

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 21, 2019

TO: Christopher J. Roscetti, Technical Director
FROM: Zachery S. Beauvais and Miranda McCoy, Resident Inspectors
SUBJECT: Pantex Plant Activity Report for Week Ending June 21, 2019

Weapon Authorization: Last week, CNS began the first phase of a contractor readiness assessment (CRA) of operational changes to support an upcoming life-extension program (see 6/14/19 report). The resident inspectors observed and evaluated CRA demonstrations and a drill for a component drop and potential tritium release. The resident inspectors noted instances where the drill exhibited less fidelity than expected due to the use of pauses and defined drill messages. They provided this feedback to the team conducting the drill. During operations demonstrations, the resident inspectors observed that PTs generally performed operations competently and correctly. The CRA team demonstrated multi-unit operations including concurrent disassembly and assembly operations. This approach could prevent members from all CRA functional areas to simultaneously evaluate both sets of operations.

Fire Detection and Suppression Control System: During preventive maintenance of batteries supporting the secondary power supply for the fire suppression system (FSS), facility maintenance reported a failed voltage test of a battery. CNS and NPO personnel determined that no fact finding was necessary for this event, in part due to identified corrective actions from past battery failures that have occurred over the past two years (see 5/18/18 and 7/20/18 reports).

Fire Alarm Receiving System (FARS): The safety class deluge FSS relies on the FARS to relay signals from individual facility fire alarm and control panels to a central emergency services dispatch center (ESDC). While electronics technicians were performing an unrelated corrective maintenance work package, the technicians and ESDC operators observed an operational loss of the FARS. The electronics technicians and fire protection engineering began troubleshooting the system and identified a failed network switch as the cause. The electronic technicians manually routed the data cables from the failed switch to an installed backup switch and were able to restore this system within 30 minutes of the initial failure. The electronic technicians installed a backup network switch that was previously procured by the information technology department. The resident inspectors questioned whether commercial grade dedication activities were needed to use this component in a safety class system. CNS fire protection engineering identified an internal commitment to determine if this is needed.

The high pressure fire loop (HPFL) limiting conditions of operation (LCO) require functions performed by the FARS to be available when the system is operable. Following the initial loss of the FARS, facilities personnel entered the appropriate HPFL LCO and dispatched personnel to perform required actions. Certain deluge FSS LCOs also require functions performed by the FARS or a panel watch to be in place for the system to be operable. Facilities personnel dispatched staff to establish panel watches in impacted facilities upon the loss of the FARS but did not enter the additional deluge FSS LCO at that time. During a fact finding meeting, the resident inspectors and NPO staff questioned whether the deluge FSS LCO entry condition was met. After further evaluation, CNS management determined that facilities personnel should have entered the deluge FSS LCO and subsequently declared a technical safety requirement violation.