

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 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 March 28, 1997.

1. DNFSB Activity Summary: Harry Waugh was on site all week. Jim McConnell was on travel to Washington, D.C. on Monday through Wednesday. Friday was a Mason and Hanger holiday.

2. New Issues:

a. W56 Milestone 2 Meeting: The W56 Seamless Safety (SS-21) Milestone 2 meeting occurred Tuesday through Thursday of this week. High-level management personnel from LLNL, SNL/CA, DOE-AL, DOE-AAO, and Mason and Hanger (MHC) attended. The meeting agenda covered SS-21 topics such as the Weapon Safety Specification, tooling, facility layout, and hazards analysis. The presentation of equipment, hazards, and controls appeared to be improved compared to other Milestone 2 meetings. One major departure from the norm was the high fidelity trainer design. The trainers, which are defined in a design agency specification, will be expensive because they will require special fabricated parts many of which will be expendable. These parts actually will be potted in place just like the real warhead. After each training class, the depotted parts will be replaced and the trainer reassembled by potting new parts in place. Other components which will be destroyed during actual operations will be consumed during the training operations also. The end result should be a much more realistic training process.

3. Issue Follow-Up:

a. Implementation of the Pantex Integrated Safety Process: The Pantex Integrated Safety Process task team met this week to discuss potential methods to implement the improved integrated safety process for nuclear explosives. The discussion centered around understanding the current initiatives underway at Pantex to develop and implement safety bases for nuclear explosives operations and the current use of complex-wide resources working on that task. Current initiatives, supported by MHC, its contractors, and the design agencies include:

- Validating and upgrading the Basis for Interim Operations / Critical Safety Systems Manual
- Revising and developing SARs (e.g., Bays, Cells, Special Purpose Facilities, Building 12-116)
- Developing HARs for ongoing SS-21 projects (e.g., W69, W56, W79, W76, W87, W78)
- Preparing for updates to Nuclear Explosive Safety (NES) Master Studies
- Preparing to revalidate weapon system-specific Nuclear Explosive Safety Studies (NESS)
- Performing Safety Evaluation Screens and USQDs as required

The team discussed the basis for scheduling systems for SS-21 (i.e., the current NESS schedule), the overlap between SARs and NES Master Studies, and the overlap between SARs and HARs. The team concluded that the basis for prioritizing all these activities should be the same -- maximize impact on safety and the Pantex mission. Therefore, the team proposed that all safety bases improvement activities should be tied to some specific mission work (i.e., a weapon system) and should not be dependent on the current NESS expiration schedule. The team is considering an approach that would focus safety basis improvement efforts on the current dismantlement projects

(W69, W56 and W79) and one initial enduring stockpile weapon, the W78. The W78 is a conventional HE system that is planned to begin a retrofit program in FY98 and thus would have a higher through-put at Pantex than other enduring systems.

The approach being considered would focus on actual weapon systems but would include both weapon-specific safety information (which would be captured in a HAR) and safety information common to all weapons (which would be captured in an improved BIO). The safety bases for these systems should include analyses of virtually all the nuclear explosive processes at Pantex and therefore, since experience has shown that most of the analyses and controls are generic to all weapon systems, a timely program to develop and implement a quality safety basis for these first systems should significantly improve the safety analysis and controls for all weapon systems. The Site Representatives note that an approach such as the one the team appears to be contemplating would require a fundamental shift in the current requirements for NES Master Studies and the need to revalidate existing system- specific NESSs. However, the Site Representatives also note that focussed efforts to produce and implement new, higher-quality safety bases and controls might be more valuable than revalidating existing, lower-quality documents.

a. MC 3395 Removal: MHC began removing MC3395 assemblies from W79 shipping containers this week. The operation began on schedule and, except for some minor typographical errors in the Nuclear Explosive Operation Procedure, is proceeding smoothly. This is notable for the W79 program.

4. Future Activities:

- a. February 4- April ? - W69 Dismantlement NESS
- b. April 4 - W79 DMSO Check Out RA starts
- c. April 9 - Quarterly Production Meeting
- d. May 15 - M&H AT-400A Corporate ORR begins (estimate)
- e. June ? - DOE AT-400A ORR (following conclusion of M&H ORR)

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