

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 6, 2018

TO: Christopher J. Roscetti, Technical Director
FROM: Ramsey P. Arnold and Zachery S. Beauvais, Resident Inspectors
SUBJECT: Pantex Plant Activity Report for Week Ending July 6, 2018

Nuclear Explosive Operations: Last week, NPO approved an evaluation of the safety of the situation that CNS submitted to disposition a positive unreviewed safety question related to non-bounding weights in the preparation cart tooling analysis (see 6/22/18 report). This allowed CNS to resume operations on a unit in a workstand with locked trunnions (see 6/8/18 report). The nuclear explosive engineering procedure (NEEP) developed for this operation was the fourth in a series of NEEPs used to resolve various, preventable issues encountered during the disassembly of this unit. The latest NEEP called for tool makers, crafts personnel who do not routinely perform hands-on operations with nuclear explosives, to partially disassemble the workstand to free up the locking feature. Prior to restarting the operation, production management provided a safety briefing to the crew to refresh them on the necessary safety requirements. The resident inspectors observed the execution of the NEEP and noted that the production technicians (PT) and tool makers worked together effectively. During the pre-shift setup, PTs identified a vacuum hose connected to the workstand which had an expired maintenance date. The PTs noted it in the logbook and were able to continue the setup and operations, as allowed by the production safety procedure. Although the hose had expired prior to the execution of the previous three NEEPs, the PTs had not documented this previously. The procedure that allows continued use of expired tooling if it is in use does not require production management to notify engineering to make necessary evaluations (see 7/28/17 report). The resident inspectors provided these observations to CNS production and engineering management.

Documented Safety Analysis (DSA) Compliance: CNS submitted a justification for continued operations (JCO) to address legacy issues with the DSA to NPO. The JCO acknowledges that “the existing DSA is not explicitly compliant” with DOE requirements. The DNFSB noted some of these practices in a 2010 letter, and members of the Board and its staff have extensively discussed concerns with NPO and CNS (see 11/17/17 and 3/2/18 reports). Through the JCO, CNS proposes additional requirements to prevent PT trip hazards during cell operations and describes why no controls are needed for other high consequence/low probability events. As CNS did not declare a potential inadequacy of the safety analysis related to these practices, they have not implemented these measures as operational restrictions while the JCO is under review.

Work Authorization: During repair work on two high pressure fire loop valves (see 2/23/18 report), pipefitters connected a jumper section of piping to the previously placed underground piping using a mechanical coupler. When the work was initially performed, the jumper was installed crooked in the coupler, outside of specifications. The following day, pipefitters returned to the worksite to clean the area. Upon viewing the connection, the pipefitters noticed that the jumper had shifted in the coupler, leading to a larger gap than had been initially present. Without management direction or authorization to do so, the pipefitters removed the coupler and remade the connection. The supervisor did not authorize the rework and necessary industrial safety inspections of the area had not been completed before the work was performed. In the process of remaking the connection, an installed gasket was damaged necessitating additional rework. CNS personnel are developing a path forward to correct the issue.