NUCLEAR REGULATORY COMMISSION

[10 CFR Part 50]

EMERGENCY PLANNING

AGENCY: U.S. Nuclear Regulatory Commission

ACTION: Proposed Rule

SUMMARY: The Nuclear Regulatory Commission, after considering the public record available concerning licensee, State and local government emergency preparedness, and the need to enhance protection of the public health and safety, is proposing to amend its regulations to provide an interim upgrade of NRC emergency planning regulations. In a few areas of the proposed amendments, the Commission has identified two alternatives which it is considering. In each instance both alternatives are presented in the following summary of the proposed changes and in the specific proposed rule changes presented in this notice. The final rule will not necessarily incorporate all of the first alternatives or all of the second alternatives. That is, in some instances the first alternative may be adopted and in others, the second alternative may be adopted. Further alternatives may be adopted as a result of consideration of public comments.

In one alternative (Alternative A), the proposed rule change would not automatically require suspension of operations for lack of concurrence in appropriate State and local government emergency response plans on the date specified in the rule, even if the Commission by that date has not yet determined whether the reactor should be allowed to continue to operate. It would:

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1. Require NRC concurrence in the appropriate State and local government emergency response plans prior to operating license issuance, unless the applicant can demonstrate to the satisfaction of the Commission that deficiencies in the plans are not significant for the nuclear power plant in question, that alternative compensating actions have been or will be taken promptly, or that there are other compelling reasons for license issuance.

2. For nuclear power reactors already licensed to operate, if appropriate State and local emergency response plans have not received NRC concurrence within 180 days after the effective date of this amendment or by January 1, 1981, whichever is sooner, require the Commission to determine whether to require the licensee to shut down the reactor. If at that time the Commission finds that the licensee has demonstrated that the deficiencies in the plans are not significant for the plant in question, that alternative compensating actions have been or will be taken promptly, or that there are other compelling reasons for continued operation, then the licensee may continue operation.

   If at that time the Commission cannot make such a finding, then the Commission will order the licensee to show cause why the plant should not be shut down. In cases of serious deficiencies, the order to show cause will be made immediately effective and the licensee would be required to shut down the reactor.

3. For nuclear power reactors already licensed to operate, if appropriate State and local emergency response plans do not warrant continued NRC

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concurrence and the State or locality do not correct the deficiencies within 4 months of notification by the NRC of withdrawal of its concurrence, require the Commission to determine whether to require the licensee to shut down the reactor. Shutdown may not be required if the Commission finds that the licensee has demonstrated that the deficiencies in the plan are not significant for the plant in question, that alternative compensating actions have been or will be taken promptly, or that there are other compelling reasons for continued operation.

If at this time the Commission cannot make such a finding, then the Commission will order the licensee to show cause why the plant should not be shut down. In cases of serious deficiencies, the order to show cause will be made immediately effective and the licensee would be required to shut down the reactor.

In the other alternative (Alternative B), the proposed rule change would automatically require nuclear power plant shutdown for lack of concurrence in appropriate State and local government emergency response plans on the date specified in the rule unless an exemption is granted by that date. It would:

1. Require NRC concurrence in the appropriate State and local government emergency response plans prior to operating license issuance. However, the Commission can grant an exemption from this requirement if the applicant can demonstrate to the satisfaction of the Commission that deficiencies in the plans are not significant for the plant in question,

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that alternative compensating actions have been or will be taken promptly, or that there are other compelling reasons for license issuance. No such operating license will be issued unless NRC finds that appropriate protective actions, including evacuation when necessary, can be taken for any reasonably anticipated population within the plume exposure EPZ.

2. For nuclear power reactors already licensed to operate, require a licensee to shut down a reactor immediately if appropriate State or local emergency response plans have not received NRC concurrence within 180 days of the effective date of the final amendments or by January 1, 1981, whichever is sooner. However, the Commission may grant an exemption from this requirement if the licensee can demonstrate to the satisfaction of the Commission that the deficiencies in the plans are not significant for the plant in question, that alternative compensating actions have been or will be taken promptly, or that there are other compelling reasons for continued operation. If there is no concurrence, and the plant is shut down, then it must remain shut down until such an exemption is granted or until concurrence is obtained.

3. For nuclear power reactors already licensed to operate, require a licensee to shut down a reactor if appropriate State or local emergency response plans do not warrant continued NRC concurrence and the State or locality does not correct the deficiencies within 4 months of notification by the NRC of withdrawal of its concurrence. However, the Commission can grant an exemption to this requirement

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if the licensee can demonstrate to the satisfaction of the Commission that the deficiencies in the plan are not significant for the plant in question, that alternative compensating actions have been or will be taken promptly, or that there are other compelling reasons for continued operation. If there is no concurrence and the plant is shut down, then it must remain shut down until such an exemption is granted or until concurrence is regained.

In both alternatives the proposed rule would:

4. Require that emergency planning considerations be extended to "Emergency Planning Zones."

5. Require that applicants' and licensees' detailed emergency planning implementing procedures be submitted for NRC review.

6. Clarify and expand 10 CFR Part 50, Appendix E, "Emergency Plans for Production and Utilization Facilities."

DATES: Comments should be submitted on or before (60 days after publication).

ADDRESSES: Interested persons are invited to submit written comments and suggestions on the proposed rule changes and/or the supporting value/impact analysis to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch. Copies of the value/impact analysis and of comments received by the Commission may be examined in the Commission's Public Document Room

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at 1717 H Street, NW., Washington, D.C. and at local Public Document Rooms. Single copies of the value/impact analysis, related regulatory guides, and the NRC staff analysis of the public comments received on the Advance Notice of Proposed Rulemaking may be obtained on request.

FOR FURTHER INFORMATION CONTACT: Mr. Michael T. Jamgochian, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 (Telephone: 301-443-5966).

