UNITED STATES
NUCLEAR REGULATORY COMMISSION
ADVISORY COMMITTEE ON NUCLEAR WASTE
WASHINGTON, D.C. 20555

April 29, 1991

The Honorable Kenneth M. Carr
Chairman
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Chairman Carr:

SUBJECT: CONSIDERATION OF HUMAN INTRUSION IN THE LICENSING OF A HIGH-LEVEL WASTE REPOSITORY

In its report to you dated May 1, 1990, the Committee recommended that the U.S. Environmental Protection Agency (EPA) standards for the disposal of high-level radioactive waste be revised to permit the application of a separate approach for evaluating the potential impacts of human intrusion. Mr. Floyd L. Galpin, Chief, Waste Management Standards Branch, Office of Radiation Programs, EPA, has requested that the Committee provide additional comments and elaboration regarding this subject. This letter is in response to that request.

One approach for evaluating human intrusion in the case of the geologic repository would be to apply techniques similar to those used by the NRC staff in assessing the threat of sabotage at nuclear power plants. In evaluating this threat, the NRC uses a deterministic rather than a quantitative probabilistic approach. The NRC approach recognizes the inherent uncertainties associated with the application of quantitative probabilistic techniques in assessing an issue of this nature.

The enclosed paper summarizes the NRC approach in the treatment and evaluation of the sabotage threat at nuclear power plants, and it addresses the issue of human intrusion as treated in the EPA standards. The paper was prepared by Mr. Steven E. Mays (ACRS/ACNW Fellow) at the request of the Committee. It has been discussed with members of the NRC staff, and it is being provided to you for possible forwarding to Mr. Galpin.

Sincerely,

Dade W. Moeller

Dade W. Moeller
Chairman

Enclosure:
As stated

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