

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 22, 2019

TO: Christopher J. Roscetti, Technical Director
FROM: Zachery S. Beauvais, Resident Inspector
SUBJECT: Pantex Plant Activity Report for Week Ending February 22, 2019

Special Tooling: CNS identified a discrepancy between safety basis assumptions and a supporting analysis regarding the capacitance of a tube bending fixture, a piece of special tooling. Specifically, a supporting technical analysis identified higher potential charge build-up on this tooling than analyzed in the safety basis. CNS safety analysis engineering determined the discrepancy represents a potential inadequacy of the safety analysis and unreviewed safety question. The greater potential charge build-up could drive higher accident likelihood and consequences. A previously implemented control establishing a mitigated electrostatic environment could limit the charge generation on the tool to below a screening threshold of concern. For this reason, CNS has determined that no operational restrictions are needed to continue safe operations. CNS safety analysis engineering is developing an evaluation of the safety of the situation related to this issue.

Safety Basis: NPO approved the closure of their conditions of approval (COA) for a recently reviewed weapon program safety basis revision. The revision was performed in preparation for an upcoming warhead Alt (see 2/8/19 report). In addition to clarifying the rationale for excluding various hazard scenarios and the applicability and functional requirements of certain controls, CNS developed two new specific administrative controls as part of their response to the COAs. The new controls elevate existing programmatic controls for compressed gas cylinder transportation and identify new training requirements for forklift drivers. The NPO approval defers to existing corrective action plans (see 9/28/18 report) to address legacy issues identified in their COA.

Plutonium Staging Operations: NPO approved the safety basis supplement (SBS) authorizing the receipt and storage of plutonium in a new material form and in a container type not previously used at the Pantex Plant (see 2/15/19 report). The SBS includes administrative compensatory measures that restrict plant personnel from opening the containers while in storage and require the material to be stored separate from all other nuclear material types present at the Pantex Plant. The SBS additionally credits the inner and outer containers as passive containment and isolation barriers. The outer container meets Department of Transportation Type-B designation, and the inner container meets expectations for nuclear material confinement detailed in DOE Standard 3013. Various other existing plant controls are also credited within the SBS. In their approval of the SBS, NPO suggested that CNS reconsider the application of a stacking limit on the new drums.

NPO also approved a revision to the startup notification report for this activity, removing the commitment to perform a contractor readiness assessment. In their evaluation to support this change, CNS noted that receipt, onsite transportation, and staging of plutonium in Type B containers are currently performed activities. CNS plans to perform an implementation verification review of the SBS. The CNS plant manager remains the startup approval authority.