

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 12, 2008

TO: Timothy Dwyer, Technical Director
FROM: Donald Owen and David Kupferer, Oak Ridge Site Representatives
SUBJECT: Activity Report for Week Ending September 12, 2008

Conduct of Operations: As reported on August 29th, B&W assessed recent events associated with conduct of operations deficiencies and concluded that additional improvement measures were needed. This week, B&W committed to YSO that the following actions are being taken:

- All production division employees will attend an operations performance improvement training session focused on preventing personnel errors and stop-work expectations.
- Managers and Supervisors are reviewing production procedures being used during the next 30 days to identify procedural enhancements potentially including the addition of critical steps, reader-worker procedure use requirements, and sign-offs.
- All production procedures will be reviewed during the next year using criteria that is currently being developed. The goal of this review is to strengthen the usability of procedures and reduce the opportunities for undesired outcomes.
- Training programs will be assessed to identify opportunities in training that will help reduce operations errors.
- Production management is developing metrics to help measure the overall progress in reducing both the number and severity of events going forward.

Criticality Safety: NNSA has issued its report from a May 2008 federal review of the Y-12 criticality safety program (see the 8/22/08 site rep. report). This review was particularly focused on evaluating B&W's compliance with DOE Standard 3007-2007, *Guidelines for Preparing Criticality Safety Evaluations*. YSO has formally directed B&W to develop a unified corrective action plan to address six deficiencies and one weakness identified in the aforementioned report.

Work Control: During the past year, a number of equipment return-to-service problems have been identified such as lack of proper testing for a safety-significant control valve software change and for a criticality accident alarm system maintenance activity (see the 2/15/08 and 8/8/08 site rep. reports). B&W has been evaluating work control protocols and has determined improvement actions to preclude recurrence of return-to-service problems. B&W intends to add a new work package checklist for work on safety-related equipment to help ensure that the work is properly scoped, needed documentation is completed, post-work testing is properly defined and return-to service properly approved. Detailed return-to-service requirements are to be consolidated in the site-wide Conduct of Operations Manual from current disparate sources. Return-to-service determinations and approvals are to be normally conducted at nuclear facility Plan-of-the-Day meetings to take advantage of the multi-disciplined personnel/organizations present. Implementation of the changes is projected by November.

Warehouse Nuclear Material Storage: Since September 2006, B&W has been loading cans containing uranium metal and oxide into new Rackable Can Storage Boxes (RCSBs) in the Warehouse. The RCSBs are planned to be transferred to the new Highly Enriched Uranium Materials Facility (HEUMF) after startup, now planned in early 2010. This week, operators were moving loaded RCSBs in the Warehouse when a few milliliters of liquid was observed on the floor. B&W identified the leakage to be a weak acid solution remnant from the manufacturing process of the boron-based neutron absorbing material used in the RCSB. Safety basis screening of this condition by Warehouse and HEUMF personnel is in progress.