

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

**MEMO TO:** J. Kent Fortenberry, Technical Director  
**FROM:** Timothy Hunt and Dave Kupferer, Pantex Site Representatives  
**DATE:** Friday, July 22, 2005  
**SUBJECT:** Pantex Plant Weekly Report

**W56 Programmatic Shutdown:** Bay and cell operations were suspended this week on the W56 program due to an emergent issue related to electrostatic discharge (ESD). The design agency informally communicated its ESD concern to BWXT Monday. BWXT halted operations pending receipt of a more formal engineering analysis. If the issue persists, a TSR-level control will likely be needed to protect the sensitive component from potential ESD insults during transport and bay operations and additional bonding may be required for cell dismantlement operations.

**W62 Anomalous Component:** During performance of a disassembly procedure, the production technicians recognized an unexpected configuration of a limited-life component. The component was not identified on the drawing and the hazards of the specific component had not been analyzed in the safety basis. The component had been changed out by the military a few years ago and replaced by a similar part (different part number). Pantex was not informed by the design agency that a different part was being used. Operations on the subject unit have been suspended pending probable changes to the safety basis, procedures, and tooling. A database review of the other W62 weapons at Pantex indicates the problem is unique to this unit. The potential for significant safety issues due to the introduction of potentially unanalyzed hazards, and the associated weapon configuration management issues, needs to be addressed.

**B61 Operational Anomaly:** During B61 disassembly operations this week, production technicians discovered a broken cable. It is likely that the cable was severed while production technicians were separating two other components. The unit was not in a nuclear explosive configuration at this point in the process. Subsequently, Explosive Safety and Nuclear Explosive Safety personnel examined the unit and determined that no immediate safety concerns existed.

**W76 Cell Operations:** On 30 March, during W76 disassembly operations, production technicians were unable to remove the midcase of a unit. This week, the fourth attempt to separate the midcase was successful after production technicians applied 3400 lbs force and injected a silicone-based substance between the case and the unit.

**Lightning Bonding System:** Over the past few months, several failures of a five year lightning bonding system preventive maintenance inspection have occurred. The engineered bonds inside nuclear facilities, Technical Safety Requirement (TSR) design features, failed resistance tests. No TSR violation resulted as BWXT engineering determined through an operability evaluation that the narrow spark gap between the bond lugs and facility rebar, which were immediately closed by the crafts and successfully retested, still provided adequate, although compromised, protection in the event of a lightning strike. The failures raises the question of whether the five year periodicity is adequate for this test or whether the frequency should be increased. BWXT engineering has recently begun tracking the failures and expects to decide by the end of the year if the five year inspection frequency needs to be shortened.

**Readiness Assessments:** PXSO has evaluated a root cause assessment report BWXT developed, which proposes improvements to the readiness assessment process. PXSO has determined that additional information should be incorporated into the report, including a better description of the proposed corrective actions and acceptable corrective action closure criteria.