

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: J. Kent Fortenberry, Technical Director
FROM: Timothy Hunt and Dave Kupferer, Pantex Site Representatives
DATE: 20 July 2007
SUBJECT: Pantex Plant Weekly Report

DNFSB Staff Activity: R. Rauch was at Pantex to observe the third week of the Bays and Cells Nuclear Explosive Safety (NES) Master Study.

Multi-Unit Operations (MUO): Last year, NNSA management formally concluded that analyses and controls previously developed to support nuclear explosive MUO met the intent of applicable nuclear explosive safety standards. Subsequently, PXSO directed BWXT to produce the safety analysis changes needed to facilitate side-wide approval of MUO. Currently, BWXT is utilizing stage 2 MUO (one crew, two units, one facility) on the W87 program and stage 3 MUO (two crews, two units, one facility) on the B61 program. Due to the minimal number of W87 disassembly and inspection (D&I) operations performed each year, implementing stage 3 MUO to support W87 operations would not significantly benefit the efficiency of the program. Likewise, BWXT is not planning on implementing MUO to support the W78 or W88 operations—the recently proposed W80 scope change may effect need to perform MUO on this program—because of the minimal number of operations currently planned for these programs during the near future. Due to geometry concerns, MUO is not considered possible during B83 and B53 operations. Since the W62 dismantlement program is expected to be completed during the next few years at a reduced rate, it does not appear that MUO will be pursued to support these operations. However, BWXT is currently planning on implementing MUO to support W76 cell disassembly operations by the end of this fiscal year. Given the reduction in planned W62 and W76 operations and the increased availability of cells, it is unclear what benefit NNSA expects to gain by implementing MUO to support W76 cell operations other than achieving additional flexibility. In addition, it appears that the schedule to implement W76 cell MUO within the next two and a half months is very optimistic and has the potential to foster a climate that could encourage expeditious solutions to potential safety concerns.

Safety Basis Changes to Support Startup of W76-1 Operations: In October 2006, PXSO approved a 10 CFR 830 compliant Hazard Analysis Report (HAR) to support ongoing W76-0 D&I operations. The safety basis change packages to support and analyze W76-1 D&I and W76-1 assembly operations were approved by PXSO in February and April, respectively, of this year (W76-0 and W76-1 D&I operations are very similar). Prior to making the HAR changes that support W76-1 operations effective, BWXT performed a review to validate that the controls that were incorporated into the HAR during development of the W76-1 analysis were appropriately implemented for ongoing W76-0 D&I operations. The reviewer identified a few procedures and tooling documents that needed to be revised, and one tooling design that needed to be modified. In addition, BWXT decided to develop a “flex” training course to address training required by the safety bases as opposed to validating the content of past training courses and personnel training records. A similar review may be appropriate in conjunction with W88 SS-21 startup activities.

ALARA Goals: The BWXT ALARA committee recently recommended that the FY07 goals be significantly reduced from 61,650 person-mrem cumulative total effective dose equivalent (TEDE) to 36,220 person-mrem TEDE. The reduction was made possible largely due to the improved tooling incorporated into the W62 and W76 operations and efficiencies gained through experience by the production technicians.