

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 11, 2020

TO: Christopher J. Roscetti, Technical Director
FROM: Miranda McCoy, Resident Inspector
SUBJECT: Pantex Plant Activity Report for Week Ending December 11, 2020

Technical Safety Requirements (TSR): CNS determined that the mismatch between the language in the safety analysis report and TSR discovered last week constituted a documented safety analysis noncompliance and a potential inadequacy of the TSR (PITSR) (see 12/4/20 report). The TSR incorrectly stated which physical configurations were subject to standoff distances for the high explosive transfer cart. CNS established the PITSR process for both Y-12 and Pantex over a year ago as a method for capturing issues with the TSR that do not constitute potential inadequacies of the safety analysis (see 6/28/19 report). Pantex engineers have not declared a PITSR since the initial two PITSRs captured during the process roll-out.

Transient Combustibles: CNS personnel declared a TSR violation following NPO personnel identifying an unattended transient combustible in one nuclear explosive bay. The transient combustible—a paper towel on a unistrut attached to the facility wall—was subsequently identified by CNS in pictures dating back over a year and a half. The paper towel was not easily visible from the floor, and CNS was not able to pinpoint the exact timeframe it was present in the facility. This is the third TSR violation CNS has declared for transient combustibles in the past six months; the previous two violations occurred in special nuclear material facilities (see 8/21/20 and 7/31/20 reports).

Blast Door Interlocks (BDI): During pre-operational checks, production technicians determined that the BDI for their nuclear explosive facility was not operable. The CNS facility representative verified the interlock failure, and entered the appropriate limiting condition for operation. BDI failures occur occasionally at Pantex, and are typically identified during pre-operational checks or start-of-shift facility checks. CNS performs quarterly tracking and trending for BDI deficiencies. In follow-on discussion with the resident inspector, CNS engineers noted that the most recent tracking and trending report did not indicate any increase in BDI issues. CNS last experienced a BDI failure in August (see 8/14/20 report).

Tooling: CNS weapons quality personnel identified that the revision of a wrist strap checker used during operations on several units did not match the revision called out in the applicable procedure. Wrist strap checkers are used during operations to verify that wrist straps—worn by technicians to control human electrostatic discharge hazards—are operable. CNS issued a revision to the wrist strap checker approximately five years ago; however, the procedure, last revised this year, called out the original issue of the wrist strap checker.

Infrared (IR) Flame Detectors: During preventive maintenance activities, CNS crafts workers determined that IR flame detectors in one nuclear explosive cell were not aligned properly. CNS performed a work order to correct the misalignment. Approximately two years ago, CNS identified an issue with misalignment of ultraviolet detector heads; however, the scope of corrective actions following the previous events was limited to ultraviolet heads and not newly installed IR detectors (see 8/17/18 report).