The Secretary of Energy
Washington, DC 20585

August 28, 1992

The Honorable John T. Conway
Chairman
Defense Nuclear Facilities Safety Board
625 Indiana Avenue, N.W.
Suite 700
Washington, D.C. 20004

Dear Mr. Conway:

Your letter of July 6, 1992, forwarded the Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 92-4 regarding the Multi-Function Waste Tank Facility (MWTF) at Hanford. The DNFSB recommended that the Department of Energy (DOE) establish a plan and methodology that result in a project management organization for the MWTF project team that assures both DOE and the contractor organizations have personnel with the technical and managerial competence to ensure effective project execution, including achieving the quantitative safety goals described in the Department's Nuclear Safety Policy (SEN-35-91).

The Department accepts the Board's Recommendation 92-4. Enclosed are comments that describe actions to be taken in response to the recommendations and DOE views on the recommendations. In accordance with section 315(b) of the Atomic Energy Act of 1954, as amended, this response will be published in the Federal Register for public comment. Also, in accordance with section 315(e) of the Act, an implementation plan will be prepared which will describe in greater detail the actions to be taken by DOE to implement the Board's Recommendation.

Sincerely,

James D. Watkins
Admiral, U.S. Navy (Retired)

Enclosure

COMMENTS ON DNFSB RECOMMENDATION 92-4 REGARDING THE MULTI-FUNCTION WASTE TANK FACILITY (MWTF) AT HANFORD

On July 6, 1992, Chairman John T. Conway of the Defense Nuclear Facilities Safety Board (DNFSB) wrote to Secretary Watkins enclosing Recommendation 92-4, which was unanimously approved by the DNFSB on July 1, 1992. The DNFSB recommendations and the Department of Energy (DOE) response are as follows:

> Recommendation 1.
>
> Establish a plan and methodology that results in a project management organization for the MWTF project team that assures that both DOE and the contractor organization have personnel of the technical and managerial competence to ensure effective project execution. This should emphasize management aspects of the project necessary to ensure adequate protection of public health and safety and should include the integration of professional engineering and quality assurance as necessary into the project, the application of appropriate standards and approved DOE requirements, and the establishment of clear lines of responsibility and accountability.

The Department accepts this recommendation. The project management structure and the technical knowledge and abilities of DOE and its contractor personnel obviously are extremely important elements in the successful performance of a major project activity such as the design and construction of the MWTF. With this in mind, the Secretary directed in the Nuclear Safety Policy (SEN-35-91) that DOE and its contractors establish and maintain management involvement and accountability to ensure that nuclear safety requirements are met and individual responsibility is articulated and understood by all parties. Furthermore, the Secretary directed DOE and its contractors to develop and foster technically competent personnel and the technical standards necessary to achieve nuclear safety. Some of the activities specifically applicable to the MWTF project that will implement this policy are discussed below.

The Project Plan (PP) and the Project Management Plan (PMP) for the MWTF project will delineate the functions and clear lines of responsibility and accountability of DOE and contractor organizations. The Department is establishing a dedicated project office within DOE and also within each of its contractor organizations to provide focused managerial and technical guidance on all aspects of the Tank Waste Remediation System, including the MWTF. Assignment and recruitment of staff for these dedicated project offices will focus on providing dedicated, competent project management, safety, quality assurance, regulatory, operations, and startup personnel responsible for implementing functions consistent with the PP and PMP. The requirements for technical expertise, professional engineering experience, and training necessary for project execution will be established in position descriptions. Candidate qualifications will be evaluated and verified as each position is filled. Emphasis will be placed on obtaining well qualified DOE and contractor staff. Growth and evolution of DOE and contractors project offices will retain continuity of functions and responsibilities. The onsite

Engineer/Constructor (E/C), for example, has performed the Conceptual Design and will be performing Title I, II, and III Design, as well as Construction Management.

