Minnesota
Environmental Quality Board
100 Capitol Square Building
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St. Paul, Minnesota 55101
Phone _____

October 21, 1984

Mr. Robert Browning
Director, Division of Waste Management
Office of Nuclear Material Safety and
Safeguards
U.S. Nuclear Regulatory Commission
1717 H. Street
Washington, D.C. 20555

Dear Mr. Browning:

The State of Minnesota has completed its review of the Draft Generic Technical Position on Licensing Assessment Methodology for High-Level Waste Geologic Repositories. We appreciate the opportunity to comment on preliminary documents of this type, and we hope that our comments will be helpful in the development of your final position on this topic. Our comments are as follows:

1. We are pleased with the complete and rigorous approach the NRC staff is taking with regard to licensing assessment (Section 3.2). Insistence on Site Characterization Plans that 1) fully identify outstanding issues, 2) describe in detail the performance assessment methodology, 3) require that the performance objectives of 10 CFR 60 are addressed, and 4) result in full documentation of licensing assessment activities will help ensure that the proper framework is in place for the final stage of the siting process. We hope that the NRC will continue to maintain that repository component and subsystem performance assessment, as well as the overall system performance, be addressed in the Site Characterization Plans. It is important that DOE establish as early as possible what it intends to demonstrate with respect to the performance of each subsystem.

2. The performance assessment methodology discussed in Section 3.2 addresses the need for site-specific analysis; however, there is no discussion of the need for consistency in the application of the methods, including models and computer codes. To the extent possible, this would seem to be important for any comparisons of conditions at the three sites being characterized. What effort will NRC make to guarantee that data developed at these sites is comparable?

3. The last sentence in Section 3.2.1.1 states that DOE should be prepared to release computer codes to the NRC or exercise them in support of the NRC effort. We believe that the NRC should insert the word "and" in place of "or" and should be able to obtain the codes, as well as have DOE use those codes to support NRC review activities.

4. Section 3.3.1 states that, "An accident which produced an off-site dose of 500 mrem/year will be limiting in determining what is important to safety." It is not clear why the limiting accident is defined in terms of an off-site exposure. What are the limiting doses on site? Are they allowed to exceed this figure? Does "off-site" mean that the dose occurs beyond the limit of the controlled zone?

5. Section 3.3.5 discusses the possibility that the coupling of scenarios could cause synergistic effects. It further states that scenarios will first be assessed as to their effect on the performance objectives of 10 CFR 60, then grouped as to consequence and associated risk. Does this type of analysis allow for coupled scenarios? Can these synergistic effects to accounted for? This section should explain how scenarios can be coupled.

   Likewise, "degrees of intensity" may be permitted for scenario identification, but NRC may not necessarily allow this for probability or consequence assessments. This section should be expanded to explain why NRC may not permit degrees of intensity to be used in probability or consequence analysis.

6. Figure 3 is a flow chart and should have arrows signifying the direction of flow. Also, it is not clear from the diagram whether NRC intends to formulate conceptual models, perform scenario analyses, and apply mathematical models in selected areas or simply review DOE analyses in these areas. Could this diagram be explained more completely in the text?

If you have any questions about these comments, please contact Gregg Larson at (612/296-9037).

Sincerely,

Tom Kalitowski

Tom Kalitowski, Chairman
Governor's Task Force on High-Level
Radioactive Waste

TK/pb

cc: First and Second Repository States