

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 13, 2025

TO: Technical Director
FROM: Pantex Plant Resident Inspectors
SUBJECT: Pantex Plant Activity Report for Week Ending June 13, 2025

Unauthorized Material: Previously, PXD discovered a contaminant in samples of a particular 35-account material that had been used to clean certain nuclear explosive components. The term *35-account material* refers to commercial material that is authorized for use during or in support of nuclear explosive operations. PXD declared a potential inadequacy of the safety analysis (PISA), determined that it represented an unreviewed safety question, and restricted operations in a certain nuclear explosive facility where the affected component was located (see 5/30/2025 and 6/6/2025 reports). During an extent-of-condition review, PXD discovered a different contaminant in other samples of this 35-account material. Upon further investigation, PXD determined that this 35-account material had been used on certain requalified nuclear explosive components—of a different type than the previous discovery. In response, this week, PXD safety analysis engineering declared a separate PISA and restricted operations and transportation activities involving the affected components. After further analysis, PXD safety analysis engineering determined that the PISA does not represent an unreviewed safety question for these particular types of components. PXD has expanded the ongoing extent-of-condition review to include all 35-account material that could potentially contain these contaminants.

Special Tooling: This week, the resident inspectors attended fact-finding meetings—previously event investigations and critiques—regarding the previous discovery by PXD quality assurance technicians of a nuclear explosive that was positioned slightly closer than expected to the door of an enhanced transportation cart (ETC) (see 6/6/2025 report). Initially, PXD special tooling program personnel applied lockwire and “do not use” tags, and initiated a stop work event to prevent further use of these ETCs until the issue could be investigated. During the fact-finding meetings, PXD tooling & machine design engineers explained that even though the position of the unit was not as expected, the ETC continued to provide adequate protection against all credible hazards as described in the safety analysis. PXD plans to develop an engineering evaluation and associated nuclear explosive engineering procedure to remove this unit from the affected ETC. To accomplish the removal, PXD has rescinded the stop work event so that technicians can perform the nuclear explosive engineering procedure. With stop work event lifted, PXD continues to rely on the lockwire and “do not use” tags to prevent further use of ETCs until completion of a design change to the stop block to ensure units remain in place during transport.

Technical Safety Requirement (TSR) Violation: Last week, PXD declared a TSR violation after production technicians performed desiccation activities on a nuclear explosive without completing pre-operational checks of the facility and equipment (see 6/6/2025 report). This week, during the fact-finding meetings, PXD personnel began discussing whether desiccation activities should be considered active operations, and therefore require pre-operational checks. PXD plans to convene a causal analysis to continue this discussion, clarify the definition of active operations, and identify any other such activities. In the interim, PXD will brief technicians to require performance of pre-operational checks prior to performing desiccation activities.