

## **DEFENSE NUCLEAR FACILITIES SAFETY BOARD**

**MEMO TO:** Timothy J. Dwyer, Technical Director  
**FROM:** Matthew Duncan and Rory Rauch, Pantex Site Representatives  
**SUBJECT:** Pantex Plant Report for Week Ending January 8, 2010

**W78 Operations:** B&W recently encountered several problems while attempting to extract a W78 canned subassembly (CSA). The first stoppage resulted from a tooling issue. Technicians were pressurizing the sealing clamp that is used to regulate the motive force for the extraction when the clamp's rubber seal detached. Per protocol, operations were placed on hold. The tool was removed and repaired, and operations were restarted only to be stopped again when technicians were unable to extract the CSA using the maximum force specified in the procedure. Program personnel suspected excessive structural material was preventing the area below the CSA from becoming fully pressurized. Process engineering developed a recovery procedure to allow the technicians to remove the material that appeared to block the entrance to the CSA's housing. After two extraction attempts, and one procedure revision to adjust the implements that were used to remove the excess material, the CSA was successfully extracted.

**Offsite Shipments:** Recently, B&W Pantex shipped a CSA to B&W Y-12 with a serial number on the shipping label that did not match the serial number on the component. Immediate corrective actions included the cessation of offsite shipments from Pantex. Since that time, B&W Pantex management has lifted the restrictions on shipments of War Reserve Units, Joint Test Assemblies, Test Beds, Reservoirs, ALT Kits, and Diamond-stamped Handling Gear. This decision was based on a pre-standing requirement that the part and serial number of each item be independently verified by line personnel and the quality organization during the build or packaging process. For CSAs, analogous practices to independently verify the accuracy of shipping labels prior to packaging were not in place prior to this incident. Before re-authorizing shipments of CSAs, B&W Pantex management has requested that all previously packaged CSAs be verified. All other shipments will be evaluated individually until an extent of condition analysis and corrective actions (e.g., implementing requirements to formally verify the accuracy of component serial numbers and other identifiers on shipping labels) have been completed.

**Technical Procedures:** In a 15 October letter, the Board identified several potential improvements related to the development and implementation of technical procedures. The site reps. met with B&W and PXSO this week to discuss the status of actions that would address the areas identified in the letter. The process engineering and tooling departments are developing performance objectives that would require their personnel to spend a pre-specified amount of time (nominally one process evolution per year) observing the operations to which they have been assigned. These observations would take place when processes are functioning normally and are intended to bolster the lines of communication between the manufacturing and engineering divisions. In addition, B&W is finalizing an improvement initiative that was chartered to remove non-value added components of the procedure revision process while examining ways to prevent the word processing issues that arose last fall. One notable component of the initiative was a comprehensive review of the B&W Writer's Manual for Technical Procedures. The review team, which included a representative from the manufacturing division, has drafted a revision to the manual. Many of the changes are focused on simplifying formatting requirements that were found to have no human factors benefit. These simplifications should enhance the consistency and usability of procedures.