

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 5, 2004

MEMORANDUM FOR: J. K. Fortenberry, Technical Director
FROM: T. Hunt, Pantex Site Representative
SUBJECT: Pantex Plant Activity Report for Week Ending November 5, 2004

DNFSB Staff Activities. A. Matteucci was on-site this week pursuing various issues.

Loss of Operational Control. During weapon disassembly cell operations this week, a bare conventional high explosive (CHE) charge was almost impacted by a falling/swinging valve assembly. A setup step in the procedure requires the technician ensure the vacuum hose is properly stowed in the quick disconnect fitting on the fixture frame prior to moving and installing above the CHE on the workstand. Following installation, the valve assembly and vacuum hose came loose from the fitting and fell within inches of the CHE. The technician reconnected the vacuum line to the stowed position on the fixture, stopped work, and contacted the supervisor. It is surmised that the fitting became disconnected during transfer of the fixture from the setup table to the workstand. It appears that a procedural change is necessary to add verification steps that ensure fittings are properly connected after handling and movement. BWXT disseminated information on the need to verify during the process that hoses are securely engaged, the necessity of notifying all cognizant personnel during anomalous situations, and the importance of appropriate individuals observing the issues first-hand (phone calls are not always adequate).

Conduct of Operations/Procedural Violation. During cell operations Thursday, a production technician performed a troubleshooting activity in the vicinity of the weapon that was not proceduralized. A lifting fixture installed on the new workstand was not drawing a vacuum, as required, when connected to a quick disconnect fitting near the top of the stand. The technician attempted to determine the cause of the problem and removed the fixture from the stand and connected it directly to the vacuum hose at the base of the stand, invalidating previously performed steps. The vacuum tube on the workstand, where an obstruction is assumed located, had been checked during tooling tryout for gross leaks but was not flow checked. An unreviewed safety question evaluation is being performed and a recovery procedure developed to temporarily bypass the vacuum tubing on the workstand.

SS-21 Tooling. Several recent malfunctions associated with an SS-21 assembly stand developed for two weapon programs have resulted in nuclear explosive disassembly operations being temporarily halted. The trunnions become misaligned and lose the capability of raising and lowering the unit evenly. The latest occurrence on a new workstand is at a point in the disassembly process where it is difficult to back out to allow repair work to be conducted or remove the unit. A previous problem with the trunnions during another disassembly operation resulted in the development of a nuclear explosive engineering procedure to temporarily adjust the workstand to allow the unit to be restored to a previous configuration and removed from the workstand. BWXT has recently begun focusing on a comprehensive approach to assessing the workstand and is considering design changes to eliminate the recurring problems.