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, D.C. 20555

SUBJECT: ACRS REPORT ON NEAR-TERM OPERATING LICENSE ITEMS FROM DRAFT 3 OF NUREG-0660, NRC ACTION PLANS DEVELOPED AS A RESULT OF THE TMI-2 ACCIDENT

Dear Dr. Ahearne:

In your letter of February 19, 1980 you asked the ACRS to provide its position on whether the NRC Staff Near-Term Operating License (NTOL) list was a necessary and sufficient set of supplementary requirements for authorizing operating licenses. During your meeting with the ACRS on March 6, 1980, there was considerable discussion of the terms "necessary and sufficient," and there was agreement that a definition of these terms in the applicable context is subjective. Reasonable people might conclude that a list half as long would be sufficient, and other reasonable people might require a much longer one. We have, therefore, not sought a collegial definition of the terms, but have instead interpreted your request to be that we look at the list and ask if it is reasonable. We have reviewed the list, item by item, for reasonableness, and the remainder of this letter should be interpreted in that sense.

The ACRS review of the NTOL items, Table A.1 of Draft 3 of NUREG-0660, "NRC Action Plans Developed as a Result of the TMI-2 Accident," was performed during the 239th meeting of the ACRS March 6-8, 1980. A Subcommittee had met with the NRC Staff on March 5, 1980. The Committee had the benefit of discussions with the NRC Staff and with industry representatives who had participated in an intensive Atomic Industrial Forum study of the NTOL proposals as outlined in Draft 2 of NUREG-0660.

The following NTOL items are from Table A.1 of Draft 3 of the Plans.

- Part 1, Requirement (3), Item I.B.1.2, "Evaluation of Organization and Management Improvements of Near-Term Operating License Applicants."

  The Committee is concerned about the specification as an NTOL requirement of an "Interoffice NRC review of licensee management to determine organizational and managerial capabilities, using internal NRC draft criteria pending development of formal criteria." If it is to be assumed that this requirement refers to utility management (rather than plant management), then it appears that assurance of competent management should be obtained as soon as feasible for all utilities that are operating power reactors, independently of NTOL activity. Coupling this determination to an operating license (OL) appears logical only if the reactor is the first to be operated by the applicant.

The Staff has indicated that the criteria for judging management capability are in an early state of development. The ACRS recommends that due regard be given to the need for a learning period in developing and applying the criteria, and that there be a continuing effort to make the criteria as clear as possible to those organizations being evaluated.

- Part 1, Requirement (4), Item I.B.1.2, "Evaluation of Organization and Management Improvements of Near-Term Operating License Applicants."

  The ACRS endorses the objective of improving the engineering capability onsite, but has not studied the criteria that will be used to qualify the group.

- Part 1, Requirement (6), Item I.C.7, "NSSS Vendor Review of Procedures."

  With respect to Emergency Procedures, the ACRS recommends that Architect-Engineers (AE) or the AE component of the operating utility also be required to review and verify the adequacy of such procedures in the context of accuracy and completeness to meet emergency conditions, including the specifications of actions to deal with inadequacies in the single failure criterion.

- Part 1, Requirement (7), Item I.C.8, "Pilot Monitoring of Selected Emergency Procedures for Near-Term Operating License Applicants."

  To ensure against relaxation of continuous vigilance to meet emergencies, the Committee recommends nonscheduled random checking of operating personnel in respect to verifying their ability to meet unanticipated accident conditions.

- Part 1, Requirement (11), Item II.K.1, "IE Bulletins on Measures to Mitigate Small Break LOCAs and Loss of Feedwater Accidents."

  This list includes some items which are useful, some which are of marginal merit and some which may, upon deeper analysis, turn out to have been wrong. Among those that deserve more careful analysis are: criteria for early RCS pump trip; criteria for HPSI termination; automatic PORV blocking; several requirements that increase scram frequency; subcooling meters (versus void-meters); etc. Each of these is a subject in itself, deserving deliberate study.

- Part 1, Requirement (12), Item II.K.3, "Final Recommendations of B&O Task Force."

