

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: J. Kent Fortenberry, Technical Director
FROM: Timothy Hunt and Dave Kupferer, Pantex Site Representatives
DATE: 17 August 2007
SUBJECT: Pantex Plant Weekly Report

Verification of Technical Safety Requirements (TSRs): At the request of PXSO, BWXT has developed a plan to periodically verify the continued proper implementation and functionality of TSRs. Specific administrative controls, in-service inspections, and surveillance requirements will be assessed on a periodic basis after the initial readiness verification process; not to exceed five years. Publication of a work instruction, assignment and training of control owners, and initiation of the verification process are to be completed in early-2008.

B53 SS-21 Dismantlement: The B53 federal project team briefed PXSO last week on its preference to pursue SS-21 dismantlement in bays instead of cells. The project team's proposal is to perform the dismantlement work in two bays—one nuclear and one non-nuclear. This would require an external explosion analysis and increasing the currently allowable TSR limit on conventional high explosives in the bay. The most significant roadblock to performing the work in cells was presented to be the extreme challenge of moving the full-up unit into a cell. The Project Team noted that performing the work in a bay would not challenge the evaluation guideline for off-site dose in the event of a release. PXSO expects to make a decision shortly on the acceptability of performing the B53 dismantlements in bays.

Nuclear Material Management: The annual update to the Nuclear Material Program Management Plan was recently issued by BWXT. Among the successes identified for the past year were the off-site shipment of most of the W70 canned subassemblies (CSA) and eight californium-252 sources. Issues noted that require near-term attention are the need to increase pit storage capacity, improve air mixing capability in a couple pit storage rooms, and modify existing CSA containers. Other activities include the development of a breached pit capsule and identification of a disposition path for the radioisotopic thermoelectric generators.

Cell Barriers: PXSO has directed that procurement and installation activities supporting the implementation of cell barriers for multi-unit operations cease immediately. BWXT subsequently suspended procurement and installation of barrier material and hardware—as well as facility modifications to support the barriers—until PXSO approves a final design. Work is still authorized to study and modify the existing cell barrier design.

BWXT System Engineering (SE): Last month, PXSO performed a review of the BWXT SE program to assess the implementation of SE-related requirements contained in DOE Order 420.1B, *Facility Safety*. PXSO concluded that BWXT has made significant progress in implementing the requirements; however, several areas still need attention before full compliance is achieved. Specific deficiencies identified in the PXSO final report include the following: some safety systems and cognizant system engineers have been omitted from the SE configuration management database, manufacturers have not been contacted to determine the availability of product warning data, vital safety system assessments are behind schedule, design change packages are not being closed promptly, the contractor assurance system has not been used to satisfactorily assess the SE program, the quality of design information summaries is not adequate, the quality of operability evaluations is poor, and the qualification process for cognizant system engineers needs improvement (12 of 35 system engineers are currently qualified). Relatedly, BWXT has committed to perform a backfit analysis of all safety systems by the end of this year.