



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

September 15, 1997

The Honorable Shirley Ann Jackson  
Chairman  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

Dear Chairman Jackson:

SUBJECT: PROPOSED GENERIC LETTER AND DRAFT REGULATORY GUIDE DG-1074 CONCERNING STEAM GENERATOR TUBE INTEGRITY

During the 444th meeting of the Advisory Committee on Reactor Safeguards, September 3-5, 1997, we met with representatives of the NRC staff and the Nuclear Energy Institute (NEI) to discuss the proposed generic letter related to steam generator tube integrity and associated Regulatory Guide. Our Subcommittees on Materials and Metallurgy and on Severe Accidents met on August 26-27, 1997, to discuss the subject matter. We also had the benefit of the documents referenced.

The staff requests in the proposed generic letter that licensees change the technical specifications related to their steam generator tube integrity programs and reactor coolant system activity. The staff stated that the intent of the requested changes is to ensure that steam generator tube integrity is maintained consistent with the licensing basis and to provide a consistent and enforceable standard for regulating steam generator tube integrity. The draft Regulatory Guide DG-1074, "Steam Generator Tube Integrity," provides guidance for developing acceptable steam generator tube integrity programs.

Recommendation

We believe that the specifications contained in the proposed generic letter and DG-1074 will provide improvements by requiring condition monitoring (as-found condition of tubes), operational assessment (assurance of tube integrity between inspections), and nondestructive examination qualification, and will be consistent with programs that have already been implemented by many utilities. Licensee technical specifications should be amended to incorporate these requirements. We believe that the proposed generic letter and DG-1074 should be issued for public comment. We believe that

the amended technical specifications will establish regulatory consistency throughout the industry and provide enforceable performance criteria.

### Discussion

The guidance proposed in DG-1074 is largely performance based and focuses on defining the characteristics of effective monitoring, assessment, and qualification programs. Such guidance should provide sufficient flexibility for the industry to introduce new inspection technologies and use updated information on steam generator tube degradation rates and mechanisms. This guidance also provides a regulatory framework for the introduction of alternate repair criteria.

Because the use of alternate repair criteria could potentially lead to increased susceptibility to thermally induced tube failures during certain severe-accident sequences, licensees wanting to introduce such criteria will be required to perform risk assessments. We support this general position, but note that the specific guidance for performing these assessments will be contained in draft Regulatory Guide DG-1073, "An Approach to Plant-Specific, Risk-Informed Decision Making: Induced Steam Generator Tube Rupture," which is being developed.

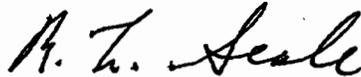
The staff has adequately addressed the issues raised during our previous meetings that are relevant to the proposed generic letter and DG-1074. We would like, however, to review the formal response to the Differing Professional Opinion, and the proposed resolution of Generic Safety Issue 163, "Multiple Steam Generator Tube Leakage," before they are issued or reviewed by the Commission. Because it is still under development, we cannot determine whether DG-1073 will adequately address the issues we have raised regarding risk assessment under severe accidents.

The Electric Power Research Institute, NEI, and PWR Owners Groups have developed industry guidelines for implementing steam generator tube integrity programs. This industry initiative is intended to strengthen existing program guidelines related to enhanced non-destructive examination, condition monitoring, and operational assessment. Since no documentation describing these guidelines has been made available to us, we cannot comment on its relation to the guidance proposed by the staff.

A representative of NEI stated that NEI is anxious to meet with the NRC staff to gain a better understanding of the staff's approach and schedule, and to resolve any differences between the NRC and industry guidelines. The NRC and NEI staffs should try to integrate the NRC and industry guidelines into a consistent and supportive framework. This effort should not delay issuance of the proposed generic letter and DG-1074 for public comment.

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

Sincerely,



R. L. Seale  
Chairman

References:

1. Memorandum dated August 12, 1997, from Thomas T. Martin, Office of Nuclear Reactor Regulation, NRC, to John Larkins, Executive Director, ACRS, Subject: ACRS Review of the Proposed Steam Generator Generic Letter and Draft Regulatory Guide DG-1074, "Steam Generator Tube Integrity"
2. Report 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
3. Memorandum dated May 23, 1997, from L. Joseph Callan, Executive Director for Operations, NRC, to the Commissioners, Subject: Steam Generator Rulemaking
4. Memorandum dated June 27, 1997, from L. Joseph Callan, Executive Director for Operations, NRC, to the Commissioners, Subject: J. Hopenfeld's Differing Professional Opinion Concerning Voltage-Based Repair Criteria for Steam Generator Rulemaking
5. 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. Letter dated July 15, 1997, from L. Joseph Callan, Executive Director for Operations, NRC, to Robert L. Seale, Chairman, ACRS, Subject: Proposed Regulatory Approach Associated with Steam Generator Integrity
7. U. S. Nuclear Regulatory Commission Draft Regulatory Guide DG-1570, "Risk Assessment of Severe Accident-Induced Steam Generator Tube Rupture," May 1997
8. U. S. Nuclear Regulatory Commission Regulatory Analysis, "Regulatory Approach for Steam Generator Tube Integrity," May 1997

