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 August 5, 2011

W76 Anomalies: After receiving approval to proceed from PXSO, B&W successfully disassembled the first of the two recent W76 units with damaged detonator cable assemblies (DCAs).

Regarding the second recent W76 unit with a damaged DCA (see 7/29/11 report), Los Alamos National Laboratory (LANL) subject matter experts met with B&W program personnel this week to discuss potential recovery options. The responsible B&W authorization basis engineer has started drafting a justification for continued operations (JCO) for the proposed recovery operation based on these discussions. By the end of next week, the draft JCO should be sufficiently mature for B&W management to determine whether they will need to request new weapon response or whether the JCO can make the safety case for the proposed recovery operation without new weapon response. In the latter situation, the safety case would be made through the application of existing weapon response to a new configuration or some other type of formally documented basis, such as an engineering evaluation.

B&W program personnel and the LANL SMEs also discussed possible measures (in addition to eliminating a DCA removal tool, as discussed in last week's report) that could be taken to prevent these types of DCA damage events from recurring. Both parties agree that units with excessive adhesive holding the DCA in place are at greater risk of being damaged since the technicians must impart a greater force to the adhesive for a longer period of time in order to loosen the DCA prior to removal. In the long term, B&W plans to work with LANL to develop a contingency procedure for situations in which the technicians have difficulty removing the DCA. The procedure would likely require the technicians to cut the DCA and apply polyimide tape to the exposed area. Meanwhile, W76 technicians have been given direction by manufacturing management to use their discretion to pause operations when they are having difficulty removing a DCA and obtain nuclear explosive safety and process engineering input before proceeding.

B53 Procedure: Technicians could not proceed with a B53 dismantlement operation when they discovered that the pit sling they were preparing to use was a different revision than allowed by the procedure. B&W subsequently learned from the vendor that there are several new revisions of the sling with insignificant variations, all of which are acceptable for use. The procedure has been updated to reflect this change.

Legacy Components and Waste: As reported last year (see 8/27/10 report), radiation safety technicians had been surveying legacy components when they discovered that one of the items was contaminated with plutonium. Since then, B&W has worked to set up a radiological tent in a warehouse where additional work with any unmarked or improperly labeled legacy containers containing components or waste can be safely opened, surveyed, and packaged properly prior to shipment offsite. The tent has been set up and is operational.

Personnel Limit Violation: The site rep observed that the posted personnel limit for a training bay had been exceeded and discussed this with B&W and PXSO. B&W plans to address the issue.