

## **DEFENSE NUCLEAR FACILITIES SAFETY BOARD**

**MEMO TO:** J. Kent Fortenberry, Technical Director  
**FROM:** Timothy Hunt and Dave Kupferer, Pantex Site Representatives  
**DATE:** 29 June 2007  
**SUBJECT:** Pantex Plant Weekly Report

**DNFSB Staff Activity:** R. Rauch was at Pantex to observe the first week of the Bays and Cells Nuclear Explosive Safety Master Study.

**W80 SS-21 Startup:** The current schedule shows the W80 Hazard Analysis Report (HAR) being submitted for approval in late-July and the Nuclear Explosive Safety Study (NESS) starting a few days later. If the current schedule holds, the HAR will not be approved when the NESS starts. PXSO has indicated that it will request an exemption to the DOE O 452.2C, *Nuclear Explosive Safety*, requirement that an approved safety basis be in place before the NESS begins; similar to what was submitted by PXSO and approved by the NNSA Central Technical Authority to support the start of the W76-1 assembly NESS. A parallel effort is underway at DOE headquarters to revise DOE O 452.2C to delete the aforementioned requirement. In addition, to achieve W80 SS-21 operations authorization by the end of this fiscal year, BWXT is planning to perform the W80 SS-21 contractor readiness assessment in parallel with the NESS.

**Configuration Management of the Safety Basis and Technical Safety Requirement (TSR) Implementation:** In 2003, PXSO and BWXT developed a plan to implement approximately 250 controls contained in approved sitewide and facility-specific documented safety analyses (DSAs). In October 2006, BWXT declared that its actions to support implementation of about 200 sitewide and facility-specific TSR controls had been completed, but that several controls were outside of the scope of the integrated implementation plan effort and would be implemented by other projects. This month, PXSO performed an independent assessment of BWXT's processes to achieve configuration management of the DSAs. The final report states that the dynamic state of the DSAs has resulted in an increasing number of safety basis changes, and associated control changes, which have been approved but have not been verified as implemented. In May, there were more than 70 safety basis change packages, which includes changes to more than 175 TSR controls, that had been approved by PXSO but not "posted" by BWXT. The review team concluded the primary configuration management problems are: approved controls need to be implemented; a DSA baseline needs to be established; the clarity and consistency of the DSA needs to be improved; and technical review comments (post-start conditions of approval) need to be dispositioned. The team identified several specific recommendations including the following: BWXT should minimize the number of safety basis change packages that are developed until a DSA baseline is established and BWXT should establish a permanent position responsible for control implementation.

**Causal Factors Analysis (CFA):** BWXT recently completed the first phase of its CFA improvement initiative. During the next couple months, BWXT plans to develop and issue a CFA manual based on the principles of high reliability organization theory and human performance improvement. This week, BWXT issued a CFA report that documents the lessons learned from a 17 April event during which a maintenance worker drilled through an embedded electrical conduit and contacted an uncontrolled 110-volt energized circuit. No injuries occurred during this event. The investigation team determined that the two primary causes of the event were deterioration of the utility locating and penetration permit processes and ineffective work planning. The report also notes that some craft workers were unaware of work instructions related to their roles and responsibilities.

**Paint Bay:** PXSO has rejected BWXT's request to stop maintaining the Paint Bay as a nuclear facility. The basis for the rejection is PXSO's desire to maintain a responsive infrastructure.