

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 30, 1999

MEMORANDUM FOR: G. W. Cunningham, Technical Director

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

SUBJECT: Pantex Plant Activity Report for Week Ending April 30, 1999

DNFSB Activity Summary: H. Waugh and T. Dwyer were on site all week. W. White was on site Tuesday-Wednesday for joint Lightning Protection/Explosives Safety meetings.

W56 Dismantlement Program: Last week, when M&H personnel visited Y-12, they learned that earlier this year, Y-12 personnel had observed a possible thermal reaction while disassembling a W56 secondary. In fact, in the Y-12 process, the potential for a thermal reaction is considered so common that an inert gas purge must be available, and the observance of a thermal reaction is considered a non-reportable event. Despite being informed of these facts, which could represent a potential inadequacy in the Pantex W56 safety analysis, M&H personnel allowed the Pantex PTs to attempt to dismantle a W56 primary-to-secondary joint, albeit under slightly more stringent maximum torque setpoints. [See Occurrence Report ALO-AO-MHSM-PANTEX-1999-0037.] This week, M&H senior management and the W56 Project Team ordered a halt to all torquing of the joint in question. A NEEP is being issued to allow W56 Dismantlements to proceed only to the point where torque would be applied; they will then be buttoned up and set aside for storage. M&H, Y-12, and the Design Agencies are developing options to investigate the cause of the stuck joints and devise a path forward.

Authorization Basis (AB) Issues: This week, DP conducted an assessment of DOE-AL/AAO nuclear explosives AB document review and approval process. This assessment evaluated the adequacy of the DOE-AL/AAO AB processes with an eye toward delegating approval authority for facility (as opposed to weapons program) ABs to DOE-AL, and ultimately to AAO. 2 of 3 CRADs, Personnel Competence and Process Institutionalization, were only partially satisfied. Therefore, DP-20 intends to grant conditional delegation, with reconsideration after observing DOE-AL/AAO handling of the next few AB activities (e.g., TSRs, lightning).

Lightning Issues: The Lightning Protection Project Team (LPPT) met with representatives of the DOE Explosives Safety Committee this week, to review a proposed change to DOE M 440.1-1, *DOE Explosives Safety Manual*. Significant comments have been exchanged over the course of the last several months, and after this final round it was agreed that the change would be presented to the full Committee for action at their next scheduled meeting, May 11th-13th. Note that this change will bring DOE M 440.1-1 in line with the recommendations of the LPPT, but does not address the myriad procedures/orders/standards at the Pantex site that contain confusing or even conflicting direction. The LPPT also released Revision 1 to their final report, *Analysis of the Risk Presented by Lightning in the Pantex Nuclear Explosive Areas*, to be passed through the DOE-AL Manager and DP-20 for delivery to the Board. It is expected that at least 1 more revision will be required due to ongoing work to address several open issues. Finally, an issue was raised regarding the site Lightning Warning System (LWS). A review commissioned by the LPPT identified an average of 5 events per year in which lightning-producing storms moved over the Pantex site without sufficient warning to allow personnel to take prescribed protective actions. This calls into question the adequacy of LWS as a credible ABCD control.