

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 20, 2018

TO: Christopher J. Roscetti, Technical Director
FROM: Zachery S. Beauvais, Resident Inspector
SUBJECT: Pantex Plant Activity Report for Week Ending November 23, 2018

Work Authorization: CNS recently declared a DSA non-compliance following the identification of inadequate test specifications for protective mats used during operations with bare conventional high explosives (see 10/19/18 report). Specifically, CNS scientists were not testing the mats to demonstrate that they could meet charge dissipation requirements for the 100-volt environment required during cut-and-cap operations. Following identification of the issue, CNS management restricted production technicians from performing cut-and-cap operations until the mats were formally tested and demonstrated to meet the dissipative requirements. CNS management captured the restriction in the plant shift superintendents' logbook but did not formally implement the restriction in the nuclear explosive operating procedures. This weekend, production technicians encountered an anomaly that required them to perform the cut-and-cap operation. Per their procedure, they notified their supervisor and the on-call process engineer and inquired whether the operations were currently authorized. The process engineer deferred to a senior process engineer who mistakenly informed the technicians that the restriction had been lifted and that they could proceed. The technicians completed the operation. Upon further evaluation, the senior engineer later determined that the operation was not authorized. CNS scientists previously performed unofficial tests of the high explosive protective mats that indicated they would likely meet the dissipative requirements but have not yet formally tested the mats per an approved test procedure. The senior engineer acknowledged that this had led to the invalid assumption that cut-and-cap operations were authorized. Following the identification of the issue, CNS plant management paused nuclear explosive operations until mission engineering identifies all applicable pauses and operational restrictions that are currently in place.

CNS has recently experienced difficulty effectively implementing pauses and operational restrictions. Since May 2018, Pantex Plant has experienced three additional technical safety requirement violations or safety basis non-compliances related to the identification and implementation of operational restrictions and pauses (see 5/4/18, 7/13/18 and 10/26/18 reports). As follow-on actions to this most recent event, CNS engineering intends to perform a causal analysis and develop a standing order to capture the requirements for entering and exiting operational restrictions.

Snow Loading: Last weekend, the Pantex Plant accumulated greater than 2 inches of snow. This prompted facility engineering to restrict transportation in ramps due to recently implemented operational restrictions (see 11/9/18 report). This week, facility engineering walked down the impacted ramps and compared the accumulated snow against the limits analyzed in the approved safety analysis. Based on these inspections, they released all areas impacted by these restrictions to normal activities, as the snow has melted and subsided. Transportation in other ramps remains restricted due to a degraded lightning protection system pole (see 11/2/18 report).