



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

October 18, 1989

The Honorable Kenneth M. Carr
Chairman
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Chairman Carr:

SUBJECT: DRAFT STAFF TECHNICAL POSITION ON THE DESIGN OF EROSION PROTECTION
COVERS FOR STABILIZATION OF URANIUM MILL TAILINGS SITES

During its 14th meeting, October 11-13, 1989, the Advisory Committee on Nuclear Waste met with representatives of the NRC staff to discuss the subject Draft Technical Position (referenced). On the basis of these discussions, we offer the following comments:

1. The Draft Technical Position being proposed by the NRC staff acknowledges that the procedures for prevention of erosion (described in the position) may increase the probability for increased infiltration of water which, in turn, could lead to groundwater contamination. While the NRC staff cautions that "The decision to use a particular reclamation strategy should consider all the possible failure modes with respect to all applicable EPA and NRC standards," they also state that "The 'systematic' process to address certain design aspects, other than the surface water erosion considerations for cover designs, is beyond the scope of this Staff Technical Position and is, therefore, not addressed." In addition, they state that "addressing only the concerns and criteria detailed in this position may not be sufficient to address the other features necessary to comply with other applicable regulations and standards."

We find this limited approach disturbing and unsatisfactory. We believe it would be better to employ a systems approach to the problem of stabilizing uranium mill tailings, wherein all related aspects of regulatory concerns would be taken into consideration. Alternatively, the Technical Position should identify and limit those activities pertinent to stabilization that could result in violations of other regulations. We believe the Technical Position should be rewritten to reflect these comments.

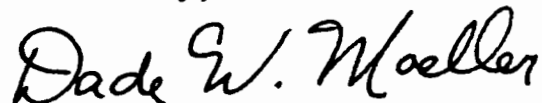
2. There is inadequate justification for the exemptions that the NRC staff is willing to grant for difficulties in meeting the standards for the control of uranium mill tailings. For example, where designing for the Probable Maximum Flood or Probable Maximum Precipitation is "impracticable," the staff will accept the Standard Project Flood. Where the provision of combined stable soil top slopes and/or rock-protected side slopes is "excessively costly," other approaches may be acceptable. We believe that additional discussion of and justification for these positions needs to be provided.

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3. Lastly is the matter of performance assessment and/or the determination of compliance with the NRC regulations. For example, the Technical Position states that the limit of 20 picocuries per square meter per second for radon-222 releases is for a value "averaged over the entire surface of the disposal site and over at least a one-year period, for the control period of 200 to 1000 years." The criteria for determining the numbers and frequency of the required measurements should be specified. Additional discussion and clarification of this and other aspects of the Technical Position to ensure compliance with NRC regulations are needed.

In summary, while the Draft Technical Position provides a considerable amount of explanation with respect to details of the various alternatives for the designs of covers for the control of uranium mill tailings, certain fundamental aspects of the philosophy and justification for the approaches being taken are lacking. We believe that additional discussion of these broader aspects is necessary and justified.

Sincerely,



Dade W. Moeller
Chairman

Reference:

U.S. Nuclear Regulatory Commission, "Draft Staff Technical Position, Design of Erosion Protection Covers for Stabilization of Uranium Mill Tailings Sites," dated August, 1989 (Predecisional)