

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 5, 2024

**TO:** Timothy J. Dwyer, Technical Director  
**FROM:** A. Holloway and C. Stott, Resident Inspectors  
**SUBJECT:** Pantex Plant Activity Report for Week Ending April 5, 2024

**Field Office Separation:** This week, NNSA established the Pantex Field Office (PFO) to oversee operations at the Pantex Plant. Previously, the NNSA Production Office had oversight responsibilities at both Pantex and Y-12 National Security Complex in Oak Ridge, Tennessee. NNSA stood up the Y-12 Field Office (YFO) to oversee operations at Y-12.

**Radiation Safety:** Previously, the resident inspectors provided observations concerning techniques performed by some CNS radiation safety department (RSD) technicians during a sitewide emergency exercise (see 11/10/23 report). This week, RSD personnel conducted a training drill designed to address these observations and modeled the scenario in a similar manner as the sitewide exercise. The simulated event included personnel contamination from a special nuclear material release from a dropped weapon component in a nearby defense nuclear facility. The resident inspectors observed improved techniques by the technicians such as contamination awareness and control during personnel decontamination and processing.

**Technical Safety Requirements:** This week, CNS declared a technical safety requirement (TSR) violation for performing an electrical test on a nuclear explosive during a lightning warning. CNS had declared lightning warnings for the site prior to the production technicians arriving for their shift. Before starting nuclear explosive operations, the technicians performed pre-operational checks of the facility and logged that lightning warnings were in effect. However, when executing the nuclear explosive operating procedure, the technicians ultimately performed the electrical test prohibited during such warnings. CNS quality assurance inspection technicians discovered this oversight during a procedurally-driven hold point. At the investigation, CNS developed actions to (1) brief all production technicians regarding electrical testing during lightning warnings and (2) provide remedial training to the technicians involved in the TSR violation. While the electrical testing prohibition is codified in a referenced programmatic procedure, CNS personnel discussed that the nuclear explosive operating procedure does not contain a warning or option-tree to help ensure that technicians do not perform such testing during lightning warnings. This procedural direction is present in operating procedures for other weapon programs. CNS will evaluate improvements to this procedure during the associated causal analysis.

**Facility Structure:** Last week, CNS facility engineering discovered erosion under a rampway concrete slab—used for nuclear explosive transportation—after noticing excessive movement when a forklift traversed the area. Upon further evaluation, CNS found that a drainpipe routed under the affected slab was clogged and appeared to have soil and debris precluding proper drainage that likely caused the erosion. The resident inspectors examined the affected area and noted void development under the slab. CNS restricted forklift and material moves for the affected portion of the rampway, cleaned out the drainpipe, and regraded the area between the end of the drainpipe and a downstream culvert to ensure proper drainage. During the critique, CNS facility engineering discussed plans to repair the ramp and perform a causal evaluation.