



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

June 1, 1990

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

Dear Chairman Carr:

SUBJECT: REVIEW OF NRC STAFF COMMENTS ON WORKING DRAFT NO. 2 OF  
EPA'S HIGH-LEVEL WASTE DISPOSAL STANDARDS

In response to your request, the Advisory Committee on Nuclear Waste reviewed the above subject report (SECY-90-162) during its 20th meeting, May 24-25, 1990. Our comments follow.

Overall, we believe that the comments and recommendations of the NRC staff are thorough and comprehensive. If implemented by EPA, these suggestions would represent an important step toward resolving many of the problems cited by this Committee. The comments by the NRC staff are in general agreement with the remarks submitted to you in our letter of May 1, 1990. However, we offer the following clarifications on several key points:

1. One of our criticisms of the EPA Standards was that they should be organized using a hierarchical structure and that lower levels should not be more stringent or conservative than higher levels. The call (Comment 2.1) by the NRC staff for EPA to conduct performance assessments of real sites (which will undoubtedly prove to be more complex than the hypothetical sites evaluated to date), and (Comment 1) to "explicitly document the acceptable risk level that underlies the release limits in the standards" should provide the information necessary to resolve this criticism.
2. We also urged that EPA express its lower level standards in terms of annual risk limits and that the critical population group be defined. We wish to reiterate this recommendation since this is standard practice in evaluations of public exposures from all types of environmental radionuclide releases. When combined with limits on cumulative releases, this approach assures control of both individual and collective doses.

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3. Our recommendation that subsystem standards be used only as guidance was directed primarily to the limits within the EPA Standards on doses to members of the public arising through consumption of contaminated groundwater. This recommendation applies equally, however, to the 1,000 year groundwater travel time in 10 CFR Part 60. If, for example, waste containers that have a projected lifetime of 10,000 years could be developed, a more relaxed groundwater travel time might be acceptable.
4. Because of its major contribution to risk, we recommended that the EPA Standards be revised to include separate considerations for evaluating the impacts of human intrusion. The approaches suggested by the NRC staff (Comments 5 and 18) are fully compatible with our recommendations.

In addition, the steps recommended by the NRC staff will help resolve some of our basic concerns relative to the potential difficulties that might be encountered in attempting to confirm compliance of a proposed HLW repository facility with the probabilistic requirements of the EPA Standards.

In summary, we believe that the comments and suggestions of the NRC staff are in concert with our recommendations. If implemented, these suggestions would resolve our major concerns.

Sincerely,



Dade W. Moeller  
Chairman

Reference:

SECY-90-162, May 7, 1990, "Comments on Working Draft No. 2 of the U.S. Environmental Protection Agency's High-Level Waste Disposal Standards" (Predecisional)