

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 15, 2016

MEMO TO: Steven Stokes, Technical Director
FROM: Zachery Beauvais, Pantex Site Representative
SUBJECT: Pantex Plant Report for Week Ending January 15, 2016

DNFSB Staff Activity: J. Anderson observed activities related to the W87 Nuclear Explosive Safety Study.

Technical Safety Requirement (TSR) Violation: Prior to executing a Nuclear Explosive Engineering Procedure (NEEP) last week to remove a broken screw from a unit, Production Technicians (PTs) discovered unpackaged components containing explosive material in a storage cabinet located in the equipment interlock, adjacent to a nuclear explosive bay. The Pantex TSRs prohibit explosive material storage in equipment interlocks. The PTs continued operations which required installation of these components, failing to recognize or report the safety violation. This week, Consolidated Nuclear Security, LLC (CNS) senior management discovered the issue and Pantex Safety Analysis and Engineering personnel verified that the event constituted a TSR violation. CNS is planning to charter an independent investigation of the event and conduct a Causal Analysis-Mistake Proofing meeting to determine the cause and necessary corrective actions.

Discovery of Cracked High Explosive: On January 7, 2015, PTs paused operations following the discovery of a cracked conventional high explosive charge. Following consultation with the appropriate subject matter experts, PTs installed a protective Adiprene cover and the security covers over the unit to achieve a safe and stable configuration. The detonator cable assembly had been removed from the unit prior to identification of the cracks. The site representative attended a meeting where personnel from CNS Production and Manufacturing Engineering, Nuclear and Explosives Surety and the cognizant design agency determined that the unit did not meet the criteria to be designated “anomalous”. CNS Production and Manufacturing Engineering is currently developing a NEEP to continue disassembly of the unit.

Special Tooling Corrective Actions: CNS recently developed corrective actions stemming from a discrepancy in the flowdown of functional requirements for the base height on an assembly stand (see 11/20/2015 and 12/4/2015 reports) revealed during an extent of condition review required to address a January 2015 Potential Inadequacy of the Safety Analysis (PISA) (see 1/16/2015 report). The assembly stand is used on multiple weapon programs; however, due to differences in how each program implemented the functional requirements, the discrepancy only affected one program. The identified corrective actions require changes to the Special Tooling Design Manual and other process aids to stress the importance of involving engineers from other weapon programs in the design and review of tooling used on multiple programs.

Approval of Revised USQ Process: Last week, the NNSA Production Office (NPO) released a Safety Evaluation Report documenting their approval of a revision to the Pantex Plant Unreviewed Safety Question Procedure. The revisions to the procedure follow an April 9, 2015, letter from NPO addressing recent issues with the PISA process (see 4/10/2015 report). The revision to the procedure initiates a formal process for documenting and communicating when new information is immature and clarifies the required time frames for action on new information. CNS plans to implement the new procedure by early March 2016.