

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 8, 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 February 8, 2002

**DNFSB Activity Summary:** H. Waugh was on leave Monday and Tuesday and was on site for the remainder of the week. W. White was on site all week. J. Deplitch, C. Martin, and W. Von Holle were on site Wednesday and Thursday to review W79 rocket motor issues, the Pantex chemical management program, and W78 tooling issues.

**W79 Propellant Concerns:** Board staff members reviewed the BWXT program for analyzing the stabilizer concentration in W79 rocket motor propellant. The Pantex plant recently took over analysis work previously done by the Army's Picatinny Arsenal to periodically evaluate the concentration of stabilizer in W79 rocket motor propellant to ensure the concentration has not fallen below acceptable levels. The BWXT program appears to provide an acceptably rigorous analysis. Recent BWXT analysis results indicate the concentration of stabilizer is well above the minimum level required for safe storage and handling of the propellant. BWXT projects that dismantlement of W79 units will be completed in early 2003 and that final sanitization of the rocket motors from these units should be completed within a year or so after dismantlement. [II.A]

**Pantex Chemical Management Program:** Based on information reviewed by the Board's staff this week, the chemical safety program at Pantex appears adequate. Control of chemicals entering Zone 12 appears reasonable. BWXT asserted that no bulk chemicals (other than chlorine) and no chemical processing operations have been identified that could impact nuclear explosive operations or transportation. Actions taken to address potential impacts to nuclear explosive transportation from a chlorine release were reviewed in a previous staff visit and appear adequate. A more thorough analysis of potential chemical impacts to nuclear explosive operations will be done through the site-wide SAR to be completed later this year.

Information presented to the staff on the BWXT self-assessment program for chemical safety concerns indicated there may be room for improvement in both the scope and periodicity of internal assessments for chemical management. Using a risk-based evaluation approach, the BWXT independent assessment program has eliminated the chemical management program from consideration for an assessment over the past couple of years. The hazard identification team assessments observed by the staff during the review did not appear to address chemical storage and handling concerns in a rigorous manner. BWXT personnel indicated the entire BWXT self-assessment process is currently under review. [II.A]

**High Pressure Fire Loop (HPFL):** The leak discovered more than two weeks ago in the high pressure fire loop has not yet been isolated. Earlier this week, BWXT personnel isolated the input to the water tank for the HPFL. The observed loss of water from the tank (about 7 inches in 15 hours) indicates a water loss of approximately 15 gallons per minute. This leak rate takes into account a known leak into the water tank from incomplete isolation and known leaks out of the HPFL system from certain drains. Near term actions being considered by BWXT include isolating sections of the HPFL and using acoustic leak detection equipment. A detailed path forward has been requested by OASO. Although the HPFL remains capable of carrying out its safety class functions, the potentially significant loss of water in an unknown location remains a concern. [II.A]