some long-lead procurement (see the 4/23/10 and 5/21/10 site rep. reports). Last week, YSO transmitted the final report of the IPR to the UPF project. YSO requested an action plan responding to the recommendations and observations in the IPR report by June 18<sup>th</sup>.

**Safety Analysis Research.** B&W discussed its plans for obtaining data on ARF and respirable fraction (RF) with the staff and site reps (see the 4/2/10 and 3/5/10 site rep. reports). The staff discussed several observations with respect to the scope of the testing, technical justification of the test parameters, and the test apparatus. B&W personnel are taking the observations under consideration. Follow-up discussions have been scheduled for next week.

**Unreviewed Safety Question Determination (USQD) Process.** In December, YSO requested that NNSA Headquarters review a proposed revision to the Y-12 USQ procedure regarding use of a new "Expert USQD" option (see the 12/25/09 site rep. report). This new option would apply to proposed changes to facilities/equipment and procedures. The objective is streamlining the USQD process wherein a designated, experienced reviewer would make the determination either that it is *readily apparent* the proposed change would not result in a positive USQ or that a standard USQD needs to be performed. Last week, NNSA Headquarters sent a formal memo to the YSO manager (with copies to other NNSA site office managers) providing agreement with using the revised USQD process at Y-12 and noting that other sites may evaluate using the approach (with some stated conditions). YSO management indicated to the site reps. that YSO anticipates approving the USQ procedure revision next week.