DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 25, 2025

TO: Technical Director
FROM: Pantex Plant Resident Inspectors
SUBJECT: Pantex Plant Activity Report for Week Ending July 25, 2025

Causal Analysis: Last month, PXD declared a Technical Safety Requirement (TSR) violation after production technicians performed desiccation activities on a nuclear explosive without completing pre-operational checks of the facility and equipment. PXD technicians perform these checks to verify that the area around the workstand is free from tripping hazards, to verify safety-class structures, systems, and components are operable, and to read and reinforce the safety requirements for proper approaches to the unit. In this case, technicians discovered that humidity conditions within the facility were not in specification upon entry and proceeded to desiccate the unit without performing pre-operational checks (see 6/6/2025 report). During subsequent fact-finding meetings, PXD personnel discussed whether desiccation activities should be considered *active operations* and therefore require pre-operational checks. This week, PXD conducted a causal analysis, which the resident inspectors attended. During the discussions, PXD identified that the definition of *active operations* used by safety analysis engineering to develop TSR controls is different from the definition used by PXD weapon operations and nuclear explosive safety. PXD participants also noted that these desiccation activities were routinely performed long before TSR controls were implemented via the pre-operational checks. PXD plans to continue the causal analysis process and release a final report, including actions to prevent recurrence. In the interim, to ensure TSR controls are implemented, PXD is requiring pre-operational checks to be performed prior to desiccation activities.

Nuclear Explosive Operating Procedures: This week, PXD personnel convened fact-finding meetings after discovering that production technicians had utilized an incorrect revision of a nuclear explosive operating procedure. PXD process engineering had updated the procedure a week prior to use and made notifications to production personnel of the change. A PXD production coordinator took copies of this new procedure revision to affected facilities, but upon arrival, found one facility locked and did not exchange copies of the procedure. Subsequently, production technicians did not verify the procedure revision during required pre-operational checks and conducted operations with the previous procedure revision. Technicians on the subsequent shift discovered the issue prior to commencing further operations. PXD verified that the changes between revisions did not negatively affect safety or quality of the completed operations. PXD plans to conduct a causal analysis to develop actions to prevent recurrence.

Fire Alarm Receiving System (FARS): After performing maintenance activities on FARS, the PXD emergency services dispatch center received trouble signals from multiple facilities. PXD determined that fire protection engineers had unknowingly prevented FARS from communicating with the fire alarm panels within the facilities. FARS provides continuous monitoring capabilities of various Fire Suppression System (FSS) statuses, such as the deluge FSS alarms and actuations, diesel fire pump water supply level, and diesel fire pump house low-temperature alarms. PXD entered the applicable limiting conditions for operations for loss of FARS, which requires manual monitoring of these parameters once per shift. PXD has scheduled a fact-finding meeting next week to identify potential gaps for this event.