

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 27, 2015

MEMO TO: Steven Stokes, Technical Director
FROM: Zachery Beauvais, Pantex Site Representative
SUBJECT: Pantex Plant Report for Week Ending November 27, 2015

Pause in Operations Due to an Assembly Stand Issue: On November 16, 2015, during assembly operations, Production Technicians (PT) experienced difficulty engaging the trunnions on a workstand. At the time of the discovery, the unit was suspended in a vulnerable state. The PTs paused the operation and, following concurrence from various subject matter experts (SME), lowered the unit from its original configuration into a support stand. The SMEs subsequently declared that the configuration was safe and stable. Consolidated Nuclear Security, LLC (CNS), Product and Manufacturing Engineering developed a Nuclear Explosive Engineering Procedure (NEEP) in order to use a transfer cart to move the unit from the support stand to an operational workstand. The nuclear explosive bay where the event occurred is authorized for multi-unit operations, and another workstand was available in the facility. CNS Tooling and Machine Design performed an engineering evaluation which determined that the transfer cart and support stand satisfied all design functional requirements during the recovery process specified in the NEEP. CNS Tooling and Machine Design is still determining the cause of the tooling malfunction but has determined it to be an isolated occurrence.

Resumption of Detonator Cable Assembly (DCA) Resistance Tests: On November 20, the CNS Nuclear & Explosive Surety Department (NESD) Manager released a pause on DCA resistance tests for one weapon program. The NESD Manager had previously issued the pause affecting two weapon programs to address a concern that the potential for hazards encountered during testing of two anomalous units may be present while performing this test on other units with similar DCAs (see 10/23/2015 report). The pause was released after CNS Product and Manufacturing Engineering revised the Nuclear Explosive Operating Procedures (NEOP) specifying performance of these tests. The revised NEOPs direct PTs to perform the test with the following changes: perform the test earlier in the disassembly process, which eliminates the potential for a specific electrostatic discharge hazard; use a pass through adapter cable, which allows potentially accumulated charges to bleed-off before connecting the tester to the unit; and wipe components and equipment with distilled water to remove excess static charge. A Nuclear Explosive Safety Change Evaluation is required before releasing the pause on the other affected weapon program.

Case Opener Tool Demonstration for Shear Wire Removal: Last week, the site representative observed CNS personnel demonstrate the use of the case opener tool designed to facilitate the removal of broken shear wire pieces from a unit in a nuclear explosive cell (see 8/14/2015 report). Previous efforts to remove the broken shear wire pieces using punches and pliers had been unsuccessful. The case opener contains a cutting head designed to prevent gouging, and when used as specified, cuts a single ribbon to allow access to the shear wire pieces. The case opener worked as intended during the demonstration.