

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

**MEMO TO:** Timothy J. Dwyer, Technical Director  
**FROM:** Timothy Hunt and Rory Rauch, Pantex Site Representatives  
**DATE:** 13 February 2009  
**SUBJECT:** Pantex Plant Weekly Report

**DNFSB Staff Activity:** D. Kupferer, B. Laake, and J. Shackelford were onsite to perform a review of the special tooling program.

**Special Tooling:** The staff performed a review of the special tooling program that focused on the processes (e.g., dimensional inspections and tryouts) used by the manufacturing and quality divisions to ensure that special tooling will perform all credited safety functions when issued to the line. The staff noted that the tooling program has significantly improved since 2004, when the Board and NNSA identified several deficiencies with the tooling receipt and inspection processes. In addition to correcting these deficiencies, B&W Pantex is taking several actions to continue improving the tooling program, such as modernizing the tooling management system to automate tool distribution to and from the line. As part of this improvement effort, B&W Pantex is in the process of revising the administrative procedures that govern the tooling program.

**B53 SS-21 Operations:** The B53 SS-21 project team approved a project plan earlier this week. The plan reflects an authorization date of December 2009. Other major milestones include weapon response issuance in April, hazard analysis report (HAR) submittal in June, HAR approval in September, nuclear explosive safety study approval and start of the NNSA readiness assessment in November.

**Technical Safety Requirement (TSR) Violations:** In response to an increase in TSR violations in FY08, B&W Pantex recently completed a causal factors analysis (CFA) investigation of the TSR violations that occurred from FY04 to FY08. The report concluded that there was no systemic solution to reduce the number of TSR violations, but identified several opportunities to improve business practices. Last week, PXSO responded by concluding that the high reliability organization (HRO) CFA methodology was not the appropriate methodology for this situation since the HRO CFA process is most beneficial when applied to single events. The response identified several management systems (e.g., conduct of operations, procedure development and approval) that were not explored in sufficient detail and provided several additional lines of inquiry that may provide insights into any latent organizational weaknesses that contributed to the TSR violations in question. PXSO requested that B&W Pantex evaluate these lines of inquiry. PXSO also requested that B&W Pantex develop a cost-effective process to evaluate the causal factors of all future TSR violations in a timely manner.

**Procedure Change Requests:** In the past week, there were two similar occurrences where the production technicians (PTs) recognized that a procedural step was missing and halted operations. The PTs were using a new revision of the procedure for the first time. The steps in question had been inappropriately moved to different sections of the procedure when it was revised. The procedure change requests had been verbally miscommunicated by the PTs to the process engineer. The revised procedure steps were not validated after incorporation of the changes. Manufacturing personnel are not required to formally document change requests when a procedural enhancement or error is identified. The relevant work instruction only states that the document custodian (e.g., process engineer) should be contacted if a need for a revision is noted. In practice, the PT generally informs the PSM of a proposed procedure change, with the PSM then working with the engineer to resolve it.