



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

SL-0413

PDR 3/26/94

January 7, 1994

The Honorable Ivan Selin
Chairman
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Chairman Selin:

SUBJECT: SUMMARY REPORT - FOUR HUNDRED FOURTH MEETING OF THE
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS, DECEMBER 9-
11, 1993, AND OTHER RELATED ACTIVITIES OF THE COMMITTEE

During its 404th meeting, December 9-11, 1993, the Advisory
Committee on Reactor Safeguards (ACRS) discussed several matters
and completed the following reports:

Reports

Thermo-Lag Fire Barriers (Report to Chairman Selin from
J. Ernest Wilkins, Jr., ACRS Chairman, dated December 16,
1993)

Electric Power Research Institute Advanced Light Water
Reactor Utility Requirements Document -- Volume III Passive
Plants (Report to Chairman Selin from J. Ernest Wilkins,
Jr., ACRS Chairman, dated December 23, 1993)

Diversity in the Method of Measuring Reactor Pressure Vessel
Water Level in the Advanced and Simplified Boiling Water
Reactor Designs (Report to James M. Taylor, Executive Direc-
tor for Operations, from J. Ernest Wilkins, Jr., ACRS Chair-
man, dated December 16, 1993)

Individual Plant Examination Program (Report to James M.
Taylor, Executive Director for Operations, from J. Ernest
Wilkins, Jr., ACRS Chairman, dated December 16, 1993)

ACRS Review of the Advanced Boiling Water Reactor Final
Safety Evaluation Report (Report to Chairman Selin from
J. Ernest Wilkins, Jr., ACRS Chairman, dated December 15,
1993)

Proposed Amendments to 10 CFR Part 73 to Protect Against
Malevolent Use of Vehicles at Nuclear Power Plants (Report
to Chairman Selin from J. Ernest Wilkins, Jr., ACRS Chair-
man, dated December 10, 1993)

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Diesel Generator Accelerated Testing (Trigger Value Approach) (Report to Chairman Selin from J. Ernest Wilkins, Jr., ACRS Chairman, dated December 14, 1993)

Memoranda

Proposed Supplement 6 to Generic Letter 89-10, "Information on Scope Grouping, Prioritization, Schedule, and Public Questions" (Memorandum to L. Joseph Callan, Acting Associate Director for Projects, NRR, from John T. Larkins, Executive Director, dated December 21, 1993) Consistent with the Committee's decision, Dr. Larkins informed Mr. Callan that the Committee decided not to review the proposed Supplement 6 to Generic Letter 89-10.

Draft Rulemaking Package Eliminating the Emergency Planning Annual Exercise (Memorandum to Warren Minners, Director, Division of Safety Issue Resolution, RES, from John T. Larkins, Executive Director, dated December 20, 1993) Consistent with the Committee's decision, Dr. Larkins informed Mr. Minners that the Committee decided to postpone its review of the subject matter until after the public comments have been reconciled by the staff.

HIGHLIGHTS OF KEY ISSUES CONSIDERED BY THE COMMITTEE

1. Thermo-Lag Fire Endurance Testing Program

The Committee was briefed by and held discussions with representatives of the Tennessee Valley Authority (Watts Bar Nuclear Power Plant) on the TVA test program on electrical raceway fire barrier systems. The Committee was also briefed by and held discussions with representatives of NUMARC and NRC on the technical and licensing rationale for the qualification of Thermo-Lag materials for use in one- and three-hour fire ratings as required by Appendix R. The technical differences between NUMARC and the NRC staff on the NUMARC Thermo-Lag fire barrier test program was discussed, including the thermocouple placement on cable tray test specimens, the plant specific applicability of generic test results, and post-test evaluation of the cable condition.

Conclusion

The Committee provided a report on this matter dated December 16, 1993, to Chairman Selin.

2. Extended Station Blackout Event at Narora Atomic Power Station (India)

The Committee was briefed by and held discussions with representatives of NRR on the lessons learned from the severe turbine building fire that resulted in an extended station blackout on March 31, 1993, at the Narora Atomic Power Station (India).

Conclusion

No Committee action was taken. ACRS members expressed an interest in obtaining more information on the lessons learned from the event if more information becomes available.

3. ABWR and SBWR Water-Level Instrumentation Diversity

The Committee was briefed by and held discussions with representatives of NRR and GE Nuclear Energy on a draft Commission Paper on the need for diversity in the methods of measuring reactor pressure vessel water level in the ABWR and SBWR plant designs.

