

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 3, 2004

MEMORANDUM FOR: J. K. Fortenberry, Technical Director
FROM: Timothy Hunt and Dave Kupferer, Pantex Site Representatives
SUBJECT: Pantex Plant Activity Report for Week Ending December 3, 2004

Safety-Class Component Degradation. On Tuesday, BWXT reported that during the performance of semi-annual preventive maintenance on the fire protection system in a nuclear facility, a test of the blind head of an ultra-violet detector assembly resulted in a high background reading, failing a test procedure acceptance criterion. The UV detectors are a critical component of the safety-class fire protection system. Even though the blind head reading was out of the manufacturer's recommended range, BWXT declared that the detector was still operable without a clear understanding of the exact affect on the detector heads ability to sense a fire. The safety basis does not provide an explicit definition of what constitutes an operable system. The detector assembly was replaced the following day.

Tooling Program. The site representatives met with the new Deputy Engineering Manager and Tooling and Machine Design Manager to discuss the path forward for resolving issues related to the tooling program, and visited tooling tryout to observe the functional testing process for a transportation cart. Deficiencies noted during the tryout were missing paperwork and an omitted signature. The cart also failed one of the functional tests—highlighting the value of this assessment. The Board's staff continues to have concerns regarding the established processes utilized to design, inspect, and issue tooling. The rigor applied to the testing of critical safety features of tooling, the formality associated with failure analyses as part of tooling design, and the effectiveness of the lessons learned program are unsettled issues. The BWXT tooling program managers were receptive to the staff's feedback and appear to have a good understanding of the actions necessary to enhance the overall quality of the Pantex tooling program.

Chemical Control Program. On Thursday, BWXT discovered that compensatory controls for the chemical program had not been adequately implemented at several non-nuclear facilities. The compensatory controls were to be in place pending implementation of the Sitewide Safety Analysis Report. The intent was to provide administrative procedures to ensure ERPG-2 limits for inhalation hazard chemicals were not exceeded at nearby nuclear facilities or nuclear transportation routes in the event of a release. Since the quantities allowed in the facilities by the safety analysis are not enough to meet production needs, BWXT proposes to refine the analysis by reducing conservatism or require additional operational controls.

Material Tracking. It was discovered this week that a mock assembly containing a high explosive component was built in a training bay and sent to the machining facility without the proper controls. The assembly was fabricated with an HE component that had been in the bay for years and was not entered into the material tracking system (Move Right). The assembly was transferred between facilities without the normal series of notifications and tracking required for explosive material. BWXT has committed to investigate whether additional material stored in training bays may be unaccounted for in the material tracking system.