

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 6, 1996

TO: G. W. Cunningham, Technical Director

FROM: Jim McConnell and Harry Waugh, Pantex Site Representatives

SUBJECT: Pantex Plant Activity Report for Week Ending December 6, 1996.

1. **DNFSB Activity Summary:** Jim McConnell and Harry Waugh were on site all week. Staff members William White and Chip Martin were on-site to perform a review of nuclear explosive electrical testers.
2. **New Issues:**
 - a. **Nuclear Explosive Safety Analyses:** This week, Mason and Hanger suspended all radiography operations involving nuclear explosives. The shutdown of the linear accelerators follows the shutdown several weeks ago of the environmental chambers. The causes of both shutdowns are similar: safety analyses and identification of safety controls are inadequate; the few engineered safety features that are specified (particularly electrical systems) do not meet generally accepted design requirements for safety systems, structures and components; and procedural operations relied upon for safety are conducted by a single technician. Members of the Board's staff, including Farid Bamdad, Chuck Keilers, Cindy Miller, and the Site Representatives identified similar problems during reviews over the last two months. The deficiencies were validated this week by a DOE-HQ review team led by Vic Stello. As a result of all of these reviews, DOE, M&H, and all three Design Agencies will meet on Monday to develop a plan to address the immediate problems and to identify long term solutions to the systemic problems. This plan will include a reassessment of both the SAR process and the NESS process. The Site Representatives and Cindy Miller will follow this corrective action program, which will undoubtedly affect implementation of Recommendation 95-2 at Pantex.
 - b. **Building 12-26 Pit Storage:** Mason and Hanger recently received a joint LLNL/LANL letter expressing concern over storage temperatures in the Building 12-26 Pit Vault. The letter correctly pointed out that temperature recorders were only installed in the vault quite recently and that it appears that some W55 pits may have experienced temperatures several degrees above the 140 °F specified limit. Pantex and LLNL Tri-Lab personnel are still collecting the facts on this matter and will present the data at the pit thermal meeting next week.
3. **Issue Follow-Up:**
 - a. **Building 12-79 Justification for Continued Operations:** On May 10, 1996, M&H identified that the amount of depleted uranium in Building 12-79 exceeded the limit in DOE-STD-1027-92 for a hazard category 2 nuclear facility. Since the facility is not declared or controlled as a nuclear facility, this discovery was a violation of the authorization basis. DOE subsequently approved a Justification for Continued Operations (JCO) that required certain corrective actions. One of those requirements was to correct the flaws in the fire walls to assure compliance with NFPA requirements by October 31, 1996. On October 29, 1996, M&H sent a letter to DOE asserting that the fire wall repairs were complete. On December 4, DOE-AAO and M&H fire protection

engineers walked-down the facility and concluded that the repairs did not satisfy NFPA code. While the holes and cracks had been grouted on one side of the wall, the grout did not meet the seven inch thick requirement for a three hour fire wall. The Site Representatives attended the subsequent critique and identified at least two significant deficiencies. First, the work order to repair the wall did not identify the standards to which the repair should have been performed and did not require a post- repair inspection by a qualified fire protection engineer. Second, although the JCO included Authorization Basis-level commitments from M&H to DOE, the commitments were not tracked in the M&H commitment tracking system. In fact, the only system that tracked the work was the Maintenance Division work planning system which tracked the job as a non-nuclear, balance-of-plant task.

- b. W55 Dismantlement:Following a long and sometimes troubled dismantlement history, the last W55 was finally dismantled this week.
- c. At-400A Pit Repackaging:It appears that the problems with the inner containment vessel girth welder have been rectified. However, the back-fill tube crimp and weld is still causing problems. Pantex and the equipment manufacturer have cooperatively designed a new weld head. Pantex has received a new set of drawings which are currently under review. Mason and Hanger is still hopeful that the corporate ORR can be conducted in January.
- d. W79 Rocket Motors:All six of the rocket motors selected for evaluation have been shipped to the Picatinny Arsenal as of November 27. Picatinny is planning to begin its evaluation tests on December 11. Pantex personnel will observe the Army tests.

4. Future Activities:

- a. December 11 - Pit Thermal Meeting
- b. December 17-20 - W69 SIID Meeting
- c. January ? - M&H AT-400A Corporate ORR begins (tentative)
- d. January ? - DOE AT-400A ORR (tentative, based on conclusion of M&H ORR)
- e. January 7 - W87 NESS Revalidation begins
- f. January 10 - W69 HAR due from LANL
- g. January 21 - W69 NESS Begins
- h. February 11 - W80 NESS Revalidation begins

Copy to: Board Members

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