DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 4, 1997

TO:	G. W. Cunningham, Technical Director
FROM:	Jim McConnell and Harry Waugh, Pantex Site Representatives
SUBJECT:	Pantex Plant Activity Report for Week Ending April 4, 1997

1. DNFSB Activity Summary: Both Jim McConnell and Harry Waugh were on site all week.

2. New Issues:

a. Tritium Reservoir Handling and Storage:Mason and Hanger has suspended on-site transportation of tritium reservoirs in "Kennedy Kits" and suitcases. The concern with these packages, which are metal containers with foam inserts and are not DOT approved for off-site transportation, is that they do not provide adequate heat transfer. During a recent operation, a Production Technician handling a reservoir noticed that his latex glove stuck to the bottle. Additional investigations identified that the foam in the container appeared to be melted. Testing of the foam revealed that melting occurs at about 350 ·F. Subsequent analysis concluded that it is possible to reach these temperatures if a full package of reservoirs is left in a closed container long enough. This temperature does not appear to be sufficient to elevate the internal gas pressure to the burst pressure. However, these temperatures do present a worker hazard, increase the possibility of an accident during handling, and are well above the temperature limits allowed at Savannah River. For the short term, MHC will allow reservoir staging (but not transportation) in Kennedy Kits and suitcases as long as the cases are not closed. In the long term, MHC is considering using only DOT approved shipping containers (i.e., the H1616), which have better heat transfer characteristics, for both on-site and off-site transportation.

3. Issue Follow-Up:

a. Special Purpose Activities Restart:DOE started to focus special purpose activity restart efforts on the dynamic balancer rather than the linac this week. Work on the linacs is awaiting a final joint laboratory report on the experiments conducted recently. The restart team expects the latest data to support removing all charge-separation-related safety controls from linac operations. The staff will need to review the final report before determining what hazards exist and what controls are required. Meanwhile, the DOE task team is trying to incorporate some of the lessons learned from the linac restart effort into the dynamic balancer project. One major improvement is that the team requested a complete preliminary hazards analysis of the entire dynamic balancing operation before attempting to decide which issues need to be resolved and what control scheme is appropriate (rather than focusing exclusively on the perceived issue that resulted in the shutdown last December). At this point, the team has at least three issues:

- What are the risks of a hydraulic fluid mist fire in the dynamic balancer bay?
- What are the electrical isolation and lightning vulnerabilities of the process?
- What are the risks of the dynamic balancer over speeding or seizing?

MHC believes that the preliminary hazards analysis can be completed in a week or so. After that, the task team intends to define the problem and propose a solution. Unlike the linac approach, the task team would like to get DOE, MHC, and Design Agency management approval of its plan before expending significant resources on implementation.

b. W79 Dismantlement:Problems still continue to arise as a result of the DOE decision to allow LLNL to design, fabricate, and assemble the DMSO HE dissolution work stations. One of the problems revolves around the fact that the work stations were not fabricated and assembled to comply with the requirements of 10 CFR 830.120. Another issue involves the design of the ventilation, fire suppression, and temperature control systems.

The present temperature control allows the DMSO solution to come within 50 ·F of its lower flammability limit. A USQD is being prepared to address these issues.

c. B61-5 Dismantlement:The B61-5 dismantlement activity was shut down this week. MHC issued a new MHC safeguards and security standard dealing with the movement of materials. The current B61-5 Nuclear Explosive Operating Procedures (NEOPs) quote parts of the old standard and are no longer in compliance with the new standard. Dismantlement will resume when the necessary revisions to the NEOPs are in place.

4. Additional Information:

a. DOE-AAO Staffing:Darrell Schmidt, the current LANL representative at the Pantex Tri-Lab office, has been selected to be the new DOE Amarillo Area Office Assistant Manager for Weapon Programs.

b. Guard Force Strike:The local Guards Union approved a contract offer on Wednesday night. The regular guards should resume their duties on Monday, April 7.

5. Future Activities:

a. February 4-April 11 - W69 Dismantlement NESS

b. April 9 - Quarterly Production Meeting

c. April 22-May 5 - W87 WPRR

d. April 24 - W56 Project Team Meeting

e. May 2 - W79 DMSO Check Out RA starts **(change)**

f. May 15 - M&H AT-400A Corporate ORR begins (estimate)

g. June ? - DOE AT-400A ORR (following conclusion of M&H ORR)

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