

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 22, 2019

TO: Christopher J. Roscetti, Technical Director
FROM: Zachery S. Beauvais, Resident Inspector
SUBJECT: Pantex Plant Activity Report for Week Ending March 22, 2019

Staff Onsite: C. Berg and S. Thangavelu provided resident inspector support, including oversight of a nuclear explosive safety (NES) evaluation for a warhead program alteration.

Implementation Verification Review: Last week, CNS initiated an implementation verification review (IVR) of a safety basis supplement involving an SNM container type not previously used at Pantex. The resident inspector observed CNS transportation personnel demonstrate handling and staging operations with this new SNM container type, including offloading, moving them into magazines, and double-stacking the containers. IVR team members questioned transportation personnel on their protocols for addressing tipped and damaged containers. The resident inspector did not note any safety concerns with their ability to conduct these operations. Alongside the process demonstrations, CNS drilled emergency services' response to a personnel injury during unloading activities. During the drill, transportation personnel attempted to contact the operations center via their handheld radios. Personnel in the operations center passively monitor radio traffic but they did not immediately address the notification. The drill coordinators noted this delay in their evaluation. The IVR team has not yet issued its report.

Approved Equipment: A CNS NES representative identified an electronic key fob that was inadvertently introduced to a nuclear explosive cell by a visitor. Electronic key fobs contain radiofrequency (RF) transmitters that have not been explicitly evaluated within the Pantex approved equipment program. The resident inspector attended a fact finding and critique held on this issue. During these meetings, CNS engineering and NES personnel identified that the plant approved equipment list does not distinguish between permanent nuclear explosive areas (NEA, i.e., bays and cells) and transient NEAs (i.e., ramps). CNS has not previously enforced a restriction on key fobs entering transient NEAs. CNS engineering is evaluating this discovery as new information and determining if it represents a safety concern. CNS system engineering is performing an evaluation to quantify the potential impacts from low energy RF transmitters.

35-Account Material: Last week, production technicians (PTs) observed that an anti-rotation block was not adhered to a gas transfer system component when they were preparing to install it on a unit. The PTs paused operations and the appropriate personnel made a safe and stable determination. The assembly process requires a specialized two-part epoxy to be applied to the block. While the epoxy had sufficient cure time between component assembly and its attempted installation, the PTs noted that it was not fully cured. CNS engineers and scientists performed a variety of tests on the epoxy, allowing the CNS team to determine the discrepancy was not caused by a material quality issue. They additionally determined that the epoxy used in the components assembly contained excess quantities of one part, impacting its ability to cure. CNS engineering identified that the procedures directing the application of the epoxy did not include steps to assure the right ratios of the parts. They have issued a temporary procedure to resume operations and intend to revise the assembly procedures to ensure the appropriate mix.