

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 21, 2005

MEMORANDUM FOR: J. K. Fortenberry, Technical Director
FROM: Timothy Hunt and Dave Kupferer, Pantex Site Representatives
SUBJECT: Pantex Plant Activity Report for Week Ending January 21, 2005

High Pressure Fire Loop. A significant leak was recently discovered in a section of the safety-class fire loop piping that runs under a ramp and into a nuclear facility interlock. It will be necessary to excavate under the facility structure to access the rupture in the ductile iron, concrete lined pipe. BWXT engineers have postulated that the amount of soil removed to support the repair will be minor enough that no seismic analysis is necessary. The breach occurred in a section of piping that was suspected of being relatively corroded and is a priority of the HPFL replacement project, which is scheduled to begin in 2007. A similar breach occurred last September in a nearby section of piping and is still under repair. No nuclear operations were in progress in the affected facility at the time of the breach.

Preventive Maintenance (PM). The staff reviewed a list of technical safety requirement surveillance and inspection extensions utilized by BWXT over the past 18 months. The safety requirements allow a 25 percent extension of the stated surveillance frequency to be used on an "as-needed" basis. Overall, about 9 percent (399 of 4320) of the PMs for critical systems were performed past specified frequencies. Thirteen PMs were completed after expiration of the 25 percent grace period. More than half of the PMs performed during the grace period were on crane/hoist systems, with dozens of others on fire systems and emergency lights. The most common reasons cited for utilizing the grace periods were that the PM was scheduled to be completed during the grace period, the facility was unavailable due to production, and crafts personnel were unavailable. In cases where the grace period expired, BWXT placed the facility in a mode such that the critical safety function provided by the system was no longer required.

Pit Repackaging. BWXT selected eight additional sealed insert (SI) containers for testing as a result of a sealed insert backfill anomaly discovered during a surveillance in December. Based on the conclusion that a procedural violation was the most likely cause, the four previous and subsequent SIs repackaged by the crew responsible for the anomalous container were evaluated. All passed the tests with the expected pressures. For future backfill operations, the procedure has been revised to include a documented verification step. There are several outstanding design agency and BWXT actions that need to be addressed before recovery actions are implemented on the anomalous container.

Tooling Readiness Review. BWXT line management, represented by a board of senior managers, is preparing to conduct a readiness review to verify actions to improve the special tooling program have been implemented. The senior management readiness review will likely start next week, followed by an independent contractor program assessment (equivalent to a contractor readiness assessment) in February.

Hoist Anomaly. During annual preventive maintenance, two deformed links were discovered in the load chain of a safety-class hoist located in a nuclear explosive bay. It is still unclear what caused the deformation. BWXT is sending the hoist to the manufacturer to be analyzed and overhauled.