

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: Timothy Dwyer, Technical Director
FROM: Matthew Duncan and Rory Rauch, Pantex Site Representatives
SUBJECT: Pantex Plant Report for Week Ending January 28, 2011

W88 Operations: Last week, technicians suspended a W88 disassembly and inspection operation after the pit lifting fixture was unable to achieve the minimum required vacuum. The responsible tooling engineer evaluated the configuration and found that the vacuum inlet to the workstand had been damaged. The damage was sufficient to cause a leak in the vacuum line and reduce the vacuum available to the fixture. The tooling engineer had designed a cover to prevent damage to the workstand inlet; however, since the cover was only considered a tooling enhancement, not a required feature, the process engineer did not immediately incorporate a step to install the cover into the applicable procedure. Technicians completed the disassembly and inspection operation by executing a recovery procedure that directed them to bypass the vacuum inlet of the workstand and connect the vacuum hose directly to the lifting fixture. After the operation was completed, production tooling support personnel tagged out the workstand, replaced it with a fully functional copy, and technicians installed the newly-fabricated cover over the vacuum inlet.

Technical Safety Requirement (TSR) Violation: As recently reported, B&W declared a TSR violation after discovering that a quarterly surveillance requirement (SR) for the high pressure fire loop (HPFL) had not been performed within the prescribed surveillance period. After further evaluation of the timeline of events that led to the TSR violation, the site reps believe that B&W did not respond in an appropriate manner to the initial indications of the missed SR.

In an assessment report issued December 2, 2010, the PXSO fire protection engineer first formally raised the possibility of a missed SR when he reported that he could not find the work packages documenting completion of previous occurrences of the SR in the Pantex document management system. Within a few days, maintenance personnel were able to find some work packages (at the time they assumed they had all of them), but recognized that their SR tracking practices were informal, deviating significantly from typical plant practice. Given the lack of formality exhibited by the organization responsible for tracking this SR, B&W should have either performed an immediate extent-of-condition review to verify that all occurrences of this SR had been completed or conservatively taken the actions required in the TSRs for a missed SR. Instead, the HPFL system was not verified to be operable until approximately one month later when the impairment group performed the January 2011 occurrence of the SR. Coincidentally, a few days later, maintenance personnel discovered that they had failed to perform the October 2010 occurrence of the SR (while developing corrective actions in response to PXSO fire protection assessment) and declared the TSR violation.

This event was the fifth missed SR or in-service inspection in the last 14 months. As reported on September 17, 2010, B&W had chartered a team to analyze the problem and identify corrective actions. The team has not completed its analysis; however, they are confident that the resultant corrective actions, when implemented, will address the breakdowns that led to this most recent event. It appears the direct cause of the event involves the practice of tracking nested surveillance activities (e.g., performing quarterly surveillance activities in conjunction with semi-annual surveillance activities), which resulted in the longer grace period associated with a semi-annual SR being inappropriately applied to quarterly surveillance activities. The group responsible for performing the subject SR has suspended this practice.