

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 24, 2002

MEMORANDUM FOR: J. K. Fortenberry, Technical Director
FROM: H. Waugh and W. White, Pantex Site Representatives
SUBJECT: Pantex Plant Activity Report for Week Ending May 24, 2002

DNFSB Activity Summary: H. Waugh was on site all week. W. White was on site Monday and Friday and was at Los Alamos National Laboratory for the remainder of the week.

Building 12-64 Seismic Evaluation: NNSA and BWXT are currently evaluating whether it is feasible to qualify Building 12-64 to allow resumption of nuclear explosive operations in the facility. A seismic study by ABSG Consulting, Inc., was completed earlier this month to support this effort. The report concludes that all but one of the 12-64 bays meet DOE seismic criteria for a PC-4 facility. The report concludes Bay 10 does not meet PC-4 criteria, but suggests the bay would meet PC-4 criteria if BWXT were to reduce the depth of the soil on the roof of the bay. ABSG Consulting, Inc., also issued a second report on the potential for delamination of the roof concrete. This report concludes the worst case damage would be small pieces of concrete potentially breaking off due to abrasion at existing interfaces, such as roof cracks. [II.A]

Bays and Cells Safety Evaluation Report: Earlier this week, OASO issued its Safety Evaluation Report (SER) approving the *Bays and Cells Safety Analysis Report* (SAR). The SER contains eight conditions of approval that require resolution prior to the BWXT readiness assessment to verify implementation of the SAR. There are an additional seventy-one comments that may be addressed after implementation of the SAR. Among the conditions of approval are the following:

- C BWXT must review the blast door interlock systems for the bays to address several specific concerns raised by OASO.
- C OASO declined to approve changes to remove the material limits for the bays and cells as specific administrative controls. The BWXT proposal would have addressed material limits through a programmatic administrative control and would have taken specific material limits out of the technical safety requirements.
- C OASO required that the lightning protection controls be applied to tritium reservoirs in the bays or cells to prevent accidental release of tritium, even though such a release may not exceed the 100 Rem evaluation guideline for worker safety.
- C OASO declined to approve the analysis and associated controls related to the facility compressed air system. BWXT will be required to resubmit this analysis to OASO for approval after changes are made to address OASO comments.

An issue raised by the Board's staff during a recent electrical systems review at Pantex related to the fact that certain safety-class electrical systems at Pantex were never intended as safety-class systems and do not meet safety-class design criteria. In one case, OASO chose in its SER to explicitly accept the existing safety-class emergency lighting system as acceptable with no analysis as to the system's reliability and without any understanding of the actual probability of an accident given the loss of lighting. The SER noted that "the SAR does not analyze the probability of an HEVR as a result of the loss of lighting, nor does it analyze the reliability of the emergency lightning [sic] system." However, the SER goes on to note that "the controls and surveillances are sufficient." It is not clear, given the absence of any analysis concerning the likelihood of the accident and the absence of any reliability analysis for the control, how OASO reached that determination. [II.A]