

# DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 24, 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 24, 1997

**1. DNFSB Activity Summary:** Harry Waugh was on site all of the four day work week. Jim McConnell returned today (Friday) from annual leave. Staff members Gwal and White were on site this week reviewing the plant lightning protection system.

## 2. New Issues:

a. B61 Tester Problem: All incoming B61 weapons are subjected to a receiving inspection. This inspection is performed after the weapon has been off-loaded from the SST and placed in a Zone 4 magazine. As a part of the inspection a test is performed to assure that the incoming weapon has been received in a safe configuration. On Thursday a B61 Mod 5 failed the continuity test of the Intent Strong Link Switch. It was determined this afternoon that in the Mod 5 the connecting cable between the bulkhead and the preflight assembly was eliminated and thus this continuity check cannot be performed. The check can be performed if the tester is connected directly to the preflight assembly. Unfortunately, this cannot be accomplished without a change to a NESS rule which typically takes many weeks. With the B61 Mod 2 dismantlement activity scheduled to be completed in two weeks to be followed immediately by the beginning of Mod 5 dismantlement, some real pressure will have to be applied to get a revision to a NESS rule approved. The Site Representatives will follow-up to see why this difference between the Mod 0/2 and the Mod 5 was not identified in the B61 Weapon Safety Specification as part of SS-21 and why the issue was overlooked during the B61 Mod 0/2/5 NESS when the NES Rules were established.

b. Lightning Protection: Agit Gwal and William White evaluated the Pantex lightning detection system and lightning protection system this week. After their review, Agit and William indicated that in general the system is adequate but the periodicity of surveillances may be too long. The surveillance periodicity for visual and electrical checks are currently one year and 47 months respectively (the maximum allowed by NFPA code and the Explosive Safety Manual). The recommended intervals (not even conservative) are seven months and one year.

## 3. Issue Follow-Up:

a. Satellite Activity Restart: Efforts to restart the linear accelerators (linacs) and the dynamic balancer continue at Pantex. The Design Agencies (LANL and LLNL) have indicated that the safety limit for exposing a nuclear explosive should be 40,000 RADs. The linacs at Pantex would have to operate for hours to deposit that much radiation in a unit. Based on this information, Mason and Hanger (M&H) plans to establish additional administrative controls (rather than engineering control) to prevent over exposures. Prior to restart M&H will also have to establish controls (some engineered and some administrative) to ensure the actual configuration during radiography is consistent with the analyzed configuration. although many of the required changes effect both the facility and the operation, DOE is planning to conduct a Safety Evaluation (SE) rather than an ORR or RA prior to restart. Provided that the prerequisites, criteria, and review approaches for the SE are adequate, the Site Representatives believe that an SE can be an adequate start-up review.

The restart plan for the dynamic balancer is still very preliminary. Originally, M&H planned to conduct a consequence analysis of an overspeed accident to determine what systems, and what safety classifications for those systems, are required. M&H has subsequently decided that it will be more efficient to assume that a safety class overspeed trip is required and focus efforts on system design and installation rather than analysis. If it is

later determined that the overspeed trip does not need to be safety class, M&H will reevaluate the surveillance requirements but will still have some added defense-in-depth.

b. Reservoir Inventory: With a shipment of reservoirs this week, the backlog reservoir inventory was reduced to less than fifty bottles. The first shipment in February should result in elimination of the once large inventory backlog.

#### **4.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 25 - W79 MC3395 Removal begins (change)
- f. March ? - M&H AT-400A Corporate ORR begins (tentative)
- g. March ? - DOE AT-400A ORR (tentative, based on conclusion of M&H ORR)

#### **Copy to:** Board Members

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