

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 2, 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 2, 2004

DNFSB Activity Summary: W. White was on leave Monday and on site the remainder of the week. T. Hunt was on site Wednesday through Friday. D. Kupferer, J. Shackelford, and R. West were on site Tuesday through Thursday to review the Pantex tooling program.

Lightning Protection Nuclear Explosive Safety (NES) Review: A joint NES review (JNR) team (consisting of representatives from NNSA, BWXT and the national laboratories) conducted a review this week to evaluate additional pathways for lightning to enter a nuclear explosive facility and proposed changes in the lightning protection controls for special purpose facilities. These changes had necessitated a revision to the justification for continue operation (JCO) issued earlier in March related to lightning protection. The JNR team concluded that the new engineered lightning protection controls for the special purpose facilities (surge suppressors, metal screens, rewiring, and removal of unused circuits) did not pose a threat to nuclear explosive safety. However, the JNR team found that the information presented to support the bounding voltage associated with the new pathways was not sufficient to assess fully the adequacy of the controls for that pathway. The JNR team nevertheless approved the controls referenced in the revised JCO as a minor change. [I, W3]

Tooling: The staff reviewed the implementation of the Pantex tooling program. Areas of focus included design, procurement, fabrication, modification and repair, receipt and inspection, and training. The staff also reviewed the corrective actions identified in a recently issued tooling improvement plan and individual actions taken in response to several recent tooling-related incidents. Areas noted by the staff where proficiency was not demonstrated were in receipt and inspection, functional testing of the safety aspects of credited tooling, the performance of peer reviews during various phases of the tooling process, and incorporation of lessons learned from tooling occurrences into the training program. In one specific case observed by the staff, tooling had been inspected and approved for use in accordance with outdated drawings that contained unauthorized pen-and-ink dimensional changes. [I, E2, E4]

Move Right System (MRS): According to BWXT personnel, all of the deliverables for the MRS identified in the May 23, 2003, letter to the Board are complete. Two additional design problems relating to low probability movements were identified during the detailed MRS testing and are being addressed by previously issued interim administrative controls. Approximately 80 changes to the MRS were suggested during the various reviews and remedial actions are being prioritized by the contractor. BWXT reported that due to the expected lack of continued computer operating system support in the coming years, it is necessary to start the planning efforts to replace the MRS. [I, NA]

Nearby Explosion: In a January 2004 letter, NNSA authorized multi-unit staging of nuclear explosives in a Pantex bay. NNSA will rescind the authorization, pending further evaluation, due to the lack of a firm technical basis. Work procedures and safety basis documents applicable to the subject weapon system will be revised to reflect single unit operations prior to continuing operations. [I, W3]