

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 10, 2023

TO: Katherine R. Herrera, Acting Technical Director
FROM: C. Berg, Acting Resident Inspector
SUBJECT: Pantex Plant Activity Report for Week Ending February 10, 2023

Operations: This week, while conducting assembly operations within a nuclear explosive cell, the production technicians did not execute a section of the nuclear explosive operating procedure (NEOP)—to obtain a final height measurement—before installing a component. The production technicians identified the missed steps upon completing the procedure and while entering the appropriate information into the Integrated Production Planning and Execution System. Upon identification of the issue, the production technicians notified the Production Section Manager, who paused further operations on the unit, which is currently in a safe and stable configuration.

To enhance production efficiency, the procedure executed by the production technicians allowed them to conduct certain operations concurrently. However, the NEOP did not contain any step to verify all of these concurrent operations were completed prior to moving forward in the procedure. CNS relied on process knowledge and training to ensure each of these parallel processes was accomplished prior to continuing onto the next task. At the event investigation, CNS identified various actions to prevent recurrence of a similar situation. CNS Process Engineering will add a step within the NEOP to ensure these parallel operations are completed prior to moving to the next step of the procedure. Furthermore, CNS plans to conduct an extent of condition review across the weapon programs to determine if any other procedures have a similar allowance for concurrent activities and could result in a similar event. Additionally, given the recent number of conduct of operations events, CNS will provide a briefing to production technicians on this weapon program to discuss this event and further emphasize expectations associated with disciplined operations. CNS also plans to strengthen oversight of the graveyard shift by assigning a dedicated Production Manager. Finally, given there is no currently approved process to completely disassemble the unit, CNS plans to draft a nuclear explosive engineering procedure to remove a few components, place the unit within an enhanced transportation cart, and relocate it to a different facility until a path forward can be determined.

Fire Protection: Last week, CNS Facility Engineering identified a degraded fire barrier penetration seal in the wall of a nuclear material bay (see 2/3/23 report). CNS repaired the seal this week and removed the associated five-foot standoff compensatory measure.

Maintenance: Earlier this month, CNS Infrastructure management identified that multiple unqualified maintenance personnel—individuals whose qualifications had lapsed—had been assigned and performed work. While conducting an effectiveness review for a previous, similar event, the CNS Infrastructure Senior Manager noted that personnel qualification reports had not been provided by the CNS Training organization at the beginning of the month and CNS Infrastructure first line supervisors did not recognize that these reports were missing. As a result, unqualified craft workers were released to perform work for one day. The event did not impact any safety significant or safety class equipment. Upon discovery of the issue, CNS paused all maintenance work across the Pantex Infrastructure organization and only released work upon verification of personnel qualification statuses by CNS Infrastructure senior management.