



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

April 22, 1999

Dr. William D. Travers
Executive Director for Operations
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Dear Dr. Travers:

SUBJECT: STATUS OF RESOLUTION OF STEAM GENERATOR TUBE INTEGRITY ISSUES

During the 461ST meeting of the Advisory Committee on Reactor Safeguards, April 7-10, 1999, we reviewed the staff and industry activities associated with steam generator tube integrity issues. During our review, we had the benefit of discussions with representatives of the NRC staff and the Nuclear Energy Institute (NEI), and of the documents referenced.

Conclusions and Recommendations

1. The NRC staff and the industry have several unresolved technical and regulatory differences associated with ensuring steam generator tube integrity. The staff and industry should continue to work toward the resolution of these differences.
2. The staff is in the process of resolving the differing professional opinion (DPO) issues associated with steam generator tube integrity. We plan to review the staff's resolution of the DPO issues after reconciliation of public comments.

Discussion

We last reviewed the issues associated with steam generator tube integrity during our 444th meeting on September 3-5, 1997, and provided a report to the Commission dated September 15, 1997. At that time, we agreed with the staff's decision not to proceed with rulemaking and recommended that a proposed generic letter and draft Regulatory Guide (DG) 1074, "Steam Generator Tube Integrity," be issued for public comment. We believed that the specifications contained in the proposed generic letter and DG-1074 would improve the integrity of steam generator tubes by having licensees do condition monitoring, operational assessment, and qualification of nondestructive examinations.

In December 1997, the industry committed to implement, on a voluntary basis, NEI 97-06, "Steam Generator Program Guidelines." The programmatic approach of NEI 97-06 is

conceptually similar to that specified in DG-1074. Consistent with Direction Setting Issue 13, "The Role of Industry," the staff held discussions with the industry concerning resolution of the differences between NEI 97-06 and DG-1074, and the establishment of an appropriate regulatory framework for implementing NEI guidelines. Anticipating resolution of these differences through additional interactions with the industry, the staff postponed the issuance of the proposed generic letter and withdrew the associated advance notice of proposed rulemaking.

The staff and industry now plan to resolve the remaining technical differences, such as the definition of the differential pressure on a steam generator tube, the choice of an accident induced leakage limit, the definitions of tube burst and tube rupture, and the risk issues associated with probabilistic structural criteria. Following the resolution of these differences, NEI plans to propose to the staff performance-based technical specifications for ensuring steam generator tube integrity. The staff plans to review the NEI proposal and prepare a safety evaluation report, which would allow licensees to request license amendments to modify their technical specifications. We plan to review the results of these efforts.

ACRS member Dr. William J. Shack did not participate in the Committee's deliberations on this matter.

Sincerely,



Dana A. Powers
Chairman

References:

1. SECY-98-248, Memorandum dated October 28, 1998, from William D. Travers, Executive Director for Operations, NRC, for the Commissioners, Subject: Proposed Generic Letter 98-XX, "Steam Generator Tube Integrity."
2. Letter dated December 16, 1997, from Ralph E. Beedle, Nuclear Energy Institute, to L. Joseph Callan, Executive Director for Operations, NRC, Subject: NEI 97-06, "Steam Generator Program Guidelines."
3. ACRS letter dated October 10, 1997, from R. L. Seale, Chairman, ACRS, to L. Joseph Callan, Executive Director for Operations, NRC, Subject: Resolution of the Differing Professional Opinion Related to Steam Generator Tube Integrity.
4. ACRS report dated September 15, 1997, from R. L. Seale, Chairman, ACRS, to Shirley Ann Jackson, Chairman, NRC, Subject: Proposed Generic Letter and Draft Regulatory Guide DG-1074 Concerning Steam Generator Tube Integrity.
5. ACRS report dated June 20, 1997, from R. L. Seale, Chairman, ACRS, to Shirley Ann Jackson, Chairman, NRC, Subject: Proposed Regulatory Approach Associated With Steam Generator Integrity.
6. ACRS letter dated November 20, 1996, from T. S. Kress, Chairman, ACRS, to James M. Taylor, Executive Director for Operations, NRC, Subject: Proposed Rule on Steam Generator Integrity.