

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: Timothy J. Dwyer, Technical Director
FROM: Matthew Duncan and Rory Rauch, Pantex Site Representatives
SUBJECT: Pantex Plant Report for Week Ending December 25, 2009

Facility Management: PXSO issued a memorandum citing an observed negative trend with respect to the conduct of facility management in recent years. The memorandum, which was based on PXSO operational awareness data, Occurrence Reporting and Process System reports, and critique attendance, identified several contributing factors to the emergence of this trend. These factors include: (1) high turnover of facility managers, (2) Technical Safety Requirements that create complex, difficult to manage scenarios, and (3) a lack of formality in the technical and management systems used to communicate with support organizations. The memorandum also indicated that B&W facility management could apply a more conservative threshold for entering limiting conditions of operation when safety system operability is in question. PXSO requested a corrective action plan to address these concerns in 45 days.

12-66 Operational Readiness Review (ORR): NNSA recently completed its ORR of expanded staging capabilities in building 12-66. The south end of the building has already been operating as a hazard category 2 nuclear facility for several years. The ORR team issued 7 post-start findings and 11 observations. The findings captured the following: (1) a lack of breadth, depth, and independence of the contractor ORR, (2) inconsistencies in the safety basis, (3) inadequate documentation of compliance with DOE Order 420.1B, *Facility Safety*, and (4) the inability to determine whether the testing needed to establish operability of the fire barrier door (between the north and south end of the facility) was adequate because of insufficient detail in the description of the door's safety functions. The ORR team believes that many of these findings resulted from B&W focusing its implementation verifications on the changes associated with the expanded capability rather than taking a fresh look at the facility in its entirety. Following PXSO's approval of B&W's corrective action plans for the post-start findings, the ORR team recommended that the PXSO manager authorize expanded staging operations in building 12-66.

Radioisotopic Thermoelectric Generators (RTGs): The number of plutonium-238 RTGs requiring temporary storage at Pantex continues to grow and is currently in the thousands. As in 2003, no long-term disposition path exists for these items (see 10/24/03 report). B&W recently submitted a documented safety analysis change package that would allow RTG storage in a new location at Pantex. No changes to safety controls would be required as B&W's evaluation of the RTGs concluded there would be no aerosolization resulting from any credible accident scenario. PXSO is evaluating the proposal.

Pit Storage: B&W proposed and PXSO approved a significant increase of the storage limits for pits in the bays of a certain facility. To accommodate the increase, the fire barrier function provided by the facility structure was upgraded from safety-significant to safety-class. The fire suppression system remains safety-significant.

Funding has not been available for design and construction of a new underground Zone 12 storage facility for weapons and pits, which would enable the eventual closure of Zone 4. Until the Pit Disassembly and Conversion Facility project is completed at the Savannah River Site, pits will continue to accumulate at Pantex. To address these project storage space shortfalls, B&W plans to propose further increases in storage density, storage in additional bays, and the use of bay equipment interlocks for storage.