

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 1, 2003

MEMORANDUM FOR: J. K. Fortenberry, Technical Director
FROM: W. White, Pantex Site Representative
SUBJECT: Pantex Plant Activity Report for Week Ending August 1, 2003

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

Move Right System: On Monday, BWXT moved a joint test assembly containing explosives during lightning warnings. The Move Right System, which authorized the move, should have prohibited the move, but did not. Personnel responsible for the move should have been aware of the restriction but were not. Following completion of the move, personnel in the operations center became concerned that the move might have violated a procedural restriction on the movement of explosives during lightning warnings. They researched the operating procedure for the Move Right System and determined that the move should have been prohibited.

The newly approved, but not yet implemented, safety basis for the Pantex Plant prohibits the transport of greater than a certain quantity of hazard class 1.1 or 1.3 explosives during lightning warnings. An explosion involving these materials outside a nuclear explosive facility might compromise the door to the facility. This scenario is not addressed in the currently implemented safety basis for the Pantex Plant. When this scenario was identified over a year ago, BWXT and PXSO appropriately determined that it was prudent to put the restriction in place before the new safety basis could be implemented, as this was a credible accident scenario for ongoing operations with no other effective, credited control. This restriction was originally implemented through a standing order. At some point, the standing order was cancelled and the restriction was supposedly implemented through the Move Right System. The restriction does not appear to have been captured in any procedure that governs the transportation of explosives other than the operating procedure for the Move Right System.

Personnel programming the Move Right System do not appear to have fully understood the requirements associated with various items whose transportation would be governed by the Move Right System. In particular, it appears the programmers did not understand that the movement of certain subassemblies containing explosives was prohibited during lightning warnings.

As an immediate action, BWXT issued a standing order to prohibit the movement of any components or assemblies containing any quantity of hazard class 1.1 or 1.3 explosives during lightning warnings. The standing order notes this prohibition exists whether or not the Move Right System authorizes the move.

The occurrence is another example of an already identified concern with the software quality assurance for the Move Right System. BWXT intends to have a more thorough test plan for the Move Right System developed and implemented by January 2004. The occurrence also illustrates a potential concern with the manner in which this particular control was implemented and the apparent failure to ensure personnel responsible for these types of moves were aware of the restrictions governing the moves. [II.A]

B61 Readiness Assessment: NNSA completed its readiness assessment this week for resumption of command disablement operations for the B61 program. The assessment team identified five pre-start findings and four post-start findings. The pre-start findings included inadequate flow down of technical safety requirements, incomplete test documentation for safety-class systems, inadequate level of knowledge regarding safety basis controls, and failure to follow procedures as required. It is not clear why some of the flow-down concerns were not captured during the readiness verification or contractor readiness assessment. [II.A]