

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 1, 2019

TO: Christopher J. Roscetti, Technical Director
FROM: Zachery S. Beauvais, Resident Inspector
SUBJECT: Pantex Plant Activity Report for Week Ending February 1, 2019

DNFSB Staff Activity: M. McCoy and L. Schleicher augmented the resident inspector coverage by observing an emergency drill, preventive maintenance and a fact finding meeting.

Seismic Hazards: The currently authorized safety basis uses time-at-risk arguments to disposition potential seismic hazards to nuclear explosives transported through ramps—structures connecting the various operating facilities. During the evaluation of proposed safety basis changes on two weapon programs, NPO questioned the continued use of these arguments to disposition these hazards. Last week, CNS initiated an internal issue response team to address potential seismic hazards during transportation activities. The team is focused on hazards related to seismic events during forklift handling operations and during transportation in ramps and loading docks. As part of this effort, CNS structural engineers walked down ramps to confirm the existing condition and identify design inputs to support future seismic upgrades of these areas. They confirmed that key sections of the ramps and the primary loading dock used for receipt of nuclear explosives in Zone 12 are not qualified to withstand a design basis seismic event. They identified several additional ramps with appurtenances that are not qualified to remain in place following such an event. CNS safety analysis engineers prepared an addendum to the safety basis that acknowledges that mitigated dose consequences due to these hazards could exceed the DOE evaluation guideline and identifies a schedule to complete various upgrade efforts. NPO and NNSA are evaluating the addendum.

Electrical Equipment: A production technician (PT) utilized an unauthorized electric mobility device within the Zone 12 material access area. In the path of travel to his duty station, the PT passed through a ramp authorized for nuclear explosive transfers. The electric mobility device was not specifically evaluated for its potential to pose an electrical insult hazard to nuclear explosives. The electric mobility device had been cleared by occupational health and safety (OSH) in consultation with the applicable production section manager (PSM). OSH personnel were not aware that the PT would be entering the material access area, and the PSM was not aware that the mobility device would be electrically-powered. The PT noted that he had been questioned by both security personnel and other PTs on the use of an electric mobility device within the material access area, and that he had responded that it had been cleared by OSH.

Emergency Response Drill: The resident inspectors observed a tritium release drill. Radiation safety department (RSD) technicians practiced donning the appropriate personal protective equipment, including self-contained breathing apparatuses (SCBAs), and executing their post-accident response procedure. The Pantex Fire Department supported RSD while using the SCBAs. Overall, the RSD technicians demonstrated clear communication while wearing SCBAs and responded appropriately to this drill scenario.