

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 22, 2022

TO: Christopher J. Roscetti, Technical Director
FROM: C. Berg, Acting Resident Inspector
SUBJECT: Pantex Plant Activity Report for Week Ending July 22, 2022

Staff Activity: The resident inspector attended a two-day meeting between CNS, NPO, and NNSA Office of Safety, Infrastructure, and Operations personnel. CNS participants provided overviews of the various ongoing site activities, highlighting upcoming programmatic deliverables and the state of Pantex infrastructure to support these missions. The meeting provided a thorough examination of aging infrastructure at the plant. Topics included short-term and long-term strategies to address the extent of aging facilities and equipment—including replacement of various high explosive facilities—upgrades to address obsolete and failing components of the safety class high pressure fire loop and fire suppression systems, and development of the Material Staging Facility to offset storage location shortages for special nuclear material. Participants also discussed a conceptual design for replacement nuclear explosive facilities. The resident inspector agrees that opportunities exist to enhance operational safety by improving site infrastructure, including in the ramps used to move nuclear material and nuclear explosives between facilities.

Electrical Outage: Earlier this month, CNS commenced a planned, extended power outage for a significant portion of the site, including various nuclear explosive and explosive-only facilities (see 7/15/22 report). CNS will use the outage to perform necessary corrective and preventive maintenance on the electrical distribution system, as well as make various upgrades (e.g., sectionalization of an electrical distribution circuit, replacement of automatic transfer switches, and installation of surge arrestors). Additionally, to take full advantage of the outage, CNS is concurrently completing multiple other projects to mitigate future facility downtime. As an example, for certain nuclear explosive cells impacted by the power outage, CNS is replacing valves for the fire suppression system, as well as installing security-related equipment and other various facility hardware (e.g., thermometer-hygrometers). Pantex personnel expect to conclude the extended power outage by the end of the month.

Maintenance: This week, CNS infrastructure personnel continued executing a work order to install thermometer-hygrometer equipment in one nuclear explosive cell impacted by the electrical outage. Following the placement of holes into the facility for equipment installation, an NPO facility representative reviewed the work package and identified that the penetration permit used to perform the work was not the most current revision. Both the outdated penetration permit and the most current revision—which addressed a boundary change for the work—had been reviewed and approved by the appropriate CNS organizations. However, in this case, the work coordinator inadvertently selected the incorrect permit revision.

At the event investigation, CNS participants acknowledged that multiple reviews of the penetration permit did not identify the discrepancy. Furthermore, they identified that the permit software system does not have sufficient configuration control to ensure the most up-to-date permit revision is affixed to work orders. CNS plans to conduct a causal analysis to resolve this matter and prevent event recurrence.