

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 25, 2022

**TO:** Christopher J. Roscetti, Technical Director  
**FROM:** A. Gurevitch, Resident Inspector  
**SUBJECT:** Pantex Plant Activity Report for Week Ending March 25, 2022

**Nuclear Explosive Safety (NES):** Two weeks ago, Pantex received an unanticipated, out-of-tolerance result from an electrical test on a unit undergoing disassembly (see 3/11/22 report). This week, a NES study group (NESSG) met to deliberate the merits of repeating the test. The NESSG concluded that Pantex could repeat the test, as multiple levels of safety remain even if the component being tested is found to be in an incorrect state. The NESSG memo identified no findings, deliberation topics, or minority opinions; however, the memo stated that this conclusion applied only to this specific unit, and did not extend to other nuclear explosives that might exhibit similar test results. The memo also explicitly stated that operations should be discontinued for this unit should the re-test provide a second out-of-tolerance result.

**Conduct of Operations:** The entrance to nuclear explosive bays includes an equipment interlock consisting of two sets of blast doors, which are configured such that only one set of doors can be open while moving items into and out of the bay. As part of the facility combustible controls, the Technical Safety Requirements (TSR) state the inner set of doors must remain closed during most nuclear explosive operations, unless personnel are entering, exiting, or present in the interlock.

During overtime work on a warhead program this past weekend, technicians used an air-powered hand-steered device to tow an enhanced transportation container (ETC-I) containing a unit into a nuclear explosive bay. After the technicians moved the ETC-I into the facility, they realized that the interlock door would not close with the device still attached. Rather than disconnecting the device to ensure the door could be closed—as directed by facility general use procedures—the technicians left the inner set of doors open. They proceeded to open the ETC-I and unload the nuclear explosive into the workstand. These actions resulted in a TSR violation.

At the critique for this event, the technicians stated that, while the general use facility procedure required closure of the interlock doors, the critical use operating procedure did not expressly state to remove the moving device and close the interlock door prior to unloading the unit into the workstand. However, critique participants noted that technicians are trained to comply with the general use procedures and TSRs, and captured this as a gap. Further, participants noted that a recent contractor Readiness Assessment for this program included a pre-start finding against the same issue; the corrective actions for this finding had been implemented prior to this event. Finally, the resident inspector notes that, although the technician training program includes high-fidelity replicas of nuclear explosives and tools, there are limitations to the training facilities that do not always accurately recreate the conditions present in a nuclear explosive facility (e.g., facility size, spacing, and certain features). On-the-job training for new technicians, which involves mentoring by a more experienced, certified technician, is often used to help address this limitation. For this specific job, the technician with the most plant experience had recently transferred into this program, and the certified technician—of which every work crew is required to have at least one—had only nine months of experience working on this specific program.