

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 19, 2024

TO: Timothy J. Dwyer, Technical Director
FROM: A. Holloway and C. Stott, Resident Inspectors
SUBJECT: Pantex Plant Activity Report for Week Ending July 19, 2024

Facility Appurtenances: This week, the resident inspectors identified a deficient pipe support—missing a required fastener—for a condensate pipe located in the overhead portion of a seismically-qualified rampway. The resident inspectors previously found a different deficient pipe support on this same condensate pipe in November 2023 (see 11/17/23 report), which currently remains barricaded until the associated work order to correct the discrepancy is completed. In response, a CNS facility representative barricaded the new area to prohibit any material moves. Upon a full extent of condition walkdown of all seismically qualified rampways, CNS facility engineers identified three additional deficient pipe supports, which were then barricaded. In a discussion with the resident inspectors, the CNS Senior Director for Engineering described imminent plans to create a small group of maintenance personnel who will be authorized to tighten loose rampway pipe support fasteners on an as-needed basis.

Fire Protection Water Leak: This week, CNS emergency services dispatch center reported a water flow alarm concurrent with diesel fire pump starts for each of their credited diesel fire pumps. These occurrences may either indicate an event that requires the flow of fire water into a facility or the presence of a leak that exceeds the ability of jockey pumps to maintain system pressure in the safety-class high pressure fire loop (HPFL). In this case, after entering the appropriate limiting condition for operations (LCO) for an unexplained diesel fire pump start, CNS identified and isolated a leak in underground HPFL piping for a non-nuclear facility within a material access area and subsequently exited the LCO. The resident inspectors note that this leak was sizable enough to start all the diesel fire pumps even though pump start signals are staggered such that only the largest HPFL system pressure losses will start multiple pumps. CNS is still investigating the exact location and cause of the leak.

Special Tooling: Last week, while performing disassembly operations in a nuclear explosive cell, CNS production technicians were not able to rotate the cell stand trunnions as required by the procedure. CNS operations personnel paused work after determining that one of the rotation locking pins would not disengage. Personnel from CNS nuclear explosive safety, safety analysis engineering, and process engineering concurred on a safe and stable determination for the item in the trunnions. CNS process engineering, in coordination with CNS tooling and machine design personnel, developed a nuclear explosive engineering procedure (NEEP) with the intent of freeing the stuck pin, but it was unsuccessful when executed. During the event critique, CNS discussed plans to remove the item from the cell stand after completing an engineering evaluation and developing a new NEEP. Additionally, CNS plans to investigate the cause of the stuck pin in the tooling warehouse after the cell stand is removed from the facility.

Safety Basis: CNS declared a potential inadequacy of the safety analysis after identifying two improperly screened electrostatic discharge hazards for a certain weapon program. CNS did not establish any operational restrictions due to an existing electrical bonding control for the associated hazards.