DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 24, 2023

TO: Katherine R. Herrera, Acting Technical Director
FROM: C. Berg, Acting Resident Inspector
SUBJECT: Pantex Plant Activity Report for Week Ending February 24, 2023

Staff Activity: J. Anderson, K. Deutsch, P. Foster, T. Koshy, and J. Parham virtually attended the training and orientation for the Approved Equipment Program Volume I Nuclear Explosive Safety Master Study, which includes the electrical equipment program—and the development and use electrical testers—at the Pantex Plant.

Technical Safety Requirement Violation: For certain defense nuclear facilities, the Technical Safety Requirements at Pantex establish a quarterly surveillance requirement for the wet pipe fire suppression system (FSS) to verify the control valves are open and locked. This surveillance requirement ensures an unobstructed flow of water to the fire system sprinklers. Earlier this week, CNS Facility Management discovered that the surveillance requirement for one such facility had not been performed within the established time interval—including the 25% grace period—and consequently declared a Technical Safety Requirement violation. In immediate response to this discovery, CNS Special Mechanic Inspectors executed the quarterly fire system preventive maintenance, ensuring the surveillance requirement was met and the FSS was operable. Additionally, CNS conducted an extent of condition review and confirmed that no other surveillance requirements had exceeded their established intervals.

At the time of the violation, CNS Special Mechanic Inspectors were executing the fire system annual preventive maintenance for the facility, which also includes the required quarterly maintenance activities. However, due to delays in starting the annual maintenance, CNS did not complete the nested quarterly surveillance requirement within the established timeframe. In addition, as noted during the event investigation and critique, the CNS Facility Representative believed that only the annual preventive maintenance was necessary to maintain operability and therefore did not appropriately track the quarterly surveillance requirement due date. To prevent a similar occurrence, CNS plans to develop corrective actions during an upcoming causal analysis, which will include evaluating surveillance requirement tracking systems within the Infrastructure and Facility Management organizations.

Conduct of Operations: This week, while performing assembly operations within a cell, the production technicians used the incorrect revision of the nuclear explosive operating procedure (NEOP). CNS Process Engineering had revised the NEOP the preceding day, but the technicians utilized the previous procedure revision to perform work. During the next shift (i.e., the graveyard shift), production technicians identified the discrepancy and the Production Manager paused operations. Of note, per site requirements, verification of the proper NEOP revision is necessary prior to commencing operations. At the event investigation, CNS participants noted opportunities to improve the communication of NEOP revisions to production personnel. Furthermore, they noted that, in this case, the difference between the two procedure revisions did not involve any process changes but corrected an inaccuracy related to the special tooling number specified within a critical step. CNS plans to conduct a causal analysis to determine appropriate corrective actions for the event.