

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 June 18, 2010

Technical Safety Requirement (TSR) Assessment: B&W recently submitted a change to the documented safety analysis (DSA) to correct approximately 50 errors associated with description and supporting analysis of the nuclear explosive cells facility structure, a design feature that provides 17 safety functions (e.g., Faraday cage, two hour fire barrier). The designated control owner found these errors while conducting an assessment as part of the site's program to re-evaluate the implementation of 20 percent of the TSRs each year. In general, the errors can be grouped into two categories: descriptions of the facility structure in the DSA that were inconsistent with control drawings and discussions in the hazard and accident analysis that were inconsistent with referenced engineering documents. The control owner noted that none of the identified inconsistencies exposed weaknesses in the ability of the control to perform its credited safety functions. While the volume of errors discovered during this assessment is a concern, it is positive that the scope of the assessment was broad enough to review and identify inconsistencies between the reference documentation and the DSA.

Procedure Adherence: A first line supervisor discovered that technicians had been inappropriately removing polyvinylchloride (PVC) gloves prior to a sequence of steps during mechanical operations for a specific weapon program. The technicians had been exchanging the PVC gloves for leather gloves, which they believed could not be mixed with any other form of hand protection. The procedure allowed the technicians to use leather gloves if desired, but required the PVC gloves during the subject sequence of steps—even under the leather gloves—to provide a barrier against depleted uranium contamination. Manufacturing management held refresher training for the technicians involved to remind them that the procedure will explicitly direct the donning and removal of required personal protective equipment in a specific step.

Nuclear Explosive Testers (NET) Storage: The nuclear explosive safety (NES) branch recently approved closure of a post-start finding from the Approved Equipment Program (AEP) NES Master Study that identified the lack of standardized requirements for the design of the dual locks that protect NET storage areas. The NES branch noted that the closure package presented by B&W only addressed the one example of potentially weak locks cited in the AEP NES Master Study report and that the fundamental issue still remains. However, they agreed that the remaining portion of this finding could be addressed outside the NES finding closure process.

Formality of Operations: The chief of NNSA's submarine launched ballistic missile branch of the nuclear weapons stockpile division recently wrote a letter to B&W and PXSO expressing concern with the formality of operations at the Special Nuclear Material Component Requalification Facility. The letter cited: (1) failure to identify an out-of-tolerance facility temperature prior to contact gauging, (2) failure to properly measure pit surface temperature during contact gauging, and (3) restart of an integrated pit fill station after review of microfocus x-ray data, but before review of qualification weld metallography data. The letter requested a formality of operations assessment and verification of corrective actions for the events cited.