



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

December 2, 1999

The Honorable Richard A. Meserve
Chairman
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Dear Chairman Meserve:

SUBJECT: SUMMARY REPORT - FOUR HUNDRED SIXTY-SEVENTH MEETING OF
THE ADVISORY COMMITTEE ON REACTOR SAFEGUARDS, NOVEMBER
4-6, 1999, AND OTHER RELATED ACTIVITIES OF THE COMMITTEE

During its 467th meeting, November 4-6, 1999, the Advisory Committee on Reactor Safeguards (ACRS) discussed several matters and completed the following reports and letters as noted below:

REPORTS

- Proposed Revision 3 to Regulatory Guide 1.160 (DG-1082), "Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants" (Report to Richard A. Meserve, Chairman, NRC, from Dana A. Powers, Chairman, ACRS, dated November 12, 1999)
- Proposed Final Design Certification Rule and Changes to the Design Control Document Associated with AP600 Design (Report to Richard A. Meserve, Chairman, NRC, from Dana A. Powers, Chairman, ACRS, dated November 12, 1999)
- Implementing a Framework for Risk-Informed Regulation in the Office of Nuclear Material Safety and Safeguards (Report to Richard A. Meserve, Chairman, NRC, from Dana A. Powers, Chairman, ACRS, and B. John Garrick, Chairman, ACNW, dated November 17, 1999)

LETTERS

- Draft Regulatory Guide DG-1093, "Guidance and Examples for Identifying 10 CFR 50.2 Design Bases" (Letter to William D. Travers, Executive Director for Operations, NRC, from Dana A. Powers, Chairman, ACRS, dated November 12, 1999)

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- Spent Fuel Fires Associated with Decommissioning (Letter to William D. Travers, Executive Director for Operations, NRC, from Dana A. Powers, Chairman, ACRS, dated November 12, 1999)
- Proposed Resolution of Generic Safety Issue (GSI)-148, "Smoke Control and Manual Fire-Fighting Effectiveness" (Letter to William D. Travers, Executive Director for Operations, NRC, from Dana A. Powers, Chairman, ACRS, dated November 12, 1999)

HIGHLIGHTS OF KEY ISSUES CONSIDERED BY THE COMMITTEE

1. Proposed Revisions to Regulatory Guide 1.160 (DG-1082), and Section 11 of NUMARC 93-01, "Assessment of Risk Resulting From Performance of Maintenance Activities"

The Committee heard presentations by and held discussions with representatives of the NRC staff and the Nuclear Energy Institute (NEI) regarding the proposed Revision 3 to Regulatory Guide 1.160 (DG-1082), "Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants," and the draft revision to Section 11 to NUMARC 93-01, "Industry Guidelines for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants."

The NRC staff stated that the proposed Revision 3 to Regulatory Guide 1.160 is intended to present guidance for implementing the provisions of 10 CFR 50.65(a)(4). The intent of paragraph (a)(4) of the rule is to require licensees to perform assessments before maintenance activities are performed on structures, systems, and components (SSCs) and to manage risk that may result from such activities. The proposed Revision 3 to the regulatory guide presents an acceptable method for assessing and managing the increase in risk that may result from nuclear power plant maintenance activities. The staff plans to endorse revised Section 11 of NUMARC 93-01.

Representatives of NEI stated that they have prepared a final draft revision to Section 11 of NUMARC 93-01 that incorporates the NRC staff's comments. NEI and NRC staff will resolve some minor issues expeditiously.

Conclusion

The Committee provided a report on this matter to NRC Chairman Meserve, dated November 12, 1999.

2. NRC Safety Research Program Report to the Commission

The Committee discussed a preliminary draft of a proposed ACRS/Year 2000 report to the Commission on the NRC Safety Research Program. The ACRS Subcommittee on the Safety Research Program is scheduled to hold a meeting on December 1, 1999, to continue discussion of this matter.

Conclusion

The Committee plans to continue its discussion of this matter at the December 2-4, 1999, ACRS meeting.

