

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: Timothy J. Dwyer, Technical Director
FROM: Timothy Hunt and Rory Rauch, Pantex Site Representatives
DATE: 30 January 2009
SUBJECT: Pantex Plant Weekly Report

Process Description Flowdown: Several times recently, it has been noted that process steps identified in the program-specific Hazard Analysis Reports (HARs) were inconsistent with those described in nuclear explosive operating procedures (NEOPs). For example, actions specific to W87 operations such as personnel bonding, installation of electrical connector covers, and removing electrical testers from the work area after use are called out in the process description section of the HAR but are absent from the associated NEOPs. It is important to note that even though the actions are not technical safety requirement (TSR) controls, they do constitute inconsistencies between safety documentation that could potentially lead to safety issues. B&W Pantex engineering is evaluating these incongruities on the W87 program through the unreviewed safety question (USQ) process. More broadly, a determination needs to be made on whether there are deficiencies in the requirements flowdown process or if the protocol to update the HARs annually to incorporate approved process changes requires additional emphasis.

Tyvek® Footwear: An issue arose recently when production technicians (PTs) working in a 5 kV electrostatic discharge (ESD) environment donned Tyvek® booties over static dissipative footwear that had previously been tested upon entry to the facility. The PTs were not required to retest footwear prior to entering a contamination area to perform nuclear explosive operations. A system engineering operability evaluation concluded that the booties could allow the PTs to be at a static potential of up to 2 kV (pass/fail on footwear checker is set for 19 volts). Addition of a procedural step to retest footwear continuity after donning booties would be a good business practice but an unanalyzed hazard does not exist for the 5 kV environment.

Person to Person Coverage: DOE O 452.2C, *Nuclear Explosive Safety*, requires certain weapon configurations be protected by two qualified persons to prevent unauthorized access. The current control at Pantex is implemented through procedural steps that are verbally communicated to personnel in the facility. The disadvantage of this protocol is that there is no visual cue to PTs or visitors that the unit is in a configuration requiring person to person coverage. B&W Pantex engineering is evaluating several other solutions—based on effectiveness, production impact, safety—to improve communication and understanding of the control. Possible options include the use of barriers or signs, limiting access to the facilities, and implementing person to person coverage for all nuclear explosive operations.

Nuclear Material Move: Last week several depleted uranium parts were moved from one nuclear facility to another with one item not being properly transacted in the Move Right system. The person electronically entering the serial numbers into the system overlooked one of the ten items. B&W Pantex is evaluating adding more paperwork/system comparison checks. There have been about 15 failures in the past year to move material in accordance with requirements.

Electrostatic (ESD) Program Implementation: B&W Pantex has developed a corrective action plan to provide clarity and consistency for the implementation of access controls for ESD facilities. By mid-April, plans are to issue a plant-wide procedure addressing requirements, identify consistent locations for the placement of barriers, and procure additional shoe checkers to ensure all applicable facilities have the proper equipment.