

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: Timothy Dwyer, Technical Director
FROM: Matthew Duncan and Rory Rauch, Pantex Site Representatives
SUBJECT: Pantex Plant Report for Week Ending November 26, 2010

Authorization Basis (AB) Improvements: Last week, PXSO approved the fiscal year (FY) 2011 AB work plan. The primary purpose of this plan is to establish B&W and PXSO management's expectations for the next generation of AB improvements and the methodologies to be used to realize these improvements. These improvements may resolve some of the issues identified in the Board's letter of July 6, 2010. For example, the plan sets forth the expectation that all hazard analysis reports (HARs) serve as the final safety basis integration document in response to the Board's concern that HARs do not explicitly document how some weapon-specific process hazards are bounded by pre-existing analyses in other documented safety analyses (DSAs). The staff report attached to the Board's July 6 letter also states that the discussion of single-failure faults for some control sets is inadequate and B&W's use of initiating event probabilities as the sole justification for why it did not apply safety class controls to certain hazard scenarios is inappropriate. In response to these concerns, the plan provides the expectation that AB analysts improve the "Adequacy of Controls" discussion in HARs. B&W plans to upgrade three DSAs in accordance with the plan this year. The out-year schedule for upgrades has not been developed, but B&W hopes to upgrade the remaining DSAs by the end of FY13.

Potential Inadequacy of the Safety Analysis (PISA): B&W declared a PISA after an assessment found several issues with the safety analysis supporting the transportation and staging of B53 main charge high explosives (HE). In general, the assessor found that these B53-specific scenarios were not properly integrated with pre-existing sitewide scenarios, such as the external explosion analysis. The most significant issue involves the AB analyst's failure to identify and incorporate the hazard presented by transporting B53 main charge HE with HE cargo trucks into the surface vehicle impact analysis. B&W has paused all loading dock operations involving B53 main charge HE until AB personnel can complete the evaluation of the safety of the situation and the unreviewed safety question determination associated with this PISA.

Readiness Reviews: In April, DOE issued DOE O 425.1D, *Verification of Readiness to Startup or Restart Nuclear Facilities*. DOE HQ directed that the revised order be implemented by October 2010. PXSO requested and received an extension from the Deputy Administrator for Defense Programs. Full implementation is now due March 2011, which is before the next startup activity is scheduled to occur.

The next startup activity, according to the approved startup notification reports (SNRs) from March and July 2010, is scheduled to be repackaging radioisotopic thermoelectric generators (RTGs). As it was considered a restart of a hazard category 2 nuclear activity (the bounding RTG at Pantex has approximately 10 g of Pu-238), B&W proposed and PXSO approved the performance of both contractor and NNSA readiness assessments (RAs). In October, B&W submitted a revised SNR proposing to eliminate the requirement for an NNSA RA for this project. The project's scope was changed to electrical testing of RTGs using a heat sink tester. The new SNR also downgraded the project to hazard category 3. According to the new order, an NNSA RA is required for restart after an extended shutdown for a hazard category 1 or 2 nuclear facility, activity, or operation, but not for those that are hazard category 3. The site rep requested the calculations and analysis that justify the change. After discussion with PXSO, B&W withdrew the SNR.