

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 17, 2015

**MEMO TO:** Steven Stokes, Technical Director  
**FROM:** Ramsey Arnold, Acting Pantex Site Representative  
**SUBJECT:** Pantex Plant Report for Week Ending July 17, 2015

**DNFSB Board Member On-site:** This week, Board Member Daniel Santos was at the Pantex Plant to observe nuclear explosive operations (NEO).

**Conduct of Operations:** During an NEO, the acting site representative and Board Member observed a production technician (PT) stumble backwards while manually performing a special tooling lift per the NEO procedure. Another PT in the immediate area appeared to assist the PT performing the lift in regaining his balance. No worker injury or component damage occurred; however, if the PT had fallen, he could have been injured and tooling or components behind him could have been damaged. Since the occurrence, Consolidated Nuclear Security, LLC (CNS) paused operations on the weapon program. CNS process engineering and production operations personnel are evaluating the affected NEOs—in particular, procedure steps that require lifting a large, heavy, or bulky piece of special tooling—and will be providing recommendations for improving the conduct of operations of NEOs to prevent safety events from occurring due to a PT falling during lifts of unwieldy special tooling. Production operations personnel also developed a pre-shift crew briefing to heighten PT awareness of performing manual special tooling lifts safely and with the appropriate formality of operations. Once the appropriate changes to the noted weapon program NEOs are completed, the same cross-functional team plans to evaluate all NEOs across weapon programs to look for similar improvements.

**Mechanical Impact Scenario:** On June 25, 2015, CNS personnel declared a documented safety analysis violation and paused all cut and cap operations, affecting two weapon programs. CNS paused these operations due to the lack of a formally documented functional test or tooling analysis that demonstrates that a cover could adequately protect the detonator cable assembly (DCA) from mechanical and electrostatic discharge (ESD) insults (see 7/10/15 report). On June 16, 2015, the NNSA Production Office approved the Justification for Continued Operations (JCO) for one affected program (see 6/19/15 report) but requested that CNS personnel revise the tooling analysis to explicitly demonstrate that the DCA was adequately protected from insults. On July 15, 2015, upon further review of the updated JCO, NPO requested that CNS provide NPO with further clarification to the JCO and associated documentation. In particular, CNS was requested to show how the credited safety functions of the protective cover are explicitly documented in the updated JCO and the related tooling analysis. NPO also requested that the nuclear explosive engineering procedures be updated to explicitly capture the need for the continuous application of Sylgard around the cap to assure the credited ESD insult barrier is in place. CNS has not completed the safety basis documentation or procedure update for the other weapon program; therefore, the affected operations remain paused.

**Emergency Response Drill:** On July 15, 2015, Pantex conducted an emergency response drill. While the drill primarily focused on a security-related event, the Operations Center including the Plant Shift Superintendent had limited participation.