

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 10, 2025

**TO:** R.T. Davis, Acting Technical Director  
**FROM:** A. Holloway and C. Stott, Resident Inspectors  
**SUBJECT:** Pantex Plant Activity Report for Week Ending January 10, 2025

**Electrostatic Discharge Event:** Last week, PXD quality assurance technicians observed an electrostatic discharge from a transportation cart containing a nuclear explosive to nearby special tooling within a special purpose facility. Of note, nuclear explosive operations for this weapon program are not considered electrostatic discharge sensitive. The technicians placed the unit in a safe and stable configuration after receiving concurrence from PXD personnel in the nuclear explosive safety, safety analysis engineering, and process engineering organizations. The next day, PXD declared that operations in this facility could resume after determining that changes do not need to be made to any associated process or tooling. The following week, PXD paused operations in this facility for nuclear explosive operations that require electrostatic dissipative (ESD) controls after discovering that other utilized carts had ESD drag straps that may be incompatible with the new, recently installed ESD tiles. Preliminary information indicates that this design incompatibility could create an environment where the carts are not properly grounded to the tiling, causing an electrical potential to exist between the carts and other tooling. Additionally, PXD has restricted the use of another cart for a different weapon program due to similar discharge concerns in facilities with ESD tiling. PXD is planning to conduct an event investigation next week for these issues.

**Conduct of Operations:** Last month, PXD production technicians placed a “do not use” tag on a piece of safety-class mass properties equipment after discovering that a bolt had been bent during use on graveyard shift. During the following day shift, PXD facility engineering removed the tag after discussing the issue with different production technicians. Later in the week, PXD reapplied the tag after further discussions between the two shifts of technicians. During the event investigation, PFO personnel questioned whether the return-to-service process was utilized, and PXD agreed that the technicians who placed the “do not use” tag should have been consulted before its removal. Additionally, PXD completed operability determinations that were not completed prior to returning the equipment to service, including evaluations of the mass properties system, the facility structure that holds the system in place, and the damaged equipment. PXD is planning to evaluate the procedures for utilizing this equipment to determine if any enhancements can be made to preclude similar equipment damage.

**Missing Electrical Tester Cable Pin:** Last month, during nuclear explosive operations, PXD production technicians discovered that a coaxial cable used with certain Category One electrical testers was missing its pin. After reviewing the units where this cable was utilized, PXD discovered that the pin had detached from the cable and remained in the electrical connector of a previously tested unit. Since several units had been tested between the time of pin detachment and the time of discovery, PXD performed testing on training components and discovered that the degraded cable would make enough of an electrical connection to receive similar test results as a cable with the pin present. PXD has documented the unit nonconformance for the pin stuck in the electrical connector. Additionally, PXD plans to brief all technicians of this weapon program on proper electrical tester inspections prior to use.