

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 4, 2023

TO: Timothy J. Dwyer, Acting Technical Director
FROM: A. Holloway, C. Stott, and C. Berg (acting), Resident Inspectors
SUBJECT: Pantex Plant Activity Report for Week Ending August 4, 2023

Staff Activity: A. Holloway reported for duty as a Pantex Resident Inspector on August 2, 2023. E. McCullough was on-site to provide resident inspector support. The resident inspectors conducted familiarization walkdowns of various nuclear material and nuclear explosive facilities.

Safety Basis: Last month, NPO transmitted a letter to CNS approving a safety basis change package that attempts to clarify the credibility of hazards from construction equipment identified as heavy vehicles used within Material Access Areas. CNS noted that such construction equipment would travel on established plant roadways, move at low speeds to provide operators sufficient time to regain control if needed, maneuver offroad into place at “extremely slow” speeds, and use a spotter to aid in the placement of the equipment. Due to these considerations, CNS determined that the facility impact hazard from use of this equipment is not credible and did not require the development of any safety controls.

Special Tooling: Last month, while conducting graveyard shift operations within a nuclear explosive cell, production technicians discovered that a component had been misaligned when installing it onto the unit. As a result, the technicians—in consultation with CNS Process Engineering and Nuclear Explosive Safety—placed the unit into a safe and stable configuration. Subsequently, when inspecting the special tooling used to install the component, the technicians identified damage to the fixture. Specifically, the *keyway* on the special tooling—used to ensure appropriate alignment of the component during installation—had sustained damage resulting in a small piece chipping off from the fixture. During the investigation, the technicians asserted that they had inspected the tooling prior to use and did not identify any damage. Additionally, they noted that the alignment of the component with the special tooling *keyway* can be difficult due to the configuration. CNS personnel discussed potential tooling improvements to aid in the alignment; however, it does not appear such modifications are achievable at the current time.

Upon discovery of this issue, CNS conducted an extent of condition review and identified one other tool with the same damage. The contractor returned both copies to the Special Tooling Warehouse, removing them from service. CNS also developed and executed a nuclear explosive engineering procedure to address the misaligned component installed on the nuclear explosive.

Electrical Event: This week, while performing electrical restoration activities following a scheduled outage in Zone 11—permitting upgrades to the electrical distribution system—CNS electricians experienced an electrical arcing event. The workers were performing an electrical test to verify the proper three-phase wiring configuration of an electrical disconnect. The electricians were wearing personal protective equipment and did not experience any injuries. CNS performed an investigation and graded this event as a medium electrical severity per National Fire Protection Association 70E, *Standard for Electrical Safety in the Workplace*. At the current time, CNS believes the event resulted from a fault within the testing meter. Consequently, they removed all meters of this model from service pending further investigation.