

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: Timothy J. Dwyer, Technical Director
FROM: Timothy Hunt and Rory Rauch, Pantex Site Representatives
DATE: 5 September 2008
SUBJECT: Pantex Plant Weekly Report

Procedure Flowdown and Formality of Operations: Last week, during a walkdown of the Special Nuclear Material Component Requalification Facility (SNMCRF), tooling engineers discovered the revision of a workstand did not match the revision in the applicable operating procedure or design drawing. A change to the workstand (to engrave removable subassemblies) was completed in June, but the procedure and drawing were never updated to reflect this latest revision. In addition, subsequent to the revision, technicians failed to follow a procedural requirement to ensure the correct revision of the workstand before use. Operations in SNMCRF were suspended and an extent of condition review identified five additional workstations with similar discrepancies. Causal analysis exercises are being held to determine why these breakdowns in configuration management and formality of operations occurred.

Lightning and Electrostatic Discharge (ESD) Safety: Subject matter experts (SMEs) from Pantex and the design agencies gathered last week to discuss open lightning and ESD safety concerns. After devoting the last several months to the restart of W76 operations, the SMEs were able to re-engage with these open issues by defining clear, manageable near-term objectives. For example, as part of the path forward for closing concerns with induced voltages on engineered bonds, B&W Pantex has committed to performing time domain reflectometry “prove-in” experiments at the bench and facility scales and presenting the results to the committee by October. Objectives for multi-point grounding, indirect effects, and concrete spalling concerns were also established.

Special Tooling: Recent assessments and operations have provided compelling evidence that greater attention to design, inspection, and configuration management of special tooling is warranted. There are thousands of items considered special tools at Pantex, 381 of which are credited in the authorization basis. Two PXSO quality assurance reviews discovered issues related to the high rejection rate for tooling going through the final phase of the acceptance process and tools not being manufactured per the drawing. It has been observed that some tooling designs for a newly authorized operation do not minimize the potential for component damage. Issues with tooling used in SNMCRF are noted elsewhere in this report. B&W Pantex is evaluating this concern.

W76-1 First Production Unit (FPU): Work continued on the physics package build this week. Tooling, major component, and quality issues have affected the flow of the process. On Friday, a significant quality issue arose that halted work and is pending design agency decision on the path forward. The production technicians and managers have been performing the work deliberately and safely, and making conservative decisions when questionable situations arise. The nuclear explosive operating procedures have been satisfactory; the process engineers have been a constant presence in the cell during the assembly to ensure adequacy of procedures.

Nuclear Material Packaging: B&W Pantex has completed an impact evaluation of DOE M 441.1-1, *Nuclear Material Packaging Manual*, and determined—with PXSO concurrence—that the requirements of the manual should not be adopted in the contract. The nuclear material located at Pantex was found to be either within the list of materials not subject to the requirements—because such materials are already covered by containment requirements of other standards—or not within the types and/or quantities identified as being subject to the manual.