

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: J. Kent Fortenberry, Technical Director
FROM: Timothy Hunt and Dave Kupferer, Pantex Site Representatives
DATE: 16 September 2005
SUBJECT: Pantex Plant Weekly Report

DNFSB Activity: A. Matteucci was on-site this week to support the site representatives and observe electrostatic discharge related meetings.

Lawrence Livermore National Laboratory (LLNL) Information Engineering Release (IER): At PXSO's request, BWXT, Sandia National Laboratories (SNL), Los Alamos National Laboratory (LANL), LLNL, and NNSA met at Pantex this week to discuss the implications and ramifications of the IER LLNL distributed last week. BWXT has agreed with LLNL that the high degree of conservatism associated with the assumed electrostatic discharge (ESD) environment at Pantex bounds the uncertainties associated with preliminary weapon response data obtained during LLNL experiments. LLNL has committed to aggressively pursue further testing that could shed additional light on the aforementioned uncertainties.

ESD Committee Meeting: On Thursday, ESD experts from SNL, LLNL, LANL, and BWXT met at Pantex to discuss potential modifications to the methodology currently used to analyze ESD hazards. LLNL presented a new methodology that appears to more realistically model the potential ESD environment during nuclear explosive operations at Pantex. LLNL's proposed methodology could significantly reduce the risk assumed in LLNL's probabilistic weapon response. Inherent to the proposed methodology is accurate and repeatable physical measurement of tooling and furniture capacitance. A path forward was identified to draft a tri-laboratories position regarding the new methodology to more thoroughly document the sensitivity of specific programs to ESD hazards, develop weapon responses and controls for the programs presently being challenged, and complete a design agency peer review of the new methodology.

High Explosives (HE) Storage Technical Safety Requirement (TSR) Violation: While preparing for pit cleaning operations, production technicians discovered that a detonatable amount of HE was adhered to a cushion attached to a pit. There is an assumption in the Pantex safety basis that high explosives are not permitted to be present during most pit storage and cleaning operations. Subsequently, BWXT declared a TSR violation. Currently, there is not a requirement for production technicians to inspect for pieces of HE prior to packaging pits into AL-R8 containers. There are other pits, removed from the same weapon system as the subject pit, currently staged in areas that do not permit the presence of explosives. BWXT is in the process of determining if pits packaged from other weapon programs could be containerized with HE.

Procedure Violation: On Thursday, while performing gas sampling operations on a weapon, it was discovered that a procedure step had been missed. When a step in the procedure was reached that required three sample bottle valves to be manually opened, the production technicians realized that the valves had never been closed; as required per procedure several steps previously. The format of the procedure, which is used on three different programs, may have contributed to the confusion on the part of the technicians. Subsequently, the process engineer deleted three non-applicable steps to allow work to continue.