DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: J. Kent Fortenberry, Technical Director
FROM: Timothy Hunt and Rory Rauch, Pantex Site Representatives
DATE: 23 May 2008
SUBJECT: Pantex Plant Weekly Report

W76 Operational Status: This week, subject matter experts (SMEs) and senior management from NNSA headquarters, PXSO, B&W Pantex, and the design agencies gathered for the first of what will likely be weekly meetings to discuss the path forward to resolve the electrostatic discharge (ESD) concerns that resulted in the suspension of all W76 operations. A B&W Pantex engineering team—which will be dedicated solely to the analysis and associated activities necessary to restart W76 operations—presented two options to address the ESD concerns. The first option relied entirely on the use of administrative controls (e.g., equipment/ personnel bonding), while the second mainly involved the implementation of static dissipative flooring. NNSA directed the W76 engineering team to initially move forward with the second option. B&W Pantex has the funds to install static dissipative flooring in four facilities in FY08, but the funding source for the remaining W76 facilities has not yet been identified. The selected option is considered a partial ESD environment due to the fact that most of the tooling will not be modified for ESD compatibility. Nuclear explosive safety and SMEs will review the adequacy of the partial ESD environment prior to its implementation.

Specific Administrative Control (SAC) Implementation: In April, B&W Pantex posted a change to the Sitewide safety analysis report (SAR) that implements a SAC verification program, as required by DOE Standard 1186, *Specific Administrative Controls*. Specifically, this change describes a verification methodology and the criteria that can be used to establish an appropriate verification periodicity for a given control. However, a substantial amount of work remains before the SAC verification program is fully implemented. First, the authorization basis department must submit a change package for each documented safety analysis (DSA) that delineates which administrative controls are SACs and which are key elements of safety management programs. For the SACs, the change package will establish a verification periodicity using the methods described in the Sitewide SAR. Next, the SACs in most DSAs must be validated through a human factors assessment, which will be performed by industrial safety until B&W Pantex can hire a human factors engineer. After each SAC has been validated, designated control owners will perform periodic verifications of SAC performance, but this process cannot be institutionalized until the aforementioned activities have been completed. The LINAC SAR is the first DSA scheduled for completion of these activities.

Technical Safety Requirement (TSR) Violation: B&W Pantex declared a TSR violation this week when it was discovered that several areas of the static dissipative flooring recently installed in a nuclear explosive bay did not provide the required buffer—equal to at least half the facility bonded standoff distance—to prevent lightning coupling from the facility through the floor to a lightning sensitive component. The non-compliant flooring will be ground away to recover from the discrepant condition. Other bays with this flooring were found to be compliant.

Emergency Management: The DOE Office of Independent Oversight (HS-63) recently completed a review of the Pantex emergency management program. The inspection found significant improvements from the previous review in 2005; however, some weaknesses were noted in the areas of programmatic procedures and hazard assessments. In the first weakness, roles and responsibilities to secure air handling units to reduce the potential influx of hazardous materials in the event of a release had not been addressed for many facilities. In the second weakness, the actual quantities of some chemicals exceeded what was assumed in the hazard analysis, leading to significant underestimates of release consequences.