

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: Timothy J. Dwyer, Technical Director
FROM: Timothy Hunt and Rory Rauch, Pantex Site Representatives
DATE: 24 October 2008
SUBJECT: Pantex Plant Weekly Report

DNFSB Staff Activity: M. Moury was onsite to observe nuclear explosive operations. J. Anderson, T. Spatz, and outside expert L. McGrew were onsite to observe the first week of the nuclear explosive safety study for W88 SS-21 cell operations.

W78 Electrostatic Discharge (ESD) Assessment: This week, subject matter experts (SMEs) from B&W Pantex, Los Alamos National Laboratory, and Sandia National Laboratories evaluated the W78 disassembly and inspection process (not currently operating) for ESD hazards that led to the suspension of W76 operations. The SMEs identified approximately ten weapon configurations that will require a combination of tooling modifications, supporting analyses, and a new weapon response before W78 operations can recommence. Program management will also determine whether static dissipative flooring is warranted.

Special Tooling: W76 operations were suspended this week when production technicians were unable to mate a protective swing arm with the workstand. A follow-on evaluation indicated the procedure in use had not been updated to reflect the most recent revision of the swing arm. B&W Pantex is evaluating the event to determine appropriate corrective actions.

High Explosive Depotting: Separation of the radiation case and insensitive high explosive (HE) main charges and detonators takes place in a non-nuclear HE facility for two dismantlement programs. The process is not as formal as nuclear operations—the technical procedure is general use and the technicians are not required to implement reader-worker-checker. Performing these operations in the HE facility instead of a nuclear explosive bay or cell has improved efficiency.

Special Purpose Facilities Nuclear Explosive Safety (NES) Master Study: The NES master study final report was approved by NNSA this week. It identifies four post-start findings and one senior technical advisor (STA) comment requiring corrective actions. The findings dealt with two person coverage deficiencies, uncontrolled combustible material, and unverified Faraday cage characteristics of the vacuum chamber door gaskets. The STA comment addressed the impact of prorogued or unperformed maintenance activities on safety. The previous master study of the radiography, vacuum chamber, mass properties, and separations testing facilities occurred in 1993. The original expiration date of September 1999 was waived by DOE.

HEPA Filters: B&W Pantex recently issued an implementation plan to address increased HEPA filter rejection rates. A site survey of processes for procuring and testing HEPA filters indicated that requirements of DOE-STD-3020-2005, *Specification for HEPA Filters Used by DOE Contractors*, are not being met. The plan establishes the technical basis and implementation milestones for a compliant HEPA filter program. Although no nuclear facilities at Pantex have credited confinement ventilation systems, four other facilities (e.g., Operations Center, Hazardous Waste Facility) have been identified where DOE-STD-3020-2005 applies. The development of a HEPA filter specification will be completed next month and supplier qualification and procurement processes will be completed in February 2009.

Ionizing Radiation and ALARA: The highest cumulative total effective dose received by an individual at Pantex in fiscal year 2008 was 414 mrem, a significant improvement from recent years. The highest doses during the previous five years ranged from 668 to 1190 mrem.