

ENCLOSURE B-1 OF SECY 80-275BPART 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)¹, as well as the plans of State governments wholly or partially within the ingestion pathway EPZ.² Generally, the plume exposure pathway EPZ for nuclear power reactors shall consist of an area about 10 miles (16 Km) in radius and the ingestion pathway EPZ shall consist of an area about 50 miles (80 Km) 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 size of the EPZ's also may be determined on a case-by-case basis for gas cooled reactors and for reactors with an authorized power level less than 250 MW thermal. The plans for the ingestion pathway shall focus on

¹Emergency Planning Zones (EPZs) are 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," December 1978.

²If the State and local emergency response plans have been previously submitted to the NRC for inclusion in the facility docket, the applicant need only provide the appropriate reference to meet this requirement.

to the Director of Nuclear Reactor Regulation for approval within one year from the effective date of this rule. Each licensee who is authorized to possess and/or operate a research reactor facility with an authorized power level less than 500 kW thermal, under a license of the type specified in § 50.21(c), shall submit emergency plans complying with 10 CFR Part 50, Appendix E, to the Director of Nuclear Reactor Regulation for approval within two years from the effective date of this amendment.

(s) Each licensee who is authorized to possess and/or operate a nuclear power reactor shall submit to NRC 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 a plume exposure pathway Emergency Planning Zone (EPZ), as well as the plans of State governments wholly or partially within an ingestion pathway EPZ.^{1,2} 10 copies of the above plans shall be forwarded to the Director of Nuclear Reactor Regulation with 3 copies to the Director of the appropriate NRC regional office. Generally, the plume exposure pathway EPZ for nuclear power reactors shall consist of an area about 10 miles (16 Km) in radius and the ingestion pathway EPZ shall consist of an area about 50 miles (80 Km) 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 size of the EPZs also may be determined on a case-by-case basis for gas

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All training, including exercises, shall provide for formal critiques in order to [~~evaluate the emergency plan's effectiveness and to correct weak areas through feedback with emphasis on schedules, session plans, practical training and periodic examinations~~] identify weak areas that need corrections and any weaknesses that are identified shall be corrected.

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2. Provisions shall be described for the yearly dissemination to the public, including the transient population, within the plume exposure pathway EPZ of basic emergency planning information, such as the methods and times required for public notification, and the protective actions planned if an accident occurs, and general information as to the nature and effects of radiation, and a listing of local broadcast stations that will be used for dissemination of information during an emergency.

3. A licensee shall have the capability to notify responsible State and local governmental agencies within 15 minutes after declaring an emergency. The licensee shall demonstrate that the State/local officials have the capability to make the public notification decision promptly on being informed by the licensee of an emergency condition. By July 1, 1981, the Nuclear Power Reactor licensee shall demonstrate that the administrative and physical means for alerting and providing prompt instructions to the public within the plume exposure pathway emergency planning zone have been established. The design objective shall be to have the capability to essentially complete the initial notification of the public within the plume exposure pathway EPZ within about 15 minutes. The use of this notification capability will range from immediate notification of the public (within 15 minutes of the time that State and local officials are notified that a situation exists requiring urgent action) to the more likely events where there is substantial time available

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cooled nuclear reactors and for reactors with an authorized power level less than 250 MW thermal. The plans for the ingestion pathway EPZ shall focus on such actions as are appropriate to protect the food ingestion pathway.

For operating power reactors, the licensee's and State and local emergency response plans shall be implemented by April 1, 1981, except as provided in Section IV, D 3 of Appendix E, of this Part. If, after April 1, 1981, the NRC finds that the State of emergency preparedness does not provide reasonable assurance that appropriate protective measures can and will be taken in the event of a radiological emergency and the deficiencies are not corrected within four months of that finding, the Commission will determine whether the reactor shall be shut down until such deficiencies are remedied or whether other enforcement action is appropriate. In determining whether a shut down or other enforcement action is appropriate, the Commission shall take into account, among other factors, whether the licensee can demonstrate to the Commission's satisfaction that the deficiencies in the plan are not significant for the plant in question, or that alternative compensating actions have been or will be taken promptly, or that there are other compelling reasons for continued operation.

The NRC will base its finding on a review of the Federal Emergency Management Agency (FEMA) findings and determinations as to whether State and local emergency plans are adequate and capable of being implemented, and on the NRC assessment as to whether the licensee's emergency plans are

for the State and local governmental officials to make a judgment whether or not to activate the public notification system. The responsibility for activating such a public notification system shall remain with the appropriate government authorities.

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for reactors with an authorized power level less than 250 MW thermal. The plans for the ingestion pathway shall focus on such actions as are appropriate to protect the food ingestion pathway.

3. Section 50.54 is amended by adding five new paragraphs, (q), (r), (s), (t), and (u).

§ 50.54 Conditions of licenses.

