

# DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 3, 2003

**MEMORANDUM FOR:** J. K. Fortenberry, Technical Director  
**FROM:** W. White, Pantex Site Representative  
**SUBJECT:** Pantex Plant Activity Report for Week Ending July 4, 2003

**DNFSB Activity Summary:** The Pantex Plant was closed on Friday for Independence Day. W. White was on site for the remainder of the week.

**Move Right System:** Last Friday, BWXT moved 1.4D explosives to a facility in which that type of explosive is not authorized. BWXT personnel responsible for accepting the material in the receiving facility rejected it once they identified it as containing 1.4D explosives. The shipment also contained 1.4S explosives, which were authorized in the receiving facility but which were not identified as required on the material movement planning and authorization form. Those items were also rejected by the receiving facility. BWXT is taking actions related to the procedural violations by the personnel who initiated the explosive movements.

In the case of the 1.4D explosives, the Move Right System incorrectly authorized the movement of the material to the receiving facility. Upon further evaluation, BWXT determined that a software flag used by the Move Right System was set incorrectly for the receiving facility. This resulted in the Move Right System not performing the appropriate evaluation of the explosive compatibility codes for the receiving facility. A subsequent evaluation of this flag for other locations found that 88 locations had the software flag set incorrectly. The apparent cause of the errors was a lack of understanding of the meaning of the flags on the part of the facility personnel who set the flags.

In March 2003, the Board sent a letter to NNSA concerning software quality assurance for the Move Right System. As part of the response to this letter, NNSA committed to performing a validation of the system data used by the Move Right System. BWXT had developed a plan for performing that validation. However, the validation of the data was being accomplished by the same personnel who input the data originally. These personnel had the same misunderstanding regarding the meaning of the software flags that they had when they set the flags. In a meeting with BWXT and PXSO on Tuesday, the site representative expressed concern with this approach. BWXT now intends to have the validation performed by personnel not responsible for the original data entry. BWXT will also train personnel responsible for data entry and validation on the use and intent of the data. [II.A]

**Special Nuclear Material Component Requalification Facility (SNMCRF):** The site representative met with BWXT project personnel this week to discuss the status of the SNMCRF project and the application of integrated safety management during the design phase of the project. BWXT is addressing PXSO comments (discussed in last week's report) on the SNMCRF preliminary hazards analysis (PHA). Preliminary design was completed with the existing, inadequate PHA. BWXT noted, however, that they did not expect significant changes to the number and types of safety systems identified in the existing PHA. This is based, in part, on the limited quantity of material that would be in process at any given time. The assumption is also based on BWXT's calculation that the maximum facility inventory of 390 kg of weapons-grade plutonium, consumed in a facility fire, would result in a cumulative exposure of less than 5 rem to the maximally exposed offsite individual.

Per DOE Order 413.3, *Program and Project Management for the Acquisition of Capital Assets*, a draft, preliminary documented safety analysis is required before NNSA can approve critical decision 2 and authorize final design. The site representative discussed with PXSO and BWXT the importance of having a quality safety analysis in place to support the final design of the SNMCRF. [I.C]