SUPPLEMENTARY INFORMATION: In June 1979, the Nuclear Regulatory Commission began a formal reconsideration of the role of emergency planning in assuring the continued protection of the public health and safety in areas around nuclear power facilities. The Commission had begun this reconsideration in recognition of the need for more effective emergency planning and in response to reports issued by responsible offices of government and its Congressional oversight committees.

By memorandum dated July 31, 1979, the Commission requested that the NRC staff undertake expedited rulemaking on the subject of State, local, and licensee emergency response plans. The proposed rulemaking described in this notice responds to that request, and has been prepared on an expedited basis. Consequently, considerations related to the workability of the proposed rule may have been overlooked and significant impacts to NRC, applicants, licensees, and State and local governments may not have been identified. Therefore, the NRC particularly seeks comments addressed to these points and intends to hold workshops prior to preparing a final rule to (a) present the proposed rule changes to State and local governments, utilities, and other interested parties and

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(b) obtain comments concerning the costs, impacts, and practicality of the proposed rule.

The Nuclear Regulatory Commission is considering the adoption of amendments to its regulation, "Domestic Licensing of Production and Utilization Facilities," 10 CFR Part 50, that would require that emergency response planning considerations be extended to Emergency Planning Zones (discussed in NUREG-0396, EPA 520/1-78-016, "Planning Basis for the Development of State and Local Government Radiological Emergency Response Plans in Support of Light Water Nuclear Power Plants"). Both the Commission and EPA have formally endorsed the concepts in that EPA/NRC Report, 44 Fed. Reg. 61123 (October 28, 1979). In addition, the Nuclear Regulatory Commission is considering revising 10 CFR Part 50, Appendix E, "Emergency Plans for Production and Utilization Facilities," in order to clarify, expand, and upgrade the Commission's emergency planning regulations.[1] Prior to the conclusion of this rulemaking proceeding, the Commission will give special attention to emergency planning matters, including the need for concurred-in plans, on a case-by-case basis in accordance with the modified adjudicatory procedures of 10 CFR Part 2, Appendix B. Under that Appendix, no new license, construction permit, or limited work authorization may be issued without Commission consideration of issues such as this.[2] Both versions

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[1] Two NRC staff guidance documents are related to this proposed rule change. "Draft Emergency Action Level Guidelines for Nuclear Power Plants," NUREG-0610 was published for interim use and comment on September 19, 1979. It is expected that a final version of the action level guidelines, based on the public comments received, will be issued in early 1980. In addition, in early 1980 upgraded and revised acceptance criteria for evaluating emergency preparedness plans will be issued for comment and may be included in the Commission's regulations.

[2] 44 Fed. Reg. 65049 (November 9, 1979).

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of the proposed amendments call for State and local government emergency response plans to be submitted to and concurred in by the NRC as a condition of operating license issuance.

Under one alternative being considered, the proposed rule would require a determination on continued operation of plants where relevant State and local emergency response plans have not received NRC concurrence. Shutdown of a reactor would not follow automatically in every case. Under the other alternative proposal, shutdown of the reactor would be required automatically where the appropriate State and local emergency response plans have not received NRC concurrence within the prescribed time periods. However, the Commission could grant an exemption to this requirement if the licensee can demonstrate to the satisfaction of the Commission that the deficiencies in the plan are not significant for the plant in question, that alternative compensating actions have been or will be taken promptly, or that there are other compelling reasons. If there is no concurrence and the plant is shut down, then the plant must remain shut down until such an exemption is granted or until concurrence is obtained.

The NRC presently requires that power reactor licensees and applicants plan for radiological emergencies within their plant sites and make arrangements with State and local organizations to respond to accidents that might have consequences beyond the site boundary. In this way, offsite emergency response planning has been related to the nuclear licensing process.

To aid State and local governments in the development and implementation of adequate emergency response plans, the NRC, in conjunction with several other Federal agencies, has attempted, on a cooperative and voluntary basis, to provide for training and instruction of State and local government

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personnel and to establish criteria to guide the preparation of emergency response plans.[3] However, in the past, the NRC has not made NRC concurrence in State and local emergency response plans a condition of operation for a nuclear power plant; the proposed rule would do so, as explained above.

In issuing this rule, NRC recognizes the significant responsibilities assigned to the Federal Emergency Management Agency (FEMA) by Executive Order 12148 on July 15, 1979, to coordinate the emergency planning functions of executive agencies. In view of FEMA's new role, NRC agreed on September 11, 1979, that FEMA should henceforth chair the Federal Interagency Central Coordinating Committee for Radiological Emergency Response Planning and Preparedness (FICCC). In addition, NRC and FEMA have agreed to exercise joint responsibility for concurring in State emergency response plans prior to NRC issuance of operating licenses. During the next few months NRC and FEMA will continue to reexamine intra-federal relationships and responsibilities regarding radiological emergency response planning. However, the Commission does not believe that the reexamination should serve as a basis for delay in the proposed rule change.

At several places in the proposed amendments, the Commission refers to the roles of State and local governments. Indeed the main thrust of the proposed rule is that prior concurrence in State and local emergency response plans will be a condition for licensing and operation of a nuclear

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[3] NRC staff guidance for the preparation and evaluation of State and local emergency response plans leading to NRC concurrence is contained in NUREG 75/111, "Guide and Checklist for Development and Evaluation of State and Local Government Radiological Emergency Response Plans in Support of Fixed Nuclear Facilities" (December 1, 1974) and Supplement 1 thereto dated March 15, 1977. The adequacy of this guidance is being reevaluated by the staff and the Commission will consider codification of the upgraded criteria in 1980.

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power plant. The Commission recognizes that it cannot direct any governmental unit to prepare a plan, much less compel its adequacy. However, the NRC can condition a license on the existence of adequate plans.

