

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 21, 2018

**TO:** Christopher J. Roscetti, Technical Director  
**FROM:** Ramsey P. Arnold and Zachery S. Beauvais, Resident Inspectors  
**SUBJECT:** Pantex Plant Activity Report for Week Ending September 21, 2018

**DNFSB Activity:** Ramsey P. Arnold completed his assignment as one of the Board's Pantex Plant resident inspectors.

**Puncture Wound:** A production technician (PT) sustained a puncture wound during nuclear explosive operations. The disassembly process on a specific nuclear weapon program requires PTs to remove shear wires from the unit case using hand tools including a scribe and locking pliers. The scribe has a necessary sharp point to allow removal of the wires. The PT set the scribe on the base of the workstand and switched to using the locking pliers. While attempting to pull the wires using the locking pliers, the PT shifted her weight and rolled her knee onto the scribe, puncturing her coveralls and piercing the skin. Radiation safety technicians surveyed the scribe, the wound, and the immediate vicinity of the event and determined there was no potential for contamination. Onsite medical provided first aid treatment, and the PT returned to work.

**Safety Basis:** CNS submitted to NPO a safety basis supplement (SBS) to address legacy issues with the safety basis. Per the SBS, the current hazard and safety analyses are not explicitly compliant with DOE expectations. CNS developed the SBS following NPO review comments on a previously submitted justification for continued operations (JCO, see 7/6/18 report). Much of the content and strategy remains the same as the previously submitted JCO. For example, the SBS still proposes various categories that CNS may use to exempt legacy issues from the problem identification and evaluation process and only implements compensatory measures for legacy issues related to the falling technician hazard. The SBS also proposes using hazard screening criteria described in approved, but not yet implemented, NNSA guidance documents. The screening criteria are specified for use by hazard analysis task teams, but the SBS suggests that the criteria be applied to existing hazard analysis conclusions. As a notable change from the previously submitted JCO, the SBS identifies what compensatory measures will be treated as specific administrative controls (SAC). The SBS includes SAC-equivalent compensatory measures that require PTs to remove tripping hazards from the immediate area around nuclear explosives in bays and cells at the start of each shift, exclude equipment not required by approved processes from the immediate vicinity of nuclear explosives, and require operating procedures to state safety requirements related to trip prevention.

In addition to the SBS, CNS submitted revised safety basis change packages to address open issues with tester stability and the use of protective covers on one weapon program (see 6/15/18 and 5/4/18 reports). Specifically, the revised change packages address conditions of approval provided by NPO in their initial review. For the tester stability issue, NPO specified that the compensatory measures included in the JCO needed to include a requirement for PTs to apply the caster brakes on the tester and ensure a free range of motion around the tester to prevent impacts to nuclear explosives. For the protective covers change package, NPO specified that the safety basis needed additional clarification on when operations occur on the unit as opposed to on the benchtop. NPO is currently reviewing the submittals.