

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: J. Kent Fortenberry, Technical Director

FROM: Timothy Hunt and Dave Kupferer, Pantex Site Representatives

DATE: Friday, May 6, 2005

SUBJECT: Pantex Plant Weekly Report

Technical Safety Requirement (TSR) Violation: During review of the Design Requirements Document for a solvent cart, the process engineer recognized a discrepancy between the tooling drawing and the authorization basis requirements for the cart. The authorization basis requires that all dissolution cart tooling be electrically bonded with conductive straps to prevent sparking and subsequent ignition of the solvent spray. It was discovered that a nozzle installed on the cart was isolated from the rest of the bonded cart by a nylon coupling, thus not meeting the requirement in the TSR. BWXT plans to replace the nylon coupling with conductive material. All operations using this tool were suspended pending reconciliation of the tooling with the technical requirements.

BWXT Nuclear Safety Officers (NSO): The seven qualified NSOs have generally been used for internal assessments, readiness verifications, validation of controls, and authorization basis document reviews, but have been redirected to concentrate their efforts on overseeing nuclear operations in bays and cells. BWXT Manufacturing Division management has directed the NSOs to provide real-time behavior-based coaching and feedback to the production technicians and supervisors and thus bring more formality to conduct of work. Although the enhanced oversight is conceptual at this point, it is expected that new roles and responsibilities will be codified shortly. NSOs were present this week when W76 cell operations started in a new cell.

W76 Cell Operations: As discussions continued on options to complete disassembly of the unit with the stuck component, a new cell was put into operation this week to allow the program as a whole to resume. Issues with the facility vacuum system and humidity control in the cell prevented the unit from reaching the step in the process where the previous unit experienced problems. The vacuum issues were not associated with the tooling, but with the failure of utilities personnel to appropriately align the system to provide adequate vacuum to the cell and tooling. It became apparent during this event that there is no system engineer specifically responsible for vacuum systems and configuration control is suspect. Based on experience from the previous unit, the procedure has been revised to reduce the maximum procedurally allowable force on the high explosive and a step was added to positively confirm separation has occurred at the desired location prior to performing subsequent procedural steps.

Suspect Fasteners: During walkdowns to verify the implementation of new, unimplemented controls, BWXT system engineering discovered more than 40 suspect/counterfeit fasteners on four trailers used to transport nuclear material and nuclear explosives on site. BWXT suspended use of the subject trailers and the suspect fasteners were marked with red paint. Subsequently, BWXT received confirmation from the Office of Secure Transportation that none of the identified suspect/counterfeit fasteners are critical to safety and put the trailers back into service. BWXT has issued a standing order that directs personnel to use a specific door closure mechanism that will ensure that the trailer doors remain closed during accident scenarios. This critical safety mechanism is not credited in the approved, unimplemented authorization basis and corresponding technical safety requirements.