

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 21, 2025

TO: Technical Director
FROM: Pantex Plant Resident Inspectors
SUBJECT: Pantex Plant Activity Report for Week Ending March 21, 2025

Anomalous Unit Determination: Last week, while performing disassembly operations, PXD production technicians heard abnormal noises after removing a component from a nuclear explosive. After consulting with the production section manager (PSM) and process engineering personnel, the technicians initiated immediate action procedures, notified the operations center, and directed all unnecessary personnel to exit the facility. The remaining technicians in the facility placed the unit in a safe and stable configuration before they exited the facility and secured it from further entry. Subsequently, the PXD nuclear explosive safety (NES) organization requested an anomalous unit determination. In such determinations, DOE Order 452.2, *Nuclear Explosive Safety*, dictates that a PXD process engineer, PXD NES representative, and design agency system engineer assess whether the nuclear explosive configuration damage or condition (1) is identified as a credible deviation and/or addressed in an approved operating procedure, (2) results in an unanalyzed configuration or one not covered by a NES evaluation, or (3) is potentially adverse to NES. Upon review of the unit condition, these personnel did not initially reach a determination and required further information concerning the state of the unit. Upon obtaining this information, the individuals reconvened and declared the unit as not anomalous. With this determination, PXD may resume operations on this unit following publication of a nuclear explosive engineering procedure.

Material Moved Through Restricted Area: The Pantex Technical Safety Requirements include a specific administrative control requiring a walker/spotter to accompany the transport of certain nuclear explosive and explosive configurations in material access areas; this control is intended to help ensure safe passage to the prescribed destination and direct the transported load away from potential insults. This week, PXD PSMs witnessed a walker/spotter escort a forklift transporting high explosive material through a restricted portion of the rampways.

Previously, in response to high winds, PXD personnel braced a degraded lightning protection catenary pole with a specialized *pole cat truck*. As the pole was within falldown distance of the rampway and other nuclear explosive facilities, PXD facility representatives, in consultation with PXD facility engineers, placed signs to restrict the ingress of materials of concern. During the event investigation, the walker/spotter stated that he noticed the sign but did not stop to check which transportation activities were restricted. Currently, PXD personnel categorized this event as a noncompliance of a credited hazard control within the approved safety basis, but plan to further discuss this categorization during a critique scheduled for next week.

Blast Door Interlocks: Last week, PXD production technicians notified a PXD facility representative that the blast door interlock system had malfunctioned for the material blast doors in a nuclear explosive cell. The PXD facility representative entered the applicable limiting condition for operations, which allowed the technicians to administratively control the doors until the repairs were complete. PXD has categorized this event as a performance degradation of a safety class system that prevented its design function when required to be operable.