

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

**MEMO TO:** Timothy Dwyer, Technical Director  
**FROM:** Tom Spatz, Pantex Site Representative  
**SUBJECT:** Pantex Plant Report for Week Ending August 10, 2012

**Fire Barrier Penetration Seals:** This week, start-up activities for the W87 Limited Life Component Exchange project were affected by safety basis issues related to suspect fire barrier penetration seals. The fire barrier penetration seal problem for the outer interlock wall was identified by fire protection engineers in October 2011. The sealant material was found not to be an Underwriters Laboratories (UL)-listed fire barrier material. (See weekly report for 11/4/2011.) B&W Pantex issued a Potential Inadequacy in the Safety Analysis (PISA) on November 11, 2011, which resulted in a positive Unreviewed Safety Question determination. B&W Pantex submitted an Evaluation of the Safety of the Situation (ESS) for the outer wall in October 2011, and NNSA Production Office (NPO) issued a Safety Evaluation Report. The facilities were operational in November 2011. More recently B&W Pantex has identified the same suspect fire barrier penetration seal problem with the inner interlock wall. B&W Pantex revised the ESS for the inner wall penetration seals. NPO has not approved the latest revision of the ESS. NPO discussed their concern to the contractor with performing start-up activities when the safety basis for the facility has a known deficiency.

The safety basis credits the Facility Structure (outer wall) with preventing an external fire from propagating into the interlock area. B&W Pantex has performed a calculation to show that a fire in the ramp can produce enough heat to ignite combustibles within five feet of the unsealed interlock wall. The safety basis compensates for this with the Administrative Control, *Combustible Material Controls*, which prevents combustibles from being staged within this region. The wet-pipe sprinkler system and the deluge system are the primary controls credited for preventing a fire from propagating to a thermally sensitive component in the Bay. The long-term solution is to replace the penetration seals with UL-approved material. B&W Pantex is replacing the penetration seals as funding is available.

**Hoist Potential Inadequacy in the Safety Analysis (PISA):** Last week, while performing a management self-assessment walk down with NPO, B&W Managers identified hazards associated with failure of the crane End Truck Stops that were not addressed in the Documented Safety Analysis. B&W Pantex suspended all hoist operations in the affected facilities. B&W Pantex issued a positive Unreviewed Safety Question determination, submitted an ESS report to NPO, and received a Safety Evaluation Report from NPO. As part of the ESS, B&W Pantex performed an analysis of the End Truck Stops to show that they exceeded the safety margin for the worst-case crane impact. Crane operations have returned to normal.