

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 23, 2013

MEMO To: Steven Stokes, Acting Technical Director
FROM: Thomas Spatz, Pantex Site Representative
SUBJECT: Pantex Plant Report for Week Ending August 23, 2013

Issue G Weapon Response: This week, the Design Agencies (DAs) released the final peer reviewed Issue G weapon responses. The DAs made several changes in weapon responses between those contained in the high quality draft and the final peer reviewed values. (See reports for 7/12/13 and 8/16/13.) In particular, two of these changes increase the probabilities for two high order consequence accident scenarios by several orders of magnitude. Babcock & Wilcox Pantex (B&W) did not submit a Justification for Continued Operation (JCO) following the release of the final Issue G weapon responses.

Two days after the release of the final Issue G weapon responses, the DAs released Issue H weapon responses. The DAs' Engineering Authorization releasing Issue H weapon responses states that the weapon response changes in Issue H were identified during a video conference as being required to enable the Pantex Plant to complete their JCO. The Engineering Authorization from Los Alamos National Laboratory stated that they determined it was appropriate to revert to the high quality draft Issue G weapon responses for the two accident scenarios mentioned above until refinement of parameters and testing/analysis is completed. B&W has submitted a JCO to the NNSA Production Office (NPO) and is awaiting the release of the Safety Evaluation Report from NPO.

NNSA sent a letter to NPO with the results of the Nuclear Explosive Safety Change Evaluation (NCE) based on the Issue G weapon responses. The NCE group concluded that controls were in place to meet the Nuclear Explosive Safety (NES) directives. The NCE was approved with no findings, deliberation topics, or minority opinions. The NCE approval memorandum states that the increased component weapon responses warrant a review of weapon responses for other weapon programs. The B&W Nuclear Explosives Surety personnel are performing a review to determine if a contractor NCE is adequate to address the release of Issue H.

Integrated Program Planning and Execution System (IPRO): This week, B&W experienced another safety-related IPRO software problem. (See report for 8/16/13.) B&W's safety basis allows special nuclear material to be moved between nuclear facilities within a building where explosives are not allowed. This week, the B&W Operations Center noticed a move being performed outside of that building during a high explosive move window and contacted the IPRO personnel. At the critique, the B&W IPRO subject matter expert stated this exact scenario was tested in the test mode of the application, but that the test mode did not match what was in the production mode. B&W's IPRO staff made the fix to the production mode and resumed material moves.

Annual Verification of Electrical Isolation: This week, B&W Independent Verification review personnel discovered that an annual verification of electrical isolation had not occurred for several years. The annual inspection for electrical isolation is required by the DOE NES directives. In 2008, the responsibility for performing the electrical isolation verification changed, and from that time forward, only a visual inspection for obvious deformation and damage has occurred. B&W personnel sent the tool to the tooling warehouse where it passed the isolation test.