**DEFENSE NUCLEAR FACILITIES SAFETY BOARD**

July 19, 2019

**TO:** Christopher J. Roscetti, Technical Director
**FROM:** Zachery S. Beauvais and Miranda McCoy, Resident Inspectors
**SUBJECT:** Pantex Plant Activity Report for Week Ending July 19, 2019

**DNFSB Staff Activity:** The resident inspectors were offsite this week. M. McCoy performed oversight planning at DNFSB headquarters. Z. Beauvais attended a technical conference.

**Weapons Operations:** While performing nuclear explosive disassembly operations in a cell earlier this year, production technicians (PT) identified damage to a detonator cable assembly (DCA). The damage, consisting of partial tearing of the DCA, required the PTs to seek a safe and stable determination, and required CNS engineering personnel to coordinate any further disassembly with the responsible design agency. CNS engineering personnel developed a modification to their existing "cut-and-cap" process, requiring PTs to cut out the damaged sections of the DCA and apply resistive tape to restore the component's original electrical standoff properties. The responsible design agency confirmed that application of this proposed technique would allow CNS engineering to assume the same electrical hazard thresholds that apply to the normal disassembly process. CNS safety analysis engineering prepared a safety basis supplement to formalize the modified process and submitted it to NPO last week. They reviewed and approved the document. CNS engineering and the responsible design agencies continue developing a process to disassemble a separate unit on the same weapon program where PTs identified potential damage to a DCA (see 5/3/19 report).

**Fire Detection and Suppression Control System:** Last week, a fire alarm control panel received an off-normal supervisory signal from the LaMarche charger. The LaMarche charger supports backup batteries for the fire protection system. CNS engineering personnel investigated the signal but were unable to determine the cause. However, these personnel were able to clear the signal. After receipt of the supervisory signal, Pantex entered the correct facility limiting conditions for operation.

CNS management did not conduct a fact finding for this event. CNS engineering will investigate the concern further during the fire protection system electrical preventive maintenance later this month. Various LaMarche chargers and backup batteries have experienced similar events over the past two years (see 6/21/19, 7/20/18, and 5/18/18 reports).

**Legacy Safety Basis Issues:** This week, CNS safety analysis engineering upgraded a potential inadequacy of the safety analysis regarding discrepancies in hazards for one weapon program to a positive unreviewed safety question (see 7/12/19 report). The noted discrepancies include changes to consequence probabilities and an additional accident scenario. Operational restrictions designed to preclude these specific drop and topple hazards for this program remain in place.