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

February 12, 1991

The Honorable Kenneth M. Carr
Chairman
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Chairman Carr:

SUBJECT: PROPOSED SUPPLEMENT 4 TO GENERIC LETTER 88-20, INDIVIDUAL PLANT EXAMINATION OF EXTERNAL EVENTS (IPEEE) FOR SEVERE ACCIDENT VULNERABILITIES - 10 CFR 50.54(f)

During the 370th meeting of the Advisory Committee on Reactor Safeguards, February 7-9, 1991, we reviewed the NRC staff's resolution of public comments on, and the resulting changes to, the proposed supplement to Generic Letter 88-20, Individual Plant Examination of External Events (IPEEE) for Severe Accident Vulnerabilities. During this review, we had the benefit of discussions with representatives of the NRC staff. We also had the benefit of the document referenced.

In our May 15, 1990 report to you concerning this subject, we asked for an opportunity to review the final draft of the proposed supplement after the public workshop and resolution of any comments. We have completed this review and conclude that the changes resulting from the resolution of comments are acceptable. Based on our further discussions during this meeting, we have identified the following concerns that we believe should be resolved before the supplement is issued.

1. The staff is asking the licensee to identify vulnerabilities that are discovered in the course of the Individual Plant Examinations (IPEs). In its June 9, 1987 report to Chairman Zech on IPE guidance, the ACRS pointed out that, "Vulnerabilities are not defined, either qualitatively or quantitatively..., nor is there guidance as to the amount and kind of improvement that the NRC staff will find acceptable." We still find that the staff has not provided either a definition of a vulnerability or guidance on how to identify one, nor does it plan to do so. The staff does plan to review the licensee's IPE, and we were told that if vulnerabilities not identified by the licensee are discovered, the licensee will be asked and, if necessary, required to deal with them. However, even at the review stage, the staff will not provide guidance as to what constitutes a vulnerability.

We believe it would contribute to a more disciplined review, and would provide helpful guidance to licensees if the staff provided, at the very least, some indication of the process to be used in identifying a vulnerability.

2. The staff has had to cope with the problem posed by the existence of two widely different, but equally authoritative, seismic hazard curves, traditionally called the EPRI and the LLNL curves. The staff position is that a licensee may conduct its seismic analysis separately using each of the curves, but may alternatively choose to use only one, provided the one chosen is the "more conservative" of the two. The justification provided was that this procedure is more likely to identify all the relevant accident sequences.

   The use of the word "conservative" may be a problem. The difference between the two curves has nothing to do with increased conservatism but simply reflects two different, and apparently equally valid, technical approaches. Further, conservatism should play no role in an analysis intended to uncover the vulnerabilities of a plant. If there is no technical basis for choosing one hazard curve over the other, the statistically valid procedure is to take a suitable average.

In our report of May 15, 1990, we stated that a simplified fire risk evaluation method is being developed by NUMARC, but has not yet been evaluated by the staff or by us. We are still planning to review the NUMARC method.

Sincerely,

David A. Ward
Chairman

Reference:
Memorandum dated January 11, 1991 from Warren Minners, Office of Nuclear Regulatory Research, to Raymond F. Fraley, ACRS, Subject: ACRS Review of Individual Plant Examination for Severe Accident Vulnerabilities Due to External Events (IPEEE) - 10 CFR 50.54(f) (Generic Letter 88-20, Supplement 4), with enclosures (Predecisional)