While the State and local governments have the primary responsibility under their constitutional police powers to protect their public, the Commission, under authority granted to it by the Congress, also has an important responsibility to protect the public in matters of radiological health and safety. Accordingly, with an understanding of its limitations and with a sensitivity to the importance of all levels of governments working together, the Commission will commit to seek and apply the necessary resources to make its part in this venture work.

Rationale for Change

The proposed rule is predicated on the Commission's considered judgment in the aftermath of the accident at Three Mile Island that safe siting and design-engineered features alone do not optimize protection of the public health and safety. Before the accident it was thought that adequate siting in accordance with existing staff guidance coupled with the defense-in-depth approach to design would be the primary public protection. Emergency planning was conceived as a secondary but additional measure to be exercised in the unlikely event that an accident would happen. The Commission's perspective was severely altered by the unexpected sequence of events that occurred at Three Mile Island. The accident showed clearly that the protection provided by siting and engineered safety features must be bolstered by the ability to take protective measures during the course of an accident. The accident also showed clearly that on-site conditions and actions, even if they do not cause significant off-site

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radiological consequences, will affect the way the various State and local entities react to protect the public from dangers, real or imagined, associated with the accident. A conclusion the Commission draws from this is that in carrying out its statutory mandate to protect the public health and safety, the Commission must be in a position to know that off-site governmental plans have been reviewed and found adequate. The Commission finds that the public can be protected within the framework of the Atomic Energy Act only if additional attention is given to emergency response planning. The Commission recognizes that the increment of risk involved in operation of reactors over the prescribed times in the implementation of this rule does not constitute an unacceptable risk to the public health and safety.

The Commission recognizes that this proposal, to view emergency planning as equivalent to, rather than as secondary to, siting and design in public protection, departs from its prior regulatory approach to emergency planning. The Commission has studied the various proposals and believes that this course is the best available choice. In reaching this determination, the Commission is guided by the findings of its Emergency Planning Task Force which found the need for intensive effort by NRC over the next few years to upgrade the regulatory program in this area. The Commission has also endorsed the findings of the EPA-NRC Joint Task Force for policy development in this area. Implementation of these reports by the NRC in its staff guidance is necessary for the NRC to be as effective as possible in assisting those governmental units and those utilities responsible for execution of the plans.

The Commission acknowledges the input of over one hundred commenters to date on the proposal to adopt new regulations. The staff evaluation

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of these comments is incorporated by reference herein as part of the record in this rulemaking proceeding.

In addition, the Commission acknowledges the important contributions made this year by various official commenters on the state of emergency planning around nuclear facilities, whose views are included as part of the basis for these regulations. The first of these was the report of the General Accounting Office issued coincident with the TMI accident which explicitly recommended that no new nuclear power plants be permitted to operate "unless offsite emergency plans have been concurred in by the NRC," as a way to insure better emergency protection. GAO Report, EMD-78-110, "Areas Around Nuclear Facilities Should Be Better Prepared for Radiological Emergencies" (March 30, 1979). In addition, the NRC Authorization Bill for FY 1980 (S.562) would amend the Atomic Energy Act to require a concurred-in State plan as a condition of operation. The policy consideration that underlies this provision would be consistent with the Commission's views of the health and safety significance of emergency planning. One of the Commission's House Oversight Subcommittees developed a comprehensive document on the status of emergency planning which recommended that NRC, in a leadership capacity, undertake efforts to upgrade its licensees' emergency plans and State and local plans. House Report No. 96-413, "Emergency Planning Around U.S. Nuclear Power Plants," 96th Cong., 1st Sess. (August 8, 1979). The Report's recommendations were significant and its findings about the need for improved emergency preparedness lend support to the NRC's own efforts to assure that the public is protected. Finally, the President's Commission on the Accident at Three Mile Island has recently recommended approved State and local plans as a condition for resuming licensing. This Commission's

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Report and its supporting Staff Reports on emergency responses and preparedness are indicative of many of the problems which the NRC would address in this rule. In this regard the Commission notes that the already extensive record made on emergency planning improvements will be supplemented by the report of its own Special Inquiry Group and other ongoing investigations, by any requirements of the NRC Authorization Act, and by the public comments solicited by this proposed rule.

The proposed rule meets many of the concerns discussed in the above mentioned reports and publications. However, the Commission notes that the proposed rule is considered as an interim upgrade of NRC emergency planning regulations and, in essence, clarifies and expands areas that have been perceived to be deficient as a result of past experiences. Because the Commission anticipates that further changes in the emergency planning regulations may be proposed as more experience is gained with implementing these revised regulations, as the various Three Mile Island investigations are concluded, and as the results become available from efforts in such areas as instrumentation and monitoring and generic studies of accident models, these proposed rules may require further modifications. Thus the proposed rule changes should be viewed as a first step in improving emergency planning.

Publication of these proposed rule changes in the Federal Register supersedes and thus eliminates the need to continue development of the proposed rule change to 10 CFR Part 50, Appendix E (43 Fed. Reg. 37473), published on August 23, 1978, regarding Emergency Planning considerations outside the Low Population Zone (LPZ).

The Commission is considering whether construction permits which have already been issued should be reconsidered because of the emergency

planning considerations of this rule. For plants in operation, NRC teams are now meeting with licensees to upgrade licensee, State and local emergency plans and implementing procedures.

In developing these proposed rule changes, the Commission has considered the potential consequences, social and economic, as well as safety, of the shutdown of an operating nuclear power plant. Under both alternatives, the substantive criteria to be applied in evaluating whether or not a licensee should be allowed to continue to operate the reactor are the same. Thus, both alternatives reflect the view that, while emergency planning is important for public health and safety, the increment of risk involved in permitting operation for a limited time in the absence of concurred-in plans may not be undue in every case.

