

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 14, 2018

TO: Christopher J. Roscetti, Technical Director
FROM: Zachery S. Beauvais and Peter J. Foster (acting), Resident Inspectors
SUBJECT: Pantex Plant Activity Report for Week Ending December 14, 2018

DNFSB Staff Activity: P. Foster was onsite to perform Resident Inspector augmentation.

Nuclear Explosives Operations (NEO): While performing a resistance measurement, technicians observed an out-of-range reading. Operations were halted and tester personnel inspected the tester and associated cable. At that time, the tester and cable passed the engineered self-check and program management initiated the anomalous unit determination process. During a subsequent self-check involving a different tester and the same cable, the system did not pass. Further examination revealed a broken conductor in the cable termination that led to an intermittent cable failure. As a result, CNS is preparing documentation to exit the anomalous unit determination process and is performing a visual inspection of all cables of this configuration to confirm there are no additional damaged connections.

Nuclear Explosive Safety (NES): A NES change evaluation (NCE) was held to discuss a special activity associated with a unit that had previously failed a test during disassembly. The NCE evaluated a proposal to re-perform the test using a different protocol to establish the unit's condition and allow the disassembly to proceed under normal operations. If approved, the activity is expected to be performed in early 2019.

Electrical Testers: A NES study group began its evaluation of the new PT3931 tester. This tester-specific study is focused on reviewing the overall system design and safety strategy, and its report will serve as a primary input for future NCEs that are required before the tester is implemented on specific programs. The new design is significantly smaller than the existing tester and is capable of operating exclusively with onboard batteries instead of relying on optical isolation between AC and DC powered units. Its construction also includes novel custom-machined chasses which allow for robust component placement and physical isolation. The new tester is scheduled for production to support programmatic operations in 2019.

Deactivation and Decommissioning (D&D): During a facility walk-down to support planned D&D activities in a non-nuclear facility, CNS personnel identified propellant components that were left in an unapproved area. The units were labeled inert but were determined to not be after further examination. In response, the units were captured in the site's inventory control program and placed in an approved container until they can be properly dispositioned. CNS held a fact-finding to document the event. While the site has limited records for these particular units, personnel were unable to determine how these units came to be stored in this facility and labeled inert. Most likely, they were moved to the facility in the late 1990s/early 2000s for a planned operation; however, there is insufficient documentation to confirm this. Given these uncertainties, the fact finding recommended an extensive facility walk-down to ensure that no other components are improperly stored in the facility. In addition, the responsible manager discussed advising other legacy facilities to perform similar walk-downs. A causal analysis and mistake proofing (CAMP) meeting was also recommended to examine the procedural gaps identified in the fact finding.