

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 21, 2003

MEMORANDUM FOR: J. K. Fortenberry, Technical Director
FROM: W. White, Pantex Site Representative
SUBJECT: Pantex Plant Activity Report for Week Ending November 21, 2003

DNFSB Activity Summary: W. White was on site all week. A. Hadjian, T. Hunt, B. Jones and D. Nichols were on site this week.

W56 Procedure Adherence Concern: Personnel conducting W56 operations this week inadvertently skipped a required series of operational steps in dismantling a W56 nuclear explosive package. Personnel on one shift performed three task setups prior to performing the tasks. This is allowed and was done to minimize the time spent in a contamination area. However, an unusual situation with the nuclear explosive package prevented the personnel from accomplishing all of the tasks prior to ending the shift. The shift turnover discussion focused on the unusual condition encountered and not on the precise status of ongoing operations.

Personnel on the following shift began operations after the last stamped-off step in the procedures, which was a setup step. They did not review the procedure to determine the first operational step that was not stamped off and missed performing one task. The error was noted when technicians saw that their attempt to remove a component of the nuclear explosive package was not proceeding as expected. Operations were suspended until a backout procedure was available to reverse the steps that had been completed out of sequence. [II, P3A, P3B, P3C]

Transportation Program: There were several incidents this week involving errors affecting the transportation program. In one case, the failure to properly flow down TSR requirements into procedures and the failure to adequately train all affected personnel led to a bulk quantity of material placarded as a class 3 flammable liquid being on restricted Pantex roadways at the same time as a nuclear explosive convoy. In another incident, failure to adhere to procedures associated with packaging radioactive material and explosives and failure to follow procedures associated with verifying empty cans prior to labeling them led to a classified, radioactive, explosive component being transported and stored in violation of requirements associated with transporting and storing the item. In another case, an explosive component was found in a facility different from the one in which it was located in the Move Right System database. While the significance of these individual incidents varies, when taken collectively, and considered with other transportation-related incidents over past few weeks, they indicate concerns with various elements of the administrative program for transportation. BWXT implemented a series of compensatory measures this week to strengthen the program and will incorporate these compensatory measures into the safety basis. [II, W4]

Upgrade Project for Building 12-64: The Board's staff met with BWXT and PXSO personnel along with consultants for BWXT to discuss a strengthening option to address the seismic concern raised in the Board's October 2003 letter. BWXT and its consultants presented a preliminary design that uses fiber reinforced polymer fabric to strengthen the roof, correcting the design deficiency noted in the Board's letter. The staff provided constructive feedback related to certain aspects of the design and analysis, but overall, the approach seemed feasible. A consultant to BWXT also presented an approach to addressing the concern raised by the Board with respect to the performance of the facility in the event of an internal explosion. The consultant will calculate the weight of explosives that would cause the roof of the facility to fail to meet its performance requirements during an internal blast. If this weight is acceptable from an operational perspective, BWXT will reduce the allowed inventory of explosives to a quantity less than this weight. If not, BWXT and its consultants will consider modifications to the facility structure to improve its performance. [III, E4]