However, the alternative rule changes differ primarily in the course of action that would follow either non-concurrence, lack of concurrence, or withdrawal of concurrence in relevant State or local emergency plans. Under one alternative (Alternative A) an order to show cause why the licensee should not shut down the plant may be issued in this circumstance, but the order to show cause would not be made immediately effective unless the Commission decided in the particular cases that the safety risks were sufficiently serious to warrant such immediate action. Under the other alternative (Alternative B), the licensee would be required to shut down the plant immediately in this circumstance. Unless and until an exemption is granted, the licensee will not be allowed to operate the reactor.

The NRC contemplates that under Alternative A initial concurrence and subsequent withdrawal, if necessary, would be noted in local newspapers. Under Alternative B, public notice of any initial concurrence or withdrawal of concurrence would be made both in the Federal Register and in local

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newspapers. Notice in the Federal Register and in local newspapers will also be provided of any required suspension of operation, any request for an exemption from this requirement, and any request that an operating license be exempt from the requirement for concurred-in plans. Public comments will be welcomed. If significant interest in meeting with the staff is expressed, the staff may hold public meetings in the vicinity of the site to receive and discuss comments and to answer questions.

Accordingly, in the discharge of its duties to assure the adequate protection of the public health and safety, the Commission has decided to issue proposed rules for public comment. The proposed changes to 10 CFR §§ 50.33, 50.47, and 50.54 apply to nuclear power reactors only. However, the proposed Appendix E to 10 CFR Part 50 applies to production and utilization facilities in general except as noted in the proposed Appendix E. These proposals, comments, other official reports, and views expressed at the public workshops will be factored into the final rule, which the NRC now anticipates will be published in early 1980.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, and section 553 of title 5 of the United States Code, notice is hereby given that adoption of the following amendments to 10 CFR Part 50 and Appendix E to 10 CFR Part 50 is contemplated.

Copies of comments received on the proposed amendments may be examined in the Commission's Public Document Room at 1717 H Street, NW., Washington, DC, and at local Public Document Rooms.

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PART 50 - DOMESTIC LICENSING OF PRODUCTION

AND UTILIZATION FACILITIES

1. Paragraph (g) of Section 50.33 is revised to read as follows:

§ 50.33 Contents of applications; general information.

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(g) If the application is for an operating license for a nuclear power reactor, the applicant shall submit radiological emergency response plans of State and local governmental entities in the United States that are wholly or partially within the plume exposure pathway Emergency Planning Zone (EPZ), as well as the plans of State governments wholly or partially within the ingestion pathway EPZ.[1] Generally, the plume exposure pathway EPZ for nuclear power reactors shall consist of an area about 10 miles in radius and the ingestion pathway EPZ shall consist of an area about 50 miles in radius. The exact size and configuration of the EPZs surrounding a particular nuclear power reactor shall be determined in relation to the emergency response needs and capabilities as they are affected by such local conditions as demography, topography, land characteristics, access routes, and local jurisdictional boundaries. The plans for the ingestion pathway shall focus on such less immediate actions as are appropriate to protect the food ingestion pathway.

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[1] Emergency Planning Zones (EPZs) are discussed in NUREG-0396, "Planning Basis for the Development of State and Local Government Radiological Emergency Response Plans in Support of Light Water Nuclear Power Plants."

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2. A new section 50.47 is added. Alternative versions of the first paragraph are presented.

§ 50.47 Emergency plans.

[ALTERNATIVE A

No operating license for a nuclear power reactor will be issued unless the emergency response plans submitted by the applicant in accordance with § 50.33(g) have been reviewed and concurred in by the NRC.[2] In the absence of one or more concurred-in plans, the applicant will have an opportunity to demonstrate to the satisfaction of the Commission that deficiencies in the plans are not significant for the plant in question, that alternative compensating actions have been or will be taken promptly, or that there are other compelling reasons to permit operation.] OR

[ALTERNATIVE B

No operating license for a nuclear power reactor will be issued unless the emergency response plans submitted by the applicant in accordance with § 50.33(g) have been reviewed and concurred in by the NRC.[2] An applicant may request an exemption from this requirement based upon a demonstration by the applicant that any deficiencies in the plans are not significant for the plant in question, that alternative compensating actions have been or will be taken promptly, or that there are other compelling reasons

[2] NRC staff guidance for the preparation and evaluation of State and local emergency response plans leading to NRC concurrence is contained in NUREG 75/111, "Guide and Checklist for Development and Evaluation of State and Local Government Radiological Emergency Response Plans in Support of Fixed Nuclear Facilities" (December 1, 1974) and Supplement 1 thereto dated March 15, 1977.

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to permit operation. No such operating license will be issued unless NRC finds that appropriate protective actions, including evacuation when necessary, can be taken for any reasonably anticipated population within the plume exposure EPZ.]

Generally, the plume exposure pathway EPZ for nuclear power plants shall consist of an area about 10 miles in radius and the ingestion pathway EPZ shall consist of an area about 50 miles in radius. The exact size and configuration of the EPZs surrounding a particular nuclear power reactor shall be determined in relation to the emergency response needs and capabilities as they are affected by such local conditions as demography, topography, land characteristics, access routes, and local jurisdictional boundaries. The plans for the ingestion pathway shall focus on such less immediate actions as are appropriate to protect the food ingestion pathway.

3. Section 50.54 is amended by adding four new paragraphs, (s), (t), (u) and (v). Alternative passages for subsections (s) and (t) are provided:

§ 50.54 Conditions of licenses.