Conclusion

The Committee provided a report on this matter dated December 16, 1993, to Mr. James M. Taylor, Executive Director for Operations.

4. ITAAC Process and Certified Design Material for ABWR

The Committee was briefed by and held discussions with representative of GE on the anticipated uses of the inspections, tests, analyses, and acceptance criteria (ITAAC) process, including implementation processes and responsibilities, Tier 1 development process, and ITAAC verification process. The Committee was also briefed on the basis for a Design Certification Material approach and the ABWR Design Certification Materials of instrumentation and control systems, piping design, human factors engineering, and radiation protection.

Conclusion

The Committee will continue deliberation on this subject during the next meeting.

5. Report from the Subcommittee on Advanced Boiling Water Reactors

Mr. Carlyle Michelson, Chairman of the Advanced Boiling Water Reactors Subcommittee, reported on the November 17, 1993 meeting to continue its review of the NRC staff's Final Safety Evaluation Report (FSER) for the GE ABWR design. The Committee discussed the schedule for completing its review of the FSER for the ABWR. The Committee expects to consider a draft report during the 407th ACRS meeting in March 1994, and, barring untimely receipt of needed information or completion of the FSER revision, to issue a final report in April 1994.

Conclusion

The Committee provided a report on this matter dated December 15, 1993, to Chairman Selin.

6. Individual Plant Examination Program

The Committee was briefed by and held discussions with representatives of the Office of Nuclear Regulatory Research on the status of the Individual Plant Examination (IPE) program, the IPE Database and Insights program, and the concept of generic issue resolution by the IPE and the Individual Plant Examination of External Events programs.

Conclusion

The Committee provided a report on this matter dated December 16, 1993, to Mr. James M. Taylor, EDO.

7. Electric Power Research Institute (EPRI) Advanced Light Water Reactor (ALWR) Utility Requirements Document for Passive Plants

Mr. Charles J. Wylie, Chairman of the Improved Light Water Reactors Subcommittee, reported on the subcommittee activities related to the review of the NRC staff's Final Safety Evaluation Report for Volume III of the EPRI passive LWR Utility Requirements document.

Conclusion

The Committee provided a report on this matter dated December 20, 1993, to Chairman Selin.

8. Safeguards and Security Requirements

The Committee was briefed by and held discussions with Robert M. Bernero, Director, Office of Nuclear Material Safety and Safeguards (NMSS), and Mr. Robert F. Burnett, Director, Division of Fuel Cycle Safety and Safeguards, on the proposed Commission paper SECY-93-270, "Proposed Amendments to 10 CFR Part 73 to Protect Against Malevolent Use of Vehicles at Nuclear Power Plants."

Conclusion

The Committee provided a letter on this matter dated December 10, 1993, to Chairman Selin.

9. Election of Officers

Dr. J. Ernest Wilkins, Jr. was reelected Chairman, Dr. Thomas S. Kress was elected Vice-Chairman, and Mr. William J. Lindblad was reelected Member-at-Large to the Planning and Procedures Subcommittee for calendar year 1994.

10. Reconciliation of ACRS Comments and Recommendations

The responses of the Executive Director for Operations (EDO) to the comments and recommendations included in previous ACRS reports were discussed as follows:

- EDO letter dated October 29, 1993, responding to the ACRS report dated September 22, 1993, concerning ACRS Comments on Proposed Generic Letter Regarding Removal of Accelerated Testing and Special Reporting Requirements for Emergency Diesel Generators from Plant Technical Specifications.

Conclusion

The Committee concluded that the EDO response did not satisfactorily address the Committee's concern over the "trigger value" approach proposed by Regulatory Guide 1.160. The Committee provided a report on this matter dated December 14, 1993, to Chairman Selin.

- EDO letter dated December 6, 1993, responding to the ACRS report dated November 10, 1993, concerning ACRS Comments on SECY-93-289, "Issuance of the Draft Preapplication Safety Evaluation Report for the Power Reactor Innovative Small Module Liquid-Metal Reactor."

Conclusion

The above EDO letter satisfactorily addressed the Committee's comments.

11. Subcommittee Meetings

During the period from November 7 to December 8, 1993, the following Subcommittee meetings were held:

- Advanced Boiling Water Reactors - November 17, 1993

The Subcommittee continued its review of the NRC staff's Final Safety Evaluation Report for the General Electric Nuclear Energy Advanced Boiling Water Reactor design.

