

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 23, 2004

**MEMORANDUM FOR:** J. K. Fortenberry, Technical Director  
**FROM:** T. Hunt and W. White, Pantex Site Representatives  
**SUBJECT:** Pantex Plant Activity Report for Week Ending April 23, 2004

**DNFSB Activity Summary:** T. Hunt was on site all week. W. White was on leave Monday and was on site for the remainder of the week.

**Tooling Concerns:** While performing operations on a W88 unit, BWXT identified a problem with the bay work stand which prevented transfer of the unit from the work stand to an enhanced transportation cart (ETC II). Operations were suspended and placed in a safe and stable configuration pending resolution of the issue. The operation was not possible because the work stand would not lower the unit sufficiently to allow proper transfer to the ETC II. BWXT subsequently determined that a stop tube on the work stand was incorrectly sized, preventing the stand from being lowered to the required height. This part, which acts as a stop to prevent excessive trunnion travel, had been fabricated to the length specified in the drawing.

The first two copies of the work stand had been built around December 2002 with a verbal authorization from the BWXT engineer to deviate from the drawing and fabricate the work stands with a shorter stop tube. This allowed proper operation of these copies of the work stand. The verbal change had not been incorporated into the controlled copy of the drawing, however. Subsequent fabrications of a reordered set of five work stands were done per the drawing and did not incorporate the verbal change that was incorporated on the first two copies. As a near-term recovery action, BWXT is evaluating the one-time use of a spacer with the ETC II in order to complete the suspended operation, since repair of the work stand may not be possible with the W88 unit still in the stand. After this unit is removed from the work stand, the stand will be modified to perform as the design intended.

The interface between the ETC II and the work stand was not exercised through the tooling tryout facility for this copy of the stand prior to being sent to the bay in January 2004. BWXT has proposed as a corrective action, exercising with high fidelity trainers select copies of reordered sets of tools currently on site. Additional actions to minimize the possibility of a similar recurrence on future fabrications are under development. [I, E2]

**W78 Seamless Safety Process:** NNSA began its second readiness assessment (RA) this week of cell operations for the new W78 seamless safety process. Failures of a W78 lifting fixture and the W78 work stand occurred during the RA. The lifting fixture was replaced, per the procedure. The work stand was not able to be repaired completely, but was used with a loose revolving trunnion handle to allow completion of the RA. Despite these tooling problems, the demonstration of cell operations, which concluded on Friday, went more smoothly than the previous effort. The NNSA RA will wrap up early next week and will likely have findings related to tooling, procedure adequacy, and performance of second-person verification.

The verification of the performance of certain actions by a second technician is an administrative control in the W78 safety basis. In a couple of instances, the technician performing the work also verified that the work was done correctly. Failure to perform second-person verification correctly was a finding from the BWXT RA last week and does not appear to have been closed adequately. The problems with executing second person verification occurred early in the review process, and subsequent performance of second-person verification improved significantly by the end of the demonstrations. [I, W6]