

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 14, 2014

**MEMO TO:** Steven Stokes, Technical Director  
**FROM:** Thomas Spatz, Pantex Site Representative  
**SUBJECT:** Pantex Plant Report for Week Ending February 14, 2014

**DNFSB Staff on Site:** J. Anderson and Z. Beauvais were at the Pantex Plant this week to observe the W78 Nuclear Explosive Safety Study.

**Potential Inadequacy of the Safety Analysis (PISA) and Positive Unreviewed Safety Question (USQ) for Bounding Impact Analysis:** Babcock & Wilcox Technical Services Pantex, LLC (B&W) declared a PISA when they discovered that the B61 Hazard Analysis Report failed to include the push bar on the transfer cart in the bounding impact scenario. The B&W Authorization Basis analyst determined that the impact energy of the transfer cart with the push bar exceeded the impact energy that the work stand is credited to withstand to prevent collapsing onto the unit or dropping of the unit. B&W has taken immediate action to pause all operations that use the transfer cart in conjunction with the work stand. On Thursday, B&W upgraded the PISA to a positive USQ due to the increase in the probability of a malfunction of equipment important to safety.

**Loading Dock Formality of Operations Event:** B&W placed two units and their respective handling gear (H-gear) into non-conformance status when production technicians discovered the H-gear did not meet specifications. After units are transported to a facility, B&W Production personnel are required to lock a caster on the H-gear to prevent the unit from rotating. The Production personnel discovered that the pin used to engage the anti-rotation fixture was missing for one of the casters, so they locked one of the other three casters. The Production personnel also noticed that two eyebolts used to attach the towing hardware to the H-gear were improperly installed facing downward on the base plate. These eyebolts were on the back of the H-gear and not used to tow the unit. The caster does not have the complete range of rotation when the eyebolt is installed on the bottom of the base plate. B&W placed these two units in non-conformance status based on the two discrepant as-found conditions of the H-gear.

At the event critique, the Site Representative discovered that Transportation personnel modify the H-gear at the loading dock by unstacking the units, installing casters on the H-gear, and manipulating the eyebolts to accommodate the tow hardware. None of these activities are performed by procedure. The Transportation personnel have a general use procedure that does not contain instructions to change the orientation of the eyebolts. B&W does have reacceptance procedures for the H-gear when it is in the paint bay. The procedures from the paint bay give the orientation of the eyebolts and the torque specifications; however these procedures are not used by the Transportation personnel at the loading dock. B&W increased the initial occurrence significance categorization of this event from three to two following the event critique.

**Anomalous Unit Update:** B&W has conclusively determined that the unusual noise heard during the assembly operation where a compressive load is applied to the unit was caused by a misalignment of a keyway and the matching slot. (See Report from 3/1/2013 for best description of what originally transpired.) B&W has experienced this in the past and is introducing a tool that was previously used into the process to facilitate disassembly of the unit.