- Individual Plant Examination (IPE) - November 18, 1993

The Subcommittee discussed the: (1) status of and insights gained from the IPE Program, (2) general status of the methodologies used in the IPE by the licensees, (3) status of the resolution of generic issues through the IPE and Individual Plant Examination of External Events programs, and (4) general status of accident management programs.

- Auxiliary and Secondary Systems - November 19, 1993

The Subcommittee discussed the: (1) current NRC and industry positions regarding Thermo-Lag issues, (2) technical differences between the NUMARC and NRC staff on NUMARC test programs, and (3) details of NRC and industry initiatives on Thermo-Lag issues, including test programs.

- ABB-CE Standard Plant Designs - December 8, 1993

The Subcommittees began its review of the Standard Safety Analysis Report for the ABB-CE System 80+ design.

- Planning and Procedures - December 8, 1993

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

12. Future Meeting Agenda

The Committee agreed to consider the following during the 405th ACRS Meeting, January 6-8, 1994, Bethesda, Maryland:

Proposed Final Rule to Revise Emergency Planning Regulations on Exercise Requirements - Review and comment on the proposed final rule on emergency planning regulations that is intended to clarify the requirements for the emergency planning exercises. Representatives of the NRC staff will participate.

Proposed Resolution of Generic Issue 67.5.1, "Reassessment of SGTR Radiological Consequences" - Review and comment on the proposed resolution of Generic Issue 67.5.1 regarding reassessment of the validity of the present techniques used to calculate radiological consequences resulting from a steam generator tube rupture (SGTR) event. Representatives of the NRC staff will participate.

BWR Core Power Stability/ATWS - Hear a briefing by and hold discussions with representatives of the NRC staff regarding the status of staff efforts in resolving the issue of BWR core power stability combined with an ATWS event, including the related issue of liquid poison remixing phenomena, and the development of emergency procedure guidelines. Representatives of the industry will participate.

Results of the Public Workshop on License Renewal - Hear a briefing by and hold discussions with representatives of the NRC staff regarding the results of the September 30, 1993 public workshop on license renewal, and a draft Commission paper that includes staff recommendations on the future directions of the license renewal. Representatives of the industry will participate, as appropriate.

Reliability Assurance Program - Hear a briefing by and hold discussions with representatives of the NRC staff regarding the staff position on the Reliability Assurance Program for the advanced light water reactors.

Certified Design Material for ABWR - Continue discussion of a proposed ACRS report on Certified Design Material in the areas of Human Factors Engineering, Radiation Protection, Piping Design, and Instrumentation and Control. Representatives of the NRC staff will participate, as appropriate.

Meeting with the Deputy Executive Director for Nuclear Reactor Regulation - Meet with Mr. Sniezek, Deputy Executive Director for Nuclear Reactor Regulation, and Mr. Milhoan who

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will succeed Mr. Sniezek in early February 1994, and discuss items of mutual interest.

Resolution of ACRS Comments and Recommendations - Discuss responses from the NRC Executive Director for Operations to recent ACRS comments and recommendations.

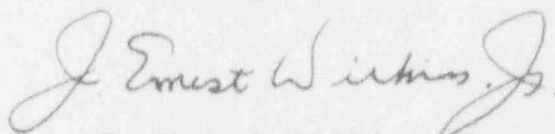
Report of the Planning and Procedures Subcommittee - Hear a report of the Planning and Procedures Subcommittee on matters related to the conduct of ACRS business. A portion of this session may be closed pursuant to 5 U.S.C. 552b(c)(2) and (6) to discuss personnel matters that relate solely to internal personnel rules and practices of ACRS and matters the release of which would represent a clearly unwarranted invasion of personal privacy.

ACRS Subcommittee Activities - Hear reports and hold discussions regarding the status of ACRS subcommittee activities, including reports from the Thermal Hydraulic Phenomena Subcommittee and Materials and Metallurgy Subcommittee.

Future Activities - Discuss topics proposed for consideration by the full Committee during future meetings.

Miscellaneous - Discuss miscellaneous matters related to the conduct of Committee activities and complete discussion of matters and specific issues that were not completed during previous meetings, as time and availability of information permit.

Sincerely,



J. Ernest Wilkins, Jr.
Chairman