

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

February 12, 1991

Mr. James M. Taylor  
Executive Director for Operations  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Dear Mr. Taylor:

SUBJECT: STANDARD REVIEW PLAN FOR REVIEWING SAFETY ANALYSIS  
REPORTS FOR DRY METALLIC SPENT FUEL STORAGE CASKS

During the 370th meeting of the Advisory Committee on Reactor Safeguards, February 7-9, 1991, we considered a proposed Standard Review Plan (SRP) for Reviewing Safety Analysis Reports for Dry Metallic Spent Fuel Storage Casks. Our Subcommittee on Defueling and Fuel Pool Storage discussed this matter with the staff during a meeting on January 29, 1991. During our review we also had the benefit of the documents referenced.

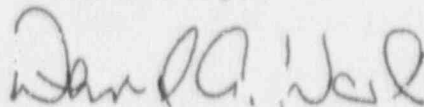
The staff proposes to publish this document as a NUREG. We concur that it will provide useful guidance to those reviewing cask designs and to those who may submit designs for approval. We have the following comments:

1. The proposed SRP is a careful, thorough, and detailed description of a plausible review process. We did not identify any important safety question that was not explored.
2. The relationship of the proposed SRP to Regulatory Guide 3.61, "Standard Format and Content for a Topical Safety Analysis Report for a Spent Fuel Dry Storage Cask," appears to be unusual. The content of this regulatory guide more nearly resembles design criteria found in Appendix A to 10 CFR Part 50 than it does a typical regulatory guide. A typical regulatory guide gives much more specific guidance than does Regulatory Guide 3.61. Indeed, the proposed SRP resembles many existing regulatory guides more than Regulatory Guide 3.61 does. However, since applicants will have access to the SRP, perhaps it can serve as both a regulatory guide and a standard review plan.
3. In some areas the proposed SRP appears to be overly conservative. For example, the reviewer is to give no "credit for burnup nor the presence of neutron poisons formed during irradiation" in criticality calculations (p. 6-3). Thermal loading calculations are to "reflect the worst credible

combinations" of possible thermal loads (p. 4-2). Stress cycles due to "periodic precipitation of snow and possible formation of ice" are to be considered (p. 2-7). "The long term effect of these stress cycles should be addressed ..." (p. 2-7). For accident conditions "instantaneous release of 100 percent of the gaseous inventory should be assumed" (p. 7-4). There are others, but these are representative examples. We recommend language in the proposed SRP that encourages reviewer flexibility in considering alternatives in these areas.

4. In the version we examined there are some statements that would benefit from clarification. These statements were identified to the staff in the course of our review.

Sincerely,



David A. Ward  
Chairman

References:

1. U.S. Nuclear Regulatory Commission, Proposed NUREG, "Standard Review Plan for Reviewing Safety Analysis Reports for Dry Metallic Spent Fuel Storage Casks," transmitted by memorandum dated September 6, 1990 from John P. Roberts, NMSS, to William Kerr, ACRS
2. U.S. Nuclear Regulatory Commission, Regulatory Guide 3.61, "Standard Format and Content for a Topical Safety Analysis Report for a Spent Fuel Dry Storage Cask," February 1989