

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: Timothy Dwyer, Technical Director
FROM: Tom Spatz, Pantex Site Representative
SUBJECT: Pantex Plant Report for Week Ending November 16, 2012

DNFSB Staff Activity: D. Ogg was at Pantex this week to observe the W80 Operational Safety Review.

Urgent Nuclear Explosive Safety (NES) Concern: Last week, B&W Pantex paused operations on all weapon programs that use the PT4183 Radio-Frequency (RF) tester. During the Approved Equipment Program (AEP) Master Study, the NES study group chair notified the NNSA Production Office (NPO) and the B&W Pantex management that the study group had characterized the use of the PT4183 RF tester as an “Urgent NES Concern”. The PT4183 RF tester is a Category 1 electrical tester which, by definition, makes a direct connection to the electrical circuit of the nuclear explosive. The PT4183 RF tester is powered by AC current from a facility wall outlet. The NES study group expressed concern that the tester did not have the appropriate surge protection to account for an electric surge from a lightning strike to the facility. The NES directives do not explicitly state how to resolve an urgent NES concern. B&W management and NPO responded immediately by pausing operations with the PT4183 RF tester, and operations remain paused. The AEP study group is still deliberating and do not plan to have a final report for weeks. Therefore, NNSA is treating the urgent NES concern as a stand-alone pre-start finding. This week, B&W management sent a letter to NPO with their proposed corrective actions. B&W proposed implementing a 4-hour clear-weather window (administrative control) in the near term, and an in-line surge suppressor (engineered control) as the long-term solution.

Fire Penetration Seals Potential Inadequacy in the Safety Analysis (PISA): B&W Pantex issued a PISA this week when fire protection engineers found suspect penetration seals in several cells, during their annual fire barrier inspection. B&W Pantex paused operations in the affected facilities. B&W Pantex did not identify the issue with the cell fire penetration seals when performing the extent of condition review of the bay fire penetration seal issue. (See report for 11/9/12.) B&W Pantex is still performing an extent of condition review for the cell facilities.

Technical Safety Requirement (TSR) Violation: This week, B&W Pantex reported a TSR violation when fire protection engineers discovered that the bay layout did not meet the combustible standoff distance. B&W Pantex paused operations in the affected facilities and held an event critique meeting and a causal analysis-mistake proofing (CA-MP) meeting this week. B&W fire protection engineers, while performing the semi-annual combustible loading inspection, discovered that combustible material was located too close to special nuclear material (SNM), and equipment used to process SNM. B&W fire protection found this issue in one building with facilities utilized by two divisions. Nuclear explosive operations are not performed in these facilities. During the event critique and the CA-MP, B&W personnel discovered that at least one procedure showing the bay layout in these facilities was not in compliance with the TSR. In one facility, B&W and NNSA had performed several start-up activities (contractor readiness assessment, federal readiness assessment, and readiness verification) without identifying the TSR combustible standoff violation. B&W Pantex is still evaluating the extent of condition.