

## **DEFENSE NUCLEAR FACILITIES SAFETY BOARD**

**MEMO TO:** J. Kent Fortenberry, Technical Director

**FROM:** Timothy Hunt and Dave Kupferer, Pantex Site Representatives

**DATE:** 25 November 2005

**SUBJECT:** Pantex Plant Weekly Report

**Damaged Weapon and Tooling:** Last Saturday, BWXT resumed operations to remove a gouged subassembly from the reentry vehicle without a full understanding of what caused the damage. The bent and broken cutter tool responsible for gouging the unit was replaced with another copy and more filler material was removed from the RV before the cutter tip broke again. Additional chiseling was necessary to finally extract the subassembly. Significant marring was evident around a large percentage of the unit. Damage to the extent seen has been screened through the authorization basis group and the design agency has no expressed issue with scratching, gouging or nicking of the case. Prior to the cutting operation on the next unit, process engineering clarified the expected feed rate and initial cutter position in the procedure and observed the cutting operation to evaluate worker technique. Even though the technician performance was acceptable, the cutter blade broke for the third consecutive time and the process has been halted until a thorough evaluation and possible tooling modification is accomplished.

**One Point Safety:** A recent PXSO review of proposed new tooling determined that BWXT did not meet the nuclear explosive safety (NES) requirement in DOE O 452.2B for the design agencies (DAs) to evaluate new tooling for one-point safety. It was also not clear whether the analysis requirement is included in the tooling design process. BWXT subsequently took actions to review tooling for all active programs and create a list of tools requiring one-point safety evaluations, work with the DAs to clarify and document screening criteria, and update several forms and instructions to consider one-point safety of new tools. Another BWXT goal is to improve the consistency of one-point safety criteria between and within the DAs. The DAs have requested that all new special tooling be analyzed and guidance on proper execution of one-point safety reviews has been added to the work instruction used by NES reviewers.

**Pantex Welding Program:** Subsequent to an independent assessment of the Pantex welding program in January, BWXT issued an improvement plan that is designed to make the program code-compliant and defensible. Deficiencies were noted in welder qualifications, procedure adequacy, and control of filler material. Although progress has been made in implementing improvements, the program currently lacks a qualified welding engineer. BWXT is aggressively attempting to fill this significant gap. The large majority of the welding on new special tooling is done by outside vendors and very few vital safety systems require welded joints. PXSO anticipates doing a welding program assessment in the near future.

**12-64 Bays Upgrade Project:** The proposed major modifications to Building 12-64 will allow Pantex to conduct weapons operations in those bays. The construction contract was to be awarded by 30 November to support the first production unit date of July 2007. Bids received for the upgrade greatly exceeded the baselined cost and the Acting Deputy Administrator for Defense Programs has taken the unusual step of requesting that Pantex reformulate the acquisition strategy by 16 December. To support a significantly lower cost, the reconsideration must include alternate contracting schemes, methods to minimize risks to the contractor, mechanisms to increase productivity, and an approach to attract a wider base of bidding contractors.