3. Proposed Changes to the Design Control Document Associated With the AP600 Design

The Committee heard presentations by and held discussions with representatives of the NRC staff and Westinghouse Electric Company regarding proposed changes to the AP600 Design Control Document. Among the changes were the redesign of a plate above a containment sump screen and an increase in the calculated concentration of hydrogen in the containment after a loss-of-coolant accident. The Committee, representatives of the staff, and Westinghouse discussed the effects of the redesigned plate on the potential for containment sump screen blockage and the effects of higher hydrogen concentration on plant risk.

Conclusion

The Committee provided a report on this matter to NRC Chairman Meserve, dated November 12, 1999.

4. Spent Fuel Fire Risk Associated With Decommissioning

The Committee reviewed a draft technical study prepared by the NRC staff on the risk from a spent fuel pool (SFP) accident at decommissioning plants. Representatives of the NRC staff, NEI, and two members of the public (Mr. Paul Blanch and Mr. Peter Atherton) presented their views on this matter. The draft technical study addresses a deterministic and a probabilistic evaluation of SFP heatup, which includes fire protection (zirconium fire) and potential for criticality.

The staff acknowledges that a risk assessment of the SFP will increase the efficiency and effectiveness of decommissioning requirements. The staff formed a technical working group to assess the existing technical information on risk from SFP accidents at decommissioning plants.

Conclusion

The Committee provided a letter on this matter to the NRC Executive Director for Operations, dated November 12, 1999.

5. Status of Resolution of Issues Associated With the Design-Bases Information

The Committee heard presentations by and held discussions with representatives of the NRC staff and NEI concerning the status of resolution of issues associated with draft Regulatory Guide DG-1093, "Guidance and Examples for Identifying 10 CFR 50.2 Design Bases." The Committee considered the staff's proposed resolution of issues related to redundancy and diversity; the various modes of operation such as (1) full-power, low-power, and shutdown operations, and accident conditions; (2) design bases values such as piping design pressure, temperature, and material; and (3) testing and inspection. The Committee also discussed the revised Appendix B to NEI 97-04, "Design Bases Program Guidelines," which the staff proposes to endorse, without exception, in DG-1093 as an acceptable method to meet NRC requirements.

Conclusion

The Committee provided a letter on this matter to the NRC Executive Director for Operations, dated November 12, 1999.

RECONCILIATION OF ACRS COMMENTS AND RECOMMENDATIONS

- The Committee discussed the response from the NRC Executive Director for Operations (EDO) dated October 8, 1999, to the ACRS comments and recommendations included in the ACRS report dated September 13, 1999, concerning an interim letter related to the license renewal of the Oconee Nuclear Station.

The Committee decided that it was satisfied with the EDO's response.

- The Committee discussed the response from the EDO dated October 25, 1999, to ACRS comments and recommendations included in the ACRS letter dated September 17, 1999, concerning the proposed final rule on alternative source term at operating reactors, draft regulatory guide, and standard review plan section.

The Committee decided it was satisfied with the EDO's response.

- The Committee discussed the response from the EDO dated October 29, 1999, to ACRS comments and recommendations included in the ACRS letter dated September 16, 1999, concerning the proposed Revision 1 to Regulatory Guide 1.78 (DG-1087), evaluating the habitability of a nuclear power plant control room during a postulated hazardous chemical release.

The Committee decided that it was partially satisfied with the EDO's response. With regard to the issue of the NRC staff documenting evidence of the validity and capability of computer codes endorsed in its regulatory guides, the Committee will continue discussion on this matter.

- The Committee discussed the response from the EDO dated October 21, 1999, to ACRS comments and recommendations included in the ACRS letter dated September 17, 1999, regarding proposed resolution of GSI-145, "Actions to Reduce Common Cause Failures."

The Committee decided it was satisfied with the EDO's response.

- The Committee discussed the response from the EDO dated October 12, 1999, to ACRS comments and recommendations included in the ACRS letter dated September 13, 1999, regarding Proposed Final Revision 3 to Regulatory Guide 1.105, "Setpoints for Safety-Related Instrumentation."

