

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: Steven Stokes, Acting Technical Director
FROM: Thomas Spatz, Pantex Site Representative
SUBJECT: Pantex Plant Report for Week Ending March 1, 2013

Positive Unreviewed Safety Question (USQ): This week B&W Pantex declared a positive USQ determination related to credited electro-static discharge (ESD) special tooling and ESD credited 35-account material. (35-Account material is commercial material that is authorized to be in the nuclear explosive facility.) B&W Pantex paused all operations utilizing credited ESD special tooling and ESD credited 35-account material. B&W submitted an Evaluation of the Safety of the Situation (ESS) to the NNSA Production Office (NPO) for approval to resume operations with no compensatory measures.

The ESS states that the documented safety analysis for several weapon programs provides ambiguous or incorrect language regarding the functional requirement related to charge dissipation. The resistance from the tool to the floor through ESD tooling components in the stack up is required to be less than 1E8 ohms. B&W has only been verifying the 1E8 ohms requirement for individual tools and not the stack up. B&W stated in the ESS that it was never intended to define a 1E8 ohms resistance for a tool, and then say that same limit applies when the tool is dissipating its charge through the 1E8 ohms human standing on the 1E8 ohms floor covering (the stack up). B&W proposed changing the functional requirements and numerous tooling design requirement documents to match the intent of the dissipation requirement.

Anomalous Unit: This week, B&W Pantex paused operations in one facility when Production Technicians (PTs) heard an unusual noise during an assembly operation. The PTs were in the process of applying a compressive load to the unit. In the middle of applying the load, the PTs heard an unusual noise and observed the load drop by one third. The PTs followed their immediate action procedures, removed the compressive load from the unit, placed the unit in a safe and stable configuration, and made the appropriate notifications. The B&W process engineer, PTs, B&W nuclear explosive safety (NES), authorization basis representative, and tooling engineer examined the tooling and could find no indication of a tooling failure. Using the definitions in the NNSA interim guidance on anomalous units (see 4/20/12 report), representatives from B&W NES, process engineering, and the Design Agency collectively determined that the unit met the definition of anomalous.

Return of Corrective Action Plan: This week, NPO returned a causal analysis and corrective action plan to B&W without approval and directed B&W to revise and resubmit the plan. The original finding came from an NPO assessment report of B&W Pantex Unreviewed Safety Question (USQ) process. The NPO assessment found the processing of new information associated with an increase in the frequency of an external fire was not adequately addressed using the DOE-approved USQ procedure. B&W did not declare a Potential Inadequacy of the Safety Analysis (PISA) or perform a USQ determination for this new information based on the fact that the control set for this event would not change. B&W's corrective action plan proposed updating the new information work instruction to require sufficient information to determine if a PISA should be declared. However, NPO stated that additional information in the new information process would not adequately address the assessment finding.