UNITED STATES
NUCLEAR WASTE TECHNICAL REVIEW BOARD
2300 Clarendon Boulevard, Suite 1300
Arlington, VA 22201

July 21, 2000

Mr. Jim Wells
Director
Energy, Resources, and Science Issues
United States General Accounting Office
Washington, D.C. 20548-0001

Dear Mr. Wells:

In your recent report for Senator Pete Domenici, *Radiation Standards: Scientific Basis Inconclusive, and EPA and NRC Disagreement Continues*, you referred to the views of the Nuclear Waste Technical Review Board (Board) about the design for the proposed Yucca Mountain high-level waste repository. I believe that your report is misleading in two respects. First, by stating that the Board "favors" a below-boiling repository design, your report creates a mistaken perception that the Board has recommended a particular design to the Department of Energy (DOE). Second, your report creates a mistaken perception of the cost of alternative repository designs.

Consistent with its mandate from Congress, the Board has followed closely the evolution of the DOE's repository design. The Board has stated that the choice of design could reduce the uncertainties in projecting repository performance for thousands of years. It also has stated that there is not yet a strong technical basis for selecting an above-boiling repository design. Thus, the Board has recommended that the DOE evaluate (among other things) the magnitude of uncertainty associated with alternative designs having different thermal characteristics. However, contrary to the impression created by your report, the Board has never recommended that the DOE select either an above-boiling or a below-boiling design. In fact, in its June 2000 testimony before the House Commerce Subcommittee on Energy and Power, the Board explicitly stated that "more thorough analysis is needed before any judgment is made about the optimal thermal conditions for repository operation."

Your report also stated that a below-boiling design "could add about $2 billion to the costs" of developing a repository at Yucca Mountain. At the Board's meeting in May 2000, the DOE presented some preliminary results and cost estimates related to its evaluation of alternative thermal designs. That analysis suggests that the incremental discounted cost of implementing a below-boiling (as opposed to an above-boiling) design might be as low as $600 million. If, for example, different assumptions are adopted about the distance between repository tunnels, the incremental cost might be reduced even further. This type of evaluation, stimulated by a Board

recommendation, will likely help the DOE to understand better the technical and economic trade offs associated with alternative repository designs. Such an understanding is essential for a sound decision, regardless of what regulatory standard is ultimately established.

Regrettably, the Board was not given the opportunity to comment on a draft during your report's preparation. We strongly encourage your office to contact the Board to ensure that possibly misleading impressions of Board positions are not created.

Sincerely,

{signed by}

Jared L. Cohon
Chairman

cc:
The Honorable Pete V. Domenici
Dr. Ivan Itkin