

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 26, 2018

TO: Christopher J. Roscetti, Technical Director
FROM: Zachery S. Beauvais, Resident Inspector
SUBJECT: Pantex Plant Activity Report for Week Ending October 26, 2018

DNFSB Staff Activity: A. Hutain and K. Sullivan performed resident inspector augmentation activities. J. Anderson observed and evaluated a nuclear explosives safety study.

Operational Restrictions: Earlier this year, CNS declared a potential inadequacy of the safety analysis related to the potential for the PT3746 tester to topple following a seismic or falling technician event (see 6/15/18 report). To continue operations, CNS safety analysis engineers identified operational restrictions requiring production technicians (PT) to maintain a six foot standoff between the PT3746 and nuclear explosive units. The operational restrictions did not specify specific configurations or specific operations where they are applicable. To implement the standoff, CNS process engineers modified the operating procedure that directs use of the tester but did not address the requirement during other operations where the tester may be present in the facility, but not in use. During field observations to support implementation of separate compensatory measures that also implement equipment standoffs, PTs and process engineers questioned whether the standoff could be maintained during operations that transfer the unit between a transportation cart and an assembly cart. This activity requires PTs to move the unit on an assembly cart close to a facility wall where the PT3746 may be stored. CNS management paused transfer operations on the impacted program and determined that the event represented a technical safety requirement violation, as the operational restriction performs a safety class function. CNS process engineering is evaluating facility layouts and other standoff restrictions prior to resuming operations. Pantex has experienced numerous issues related to the specification and implementation of operational restrictions since CNS increased their use in 2017 (see 10/27/17, 12/21/17, 5/4/18 and 7/13/18 reports).

Emergency Preparedness and Response: Pantex personnel conducted an emergency response organization (ERO) drill involving a dropped pit coincident with a forklift-related injury and nearby electrical fire. During the drill, responders encountered difficulty producing atmospheric plume models in a timely manner due to software issues and delayed classification approval. Additionally, the emergency manager identified an error in the initial plume model due to a truncation of the GPS coordinates. All emergency operations center response objectives were completed and the recovery phase was being entered when the drill was terminated. DNFSB staff observed the plant shift superintendents, the ERO executive team, and radiation field monitoring teams perform their response actions. Unrelated to the drill, Pantex declared an operational emergency due to a security concern with a vehicle parked at the John C. Drummond Center. As protective actions, nearby workers sheltered-in-place and all personnel paused operations. The emergency was terminated after the vehicle was inspected by law enforcement.

Turnover Processes: DNFSB staff conducted facility observations focused on the turnover of duties. This included observing CNS facility representatives (FR) and fire protection engineering inspecting nuclear explosive areas prior to entering limiting conditions of operations to support maintenance work, work authorization activities performed by FRs, turnover between day shift FRs and the swing shift FR, and plant shift superintendent shift turnover activities.