

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 27, 2021

**TO:** Christopher J. Roscetti, Technical Director  
**FROM:** A. Gurevitch, M. Bradisse (acting), and C. Berg (acting), Resident Inspectors  
**SUBJECT:** Pantex Plant Activity Report for Week Ending August 27, 2021

**Staff Activity:** The resident inspectors continued to observe a meeting of a nuclear explosive safety (NES) study group (NESSG) related to a proposed disassembly process for legacy units on a specific weapon program with a cracked component (see 8/20/21 report). In addition, a staff review team conducted a teleconference with NPO and CNS to outbrief results from a staff review of the Pantex external dosimetry program, including factors contributing to the degradation of the program and the loss of dosimetry processing capability (see 9/11/20 and 4/30/21 reports).

**NES:** Last week, a different NESSG transmitted a summary memo to NPO for a recent NES change evaluation (NCE) related to authorization of a specific electrical tester on a certain weapon program (see 8/6/21 report). The weapon program in question will be the last one to make use of this tester; consequently, the memo served partially as a roll-up of issues discussed in previous NCEs for this tester on other weapon programs. The NESSG did not identify any findings but did record 12 deliberation topics, most of which pertained to lingering minor documentation and implementation issues that should be resolved. During discussions, NESSG members noted that the authorization of this tester—and replacement of the electrical tester used to perform this function previously—represents a significant increase in overall safety.

**High Pressure Fire Loop (HPFL):** In earlier reports, the resident inspectors reported several issues related to the operation of the HPFL, likely resulting from residual elevated leak rates following a major pipe rupture and leak in the system (see 7/23/21 and 8/13/21 reports). Subsequent to those events, CNS performed maintenance tasks to re-isolate the location of the initial leak (i.e., flushing and reseating the isolation valves). These efforts appear to have significantly lowered the overall system leak rate, which has reduced over-cycling of HPFL pumps. The current leak rate is approximately 5% of the operability threshold documented in the technical safety requirements.

**Safety Basis:** Earlier this month, CNS lifted a Stop Work order for special nuclear material activities related to a legacy weapon program. Operations involving pits for this program had been paused since May, when CNS discovered a misalignment between the criticality safety analysis for this specific pit type and the general safety requirements procedure for working with multiple units in the same facility. The two documents specified different limits for the number of allowed pits. The applicable safety requirements procedure was updated to match the criticality safety analysis.

**Fire Alarm Receiving System (FARS):** Earlier this month, the emergency services dispatch center (ESDC) received an error message, which resulted in dispatchers briefly losing connectivity with the FARS. CNS personnel restored connectivity but entered appropriate limiting conditions for operations due to the momentary loss. The resident inspectors note the ESDC has previously lost FARS connectivity for other reasons (see 1/15/21 and 5/21/21 reports).