Statement of

Dr. John E. Cantlon, Chairman
Nuclear Waste Technical Review Board

Before the

Subcommittee on Energy and Water Development
Committee on Appropriations
U.S. House of Representatives

April 27, 1993

Statement of
Dr. John E. Cantlon, Chairman
Nuclear Waste Technical Review Board
Fiscal Year 1994

Mr. Chairman and members of the Subcommittee:

I am John E. Cantlon, Chairman of the Nuclear Waste Technical Review Board (the Board). I am pleased to be here today to discuss some of the Board's accomplishments of the past four years and to present the Board's appropriation request for fiscal year 1994. On behalf of the other Board members, I would like to thank you, Mr. Chairman, and the members of the Subcommittee, for this opportunity.

Mr. Chairman, I have prepared an opening statement that briefly describes the Board and its activities. I also have prepared a document containing the specifics of our request and supporting data. With your permission, I will submit this more detailed document for the record.

Appropriation request

On behalf of the Board, I am submitting a request for $2,528,000. This appropriation request, together with $963,000 in carryover funds from fiscal year 1992, will satisfy our fiscal year 1994 funding requirement of $3,491,000. Our request reflects projections of funding levels necessary to support Board activities based on our experience of the past few years.

Board mandate and activities

Mr. Chairman, Congress has given the Department of Energy (DOE) the responsibility of developing a system to manage the disposal of the nation's spent fuel from civilian nuclear plants, along with some high-level defense waste from reprocessing. And Congress directed the DOE to characterize a site at Yucca Mountain, Nevada, for the potential development of a repository for the disposal of this waste. The Nuclear Waste Technical Review Board was

created by Congress to provide an *unbiased* source of expert advice on the technical and scientific aspects of the DOE's work in this area. We are an entirely independent entity within the executive branch. The Board has no ties, administrative or otherwise, to the DOE.

The Board has used several methods to obtain information on which to base its evaluation of the DOE program. For example, since 1989, we have sponsored more than 45 meetings and technical exchanges with the DOE and its contractors and with other federal agencies, the national laboratories, the state of Nevada, the utilities, and state utility regulators. We have solicited the views of the public and environmental organizations on a variety of issues. We have met with members of Congress and their staff, Nevada's Governor Miller, Nuclear Waste Negotiator Leroy, and representatives of the Nuclear Regulatory Commission and the Environmental Protection Agency. In addition to attending numerous technical conferences, symposia, and workshops, members and staff have participated in field trips to examine geologic formations in the state of Nevada. We also have traveled to Sweden, Germany, and Canada to observe high-level waste management activities in those countries.

By participating in these activities and engaging in an ongoing dialogue with the DOE and other interested parties, the Board has been able to evaluate the DOE's technical and scientific program as it unfolds. Each year, we submit two reports to Congress and the Secretary of Energy, which contain recommendations based on this evaluation process.

We also play an important role as a catalyst within the technical community. Our efforts have significantly increased communication and promoted cooperation within the DOE, and among the DOE and the other organizations involved with civilian radioactive waste disposal issues.

Continuing concerns

Mr. Chairman, the job of evaluating such a complex and comprehensive program requires substantial effort. Despite our small size and short history, I believe we have been able to make a significant contribution to the DOE program in a variety of ways. Time does not permit me to list the more than 60 recommendations the Board has made to the Secretary and Congress on numerous important technical and scientific issues over the past three years. However, I would like to touch on two areas of concern that have received special attention from the Board because of their significance for the program.

One of our earliest efforts was to encourage the DOE to determine, as soon as possible, whether or not the site at Yucca Mountain is suitable for repository development. And the Secretary has stated that the early determination of site suitability is a top program priority. However, the DOE has postponed construction of the underground exploratory studies facility and has decided to focus instead on surface-based testing. The Board has long believed that surface-based testing alone will not provide the critical information needed to determine site suitability. We are concerned that further delays in the initiation of underground excavation and testing could lead to delays in determining whether or not Yucca Mountain is a suitable site.

The Board has made recommendations to the DOE that we believe could help speed the start of construction of the exploratory studies facility (now scheduled for fiscal year 1994). However, even with these changes, we believe that if sufficient and predictable long-term funding is not provided for both construction of the facility and for necessary site-characterization activities, Congress and the Secretary of Energy should anticipate slippage in the current repository development schedule.

A second major area of concern involves the engineered barrier system. The engineered barrier system comprises all engineered parts of the waste management system that are designed to prevent the release of radionuclides into the environment. The Board believes that the use of robust engineered barriers - in conjunction with a well-characterized, suitable site - should substantially improve confidence in the long-term performance of a repository. Acting on a Board recommendation, the DOE hosted a workshop on engineered barriers, which provided an excellent forum for the exchange of views and technical information. However, citing budget constraints, the DOE has steadily reduced funding in this area over the last three years. The Board strongly believes that studies of the potential contribution of long-lived engineered barriers should be made a more important part of the DOE program.

Future focus

The Board will continue to monitor progress in these areas. In addition, Board activities during the past months have revealed other areas on which the Board plans to focus in the future.

For example, the Board currently is studying the question of what temperatures should be allowed to build up in a repository after emplacement of the spent fuel. DOE decisions related to

this question could have far-reaching implications for the entire waste management system, from storage to disposal. The Board's recommendations on this important issue will be included in its fifth report, due out this spring.

In closing, I would like to say that as Chairman of the Nuclear Waste Technical Review Board, I have been gratified by what the Board has been able to accomplish since it began operation just three years ago. However, there is still much to do. We believe that as an agency providing a completely independent review, the Board has a continuing and vital role to play in the progress of the DOE's technical and scientific program.

Mr. Chairman, that concludes my remarks. I would again like to thank you and the Subcommittee for the opportunity to be here today. I will be pleased to address any questions you may have.