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(s) Each licensee who is authorized to possess and/or operate a nuclear power reactor shall submit within 60 days of the effective date of this amendment the radiological emergency response plans of State and local governmental entities in the United States that are wholly or partially within the plume exposure pathway EPZ, as well as the plans of State governments wholly or partially within the ingestion pathway EPZ.[1] Generally, the plume exposure pathway EPZ for nuclear power reactors shall

[1] Emergency Planning Zones (EPZs) are discussed in NUREG-0396, "Planning Basis for the Development of State and Local Government Radiological Emergency Response Plans in Support of Light Water Nuclear Power Plants."

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consist of an area about 10 miles in radius and the ingestion pathway EPZ shall consist of an area about 50 miles in radius. The exact size and configuration of the EPZs for a particular nuclear power reactor shall be determined in relation to the emergency response needs and capabilities as they are affected by such local conditions as demography, topography, and land characteristics, access routes, and local jurisdictional boundaries. The plans for the ingestion pathway shall focus on such less immediate actions as are appropriate to protect the food ingestion pathway. [ALTERNATIVE A: If the appropriate State and local government emergency response plans have not been concurred in[2] within 180 days of the effective date of the final amendments or by January 1, 1981, whichever is sooner, the Commission will make a determination whether the reactor should be shut down. The reactor need not be shut down if the licensee can demonstrate to the Commission's satisfaction that the deficiencies in the plan are not significant for the plant in question, that alternative compensating actions have been or will be taken promptly, or that there are other compelling reasons for continued operation.] OR [ALTERNATIVE B: If the plans submitted by the licensee in accordance with the subsection have not been concurred in by NRC within 180 days of the effective date of this amendment or by January 1, 1981, whichever is sooner, the reactor in question will be shut down until the concurrences have been obtained. The licensee may request an exemption from this requirement based upon a demonstration that any deficiencies in the plans are not significant for the plant in

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[2] NRC staff guidance for the preparation and evaluation of State and local emergency response plans leading to NRC concurrence is contained in NUREG 75/111, "Guide and Checklist for Development and Evaluation of State and Local Government Radiological Emergency Response Plans in Support of Fixed Nuclear Facilities" (December 1, 1974) and Supplement 1 thereto dated March 15, 1977.

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question, that alternative compensating actions have been or will be taken promptly, or that there are other compelling reasons for continued operation. However, unless and until this exemption has been granted by the Commission, the plant shall be maintained in the shutdown condition.]

[ALTERNATIVE A

(t) If, after 180 days following the effective date of these amendments or January 1, 1981, whichever is sooner, and during the operating license period of a nuclear power reactor the Commission determines that the appropriate State and local government emergency response plans do not warrant continued NRC concurrence and such State or local government fails to correct such deficiencies within 4 months of the date of notification of the defects, the Commission will make a determination whether the reactor shall be shut down until the plan is submitted and has again received NRC review and concurrence. The reactor need not be shut down if the licensee can demonstrate to the Commission's satisfaction that the deficiencies in the plan are not significant for the plant in question, that alternative compensating actions have been or will be taken promptly, or that there are other compelling reasons for continued operation.] OR

[ALTERNATIVE B

(t) If, after 180 days following the effective date of these amendments or after January 1, 1981, whichever is sooner, and during the operating license period of a nuclear power reactor, the Commission determines that the appropriate State or local government emergency response plans do not warrant continued NRC concurrence and such State or local government fails to correct such deficiencies within 4 months of the date of notification of the defects, the reactor in question will be shut down. The

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licensee may request an exemption from this requirement based upon a demonstration that any deficiencies in the plans are not significant for the plant in question, that alternative compensating actions have been or will be taken promptly, or that there are other compelling reasons for continued operation. However, unless and until this exemption has been granted by the Commission, the plant shall be maintained in the shutdown condition.]

(u) The licensee of a nuclear power reactor shall provide for the development, revision, implementation and maintenance of its emergency preparedness program. To this end, the licensee shall provide for an independent review of its emergency preparedness program at least every 12 months by licensee, employees, contractors, or other persons who have no direct responsibility for implementation of the emergency preparedness program. The review shall include a review and audit of licensee drills, exercises, capabilities, and procedures. The results of the review and audit, along with recommendations for improvements, shall be documented, reported to the licensee's corporate and plant management, and kept available at the plant for inspection for a period of five years.

(v) Within 180 days after the effective date of the final rules or by January 1, 1981, whichever is sooner, each licensee who is authorized to possess and/or operate a production or utilization facility shall have plans for coping with emergencies which meet the requirements of Appendix E of this Chapter.

4. 10 CFR Part 50, Appendix E, is amended as follows:

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APPENDIX E--EMERGENCY PLANNING AND PREPAREDNESS FOR PRODUCTION AND UTILIZATION FACILITIES[1]

I. Introduction

Each applicant for a construction permit is required by § 50.34(a) to include in its preliminary safety analysis report a discussion of preliminary plans for coping with emergencies. Each applicant for an operating license is required by § 50.34(b) to include in its final safety analysis report plans for coping with emergencies.

This appendix establishes minimum requirements for emergency plans for use in attaining a state of emergency preparedness. These plans shall be described in the preliminary safety analysis report and submitted as a part of the final safety analysis report. The potential radiological hazards to the public associated with the operation of research and test reactors are considerably less than those involved with nuclear power reactor. Consequently, the size of the EPZs for Research and Test reactors and the degree to which compliance with the requirements of this section

[1] NRC staff has developed three regulatory guides: 1.101, "Emergency Planning for Nuclear Power Plants," 2.6, "Emergency Planning for Research Reactors," and 3.42, "Emergency Planning in Fuel Cycle Facilities and Plants Licensed Under 10 CFR Parts 50 and 70"; and NUREG-0610, "Draft Emergency Level Action Guidelines for Nuclear Power Plants" (September 1979) to help applicants establish adequate plans required pursuant to § 50.34 and this Appendix for coping with emergencies. Copies of the guides are available at the Commission's Public Document Room, 1717 H Street, NW., Washington, D.C., 20555. Copies of guides may be purchased from the Government Printing Office. Information on current prices may be obtained by writing the U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Publications Sales Manager.

