UNITED STATES
NUCLEAR WASTE TECHNICAL REVIEW BOARD
1100 Wilson Boulevard. Suite 910
Arlington, VA 22209

February 23, 1996

The Honorable Newt Gingrich
Speaker of the House
U.S. House of Representatives
H204 Capitol
Washington, DC 20515

Dear Speaker Gingrich:

During this past year, it has become increasingly clear that the Department of Energy's (DOE) Civilian Radioactive Waste Management Program is approaching a critical crossroads. The authorizing and appropriating committees of the Congress have signalled what may prove to be a change in program focus from *permanent* disposal of commercial spent fuel in an underground repository to *temporary* surface storage. The Nuclear Waste Technical Review Board, which has been evaluating this DOE program for Congress since 1989, is concerned about this possible change in focus — especially given the significant recent progress in the DOE's site-characterization and repository development activities. In accordance with the Board's legislative mandate to report to the Congress and the Secretary of Energy on this program, the Board would like to bring its concerns to your attention. Specifically, this letter addresses (1) the extent of recent progress at Yucca Mountain, Nevada, (2) the continuing need to keep the primary focus of the federal government's current waste management efforts on permanent disposal, and (3) the implications of further fluctuations in program funding.

The DOE has made significant recent progress at Yucca Mountain

Significant progress has been made in a number of areas at Yucca Mountain during this past year. The DOE has greatly increased the efficiency of the underground tunneling operation at the site; the main tunnel is now more than 2.5 miles long and is exploring at the proposed repository level. The DOE is obtaining data about the character and hydrology of the underground rock where waste eventually could be placed. In addition, a clear and technically defensible waste isolation strategy is beginning to emerge. This strategy will help explain how the natural and engineered barriers at the site should work together to isolate radioactive waste from the environment. Together with recent advances in repository performance assessment, the strategy will enable the DOE to set priorities among exploration and testing activities to achieve a better understanding of the hydrology and other characteristics of the site — in less time and at less cost. Finally, current management is continuing to improve program focus and effectiveness. The Board believes that if the DOE can maintain the recent pace of underground exploration, testing, and analysis, sufficient information should be

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available to determine within five years if the site at Yucca Mountain is suitable[1] for repository construction.

Based on the data gathered and the analyses completed so far, the Board has seen nothing that would indicate that the Yucca Mountain site is unsuitable from a technical standpoint for repository development. However, it will be necessary to complete additional underground exploration and testing activities at Yucca Mountain before the DOE can make a technically sound decision on the suitability of the site. Also, the DOE's application to the NRC for a construction license will require additional confirmatory activities.

Permanent disposal in a geologic repository should remain the nation's primary objective

Several legislative proposals are being considered by Congress that would shift the focus of the DOE's program from permanent disposal to temporary storage. Ironically, this is happening just when previous investments in site characterization and repository development are beginning to pay off.

The Board has spent the past year reviewing the many complicated issues related to the storage and disposal of commercial spent fuel. We will be releasing a report on our findings in March and would very much like to brief you or your staff on our conclusions and recommendations. It is clear from our analysis that spent fuel (and defense high level waste) will ultimately need to be disposed of; temporary storage is not a substitute for disposal. Nevertheless, the Board has concluded that a large federal storage facility will be needed in the future, especially around 2010 when reactors will begin shutting down in large numbers. It also is clear that the techmeal, operational, and fiscal advantages of having such a storage facility increase if the facility is located at an operating repository site.

There is no compelling technical or safety reason, however, to move spent fuel to a centralized storage facility in the next few years. Moreover, the Board believes that adding a major storage component to the DOE's present responsibilities — in today's constrained funding environment — could create such competition for funding and other resources that the nation's commitment to developing a permanent geologic repository could be seriously eroded. Results of past efforts to develop centralized storage suggest that, without the credible prospect of disposal, it may prove very difficult to site and develop any new storage capacity. Opposition in the past to storage facilities has centered on the concern that once sited, a facility could become a de facto surface disposal site. The lack of a disposal capability also raises serious questions about the fate of the government-owned spent fuel and high-level defense wastes that currently are being stored — sometimes under less-than-optimum conditions — at defense sites around the country.

[1]*By suitable we mean that there is a high probability that the site, along with the appropriate engineered barriers, can provide long-term waste isolation.*

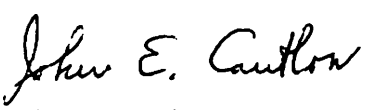
The Board recommends that, for the next several years, the DOE's Civilian Radioactive Waste Management Program focus its efforts on making a timely decision on the suitability of the Yucca Mountain site for repository development. In the meantime, reauthorizing a small, limited-capacity backup storage facility, similar to the one previously authorized by the Nuclear Waste Policy Act, may be one way to accommodate the storage needs of any utilities that, for one reason or another, cannot continue to store their own spent fuel.

Consistent program funding will be necessary

In March 1993, the Board's *Special Report to Congress and the Secretary of Energy* concluded that the program was allocating a high proportion of funds to overhead and infrastructure costs, thus limiting funding for important testing, research, design, and underground excavation. Current program management has succeeded in part in addressing this problem. However, further fluctuations in program funding of the magnitude currently being experienced will make it very difficult to retain key technical and management personnel or to maintain the current pace of program activities. The Board believes that sufficient and consistent long-term funding will be necessary to sustain current program momentum so that a site-suitability determination at Yucca Mountain can be made within the next few years.

In summary, the Board reiterates its belief that the nation ultimately will need *both* a credible repository development program *and* a plan to address future spent fuel storage needs. For the next several years, however, the primary focus should remain on developing a credible disposal capability. This is the best way to achieve safe, permanent disposal of all of the country's spent nuclear fuel and high-level waste and to allay concerns that existing temporary storage facilities will become permanent. For the next few years, the DOE should focus on making a technically defensible decision on the suitability of the Yucca Mountain site for repository development. To address future storage needs, the Congress could authorize the DOE to begin *generic* planning now for a large federal storage facility and supporting transportation infrastructure at a funding level modest enough to avoid competition with the repository program. Plans should ensure that this facility is operating at full scale by 2010 — ideally at a repository site. Also, a small, emergency backup storage capability at an existing federal nuclear site may be necessary. Finally, the Board recommends that Congress provide sufficient and consistent funding for the next several years to help ensure the success of this critical national program.

Sincerely,



John E. Cantlon
Chairman