

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 28, 1997

TO: G. W. Cunningham, Technical Director
FROM: Jim McConnell and Harry Waugh, Pantex Site Representatives
SUBJECT: Pantex Plant Activity Report for Week Ending February 28, 1997.

1. DNFSB Activity Summary: Harry Waugh was on site all week. Jim McConnell was at DOE-Albuquerque on Friday.

2. Issue Follow-Up:

a. AT-400A Pit Repackaging Program Reduction: DOE-AL has decided to scale back the program for repackaging pits from AL-R8 containers into AT-400A containers significantly. The new plan will reduce the effort from about 2000 pits per year to about 200 pits per year. Even at the original rate, DOE projected that the pit repackaging initiative would require about ten years. Reportedly, there are concerns that the original design of the AT-400A as both a shipping and storage container may have resulted in the container being over-designed (and therefore too expensive and too difficult to produce) for its current mission. DOE-AL reportedly chose to slow down the project to evaluate whether a new package (such as a new inner container for the AL-R8) would be better for use as a storage container at Pantex. DOE-AL plans to use the savings from the program reduction (from money that would have been used to purchase AT-400A containers) to fund other initiatives. It is unclear if DOE has plans to replace the Mod-FL as a pit shipping container.

In the meantime, Pantex is continuing work to start up one AT400-A mechanical repackaging line (details on the technical issues still to be addressed are provided below). Pantex intends to start packaging W48 pits as soon as this summer. At a rate of 20 pits per month, it will take several years to repackage all the W48 pits. There are no plans to repackage any other pits such as W54/B54s or W55s at this time. Reportedly, it will take a minimum of about three years to design and develop a repackaging process using a new container. There are no safety basis documents or EIS analyses that take credit for AT-400A containers explicitly; however, the AT-400A is significantly more robust than the AL-R8 and has better heat transfer characteristics. Additionally, it is not clear how this decision will impact plans to perform surveillances of pits stored in AL-R8s or plans for new storage facilities such as Building 12-116 or potentially Building 12-66.

Mason and Hanger (MHC) must still resolve several technical safety issues before the AT-400A mechanical repackaging line can start. Most of the issues involve controls to prevent a burn through of the inner containment vessel during the automated welding process. This scenario could lead to the energized MIG welding rod striking the pit and subsequently causing a localized plutonium release. To prevent this accident, MHC is developing two redundant rotation sensors that will shut off the welder if the spindle slows below an allowable rate. The welder will also include a power monitor that will ensure the welder will not burn through the inner containment vessel even if the spindle slows down well below the trip point of the rotation sensors. although not yet completed, MHC believes that analysis will show there are no other single point failures that can lead to the accident of concern. Therefore, if the systems described above are designed to IEEE standards for nuclear grade safety significant systems, the welder should satisfy the double contingency principle. MHC expects that these systems can be designed and installed in time to support a MHC ORR in May.

b. Satellite Activity Restart: The project team completed revising the Pantex Basis for Interim

Operations and Critical Safety Systems Manual this week. The team sent the changes to DOE-AL for review and subsequent forwarding to DOE-HQ for review and approval. The Site Representatives sent copies of the changes and the supporting Design Agency reports to the staff for review. The project team is now working on implementing the changes and the new controls in the bays and the radiography procedures. The integrated readiness review team plans to conduct its assessment next week to support start-up after a briefing to the "Senior Managers' Team" (which includes both DP-20 and DP-3) on March 13, 1997.

3. Future Activities:

- a. February 4-March ? - W69 Dismantlement NESS
- b. March 13 - Pantex ISM Senior Managers' Meeting
- c. March 18-20 - W78 Archiving Meeting @ SNL/NM
- d. March 25 - W79 MC3395 Removal begins
- e. March 25-27 - W56 Milestone 2 Meeting @ Pantex (change)
- f. April 4 - W79 DMSO Check Out RA starts
- g. April 9 - Quarterly Production Meeting
- h. May 15 - M&H AT-400A Corporate ORR begins (estimate)
- i. June ? - DOE AT-400A ORR (following conclusion of M&H ORR)

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