DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 18, 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 June 18, 2004

Emergency Response Exercise. BWXT and NNSA conducted an exercise this week to evaluate the capabilities of the Pantex Plant to respond to a simulated emergency event. The exercise was designed to focus on incident and on-scene command, control and communications, and field response involving Fire Department, Security, and Infrastructure personnel. The scenario involved a small explosion that released a hazardous chemical from a gas cylinder.

Several areas for improvement were noted by BWXT, NNSA and the site representatives. At the event scene, security personnel were requested to scour the facility prior to determination of the hazard; the hazardous material response team was slow to respond and initially arrived at the wrong location due to a control error; key personnel did not have the appropriate protective equipment and are not trained on its use; there was confusion on how to handle certain weather components; and the fire department established its base of operations too close to the hazard source and without the proper monitoring. In the operations center, communications with NNSA headquarters and the on-scene commander were problematic, information relative to the hazard posed by the unknown chemical had to be injected into the exercise more than 90 minutes after the initial event occurred, and there was a miscommunication with offsite personnel regarding press releases.

Site-wide participation in the exercise improved relative to other recent exercises with two notable exceptions. NNSA participated in the operations center portion of the exercise, but no NNSA personnel were present at the scene of the simulated event. In addition, participation by production technicians was limited; i.e., certain on-going bay and cell operations were not suspended. A report will be generated identifying significant findings, impacts of the findings on meeting the exercise objectives, and suggested corrective actions. [IV, P1, P3]

Software Quality Assurance Assessment. NNSA completed a verification review of analytical software tools at the Pantex Plant. This review was part of a commitment in the implementation plan for Recommendation 2002-1. The scope of the assessment was limited to the safety functions and reliability of two software models used for safety analysis and design. MAX2_MHC provides atmospheric transport, diffusion, and deposition modeling capabilities along with an added fire model. ERAD is a three-dimensional numerical simulation of particle dispersion in the atmosphere. The preliminary results from the assessment found the ERAD software to be deficient in support documentation and traceability for use in authorization basis documentation (BWXT committed to archive the ERAD model). The assessment also found that additional efforts were needed to achieve an acceptable level of accountability for use of the MAX2_MHC software in authorization basis work. [IV, E2]

TSR Integrated Implementation Plan. On Tuesday, BWXT concluded the latest contractor readiness assessment (CRA) of implementation of a group of controls from the *Technical Safety Requirement (TSR) Integrated Implementation Plan (IIP).* This was the second in a series of assessments being conducted to validate the implementation of new or modified safety controls from safety basis documents created under 10 CFR 830, *Nuclear Safety Management*. The CRA found 16 of 25 controls reviewed to be implemented adequately.

BWXT is implementing 210 new or modified safety controls as part of this project. The TSR IIP, submitted to the Board as a deliverable under Recommendation 98-2, schedules implementation of 130 controls in FY04, with the remainder in FY05. Currently, nine controls are TSRs, and approximately 20 additional controls have been implemented fully but have not yet been made effective as TSRs. [I, W4]