

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 27, 2024

TO: Timothy J. Dwyer, Technical Director
FROM: A. Holloway and C. Stott, Resident Inspectors
SUBJECT: Pantex Plant Activity Report for Week Ending September 27, 2024

Conduct of Operations: This week, the resident inspectors attended the causal analysis meeting for a recent self-check of an electrical resistance tester that appeared to have a reading outside the acceptable range specified in the operating procedure (see 9/6/2024 report). After the result was recorded, the technicians proceeded to perform electrical tests on a nuclear explosive as if the previous self-check value was within the acceptable range. Subsequent CNS and design agency actions were based on this initial information. However, during the causal analysis meeting, the CNS production technicians—who performed the test—and their production section manager stated that they immediately knew the resistance reading was accurate and within procedural acceptance criteria but did not relay this information to any other organization for several days.

Representatives from other CNS organizations in attendance—including the CNS operations program manager for this weapon program, nuclear explosive safety, safety analysis engineering, process engineering, and quality engineering—all stated that they were only made aware of these details a week later during the event investigation and made decisions for the safety of the nuclear explosive based on the potentially incorrect initial information. The applicable design agency also evaluated this unit as detailed in a Specification Exemption Release according to the information that was initially provided.

After the causal analysis coordinator noted that they did not believe this event warranted a causal analysis toward the end of the meeting, the resident inspectors remarked that multiple organizations made decisions for the safety of a nuclear explosive based on potentially incorrect data that was not corrected until the subsequent event investigation.

Unplanned Power Outage: This week, while performing electrical switching operations to facilitate maintenance activities on the site electrical distribution system, CNS lost power to several facilities due to a suspected failed electrical connection. After identifying the location of the failure, CNS was able to reenergize the affected facilities with a single electrical feed that remained undamaged. CNS plans to continue powering these facilities with a single electrical feed until they are able to plan an electrical outage to repair the damaged circuit. While none of the affected facilities were defense nuclear facilities, this type of electrical outage has occurred multiple times (see 9/22/2023 and 5/10/2024 reports).

CNS facility engineering personnel have previously briefed the resident inspectors on some of the common issues that have caused electrical outages at the site—e.g., equipment aging and incorrectly installed connection components. Additionally, they explained that CNS is currently in the process of planning several electrical outages to upgrade the onsite electrical distribution system; these upgrades would add additional electrical disconnects to limit how much of the grid and associated facilities must be removed from power to perform maintenance on any given electrical connection.