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(q) A licensee authorized to possess and/or operate a nuclear power reactor shall follow and maintain in effect emergency plans which meet the standards in 50.47(b) and the requirements in Appendix E of this Part. A licensee authorized to possess and/or operate a research reactor or a fuel facility shall follow and maintain in effect emergency plans which meet the requirements in Appendix E of this Part. The nuclear power reactor licensee may make changes to these plans without Commission approval only if such changes do not decrease the effectiveness of the plans and the plans, as changed, continue to meet the standards of 50.47(b) and the requirements of Appendix E of this Part. The research reactor licensee and/or the fuel facility licensee may make changes to these plans without Commission approval only if such changes do not decrease the effectiveness of the plans and the plans, as changed, continue to meet the requirements of Appendix E of this Part. Proposed changes that decrease the effectiveness of the approved emergency plans shall not be implemented without application to and approval by the

adequate and capable of being implemented. Nothing in this paragraph shall be construed to limit the authority of the Commission to take action under any other regulation or authority of the Commission or at any time other than that specified in this paragraph.

(t) A nuclear power reactor licensee shall provide for the development, revision, implementation, and maintenance of its emergency preparedness program. To this end, the licensee shall provide for a review of its emergency preparedness program at least every 12 months by

APPENDIX E--EMERGENCY PLANNING AND PREPAREDNESS FOR
PRODUCTION AND UTILIZATION FACILITIES¹

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 an acceptable state of emergency preparedness. These plans shall be described generally 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 and fuel facilities licensed under 10 CFR Part 50 and 70 involve considerations different than those associated

¹NRC staff has developed two regulatory guides: 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 a joint NRC/FEMA report, NUREG-0654; FEMA-REP-1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants - For Interim Use and Comment," January 1980, to provide guidance in developing plans for coping with emergencies. Copies of these documents are available at the Commission's Public Document Room, 1717 H Street, NW., Washington, D.C. 20555. Copies of these documents 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.

Commission. The licensee shall furnish 3 copies of each proposed change for approval; if a change is made without prior approval, 3 copies shall be submitted within 30 days after the change is made or proposed to the Director of the appropriate NRC regional office specified in Appendix D, Part 20 of this Part, with 10 copies to the Director of Nuclear Reactor Regulation, or if appropriate, the Director of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

(r) Each licensee who is authorized to possess and/or operate a research or test reactor facility with an authorized power level greater than or equal to 500 kW, under a license of the type specified in § 50.21(c), shall submit emergency plans complying with 10 CFR Part 50, Appendix E;

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In deciding whether to permit reactor operation in the face of some deficiencies, the Commission will examine whether the deficiencies are significant for the reactor in question or whether alternative compensatory actions have been or will be taken promptly or whether consistent with the public health and safety other compelling reasons exist for reactor operation.

Specifically, the regulation contains the following three major changes from past practices:

1. In order to continue operations or to receive an operating license an applicant/licensee will be required to submit their emergency plans, as well as State and local governmental emergency response plans to NRC. The NRC will then make a finding as to whether the state of onsite and offsite emergency preparedness provides reasonable assurance that appropriate protective measures can and will be taken in the event of a radiological emergency.

The NRC will base its finding on a review of the Federal Emergency Management Agency (FEMA) findings and determinations as to whether State and local emergency plans are adequate and capable of being implemented, and on the NRC assessment as to whether the licensee's/applicant's emergency plans are adequate and capable of being implemented. Specifically:

- a. An Operating License will not be issued unless a favorable NRC overall finding can be made.
- b. After April 1, 1981, an operating plant may be required to shut down if it is determined that there are such deficiencies such that a favorable NRC finding cannot be made or is no longer warranted and the deficiencies are not corrected within 4 months of that determination.

with nuclear power reactors. Consequently, the size of Emergency Planning Zones² (EPZs) for facilities other than power reactors and the degree to which compliance with the requirements of this Section and Sections II, III, IV and V is necessary will be determined on a case-by-case basis.³

II. The Preliminary Safety Analysis Report

The Preliminary Safety Analysis Report shall contain sufficient information to ensure the compatibility of proposed emergency plans for both 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, land use, and local jurisdictional boundaries for the Emergency Planning Zones (EPZs) as in the case of nuclear power reactors as well as the means by which the standards of 50.47(b) will be met.

²EPZs for power reactors are 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," December 1978. 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. The size of the EPZs also may be determined on a case-by-case basis for gas cooled nuclear reactors and for reactors with an authorized power level less than 250 MW thermal. Generally, the plume exposure pathway EPZ for nuclear power plants with an authorized power level greater than 250 MW thermal shall consist of an area about 10 miles (16 km) in radius and the ingestion pathway EPZ an area about 50 miles (80 km) in radius.

³Regulatory Guide 2.6 will be used as guidance for the acceptability of research and test reactor emergency response plans.

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capabilities will require close coordination and cooperation between responsible Federal agencies, State government, and the nuclear industry. An orderly and comprehensive approach to this effort makes it necessary that onsite responsibilities be clearly identified with NRC and the nuclear industry while deferring offsite responsibilities to State government with appropriate FEMA oversight and assistance.

