DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 10, 2004

MEMORANDUM FOR: J. K. Fortenberry, Technical Director
FROM: Timothy Hunt and Dave Kupferer, Pantex Site Representatives
SUBJECT: Pantex Plant Activity Report for Week Ending December 10, 2004

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

Tooling. On Friday, BWXT suspended all nuclear explosive operations due to a concern with loose fasteners discovered on a load-bearing special tool. It was found that six threaded fasteners were partially backed out of workstand parts that directly supported the weapon. Last week, the tool had gone through receiving and inspection, the tooling review team, and quality assurance with no deficiencies noted. Additionally, the field engineer inspected the stand shortly before it was sent to the bay and found no problems. It was not sent to tooling tryout because it was not a credited tool. A general note on the tooling drawing requires all fasteners not identified for alternate torquing to meet the plant's Tooling and Machine Design manual requirements. This had been interpreted by BWXT to be a suggested best practice, not a requirement, as torque wrenches were not normally used when installing non-credited fasteners. PXSO is insisting that all drawing requirements be explicitly met as design assumptions and functionality are based on the correct assembly of the tool. BWXT has committed to look at the design of all load-bearing tools and inspect those of concern for similar issues before restarting operations.

Archiving. BWXT responded this week to the Board's letter of October 27, 2004, concerning archiving of weapon-specific safety-related information. The response lists all remaining weapon programs as having completed either the Recommendation 93-6 archiving process or an alternate process that captured knowledge of historical safety issues. Subsequent to archiving activities ending at Pantex in 1997, weapon safety specifications (WSS) for several programs have been developed that attempt to preserve safety issues as part of the SS-21 startups. BWXT believes that the current WSS process is adequate in identifying and documenting weapon safety information, but does not describe how information that would be gathered through the 93-6 interview process is catalogued. BWXT concludes that archiving results to date have added little or no value in developing SS-21 or documented safety analysis processes and the program should not be reimplemented. PXSO concurs with BWXT that archiving is no longer necessary and the availability of upgraded documented information forms a sound basis for safe operations.

Nuclear Explosive Safety Studies. There were two nuclear explosive safety (NES) master study kick-off meetings at Pantex this week – paint bay and interactive electronic procedures (IEP). The paint bay NES study will authorize nuclear explosive operations for painting B83 assemblies in a Hazard Category 2 facility. No facility at Pantex is currently authorized to conduct painting operations on nuclear explosives. The IEP NES study is evaluating the touchscreen and stand, which will be located in the nuclear facilities, as well as the system software. Of particular concern are the processes by which the current paper operating procedures will be transferred to the electronic format, the fidelity of information from other computer systems that interface with the IEP system, and how change control will be managed.

A waiver of the DOE-STD-3015-2004 requirement to have two senior technical advisors participate in the review was granted by NA-121 to both NES teams because the only two STAs are committed to support the concurrent B83 NES study. A waiver has also been requested for other upcoming NES studies pending the identified action to hire and train four additional STAs. There are about 15 major NES studies planned for Pantex within the next year.