



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

May 6, 1980

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

SUBJECT: REPORT ON PROPOSED EMERGENCY PLANNING RULE (10 CFR Part 50)

Dear Dr. Ahearne:

The purpose of this letter is to provide you with ACRS comments on the Proposed Rule on Emergency Planning (10 CFR Part 50) as published in the Federal Register (Vol. 44, No. 245) on December 19, 1979. In preparing these comments, the Committee had the benefit of discussions with the NRC Staff on May 1, 1980. The ACRS Subcommittee on Site Evaluation also met with the NRC Staff on April 22, 1980 to discuss this matter.

Subsequent to the meeting on April 22, 1980, the Subcommittee Chairman was informed that the Proposed Rule had been extensively revised by the NRC Staff. However, a copy of this newer version was not made available to either the Subcommittee or the full Committee in time for the preparation of these comments. If you desire, the Committee would be pleased to offer comments on the revised Rule at a later date. Because of scheduling difficulties, the earliest that this could be accomplished would be approximately the middle of July. Although this would probably necessitate a delay in the implementation of the Rule, we believe there are benefits to be gained through additional review.

The ACRS concurs with the NRC Staff view that there is a need to review and upgrade the status of emergency preparedness at commercial nuclear power plants. Those provisions in the proposed regulations that concern definition of roles, identification of proposed actions, and testing of the performance of equipment and personnel are clearly desirable. However, our review of the Proposed Rule has revealed a number of questions and problem areas. The more significant of these may be summarized as follows:

1. The Proposed Rule includes two alternative approaches for implementing the proposed changes. On the basis of clarifications provided by the NRC Staff, the ACRS would endorse Alternative A. In case of problems with State and local government emergency response plans, this Alternative would require action by the NRC to shut down a plant, instead of automatically requiring shutdown under the regulations.

2. The NRC Staff notes in the Proposed Rule that "while emergency planning is important for public health and safety, the increment of risk involve[d] in permitting operation [of existing reactors] for a limited time in the absence of concurred-in plans may not be undue in every case." The Committee agrees with this conclusion but questions whether it is compatible with the assertion that the Commission views "emergency planning as equivalent to, rather than as secondary to, siting and design in public protection ...." Safe day-to-day operation would be impossible without adequate siting and design and proper operation of a safely designed and sited reactor would probably not represent an unacceptable risk for several months and probably years.

A preferred statement would recognize that siting, design, and emergency planning, as well as responsible operation, are separate but interrelated considerations that constitute the overall safety package. It is not clear that the NRC policy of elevating emergency planning to the same level as engineered safety features is wise or necessary. The role of emergency planning should be defined as supplemental to the decisions to allow operation of a plant.

3. In the Foreword to NUREG-0654 (See Reference 2) emphasis is placed on there being minimum acceptance criteria for emergency preparedness and planning. There are also implications in this report and in the Proposed Rule that these criteria will be made mandatory for licensees and for the acceptability of emergency plans developed by State and local agencies. Insistence on strict compliance with detailed criteria could prevent proper coordination of nuclear power plant emergency planning with other emergency preparedness activities of State and local agencies, and could also delay the modification of specifications for key factors, such as evacuation times and distances, as better information is developed through ongoing emergency planning.

In addition, the Committee has noted an absence of technical justification for many of the requirements associated with the Proposed Rule and the criteria by which compliance will be judged. If, in the final analysis, a decision is made to retain these criteria in the Rule, then, as a minimum, efforts should be made to test them on a range of nuclear and major nonnuclear accidents that have occurred in the past. Such tests would be particularly useful in showing how successful the specified actions would have been in alleviating the effects of the given events.

4. The Proposed Rule specifies that "the capability will be provided to essentially complete alerting of the public within the plume exposure pathway EPZ within 15 minutes of the notification by the licensee of local and State officials." The ACRS agrees that providing such capability is desirable but believes that emergency plans should reflect the fact that there is less urgency for immediate notification of people living at greater distances from the site and that, in the majority of cases, the promptness of notification should have the important input of human evaluation and assessment. This might be accomplished through application of a graded scale of timing tied into distance, coupled with on-the-spot evaluations of local weather and other conditions. Supporting this approach are the results of recent research which indicate that prompt evacuation of people residing beyond five miles of a site may not be beneficial on a risk assessment basis except under the most unusual circumstances. Furthermore, there is need to consider the possible risks associated with notification of the public prior to the police and other officials being ready and available to direct and control the responses of people residing near a power plant.
5. The Proposed Rule and accompanying proposed criteria request that applicants provide detailed information on evacuation, including "an analysis of the time required to evacuate various sectors and distances within the plume exposure pathway EPZ for transient and permanent populations." In no case, however, does the Proposed Rule provide information as to what times would be considered acceptable, even though, in the case of evacuation, the risks resulting from transportation accidents are often related to the hastiness of the action. As written, the Rule also appears to allow no alternative to evacuation. This implies that the applicant is not likely to be permitted to provide a better alternative, such as having the population remain indoors while the plume passes. This is a situation that reduces itself to the now familiar issue of specifying "how to" rather than providing the desired goal and allowing the licensee or State government to seek the best solution. In some locations, evacuation from the plume Emergency Planning Zone is obviously impractical. If evacuation is to be the favored emergency planning alternative, this choice and the requirements for it should be well-substantiated.
6. The Proposed Rule calls for "the yearly dissemination to the public within the plume exposure pathway EPZ of basic emergency planning information such as the possibility of nuclear accidents, the potential human health effects of such

