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

March 11, 1980

Honorable John F. Ahearne
Chairman
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Dr. Ahearne:

SUBJECT: RECOMMENDATIONS OF THE NRC TASK FORCE ON BULLETINS AND ORDERS

During its 239th meeting, March 6-8, 1980, the Advisory Committee on Reactor Safeguards completed a review of the recommendations of the NRC Task Force on Bulletins and Orders, hereafter called the Task Force. The ACRS Subcommittee on TMI-2 Accident Bulletins and Orders met with representatives of the NRC Staff and Utility Owners Groups on July 9, 1979, August 2, 1979, January 3-4, 1980, and March 4, 1980. The ACRS previously met with representatives of the Task Force at the Committee's meetings of October 4-6, 1979, January 10-12, 1980 and February 7-9, 1980.

The Task Force, formed in May 1979, was charged with reviewing and directing the TMI-2 related staff activities associated with the NRC I&E Bulletins, Commission Orders, and generic evaluations of loss of feedwater transients and small-break loss-of-coolant accidents for all operating plants to assure their continued safe operation. Specific review areas included systems reliability, vendor analysis methods and operating guidelines, plant procedures, and operator training. The results of the Task Force efforts have been reported in NUREG-0645, Volumes I and II, and a series of vendor specific reports noted below.

In its review, the Committee notes that the recommendations in reports NUREG-0565, 0611, 0623, 0626, and 0635 are those deemed by the Task Force to make the operating light water reactor plants less susceptible to core damage during accidents and transients which are coupled with systems failures and operator errors.

The Task Force has proposed that both the recommendations and the responsibility for their implementation be included in Section II.K.3 of NUREG-0660, "NRC Action Plans Developed As a Result of the TMI-2 Accident". The Committee agrees with this course of action.

With regard to the recommendations the Committee has the following comments:

- Reactor Coolant Pump Trip and High Pressure Injection (HPI) Termination Criteria: The NRC Staff has required prompt trip

of the reactor coolant pumps in the event of a small-break LOCA. Recent transients at some operating plants have resulted in RCP trip for non-LOCA events and, in some cases, the use of the NRC approved procedures for HPI termination have resulted in PORV or safety valve actuation due to overfilling of the primary system. The NRC Staff should, in conjunction with the licensees, review the criteria for HPI termination and reactor coolant pump trip to reduce unnecessary challenges to the pressurizer safety valves and prevent unnecessary trips of the reactor coolant pumps which may increase the difficulty in establishing uninterrupted core cooling.

- Feed-and-Bleed Cooling of the Primary System: At the March 4, 1980 Subcommittee meeting, the NRC Staff said that there are presently no requirements for the use of feed-and-bleed cooling for decay heat removal. The Committee believes that the availability of a diverse heat removal path such as feed and bleed is desirable, particularly if all secondary-side cooling is unavailable. The ACRS has established an Ad Hoc Subcommittee to review this matter.

- Reduction of Challenges to the PORVs in B&W Plants: As a result of the TMI-2 accident, the NRC Staff has required that all B&W plants raise the PORV actuation setpoint and lower the high-pressure reactor trip setpoint in order to reduce the number of challenges to the PORV. While recent B&W operating reactor experience indicates that the PORV challenge rate has been reduced, there has been a corresponding increase in the number of reactor scrams. The Committee notes that an increase in the scram rate increases the probability of a deleterious impact on safety, and recommends that the NRC Staff continue to evaluate the overall impact of the above action on plant safety.

- Potential Unreviewed Safety Question with Regard to Automatic Initiation of the Auxiliary Feedwater System: Several utilities have raised the issue of a potential unreviewed safety question with regard to automatic initiation of the AFW system, in the event of a main steamline break inside containment. This issue should be reviewed.

The Task Force has recommended that the vendor methods used for small break LOCA analysis should be revised, documented and submitted for NRC review, and that plant specific calculations using NRC approved methods should be provided thereafter. The NRC Action Plans also include an item which recommends that the NRC develop and issue a position on required conservatisms in small break calculations. The Committee believes that the schedule used for developing a revised NRC approach to small break calculations should, if practical, be made compatible with the schedule required of the NSSS vendors for revising their small break models. This

should lead to a more efficient use of available resources and may lead to an earlier development of improved analyses. This implies some increased flexibility in the schedule.

With regard to the schedules proposed for the implementation of these recommendations, the Committee believes that the orderly and effective implementation and the appropriate level of review and approval by the NRC staff will require a somewhat more flexible, and in some cases more extended, schedule than is implied by the Task Force reports.

The Committee is still reviewing the NRC Action Plans which we understand will include the Task Force's recommendations discussed above, as well as many other recommendations.

Sincerely,

Milton S. Plesset

Milton S. Plesset
Chairman

References:

1. U.S. Nuclear Regulatory Commission, "Generic Evaluation of Small Break Loss-of-Coolant Accident Behavior in Babcock & Wilcox Designed 177-FA Operating Plants", USNRC Report NUREG-0565, January 1980.
2. U.S. Nuclear Regulatory Commission, "Generic Evaluation of Feedwater Transients and Small Break Loss-of-Coolant Accidents in Westinghouse-Designed Operating Plants", USNRC Report NUREG-0611, January 1980.
3. U.S. Nuclear Regulatory Commission, "Generic Assessment of Delayed Reactor Coolant Pump Trip During Small Break Loss-of-Coolant Accidents in Pressurized Water Reactors", USNRC Report NUREG-0623, November 1979.
4. U.S. Nuclear Regulatory Commission, "Generic Evaluation of Feedwater Transients and Small Break Loss-of-Coolant Accidents in GE-Designed Operating Plants and Near-Term Operating License Applications", USNRC Report NUREG-0626, January 1980.
5. U.S. Nuclear Regulatory Commission, "Generic Evaluation of Feedwater Transients and Small Break Loss-of-Coolant Accidents in Combustion Engineering Designed Operating Plants", USNRC Report NUREG-0635, January 1980.
6. U.S. Nuclear Regulatory Commission, "Report of the Bulletins and Orders Task Force", USNRC Report NUREG-0645, Volumes I-II, January 1980.
7. U.S. Nuclear Regulatory Commission, "NRC Action Plans Developed As a Result of the TMI-2 Accident", USNRC Report NUREG-0660, Draft 3, March 5, 1980.