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July 17, 1985

Honorable Nunzio J. Palladino
Chairman
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Dr. Palladino:

SUBJECT: ACRS COMMENTS ON EPA STANDARDS FOR HIGH-LEVEL RADIOACTIVE WASTE
DISPOSAL

During its 303rd meeting, July 11-13, 1985, the Advisory Committee on Reactor Safeguards discussed the proposed "Environmental Radiation Protection Standards for Management and Disposal of Spent Nuclear Fuel, High-Level and Transuranic Radioactive Wastes" (40 CFR 191), being developed by the U. S. Environmental Protection Agency (EPA). This was also the subject of a meeting of our Waste Management Subcommittee on June 18, 1985, during which discussions were held with staff members from both the EPA and the NRC. The Committee also had the benefit of the documents referenced.

Although we noted a number of questions relating to the proposed standards, a key issue pertains to the application of probabilistic conditions on the proposed radionuclide release limits. In this regard, we wish to call attention to a particular recommendation made by the High-Level Radioactive Waste Disposal Subcommittee of the EPA Science Advisory Board, namely:

"We recommend that use of a quantitative probabilistic condition on the modified Table 2 release limits be made dependent on EPA's ability to provide convincing evidence that such a condition is practical to meet and will not lead to serious impediments, legal or otherwise, to the licensing of high-level-waste geologic repositories. If such evidence cannot be provided, we recommend that EPA adopt qualitative criteria, such as those suggested by the NRC." (Reference 2)

It is our understanding that the NRC Staff has concurred with the proposed EPA standards, including the use of a probabilistic approach on radionuclide release limits. In view of the importance of the ability of the NRC Staff to determine compliance with the EPA standards in licensing a high-level waste repository, we recommend that the Commission assure itself that the NRC Staff is correct in endorsing this approach. We believe that demonstration of such compliance will be extremely difficult and that the proposed standards are unduly restrictive.

Dr. David Okrent, ACRS Member, and Drs. Konrad Krauskopf and Frank Parker, ACRS consultants, who participated in the ACRS discussions on this matter, were also involved in the review conducted by the EPA Science Advisory Board of an earlier version of the proposed standards.

Sincerely,

David A. Ward
Chairman

References:

1. EPA Working Draft No. 6 -- Final 40 CFR 191, "Environmental Radiation Protection Standards for Management and Disposal of Spent Nuclear Fuel, High-Level and Transuranic Radioactive Wastes," dated June 15, 1985
2. Letter from H. E. Collier, Subcommittee Chairman, to W. D. Ruckelshaus, EPA Administrator, dated February 17, 1984 forwarding "Report on the Review of Proposed Environmental Standards for the Management and Disposal of Spent Nuclear Fuel, High-Level and Transuranic Radioactive Wastes (40 CFR 191)" by the High-Level Radioactive Waste Disposal Subcommittee, Science Advisory Board, EPA, dated January 1984
3. SECY-84-320 for the Commissioners from W. J. Dircks, EDO, Subject: NRC Staff Comments to Environmental Protection Agency (EPA) on the Science Advisory Board Report on Proposed EPA Standard for Management and Disposal of Spent Nuclear Fuel, High-Level and Transuranic Waste (40 CFR Part 191), dated August 9, 1984
4. Letter from J. G. Davis, NRC Staff, to EPA, Subject: Response to EPA's request for comments on their proposed environmental standards for management and disposal of spent nuclear fuel, high-level and transuranic radioactive wastes, dated May 10, 1983
5. Letter from N. J. Palladino, Chairman, NRC, to L. Verstandig, Acting Administrator, EPA, Subject: Commission's concerns about sections of the proposed standards that deal with means of implementation, dated May 11, 1983

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