

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

TO: Timothy Dwyer, Technical Director
FROM: Wayne Andrews and David Kupferer, Site Representatives
SUBJECT: Oak Ridge Activity Report for Week Ending August 5, 2011

Readiness Workshop. This week, Y-12 hosted DOE's 11th Annual Readiness Workshop (see the 8/20/10 report). The workshop included presentations and discussions on the following topics: (1) an overview of the Fukushima Daiichi earthquake and tsunami events, (2) strategies for successfully achieving readiness to startup or restart nuclear operations, (3) the status of and lessons learned from implementing DOE Order 425.1D, *Verification of Readiness to Start Up or Restart Nuclear Facilities* (see the 10/22/10 report), (4) the status of NNSA's Readiness Review Performance Improvement Initiative, and (5) insights for future readiness review team leaders.

DOE Order 425.1D requires that DOE conduct readiness assessments prior to restarting nuclear operations that have been shutdown for an extended period of time. Some DOE contractors, including B&W Y-12, have implemented Continuing Operations Plans (COPs) that forgo the requirement to perform a readiness assessment prior to restarting operations based on their assertion that the COPs ensure the deliberate and systematic maintenance of equipment, procedures, and personnel qualifications during periods in which there is no programmatic need to perform the subject operations. During the Readiness Workshop, the Board's staff noted that, absent a formal exemption to DOE Order 425.1D, COPs should not be used as a basis for circumventing the requirement to perform readiness assessments prior to restarting nuclear operations.

Microwave Casting. B&W has completed approximately seventy percent of the 161 affirmations that were developed to support the Readiness Certification Assurance process that is being used to validate readiness efforts for startup of the new production microwave casting unit (see the 4/8/11 report). B&W has been addressing issues identified during startup testing of this equipment; most significantly, B&W has been unable to achieve the necessary vacuum pressure levels and is reconnecting a turbopump to the system. The turbopump was previously disconnected due to concerns associated with potential uranium vaporization hazards. B&W is revising the safety basis to address these concerns. B&W expects to begin cold operations on August 21st and initiate its readiness assessment on August 24th. In order to achieve this schedule, B&W needs to (1) complete equipment repairs, (2) complete testing and obtain approval from the Test Review Board, (3) complete the safety basis revision and obtain its approval from YSO, and (4) make the safety basis and criticality safety requirements effective.

Quality Assurance/Highly Enriched Uranium Materials Facility (HEUMF). This week, B&W conducted a critique to discuss an event it externally reported two weeks ago. On July 12th, while reviewing the results of annual testing for a surveillance requirement associated with the safety-significant power distribution system, B&W discovered the fuel that supplies the diesel generator had not been adequately tested during procurement to verify that it met the acceptance criteria identified in the applicable Technical Evaluation and Acceptance Plan (TE&AP, see the 3/25/11 and 3/5/10 reports). B&W developed and issued a nonconformance report that concluded the fuel can be used as is because the State of Tennessee requires all diesel fuel sold in the state to meet the procurement acceptance criteria identified in the TE&AP. During the critique, B&W identified a follow-up action to improve the technical basis associated with both the surveillance testing criteria contained in the Technical Safety Requirements and the procurement acceptance criteria contained in the TE&AP.