

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 20, 2025

**TO:** Technical Director  
**FROM:** Pantex Plant Resident Inspectors  
**SUBJECT:** Pantex Plant Activity Report for Week Ending June 20, 2025

**Safety Basis:** Last week, PXD safety analysis engineering declared a potential inadequacy of the safety analysis (PISA) after receiving formal notification from a design agency that the organization could no longer support the mechanical insult weapon response rules provided for multiple configurations of a weapon program containing a specific component. Through routine review of weapon response documents, the design agency determined that the prescribed impact energy threshold for the component is not bounding. As a result of the PISA declaration, PXD instituted an operational restriction to prohibit nuclear explosive operations on this weapon program when the particular component is present in the facility or installed in the unit, excluding periods when the nuclear explosive is inside handling gear or certain enhanced transportation carts. Prior to resuming the affected operations, PXD will assess the updated weapon response rules and determine the adequacy of established safety controls.

**Issues Management:** Last week, the resident inspectors attended causal analysis meetings concerning a previously declared Technical Safety Requirement (TSR) violation for a surveillance requirement that was not satisfied (see 5/16/2025 report). The surveillance requirement verifies that an alarm and automatic shutdown feature of special purpose facility equipment functions at a predetermined setpoint for load imbalance. During these causal analysis meetings, PXD Facility Engineering and Issues Management personnel concluded that miscommunications between the site and the manufacturer led to equipment setpoint changes by the manufacturer after completion of factory acceptance testing. Compounding the issue, PXD facility engineering stated that the equipment load imbalance readout displayed values only in terms of percent of the established setpoint. Pantex contractor personnel had specified a lower setpoint than required in the TSR to allow margin for the sensors to detect and shut down the equipment before passing the load imbalance threshold. The causal analysis participants postulated that the manufacturer may have raised the setpoint to lessen nuisance equipment shutdowns, not understanding the safety implications. PXD developed actions to prevent event recurrence for the applicable equipment, including correcting the equipment setpoints, updating the test procedure that fulfills the surveillance requirement, modifying the setpoints in the vendor manual, and revising the TSR wording to clarify the intent of the requirement that the equipment never exceed the established load imbalance limit. The resident inspectors questioned whether there could be an action to prevent similar issues with site acceptance of other equipment.

**Unauthorized Work:** Last week, PXD special mechanical inspectors performed a test of the high-pressure fire loop electric maintenance pump according to steps provided in a work order. PXD later identified that not all required safety organizations had approved the activities in the work order prior to performance of the test. This week, PXD decided that a fact-finding meeting would not be required since the event is not reportable under DOE directives, and it was similar to an event that occurred in October 2024. PXD has not completed the actions developed for the previous event. The resident inspectors are questioning the adequacy of interim actions until these actions to prevent recurrence are implemented.