

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 8, 2024

TO: Timothy J. Dwyer, Technical Director
FROM: A. Holloway and C. Stott, Resident Inspectors
SUBJECT: Pantex Plant Activity Report for Week Ending November 8, 2024

Pantex Management & Operating (M&O) Contractor: On November 1, 2024, PanTeXas Deterrence, LLC (PXD) officially transitioned as the M&O contractor for the Pantex Plant.

Nuclear Explosive Operating Procedures: Earlier this year, the Pantex contractor resumed nuclear explosive operations for a certain weapon program that had been paused since October 2023 after a design agency sent formal notification that they could no longer support the program's mechanical insult weapon response rules (see 8/23/2024 report). The Pantex contractor developed a justification for continued operations, which established compensatory measures to include requiring two technicians to lift a certain tool over the unit to prevent inadvertent impact scenarios. This week, PXD identified that an associated nuclear explosive operating procedure did not contain the required compensatory measure in one section of the document. Upon discovery of the procedural issue, PXD ceased nuclear explosive operations that utilize this procedure. Originally, PXD considered this discrepancy a technical safety requirement violation. However, PXD maintains that two technicians were utilized for the applicable procedural steps due to the bulky size and weight of the tool. Consequently, PXD recategorized the occurrence as a management concern, which will be further evaluated during an upcoming event investigation.

Safety Basis: Last week, PXD safety analysis engineering declared a potential inadequacy of the safety analysis (PISA) after discovering certain toppling hazard scenarios within the vacuum chamber facility safety basis had incorporated nonconservative weapon response rules. This week, PXD determined that the PISA represented an unreviewed safety question. Due to existing engineered controls already in place for these scenarios (i.e., special tooling), PXD safety analysis engineering did not establish any operational restrictions. Furthermore, PXD plans to apply an existing weapon response rule for these scenarios.

Emergency Exercise: This week, Pantex conducted an emergency exercise involving detonation of high explosives within a nondefense nuclear facility. The simulated event also included a vehicle accident on a public road that involved fire department leadership during the response. Per the exercise plan, offsite organizations responded to the scene of the vehicle accident and dispatched a medical helicopter to transport the injured personnel. Specific topics evaluated by Pantex during the emergency exercise included (1) appropriate communications between Pantex and offsite organizations, (2) proper transition of command and control at the event scenes, and (3) activation and standup of the emergency response organization.

Conduct of Operations: PXD recently became aware of a nuclear explosive assembled at Pantex in which a cover plate alignment key was sheared during assembly operations. Using a trainer unit, PXD determined the likely cause of the damage. Due to tight component tolerances and limited visual cues, PXD technicians rely on feel to properly place the cover plate before pressing operations. During the event investigation, PXD stated they intend to hold a causal analysis and develop additional operator visual aids to prevent recurrence.