

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 11, 2016

**MEMO TO:** Steven Stokes, Technical Director  
**FROM:** Zachery Beauvais, Pantex Site Representative  
**SUBJECT:** Pantex Plant Report for Week Ending March 11, 2016

**DNFSB Staff Activity:** D. Andersen and R. Jackson observed structural in-service-inspections (ISI), special nuclear material transportation operations, and held discussions on structural topics.

**Work Performed Without Authorization:** Special Mechanic Inspectors (SMI) performed monthly Radiation Alarm Monitoring System tests in two nuclear explosive bays that were not authorized per the Pantex work authorization process. The work authorization listed multiple bays, including two requiring entry into the Limiting Conditions for Operations (LCO) to perform the test, but did not include all bays in the building. CNS conducted and the site representative attended a critique on the event. According to the statements presented at the critique, the SMIs noted this activity is normally performed in all bays within a building during one shift and acknowledged that they focused attention on the two facilities requiring LCO entry and may have overlooked necessary details presented in the pre-job briefing. The form completed to document the pre-job-briefing lacked specific details and did not note the specific bays where the work was authorized. In its November 12, 2015, letter on the Pantex Maintenance Program, the DNFSB noted opportunities for improvement in the work authorization process. Due to the discovery of multiple recent instances of work performed without proper authorization (see 2/5/2016 report), CNS plans to conduct an extent of condition.

**Cracked High Explosive Removal:** The NNSA Production Office (NPO) approved a Justification for Continued Operations (JCO) and approved the results of a Nuclear Explosive Safety (NES) Change Evaluation (NCE) to allow CNS to remove a cracked conventional high explosive charge and continue disassembly of the unit (see 1/15/2016 report). PTs had been unable to previously complete disassembly when they were unable to separate a significant component from the intact charge (see 2/26/2016 report). The vacuum fixture is credited during the normal process to support the separated charge during removal. A JCO was required as CNS could not verify that the vacuum would hold on the cracked charge through the steps where it is normally required. Vacuum pressure is currently applied to the cracked charge in the fixture and will provide defense-in-depth during the proposed operations. The Nuclear Explosive Engineering Procedure (NEEP) directs PTs to tape the charge to the fixture and manually hold the charge in-place. Once the cracked charge is removed from the workstand, the NEEP directs PTs to proceed with a previously authorized process to complete disassembly. The NCE concluded that the proposed operations do not violate the NES Standards.

**Loss of Electrical Power:** A loss of power affecting multiple nuclear explosive bays occurred when CNS personnel attempted to energize an uninterruptible power supply recently installed by subcontractors. The emergency diesel generator started as designed; however, due to a breaker trip, the generator could not provide power to the facility. The trip which initiated the outage was caused by incorrect field wiring and misaligned phase rotation between inputs on two UPS units. CNS conducted, and the site representative attended, a critique on the event. The outage occurred on swing shift and did not impact ongoing nuclear explosive operations, but it did lead to the temporary loss of fire alarm control panels and radiation monitors. Normal power was restored to the affected areas approximately four hours after the initial trip.