

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

**MEMO TO:** J. Kent Fortenberry, Technical Director  
**FROM:** Timothy Hunt and Dave Kupferer, Pantex Site Representatives  
**DATE:** 25 May 2007  
**SUBJECT:** Pantex Plant Weekly Report

**Tooling Impact Event:** Approximately two years ago, a nuclear explosive operating procedure was modified to allow technicians to place aluminum spacers between a sensitive component and a jackscrew. The spacers artificially extend the travel of the jackscrew to facilitate the removal of another component from the unit. Last week, an aluminum spacer temporarily stuck to the foot of the jackscrew as it was being retracted before falling about six inches onto the sensitive component. BWXT had included this scenario in the documented safety analysis and the design agency had provided weapon response information that screened the possibility of this scenario resulting in significant consequences. The use of the spacers was evaluated via the unreviewed safety question process for a different procedure, however, not the procedure in use during the recent event. BWXT identified more than a year ago that the jackscrew should be lengthened, which would eliminate the need for the spacers. The permanent modification was completed this week and operations with the upgraded fixture have resumed.

**Unauthorized Conduct of Operations:** During W62 disassembly, technicians are required to pump a component off with an air operated grease gun. Hand fatigue has become an issue and the technicians were observed to be using plastic tie wraps to aid in maintaining pressure on the grease gun handle. The use of plastic tie wraps is not procedurally authorized. On a previous occasion, the technicians were directed to stop using duct tape, also unauthorized, to serve the same function. Engineering is evaluating possible solutions to relieve the hand fatigue concern.

**W88 Nuclear Explosive Safety Study (NESS):** The proposed W88 limited cell operations are essentially the same as last performed three years ago and previously evaluated by the NESS group in December 2000. There was one pre-start finding dealing with the adequacy of controls to minimize the possibility of energy release from a dropped high explosive (HE) and no post-starts due to the limited number of authorized operations. One minority opinion, endorsed by three of seven group members, addressed the lack of engineered controls to prevent the drop of an HE charge during handling and movement. The majority response concluded that HE handling was adequately controlled based on technician training and demonstrated proficiency, cell layout, and process flow. Readiness assessment demonstrations will likely begin next week.

**Special Nuclear Material Component Requalification Facility:** Evaluation of the process prove-in lot of eight pits has been completed. The collected data was provided to the design agency this week and a Qualification Evaluation Release is expected to be issued in early-June.

**Special Tooling Assessment:** A recent safety system assessment of special tooling by PXSO concluded that an appropriate level of design, acceptance, and maintenance is being performed. As part of the assessment, an analysis of BWXT's corrective actions from the NNSA review of September 2005 was included. The only identified weakness was in regards to the vendors which fabricate about 60 percent of the special tooling. BWXT completed a welding program assessment of 20 percent of the vendors and found that they do not meet the contractually documented welding requirements. The PXSO assessment found that the BWXT welding program has improved significantly since the 2005 NNSA review identified weaknesses.