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and sections II, III, IV and V is necessary will be determined on a case-by-case basis using Regulatory Guide 2.6 as a standard for acceptance. State and local government emergency response plans, which may include the plans of offsite support organizations, shall be submitted with the applicant's emergency plans.

II. The Preliminary Safety Analysis Report

The Preliminary Safety Analysis Report shall contain sufficient information to ensure the compatibility of proposed emergency plans both for onsite areas and the EPZs with facility design features, site layout, and site location with respect to such considerations as access routes, surrounding population distributions, and land use for the Emergency Planning Zones[2] (EPZs).

As a minimum, the following items shall be described:

A. Onsite and offsite organizations for coping with emergencies, and the means for notification, in the event of an emergency, of persons assigned to the emergency organizations;

B. Contacts and arrangements made and documented with local, State, and Federal governmental agencies with responsibility for coping with emergencies, including identification of the principal agencies.

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[2]The size of the EPZs for a nuclear power plant shall be determined in relation to the emergency response needs and capabilities as they are affected by such local conditions as demography, topography, land characteristics, access routes, and local jurisdictional boundaries. Generally, the plume exposure pathway EPZ for light water nuclear power plants shall consist of an area about 10 miles radius and the ingestion pathway EPZ an area about 50 miles in radius. EPZs are discussed in NUREG-0396. The size of the EPZ's for non-power reactors shall be determined on a case-by-case basis.

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[ALTERNATIVE A

C. Protective measures to be taken in the event of an accident within the site boundary and within each EPZ to protect health and safety; corrective measures to prevent damage to onsite and offsite property; and the expected response, in the event of an emergency, of offsite agencies] OR

[ALTERNATIVE B

C. Protective measure to be taken in the event of an accident within the site boundary and within each EPZ to protect health and safety; procedures by which these measures are to be carried out (e.g., in the case of an evacuation, who authorizes the evacuation, how the public is to be notified and instructed, how the evacuation is to be carried out); and the expected response, in the event of an emergency, of offsite agencies];

D. Features of the facility to be provided for onsite emergency first aid and decontamination, and for emergency transportation of onsite individuals to offsite treatment facilities;

E. Provisions to be made for emergency treatment at offsite facilities of individuals injured as a result of licensed activities;

F. Provisions for a training program for employees of the licensee, including those who are assigned specific authority and responsibility in the event of an emergency, and for other persons not employees of the licensee whose assistance may be needed in the event of a radiological emergency;

G. Features of the facility to be provided to ensure the capability for actuating onsite protective measures and the capability for facility

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reentry in order to mitigate the consequences of an accident or, if appropriate, to continue operation;

H. A preliminary analysis which projects the time and means to be employed in the notification of State and local governments and the public in the event of an emergency. A preliminary analysis of the time required to evacuate various sectors and distances within the plume exposure pathway EPZ for transient and permanent populations.

III. The Final Safety Analysis Report

The Final Safety Analysis Report shall contain the emergency plans for coping with emergencies. The plans shall be an expression of the overall concept of operation, which describe the essential elements of advance planning that have been considered and the provisions that have been made to cope with emergency situations. The plans shall incorporate information about the emergency response roles of supporting organizations and offsite agencies. That information shall be sufficient to provide assurance of coordination among the supporting groups and between them and the licensee.

[ALTERNATIVE A

The plans submitted must include a description of the elements set out in Section IV to an extent sufficient to demonstrate that the plans provide reasonable assurance that appropriate measures can and will be taken in the event of an emergency to protect public health and safety and minimize damage to property within the Emergency Planning Zones (EPIs).[2]] OR

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[ALTERNATIVE B

The plans submitted must include a description of the elements set out in Section IV to an extent sufficient to demonstrate that the plans provide reasonable assurance that appropriate measures can and will be taken in the event of an emergency to protect public health and safety within the Emergency Planning Zones (EPZs).[2]]

IV. Content of Emergency Plans

The applicant's emergency plans shall contain, but not necessarily be limited to, the following elements: organization for coping with radiation emergencies, assessment action, activation of emergency organization, notification procedures, emergency facilities and equipment, training, maintaining emergency preparedness, and recovery. The applicant shall also provide an analysis of the time required to evacuate various sectors and distances within the plume exposure pathway EPZ for transient and permanent populations.

A. ORGANIZATION

The organization for coping with radiological emergencies shall be described including definitions of authorities, responsibilities and duties of individuals assigned to licensee's emergency organization, and the means of notification of such individuals in the event of an emergency. Specifically, the following shall be included:

1. A description of the normal plant operating organization.
2. A description of the onsite emergency response organization with a detailed discussion of:
   a. Authorities, responsibilities and duties of the individual(s who will take charge during an emergency;

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b. Plant staff emergency assignments;

c. Authorities, responsibilities, and duties of an onsite emergency coordinator who shall be in charge of the exchange of information with offsite authorities responsible for coordinating and implementing offsite emergency measures.

3. A description of the licensee headquarters personnel that will be sent to the plant site to provide augmentation of the onsite emergency organization.

4. Identification, by position, of persons within the licensee organization who will be responsible for making offsite dose projections and a description of how these projections will be made and the results transmitted to State and local authorities, NRC, FEMA and other appropriate governmental entities.

5. Identification, by position and function, of other employees of the licensee with special qualifications for coping with emergency conditions which may arise. Other persons with special qualifications, such as consultants, who are not employees of the licensee and who may be called upon for assistance for short- or long-term emergencies shall also be identified. The special qualifications of these persons shall be described.

6. A description of the local offsite services to be provided in support of the licensee emergency organization.

7. Identification of and expected assistance from appropriate State, local, and Federal agencies with responsibilities for coping with emergencies.