accidents and their causes, methods of notification, and the protective actions planned if an accident occurs...." Although the last two of these items appear reasonable, the ACRS suggests that the dissemination of information of the types described in the first two items cannot be expected to provide any improvements in emergency preparedness. The Committee therefore recommends that these two items be deleted.

7. The Proposed Rule specifies that exercises to test the adequacy of an emergency plan should be conducted at a frequency of once every three or five years. Because of the rapid turnover in staff personnel at all levels in all the organizations involved, the ACRS recommends that such exercises be conducted at three-year intervals. The Committee also urges that the exercises be utilized for purposes of instruction as well as for evaluations of compliance.

Although the Proposed Rule calls for licensees to provide an independent review of their emergency preparedness program every twelve months, no mention is made of participation by State and local authorities. This omission should be corrected.

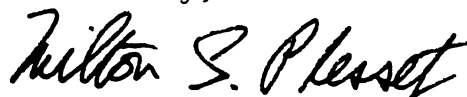
8. One alternative in the Proposed Rule requires that corrective measures to prevent damage to onsite and offsite property be identified. The ACRS believes that protection of property is less important and less feasible than protection of health and safety and, in fact, may divert effort from the latter aspect. The Committee recommends therefore that this requirement be omitted from the Rule.
9. As written, the Proposed Rule will require in-depth discussion and subsequent concurrence in the emergency preparedness program by the applicant and the NRC, as well as by State and local governmental authorities. The ACRS is concerned that this could constitute a third-party veto of the operation of a nuclear power plant based on considerations that may be unrelated to health and safety. The ACRS believes that such a requirement should not be included in the Rule without some safeguards against such action by a third party. Furthermore, a de facto veto power on operation appears to exist with each local government entity within ten miles of a nuclear power plant if it chooses not to permit establishment of the warning facilities required to meet the criteria. If the Proposed Rule poses such a possibility, it introduces complex societal issues. The ACRS recommends that the wording of the Rule be altered to permit the NRC sufficient flexibility to cope with this situation and not mandate such power to local governmental entities in the absence of a Federal law addressing the matter.

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10. The ACRS would also like to comment on the role of the Federal Emergency Management Agency (FEMA) as related to the Proposed Rule. Although the NRC Staff stated that FEMA would simply notify them of their decision relative to the adequacy of a State and local emergency plan, a nonconcurrence on the part of FEMA might also represent a "veto" action on a given application. There are also questions as to the adequacy of the resources or the staffing of FEMA to assume these new responsibilities. In addition, the ACRS sees a need for clarification of its future role relative to FEMA and to reviews of emergency preparedness planning for nuclear facilities.
11. In a sense, the NRC is serving as a pioneer in the area of emergency preparedness. It should be recognized that there are many other technological aspects of society which pose hazards comparable to, or larger than, those from nuclear power plants. FEMA is in the process of developing guidance with regard to emergency preparedness in a general way; however, the rate of implementation proposed for nuclear plants by this Rule appears to be much more rapid, and the requirements possibly more stringent than those required for other types of facilities. The Committee believes that the NRC-FEMA approach to emergency preparedness for nuclear reactor accidents should be developed and implemented within the framework of a broad societal approach to emergency situations in general.

The Committee will be pleased to discuss the above items with you at your convenience. In the meantime, we trust these comments will be helpful to you and the NRC Staff.

Sincerely,



Milton S. Plesset  
Chairman

References:

1. Proposed Emergency Planning Rule, Federal Register Vol. 44, No. 245, December 19, 1979.
2. NUREG-0654 (FEMA-REP-1), "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," January, 1980.
3. NUREG-0628, "NRC Staff Preliminary Analysis of Public Comments on Advance Notice of Proposed Rulemaking on Emergency Planning," January, 1980.
4. NUREG/CP-0011, "Proceedings of Workshops on Proposed Rulemaking on Emergency Planning for Nuclear Power Plants," January, 1980.