  Refer to the ACRS report dated March 11, 1980 on the Bulletins and Orders Task Force report, which documents some of our concerns.

- Part 1 Requirement (13), Item III D.3.4, "Control Room Habitability."

  The ACRS notes that this item merely sets a goal to "confirm compliance with existing Regulatory Guides and Standard Review Plan...." The TMI incident indicates that existing requirements to protect the occupants of the control room against radiation may not be adequate, particularly with respect to leakage control and arrangement of air intakes.

- Part 2, Requirement (4), Item I.C.1, "Short-Term Accident Analysis and Procedure Revision."

  The comments in the first sentence concerning Part 1, Requirement (11) regarding the need for careful analysis apply to a number of unresolved items in this requirement.

- Part 2, Requirement (15), Item II.E.4.1, "Containment Dedicated Penetrations."

  The ACRS recommends that, in design and location of penetrations for the recombiner, the Staff pay particular attention to the possibility of hydrogen accumulation at high points in the containment or containment compartments.

- Part 3, Requirement (4), Item III.A.3.1, "Role of NRC in Emergency Preparedness."

  We believe that the responsibility for handling an emergency should be clear and undiluted, and should rest with the utility. The NRC should be fully informed, prepared to intervene when necessary for the public health and safety, but should not, as a rule, take over responsibility in the event of an accident. This issue must be resolved.

In considering these matters, the ACRS also examined those NTOL requirements that have already been issued in the NRC letters of September 27, 1979 and November 9, 1979 to all pending operating license applicants. Included among this group are several requirements related to improved systems for measuring the concentrations of various contaminants both within containment and in effluent releases. Although the Committee endorses these requirements, it believes that more attention needs to be directed to assuring:

(a) That samples collected are representative with emphasis on the location and nature of the sample collector and the length, diameter, and specific nature of the sampling lines.

(b) The adequacy and reliability of the performance of the associated sampling and monitoring equipment.

The Committee wishes to comment at this time on two items in the Action Plans in order to recommend the initiation of actions which relate to the NTOL plants. In the Committee's opinion, the issuance of an operating license should not be contingent on completion of these matters.

1. In its letter of December 13, 1979 on the TMI-2 Lessons Learned Task Force Report, the ACRS supported the Integrated Reliability Evaluation Program (IREP). However, the ACRS went on to state, "The Committee does not agree that the proposed IREP will fully satisfy the need. The ACRS recommends that the NRC develop a program in which licensees, acting individually or jointly, develop reliability assessments of their plants in addition to the NRC IREP, which would be performed concurrently."

   The ACRS believes that, on an expedited but practical schedule, the NTOL plant owners, as well as current licensees, should be required to perform studies of the type referred to above.

2. In its letter of December 13, 1979, the ACRS supported the recommendation of the Lessons Learned Task Force concerning design features for core-damage and core-melt accidents. The ACRS further recommended that design studies of possible hydrogen control and filtered-venting systems for containment be required from licensees. The ACRS also recommended that special attention be given to making a timely decision on possible interim measures for ice-condenser containments. The ACRS recommends initiation of such studies for NTOL plants.

The ACRS has noted in previous letters that it is important that the improvements in safety proposed as a result of the Three Mile Island accident be considered in a broad perspective and that other matters of importance to safety receive proper priority. The ACRS believes it important that the diversion of resources needed to deal with NTOL related activities not produce neglect of problem areas which should have a high priority. The Committee expects to comment on this in detail when it reports on the NRC Action Plans.

The ACRS believes that, subject to the above comments, the NTOL items identified in the NUREG-0660, Draft 3, provide a satisfactory basis for the resumption of licensing.

Additional comments by ACRS Member H. Lewis are presented below.

Sincerely,

Milton S. Plesset

Milton S. Plesset
Chairman

Additional Comments by Member H. Lewis

Many items not called out above have still not received sufficient analysis, and silence on these items should not be construed as concurrence in the current Staff position. None of these uncertainties should, in my view, affect the resumption of licensing, but I believe that they should be resolved before the Staff position becomes too frozen.