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8. Identification of the State and/or local officials responsible for planning for, ordering, notification of, and controlling appropriate protective actions, including evacuations when necessary.

B. ASSESSMENT ACTIONS

The means to be provided for determining the magnitude and continued assessment of the release of radioactive materials shall be described including emergency action levels that are to be used as criteria for determining the need for notification and participation of local and State agencies and the Commission and other Federal agencies, and the emergency action levels that are to be used as criteria along with appropriate meteorological information for determining when protective measures should be considered within and outside the site boundary to protect health and safety and prevent damage to property. The emergency action levels shall be based on in-plant conditions and instrumentation in addition to onsite and offsite monitoring. These emergency action levels shall be discussed and agreed upon by the applicant and State and local governmental authorities and approved by NRC. They shall also be reviewed with the State and local governmental authorities on an annual basis.

C. ACTIVATION OF EMERGENCY ORGANIZATION

The entire spectrum of emergency conditions which involve the alerting or activation of progressively larger segments of the total emergency organization shall be described. The communication steps taken to alert or activate emergency personnel under each class of emergency shall be described. Emergency action levels (based not only on onsite and offsite radiation monitoring information but also on readings from a number of

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sensors that indicate a potential emergency such as the pressure in containment and the response of the Emergency Core Cooling System) for notification of offsite agencies shall be described. The existence, but not the details, of a message authentication scheme shall be noted for such agencies.

D. NOTIFICATION PROCEDURES

1. Administrative and physical means for notifying, and agreements reached with, local, State, and Federal officials and agencies for the early warning of the public and for public evacuation or other protective measures, should they become necessary, shall be described. This description shall include identification of the principal officials, by title and agencies, for the Emergency Planning Zones[2] (EPZs).

2. Provisions shall be described 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, as well as a listing of local broadcast network that will be used for dissemination of information during an emergency.

3. Administrative and physical means, and the time required, shall be described for alerting and providing prompt instructions[3] to the public within the plume exposure pathway Emergency Planning Zone. It is the applicant's responsibility to ensure that such means exist, regardless of who implements this requirement.

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[3] It is expected 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.

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E. EMERGENCY FACILITIES AND EQUIPMENT

Provisions shall be made and described for emergency facilities and equipment, including:

1. Equipment at the site for personnel monitoring;

2. Equipment for determining the magnitude of and for continuously assessing the release of radioactive materials to the environment;

3. Facilities and supplies at the site for decontamination of onsite individuals;

4. Facilities and medical supplies at the site for appropriate emergency first aid treatment;

5. Arrangements for the services of a physician and other medical personnel qualified to handle radiation emergencies;

6. Arrangements for transportation of injured or contaminated individuals from the site to treatment facilities outside the site boundary;

7. Arrangements for treatment of individuals injured in support of licensed activities on the site at treatment facilities outside the site boundary;

8. One onsite technical support center and one near-site emergency operation center from which effective direction can be given and effective control can be exercised during an emergency;

9. At least one onsite and one offsite communications system, including redundant power sources. This will include the communication arrangements for emergencies, including titles and alternates for those in charge at both ends of the communication links and the primary and backup means of communication. Where consistent with function of the governmental agency, these arrangements will include:

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a. Provision for communications with contiguous State/local governments within the plume exposure pathway Emergency Planning Zone. Such communications shall be tested monthly.

b. Provision for communications with Federal emergency response organizations. Such communications systems shall be tested annually.

c. Provision for communications between the nuclear facility, State and/or local emergency operations centers, and field assessment teams. Such communications systems shall be tested annually.

F. TRAINING

The program to provide for (1) the training of employees and exercising, by periodic drills, of radiation emergency plans to ensure that employees of the licensee are familiar with their specific emergency response duties, and (2) the participation in the training and drills by other persons whose assistance may be needed in the event of a radiation emergency shall be described. This shall include a description of specialized initial training and periodic retraining programs to be provided to each of the following categories of emergency personnel:

a. Directors or coordinators of the plant emergency organization.

b. Personnel responsible for accident assessment, including control room shift personnel.

c. Radiological monitoring teams.

d. Fire control teams (fire brigades).

e. Repair and damage control teams.

f. First aid and rescue teams.

g. Local services personnel, e.g., local Civil Defense, local law enforcement personnel, and local news media persons.

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POOR ORIGINAL

h. Medical support personnel.

i. Licensee's headquarters support personnel.

j. Security personnel.

The plan shall describe provisions for the conduct of yearly drills and exercises to test the adequacy of timing and content of implementing procedures and methods, to test emergency equipment and communication networks, and to ensure that emergency organization personnel are familiar with their duties. Such provisions shall specifically include participation by offsite personnel as described above as well as other State and local governmental agencies. The plan shall also describe provisions for a joint exercise involving the Federal, State, and local response organizations. The scope of such an exercise should test as much of the emergency plans as is reasonably achievable without involving full public participation. Definitive performance criteria shall be established for all levels of participation to ensure an objective evaluation. This joint Federal, State, and local exercise shall be:

1. for presently operating plants, initially within one year of the effective date of this amendment and once every [ALTERNATIVE A three years] or [ALTERNATIVE B five years] thereafter.

3. for a plant for which an operating license is issued after the effective date of this amendment, initially within one year of the issuance of the operating license and once every [ALTERNATIVE A three years] or [ALTERNATIVE B five years] thereafter.

All training provisions shall provide for formal critiques in order to evaluate the emergency plan's effectiveness and to correct weak areas

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through feedback with emphasis on schedules. lesson plans, practical training, and periodic examinations.

G. MAINTAINING EMERGENCY PREPAREDNESS

Provisions to be employed to ensure that the emergency plan, its implementing procedures and emergency equipment and supplies are maintained up to date shall be described.

