

EXECUTIVE OFFICE OF THE PRESIDENT  
COUNCIL ON ENVIRONMENTAL QUALITY  
722 JACKSON PLACE, N. W.  
WASHINGTON, D. C. 20006

April 15, 1980

Honorable John F. Ahearne  
Chairman  
Nuclear Regulatory Commission  
1717 H Street, N.W.  
Washington, D.C. 20555

Dear Chairman Ahearne:

We appreciate this opportunity to respond to your March 12, 1980, letter to me requesting the views of the Council on Environmental Quality regarding your proceeding to reassess the Nuclear Regulatory Commission's degree of confidence that radioactive wastes will be safely disposed of and to examine other matters.

The Council strongly supports the conclusions of the Administration's Interagency Review Group on Nuclear Waste Management set out in its March, 1979, Report to the President ("IRG Report") as well as the policies adopted by the President in his February 12, 1980, Message to Congress on Radioactive Waste Management.

In his Congressional Message, the President stressed the importance of having the NRC "provide the Nation with its judgment on whether or not it has confidence that radioactive wastes produced by nuclear power reactors can and will be disposed of safely," and he urged that the NRC's review of this question "provide a full opportunity for public, technical and government agency participation." As this request reflects, it is important that the NRC reassess and decide the question of whether safe, ultimate disposal of nuclear wastes both can and will be provided. The NRC should not limit its inquiry to the much less important question of whether safe temporary (on or off-site) storage can be provided. Nor should the NRC focus simply on the question of whether it is technically possible to provide safe, ultimate disposal; it is important for the public, the Congress and the Executive Branch to have the NRC's assessment of whether safe ultimate disposal will be provided as well as its assessment of whether it can be provided. Regarding procedures, we believe that the Commission should ensure the fullest possible public participation in its proceeding, including whatever procedures are needed to provide a framework for fair and principled decisionmaking.

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There are several aspects of the IRG Report that bear emphasis. First, the IRG as a whole expressly excluded from consideration the question of whether enough is known about providing safe nuclear waste disposal to justify continued nuclear power plant licensing by the NRC. The IRG's official position of neutrality on the "linkage to licensing" issue is described on pages 5-6 of the IRG Report and in the following paragraphs added in response to public comments on the draft IRG report (pages 7-8):

"The IRG recognizes that many people perceive that a linkage does and should exist between nuclear waste disposal and the future of nuclear power and that the linkage has been made in some states, in other countries and by the Nuclear Regulatory Commission. The IRG also understands that positive movement toward resolution of the waste disposal problem will not only deal with serious environmental issues, but also influence public perceptions concerning the acceptability of nuclear power and in that sense can be viewed as not being neutral. The IRG feels that its task is to help resolve the nuclear waste disposal problem for its own sake. The future of nuclear power and the relation of this energy source to other energy sources are important questions that will be debated in many forms but the IRG believes it should not participate in those debates. The IRG reiterates its view that standards, criteria, and regulations to protect the public must be developed neutrally."

"Some IRG members believe that the IRG report does not adequately meet its own stated criteria for neutrality. These members believe the IRG has not adequately described or analyzed the ways in which differences in future nuclear growth might heighten or reduce waste management difficulties. Many of the IRG analyses and recommendations are focused on more near-term issues such as those associated with the existing wastes and first repository. These members believe the report did not adequately analyze the effects of future nuclear growth on the real ability of our technical, political, and social institutions to manage nuclear wastes safely.

"Some IRG members believe that the present U.S. commitment to the use of commercial nuclear power should not be substantially increased without convincing assurance arrived at in a public proceeding that nuclear waste disposal can and will be accomplished without unacceptable risks to public health and safety."

The final two paragraphs in the above passage from the IRG report, which reflect the Council's views, are obviously pertinent to the Commission's current inquiry. Significantly, Royal commissions in both Great Britain and Canada have addressed the nuclear waste issue recently, and both affirm the principle reflected in the final paragraphs. "It would be irresponsible and morally wrong," the British Commission concluded, "to commit future

generations to the consequences of nuclear power on massive scale unless it has been demonstrated beyond a reasonable doubt that at least one method exists for the safe isolation of these wastes for the indefinite future." And the Canadian Commission recommended that no nuclear commitment greater than 20,000 MW be undertaken "until it has been demonstrated beyond reasonable doubt that a method exists to ensure the safe containment of the long-lived, highly radioactive waste for the indefinite future." It also noted that "If (an independent review) committee is not satisfied with progress by 1985, a moratorium on additional nuclear power stations would be justified."

