

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: J. Kent Fortenberry, Technical Director
FROM: Timothy Hunt and Dave Kupferer, Pantex Site Representatives
DATE: Friday, June 3, 2005
SUBJECT: Pantex Weekly Report

Cell Gap Calculation: BWXT recently provided an interim report to PXSO that documents progress in revising the cell gap calculation and identifies future work and deliverables. Preliminary results indicate a reduction in the off-site dose of about 60 percent, primarily due to modeling the facility as an amalgam of smaller volumes and modifying the particle size distribution. The second part of the calculation refinement, currently underway, uses an external contractor to perform more sophisticated modeling. Computational fluid dynamics models are expected to quantify particle flow during an explosion, material capture through the gravel roof, and impaction around knife-edge gaps. Final results of the recalculation effort are expected in March 2006.

Surveillance Requirement (SR) Failure: During monthly testing, an uninterruptible power supply (UPS), which supports a production cell, did not carry the required load for the required duration of time. The UPS is a part of a safety related system to support emergency lighting. The emergency lighting remained operational during this period and met all the associated technical safety requirements because there is an alternate, redundant UPS.

Office of Independent Oversight and Performance Assurance (OA) Findings: BWXT responded on 27 May to findings from the February 2005 OA review by issuing its corrective action plan to PXSO for review and submittal to OA. Proposed improvements include the following: more formal control of radiological work, revisions to the unreviewed safety question instructions for processing new information that may impact the safety basis, improved processes to identify trends and lessons learned, and establishment of engineering calculation and analysis processes that meet quality requirements of 10CFR830, *Nuclear Safety Management*.

Weapon Identification: While performing a procedural step to verify that markings and information on unit documentation and the transport gear matched the serial number on the weapon in the container, the production technicians recognized a discrepancy. The unit serial number on the quality form, inspection record card, and transport gear did not match what was found when the container was opened and the unit exposed. The PTs took appropriate action to stop work and contact cognizant personnel. An unsatisfactory report will be sent to the military to apprise it of the problem. BWXT is determining where the unit in question is currently stored and what adjustments to the Move Right system are necessary.

Zone 4 Thermal Monitoring: BWXT continued to troubleshoot the Zone 4 auto-alert monitoring (Zetron) system this week. Last week, after a communication breakdown was discovered between some Zone 4 magazines and the operations center, the problem was believed to be related to the connection between the Zetron system components. The system has continued to have communication problems after the component connections were reestablished. BWXT has put compensatory measures in place until the root cause of the problem can be determined and resolved.