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NUCLEAR REGULATORY COMMISSION
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MEMORANDUM FOR: Raymond F. Fraley, Executive Director
Advisory Committee on Nuclear Waste

FROM: James M. Taylor
Executive Director
for Operations

SUBJECT: RECEIPT OF COMMENTS FROM THE ADVISORY COMMITTEE ON NUCLEAR
WASTE ON THE "THREE-BUCKET APPROACH"

Thank you for the May 30, 1991, letter from Dade W. Moeller to Chairman Carr, describing the views of the Advisory Committee on Nuclear Waste (ACNW) on the staff's quasi-deterministic approach for evaluating the impacts of unlikely events that might affect repository performance. The ACNW's general endorsement of the staff's concept is appreciated. The staff notes that there are two additional areas that the ACNW might wish to consider in its continuing study of the staff's proposal.

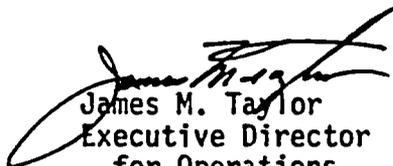
First, the May 30th letter notes that the probability limit for distinguishing between the second and third categories of scenarios ("unlikely" versus "very unlikely") is still under consideration by the ACNW. In the staff's comments to the U.S. Environmental Protection Agency, where the staff's approach was first suggested (August 27, 1990, letter from Robert E. Browning to Richard Guimond), it recommended a qualitative criterion. The relative merits of numerical versus qualitative criteria for distinguishing "unlikely" from "very unlikely" scenarios might merit additional consideration.

Second, the ACNW states its view that no scenario involving inadvertent human intrusion will be assigned to the most likely category of scenarios. The staff agrees, and notes that 10 CFR Part 60 currently limits the most likely category ("anticipated" in Part 60) to natural processes and events. However, during staff presentations to the ACNW, ACNW members suggested that human intrusion should be relegated to the third, "very unlikely," category. Such a categorization of human intrusion was proposed by the Commission when Part 60 was published for public comment (46 FR 35282-35283, July 8, 1981), but was revised when the final criteria of Part 60 were promulgated (48 FR 28199-28200, June 21, 1983). The existing criteria of Part 60 allow classification of human intrusion in either the second or the third category, dependent on the estimated likelihood of occurrence. The ACNW might wish to further consider the proper classification of human intrusion ("unlikely" or "very unlikely") and any need to reexamine the Commission's earlier decision.

Raymond F. Fraley

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The staff appreciates the ACNW's review and advice in this area, and we look forward to further interactions with the ACNW during its continuing study of the staff's proposal.



James M. Taylor
Executive Director
for Operations

cc: The Chairman
Commissioner Rogers
Commissioner Curtiss
Commissioner Remick
SECY