John T. Conway, Chairman
A.J. Eggenberger, Vice Chairman
John W. Crawford, Jr.
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DEFENSE NUCLEAR FACILITIES SAFETY BOARD

625 Indiana Avenue, NW, Suite 700, Washington, D.C. 20004 (202) 208-6400



January 21, 1993

Ms. Linda G. Stuntz Acting Secretary of Energy Washington, DC 20585

Dear Ms. Stuntz:

On January 21, 1993, the Defense Nuclear Facilities Safety Board, in accordance with 42 U.S.C. § 2286a(5), unanimously approved Recommendation 93-1 which is enclosed for your consideration. Recommendation 93-1 deals with Standards Utilization in Defense Nuclear Facilities.

42 U.S.C. § 2286d(a) requires the Board, after receipt by you, to promptly make this recommendation available to the public in the Department of Energy's regional public reading rooms. The Board believes the recommendation contains no information which is classified or otherwise restricted. To the extent this recommendation does not include information restricted by DOE under the Atomic Energy Act of 1954, 42 U.S.C. §§ 2161-68, as amended, please arrange to have this recommendation promptly placed on file in your regional public reading rooms.

The Board will publish this recommendation in the Federal Register.

Sincerely,

John T. Conway

Chairman

Enclosure

RECOMMENDATION 93-1 TO THE SECRETARY OF ENERGY pursuant to 42 U.S.C. § 2286a(5) Atomic Energy Act of 1954, as amended.

Dated: January 21, 1993

Several of the Board's recommendations have emphasized the importance of an effective program of standards utilization in defense nuclear facilities. By so doing, the Board has shown that it considers the detailed review of ongoing operations for compliance with DOE Orders (and applicable consensus standards) as an essential measure in assuring that defense nuclear facilities are being operated in a safe manner.

The Board has noted significant progress by DOE in the issuance of new and revised nuclear safety orders that more explicitly delineate requirements in such areas as: unreviewed safety question determinations, technical safety requirements, nuclear safety analysis reports, design requirements and nuclear criticality safety. However, the Board's ongoing review of the use of standards in defense nuclear facilities has disclosed a number of potential inconsistencies in the manner in which DOE Orders related to nuclear safety are applied at facilities that produce and process fissile materials, relative to those facilities that assemble, disassemble, and test nuclear weapons. The Board notes that DOE orders differentiate between nuclear safety and "nuclear explosive safety," (the latter is defined by DOE Order 5610.11, Nuclear Explosive Safety); however, the Board considers that certain basic safety principles apply to the handling of fissile materials, regardless of the form that the material is in.

For example, a number of orders related to nuclear safety are explicitly excluded from applicability to facilities that assemble, disassemble and test nuclear weapons, while others are applicable only to "nuclear facilities," (as defined by DOE Order 5480.5, Safety of Nuclear Facilities). Those that apply to "nuclear facilities do not necessarily apply to facilities that assemble, disassemble and test nuclear weapons. In other technical areas, such as quality assurance, essentially different programs have been put in place (i.e., DOE-AL directives QC-1 and QC-2, as opposed to DOE Order 5700.6C).

The Board is committed to ensuring the level of safety assurance at those facilities that assemble, disassemble and test nuclear weapons is at least as rigorous as that required at other defense nuclear facilities and that it can be measured to compare with the level of safety assurance provided to the public and site workers by commercial nuclear material processing facilities. The above being recognized, the Board recommends that:

1. DOE review its list of orders and directives related to nuclear safety and determine those that apply to facilities and operations that assemble, disassemble and test nuclear weapons.

- 2. DOE evaluate the level of nuclear safety assurance provided by the orders and directives applicable to facilities that assemble, disassemble and test nuclear weapons and compare it to the level of safety assurance provided by DOE Orders and directives applicable to other DOE defense nuclear facilities.
- 3. DOE develop a plan for addressing any deficiencies found by the above two reviews.
- 4. Priority be given by DOE to completing site-wide order compliance reviews at facilities that assemble, disassemble and test nuclear weapons; with special emphasis placed on the Pantex Plant.

John T. Conway Chairman