

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 10, 2020

TO: Christopher J. Roscetti, Technical Director
FROM: Miranda McCoy, Resident Inspector
SUBJECT: Pantex Plant Activity Report for Week Ending April 10, 2020

COVID-19: This week, NNSA approved CNS to transition to the containment phase of their Pantex COVID-19 response plan. In accordance with the response plan, CNS began transitioning non-essential personnel to telework status and began shutdown of non-mission critical onsite work. Production technicians are placing non-mission critical, in-progress units in transportable configurations where possible, and safe and stable configurations for all paused units. Given the amount of ongoing mission critical work, many nuclear explosive facilities will remain operational. CNS will continue to transition to minimum staffing levels throughout next week. Additionally, Pantex activated a limited emergency response organization to monitor information related to COVID-19, provide direction to CNS management, and respond to any emergency events as required.

Electrical Distribution: CNS concluded a fact finding investigating power interruption in Zone 11 (see 3/6/20 and 1/24/20 reports). In January, infrastructure personnel responded to a loss-of-power event affecting one of the two redundant electrical circuits in Zone 11 south. At that time, infrastructure switched over to the other electrical circuit and operated without a functional redundant circuit while troubleshooting the issue. CNS replaced several components of the electrical system, including aging connectors, cable grounding, and a transfer switch. However, while re-energizing the system, several breakers tripped. Visual and infrared inspections did not indicate any issues with the circuit. In February, CNS subcontracted additional cable testing that did not reveal any faulty cables. CNS crafts then re-energized the system again, resulting in a notable flash of light from a switchgear and immediate loss of power. CNS noted several arc burns within the switchgear, and a reduced air gap that likely caused the noted arcing. During the fact finding, personnel noted that the failed switchgear was a newer system component, and disassembly would have voided its warranty; the switchgear was therefore not an anticipated failure mechanism and not disassembled for inspection. In response to this event, CNS engineering committed to evaluating the progression of the event and determining whether any steps taken by CNS could prevent recurrence of similar events.

Safety Basis: NPO concurred on a CNS plan to address impact hazards from transient material and equipment in ramps and corridors during seismic events. Last year, NNSA invoked the exigent circumstances provision in the safe harbor standard for hazards present during onsite transportation activities, including transient material impacts; CNS later briefed NNSA personnel on proposed controls for transient material impacts (see 1/24/20 and 2/8/19 reports). The transient equipment plan proposes three controls but does not propose additional analysis or the development of new weapon response information. The plan involves utilizing an existing control, the high explosive transportation cart, for moves involving two additional weapon programs. Additionally, Pantex operations personnel will implement a project to better organize transient materials in ramps and corridors and reduce their presence where reduction will have minimal operational impact. The plan will also credit the existing transportation configuration assembly control for mechanical impacts from transient material and equipment.