

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 16, 2009

TO: Timothy Dwyer, Technical Director  
FROM: Donald Owen and David Kupferer, Oak Ridge Site Representatives  
SUBJECT: Activity Report for Week Ending October 16, 2009

**Highly Enriched Uranium Materials Facility (HEUMF).** Based on certifications from B&W Vice Presidents and Division Managers, B&W is prepared to declare readiness for HEUMF operations. B&W's Readiness Certification Assurance Board approved more than 450 affirmations by senior line managers and B&W considers that the defined prerequisites for the B&W Operational Readiness Review (ORR) are met. The B&W ORR is to begin next week.

**Criticality Safety.** Warehouse personnel were planning a cage-to-cage move of a shipping package consisting of a 55-gallon drum containing a can with uranium oxide compounds (from prior Oak Ridge gaseous diffusion plant operations). While preparing for the move, Warehouse personnel identified that the governing database indicated the shipping package contained 628 grams of uranium, which exceeded the 350 gram criticality safety limit for the shipping package. Warehouse personnel took appropriate action to control the cage and shipping package.

During its critique, B&W determined the compound material had been blended in Building 9212 in September 2006 and samples were taken to establish uranium mass. By January 2007, the sample analyses were completed but the data was not successfully entered into the governing database. Rather, the database defaulted to an "average value" estimate for such compounds (assigning a mass of about 100 grams to the can). The can was placed in the shipping package in August 2008 and was transferred to the Warehouse. In October 2008, in an effort to assign specific mass values to items that only had "estimates" for material accountability purposes, the database was updated with the specific mass value of 628 grams. No requirement or protocol was identified, however, to notify the facility management or criticality safety organizations of this adjustment to the uranium mass value of a stored item. B&W is establishing an investigation team to examine the event and database management practices. While B&W has completed some extent-of-condition review, further extent-of-condition review is planned.

**Conduct of Operations/Feedback and Improvement.** Two months ago, B&W discovered that several items of lifting equipment with expired inspection stickers were being regularly used during assembly operations (see the 8/14/09 site rep. report). B&W developed several immediate corrective actions in response to this event and is still in the process of conducting a more detailed investigation. An immediate action included production management briefing operators on the importance of ensuring that all equipment, fixtures, and accessories are within required periodic inspections, calibrations, etc. as required by the applicable procedure. Last week, assembly operators discovered that the calibration sticker on the load-cell of an assembly press had expired eight days earlier. The assembly press had been used several times during this time period. B&W verified that other equipment in the Assembly/Disassembly Building is current and is developing additional corrective actions pending completion of their investigation.

**Assembly/Disassembly Operations.** In response to an event during which a process engineer provided direction to operators during machining that resulted in unexpectedly exposing underlying materials, B&W issued a Standing Order this week (see the 10/9/09 site rep. report). It is not apparent to the site reps. that the requirements contained in the Standing Order are sufficient and clear to prevent an event similar to the machining event discussed above. The site reps. discussed the details of this concern with B&W management. Production management is planning to review assembly, disassembly, and dismantlement procedures in order to identify which procedural steps should continue to include the flexibility of being performed "as directed by the process engineer."