

April 26, 1995

Edward P. Regnier
U.S. Department of Energy, EH-232
1000 Independence Avenue
Washington, D.C. 20585

Subject: IAEA RADWASS Draft Safety Standard Geological Disposal of
Radioactive Waste

Dear Mr. Regnier:

The Nuclear Regulatory Commission staff has reviewed the International Atomic Energy Agency's (IAEA) draft safety standard, "Geological Disposal of Radioactive Waste." Our review is enclosed with this letter. Because of the limited time allowed and the press of other business, we were only able to accomplish a limited review.

It would be appreciated if more time were allotted for these reviews, and also to have some knowledge of what standards are presently under development, prior to our submitting comments. It would be greatly appreciated if we could discuss this after your return from Vienna.

Sincerely,

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Norman A. Eisenberg
Performance Assessment & Hydrology Branch
Division of Waste Management
Office of Nuclear Material Safety
and Safeguards

Enclosure:
As stated

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Comments on "Geologic Disposal of Radioactive Waste"
Safety Series No. 111-S-4

We have no general comments.

Specific Comments:

1. Section 102. Last sentence: Replace "proven" with "demonstrated". It is likely that few things will be "proven" with regard to long-term disposal.

2. Sections 504 and 505. Together these sections mandate an overall risk criterion for determining repository safety and require that the assessment consider the "entire disposal system". The language should be loosened somewhat to allow for the derived standards currently in use in the U.S. That is current EPA standards call for a probabilistic limit on the normalized release of radionuclides over 10,000 years. The following language added to Section 505 might work: "A derived standard and an assessment demonstrating compliance with it may be substituted by a Member State, provided that adequate protection of the public health and safety is assured and that adequate safety is assured by some manifestation of a multiple barrier approach."

3. Section 706. First sentence: Replace "most likely vehicle" by "a common vehicle" or "a likely means". For an unsaturated site like Yucca Mountain, migration of radionuclides in gas phase is a significant, if not dominant, factor.

4. Section 1001. Item (b): Not all disposal concepts would require backfilling deposition holes and disposal cavities; e.g. salt repositories may allow these openings to creep shut with good results. Suggest adding "potential" right after "(b)".

Enclosure