DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 17, 1997

TO:	G. W. Cunningham, Technical Director
FROM:	Jim McConnell and Harry Waugh, Pantex Site Representatives
SUBJECT:	Pantex Plant Activity Report for Week Ending January 17, 1997

1. DNFSB Activity Summary: Harry Waugh was on site all week. Jim McConnell departed on annual leave on Friday and is scheduled to return to the office on Thursday January 23.

2. New Issues:

a. B53 Archiving Activity: In response to Recommendation 93-6, Los Alamos National Laboratory (LANL) is preparing to begin gathering technical information, data, and recollections from retirees relative to the B53. This is the second Los Alamos system to be reviewed in this fashion prior to beginning dismantlement. The first system reviewed was the W69 which took place in January 1996. It is currently scheduled for First Dismantlement Unit (FDU) in April of this year. Harry Waugh has been requested by LANL to participate in the B53 archival activity, and the Technical Director has concurred. Archiving meetings and video tape sessions are scheduled to begin in early February.

3. Issue Follow-Up:

a. Linear Accelerators: The linear accelerators (linacs) at Pantex remain shut-down pending resolution of safety issues. One of the actions required to restart the linacs is to calibrate the accumulated dose meters. These meters are intended to display the accumulated dose one meter from the head of the linac. The dose meter is the primary control mechanism for the linac. The operators set a desired dose, currently not to exceed 500 rads) and the machine is supposed to shut off automatically when it reaches that cumulative dose. The main linacs in Building 12-84 (an 8 MeV unit and a 9 MeV unit) had not been calibrated in the last ten years. The first unit was found to be out of calibration by 30% but the actual dose was less than the displayed dose. The other linac was out of calibration by 70% with the machine putting out more energy than indicated. This latter case was determined to be a positive unreviewed safety question because excess dose on a nuclear explosive could cause a charge build-up on the detonators and, subsequently, initiation of the main charge HE. Pantex has issued an Unusual Occurrence on the linacs. They are also working to change the controls in the Basis for Interim Operations and to add a new safety surveillance to the Critical safety Systems Manual.

b. W87 NESS Revalidation: The W87 NESS Revalidation was completed this week. As indicated last week, Wayne Andrews was here to observe the first weeks deliberations and he noted improvements over previous revalidations. To no ones surprise, the study group recommended that the previous NESS be revalidated. During this study the group evaluated some operations that were outside the scope of the previous study. They were disassembly operations in which the pit and main charge HE are collocated but not fully assembled. Also, the assembly and disassembly of the Neutron Generator and Gas Transfer Systems. These were not considered to be nuclear explosive operations and thus were not studied previously. It should be pointed out that these operations are now included in the DOE O 452.2 definition of "nuclear explosive"

4. Additional Information:

a.Chuck Keilers was on plant site this week reviewing pit cladding issues and the status of the Building 12-116 backfit design. He is planning on issuing a contact report and later a trip report on his observations. Chuck indicated that the following information was appropriate for release at this time pending release of the later reports: The pit cladding is the primary confinement, and in the case of Zone 4 pits, the only confinement. DOE, M&H, and the Laboratories are being proactive in several areas to ensure pit integrity, but there are no TSRs

related to pit clad integrity. Also, some M&H personnel, particularly in Risk Management, may not yet fully realize that long-term pit staging may present new or more significant hazards than before, when pits were cycled back to Rocky Flats. The higher risk period appears to be the next two to three years, during which the most limiting pits are scheduled to be repackaged in AT-400A containers. The 12-116 backfit design is moving ahead toward SNM move-in in mid 1998. The SAR basis inventory is 4000 pits. Actual inventory will be less, based on current arrangement drawings. Higher seismic loads (PC-3) are being used, and features to avoid Stage Right Pallet toppling are being considered. Developing design SRIDs and the SAR (particularly, criticality analyses) may become controlling and may be impacted by recent emphasis on the 12-104 bays.

5. Future Activities:

a. February 4-28 - W69 Dismantlement NESS
b. February 11 - W80 NESS Revalidation begins
c. February 17 - W87 WPRR begins
d. March 3 - W87 Safety Evaluation for Production begins
e. March 18 - W79 MC3395 Removal begins
f. March ? - M&H AT-400A Corporate ORR begins (tentative)
g. March ? - DOE AT-400A ORR (tentative, based on conclusion of M&H ORR)

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