

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

**MEMO TO:** J. Kent Fortenberry, Technical Director  
**FROM:** Timothy Hunt and Dave Kupferer, Pantex Site Representatives  
**DATE:** 30 November 2007  
**SUBJECT:** Pantex Plant Weekly Report

**DNFSB Staff Activity:** R. Rauch was onsite providing site rep support.

**Person-to-Person Coverage:** A PXSO facility representative (FR)—and subsequently B&W personnel—recently discovered that numerous steps in W76 disassembly procedures were not appropriately identified as requiring person-to-person coverage. Steps where technicians are performing work on conventional high explosives, main charge high explosives with exposed detonator cables, or nuclear explosives connected to an electrical tester must be—per DOE O 452.2C, *Nuclear Explosive Safety*—annotated with an [M] in the left margin. During the operations observed by the FR, the technicians performed the steps in a person-to-person manner. B&W is reviewing procedures for all programs for evidence of other omissions of this safety requirement.

**High Dose Rate Operations:** B&W has revised its Radiation Protection Program—and submitted it to PXSO for approval—to clarify that provisions in 10CFR835 for high radiation areas are not required for high dose rate operations at Pantex involving nuclear explosive and pit operations. A recent B&W review of weapon and pit operations determined that it is not credible for an individual to receive a whole body dose equivalent of 100 mrem in one hour, even though some pits have dose rates well in excess of that. The B&W report concluded that since weapon components within a program have very little variation in radiological characteristics and the process and stay times are relatively stable (although a time-motion study has not been done for the W62 program), the integrated dose can be calculated with a high degree of certainty. Historical data indicate that it is unlikely that the 100 mrem in one hour limit has been violated.

**Conduct of Operations:** During bay operations on a W84 joint test assembly, production technicians improperly installed the unit into the assembly stand. The procedure described the action as aligning a hole on the unit with the zero degree mark on the stand. The stand was not marked and the unit was installed 180 degrees out. The recovery procedure had the technicians slightly raise the unit with the hoist and rotate it to the proper orientation. The production supervisor has requested that engineering mark the assembly stand to eliminate confusion.

**Pit Holding Fixtures (Birdcages):** All on-site transportation of pits was suspended yesterday due to weld quality and material questions surrounding about 2000 birdcages. *Weapon Quality Policy* (QC-1) mandates that items procured from vendors meet established requirements. A number of components on the birdcage were found to be welded using an unauthorized process and material was substituted without approval. B&W has completed a preliminary analysis of the current configuration and will provide it to the design agency for approval. The birdcage is not credited in the authorization basis and B&W does not believe there are any safety issues associated with its continued use for onsite storage and transportation.

**Pantex Management and Operating Contractor:** BWXT Pantex, LLC has changed its name to Babcock & Wilcox Technical Services Pantex, LLC (B&W Pantex).

**PXSO Site Manager:** Dan Glenn has left the Pantex Site Office to join the Los Alamos Site Office. Don White will be the acting site manager until a permanent replacement is appointed.