

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: Timothy Dwyer, Technical Director
FROM: Rory Rauch, Pantex Site Representative
SUBJECT: Pantex Plant Report for Week Ending June 8, 2012

DNFSB Staff Activity: T. Spatz was at Pantex to augment site rep coverage.

Electrostatic Discharge (ESD) Flooring: As discussed in the May 4, 2012, report, system engineers discovered that the ESD floors in 2 facilities had failed the annual in-service inspection (ISI). Each floor had 2 test points (out of 15) that exceeded the maximum allowable resistance from the floor to facility ground ($10^8 \Omega$). B&W has been unsuccessful in its attempts to reduce the resistance of these floors below $10^8 \Omega$. System engineers tested the floors in both facilities at 1600 points and found several points that approach $10^9 \Omega$. These test failures have caused the system engineers to consider modifying the approach to implementing the ESD floor design feature (DF). B&W ESD subject matter experts originally selected $10^8 \Omega$ as the maximum resistance for any point tested on the floor as a simple, conservative means of implementing the DF. However, this approach does not account for the voltage dependence of the resistance of the ESD floor, nor does it define the minimum area of the floor that must exceed the acceptable resistance value in order to compromise the ability of the ESD floor to perform its credited safety function. System engineers are currently developing an approach that would account for these factors and allow these facilities to once again be used as ESD program areas. It should be noted that, while these ESD floors have areas that exceed the resistance limits specified in the safety basis, ISI data shows that most ESD floors are becoming more conductive with increased wear.

Nuclear Explosive Safety (NES) Senior Technical Advisors (STAs): This week, NNSA convened a NES study (NESS) without the requisite number of STAs. DOE Manual 452.2-2, *Nuclear Explosive Safety Evaluation Process*, requires a minimum of 2 STAs for a NESS. Due to funding limitations, NNSA management decided to request an exemption to this requirement and perform the W84 error code unit (ECU) NESS without STAs. The NNSA NES Division manager submitted a request for an exemption to this requirement last week, but NNSA management had not approved the request when the NESS began earlier this week. The W84 ECU NESS group observed approximately half of the planned demonstrations when NNSA management, after discussing the exemption request further, decided to suspend the study. It is not clear when the NESS will reconvene.

W78 ESD Tooling: This week, PXS0 approved a change to the W78 Hazard Analysis Report (HAR) that altered the manner in which the dissipative properties of six special tools (mainly bowls and support fixtures) are treated. The last revision of the W78 HAR credited this property—a breakdown voltage below 5 kV—as an important-to-safety program. The newly approved revision of the W78 HAR eliminates this program and elevates the functional classification of the dissipative property to a functional requirement of a safety class design feature. The purpose of this change was to treat this property consistent with other credited special tooling properties, which are typically captured in the safety basis as functional requirements of design features, not stand-alone programs.