In addition to these comments, two petitions for rulemaking were filed in reference to the proposed rule. [~~Although the petitions were denied;~~] The comments made by the petitioners in support of their petition were considered in developing the final rule.

The Commission has placed the planning objective from NUREG-0654; FEMA-REP-I "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants for Interim Use and Comment" January 1980, into the final regulations. Comments received concerning NUREG-0654 were available in developing the final regulation. The Commission notes that the planning objectives in NUREG-0654 were largely drawn from 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, which have been in use for some time.

The approximately 60 public comment letters received on NUREG-0654 were not critical of the proposed planning objective. The Commission also notes that at the May 1, 1980 ACRS meeting, the Atomic Industrial Forum representative encouraged the use of the planning objective from

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, following an accident, reentry of the facility would be appropriate or when operation could be resumed shall be described.

V. Implementing Procedures

No less than 180 days prior to scheduled issuance of an operating license or license to possess nuclear material, 3 copies each of the applicant's detailed implementing procedures for its emergency plan shall be submitted to the Director of the appropriate NRC Regional Office with 10 copies to the Director of Nuclear Reactor Regulation or if appropriate the Director of Nuclear Material Safety and Safeguards. In cases where a decision on an operating license is scheduled less than one year after the effective date of this rule, such implementing procedures shall be submitted as soon as practicable but before full power operation is authorized. Prior to March 1, 1981, licensees who are authorized to operate a nuclear power facility shall submit 3 copies

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and offsite agencies. That information shall be sufficient to provide assurance of coordination among the supporting groups and between them and the licensee.

The plans submitted must include a description of the elements set out in Section IV for the Emergency Planning Zones (EPZs)² 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.

IV. Content of Emergency Plans

The applicant's emergency plans shall contain, but not necessarily be limited to, information needed to demonstrate compliance with [the objectives of 50.47(b); including] the [following] elements set forth below, i.e. organization for coping with radiation emergencies, assessment action, activation of emergency organization, notification procedures, emergency facilities and equipment, training, maintaining emergency preparedness, and recovery. In addition, Nuclear power reactor applicants' emergency response plans shall contain information needed to demonstrate compliance with and will be evaluated using the standards described in Section 50.47(b).⁴ The nuclear power reactor applicant shall also provide an analysis of the time required to evacuate and the taking of other protective actions for various sectors and distances within the plume exposure pathway EPZ for transient and permanent populations.

⁴These objectives are addressed by specific criteria in NUREG-0654; FEMA-REP-1 titled "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants for Interim Use and Comment," January 1980.

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 and/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. Medical support personnel.
- h. Licensee's headquarters support personnel.
- i. Security personnel.
- j. In addition, a radiological orientation training program shall be made available to local services personnel, e.g., local Civil Defense, local law enforcement personnel, local news media persons.

The plan for Nuclear Power Reactors shall describe provisions for the conduct of an emergency preparedness exercise once a year. This exercise is intended to test the adequacy of timing and content of implementing procedures and methods, to test emergency equipment and communication networks, to test the public notification system, and to ensure that emergency organization personnel are familiar with their duties. Such provisions shall specifically include periodic participation by offsite personnel as described above as well as other State and local governmental agencies.

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3. Section 50.54 is amended by adding five new paragraphs, (q), (r), (s), (t), and (u).

§ 50.54 Conditions of licenses.

* * * * *

(q) A licensee authorized to possess and/or operate a [~~production and utilization facility except research reactors~~] nuclear power reactor shall follow and maintain in effect emergency plans which meet the standards in 50.47(b) and the requirements in Appendix E of this Part. A licensee authorized to possess and/or operate a research reactor or a fuel facility shall follow and maintain in effect emergency plans which meet the requirements in Appendix E of this Part. [~~The production and utilization facility~~] nuclear power reactor licensee [~~except research reactor~~] may make changes to these plans without Commission approval only if such changes do not decrease the effectiveness of the plans and the plans, as changed, continue to meet the standards of 50.47(b) and the requirements of Appendix E of this Part. The research reactor licensee and/or the fuel facility licensee may make changes to these plans without Commission approval only if such changes do not decrease the effectiveness of the plans and the plans, as changed, continue to meet the requirements of Appendix E of this Part. Proposed changes that decrease the effectiveness of the approved emergency plans shall not be implemented without application to and approval by the

Commission. The licensee shall furnish 3 copies of each proposed change for approval; if a change is made without prior approval, 3 copies shall be submitted within 30 days after the change is made or proposed to the Director of the appropriate NRC regional office specified in Appendix D, Part 20 of this Part, with 10 copies to the Director of Nuclear Reactor Regulation, or if appropriate, the Director of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

(r) Each licensee who is authorized to possess and/or operate a research or test reactor facility with an authorized power level greater than or equal to 500 kW, under a license of the type specified in § 50.21(c), shall submit emergency plans complying with 10 CFR Part 50, Appendix E,