

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 30, 1998

MEMORANDUM FOR: G.W. Cunningham, Technical Director

FROM: T. Dwyer and H. Waugh, Pantex Site Representatives

SUBJECT: Pantex Plant Activity Report for Week Ending January 30, 1998

DNFSB Activity Summary: Harry Waugh and Timothy Dwyer were on site all week. Ajit Gwal and William White were on site to meet with the Lightning Protection working group and DP-3. Charles Keilers and Asadour Hadjian were on site to attend a Seismic Criteria Workshop.

Lightning Protection: The Lightning Protection working group presented their latest data to DOE-AL, AAO, and DP-3, in preparation for responding to the Board's reporting requirement [originally December 11th per Board letter dated September 12, 1997; extended to February 20th per Board letter dated October 30, 1997]. The primary issue raised during the briefings and subsequent discussions involved the use of a single administrative control (isolation) to preclude a nuclear detonation as a result of a lightning strike. As a result of these discussions, DOE (DP-3) will be requesting a further extension of the reporting deadline, to allow a larger group of laboratory participants to perform more detailed analyses and to investigate alternative controls.

Sitewide Seismic Issues: The Pantex Seismic Criteria Working Group conducted a workshop this week to develop a path forward to ensure that nuclear explosive facilities meet technically-defensible seismic requirements, which are still being defined. Their plan now includes (1) determining the vulnerable weapon configurations/facilities; (2) evaluating those configurations/facilities for seismic inputs equivalent to or better than a major plutonium facility (i.e., PC-3 or PC-4); and (3) inspecting facilities for equipment vulnerabilities using the NRC-approved criteria for older commercial nuclear power plants.

Building 12-64 Structural Vulnerabilities: The Building 12-64 bays being used for the W-69 Dismantlement Program have weakly supported appurtenances that may fall during an earthquake (e.g., 150 lb light fixtures). Last year DOE postponed inspecting these appurtenances, and the inspections still have not been done. Further, and perhaps more importantly, the frangible roof design has no reinforcement on the bottom and little reinforcement in one direction on the top. This has caused extensive visible cracks on the bottom -- the roof is statically damaged. As a result, it is difficult to estimate the margin available above dead load, particularly in an earthquake. The staff (Hadjian) is initiating a detailed investigation.

AT-400A Pit Repackaging Line: The AT-400A Pit Repackaging Line remains shut down pending resolution of issues arising from ultrasonic testing (UT) of the containment vessel girth welds. UT ensures consistent container quality for *off-site* transportation purposes; the AT-400A is actually accepted based on passing a gross leak check. Per DOE direction, LLNL developed UT specification SS706451 by starting with the Boiler and Pressure Vessel Code, then making selective modifications. The AT-400A was subjected to the off-site accident sequence specified in 10 CFR 71 for class B transportation containers, but LLNL did *not* fully characterize the girth weld prior to conducting the tests. Validity of UT data has been questioned by LLNL, especially given the resolution limits of the current manual UT method. 6 empty AT-400As have been welded and will be sent to LLNL and SNL for characterization/correlation of UT data. Also, an automated UT system is being developed, which may resolve some of these questions, but it is not expected to be on line before mid-April.

W87 ASSET Program Review: The W87 Advanced SS-21 Enhancement Task (ASSET) Project Team briefed the executive management review team on Thursday, in order to obtain approval of the W87 project scope of work and path forward. The W87 ASSET Program has been ongoing for four months, and is scheduled to conclude at the end of March. To date, there has been no official direction from either DOE-AL or DOE-HQ on requirements and guidance for conducting ASSET programs. Of note, products of this W87 project, an activity based controls document (ABCD) and a HAR, are intended to provide justification for extending the existing NESS and authorization basis without achieving full SS-21 compliance.

Attachment

Upcoming Pantex Events:

February 2-4 -- W79 WR Cell SIRR**

February 3 -- B61-11 SIRR starts

February 3-6 -- W79 NESS SIID validation [adequacy review]

February 23-March 27 -- W79 NESS

March 20 -- B61-11 NESE SIID validation [adequacy review]**

April 7-17 -- B61-11 NESE**

April 20 -- W79 FDU

May 5-8 -- W56 NESS SIID validation [adequacy review]**

May 5-29 -- NES Electrical Tester Master Study**

June 2-July 10 -- W56 NESS**

NOTES: ** highlights events which are new listings or for which schedule has changed