

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 10, 2009

TO: Timothy Dwyer, Technical Director
FROM: Donald Owen and David Kupferer, Oak Ridge Site Representatives
SUBJECT: Activity Report for Week Ending April 10, 2009

Board Visit. Board members Joseph Bader and Larry Brown and staff members Abrefah, Grover and Kasdorf visited Y-12 to review preliminary design efforts for the Uranium Processing Facility (UPF) and to walkdown Building 9201-5, which is undergoing facility cleanup. B&W also briefed the staff on recent information on quality assurance deficiencies with fasteners for the safety-class storage racks in the Highly Enriched Uranium Materials Facility (HEUMF). Some noteworthy items from the visit include:

- Basic Ordering Agreement (BOA) Subcontractors — Regarding roles, responsibilities and interfaces among B&W and BOA subcontractors (see the 9/5/08 site rep. report), B&W now intends to add a section to the UPF Engineering Execution Plan that specifically discusses processes for BOA subcontractor integration and interface.
- UPF Seismic Design Criteria (SDC) — The staff raised questions regarding B&W's application of SDC to UPF safety-significant confinement ventilation and fire alarm systems.
- HEUMF Storage Rack Fasteners — B&W has determined the cause of the discrepancies between bolt head-markings and the head-markings indicated on the Certified Material Test Reports (CMTRs) to be transcription errors (see the 2/27/09 site rep. report). B&W has also located a CMTR that is considered to be for the lot of bolts that did not previously have a CMTR. This lot was discovered while personnel were collecting samples of bolts from the installed storage racks for the fastener test program. This lot was subsequently included in the test program. B&W recently identified two additional lots of bolts (and associated CMTRs) that were reportedly shipped to Y-12 (these two lots were not included in the test program). B&W indicated that the installed fasteners are suitable for use because the data from the CMTRs and test program demonstrate that the fasteners satisfy applicable mechanical property and chemical composition requirements.

Conduct of Operations. B&W issued a new procedure use protocol requiring nuclear operations managers to explicitly include a defined use category into operating procedures versus the prior practice of allowing first-line supervisors to define the use expectations (see the 3/13/09 site rep. report). Implementation of the new requirement is expected as part of the ongoing effort to review operations procedures over the next several months.

Pressurized Drum Event. B&W externally reported a near-miss occurrence where the lid of a 55-gallon drum was forcefully ejected upon loosening of the drum closure ring by an operator. Fortunately, the operator was not injured (potentially due to his position as the drum was in the center of a pallet). The operator was opening the drum to add additional sludge from the cleanout of an outdoor dike associated with Oxide Conversion Facility scrubber operations. The unvented drum had been partially filled with dike cleanout sludge in June 2008 and closed until this week. The portion of the (automated) job hazard analysis covering the dike cleanout effort did not address sludge disposition or the task of loading material into drums. A Standing Order has been issued providing certain restrictions on opening unvented drums. B&W is evaluating this occurrence including determination of improvements to address unvented drums.

Furnace Reduction Operations. B&W resumed furnace reduction operations this week (see the 3/20/09 site rep. report). The operations were last performed in September 2008.