

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 18, 2002

MEMORANDUM FOR: J. K. Fortenberry, Technical Director
FROM: W. White, Pantex Site Representative
SUBJECT: Pantex Plant Activity Report for Week Ending October 18, 2002

DNFSB Activity Summary: The Pantex Plant was closed on Monday for the Columbus Day Holiday. W. White was on leave Tuesday and was on site Wednesday through Friday.

Deluge Fire Suppression System: On Wednesday, OASO approved the BWXT *Implementation Plan for Justification for Continued Operation [JCO] of Nuclear Facilities with Fire Suppression Systems*. OASO complimented BWXT on its prompt response to recent test anomalies and agreed with the scheduled completion date of April 2003 for flushing and testing of all deluge systems.

The implementation plan outlines the path forward and schedule for addressing actions required in the JCO. These actions primarily involve the installation of strainers in deluge systems without them and the testing and flushing of all deluge systems, including those with strainers. Operations on conventional high explosive systems will not be allowed in facilities with deluge suppression systems having no strainer. Operations will be allowed to continue for systems with insensitive high explosives in such facilities; however, as a result of current facility assignments, only the W87 program will continue operations in facilities with deluge systems that have no strainer installed. For those facilities, the implementation plan calls for installation of strainers by the end of January 2003.

The implementation plan defers potential actions associated with the wet pipe fire suppression systems until after an evaluation of those systems by BWXT. The wet pipe fire suppression systems do not have strainers, but are not used in facilities where nuclear explosive assembly and disassembly operations are conducted. BWXT personnel currently are working on this evaluation.

One key issue not addressed in the JCO or in the implementation plan is the long-term path forward to continue flow testing of the deluge fire suppressions systems. National Fire Protection Association (NFPA) 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*, requires a test of deluge valves at full flow on an annual basis. For cases where the full flow test might impact protected equipment, the standard requires the flow test to be conducted during the next scheduled shutdown, but no less frequently than every three years. BWXT and OASO continue discussions on the appropriate frequency and scope for future full flow tests of the deluge fire suppression systems. Given the results of recent full flow tests, periodic testing, in compliance with NFPA code requirements, appears warranted. [II.A]

Building 12-64 Upgrade Project: BWXT continued work on a conceptual design report for the upgrade project for the bays in building 12-64. The report is expected to be complete within a month. A potential design deficiency identified by the Board's staff might result in the failure of the reinforced concrete slab in the roof structure during a seismic event. This concern has not yet been resolved. The current path forward is to identify the design concern in the request for a proposal that is scheduled to be sent out in the fourth quarter of FY03. Bidders would be tasked to develop designs and costs for solutions to address spalling and delamination of the reinforced concrete slabs in the roofs of the 12-64 bays. [II.A]