

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 12, 2003

**MEMORANDUM FOR:** J. K. Fortenberry, Technical Director  
**FROM:** W. White, Pantex Site Representative  
**SUBJECT:** Pantex Plant Activity Report for Week Ending September 12, 2003

**DNFSB Activity Summary:** W. White was on site Monday through Thursday and was recruiting in Houston on Friday. D. Burnfield and D. Volgenau were on site Tuesday through Thursday to review work planning.

**W56 Seamless Safety Tooling:** On Wednesday, BWXT discovered that a seamless safety tool for the W56 program had been sent to the production line after being reassembled incorrectly following an on-site modification. The tool is used to rotate a high explosive component towards a padded cart. The explosive component is then lifted by hand and placed on the cart prior to packaging. In this case, production technicians discovered the tool would not rotate in the appropriate direction. The technicians returned the high explosive component to a safe and stable configuration and contacted the production section manager.

The tool was apparently rebuilt by BWXT personnel in a reverse manner before being sent to the production line. Instead of rotating towards the padded high explosive cart, the tool rotated towards the other side of the workstand. The tool performs several safety functions as identified in the W56 safety basis. Although the rotational direction of the tool is not explicitly identified as a safety function, an inadvertent rotation of the tool in the wrong direction would tilt the explosive component away from the padded cart and increase the likelihood of an explosive drop to the base of the workstand.

The tooling error resulted when BWXT personnel installed part of the tool in the reverse direction following a modification. BWXT is currently evaluating how the tool managed to pass receipt and inspection procedures and what corrective actions might be necessary for the receipt and inspection program and the maintenance and modification programs for tooling.

Also of concern is the fact that the tool was used once prior to the discovery that it would not function normally. It is not clear how production technicians using the tool on an earlier shift failed to notice that the tool did not rotate as required prior to removing the high explosive component. [II.A]

**Work Planning:** The Board's staff reviewed the aspects of integrated safety management at the activity level related to work planning and worker protection. The Pantex Plant did not present a documented, robust program to protect its work force. In particular, the areas of hazard analysis and feedback and improvement were weak. The efforts by planners and the engineering staff in each division to write and maintain work procedures for both maintenance and programmatic work were not consistent across the site. In addition, the prepared work procedures reviewed by the staff contained technical errors or omissions.

Several efforts are in progress to improve work planning and to improve the BWXT assessment program for both maintenance and programmatic work. However, these efforts are too recent to be evaluated adequately. [II.A]