DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: Timothy Dwyer, Technical Director
FROM: Matthew Duncan and Rory Rauch, Pantex Site Representatives
SUBJECT: Pantex Plant Report for Week Ending January 27, 2012

Board Visit: Dr. Peter Winokur, Ms. Jessie Roberson, Mr. Joseph Bader, and Dr. John Mansfield, along with staff members T. Dwyer, B. Laake, D. Ogg, and N. Slater-Chandler were on site to meet with plant personnel to review the safety of nuclear operations. Topics of discussion included B&W initiatives to upgrade tooling, upgrade vital safety systems, improve conduct of operations, improve procedures, and improve the safety basis. Of note, B&W indicated that it received funding last week to purchase an additional 11 seismically-qualified hoists. Installation of these hoists is tentatively scheduled to be completed in fiscal year 2014, at which time B&W will have seismically-qualified hoists in all nuclear explosive facilities.

Anomalous Unit: Late last week, the PXSO manger approved the final report for the nuclear explosive safety (NES) change evaluation (NCE) of the proposed recovery operation for the unit with the detonator cable assembly (DCA) that could not be removed using the currently approved process (see 1/20/12 report). The NCE group identified the need for some procedure enhancements (e.g., polyimide tape to the setup material list), but did not identify any NES findings with respect to the proposed recovery operation on this specific unit. B&W successfully executed the recovery operation this week.

During the NCE, the NCE group and B&W project team discussed ways to more efficiently recover from future units that experience processing issues similar to this one. The primary question during this discussion became what criteria could be used to characterize a DCA as "stuck." This caused the NCE group to revisit the technique used to remove the adhesive surrounding the DCA during the original attempt to disassemble this unit last August. The project team was unable to provide any specific weapon response information or specific safety basis analysis to support the extent of scoring of the high explosive (HE) that took place while removing the adhesive; therefore, the NCE group recommended that B&W apply controls to prevent excess damage to the HE and unacceptable mechanical stresses to the DCA. This week, B&W addressed the NCE group's recommendation by modifying the applicable procedure and training the technicians to only allow incidental scoring of the HE during removal of the adhesive.

Processing Anomalies: This week, technicians were removing a DCA from the electrical system of a particular weapon when they observed that part of the connector at the electrical system interface was missing. They immediately paused the operation and contacted their supervisor. The technicians indicated that they did not observe or experience anything unusual prior to that step of the process. B&W process engineering is working with the responsible design agency (DA) to determine the cause of the connector damage and whether tooling modifications will be required to prevent damage on future units. DA, B&W safety basis, and NES personnel determined that the missing connector part did not introduce any safety concerns.

During a disassembly operation on a different weapon program, technicians found that the DCA had been bent excessively. B&W personnel are postulating that the bending occurred when the DCA was caught between two components in an unanticipated fashion. Safety basis and DA personnel evaluated the configuration and determined that the bending created no safety concerns. B&W has since processed the unit. B&W plans to modify the process to prevent bending of the DCA during operations on this weapon program in the future.