DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: Timothy J. Dwyer, Technical Director
FROM: Timothy Hunt and Rory Rauch, Pantex Site Representatives
DATE: 12 December 2008
SUBJECT: Pantex Plant Weekly Report

High Explosive Pressing Facility (HEPF): The HEPF project received critical decision-3 approval in May, but start of construction has been delayed by high construction contract bids. This delay may endanger B&W Pantex's ability to meet future HE production requirements for the W76 life extension program. In the short term, multiple shift operations will be used to build an on-the-shelf inventory of components, but an increasing HE production workload will deplete this inventory by 2014. This week, NNSA headquarters approved a baseline change proposal that increases the total project cost by approximately 40% in an attempt to meet the higher-than-anticipated construction bids. If a contract can be awarded by March 2009, the project team estimates the HEPF will be operational by May 2014 and mission impacts will likely be avoided.

Backfit Analysis: B&W Pantex recently submitted a plan to evaluate previously designed and installed safety SSCs against current codes and standards (also referred to as a backfit analysis). The plan identifies 11 safety structures, systems, and components (SSCs, e.g., the emergency lighting system, deluge fire suppression system, and lightning detection and warning system) and proposes to use the process for "Safety System Design Adequacy," as established by the Energy Facilities Contractors Group (EFCOG) in July 2004. B&W Pantex is conducting training on the backfit analysis process with all cognizant system engineers this week. The backfit analysis of the first four SSCs is scheduled for completion in March 2009.

Special Tooling: A W76 disassembly operation was suspended this week when production technicians were unable to mate two pieces of special tooling. It was determined that a new copy of a holding fixture was missing parts (helicoils) that provide a threading interface with the mating rods on an installation fixture. The production technicians recognized the problem before attempting to manipulate the unit and the safety of the operation was never compromised. Tooling warehouse technicians had been briefed a couple times recently on the importance of verifying the presence of helicoils in special tooling following similar events. Management plans to add a separate inspection for helicoils prior to issuance to the line. A subsequent investigation found that all similar holding fixtures recently received from the vendor were missing the helicoils.

Expired Calibrated Equipment: It was discovered six days after the calibration was due that two gamma radiation monitors had expired in a linear accelerator control room. Seven technicians had performed the pre-operation check—which required validating that the monitoring system was operational—without recognizing that the calibration date had passed. Other communication systems that are designed to alert cognizant personnel of impending calibration due dates also failed. A secondary monitoring system was functional during the timeframe in question and there were no unmonitored exposures.

Electrostatic Discharge (ESD) Facility Violation: Two electricians entered an operational facility that had a newly applied ESD floor in the round room. The production technicians questioned the craftsmen on whether they had verified the conductivity of their non-ESD footwear prior to entering the cell. They had not; a procedural and posting violation as well as a contravention of their training. The electricians entered the cell corridor to perform maintenance on the blast doors and did not access the area covered by the ESD flooring.