

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 10, 2004

**TO:** J. Kent Fortenberry, Technical Director  
**FROM:** R. Todd Davis/Donald Owen, Oak Ridge Site Representatives  
**SUBJ:** Activity Report for Week Ending November 12, 2004

The site reps. will be out of the office on Thursday and Friday.

A. Safety System Design Adequacy - Response to Board Letter of October 16, 2003. The Board's letter on Building 9212 safety systems noted that six credited fire sprinkler systems were designed to a National Fire Protection Association (NFPA) code dating back to 1969, that one of the systems had been recently upgraded from safety-significant to safety class, and that the Board believed that the adequacy of the sprinkler systems to meet current standards should be evaluated. As part of the response to the Board's letter, BWXT has been leading an Energy Facility Contractor Group (EFCOG) effort to propose a process for design adequacy evaluations (see 2/13/04 site rep. report). In late August, the EFCOG submitted their proposed design adequacy evaluation process for complex-wide use to DOE Headquarters. The evaluations would be performed for situations such as upgrades in system classification or identification of information potentially bearing on system performance including significant changes in national codes and standards. BWXT plans to incorporate the process into Y-12 engineering procedures by January.

B. Oxide Conversion Facility. Based on equipment problems and observations from BWXT and YSO oversight personnel during an integrated run last week, BWXT Manufacturing Division management decided this week to delay the resumption of the BWXT Operational Readiness Review from November 15<sup>th</sup> to the week of November 29<sup>th</sup>. Another attempt at a satisfactory integrated run is planned for the week of November 15<sup>th</sup>.

C. Microwave Casting. As previously reported (6/10/04 and 8/27/04 reports), the level of readiness review for startup of a prototype campaign (15 runs) for microwave casting of enriched uranium had been under discussion between YSO and BWXT. In mid-September, BWXT proposed to conduct a BWXT Readiness Assessment (RA) with BWXT as startup authority. Last week, YSO acted on the BWXT proposal. Citing different equipment, prototypic nature of the operation and new safety basis controls, YSO decided that a YSO RA would also be conducted and the YSO Manager would be the startup authority. The new safety basis controls include a microwave chamber relief valve, stack insulation preconditioning (to drive off moisture) and a stack spill ring, all to prevent a steam over-pressurization or explosion. The site reps. and staff will review BWXT and YSO RA plans and the conduct of the RAs to ensure appropriate scope of the reviews including review of implementation of the new safety basis controls.

D. Conduct of Operations - Pre-Job Briefings. As reported on June 4<sup>th</sup> and July 9<sup>th</sup>, at least five events occurred where lack of an adequate pre-job brief was identified as a causal factor. The site rep. had observed a lack of site requirements/guidance on when to perform pre-job briefings and discussed the observation with YSO and BWXT management. In late September, the BWXT Manufacturing Division issued a Standing Order requiring pre-job briefs for all work activities in nuclear facilities. The pre-job briefs are required to cover safety controls on a graded basis with emphasis on new, infrequent or high risk activities. The effectiveness of these Standing Order requirements is being evaluated and the results will be used in developing site-wide requirements for incorporation into the Y-12 Conduct of Operations Manual by early 2005.