

June 3, 1996

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

Dear Mr. Taylor:

SUBJECT: RESOLUTION OF THE MULTIPLE SYSTEM RESPONSES
PROGRAM ISSUES

During the 431st meeting of the Advisory Committee on Reactor Safeguards, May 23-25, 1996, we completed our review of the adequacy of the resolution of the Multiple System Responses Program (MSRP) issues. During the 427th meeting, December 7-8, 1995, we heard presentations by and held discussions with representatives of the NRC staff and an ACRS Senior Fellow regarding this matter. We also had the benefit of the documents referenced.

In the process of reviewing a number of Unresolved Safety Issues (USIs) during the mid-1980s, the ACRS expressed concern that treating each safety issue in isolation might not identify significant system interactions. The ACRS also raised a number of questions concerning system interactions that were not addressed in the proposed resolution of certain USIs. Subsequently, the staff established the MSRP in 1986 to address ACRS concerns and other related issues.

The MSRP identified 21 potential generic issues. In August 1995, the NRC staff issued a final report which concluded that none of the MSRP issues posed new or separate safety concerns and that these issues were being addressed under the scope of the existing Generic Safety Issue (GSI) process, or in the programs of Individual Plant Examinations (IPEs) and Individual Plant Examination of External Events (IPEEEs).

The MSRP issues have been treated to a degree in the IPE/IPEEE programs and in the GSI process. A review of a number of IPE/IPEEE submittals, however, failed to identify satisfactory resolution for some issues (e.g., the treatment of interactions between nonsafety and safety systems, seismically induced interactions, and hydrogen line ruptures). We also note that the issues of nonsafety/safety systems interactions appear to be better treated in the IPEEE submittals that were based on probabilistic risk assessments than in those that were based on Seismic Margins Methodology and Fire-Induced Vulnerability Evaluation Methodology.

Incorporation of some MSRP issues into the IPE/IPEEE process may

have been expedient, but the staff failed to put into place a mechanism to ensure that licensees had evaluated and resolved these issues in an adequate manner. Additional staff review to determine the adequacy of the resolution of these issues is, therefore, warranted.

As stated in our report to the Commission, dated August 16, 1988, we continue to emphasize that "systems interactions, some of which may be adverse to safety, will continue to be revealed by operating experience in existing plants. These should be evaluated by the staff as they occur, and the lessons learned incorporated into the requirements and practices of the agency."

Sincerely,

/s/

T. S. Kress
Chairman

References:

1. U. S. Nuclear Regulatory Commission, NUREG/CR-5420, "Multiple System Responses Program - Identification of Concerns Related to a Number of Specific Regulatory Issues," Prepared by Oak Ridge National Laboratory, October 1989
2. Multiple System Responses Program - Final Report, transmitted by memorandum dated August 2, 1995 from L. C. Shao, Office of Nuclear Regulatory Research, to David L. Morrison, Office of Nuclear Regulatory Research
3. Memorandum dated January 12, 1996, from August W. Cronenberg, ACRS Senior Fellow, to ACRS Members and Staff, Subject: Observations from Review of Multiple System Responses Program (MSRP) Reports and Memoranda
4. U. S. Nuclear Regulatory Commission, NUREG-0933, "A Prioritization of Generic Safety Issues," July 1991
5. Report dated August 16, 1988, from W. Kerr, ACRS Chairman, to Lando W. Zech, Jr., NRC Chairman, Subject: Proposed Resolution of USI A-17, "Systems Interactions in Nuclear Power Plants"

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