

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 1, 2018

TO: Christopher J. Roscetti, Technical Director
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SUBJECT: Pantex Plant Activity Report for Week Ending November 2, 2018

Catenary Lightning Protection System: During area inspections to support a planned electrical outage, CNS personnel discovered a wooden pole supporting lightning protection catenary wires to be degraded and leaning. The pole is installed inside the Zone 12 material access area near a nuclear explosive facility and ramps used for transporting nuclear explosives. The lightning protection system is not a credited nuclear safety system, but is required by the explosive safety program. Upon discovery, maintenance personnel propped the pole using a “pole-cat” boom truck, verifying that the placement of the truck met operational restrictions for fall hazards impacting the nuclear facilities. In its degraded state, there is a potential for the pole to impact the nearby ramps. Consequently, CNS restricted movement of hazardous material in the impacted areas. This action prevented movement of materials between a loading dock that is typically used and several facilities, prompting CNS management to prepare the alternate loading dock for operations. Personnel from facilities, transportation, and readiness, in coordination with NPO, performed a process modification report to determine if further readiness review was necessary. CNS updated their internal processes to require this after the last use of the alternate loading dock (see 11/4/16 report). They determined that a formal readiness review was not required, and proceeded to verify the facility was ready using a local checklist process. During a fact finding meeting held on this issue, infrastructure and engineering acknowledged that they had identified a missing guy-wire anchor for the pole in 2014, but the condition had not yet been corrected. Engineering and maintenance are determining how to address the degraded pole.

Readiness: Last week, CNS commenced a contractor readiness assessment (CRA) of pit surveillance operations with new equipment in a section of an existing special nuclear material (SNM) processing facility. A similar capability already exists in the SNM component requalification facility. The new operations will allow Pantex to extend their requalification capacity in support of an upcoming weapon program alteration and life extension program. CNS and construction subcontractors significantly remodeled the rooms where the equipment is installed to prepare for the new capability. The CRA team started with a known pre-start finding related to ongoing efforts to complete seismic qualification of appurtenances in the area. The CNS plant manager has startup authority for this project.

Weapon Response: CNS safety analysis engineering (SAE) received new weapon response relevant to mechanical impacts involving bay and special purpose facility operations with nuclear explosives on one program. The weapon response reflects new information provided by experimental testing of impacts to metallic weapon components, completed in 2015. Prior to receiving a formal release from the design agencies, CNS followed their local procedures for handling new information that was deemed immature. The change in weapon response results in some hazards causing tritium release to no longer screen. SAE evaluated the change, determined it represented a potential inadequacy of the safety analysis, and identified operational restrictions. The operational restrictions require a specific orientation of the unit to preclude impacts during some activities, make use of existing engineering controls, and extend the personnel evacuation specific administrative control.