DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 17, 2003

MEMORANDUM FOR: J. K. Fortenberry, Technical Director
FROM: W. White, Pantex Site Representative
SUBJECT: Pantex Plant Activity Report for Week Ending October 17, 2003

DNFSB Activity Summary: The Pantex Plant was closed on Monday for the Columbus Day Holiday. W. White was on site for the remainder of the week. D. Nichols was on site Tuesday through Thursday to discuss the seamless safety project for the W87, to observe W87 and W62 operations, and to discuss the use and development of weapon response information.

Pit Temperature Limits: On Thursday, PXSO approved a justification for continued operations (JCO) related to pit temperature limits. The JCO became necessary when the design agencies identified pit temperature limits for certain pits types to prevent breaches of the pit cladding that might lead to the release of nuclear material. In particular, the temperature limits for three pit types (W48, B54, and W55) were identified by the design agencies as being below credible maximum temperatures for pit staging areas at the Pantex Plant. These limits were identified by Lawrence Livermore National Laboratory in February 2000 and by Los Alamos National Laboratory in July 2002.

The JCO identifies the following compensatory measures for continued operations:

- The pit thermal monitoring system will alert personnel to elevated temperatures. Established monitoring frequencies and an administrative program for relocating pits when necessary will provide personnel with time to cool the facility or relocate the pits.
- The Radiation Safety Program will ensure technicians are trained to recognize potential nuclear material releases, evacuate the area, and call the Radiation Safety Department.
- The Nuclear Material Storage, Handling, and Shipping Program and the Approved Container Program will ensure pits are staged and shipped in approved containers to minimize any nuclear material release that might occur.

A revision to the approved, but not implemented, *Nuclear Material Safety Analysis Report [SAR] Module*, will be necessary. The SAR identifies a similar accident scenario, but, based on the container configuration, calculates the on-site and off-site consequences as less than the evaluation guidelines. The modified JCO scenario calculates potential worker exposures in excess of 100 rem. BWXT committed to completing the SAR revision by February 27, 2004. The JCO will expire May 30, 2004, by which time the revised SAR module should be implemented. [II.A, W3]

Implementation of Technical Safety Requirements: On Friday, BWXT began its readiness assessment for implementation of the first group of technical safety requirements identified in the *Technical Safety Requirements Integrated Implementation Plan*, a deliverable to the Board under Recommendation 98-2. Following a thorough readiness verification that was briefed to a team of senior managers, BWXT elected to proceed with its contractor readiness assessment for 13 controls, 9 of which were from the original 19 controls in the first group and 4 of which were moved up from the second group of controls. Based on the readiness verification, BWXT chose not to proceed with a contractor readiness assessment of most of the engineered controls in the first group until improvements can be made in the configuration management and drawings for these systems. Discrepancies also must be resolved between the authorization basis functional descriptions of certain systems and the system drawings. The controls deemed ready for implementation include administrative controls related to transportation and fire protection as well as combustible storage carts and containers. [II.A, W4]