

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: J. Kent Fortenberry, Technical Director
FROM: Timothy Hunt and Rory Rauch, Pantex Site Representatives
DATE: 28 March 2008
SUBJECT: Pantex Plant Weekly Report

External Explosion Analysis: B&W Pantex completed a three year effort to evaluate the safety basis impacts of non-nuclear, explosive operations on nuclear operations. The need for this evaluation was based on the premise that PXSO does not approve the process hazards analyses for non-nuclear operations, yet these operations can produce an explosion that results in an unacceptable consequence from nuclear operations governed by a PXSO-approved, 10CFR830-compliant documented safety analysis (DSA). B&W Pantex decided not to generate a 10CFR830-compliant DSA for all non-nuclear operations that could impact nuclear operations. Instead, the analysts assumed the hazard existed and evaluated numerous possible combinations of the effects of external explosions on nuclear operations, either in transport or in a fixed location. The analysis of donor events in a fixed location assumed the explosion occurred and sought to determine whether its effects on nuclear operations were sufficiently mitigated. By contrast, the analysis of donor explosions in transport sought to determine whether sufficient controls were in place to prevent the initiating event. This effort resulted in changes to approximately 120 controls—such as the designation of safety class facility structures and explosive facility limits—half of which were modified significantly enough to require re-implementation. The term “explosive-only” operations will be used in the Pantex DSA to identify those non-nuclear operations that require controls with a nuclear pedigree to reduce the risk of the events postulated in this evaluation to an acceptable level.

Conduct of Operations: On Friday, a war reserve unit was slightly damaged while technicians were manually moving it into a staging facility. As one technician was aligning and locking a caster on the transportation gear during the parking evolution, the nose contacted the nose of a nearby unit. The hazard analysis for the subject program screens all impacts and engineering had no concerns with the components located under the nose. The procedure requires three technicians move the unit into the staging facility but the interpretation of the step was that this did not include parking. The procedure will be clarified to ensure three technicians move and also park units.

Graveyard Shift Operations: The W76 became the second program—along with the W80—to restart a second shift operation. The additional capacity is temporarily needed to support disassembly and inspection (D&I) activities. It will likely be maintained following the D&I campaign if the W76-1 ramp up is approved.

W88 SS-21 Operations: The last of the limited number of rebuild units using a new item provided by the design agency was completed this week. This was the first W88 bay operation to use the full SS-21 process and was executed with few difficulties.

Training Program: B&W Pantex recently performed an independent assessment of its training and qualification program as part of its FY2008 contractor assurance system. The review focused on the competence of technical training department personnel, division training officers, and course instructors. The assessment, which was determined to be compliant, identified two weaknesses associated with the up-to-dateness and details of references cited in plans of instruction.