

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: Timothy J. Dwyer, Technical Director
FROM: Timothy Hunt and Rory Rauch, Pantex Site Representatives
DATE: 28 November 2008
SUBJECT: Pantex Plant Weekly Report

Nuclear Material Storage Warehouse: In March it was discovered that a facility was storing greater than Hazard Category 3 quantities of nuclear material but was not credited for that function in the documented safety analysis. Last week B&W Pantex completed a partial deinventory that reduced the quantity of nuclear material in the warehouse below the Hazard Category 3 threshold. The plan is to restart the facility as a Hazard Category 2 nuclear facility upon successful completion of operational readiness reviews.

W76 Assembly and Disassembly: The last of a handful of W76 operations performed in a 12kV environment was completed recently. Approval to perform all W76 operations in a 5kV environment was vouchsafed this week with the initial authorization of six facilities.

Radiological Controls: It was discovered recently that Sandia National Laboratories' (SNL) Weapon Evaluation Test Laboratory (WETL) personnel were not performing tritium bioassay nor obtaining B&W Pantex radiation safety coverage at the start of each shift as required by a Radiation Work Permit for one WETL operation. Also, B&W Pantex—which provides radiation support services to SNL—was not de-posting the contamination area associated with this operation per established procedures. Based on process knowledge, it is unlikely that there has been any unmonitored tritium exposure. Steps to improve communications between SNL and B&W Pantex radiation safety personnel are being pursued.

W76 Special Tooling: B&W Pantex has had a number of work stoppages in the disassembly cells since it resumed operations in August. In each case a path forward was determined and recovery operations implemented; however, a systemic look for possible common failures has not been completed. Recent W76 issues include modifications to tools that created clearance problems with other fixtures/tools; workstand gear slippage during a rotation operation; multiple workstand alignment issues; and a workstand malfunction while lowering a nuclear component. Additional training has been provided to the technicians on workstand manipulation, design modifications and revisions to the tools have been proposed, and process changes to ensure proper alignment before installing tools on the stand have been developed. A B&W Pantex causal analysis is expected to evaluate possible underlying causes for these issues to assure that corrective actions are going to be effective in the long term.

Crane Girder Irregularities: Trolleys for a few NUM-1 hoists in 12-84 East have experienced difficulties in traveling the length of the bridge girders without losing traction. When the hoist is not carrying a load, the drive wheels slip about 20 percent of the time as it approaches the ends of the girders. A B&W Pantex engineering evaluation determined that a slight pull on the pendant restraint rope when the trolley prematurely stops would not violate codes or create a safety concern. Similar means of moving manual trolleys are still being implemented in other Pantex facilities. A longer term engineered solution is under consideration.

Nuclear Explosive Safety (NES): Last month, a third B&W Pantex NES department individual became certified to participate in NES studies after passing his oral board. A fourth NES department individual is expected to board next month and a fifth should be certified in the March time frame. Others are in the queue for certification and have attended many of the initial classes, but are probably about a year away from certification.