

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 27, 2025

TO: Technical Director
FROM: Pantex Plant Resident Inspectors
SUBJECT: Pantex Plant Activity Report for Week Ending June 27, 2025

Nuclear Explosive Safety: This week, a Nuclear Explosive Safety (NES) study group conducted an evaluation to assess proposed alternative disassembly operations, as well as the associated special tooling, for certain nuclear explosives. The NES study group and resident inspectors observed demonstrations of the proposed operations in a training environment. The NES study group documented five deliberation topics, with no NES deficiencies or minority opinions identified related to the proposed operations. The resident inspectors noted that the production technicians displayed strong disciplined operations during demonstrations and appropriately addressed study group questions.

Fire Pump House Modification: Recently, PXD Safety Analysis Engineering submitted a Safety Basis Supplement (SBS) to incorporate a compensatory measure during ongoing construction and upgrades to a diesel fire pump house (see 5/9/2025 report). This SBS adds a condition to the Limiting Condition for Operations (LCO) for the high-pressure fire loop to utilize the electric maintenance pump should one of the two remaining diesel fire pumps become inoperable. Before obtaining approval, PXD completed a performance test of the electric maintenance pump—though not all safety organizations had approved this maintenance activity (see 6/20/2025 report)—and found indications that the pump output had degraded from manufacturer expectations. In the SBS, PXD states that an operability determination would be required before relying on this pump, since the pump does not have the capacity to support all nuclear explosive and special nuclear material facilities within the material access area. PXD fire protection engineering personnel indicated that this operability determination will reflect current pump performance, minus five percent for conservatism. PXD fire protection engineering is arranging an additional performance test of the electric maintenance pump to obtain additional data points while concurrently planning replacement of this pump in case of similar results. This week, PFO approved the SBS, noting it provides reasonable assurance that utilization of the electric maintenance pump and one safety-class diesel fire pump would still provide adequate protection from applicable hazards.

Qualification Board: This week, a resident inspector attended an oral board for the periodic requalification of a PXD production section manager for operations within special purpose facilities. This examination focused on various fields of knowledge that a Production Section Manager is required to maintain proficiency in.

Nuclear Explosive Operations: This week, during calibration activities, PXD discovered a broken cable pin stuck in an electrical cable adaptor kit that had been used on multiple units. Following this discovery, PXD issued nonconformances for the cable missing the pin as well as for the units on which this particular adaptor kit had been used. PXD Process Engineering contacted the relevant design agencies and is currently developing a path forward. PXD created an event record in the issues management database and marked it *closed* since this event does not require a formal fact finding according to PXD guidance documents.