

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: Timothy J. Dwyer, Technical Director
FROM: Timothy Hunt and Rory Rauch, Pantex Site Representatives
DATE: 21 November 2008
SUBJECT: Pantex Plant Weekly Report

Board Visit: Mr. Larry Brown, Dr. John Mansfield, and Dr. Peter Winokur were onsite to meet with plant personnel to review the safety of nuclear and nuclear explosive operations.

Lightning Safety: B&W Pantex has requested that the Nuclear Weapons Complex Electromagnetic Committee place top priority on the development of techniques to determine whether facility penetrations are intrinsically bonded to the facility Faraday cage. As a consequence, work on the evaluation of potentially multi-point grounded weapon configurations has been deferred until approximately March 2009. In the meantime, B&W Pantex will rely on suspending operations during lightning warnings and administratively controlling the orientation of lightning sensitive components to protect against potentially multi-point grounded task exhaust operations (to date, the bounding configuration identified by the committee). Upon re-engagement with this issue, the committee plans to perform additional analysis to better understand the credibility of the hazard before it works to develop an engineered control.

W76 Nuclear Explosive Safety (NES) Change Evaluation (NCE): NNSA convened an NCE this week to assess tooling enhancements for W76-1 cell assembly operations. The enhancements are intended to improve process continuity and prevent some of the tooling-related suspensions that affected previous W76-1 assembly operations. Specifically, the first set of enhancements adds compliance to the tooling that supports a component placement operation. The second set of enhancements redistributes the load on a component being installed, which decreases the time needed to complete the installation and minimizes the force applied to components not involved in the operation. The NCE group concluded that these enhancements provided adequate assurance of NES.

Human Performance Errors: Last month, PXSO requested that B&W Pantex evaluate recent events that could be attributed to human performance error to determine whether corrective actions appropriately emphasized personal accountability. B&W Pantex responded this week by describing the organization's approach to maintaining an appropriate level of personal accountability. B&W Pantex recognizes that the first line supervisor is vital to communicating performance expectations and ensuring operations are performed safely. To that end, six production section managers (first line supervisors of the production technicians) are being hired to improve the span and control of operations. In addition, management conducts weekly meetings to discuss performance expectations and recent lessons learned. In some cases, B&W Pantex management believes that disciplinary action is appropriate as a measure to emphasize personal accountability; however, they believe such action has to be balanced with the need to create an environment in which the workforce can raise issues without fear of reprisal.

B53 Canned Sub-Assembly (CSA) Extraction: B&W Pantex completed a study of the feasibility of extracting the B53 CSA from the bomb case at Pantex. Depending on the availability of approved shipping containers, the B53 project team believes it will take 10 to 12 months to gain authorization and 18 months to complete the operation at a total estimated cost of \$6.24 million. If NNSA decides to conduct this operation at Pantex, the project team plans to use a horizontal extraction technique rather than a previously established vertical extraction technique, which required the use of a floor pit and increased hoist capacity.