DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 29, 2010

TO: Timothy Dwyer, Technical Director
FROM: Donald Owen and David Kupferer, Oak Ridge Site Representatives
SUBJECT: Activity Report for Week Ending January 29, 2010

Highly Enriched Uranium Materials Facility (HEUMF). On Monday, B&W commenced nuclear operations in HEUMF when several loaded Rackable Can Storage Boxes were received by HEUMF and placed in the storage area. The site reps. observed portions of the initial storage operations. In response to a prior site rep. and staff inquiry (see the 1/15/10 site rep. report), B&W management stated that the computer program used during recontainerization operations will be approved and controlled as a formal operator aid.

Complex Command Center. The current Y-12 Plant Shift Superintendant Office and Technical Support Center are located in a World War II-era building that is seismically unqualified and would be uninhabitable (i.e., lacking redundant, highly-filtered ventilation) during some potential accident scenarios. In October 2007, NNSA approved Critical Decision-0, *Mission Need*, for a new Complex Command Center (CCC). In December 2008, NNSA approved Critical Decision-1, *Preliminary Baseline*, for the CCC project (see the 3/27/09 site rep. report). The proposed acquisition strategy in the approved CD-1 package is for a third-party to finance construction of the CCC and for NNSA to subsequently lease the facility. NNSA was planning to begin construction of the CCC in 2010. DOE's Office of Cost Analysis recently performed a review of the CCC project and is questioning NNSA's pursuit of a build-lease strategy rather than utilizing line-item funding for new construction. The outcome of this review has the potential to delay the CCC project.

Criticality Safety. Prior to an on-site material transfer, B&W identified a criticality safety deficiency when personnel from the receiving facility questioned the loading of a birdcage to be transferred from the Warehouse. The birdcage contained three uranium metal items, which violates a requirement of one item per birdcage. The birdcage had been loaded from a non-standard, legacy birdcage in October using a "Request for Technical Deviation or Clarification (TDC)" as the criticality safety basis document. B&W had developed the TDC to provide repackaging authorization for this and several other legacy containers. B&W management determined that the TDC did not clearly reference general Warehouse requirements (which typically limit one item to a birdcage) for application to this container. Operators believed that, as long as mass and enrichment limits from the TDC were met, the contents of the legacy birdcage could be repackaged to the standard birdcage. Follow-up actions to ensure that TDCs provide clear, complete requirements are being developed.

Conduct of Operations. On Wednesday, B&W issued an occurrence report in response to an event during which an engineer unexpectedly discovered radioactive material outside of posted radiological areas. B&W management plans to update its occurrence report to document their concern that when employees made this discovery, they did not immediately stop work and notify the shift manager and radiological control. B&W is planning to conduct briefings for engineering and operations personnel to re-emphasize the requirement to stop work and make appropriate notifications immediately after discovering abnormal conditions.

B&W is still evaluating if and when procedures should allow process engineers to verbally direct work during assembly/disassembly operations (see the 10/16/09 site rep. report). B&W previously issued a Standing Order to restrict process engineers from providing verbal direction during nuclear operations. The site reps. again questioned the clarity of this Standing Order with B&W management. B&W management committed to consider revising the Standing Order.