

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: Timothy Dwyer, Technical Director
FROM: Tom Spatz, Pantex Site Representative
SUBJECT: Pantex Plant Report for Week Ending December 7, 2012

Safety Culture: The U.S. Department of Energy (DOE), Office of Health, Safety and Security (HSS) issued the *Independent Oversight Assessment of Nuclear Safety Culture at the Pantex Plant* report. The report presents the results of the external independent safety culture survey that was performed at the Pantex Plant between June and August 2012. The assessment team concluded that, “[t]he Pantex Plant has not been successful in understanding the organizational and programmatic behaviors that are necessary for a healthy safety culture.” The assessment team noted that after years of efforts to implement the principles of a High Reliability Organization (HRO), the HRO principles have not yet been internalized by the Plant. The assessment team also noted that the “success and strength of the Pantex Plant lies in the employees’ individual patriotic commitment to the mission of the organization.” The assessment team recommended B&W management gain the respect and trust of the employee population, improve the quality of work life at the plant, and enhance awareness of the employee concerns program and the differing professional opinion process.

Positive Unreviewed Safety Question (USQ) on Two Gas Cylinder Cart Designs: This week B&W Pantex upgraded the potential inadequacy in the safety analysis (PISA) on two gas cylinder cart designs to a positive USQ determination. (See report for 11/30/12.) B&W production personnel have placed caps on the gas cylinders and moved the carts to where they could not possibly impact nuclear explosives if the cart were to fall over.

Fire Penetration Seals: Last week, B&W Pantex issued a positive USQ determination related to suspect penetration seals found in several facilities. (See reports for 11/16, 23, and 30/12.) B&W submitted a Justification for Continued Operation (JCO) to the NNSA Production Office (NPO) for approval of operations in the seven affected cells. The JCO contained three categories of compensatory measures to improve the reliability of the wet-pipe sprinkler system and the high pressure fire loop, minimize ignition sources, and minimize combustibles. The compensatory measures B&W has proposed are similar to those NPO already approved in August 2012 for bay operations. (See report for 8/24/12.) NPO has issued a Safety Evaluation Report accepting the compensatory measures and authorizing start-up of operations in the affected cells. The SER directs B&W Pantex to keep inner cell doors closed during operations for selected cells and establishes an expiration date of June 30, 2013, for the JCO.

Alternating Current (AC) Powered Category 2 Electrical Equipment: This week, B&W Pantex paused nuclear explosive operations that utilize category 2 electrical equipment based on a line of inquiry related to lightning effects from the W80 Operational Safety Review. The safety issue is similar to the urgent Nuclear Explosive Safety concern identified for category 1 electrical testers during the Approved Equipment Program Master Study. (See report from 11/16/12.) The *DOE Nuclear Explosive Safety Manual* (DOE M 452.2-1A) defines category 2 equipment as that which is not intended to connect to the electrical system of a nuclear explosive, but could come in contact with a nuclear explosive. B&W Pantex made procedure changes to incorporate a four-hour clear-weather window prior to performing operations with AC powered category 2 equipment. B&W Pantex has implemented the four-hour clear-weather window and resumed operations with the affected equipment.