

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 22, 2022

**TO:** Christopher J. Roscetti, Technical Director  
**FROM:** A. Gurevitch, Resident Inspector  
**SUBJECT:** Pantex Plant Activity Report for Week Ending April 22, 2022

**Staff Activity:** M. Sautman was onsite this week to augment resident inspector coverage, attend meetings, and conduct mentorship and training activities.

**Technical Safety Requirement (TSR) Violation:** Last week, CNS personnel responded to a trouble signal for an infrared sensor of the fire detection system in a nuclear explosive bay. The facility representative declared the appropriate limiting condition for operations (LCO) until maintenance technicians could respond to fix the trouble signal. This LCO requires that any nuclear explosive be placed into a safe and stable configuration and the on-duty Fire Protection Engineer (FPE) to conduct a walkdown of the facility to evaluate whether combustible material loading necessitates a fire watch (i.e., continuous monitoring of the area for fire or signs of fire by at least one person). However, the walkdown did not account for “super-tables” (i.e., large work-tables that have significant combustible plastic surfaces) that were present in this bay. As a result, the FPE incorrectly determined that staffed persons were not required to conduct a fire watch. Four days later, CNS personnel realized that the presence of the super-tables in the facility—without a corresponding fire watch—represented a TSR violation. CNS immediately deployed production technicians to perform the fire watch until the situation is remedied.

**Safety Basis:** This week, CNS safety analysis engineering (SAE) declared a potential inadequacy of the safety analysis (PISA) following the identification that certain cabinets and workbenches were not adequately evaluated in the hazard analysis reports for three weapon programs. Scenarios not fully addressed in the safety basis include equipment toppling into the nuclear explosive. To prevent these hazard scenarios, CNS established an operational restriction requiring either maintaining an appropriate distance between the equipment and nuclear explosive or, if that is not feasible, using two technicians to control and remove the equipment from the facility. The operational restriction was implemented and return to work was approved.

Last week, in a separate occurrence, SAE declared a PISA upon discovery of discrepancies associated with electrostatic discharge (ESD) parameters for operations involving electrically conductive bags used to package components on two weapon programs (see 4/15/22 report). This week, CNS extended the application of the PISA to a third weapon program. For this new weapon program, the ESD parameters for certain bags exceed the limits used within weapon response development to characterize component response during electrical insult scenarios. As an operational restriction, CNS prohibited the use of six electrically conductive bags with this program, except in a few specific circumstances.