



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

July 26, 2011

Mr. David G. Huizenga
Acting Assistant Secretary for Environmental Management
U.S. Department of Energy
1000 Independence Ave., SW
Washington, DC 20585

Dear Mr. Huizenga:

The Amendments to the Nuclear Waste Policy Act (NWPA) charge the U.S. Nuclear Waste Technical Review Board with evaluating the technical and scientific validity of activities undertaken by the U.S. Department of Energy (DOE) in implementing the NWPA. The Board also is charged with reporting the findings, conclusions, and recommendations from its evaluations to Congress and the Secretary of Energy.

In discharging these responsibilities, the Board holds several public meetings each year, and it is customary for the Board to provide feedback to DOE from the presentations and discussions at the meetings, together with other points that arise from them. In the first half of this year, we held two public meetings and a workshop. The first public meeting was focused on issues related to the work of the DOE Office of Nuclear Energy, so in this letter, I am reporting to you on relevant issues from the second public meeting and the workshop.

Comments from April Meeting

The Board's second public meeting this year was held in Amherst, New York, on April 27. The meeting dealt exclusively with past, current, and planned activities at the Western New York Nuclear Service Center (referred to below as West Valley) and focused on the West Valley Demonstration Project (WVDP), which is being conducted by your office. The WVDP includes decommissioning and waste management activities at West Valley, following the permanent closure of the only U.S. commercial reprocessing facility that operated on the site between 1966 and 1972. The Board's findings and observations from that meeting are presented below.

- In March 2011, DOE issued a draft determination* that contained a preliminary determination that the melter from the vitrification plant at West Valley can be managed and disposed of as low-level waste. That conclusion was based on criteria in DOE Manual 435.1-1, *Radioactive Waste Management Manual*. Because this appears to be the first time that these procedures have been applied to a melter, the experience and outcome in the West Valley case will set an important precedent for the many melters at Hanford

* *Draft Waste Incidental to Reprocessing Evaluation for the Vitrification Melter, U.S. Department of Energy, West Valley, New York, March 2011.*

and Savannah River that will require disposal. The Board therefore recommends that DOE take this into account in finalizing the determination of the appropriate method of disposing of the melter from West Valley.

- The Board understands that a key element of the planning basis for the project for relocating the canisters of vitrified waste at West Valley was the assumption, at that time, that a repository at Yucca Mountain would be available to receive the waste within the planning horizon. Currently, however, there is uncertainty about when a U.S. repository will be available and about whether a repository other than the one planned for Yucca Mountain would be able to accept waste packages as large as those necessary to contain the 5-canister or 7-canister MPCs, which are planned for use at West Valley. Because of these uncertainties, the Board recommends that plans for the relocation project should be flexible enough to adapt to future changes in repository design and schedule.
- The Board believes that it is important to preserve, and share on an ongoing basis, program data and experiences among entities involved in waste management and is concerned about the apparent lack of attention currently being paid to this matter at West Valley. We would like to invite representatives of your office to participate in a future Board meeting to discuss the procedures in place within DOE-EM for sharing decommissioning experiences among facilities and preserving decommissioning information. The Board is particularly interested in discussing plans for the preservation of information from decommissioning activities that will assist in minimizing future generation of high-level radioactive waste. The Board also has made a recommendation to DOE-NE that it should ensure that the necessary level of contact exists between its staff and DOE-EM staff to maximize the benefit to future DOE fuel-cycle programs of information available from the WVDP.
- Two members of the Board staff attended the regular monthly meeting of the West Valley Citizen Task Force during the evening of April 27. It is clear that this long-standing organization is involved, interested, and informed and that it is well-supported by DOE, the New York State Energy Research and Development Authority, and their contractors. We commend and encourage DOE's ongoing interaction with this well-informed group and other members of the interested public. In that regard, the Board recommends that DOE consider the use of all available information platforms, including electronic social media, to maintain and enhance the level of transparency in its operations at West Valley and other DOE sites.

Workshop on Benchmarking Analytical Results

The workshop organized by the Board was the Workshop on Evaluation of Waste Streams Associated with LWR Fuel Cycle Options. It was held in Arlington, Virginia, on June 6 and 7, 2011, and was arranged to provide a forum for developers and users of computer models, codes, and analytical tools to benchmark their results from analyzing and comparing a set of standard fuel-cycle scenarios. The Board has developed an analytical tool called the Nuclear Waste Assessment System for Technical Evaluation (NUWASTE) to assess the effects of different nuclear power program assumptions and fuel-cycle options on programs in the United States for managing spent nuclear fuel and high-level radioactive

waste. Although DOE-EM does not have the need for a computer model to analyze fuel-cycle scenarios, the presentation on the systems dynamic model that DOE-EM has developed to show the waste management operations at the Savannah River Site was a significant addition to the workshop. As we continue to develop the capabilities of NUWASTE, we may request the support of your staff in determining how to best represent the characteristics and quantities of DOE-generated high-level waste to give a complete representation in NUWASTE of the wastes to be managed under the Nuclear Waste Policy Act.

Finally, the Board appreciates very much the participation of DOE-EM staff and other representatives at the meetings we have held so far this year. We particularly thank Mr. Bryan Bower, who managed the arrangements for the Board's visit to West Valley in April, and Ms. Terry Tyborowski, who presented the DOE-EM waste management model at the workshop in June.

Sincerely,

{Signed by }

B. John Garrick
Chairman

cc:

Dr. S. Chu, Secretary of Energy
Dr. P. Lyons, Assistant Secretary, DOE-NE
Mr. B. Bower, DOE-EM, West Valley
Mr. P. Bembia, NYSERDA, West Valley