

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 19, 2018

TO: Christopher J. Roscetti, Technical Director
FROM: Zachery S. Beauvais, Resident Inspector
SUBJECT: Pantex Plant Activity Report for Week Ending October 19, 2018

DNFSB Staff Activity: C. Berg attended a meeting of the DOE Explosives Safety Committee.

Protective Mats: During their preparation of a DSA change package, CNS safety analysis engineers identified a discrepancy with the specifications for protective floor mats used during operations with conventional high explosives. Certain cell operations on two weapon programs require a mitigated 100 V environment (i.e., the maximum electrostatic discharge potential is limited to 100 V). Prior to implementation of the 100 V environment on these programs, the Pantex contractor credited the floor mats to limit discharge to 5 kV and local testing procedures verified that the floor mats complied with that limit. CNS did not update the testing specifications to reflect the more restrictive, 100 V value, when it was implemented. Upon discovery of this discrepancy, CNS process engineering paused impacted operations. CNS safety analysis engineers are evaluating whether the discrepancy represents a PISA and plans to hold a fact finding meeting early next week. This is the fifth issue in the last five years related to inadequate or incomplete testing for 35-account material (i.e., commercially acquired material used in weapons processes; see 12/6/13, 5/6/16, 7/1/16 and 9/22/17 reports).

Change Control: Earlier this year, CNS identified that changes to the weight of a component described in the weapon safety specification (WSS) for one program led to a non-conservative tooling analysis (see 8/9/18 report). The issue was discovered following questions raised by the DNFSB staff that resulted in CNS performing an unreviewed safety question determination. In their corrective action plan for the event, CNS acknowledged that incomplete review of the WSS contributed to the issue but did not identify any corrective actions related to this cause. CNS further noted that an approved engineering workflow provides assurance that design agency documents are properly reviewed. The resident inspector performed an independent extent of condition review to determine whether additional safety basis documents referenced outdated WSSs. The resident inspector determined that a majority of hazard analysis reports did not include the most up-to-date WSS. The resident inspector did not note any immediate safety concerns as a result of the outdated references but did provide the results to CNS and NPO engineering. They are further evaluating the information.

Training and Qualification: The resident inspector observed a qualification oral board for a production section manager (PSM). The resident inspector found the board to be adequate but noted instances where scenario based questions assume actions that may not be consistent with current best practices and instances where expected answers could be improved. Over the past year, the resident inspectors and other board staff have collected similar observations related to the oral board process and the content of the oral board training material for PSMs (see 6/8/18 and 7/27/18 reports). The resident inspector provided these observations to CNS and NPO operations personnel for further evaluation. Despite the noted areas for process improvement, the resident inspector does not question the result of any PSM oral board he has observed.