

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: Steven Stokes, Acting Technical Director
FROM: Thomas Spatz, Pantex Site Representative
SUBJECT: Pantex Plant Report for Week Ending February 15, 2013

DNFSB Staff Activities: This week, A. Gwal and P. Foster were at the Pantex Plant to perform a review of the electrical distribution system.

Electrical Panel Fire: This week, B&W Pantex experienced a fire in an electrical breaker panel that shut down all classified and unclassified computing on the site. B&W Pantex relies on classified computer programs to maintain nuclear material and explosives limits for facilities, as well as control on-site movement of material. The Pantex operations center (OC) paused all on-site transportation and reconciled all material moves that were in progress shortly after the system went down. B&W operations personnel assured all nuclear explosives were in a safe and stable configuration, and then paused all nuclear explosive operations, and special nuclear material operations. Although the fire was not in a nuclear facility it did result in a pause of all nuclear operations.

The fire department responded to the activation of a smoke detector. The fire originated in a new breaker box that was installed in April 2012, as part of the Operations Systems Development and Integration (OSD&I) project. B&W Pantex has installed several new breaker boxes as part of the OSD&I project to establish redundant power supplies for computer power. B&W only connected wires to the load side of the breakers when these new panels were installed. The line side was not touched in order to maintain the Underwriter Laboratories (UL) listing of the panel. B&W electrical safety personnel suspect that the fire was caused by a loose fastener that secured the breakers to the panel's main bus on the line side of the breaker. The bus that the breakers were secured to is a three layer thick piece of copper. B&W electrical safety personnel discovered that two of the layers of copper were melted away at one of the breaker connections. B&W examined the undamaged breaker boxes and found that some of these fasteners could be tightened one full revolution to achieve the specified torque.

B&W recovered from this event within 24 hours, thanks in part to the fact that they just installed redundant panels. B&W held an event critique the day after the event and is preparing to hold the causal analysis/mistake proofing meeting.

In-Service Inspection (ISI) Requirement: This week, the NNSA Production Office (NPO) sent a letter to the B&W engineering division manager related to the ISI for high explosive floor mats. The DNFSB site representative identified that the pre-shift visual inspection did not meet the intent of the ISI, which requires that noticeable dirt or pebbles that can be felt on the surface shall be removed prior to use. (See report for 1/25/13.) NPO noted that it is imperative that B&W take immediate action to ensure the adequate implementation of this safety-class control in a manner that is consistent with the evaluation provided in the Hazard Analysis Report. NPO further directed B&W to perform an extent of condition and provide a written response on the path forward within five days.