DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 8, 1999

MEMORANDUM FOR: G. W. Cunningham, Technical Director

FROM: T. Dwyer and H. Waugh, Pantex Site Representatives

SUBJECT: Pantex Plant Activity Report for Week Ending January 8, 1999

DNFSB Activity Summary: H. Waugh and T. Dwyer were on site all week.

Isopropyl Alcohol Fire: During a W78 D&I in 12-44 Cell 3 on December 29th, a small fire occurred while cleaning a case component. [See Occurrence Report ALO-AO-MHSM-1998-0094.] All electronic/explosive components had been removed from the case, and a PT was in the process of cleaning the case using alcohol, kimwipes, and a tongue depressor. The fire was quickly extinguished, and no personnel were injured/contaminated in this incident. M&H has been investigating the cause of the fire -- the leading ignition source candidate is human electro-static discharge. As a precautionary measure, M&H has prohibited the use of TNT nitrile gloves in site operations. Butyl gloves, which reportedly are at least 2 orders of magnitude less resistive, will be used instead. The more conservative measure of removing all isopropyl alcohol from use in site operations (or at least weapons operations) has been mentioned as a possibility by M&H, but may not be aggressively pursued unless external (e.g., DOE) pressure is applied. M&H has had a bromide-based non-flammable solvent under consideration for Design Agency approval.

As a result of the fire, all weapons operations were shut down and facilities were placed in maintenance mode. M&H has issued a series of standing orders (99MFG-125, superseded by -126), which allowed operations that do not involve any flammable liquids to restart. All other operations are allowed to proceed only to the point at which flammable solvents would be applied. Specific instructions (NEEPs, EIs, etc.) are being developed for each operation that requires the use of flammable liquids. Until such instructions are issued, the standing order requires the Operations Manager to explicitly review and approve each and every application of flammable solvents. There are certain operations wherein the use of flammable solvents is specifically prohibited (e.g., application to internal component surfaces or to bare HE).

W87 Life Extension Program (LEP): The W87 LEP SIRR has been closed. 7 pre-start findings, 1 post-start finding, and 6 observations were reported; findings related to the incomplete status of the HAR/ABCD were excised from the report per direction from the Project Team to the SIRR Team changing the SIRR scope. [A revised SIRR Plan of Action reflecting that change is currently in the signature chain.] DOE-AL has approved a plan to conduct the LEP assembly process on the first 2 WR units, which are explicitly delineated to be Design Agency Engineering Evaluation (EE) demonstrations, prior to implementation of the W87 safety basis. Through a combination of written and verbal instructions, the following remaining prerequisites have been established for the EE (now scheduled to begin January 19th): 1] final SIRR report; 2] closure of MSA, SIRR, and NEC walkdown pre-start findings; 3] DOE approved HAR/ABCD (but not flowdown/implementation); 4] ABCD implementation schedule; 5] AAO confirmation of the 2 W87 LCOs; 6] PTs trained on the 2 LCOs; and 7] DOE-AL approved Authorization Agreement. HAR/ABCD issues will be dealt with in subsequent M&H and DOE Readiness Assessments focusing specifically upon the control set for the existing/new W87 processes.