



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

May 30, 1991

Mr. Robert M. Bernero, Director  
Office of Nuclear Material  
Safety and Safeguards  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Dear Mr. Bernero:

SUBJECT: REVIEW OF DRAFT SECY PAPER ON DEALING WITH UNCERTAINTIES

The Advisory Committee on Nuclear Waste has reviewed a copy of the draft SECY paper, "Staff's Approach for Dealing with Uncertainties in Implementing the EPA High-Level Waste Standards." As you know, the NRC staff is writing this paper in response to a request from the Commission for an explanation of the management of uncertainties during the process of evaluating compliance of a proposed repository with the probabilistic standards of the U.S. Environmental Protection Agency (EPA). During our 30th meeting, we had extensive discussions on this topic with members of your staff. The transcript of our April 24, 1991 meeting contains details of our comments and concerns.

The draft SECY paper and its accompanying document provide a broad view of the uncertainties that will need to be addressed during site characterization and the subsequent licensing process. Although the draft SECY paper includes discussion of methods to reduce uncertainties, we believe the staff has insufficiently clarified its role in the management of uncertainties that will remain after a license application is submitted. The draft SECY paper is also substantially silent on (1) the general program plan envisioned by the NRC staff for managing uncertainties, (2) the way in which rulemaking and similar protocols will be used to manage uncertainties that are likely to become important at the time of license hearings, and (3) the distinction between the role of the NRC and that of the U.S. Department of Energy in reducing and managing technical uncertainties. At the same time, the draft SECY paper includes extensive coverage of topics that could be interpreted as not being pertinent to the questions that need to be addressed. One example is the discussion of the benefits to be derived from the existing version of the EPA Standards. The discussion of collective versus individual dose limits should also be removed from the SECY paper.

Although the draft paper is partially responsive to the request of the Commission for a discussion of the management of uncertainties, there is a need to develop a program plan that (1) establishes guidelines for developing responses to a broad range of uncertainty

issues; (2) describes the bases for actions by the staff, for example, the method of balancing reliability and risk; and (3) serves as a guide to the preparation of additional reports that systematically explore the application of the overall plan to various parts of the licensing process, such as the approach to reconciling expert judgments that conflict. Such a plan would provide assurance of long-term regulatory consistency and completeness; in essence, it would serve as a "road map." The existing draft paper and our discussions with the NRC staff can readily serve as a beginning for the preparation of a program plan.

We believe that the staff is approaching the difficult and complex topic of uncertainty issues with growing insight. Although the present draft SECY paper represents an improvement over the earlier version, it demonstrates the need to organize the variety of issues to be addressed so that uncertainties are minimized and managed satisfactorily, leading to the formulation of defensible policies. Some parts of the draft paper, particularly portions of section 2 and much of section 3, could, after revision, be issued as a partial response to the Commission's request.

We look forward to working with the staff on these matters and to reviewing additional documents on this important topic as they are developed. We would be pleased to meet with you to elaborate on our comments and suggestions.

Sincerely,



Dade W. Moeller  
Chairman

Reference:

Draft SECY Paper, "Staff's Approach for Dealing with Uncertainties in Implementing the EPA High-Level Waste Standards," undated, received April 26, 1991.