The IRG did address several matters which bear directly on the question of the degree of confidence that is prudent. Two of these are the status of technical knowledge regarding mined geologic repositories and the degree of our current understanding and resolution of institutional difficulties and uncertainties.

Regarding the current status of technical knowledge, the IRG Report concludes as follows (page 42):

"Present scientific and technological knowledge is adequate to identify potential repository sites for further investigation. No scientific or technical reason is known that would prevent identifying a site that is suitable for a repository provided that the systems view is utilized rigorously to evaluate the suitability of sites and designs, and in minimizing the influence of future human activities. A suitable site is one at which a repository would meet predetermined criteria and which would provide a high degree of assurance that radioactive waste can be successfully isolated from the biosphere for periods of thousands of years. For periods beyond a few thousand years, our capability to assess the performance of the repository diminishes and the degree of assurance is therefore reduced. The feasibility of safely disposing of high level waste in mined repositories can only be assessed on the basis of specific investigations at and determinations of suitability of particular sites. Information obtained at each successive step of site selection and repository development will permit reevaluation of risks, uncertainties, and the ability of the site and repository to meet regulatory standards. Such re-evaluations would lead either to abandonment of the site or a decision to proceed to the next step. Reliance on conservative engineering practices and multiple independent barriers can reduce some risks and compensate for some uncertainties. However, even at the time of decommissioning some uncertainty about repository performance will still exist. Thus, in addition to technical evaluation, a societal judgment that considers the level of risk and the associated uncertainty will be necessary.

"While agreeing with the above revision of the second technical finding, some members of the IRG are still concerned that insufficient attention is given in this report to significant gaps and uncertainties in our current technical understanding. The scientific feasibility of the mined repository concept remains to be established. The preferred approach to long-term nuclear waste disposal may prove difficult to implement in

practice and may involve residual risks for future generations which may be significant."

The NRC should include as part of the record of this proceeding and should consider three additional reports which address the current status of technical knowledge:

- "State of Geological Knowledge Regarding Potential Transport of High-Level Radioactive Waste From Deep Continental Repositories," Report of an Ad Hoc Panel of Earth Scientists, U.S. Environmental Protection Agency, June 1978.
- "Geologic Disposal of High-Level Radioactive Wastes -- Earth-Science Perspectives," Geological Survey Circular 779, U.S. Department of the Interior, 1978.
- "Subgroup Report on Alternative Technology Strategies for the Isolation of Nuclear Waste," Interagency Review Group on Nuclear Waste Management, October 1978, TID-28818 Draft.

Regarding the issue of institutional problems related to actually implementing the preferred technical approach in the real world, we call your attention to pages 87-88 of the IRG Report and particularly to the following (page 88):

Significant institutional difficulties are involved in: marshalling the resources and programs capable of accurately detailing site suitability criteria and establishment of standards; thoroughly investigating possible sites; accurately assessing site characteristics in light of the technical criteria; carrying out credible analyses of the risks; obtaining agreement on site selection; getting the facility approved and licensed; providing for careful construction and operation of the repository (including safe transportation and handling of the wastes); mitigating accidents and responding to repository failure if that occurs; and providing adequate, long-term monitoring. The level of difficulty of all these problems could increase with the size of the nuclear waste inventory and its rate of growth. Institutions that can cope on a small scale may fail as the demands placed on them multiply. The IRG believes that a more detailed analysis of logistical and other institutional problems which would arise out of attempting to manage wastes on the scale required should be undertaken.

In this proceeding, the Commission is addressing a matter of utmost importance to the health and safety of this and future generations. The task you face is a difficult one, and if we can be of additional assistance to you, please do not hesitate to call upon us.

Sincerely,

*Gus Speth, Acting Chairman*  
GUS SPETH  
Chairman

cc: Members of the Commission