The application of appropriate standards and approved DOE requirements began with the development of Functional Design Criteria (FDC). The FDC was reviewed by Westinghouse Hanford Corporation (WHC) and the appropriate DOE safety, quality assurance, security, startup, operations and programs, and contractors from other DOE Field Offices, to name a few of the active participants, to ensure adequate protection of the public health and safety. As a result of these reviews, it was recognized that some of the criteria require additional consideration. This will be done during the next phase of the project; namely, Advanced Conceptual Design. Future project phases and design documentation will undergo similar reviews consistent with the responsibilities delineated in the PP and PMP.

Clear lines of responsibility and accountability are achieved with direction originating from the DOE Project Manager to WHC. WHC provides day-to-day technical direction, oversight, letters of instruction, and work authorization and funding to the E/C.

In addition, outside technical expertise is utilized from a variety of sources in support of the dedicated project office (e.g., other DOE Field Offices and their contractors, independent consultants from the commercial sector, General Support Services Contract with the DOE Richland Field Office, etc.).

Recommendation 2.

Identify the design bases and engineering principles and approaches for the MWTF project that provide the data and rationale to show that the design for the MWTF conservatively meets the quantitative safety goals described in the Department's Nuclear Safety Policy (SEN-35-91). The Board believes that this would include items related to standards, identification of safety-related items, detailed design bases, functional design criteria, and safety analyses.

The Department accepts this recommendation. It is DOE policy that the general public be protected such that no individual bears significant additional risk to health and safety from the operation of a DOE nuclear facility above the risks to which members of the general population are normally exposed. This policy was established in September 1991 in SEN-35-91. Implementation of this policy must begin with the design and construction phases for new facilities, and the data and rationale that demonstrate implementation of the policy must be clearly defined and adequately documented. Some of the activities specifically applicable to the MWTF project that will implement this policy are discussed below.

The *Radiological Risk Acceptance Guidelines*, developed by the DOE High-Level Waste Safety Envelope Working Group and the Westinghouse Management and Operating (M&O) Nuclear Facility Safety Committee, will be used in determinations involving the acceptability of design for all high-level waste tank facilities. These guidelines were developed from existing DOE Orders,

guidelines, recommended peer group assessments, and industrial standards. The guidelines are to be used for individual accident risk assessments of accidents that could result in unplanned releases of radioactive materials. These guidelines were developed to be conservative with respect to the quantitative safety goals described in DOE Nuclear Safety Policy. Individual safety analyses, to be documented in Safety Analysis Reports, will be required to demonstrate that the safety policy has been met.

In addition, the MWTF will be designed, constructed, and operated with appropriate measures to prevent or minimize potential radioactive releases, including engineered safety features to minimize potential releases and the use of procedural controls to mitigate the effects of potential releases.

A Supplemental Design Requirements (SDR) document will be prepared which will address the design basis and technical rationale to be utilized during project design/construction. The SDR will identify in greater detail the functional requirements of the major systems and components already established in the approved Functional Design Criteria (FDC). The supplemental design requirements will address specific implementation of the draft DOE Seismic Design and Evaluation Guidelines for the DOE HLW Tanks, the conservatisms being incorporated into the design documents, the considerations of safety risk assessments, and the selection basis for specific codes and standards applied to the project. This document will serve as the lower-level technical baseline to the FDC.

By utilizing the SDR, the risk assessment guidelines, DOE Order 6430.1A Compliance Analysis, lessons learned, and applicable features of the DNFSB Recommendation 90-2 implementation requirements, we believe that the intent of SEN-35-91 will be implemented. Through the preparation and independent review of all required safety documentation (e.g., Preliminary Safety Evaluation, Preliminary Safety Analysis Report, Final Safety Analysis Report, Operational Safety Requirements, and Emergency Response Procedures), the final successful documentation of all safety-related aspects will be assured. The preparation of the safety documentation is scheduled throughout the life of the project.