H. RECOVERY

Criteria to be used to determine when to the extent possible, following an accident, reentry of the facility is appropriate or when operation should be continued.

V. Implementing Procedures

No less than 180 days prior to scheduled issuance of an operating license, 10 copies each of the applicant's detailed implementing procedures for its emergency plan shall be submitted to NRC Headquarters and to the appropriate NRC Regional Office: Provided that, in cases where the operating license is scheduled to be issued less than 180 days after the effective date of this rule, such implementing procedures shall be submitted as soon as practicable. Within 60 days after the effective date for compliance under § 50.54(v) with the revised Appendix E, licensees who are authorized to operate a nuclear power facility shall submit 10 copies each of the licensee's emergency plan implementing procedures to NRC Headquarters and to the appropriate NRC Regional Office. As necessary to maintain them up to date thereafter, 10 copies each of any changes to these implementing procedures shall be submitted to NRC Headquarters and to the same NRC Regional Office within 30 days of such changes.

[7590-01]

(Sec. 161, Pub. L. 83-703, 68 Stat. 948 (42 U.S.C. 2201); Sec. 201, as amended, Pub. L. 93-438, 88 Stat. 1242, Pub. L. 94-79, 89 Stat. 413 (42 U.S.C. 5341).)

Dated at Washington, D.C. this 13th day of December 1979.

For the Nuclear Regulatory Commission.

Samuel J. Chilk
Secretary of the Commission

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AGENDA FOR EMERGENCY PREPAREDNESS WORKSHOPS

Morning Session -- 8:30 a.m.

Introduction

- Purpose & Scope of Meeting.
- Background-Reason for proposed Rule.
- Proposed Rule provides for Federal/State/Local planning for emergencies.
- NRC Emergency Planning requirements-concurrence required.

Presentation of Proposed Rule

- Rationale for and description of proposed rule.
- Criteria to be met for concurrence.
- Who must have concurrence?
- Review and concurrence procedures.
- Differences in requirements for emergency planning zones, i.e. plume exposure zone for compared to ingestion pathway zone.

Federal Emergency Management Agency (FEMA)

Role in overall emergency preparedness, training, funding, and model plan development.

Public Affairs

Role of public affairs officials in an emergency, coordination between "responders" and the media.

Questions and Comments From General Public

Afternoon Session -- 1:00 p.m.

Discussion By Participants

Discussion Points:

- Requirement that State and local emergency response plans be concurred in by the NRC as a condition of operating license issuance. (NRC concurrence in State and local plans is not required at the construction permit stage.) Additionally:

  a. An operating plant may be required to shutdown if a State or local emergency plan has not received NRC concurrence within 180 days of the effective date of the final amendments, or January 1, 1981, whichever is earlier.

  b. An operating plant may be required to shutdown if a State or local emergency plan does not warrant continued NRC concurrence and is not corrected within 4 months of notification of NRC concurrence withdrawal.
  (Discussion will include consideration of alternative proposed rules for permitting continued operation or issuance of operating licenses for an interim period where there are no concurred in plans or concurrence has been withdrawn). -

- Requirement that emergency planning be expanded to cover "Emergency Planning Zones".
- Requirement that detailed emergency planning implementing procedures be submitted to NRC for review.
- The requirement that specified "Emergency Action Levels" be used by the applicant, State and local authorities.
- Provisions for prompt alerting of the public and instructions for public protection.
- Requirements for having Emergency Operations Center.
- Requirement for providing redundant communications systems.
- Requirement for providing specialized training to licensee and local emergency support personnel.
- Requirement for maintaining up-to-date plans.
- What measures can compensate for various deficiencies.

Closing Session

- Individual statements/comments by participants and public.
- Concluding statement by NRC.

Adjourn -- 5:00 p.m.

Enclosure No. 3

SCHEDULE

January 15	Roosevelt Hotel Madison & 45th Street New York, New York 10017 212-661-9600
January 17	Bellevue Hotel Geary at Taylor Street San Francisco, California 94102 415-392-7752
January 22	Ramada O'Hare Inn 6600 N. Mannheim Road Des Plaines (at O'Hare Airport) 312-827-5131
January 24	Downtown Holiday Inn 175 Piedmont, NE Atlanta, Georgia 30303 404-659-2727

Trelay

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

December 26, 1979

APPLICANTS FOR CONSTRUCTION PERMITS AND
LICENSEES OF PLANTS UNDER CONSTRUCTION

Gentlemen:

SUBJECT: REQUEST FOR INFORMATION REGARDING EVACUATION TIMES

This letter is being sent to all applicants for construction permits, and licensees of plants under construction. The purpose of the letter is a request for information regarding estimates for evacuation of various areas around future nuclear power plants. The requested information is in addition to that requested by the November 21, 1979, letter to all applicants for an operating license and licensees of plants under construction from Domenic B. Vassallo, Acting Director, Division of Project Management, Office of Nuclear Reactor Regulation.

Although evacuation time estimates are expected to be prepared in the course of the upgrading of the state of emergency preparedness as previously specified submission of these estimates to the NRC is being requested on an accelerated time scale so that the NRC can identify those instances in which unusual evacuation constraints exist and special planning measures should be considered. In some cases of extreme difficulty where a large population is at risk, special facility modifications may also be appropriate. The information requested in the enclosure should be submitted no later than March 31, 1980.

Previous correspondence indicated that efforts to develop a model plan were continuing. It now appears that the model plan will not be completed on a schedule which will be of use in developing upgraded plans in the near term. The upgraded plan development should therefore proceed on a site-specific basis.

Sincerely,

Brian K. Grimes, Director

Enclosure:
Request for Evacuation Time
Estimates

cc w/enclosure:
Service Lists

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DUPLICATE DOCUMENT

Entire document previously entered into system under:
ANO 8001180011
No. of pages: 4