

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

**MEMO TO:** J. Kent Fortenberry, Technical Director  
**FROM:** Timothy Hunt and Dave Kupferer, Pantex Site Representatives  
**DATE:** 4 August 2006  
**SUBJECT:** Pantex Plant Weekly Report

**W88 Seamless Safety for the 21<sup>st</sup> Century (SS-21):** Last week, the NNSA Office of Nuclear Weapons Stockpile directed PXSO management to support activities necessary to complete implementation and authorization of W88 SS-21 processes by January 31, 2008. This date represents a significant acceleration from the schedule BWXT noted in its 10CFR830 exemption request two weeks ago. BWXT's exemption request stated that a compliant W88 safety basis was scheduled to be submitted in March 2009. NNSA has also directed that the W88 SS-21 process will implement a "horizontal disassembly" strategy to address a potential safety issue.

**Pantex Electrostatic Discharge (ESD) Environment:** BWXT is attempting to produce a definition of the Pantex ESD environment that is agreeable to the design agencies for use in developing weapon responses for all programs. Essential tasks that must be accomplished include data collection such as static potentials on personnel and tooling in various facilities, compilation of data into a probabilistic voltage distribution, and development of software to reconcile the voltage distribution with component response data. A transition plan will ultimately be published that will obviate the need to declare preexisting weapon responses invalid or compel programs to seek new responses, based on the emergent information.

**Static Dissipative (ESD) Flooring:** Currently, only B61 operations are authorized to be performed in facilities in which ESD flooring has been installed. The B61 program is engineered to be electrically compatible with the ESD flooring, including conductive tooling, work stands, storage units, carts, and work boots. During meetings at Sandia National Laboratories last month, the design agencies committed to drafting a white paper that analyzes the safety implications of performing nuclear explosive operations on programs that are not engineered to be compatible with the ESD flooring. The authorization of operations for programs other than the B61 program in facilities with ESD flooring would allow BWXT's Manufacturing Division more logistical flexibility and could potentially accelerate the installation of ESD flooring in additional facilities.

**Readiness Review Process:** During the past few years, BWXT was experiencing an increasing number of findings during contractor and NNSA readiness reviews. In May 2005, PXSO tasked BWXT with performing a root cause analysis and implementing any resultant corrective actions. The recently completed project appears to be bearing fruit. As a result of some significant improvement actions, the number of pre-and post-start findings from NNSA readiness reviews has fallen dramatically. The average number of findings from the four reviews in fiscal year (FY) 2006 is 3.8, compared to 13.3 for the four reviews in FY05. Major factors apparently contributing to the reduction in findings are incorporation of an affidavit process into the readiness verification process and enhanced training and qualification of project team members.

**B53 Project:** The B53 SS-21 engineering and project teams met recently to baseline the dismantlement process flow in support of achieving Milestone 1 (scope, budget) this fiscal year. Plans are to develop a Hazard Analysis Report for the nuclear operations and a Process Hazard Analysis for the non-nuclear activities. The design and fabrication of new tooling is one of the critical elements to meeting the NNSA targeted startup date of April 2008. Pantex is working to support anticipated receipt of units from off-site in a few months. This will only happen if the transportation plan is approved.