

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 5, 2016

MEMO TO: Steven Stokes, Technical Director
FROM: Zachery Beauvais, Pantex Site Representative
SUBJECT: Pantex Plant Report for Week Ending February 5, 2016

DNFSB Activity: Board member Sean Sullivan was onsite February 2-3. During the visit, Mr. Sullivan and the site representative observed nuclear explosive operations on multiple weapon programs.

Cracked High Explosive Update: Last week, the cognizant design agency issued a Special Instruction Engineering Release (SIER) authorizing continued disassembly of a unit with a cracked conventional high explosive (CHE) charge (see 1/15/2016 report). The SIER provides guidance on how Pantex personnel may proceed in disassembly. The guidance within the SIER includes the following recommendations: Production Technicians (PT) apply one continuous piece of two-inch vinyl tape circumferentially around the charge, to remain in place through charge removal; PTs rotate the assembly so that the cracked charge is oriented downward prior to performing charge separation, allowing the cracked charge and any potential fragments to be held in the fixture by gravity; and PTs should apply strips of tape to any cracks visible on the interior of the charge prior to its final removal. This week, the Production Technicians (PT) who will be performing the additional disassembly operations completed their training on a draft Nuclear Explosive Engineering Procedure (NEEP), incorporating this guidance. Additionally, Consolidated Nuclear Security, LLC (CNS), Safety Analysis Engineering issued an Information Engineering Release (IER) to the design agency requesting that they determine if the cracking present on this unit would increase the unit's sensitivity to mechanical insults. This week, the design agency responded in an IER that the cracking observed on this unit is sufficiently similar to that observed on a unit encountered in January 2015 (see 1/30/2015 report) to allow the same conclusion that there is no change to the sensitivity of the CHE.

Removal of Stuck Wedge Wires: During disassembly and inspection operations earlier this week, PTs encountered wedge wires that could not be removed per the approved process. Wedge wires are installed to connect a support component to the case on this program. CNS Production and Manufacturing Engineering revised an existing NEEP to continue disassembly of the unit. The NEEP directs PTs to use an awl and a plastic hammer to pry the support component away from the case until the wedge wires are accessible, and repeat this process until all have been removed from the unit. In an SIER issued to authorize the operation, the cognizant design agency anticipated that the operation would damage the support and case. On February 4, PTs successfully executed the NEEP.

Unauthorized Electrical Work: Last week, CNS electrical safety personnel discovered unauthorized work performed on the electrical system within an explosives development facility, including the replacement of multiple 120 volt relays, without following lockout/tagout or wall penetration requirements. The facility where this work occurred does not contain nuclear explosives or special nuclear material. The site representative attended a critique of the event on February 1. Development management had planned to replace the relays at a later date as part of broader electrical work planned for the facility. During the critique, the individual who performed the work noted that schedule requirements may have influenced his decision to do so without authorization. No injuries occurred as a result of this activity.