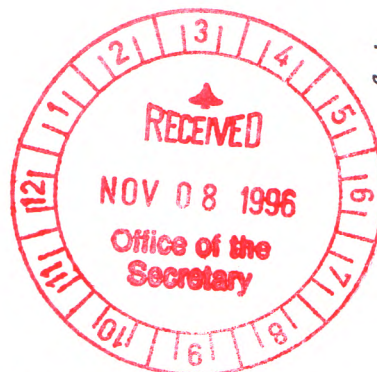


From: Timothy J. McCartin
To: WND1.WNP2.SECY
Date: 11/8/96 3:37pm
Subject: SA COMMENT



DSI-6

(12)

ATTACHED IS MY COMMENTS ON STRATEGIC ASSESSMENT ISSUE #6

HLW AND SPENT FUEL

acknowledged by *e-mail 11/20/96*

DEPARTMENT OF ENVIRONMENTAL REGULATION
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Comments on Strategic Assessment Issue:
6. High-Level Waste and Spent Fuel

Commentor: Tim McCartin, NMSS/DWM (415-6681)

My comments relate to the last paragraph of Section VI which seeks comment on activities the NRC might undertake to resolve issues.

As noted in the paper, there are a number of uncertainties that have significant potential to affect the licensing of a repository in an adverse manner (i.e., excessive delays and boundless speculation). I believe one approach which could improve the current program is the consideration of an aggressive approach to issue resolution (this subject is first introduced in Option 2). The licensing of the HLW repository contains issues upon which, given the current regulation and litigative environment, offer the potential for a licensing hearing that can be endless and filled with non-productive debate.

Why is this the case? Simply put, the calculation of an individual dose for long time periods (1,000 years or more) requires a number of very speculative assumptions with respect to human lifestyles, demographics, etc. in addition to uncertainties in understanding and estimating geologic, hydrologic, and the behavior of engineer barriers. While I believe that reasonable repository performance calculations can be performed to help support licensing decisions, I also believe that defending particular assumptions in a licensing environment could lead to boundless speculation if nothing has been done prior to the hearing to resolve issues. Resolving issues, prior to the licensing hearing, is of tantamount importance for having a meaningful, focussed licensing hearing.

A number of items may be appropriate for resolution consideration prior to a licensing hearing. For example: speculation on human lifestyles in the far future can lead to boundless speculation if no controls are in place to moderate speculation; litigation of every assumption and parameter in the performance assessment could lead to endless debate on minor points. Consistent with some of the thinking presented in Option 2, I would propose that NRC consider:

1) Adoption of Approaches for Determining Compliance

As part of issue resolution, the NRC could codify in regulation certain aspects of a performance calculation that have the potential to result in boundless speculation in the licensing hearing. Clearly, aspects of the critical group (location and lifestyles) and reference biosphere are highly speculative in any performance calculation. NRC could codify the approach to use consistent with a regulatory philosophy to protect public health and safety but not require an air-tight case that every possibility has been considered and will meet every requirement. The approach would allow for a reasoned approach appropriate to the concerns at Yucca Mountain that will limit speculation in key areas such as future societies. I believe this approach could be comparable to regulatory approaches in other areas such as transportation that makes use of a drop test as a surrogate for potential accident conditions but does not attempt to make the drop test cover all possible accident conditions.

2) Issue Resolution between DOE and NRC

NRC should look into approaches for resolving technical issues (e.g., climate change,

infiltration, volcanism) prior to licensing. If every aspect of the performance assessment is up for debate then excessive delays could result. If identification and documentation of issues and their resolution could be agreed to prior to licensing there is potential to improve significantly the licensing process and focus the hearing key issues worthy of the hearing.

While the above considerations are primarily addressed in Option 2, I believe that the current structure of the program is working very well. Therefore, I believe expanding Option 3 to include an aggressive look at issue resolution, as described in my two recommendations, is appropriate.