

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 13, 2009

TO: Timothy Dwyer, Technical Director  
FROM: Donald Owen and David Kupferer, Oak Ridge Site Representatives  
SUBJECT: Activity Report for Week Ending March 13, 2009

Board members Joseph Bader, Larry Brown and Peter Winokur along with staff members Dwyer, Moury, Abrefah and Gutowski visited Oak Ridge this week.

**Board Visit to Oak Ridge.** YSO, DOE-ORO and contractor personnel briefed the Board members and staff on nuclear operations and safety initiatives at Y-12 and ORNL. The Board members and staff also walked-down the Assembly/Disassembly Building, the Enriched Uranium Operations Building, and the Transuranic Waste Processing Center. Some noteworthy items from the visit include:

- Updates on Safety of Building 9212 and on Uranium Processing Facility (UPF) Progress — B&W outlined upgrade actions taken and planned for Building 9212, actions for continued monitoring of building condition, and progress towards completion of UPF. These updates were provided to satisfy an annual briefing request in the Board's letter of March 13, 2007.
- Quality Assurance (QA) — B&W management noted previously identified problems with QA on the Highly Enriched Uranium Materials Facility (HEUMF) in design, procurement and construction. While some improvement initiatives have been implemented during the last few years to address specific deficiencies, B&W has concluded that execution of the QA function needs to be improved. B&W stated that focus areas targeted for improvement will include defined responsibilities and accountability. Specific actions are yet to be determined.
- Conduct of Operations — Procedure use expectations had been left to individual first-line supervisors (see the 11/14/08 and prior referenced site rep. reports). B&W will issue a new protocol requiring nuclear operations procedures to explicitly state one of several defined use categories. A nuclear industry "Good Practice" document is being used for the new protocol.

**Highly Enriched Uranium Materials Facility.** B&W has been addressing a recent concern that the Construction Specifications used for HEUMF do not systematically include detailed 'critical characteristics' for acceptance of safety systems, structures and components (SSCs). B&W engineering personnel have developed a plan to ensure critical characteristics are identified and verified. The SSCs being evaluated include the fire suppression system, storage racks, Rackable Can Storage Boxes, drum trays, Criticality Accident Alarm System, power distribution system, and confinement system. B&W expects to complete the evaluations during the next few months.

**Activity-Level Work Planning.** Last week, maintenance personnel were breaking apart a concrete sidewalk during an excavation activity at Y-12 when an existing electrical conduit sticking through the sidewalk was inadvertently struck and pulled loose by a motorized vehicle. The 120-volt electrical line within the conduit was short-circuited. The B&W planning team had determined that implementing a 'spotter' during the excavation would be sufficient to ensure that the electrical hazard was addressed as opposed to de-energizing and applying a formal Lockout/Tagout to the electrical line. B&W's Job Hazard Analysis Manual states that "engineered controls ... should be stressed as the first line of defense..." for such situations. The site reps. consider that reinforcement of the hierarchy of engineered controls over administrative controls with work planning teams may be warranted.