

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 2, 2023

TO: Katherine R. Herrera, Acting Technical Director
FROM: C. Stott and C. Berg (acting), Resident Inspectors
SUBJECT: Pantex Plant Activity Report for Week Ending June 2, 2023

Staff Activity: M. Sautman was on-site to provide resident inspector mentorship and support, including walking down the operations center, emergency services dispatch center, and emergency operations center.

Technical Safety Requirement (TSR) Violation: For safety class wet-pipe fire suppression systems, the Pantex TSRs require an unobstructed water supply from the high pressure fire loop to the sprinkler heads within the facility. To ensure this unobstructed flow path, CNS established a five-year surveillance requirement to assess the internal condition of the fire suppression system from the fire riser to the sprinklers. This week, CNS discovered that the assessment had not been performed for a nuclear explosive cell within its required periodicity. As a result, CNS conservatively entered the appropriate limiting condition for operations (LCO) for the facility, which includes placing all operations in a safe and stable configuration, implementing a fire watch or ensuring sufficient combustible standoff distances are established in accordance with CNS Fire Protection Engineering direction, and placing the facility into maintenance mode.

Due to the missed surveillance requirement, CNS categorized the event as a TSR violation. However, CNS did complete the 5-year wet-pipe internal inspection within the 24-hour window after discovery as defined within the TSRs. Given the successful completion of this inspection within this time period, CNS proved the continued operability of the system and exited the associated LCO. CNS plans to conduct an event investigation next week to discuss the cause of the missed surveillance requirement and develop any necessary corrective actions.

Conduct of Operations: This week, for a unit on one weapon program, production technicians identified that a quality hold point had been missed in the previous nuclear explosive operating procedure (NEOP). Rather than completing the final section of the procedure, which contains this quality hold point, the production technicians on the next work shift began the following NEOP. The technicians identified the discrepancy while subsequently reviewing the operating procedures and entering data.

At the event investigation, CNS participants noted that limited communication between work shifts and less than adequate logbook documentation—including no information provided related to the stopping point within the procedure and the need to complete the quality hold point—contributed to the event. CNS categorized the event as a management concern. To help prevent recurrence of a similar incident, CNS plans to implement the following corrective actions: (1) brief technicians on site expectations related to logbook documentation and (2) potentially revise the second NEOP to verify completion of the quality hold point in the previous procedure prior to commencing further operations. Finally, during the investigation, participants noted similarities of this event with a previous incident where procedural steps were not conducted (see 4/28/23 report). Consequently, CNS will evaluate the site procedures and pre-operational checklists for potential enhancements for work shift turnover during the causal analysis.