



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

September 26, 1990

OFFICE OF THE
COMMISSIONER

MEMORANDUM FOR: James M. Taylor
Executive Director for Operations

Dennis K. Rathbun, Director
Congressional Affairs, GPA

FROM: James R. Curtiss *James R. Utin*

SUBJECT: DRAFT TESTIMONY FOR THE OCTOBER 2, 1990
HEARING ON THE FEDERAL PROGRAM FOR THE
DISPOSAL OF SPENT NUCLEAR FUEL AND HIGH-LEVEL
RADIOACTIVE WASTE

I have reviewed the subject testimony and have the following remarks:

- 1) I disagree with the staff's conclusion that the EPA HLW standards are, with "some refinement", acceptable and can be implemented. As I see it, there are two issues here: (i) Are the Environmental Protection Agency (EPA) standards overly stringent? and (ii) Can we apply a probabilistic standard of the type that EPA has promulgated?

With regard to the stringency of the standards, the views expressed at the recent National Academy of Sciences (NAS) Symposium, including the views of our own Advisory Committee on Nuclear Waste, the Nuclear Waste Technical Review Board, and many others, raise substantial questions about the stringency of the EPA standards that deserve to be evaluated. Indeed, it is for this very reason that we specifically requested in our recent comments on EPA's proposed draft #2 standards that EPA provide a more thorough explanation of the risk basis for its standards.¹ In my

¹ The EPA representative at the recent NAS Symposium, when pressed to explain the risk basis for the standards, resorted to the argument that the public is demanding that the standards be as stringent as they are, even though that may go far beyond what we do for other environmental risks, because nuclear waste is some of the "nastiest stuff on the face of the earth." While I don't dispute this latter comment, I would observe that EPA's logic here -- standards setting is justified by what the public demands, even though there may be a negligible relationship between what the public demands and the actual risk posed by a particular activity -- is an approach that we have tried to move

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judgment, until we have had an opportunity to evaluate this matter more carefully, I am of the view that we should reserve judgment on whether we believe the EPA standards are overly stringent. For this reason, I would redraft the testimony to emphasize the following points:

- (i) Substantial concerns have been raised recently about the stringency of the EPA standards, including the comments of the National Academy of Sciences, the Nuclear Waste Technical Review Board, and the Advisory Committee on Nuclear Waste.
 - (ii) Additionally, the NRC has recently asked EPA for a more detailed discussion of the basis for its standards, focusing on the underlying risk basis and comparing the approach taken here to standards established by EPA for other environmental risks.
 - (iii) For these reasons, the Commission is reserving judgment at this point on whether we believe the EPA standards are overly stringent, pending a more thorough evaluation of the results of the recent NAS Symposium, as well as EPA's response to our request for an explanation of the risk basis underlying its standard.
- 2) With regard to the feasibility of implementing the EPA standards, I am unable to reconcile the position that the staff takes in this testimony with the following observation from SECY-89-319, "Implementation of the U.S. Environmental Protection Agency's High-Level Waste Disposal Standards":

"Thus, while the language added by EPA to the rule and in the Supplementary Information [in 1985] tends to recognize qualitative considerations, an acceptable approach to implementation is still ambiguous and the governing standard is still the probabilistic numerical standard" (emphasis added).

At a minimum, we should attach a copy of SECY-89-319 to the testimony, wherein the staff presents a comprehensive discussion of the problems associated with implementation of the EPA standard, including all of the relevant historical references. But more to the point, I think we should be more forthcoming in discussing what is quite obvious in SECY-89-319: We have long had concerns with the ability to implement a probabilistic standard; we endeavored to resolve

away from in our recent comprehensive proposal to EPA on how we should approach standards setting for radiological risks.

the concerns in 1985, when EPA agreed to add some qualifying language to its standards and, based upon that, the staff advised the Commission that the standards could be implemented in a licensing review; the 1985 language did not get the job done and, consequently, we still face the situation today that we faced in 1982: "an acceptable approach to implementation is still ambiguous." I would redraft the testimony to reflect this fact.

- 3) In addition to commenting on the EPA standards, the NAS report also criticizes the NRC's subsystem performance criteria, on the ground that the criteria are unnecessarily constraining and inflexible. This comment, together with the extensive discussion at the Symposium on the question of whether the NRC criteria accurately reflect what is required to meet EPA's standards, deserve further consideration by the Commission as well. For this reason, I would add a section to the testimony indicating that the Commission intends to reexamine its subsystem performance criteria to ensure that -- (i) the overall performance objective implicit in these criteria is well-defined, transparently obvious to the public, and clearly based upon a defined health and safety objective; (ii) satisfying the NRC subsystem performance criteria is directly tied to satisfying the EPA standards; and (iii) sufficient flexibility is available in the application of these criteria to permit DOE the latitude to meet the overall performance objective through an appropriate balancing of engineered and geologic features.
- 4) Finally, I would observe that until the Commission has had an opportunity to evaluate the views expressed at the recent NAS Symposium, I think it is premature for the staff to forward "staff comments" to the NAS on this report. In fact, the policy issues that were raised at this Symposium are of sufficient importance that they deserve Commission attention. Accordingly, I fully support Commissioner Rogers' recent suggestion that the staff submit to the Commission an analysis of the policy, technical, and procedural issues raised at this Symposium and the staff's response to those issues. [I will have a similar request for the staff shortly, focusing in somewhat more detail on the specific issues that I think are particularly important.] Upon receipt of the staff's analysis, I believe this report and the related Symposium warrant a response directly from the Commission.

cc: Chairman Carr
 Commissioner Rogers
 Commissioner Remick
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