

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

**MEMO TO:** J. Kent Fortenberry, Technical Director  
**FROM:** Timothy Hunt and Dave Kupferer, Pantex Site Representatives  
**DATE:** 9 December 2005  
**SUBJECT:** Pantex Plant Weekly Report

**DNFSB Activity:** Staff members A. Matteucci and M. Moury and Outside Experts D. Boyd and R. Lewis were on-site this week for a review of conduct of operations.

**Occurrence Reporting and Processing System (ORPS) Reports:** In January 2005, BWXT committed to resolving noted deficiencies in the ORPS reporting process. The goal was to revise the Quality Assurance Improvement Plan and carry out proposed enhancements in the timeliness and content of completed occurrence reports. Writing guidelines and a process for reviewing submittals were developed but implementation results have been inconsistent. PXS0 issued a memorandum to BWXT this week— following review of a particular report where a Technical Safety Requirement-level event was inaccurately categorized—reiterating its expectations for management reviews before the submittal of reports and the high quality content of reports.

**W70 Tooling:** During erosion operations, production technicians (PTs) in a nuclear explosive bay observed a loud popping noise and a dark puff of gas emanate from the eroder supply cart. The PTs shut-off the eroding operation and promptly exited the facility. Appropriate notifications were made. The fire department responded and determined that there were no fire hazards associated with the eroder supply cart. Engineering and maintenance personnel analyzed the eroder supply cart and determined that it was possible that a pump could have malfunctioned, which would have caused some amount of noise. In addition, the pump malfunction could have caused a small amount of tooling oil to be atomized in a small puff that could have looked and smelled like smoke. The eroder supply cart is pneumatically powered and has no internal electrical components.

**W56 Nuclear Explosive Safety (NES) Study:** The NES study group met with the W56 project team last week. Based on the information presented, the study group concluded the proposal for the spinner process could be effectively evaluated as a NES change evaluation (NCE) rather than a NES study. However, technical problems with one new tool could delay this evaluation until early February. On a separate issue, PXS0 asked that a NES study group convene at Pantex the week of 19 December to consider new design agency information regarding electrostatic discharge hazards. The NES study group scoped the issue with the project team and Lawrence Livermore National Laboratory subject matter experts, and established a plan and schedule that supports the PXS0 request.

**W62 Tooling:** As a result of three recent failures of a cutting tool used during nuclear explosive operations, tooling engineers completed a detailed analysis of the causes of the breaks and, in one case, damage to a weapon component. The investigation indicated the breaks resulted from inadequate strength of the cutting surface backing material and the damage to the unit occurred after the cutter had bent and the cutting surface was driven into the component. Modifications to the cutter include the use of a harder steel, a redesigned shape that should minimize potential snagging during the operation, and the addition of a nylon spacer to reduce the probability of the cutter contacting a component. A new cutting bit will be tested on a trainer unit prior to implementing on a weapon and the bits will be employed only once before being replaced. BWXT management indicated that they intend to implement a more rigorous evaluation process when tools malfunction or break.