

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: Timothy Dwyer, Technical Director
FROM: Timothy Hunt and Rory Rauch, Pantex Site Representatives
DATE: 20 June 2008
SUBJECT: Pantex Plant Weekly Report

DNFSB Staff Activity: B. Laake was onsite to augment site representative coverage.

Lightning and Electrostatic Discharge (ESD) Safety: Lightning and ESD subject matter experts (SMEs) gathered last week to discuss the actions taken to address open lightning and ESD safety concerns. PXSO has established a goal to restart W76-1 operations by 11 August, thus most of the meeting focused on the technical challenges associated with the ESD hazards that led to the suspension of W76 operations. Specifically, the SMEs discussed possible methods to evaluate the acceptability of the use of tools with an anodized surface in a dissipative environment. B&W Pantex plans to use material properties found in literature supported by testing on tool coupons to demonstrate that the anodized tools will dissipate charge at an acceptable voltage. The SMEs have yet to come to a consensus on the appropriateness of this path forward. With most of the lightning SMEs devoted to addressing W76 ESD hazards, there has been little progress in addressing open lightning safety concerns.

12-98 Cell Safety System Upgrades: PXSO recently approved documented safety analysis changes that reflect planned upgrades to the emergency lighting (e-light) system in building 12-98, cells 1 and 2. The e-light system is a safety class control credited to prevent impact events following loss of power. The new e-lights are qualified to operate during and after a performance category 3 (PC-3) seismic event and will exceed the minimum illumination requirement of 0.5 ft.-candle at the working surface by a greater margin. Concurrent with the e-light system upgrades, B&W Pantex will also modify overhead items in these facilities to comply with PC-3 seismic criteria. B&W Pantex completed the upgrades for cell 1 this week and should complete the cell 2 upgrades by the end of June. Building 12-98, cell 3 is also scheduled to be upgraded by the end of July. Completion of this effort will leave four cells that require e-light upgrades and two cells that require seismic upgrades to overhead items.

W87 In-Situ Mechanical Safe Arming Device (MSAD) Operations: B&W Pantex was granted authorization to commence W87 In-Situ MSAD operations this week. Neither the NNSA readiness assessment nor nuclear explosive safety study identified any pre-start findings. Late this week, B&W Pantex modified the tester hardware by removing a resistor that facilitates bleed-off of electrostatic buildup because it was thought to present an unrelated worker safety issue. Initial use of the tester is now on hold pending resolution of the issue. In the future, B&W Pantex management will involve the electrical authority having jurisdiction earlier in the readiness process to ensure that such concerns are not raised just prior to startup.

W62 Anomaly: The production technicians (PTs) entered immediate action procedures during dismantlement operations Thursday when they heard an unusual sound. While separating two components, the PTs described what sounded to them like an air pressure release. They evacuated the facility and contacted appropriate personnel. To further evaluate the potential anomaly, the component in question needs to be completely removed and inspected. This will be done with enhanced technical oversight from various organizations.

Conduct of Operations: The PTs displayed superior formality during W80 dismantlement operations observed on the graveyard shift. The PTs competently performed the reader-worker-checker protocol, effectively communicated, exhibited a high level of attention to detail, and skillfully implemented the two-person control requirement.