

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 3, 2023

**TO:** Timothy J. Dwyer, Acting Technical Director  
**FROM:** A. Holloway, C. Stott, and C. Berg (acting), Resident Inspectors  
**SUBJECT:** Pantex Plant Activity Report for Week Ending November 3, 2023

**Staff Activity:** M. Sautman was on-site to provide resident inspector support and conducted walkdowns of the operations center and a recent high pressure fire loop lead-in rupture (see 10/27/23 report). The resident inspectors attended a nuclear explosive safety (NES) evaluation related to plans for a new type of electrostatic dissipative flooring tiles.

**Safety Basis:** Last month, NPO approved—with two directed changes—a safety basis change package related to the Fire Protection Program specific administrative control (SAC), which is credited for various internal and external facility fire scenarios. As part of the *Pantex Safety Basis Vision* initiative, CNS committed to “[r]eview all SACs for appropriateness and update them to DOE-STD-1186-2016, *Specific Administrative Controls*.” With regard to the Fire Protection Program SAC, CNS revised the safety basis to provide additional clarifications and details, as well as reformat existing Combustible Controls from a Directive Action SAC to a SAC Limiting Condition for Operations (LCO). When combustible material is identified in an unallowable location, the SAC LCO provides pre-approved actions to correct the situation without resulting in a technical safety requirement violation.

**Special Tooling:** Last week, NPO transmitted to CNS the results of a NES evaluation on the recovery process for a unit within a Mass Properties Transfer Cart that had malfunctioned during use (see 10/6/23 report). A NES Study Group (NESSG) reviewed the proposed nuclear explosive engineering procedure for the recovery process, which included using the facility hoist to lift the unit from the malfunctioned cart and transfer it into an operable one. The NESSG identified no findings and four deliberation topics during its evaluation. While the NESSG noted that the hoisting operation would not have a second independent positive measure to protect against unit drops, they determined that a 133-percent load test of the lifting fixture with supplemental engineering analysis was sufficient to minimize NES concerns. Additionally, NPO approved a safety basis supplement for the proposed operation, and CNS subsequently executed the recovery process.

**Conduct of Maintenance:** This week, CNS Special Mechanical Inspectors (SMI) inadvertently actuated the incorrect solenoid valve associated with the fire protection deluge system within a nuclear explosive cell, resulting in substantial water release. The impacted facility did not contain a nuclear explosive. The SMIs were performing steps within a five-year preventive maintenance procedure to test the deluge system solenoid valve for one cell—which had the water supply isolated—but instead initiated a deluge system response in the adjacent facility. In preparation for the investigation, CNS gathered written accounts from the SMIs, which stated that an individual turned from the fire protection test panel to acknowledge an expected alarm before manipulating the manual deluge switch for the incorrect facility. Of note, the maintenance procedure requires concurrent verification from two SMIs for steps involving solenoid valve actuation. CNS has paused these maintenance activities until a suite of resumptive corrective actions is developed and implemented.