DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 26, 2024

TO: Timothy J. Dwyer, Technical Director
FROM: A. Holloway and C. Stott, Resident Inspectors
SUBJECT: Pantex Plant Activity Report for Week Ending July 26, 2024

Pantex Management & Operating (M&O) Contractor: NNSA recently selected PanTeXas Deterrence, LLC (PXD) as the new M&O contractor for the Pantex Plant. PXD has begun a transition period with CNS, the current M&O contractor for both Pantex and the Y-12 National Security Complex.

Readiness Assessment: CNS recommenced the contractor readiness assessment (CRA) for multi-application transportation attachment device operations on a weapon program. Previously, CNS suspended the CRA in March 2024 after noting challenges during the demonstrations, including procedural adherence and conduct of operations concerns (see 3/22/24 report). CNS continued to utilize onsite transportation personnel to perform these nuclear explosive operations in multiple locations—allowed by PFO through approval of a safety basis change package—that are not usually designated for such activities. Following the CRA suspension, PFO has now elected to observe separate demonstrations as part of the federal readiness assessment.

The resident inspectors observed the CRA demonstrations, which again included an emergency drill that simulated an abnormal response of the unit during these operations. During demonstrations in one of the locations, the resident inspectors discovered a deficient seismically qualified pipe support in the vicinity of the operations while a PFO facility representative identified an additional one. Before starting the operation, a CNS facility representative barricaded the affected area and allowed completion of the CRA demonstrations in the remaining portion of the designated location.

Conduct of Operations: This week, CNS production technicians discovered damage to components within a nuclear explosive during assembly operations. Upon further investigation, CNS determined that the damage resulted from the components being improperly installed in a previous procedural step prior to pressing operations. Upon discovery, CNS process engineering and operations personnel paused the operations. CNS plans to develop a nuclear explosive engineering procedure to disassemble the unit and replace the damaged components. During the event investigation, CNS also discussed plans to retrain all technicians that perform these operations. After discussions with the resident inspectors concerning clarity of the procedural steps, CNS operations personnel stated they intend to invite and solicit feedback from CNS human factors personnel during an upcoming training session.

Additionally, CNS recently became aware of a nuclear explosive assembled at Pantex in which the outer sheathing of a certain electrical cable had been damaged. CNS set up a mock unit in a training bay to recreate potential scenarios for this damage but had a difficult time observing the cable during all associated operations. CNS has developed a corrective action to aid the production technicians in directing the cable during these operations to minimize pinching by other components. CNS plans to revise the associated procedure with the new assembly technique, as well as brief the technicians on the issue and proposed resolution.