

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 22, 2003

MEMORANDUM FOR: J. K. Fortenberry, Technical Director
FROM: W. White, Pantex Site Representative
SUBJECT: Pantex Plant Activity Report for Week Ending August 22, 2003

DNFSB Activity Summary: W. White was on leave Thursday and was on site for the remainder of the week.

W62 Seamless Safety Tooling: Operations were suspended last week on the first W62 unit to be disassembled with the new seamless safety tooling. The new bore down process was not able to separate the physics package from the reentry shell successfully. This new process had been attempted only on trainer units. This was the first effort to perform this process on a nuclear explosive. The assembly process and material characteristics associated with the nuclear explosive apparently resulted in characteristics that are not duplicated successfully in trainer units.

BWXT and the design agency are working to develop a new disassembly approach that more closely resembles the old bore down process but that utilizes the new integrated work stand. W62 disassembly and inspection operations will remain on hold until this tooling change is implemented and has completed necessary change control reviews.

Both an April 2003 Board letter and an August 2003 NNSA assessment of training at the Pantex Plant noted concerns with the fidelity of weapon trainer units. The fidelity of these trainer units is important for the development of weapon assembly and disassembly processes and tooling as well as for training production technicians. [II.A]

Move Right System: On Tuesday, BWXT personnel moved nuclear material from a facility that was in maintenance mode at the time. The Pantex Plant authorization basis allows transportation into and out of facilities to support staging of materials in facilities that are in maintenance mode. However, BWXT internal procedures prohibit the movement of materials into or out of facilities in maintenance mode unless the move is necessary to allow required maintenance to take place in the facility from which material is being moved.

The move in question was authorized by the Move Right System. One of the requirements in the requirements specification for the Move Right System was to prohibit the movement of materials into or out of facilities in maintenance mode. During the programming phase, however, project personnel decided to prohibit only the movement of material into a facility that was in maintenance mode. This change was never captured in a revision to the requirements specification and was not evaluated for consistency with pertinent procedures for material transfers.

Of note, however, one of the key factors in the occurrence was a misunderstanding on the part of personnel conducting the material move regarding the status of the facility. The occurrence resulted from a personnel error that the Move Right System was not programmed to prevent. [II.A]

Loss of Power Procedure: The site representative met this week with BWXT personnel to discuss an ongoing effort by BWXT system engineers to develop a procedure for reacting to and recovering from a loss of power to nuclear facilities. Such a procedure would allow more formal recovery from an unplanned loss of electrical power. The procedure would provide key guidance for determining operational status of safety-related systems that rely on electrical power prior to resuming facility operations. [II.A]