

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 July 1, 2011

W76 Anomaly: This week, W76 technicians were removing a detonator cable assembly (DCA) when the component separated. They immediately contacted their supervisor, who directed them to wrap the exposed areas in Kapton® tape, per a general safety requirement in the procedure. Design agency personnel are scheduled to be onsite next week to evaluate the configuration and aid B&W in developing a path forward. It should be noted that this damage does not appear to have resulted from inadequate conduct of operations. Engineering personnel believe a relatively new tool for DCA removal may have contributed to the event.

W78 Operations: Technicians completed disassembling the W78 unit with the damaged DCA without incident.

Potential Inadequacy in the Safety Analysis (PISA): This week, a fire protection engineer discovered a discrepant, as-found condition associated with the bay doors of a nuclear (i.e., non-nuclear explosive) facility. The discrepancy involved four holes approximately 1/2 in. in diameter, which called into question the ability of the bay door to provide a 2 hour fire barrier (one of the functional requirements of the nuclear facility structure design feature). This particular facility was in repair mode, thus no initial action was taken to suspend operations. The following day, the facility manager performed an extent-of-condition review, and found these holes and other types of gaps in operational nuclear facilities. He immediately suspended operations in all affected bays. B&W formally declared a PISA and identified two additional compensatory measures, including an administrative control to minimize combustibles in the ramps outside the affected facilities. Fire protection engineers are modeling the response of the discrepant doors to the design basis external fire to determine the extent to which the fire barrier functional requirement in these facilities has been compromised.

Independent Verification: B&W routinely uses independent verification practices to increase the likelihood that certain quality or safety-related procedural steps are executed correctly during nuclear and nuclear explosive operations. PXS0, citing recent events involving the failure to properly mark a joint-test assembly and the failure to properly label a radioisotopic thermoelectric generator during packaging for shipment (see 6/10/11 and 5/13/11 reports, respectively), issued a memo stating that existing B&W independent verification practices may not be as effective as necessary. In the memo, PXS0 requests that B&W review current work step verification processes with regard to DOE Standard 1036, *Guide to Good Practices for Independent Verification*, and recently issued DOE Order 422.1, *Conduct of Operations*, and develop a more robust independent verification program.

Justification for Continued Operations (JCO): PXS0 approved an extension for the JCO addressing water accumulation in nuclear and nuclear explosive operating areas. PXS0 initially approved the JCO last August after the flooding event of July 8, 2010, demonstrated that the Sitewide Safety Analysis Report did not adequately characterize the hazards presented by the design basis rainfall event. The JCO identifies several compensatory measures, the most significant of which requires technicians to suspend manifold operations in the event that the National Weather Service declares lightning and flash flood warnings for Carson County. B&W plans to submit the authorization basis change package that adequately characterizes the design basis rainfall event and associated controls by the end of July.