

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 29, 2004

MEMORANDUM FOR: J. K. Fortenberry, Technical Director
FROM: T. Hunt, Pantex Site Representative
SUBJECT: Pantex Plant Activity Report for Week Ending October 29, 2004

DNFSB Staff Activities. W. White was on-site this week pursuing various issues.

Loss of Electrical Energy Control. On October 10, 2004, the fire department responded to a non-nuclear facility at the Pantex Plant because of the reported presence of smoke. This resulted when a 120/208 volt transformer to the facility was incorrectly replaced by an electrical subcontractor with a 277/480 volt transformer. The BWXT scope of work specified the improper size transformer. When the new transformer was placed on service, excessive voltages were supplied to building loads, resulting in several hundred thousand dollars of assessed damage. Although BWXT specified the wrong transformer, this is another example of subcontractors performing hazardous work based on incorrect assumptions and without a questioning attitude.

Electrical Safety. The staff met this week with BWXT Electrical Safety Committee (ESC) personnel and PXSO personnel to discuss the recently restarted committee. The ESC has approved a charter and developed an action plan to monitor and improve electrical safety as requested by NNSA in September. The action plan includes a number of assessments of programs and procedures as well as a review of past incidents. The staff encouraged both BWXT and PXSO to consider increasing their field observations of subcontractor work by persons with expertise in safe electrical work practices. Based on the discussions, it appears that the safe conduct of subcontractor activities is a priority for both BWXT and PXSO management.

Facility Safety. BWXT recently issued several white papers defending the proposed design compliance of Buildings 12-44 and 12-64 with DOE Order 420.1A, *Facility Safety*. The papers addressed safety class systems including the task exhaust, fire suppression system, crane assembly, and blast door interlocks. PXSO personnel have reviewed the documents and have expressed concerns with the procurement and evaluation requirements of commercial-grade hoists and the need to provide better rationale for the failure to meet ANSI/IEEE-379 requirements related to independency and separation of the blast door interlock system.

Hoist Anomaly. This week, BWXT reported that a 1-ton cell hoist failed an in-service inspection (ISI) step (which required that the pawl be checked for signs of wear) when performing the annual load brake inspection. The inspection indicated the pawl face had worn unevenly on both sides. The hoist is approximately 30 years old and shows some signs of wear, but the inspection step does not quantify at what point the ISI fails. Immediately preceding the disassembly and inspection of the hoist brake mechanism, the hoist had passed a rated capacity load test. The system engineer completed an operability evaluation and authorized the hoist be returned to service. All hoists in the 12-44 cells and 12-64 bays are scheduled to be replaced with heavier duty models when upgrades begin in a few months.