

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 4, 2016

MEMO TO: Steven Stokes, Technical Director
FROM: Zachery Beauvais, Pantex Site Representative
SUBJECT: Pantex Plant Report for Week Ending March 4, 2016

Technical Safety Requirement (TSR) Violation Investigation: On January 13, 2016, Consolidated Nuclear Security, LLC (CNS), management discovered that unpackaged components containing explosive material had been previously staged in an unauthorized location and declared a TSR violation (see 1/15/2016 report). In addition to conducting a critique and Causal Analysis-Mistake Proofing meeting, CNS chartered an independent investigation of the incident. The causal analysis and investigation reports were recently finalized and released. The timeline of events established in the reports state that the components were first moved to the equipment interlock on January 2, removed from the interlock on January 6, anonymously reported to CNS Nuclear Explosive Safety (NES) personnel on January 11, and brought to the attention of CNS senior management on January 13. Production Technicians (PT), Production Section Managers (PSM) and the program's Production Manager became aware by January 6 that the components had been staged in a bay interlock but failed to recognize and report that a TSR violation had occurred; although, some of those involved had discussed that possibility. According to the causal analysis report, there were six missed opportunities to identify or correct the condition. The personnel involved held an initial perception that tensions between the crews that had performed the operations on January 2 and January 6, respectively, had led to an intentional misplacement of the components. While the investigation team later determined this to have not been the case, the initial response by line management focused on addressing this perception, rather than assessing the safety implications of the discovery.

The investigation team made several recommendations including the following: evaluate the turnover process to ensure operations only commence after all necessary tools, parts, and components are available; evaluate the "safe and stable" determination process to expand consideration for components not installed on the nuclear explosive that may require additional protection; evaluate the adequacy of TSR training; and provide clarity and emphasis on the basis for safety controls. CNS has committed to perform corrective actions to address each of these items. The investigation also recommended that CNS evaluate the PSM position responsibilities. Notably, the report states that there is currently a ratio of 1 PSM to 27 PTs performing work on this weapon program and "PSM oversight should be improved." CNS management is considering options to address this recommendation.

Dispersion Analysis Methodology: Last week, CNS Safety and Process Engineering submitted an updated plan for the consolidation of dispersion calculation methodologies at Pantex and the Y-12 National Security Complex to the NNSA Production Office (NPO). The plan was issued in response to an NPO request to evaluate and update the current calculations at Pantex (see 4/10/2015 report). The recent update communicates the selection of codes to be used in future analyses and outlines additional necessary steps. The additional steps include a near-term action to perform analyses using complete meteorological data collected in calendar year 2015, to determine if the data currently used is bounding, and a long-term action to establish a centralized service center to perform safety analysis calculations for Pantex and Y-12. CNS intends to complete the actions in the plan by the end of calendar year 2016.