

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

**MEMO TO:** J. Kent Fortenberry, Technical Director  
**FROM:** Timothy Hunt and Dave Kupferer, Pantex Site Representatives  
**DATE:** 7 October 2005  
**SUBJECT:** Pantex Plant Weekly Report

**DNFSB Staff Activity:** C. March, A. Matteucci, and J. Deplitch, were on-site this week to review the Fire Protection Program and related safety systems.

**W76 Tooling Incident:** During attempted separation of the high explosive (HE), a piece of tooling malfunctioned, causing damage to the HE in three locations. Upon recognition that the tooling was not operating as designed, the production technicians halted the disassembly activity and contacted management. BWXT line management and the PXSO facility representative (FR) agreed that the damaged HE did not present a safety issue and that the proposed path forward, to annotate the procedure and allow the production technicians to complete the operation, did not warrant a more extensive evaluation of the condition of the HE. BWXT personnel and the PXSO FR determined the damage to be acceptable based on experience and the rationale that other operations on this HE create similar damage. A critique was not convened.

**Facility Restart After Loss of Power:** Subsequent to the plant-wide loss of power event of 26 August, BWXT was procedurally required to complete a checklist for each effected facility to validate operability of the numerous mechanical, electrical, and radiological systems before resuming normal operations. Missing forms, incomplete data, and inaccurate information were noted deficiencies in the checklist process. PXSO has requested that BWXT conduct an investigation of the incident and develop a corrective action plan.

**Potential Inadequacy of the Documented Safety Analysis (PISA):** On 27 September, BWXT declared a PISA after discovering that the design requirements document for a transportation cart listed the bounding capacitance of the cart to be more than 500 pF, which is greater than the capacitance assumed in the design agency weapon response for a specific weapon program. After declaring the PISA, BWXT determined that additional weapon response was not warranted because the methodology used to measure the bounding capacitance was excessively conservative. BWXT has withdrawn the PISA declaration.

**Conduct of Operations:** During W76 disassembly operations, a production technician (PT) was directed by procedure to cut and remove lock wire from a cable and subsequently perform a torque check on a bolt. The PT mistakenly removed the lock wire from an adjacent connector and tightened the wrong bolt. The PT was certified on this process and understood the procedure.

**High Pressure Fire Loop (HPFL) Replacement Project:** BWXT has proposed a three phase plan to replace the HPFL and associated lead-in piping; (1) replacement of both the HPFL and associated lead-in piping around some nuclear explosive facilities, (2) replacement of the main pipe HPFL in the rest of Zone 12 South, and (3) replacement of the remaining lead-in piping in Zone 12 South. Phase three is currently unscheduled and unfunded. Four of the last 15 HPFL breaks occurred in 12-84 lead-in piping, which is not expected to be replaced until phase three.

**PISA:** This week, while reviewing electrical tester configuration descriptions and requirements, BWXT discovered that electro-magnetic radiation (EMR) stand-off distances had not been appropriately integrated into work procedures. BWXT declared a PISA and suspended operations that require AC powered testers, with the exception of Phoenix carts, to be connected to nuclear explosives. As a long-term action, BWXT plans to analyze whether or not EMR is a realistic hazard.