

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 13, 2020

**TO:** Christopher J. Roscetti, Technical Director  
**FROM:** Miranda McCoy, Resident Inspector  
**SUBJECT:** Pantex Plant Activity Report for Week Ending November 13, 2020

**DNFSB Staff Activity:** C. Berg provided remote resident inspector coverage.

**Electrostatic Dissipative (ESD) Flooring:** Following water intrusion into a nuclear explosive bay, CNS issued a Stop Work Event and safety analysis engineering (SAE) declared a potential inadequacy of the safety analysis (PISA) last week due to the potential for standing water to affect the resistivity of the ESD flooring in the facility (see 11/6/2020 report). The flooring is credited as part of the ESD environment to prevent electrostatic discharge hazards. Since there is a unit in the facility, introduction of resistivity testing equipment to retest the ESD floor is not authorized. As a result, CNS will not pursue ESD floor testing at this time; an alternative electrical bonding scheme will be proposed to permit further unit disassembly.

**Facility Structure:** Last week, a small piece of concrete fell from the ceiling in an operational nuclear explosive bay (see 11/6/2020 report). Extent of condition walkdowns of neighboring facilities identified similar concerns with three other bays with the same design. Upon further investigation, CNS determined that natural movement of the facility's floating roof led to concrete chipping at the wall-ceiling interface. The design of the impacted facilities did not include an embedded steel feature to prevent this chipping on certain walls. CNS systems engineering is performing a reevaluation of all nuclear and nuclear explosive facilities, and working a path forward with project engineering to repair the affected facilities. Of note, one of the three facilities identified during the extent of condition walkdowns is also impacted by the water intrusion; repair activities cannot be performed until the unit in this facility is processed.

**Special Tooling:** In August, CNS submitted a letter to NPO proposing the special tooling design feature be changed to a specific administrative control. This week, NPO determined that special tooling should remain a design feature, and specifically noted that the proposed change would not follow the hierarchy of controls and could reduce the reliability of the control set. Further, NPO indicated that for active special tooling—such as those relying upon vacuum—CNS should consider developing limiting conditions for operations. The direction provided by NPO aligns with the Board's Recommendation 2019-1.

**Operational Restriction Implementation:** In October, SAE declared a PISA and unreviewed safety question for water exposure hazards on one weapon program (see 10/9/2020 report). As a result, CNS established an operational restriction to require a minimum of thirty minutes between certain operations. The operational restriction was implemented as a critical verification step through an annotated change to the procedure. This week, production technicians utilized the unrevised procedure during operations. Both the unrevised and revised procedures were available in the facility, and production technicians did not verify the use of the correct procedure issue prior to operations. CNS personnel noted in the event critique that they believed the time requirement was met via the normal operating process and through a later non-critical step in the procedure, though the required critical step had not been performed.