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November 14, 1995

Mr. James M. Taylor  
Executive Director for Operations  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

Dear Mr. Taylor:

SUBJECT: PROPOSED FINAL REGULATORY GUIDE 1.164, "TIME RESPONSE  
DESIGN CRITERIA FOR SAFETY-RELATED OPERATOR ACTIONS," TO  
RESOLVE GENERIC SAFETY ISSUE B-17

During the 426th meeting of the Advisory Committee on Reactor Safeguards, November 2-4, 1995, we reviewed the proposed final Regulatory Guide 1.164, which was developed by the staff to resolve Generic Safety Issue B-17, "Criteria for Safety-Related Operator Actions." During the meeting, we had the benefit of discussions with the NRC staff. We also had the benefit of the documents referenced.

Criterion 19, "Control Room," of Appendix A to 10 CFR Part 50, "General Design Criteria for Nuclear Power Plants," requires that a control room be provided from which actions can be taken to operate the nuclear power unit safely under normal and accident conditions. Generic Safety Issue B-17 called for the development of time criteria for safety-related operator actions that included a methodology for determining whether or not automatic actuation would be needed to mitigate a design-basis event.

In Regulatory Guide 1.164, the staff endorses ANSI/ANS-58.8-1994, "Time Response Design Criteria for Safety-Related Operator Actions." This Standard establishes criteria and simplifies the process for calculating the minimum allowable response times for manual operator actions to stabilize the plant during a design-basis event. The NRC staff proposes endorsement of this Standard to resolve Generic Safety Issue B-17.

Based on material presented by the staff, we find no technical basis for the estimates of minimum times for operator actions in ANSI/ANS-58.8-1994. Comparison of the recommended times with results from exercises done on plant simulators does not demonstrate that these times are appropriately conservative. Consequently, we do not support the staff's endorsement of ANSI/ANS-58.8-1994 in Regulatory Guide 1.164 and do not believe that this endorsement is the appropriate way to resolve Generic Safety Issue B-17.

The Standard does not address operator response times for advanced nuclear power plants. There is a need to consider this issue in some way for the evolutionary and passive plants.

Additional comments by ACRS Members George Apostolakis, Ivan Catton, and Robert L. Seale are presented below.

Sincerely,

/s/

T. S. Kress  
Chairman

Additional Comments by ACRS Members George Apostolakis, Ivan Catton, and Robert L. Seale

In support of its recommended minimum response times, the staff relied in part on results that were produced from the Operator Reliability Experiments. We find this to be inappropriate because these experiments were not subjected to independent peer review and the staff did not have access to the actual data collected.

References:

1. Memorandum dated October 4, 1995, from M. Wayne Hodges, Office of Nuclear Regulatory Research, to John T. Larkins, ACRS, Subject: Regulatory Guide 1.164, "Time Response Design Criteria for Safety-Related Operator Actions," for ACRS Review and also transmitting staff response to public comments
2. U. S. Nuclear Regulatory Commission, NUREG-0933, Supplement 06, March 1987, "A Prioritization of Generic Safety Issues," Item B-17, "Criteria for Safety-Related Operator Actions," Revision 2
3. American Nuclear Society, ANSI/ANS-58.8-1994, "Time Response Design Criteria for Safety-Related Operator Actions," approved by the American National Standards Institute, Inc., August 23, 1994

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