

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 11, 2022

TO: Christopher J. Roscetti, Technical Director
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SUBJECT: Pantex Plant Activity Report for Week Ending March 11, 2022

Immediate Action Procedures: Nuclear explosive disassembly operations on a certain weapon program recently resumed following a multi-year effort to address internal charge generation hazards (see 2/25/2022 report). Earlier this week, while disassembling the first unit since operations were reauthorized, production technicians initiated immediate action procedures when an electrical resistance test provided an overrange result. Immediate action procedure steps included pausing operations and placing the unit into a safe and stable configuration.

The specific electrical test that was executed diagnoses the condition of a safety component within the unit—ensuring it is in the proper state—prior to continuing disassembly operations. At the event critique, participants noted that the electrical tester used had passed its self-test prior to use. Furthermore, technicians identified that the tester was configured appropriately and had established a good electrical connection between cables during testing. Finally, following the event, tester design personnel evaluated the equipment and found it operated as designed.

Subsequently, design agency and CNS personnel met to discuss the event and any impacts to nuclear explosive safety (NES). Based on these discussions, CNS process engineering, design agency system engineering, and CNS NES representatives decided that the unit configuration met the anomalous unit criteria (see 3/26/21 report).

Safety Basis: Last week, CNS identified that although a container was approved for use in procedures for packaging and unpacking operations, it was not identified in the documented safety analysis for a specific weapon program. CNS declared a stop work event and placed sixteen procedures into inactive status. CNS further declared a potential inadequacy of the safety analysis due to the use of this container. As an operational restriction, CNS now prohibits the use of this container to package and unpackage a specific component. In addition, all of these containers have been removed from operational nuclear explosive facilities and a transportation restriction has been put into place to prevent them from being issued to those facilities. With this operational restriction in place, CNS has resumed operations with the affected procedures.

This week, CNS held a critique for another container (i.e., handling-gear [H-Gear]) used on a different weapon program. Pantex received multiple nuclear explosives in newer revision H-Gear. However, the design agency did not update documentation that notifies Pantex of the change and allows the site to receive the revised H-Gear from the military. While removing one of the nuclear explosives from its H-Gear, a technician identified that this revision was not authorized in the Pantex tracking system. Furthermore, this H-Gear revision was not allowed per the current safety bases. At the time of discovery, CNS conducted an extent of condition and found that two units had been fully processed. At the event investigation participants determined that technicians had not appropriately verified the H-Gear part number and therefore entered the older H-Gear revision incorrectly into the material movement tracking software. After receiving NPO approval for a safety basis change package, CNS returned operations to work.