

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 4, 2019

TO: Christopher J. Roscetti, Technical Director
FROM: Zachery S. Beauvais and Miranda McCoy, Resident Inspectors
SUBJECT: Pantex Plant Activity Report for Week Ending October 4, 2019

Severe Weather: Pantex Plant experienced a significant rain event, resulting in localized flooding that impacted office access for personnel from NPO and a number of CNS divisions. Impacts to operations and facilities supporting operations have been minimal.

Control Implementation: The Pantex technical safety requirements (TSR) specify that while technicians are moving high explosives on one weapon program in its storage container, they “shall only lift the storage container as high as required to safely complete the operation.” The documented safety analysis requires that this control be implemented through both procedures and training. The control is typically implemented through a caution statement in the general instructions section of the applicable nuclear explosive operating procedure. While evaluating questions posed by NPO staff, CNS mission engineering identified that the control is not implemented in the plant’s generally applicable nuclear explosive transportation procedure. CNS mission engineering initially treated the discovery as a TSR violation and restricted execution of all applicable operations. While further investigating the issue, CNS personnel identified that similar requirements are captured in a separate, general safety requirements procedure that would have been applicable to the operation. This procedure directs technician to “maintain a minimum distance that explosive material can fall if accidentally dropped during handling.” This allowed CNS management to conclude that the TSR was implemented and subsequently down-graded the issue. CNS process engineering has lifted the pause and plans to modify procedures to more directly implement the control.

Fire Protection System: This week, CNS facilities and engineering personnel discovered three separate components within the safety class fire protection system to be in degraded condition. The resident inspectors previously noted a recent trend of events involving miscellaneous hardware, including ultraviolet (UV) flame detectors (see 9/20/2019 report). Details of the three events are presented below:

- A UV detector head failed a preventive maintenance surveillance.
- An infrared (IR) detector degradation resulted in a Det-Tronics control panel trouble alarm signal. The CNS facility representative entered the appropriate limiting condition of operation. This is the first event involving an IR detector faulting in this manner; accordingly, CNS facilities submitted a work order to troubleshoot the IR detector fault. CNS facilities and engineering intend to determine a path forward and conduct a causal analysis dependent on the information gathered from performing the work order.
- A high pressure fire loop (HPFL) tank alarm failed to communicate with the Emergency Service Dispatch Center. The applicable fire alarm control panel was reset; however, the reset did not resolve the communication error. The CNS facility representative placed the affected HPFL tank in inoperable status.