

February 8, 2001

The Honorable Richard A. Meserve  
Chairman  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

Subject: NRC HIGH LEVEL RADIOACTIVE WASTE KEY TECHNICAL ISSUE  
RESOLUTION PROCESS

Dear Chairman Meserve:

In April 2000, the Department of Energy (DOE) and the Nuclear Regulatory Commission (NRC) held a meeting to decide how to accelerate the issue resolution process. Since that meeting, there have been several technical exchanges between NRC and DOE. During the 121<sup>st</sup>, 122<sup>nd</sup>, and 123<sup>rd</sup> meetings of the Advisory Committee on Nuclear Waste, September 19-21, October 17-19, and November 27-29, 2000, we were briefed by representatives of NRC and DOE staffs regarding the progress toward resolution of the key technical issues (KTIs).

The issue resolution process appears to be working as planned. We commend the staff for its work on issue resolution. At the technical exchange meetings, both the NRC and Center for Nuclear Waste Regulatory Analyses (CNWRA) staffs demonstrated a sound grasp of the technical issues and were prepared to negotiate an acceptable way of closing these prelicense-application issues. Furthermore, we are pleased to see that the staff has made significant progress in adopting a risk-informed and performance-based (RIPB) approach. The staff has modified acceptance criteria for issue closure to avoid unnecessary prescriptiveness, opting to allow DOE to propose the process by which DOE will fulfill the requirements. This approach is consistent with the Commission's intent and will lead to a rational basis for evaluating the DOE's proposal for meeting the requirements.

We have two continuing concerns about the overall process, namely: (1) whether all important subissues have been identified and (2) whether issues and subissues are being appropriately integrated. For example, we think that examination of coupled processes in the waste package and near-field environments may lead to some "surprises" that are not subsumed in the current structure. With respect to integration, we agree with the continued use of the total system performance assessment code to determine "how the pieces fit together." We were also glad to learn that the staff plans to publish an *integrated* issues report in the near future. We plan to monitor further progress in issue integration.

The first KTI meeting in August 2000 was on total system performance assessment. NRC and DOE agreed at that meeting that all of the issues and subissues specific to the repository functioning must be discussed before any decision is made about the adequacy of the overall integration within a performance-assessment framework. The final KTI meeting on total system performance assessment is scheduled for the spring of 2001. We look forward to learning more about how the staff has used the "performance-assessment window" to look at issue resolution in an integrated way.

We are disappointed that the issue-resolution meetings were not used to explore innovative ways to engage the public in the evaluation process. We recognize that the technical issues that must be addressed by the NRC and DOE staffs are many and complex and that the time at the meetings must be devoted to discussions needed to reach agreements on closure. We remain convinced, however, that these meetings might have proved important to help build public confidence in NRC's independent oversight.

Sincerely,

*/RA/*

B. John Garrick  
Chairman

References:

1. Letter dated November 17, 2000, from C. William Reamer, Office of Nuclear Material Safety and Safeguards, NRC, to Stephan Brocoum, U. S. Department of Energy, transmitting Summary Highlights of NRC/DOE Technical Exchange and Management Meeting on Unsaturated and Saturated Flow Under Isothermal Conditions, October 31-November 2, 2000, Albuquerque, New Mexico.
2. Letter dated October 27, 2000, from Janet Schlueter, Office of Nuclear Material Safety and Safeguards, NRC, to Stephan Brocoum, U. S. Department of Energy, transmitting Summary Highlights of NRC/DOE Technical Exchange and Management Meeting on Subissues Related to Criticality, October 23-24, 2000, Las Vegas, Nevada.
3. Letter dated October 27, 2000, from Janet Schlueter, Office of Nuclear Material Safety and Safeguards, NRC, to Stephan Brocoum, U. S. Department of Energy, transmitting Summary Highlights of NRC/DOE Technical Exchange and Management Meeting on Structural Deformation and Seismicity, October 11-12, 2000, Las Vegas, Nevada.
4. Letter dated October 4, 2000, from Janet Schlueter, Office of Nuclear Material Safety and Safeguards, NRC, to Stephan Brocoum, U. S. Department of Energy, transmitting Summary Highlights of NRC/DOE Technical Exchange and Management Meeting on Container Life and Source Term, September 12-13, 2000, Las Vegas, Nevada.
5. Letter dated October 23, 2000, from Janet Schlueter, Office of Nuclear Material Safety and Safeguards, NRC, to Stephan Brocoum, U. S. Department of Energy, transmitting Summary Highlights of NRC/DOE Technical Exchange and Manage-

- ment Meeting on Igneous Activity, August 29-31, 2000, Las Vegas, Nevada.
6. Letter dated September 8, 2000, from Janet R. Schlueter, Office of Nuclear Material Safety and Safeguards, NRC, to Stephan Brocoum, U. S. Department of Energy, transmitting Summary Highlights of NRC/DOE Technical Exchange and Management Meeting on Unsaturated and Saturated Flow Under Isothermal Conditions, August 16-17, 2000, Berkeley, California.