The Committee decided it was satisfied with the EDO's response.

- The Committee discussed the response from the EDO dated October 22, 1999, to ACRS comments and recommendations included in NUREG-1635, Vol. 2, "Review and Evaluation of the Nuclear Regulatory Commission's Safety Research Program."

The Committee decided to continue its discussion of the adequacy of the EDO's response during its discussion of the FY2000 report to the Commission on the NRC Safety Research Program.

EDO FOLLOW-UP ITEMS

- The Committee plans to review the staff's progress in assessing the risks associated with spent fuel pools for decommissioning plants.
- The Committee plans to review the proposed final version of Draft Regulatory Guide DG-1093, "Guidance and Examples for Identifying 10 CFR 50.2 Design Bases," following the reconciliation of public comments.

- The ACRS and ACNW plan to review the staff's progress in implementing a framework for risk-informed regulation in the Office of Nuclear Material Safety and Safeguards at future meetings.
- The Committee was partially satisfied with the EDO's response dated October 29, 1999, to ACRS comments and recommendations included in its September 16, 1999 letter, concerning the proposed Revision 1 to Regulatory Guide 1.78 (DG-1087). The Committee plans to continue its discussion of the issue raised in its letter that the staff should document evidence of the validity and the capability of computer codes endorsed in regulatory guides such as the HABIT code endorsed in the proposed Revision 1 to Regulatory Guide 1.78.

OTHER RELATED ACTIVITIES OF THE COMMITTEE

During the period from September 30, 1999 through November 3, 1999, the following Subcommittee meeting was held:

- Planning and Procedures - November 3, 1999

The Planning and Procedures Subcommittee discussed proposed ACRS activities, practices, and procedures for conducting Committee business and organizational and personnel matters relating to ACRS and its staff.

PROPOSED SCHEDULE FOR THE 468TH ACRS MEETING

The Committee agreed to consider the following during the 468th ACRS Meeting:

Proposed Final Amendment to 10 CFR 50.55a Regarding Elimination of the 120-Month ISI and IST Programs Update Requirement

Briefing by and discussions with representatives of the NRC staff, American Society of Mechanical Engineers (ASME), and the Nuclear Energy Institute (NEI) regarding the proposed final amendment to 10 CFR 50.55a associated with the elimination of the requirement for updating the inservice inspection (ISI) and inservice testing (IST) programs every 120 months, as well as a proposed Commission paper related to this matter.

Low-Power and Shutdown Operations Risk Insights Report

Briefing by and discussions with representatives of the NRC staff and its contractors regarding the low-power and shutdown operations risk insights report, as well as a proposed Commission Paper related to this matter.

License Renewal Application for Calvert Cliffs Nuclear Power Plant and the Associated Safety Evaluation Report

Briefing by and discussions with representatives of the NRC staff regarding Baltimore Gas and Electric Company's application for renewal of Calvert Cliffs Units 1 and 2 licenses and the associated NRC staff's Safety Evaluation Report.

Proposed Resolution of Generic Safety Issue (GSI)-190 and GSI-166

Briefing by and discussions with representatives of the NRC staff and its contractors regarding the proposed resolution of GSI-190, "Fatigue Evaluation of Metal Components for 60-Year Plant Life," and GSI-166, "Adequacy of Fatigue Life of Metal Components."

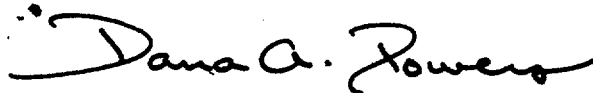
A Technique for Human Event Analysis (ATHEANA)

Briefing by and discussions with representatives of the NRC staff regarding the ATHEANA process, use of ATHEANA process to evaluate selected operational events, and related matters.

NRC Safety Research Program Report to the Commission

Discussion of the proposed final report to the Commission on the NRC Safety Research Program.

Sincerely,

A handwritten signature in black ink that reads "Dana A. Powers". The signature is fluid and cursive, with a large initial "D" and a stylized "P".

Dana A. Powers
Chairman