

# DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 15, 2002

**MEMORANDUM FOR:** J. K. Fortenberry, Technical Director  
**FROM:** H. Waugh and W. White, Pantex Site Representatives  
**SUBJECT:** Pantex Plant Activity Report for Week Ending March 15, 2002

**DNFSB Activity Summary:** H. Waugh and W. White were on site all week. C. Coones, A. Matteucci, and R. West were on site Monday through Thursday to review fire protection.

**Fire System Upgrades:** Earlier this year, NNSA sent the Board a project execution plan defining the scope of work and schedule for the fire alarm system replacement project. The project will use incremental funding to replace fire alarm panels, correct alarm system vulnerabilities, provide redundant alarm communications and install a computer-aided dispatch system. The project will upgrade nuclear explosive facilities on a priority basis; however, BWXT personnel indicated that the upgrade of specific nuclear facilities may be postponed if shutting down the facilities would impact production schedules in an unacceptable manner.

Several other projects are also ongoing to improve the fire detection, suppression and alarm capabilities of Pantex nuclear explosive facilities. A recently initiated project will replace the fire alarm receiving station. The first phase of this project, to identify design alternatives, was just initiated and should be complete later this summer. Installation of the new system should begin shortly thereafter. Another ongoing project is the upgrade of Building 12-44 to provide a deluge capability with infra-red activation. This project is scheduled to be complete late this year. BWXT was unable to provide the staff with an integrated plan that addresses all ongoing fire protection upgrade projects, making it difficult to determine whether all potential vulnerabilities in the fire alarm, detection, and suppression systems are being addressed. [II.A]

**Fire Department Baseline Needs Assessment:** On January 4, 2002, a subject matter expert retained by BWXT under a work-for-others agreement with Lawrence Livermore National Laboratory completed a *Pantex Plant Fire Department Baseline Needs Assessment*. The assessment identified significant deficiencies in staffing for emergency response and in formality for the Fire Department training program. In particular, the assessment report states that "the minimum staffing of six personnel is inadequate in itself, and that is reduced by the assignment of emergency responders to corollary duties that endanger the Fire Department's ability to protect the Pantex Plant, its employees and the public." Discussions this week with BWXT personnel indicated the normal staffing is usually more than the minimum requirement of six personnel, but less than the thirteen personnel recommended in the report. The report also indicates that the training of the fire department may be lacking in certain areas, particularly those requiring training of the fire company as a unit. In total, the report contains 25 recommendations concerning such topics as staffing, training, response plans and drills. Neither BWXT nor NNSA has developed a response to the assessment. BWXT intends to complete its evaluation before April 19, 2002. [II.A]

**Lightning Protection:** On Tuesday night, BWXT suspended all nuclear explosive operations at Pantex. The suspension followed an observation by an ASO facility representative that high voltage electrical cabling going into the LINAC bay did not appear to be in conduit. The cable did not meet the requirements to be considered a bonded penetration. Since the facility was following bonded stand-off distances, ASO and BWXT considered this to be a violation of the specific administrative controls for lightning protection.

BWXT placed operations in the LINAC in a safe and stable configuration and removed nuclear explosives from the facility. All Pantex nuclear explosive operations were suspended until BWXT determined on Wednesday that no similar anomaly existed for other facilities. The LINAC bays were restarted with unbonded stand-off distances established for the facility. [II.A]