

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 8, 2016

MEMO TO: Steven Stokes, Technical Director
FROM: Zachery Beauvais, Pantex Site Representative
SUBJECT: Pantex Plant Report for Week Ending January 8, 2016

Broken Shear Wire Extraction: Last week, Production Technicians (PT) completed disassembly of a unit with broken shear wires (see 8/14/2015 and 11/27/2015 reports) following successful execution of a Nuclear Explosive Engineering Procedure (NEEP) directing the use of a newly designed case opener tool. A Nuclear Explosive Safety (NES) Study Group had previously convened on December 18, 2015, to conduct a NES Change Evaluation of the proposed operations and determined that it did not violate the NES standards.

Evaluation of the Safety of the Situation (ESS): On January 7, 2016, the NNSA Production Office (NPO) approved an ESS granting a six month extension to the electrostatic dissipative (ESD) floor covering in-service-inspection (ISI) in two facilities. Because the facilities currently contain certain items, the ISIs could not be performed. NPO had previously approved an extension to the ISI for one of the two affected facilities. The ESS was supported by an engineering evaluation concluding that there is no likely near term degradation in the ESD floor covering based on measurements obtained during the previous ISIs.

Anomalous Units: Last month, the responsible design agency released a Special Instruction Engineering Release (SIER) specifying the path forward for continued disassembly of two anomalous units which had previously experienced out-of-tolerance readings during Detonator Cable Assembly (DCA) resistance tests (see 4/17/2015 and 8/14/2015 reports). The SIER specifies that the PTs performing the operation will be bonded to ground, wipe components with distilled water to remove excess charge, cut the DCA, apply insulating tape to the cut DCA, and then enter the normal disassembly process. The SIER also included authorization information identifying actions to be implemented if the normal DCA removal process is ineffective. In that event, the SIER specifies a modified version of the previously approved cut and cap procedure requiring the use of a modified cap, currently under development by CNS Tooling and Machine Design.

Enhanced Transportation Cart, Type I (ETC-I): On January 5, 2016, quality assurance technicians were unable to fully rotate the transfer rail interlocks on an ETC-I during an attempted transfer of a unit to a Linear Accelerator Cart. The technicians paused the operation. The appropriate subject matter experts determined that the unit should be retracted into the ETC-I in order to achieve a safe and stable configuration. Personnel from Tooling and Machine Design determined that the issue was likely caused by displacement of an alignment plate required to perform the transfer. Production and Manufacturing Engineering subsequently developed a NEEP to return the unit to a workstand in a nuclear explosive bay and load the unit into a different ETC-I. This operation does not rely on the functionality of the alignment plate.