

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 30, 2001

**MEMORANDUM FOR:** J. K. Fortenberry, Technical Director

**FROM:** H. Waugh and W. White, Pantex Site Representatives

**SUBJECT:** Pantex Plant Activity Report for Week Ending November 30, 2001

**DNFSB Activity Summary:** H. Waugh was on leave Tuesday and was on site for the remainder of the remainder of the week. W. White was on site all week. R. West and L. McGrew were on site all week to observe the W78 Nuclear Explosive Safety Study (NESS) and Readiness Assessment (RA).

**W78 Independent Safety Reviews:** NNSA continued the NESS and the concurrent NNSA RA for the W78 disassembly, inspection and repair operations. Cell operations were conducted this week and were observed by both teams. In addition to these operations the RA team observed 5 surveillance/in-service inspection operations, two of which were repeated actions after the RA team noted deficiencies in the original operations. The RA team has preliminarily identified three pre-start findings and three post-start findings. The tentative pre-start findings concerned deficiencies with the plan for the transition to operations, improper implementation of a safety control in the procedure for the vacuum chamber, and failure to establish ALARA goals for the W78 operations. One of the post-start findings will likely address issues with procedural adherence and conduct of operations during maintenance activities. Only one of the 5 maintenance activities was accomplished without a deficiency and that one was a repeated activity after the RA team alerted maintenance personnel of procedural problems during the first attempt. This finding was designated as post-start because a review by the RA team found that the errors made did not affect satisfying the safety control requirements. The Office of Amarillo Operations (recently renamed) considered the potential finding significant and took immediate action to have facility representatives begin more frequent observations of safety-related maintenance operations. [II.A]

**Sprinkler Actuation in 12-104A:** On Wednesday, three of six wet pipe sprinkler heads in a mechanical room in Building 12-104A actuated. The fire department responded, and, as there was no evidence of a fire, isolated the sprinkler heads to stop water flow. BWXT assembled a team, including fire department personnel and fire protection engineering personnel, to investigate the incident. The cause of the sprinkler head actuation remains unknown. Possible contributing factors include the cold weather, a fan set to run continuously rather than in automatic mode, a pressure surge in the fire system piping, and corrosion identified after the occurrence near the end caps of the fire pipes where the sprinklers were located.

Given that the cause of the sprinkler actuation is unknown, BWXT is evaluating whether similar potential contributing factors exist in other Pantex facilities. Preventive maintenance and inspection records for the sprinklers which actuated are being collected for examination. In addition, all six

sprinkler heads in the mechanical room are being replaced, and the ones which actuated are being sent to the manufacturer for evaluation. The sections of the fire pipe with the actuated sprinklers will be replaced and the old pipe will be evaluated.

Another sprinkler head actuated on Thursday in Zone 11; BWXT assumed the cause of this actuation was heat from a nearby steam line but will conduct further evaluations. [II.A]

**B83 Nuclear Explosive Safety Review:** A nuclear explosive safety (NES) review team met on Thursday to evaluate proposed electrical testing for a B83 unit which had previously failed electrical testing in April 2001 and again in June 2001. This time, Sandia National Laboratories proposed an exhaustive suite of diagnostic electrical tests to help isolate the fault. The NES review team agreed the tests could be approved as a minor change. [II.A]