

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 11, 2015

MEMO TO: Steven Stokes, Technical Director
FROM: Zachery Beauvais, Pantex Site Representative
SUBJECT: Pantex Plant Report for Week Ending December 11, 2015

DNFSB Staff Activity: Board Chair J. Connery, Board Member B. Hamilton, and staff member R. Arnold observed nuclear explosive operations, walked down nuclear explosive areas, discussed recent and ongoing facility upgrades and modifications, and met with NNSA and Consolidated Nuclear Security, LLC, leadership while onsite. T. Dwyer observed the NNSA Assistant Deputy Administrator for Stockpile Management Senior Management Team meeting. C. Berg and P. Migliorini observed a working meeting of the Weapons Complex Falling Man Committee. D. Owen observed the ongoing W87 Nuclear Explosive Safety (NES) Study.

NES Change Evaluation (NCE) for Isolator Processing and Resistance Tests: On December 7, 2015, a NES Study Group conducted, and the site representative observed, an NCE for proposed changes to isolator processing and detonator cable assembly (DCA) resistance tests. CNS and the Design Agency previously identified degradation of isolator components used on two weapon programs that required additional controls to protect against electrostatic discharge hazards (see 6/26/2015 report). The proposed changes evaluated during this NCE include a prohibition on performing isolator electrical tests while a nuclear explosive is present in the facility and a requirement to immediately package the isolators following removal from the unit. The process changes for the DCA resistance tests stem from concerns raised following the discovery of two units on a different weapon program that experienced out-of-tolerance measurements during a DCA resistance test (see 4/17/2015 and 8/21/2015 reports) and were later declared anomalous. The proposed changes for DCA resistance tests include the use of a pass through adapter cable while performing the test, a requirement to obtain a clear weather window prior to performing the test, additional personnel and equipment bonding, and steps to wipe equipment with distilled water to remove excess charge. Similar changes were evaluated during NCEs for the other affected weapon program (see 7/10/2015 and 10/23/2015 reports). The NESSG documented no findings, and determined the DOE NES standards and other NES criteria have been met. The NESSG identified one deliberation topic which concluded that steps in the associated procedure that direct the application of insulating tape upon discovery of a damaged DCA are prudent regardless of the results of the resistance test.

Shear Wire Removal: This week, CNS sent an Information Engineering Release (IER) to the Design Agency requesting weapon response for continued disassembly of units with broken shear wires using the case opener tool (see 11/27/2015 report). The IER states that based on the design of the tool and the cutting surface, significant loading is only applied to the outer edge of the shear wire.

Stripped Screw Removal: This week, CNS released a Nuclear Explosive Engineering Procedure for removal of a stripped screw from a unit. The NEEP requires production technicians to maintain control of the area during execution; however, it directs machine shop personnel to remove the stripped screw using hand operated tools.