

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: J. Kent Fortenberry, Technical Director
FROM: Timothy Hunt and Rory Rauch, Pantex Site Representatives
DATE: 21 March 2008
SUBJECT: Pantex Plant Weekly Report

Barrier Development: Last August, PXS0 directed that procurement and installation of cell barrier material and hardware for multi-unit operations cease immediately. Following a review of the risks and costs of multi-unit operations options, NA-12 directed B&W Pantex to proceed with a redesign of the Los Alamos National Laboratory (LANL) proposal as the lowest risk and cost option. Last week, B&W Pantex briefed the Senior Management Team on the new cell barrier design. After discussing the safety implications of the implementation of cell barriers, NA-12 tentatively suspended barrier development for 30 days and will revisit its decision to require barrier implementation for certain types of operations.

W80 Process Anomaly: While separating a major assembly during dismantlement operations, the top half of the assembly did not stay together as designed. The production technicians returned the weapon to a safe configuration and suspended operations. A recovery procedure—which approved the disassembly of the anomalous condition using the previous process with some enhancements—was attempted this week, but the assembly failed to separate. Program personnel are in the process of developing a new recovery procedure. The failed recovery procedure included a tooling adjustment that allows safety latches to engage the top half of the assembly for the entire duration of the separation step.

B61 Transportation During Lightning Warnings: Transportation of the B61 ultimate user (UU) configuration during lightning warnings has been prohibited for the last several years. As a legacy initiative of the 2006 Pantex Throughput Improvement Plan, B&W Pantex recently submitted an authorization basis change package that qualifies B61UU configuration for loading/unloading (in an enclosed loading dock) and ramp transportation during lightning warnings. Nuclear explosive safety (NES) approval of this change was obtained from a July 2006 nuclear explosive safety change evaluation (NCE). The NCE group expressed concern that, though the analysis provided to them indicated a safe weapon response to a lightning strike, the analysis relied on components that were not designed or certified to perform the safety function attributed to them. However, after qualitatively considering all factors (such as the ramp structure and facility lightning protection systems), the NCE group concluded that the elimination of lightning restrictions on the proposed operations was not a threat to NES. B&W Pantex has documented the specific attributes of the B61 UU configuration that provide faraday cage protection against a lightning strike and captured these features as a transportation configuration control design feature.

Seamless Safety for the 21st Century (SS-21) Startup Schedule: The startup of W88 SS-21 cell operations, on schedule for March 2009, is the highest priority SS-21 activity. Approval of the hazard analysis report for these operations is on schedule for September 2008. B53 SS-21 development is on schedule for September 2009, but is awaiting weapon response from LANL to determine a key safety basis parameter that could significantly impact the control set for these operations. In part because of disagreements regarding the applicability of portions of the available empirical data set, LANL is performing an expert elicitation to determine this parameter. The results of this process, including peer review and documentation, are not expected until the summer time frame. W84 SS-21 startup has been delayed into FY10 because of a technical issue. Once these startups have been completed, all weapon programs at Pantex will have implemented SS-21 re-engineering.