

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

**MEMO TO:** Timothy Dwyer, Technical Director  
**FROM:** Tom Spatz, Pantex Site Representative  
**SUBJECT:** Pantex Plant Report for Week Ending October 12, 2012

**Tooling Malfunction:** B&W Pantex continues to pause operations on four weapon programs due to the failure of a lifting and rotating fixture. (See report for 9/21/12, 9/28/12, and 10/5/12.) This week, B&W Pantex was able to obtain authorization to perform lifting and rotating operations in the training bay. Operations in the training bay do not involve nuclear explosive operations. B&W tooling engineers disassembled the broken fixture and determined that the set screw securing the anti-rotation handle had broken due to the combined effects of being a couple-of-turns loose and bending fatigue. B&W tooling engineers have also determined why the fixture rotated with one handle still operable. The Site Rep observed a demonstration of this failure mode as well as the proposed solution on a trainer unit in the training bay. B&W Pantex sent a letter to the NNSA Production Office (NPO) requesting that a Nuclear Explosive Safety Change Evaluation (NCE) be convened to evaluate the use of lifting and rotating fixtures on units that were in process when the pause was declared, and to ensure that the fixtures operate as intended during future use.

**Facility Insult Positive Unreviewed Safety Question (USQ):** This week B&W Pantex issued a positive USQ determination related to non-bounding calculations of a facility structural design feature and its associated functional requirements. B&W system engineering personnel have been performing calculations as a result of the Board's March 2nd letter and attached Staff Issue Report, *Review of Calculations Supporting the Safety Basis for the Pantex Plant*. Based on these new calculations, B&W authorization basis personnel determined that the facility structural design feature did not meet the functional requirement. B&W Pantex has taken immediate action to prevent the scenario.

**Lock-Out/Tag-Out (LOTO) Violation:** This week B&W Pantex held a critique for an event involving a LOTO violation by a subcontractor. B&W utilities personnel performed the LOTO to isolate steam in a section of piping. They installed one lock at the energy source and a second lock at a downstream open flange, with an air gap after the flange for easy visual verification that there was no energy in the pipe. The subcontractor started removing piping at the lock where the energy source was isolated. They removed piping until there was one section of piping with both ends open (no energy source), and a LOTO tag on the open flange at one end of the pipe. The subcontractor removed the open-ended pipe with the LOTO tag on it rather than notify B&W construction support personnel to have the lock and tag removed. At the critique, NPO expressed concern that the scope of the LOTO procedure did not identify the fact that the piping was to be removed. B&W utilities personnel stated that they would have placed the lock and tag at a different location had they known the pipe was to be removed. B&W Pantex is retraining the subcontractor on LOTO procedures and planning to perform a causal analysis-mistake proofing for this event.

**Shipping Container Positive Unreviewed Safety Question (USQ):** This week, NPO approved on-site movement of all containers. B&W Pantex still has a pause on over-the-road use of shipping containers with foam from a specific vendor. (See report for 10/5/12.)