August 22, 1980

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In the Matter of
Pennsylvania Power and Light Co.
Allegheny Electric Cooperative, Inc.
(Susquehanna Steam Electric Station, Units 1 and 2)
Docket Nos. 50-387, 50-388

Gentlemen:

On Tuesday, August 19, 1980, the Commission amended its regulations on emergency planning. 45 Fed. Reg. 55402-55418. These rule changes became effective on November 3, 1980. A copy of the pertinent pages of the Federal Register is enclosed for the information of the Board and the parties.

Enclo

Sincerely,

James M. Cutchin, IV
Counsel for NRC Staff

Enclosure: As stated

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Federal Register

Tuesday
August 19, 1980

Part VIII

Nuclear Regulatory Commission

Emergency Planning; Final Regulations

NUCLEAR REGULATORY COMMISSION

10 CFR Parts 50 and 70

Emergency Planning

AGENCY: U.S. Nuclear Regulatory Commission.

ACTION: Final rule.

SUMMARY: The Nuclear Regulatory Commission is upgrading its emergency planning regulations in order to assure that adequate protective measures can and will be taken in the event of a radiological emergency. Nuclear power plants and certain other licensed facilities are required to submit their emergency plans, together with the emergency response plans of State and local governments, to the Commission. The Commission and the Federal Energy Management Agency will review the plans for adequacy. The amendment also extends emergency planning considerations to "Emergency Planning Zones", and makes additional clarifications.

EFFECTIVE DATE: November 3, 1980.

Note.—The Nuclear Regulatory Commission has submitted this rule to the Comptroller General for review of the reporting requirements in the rule, pursuant to the Federal Reports Act, as amended (44 U.S.C. 3512). The date on which the reporting requirements of the rule become effective includes a 45-day period, which the statute allows for Comptroller General review (44 U.S.C. 3512(c)(2)).

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: On September 19, 1979 and on December 19, 1979, the Commission published for public comment (44 FR 54308 and 44 FR 75167) proposed amendments to its emergency planning regulations for production and utilization facilities. Extensive comments were received, all of which were evaluated and considered in developing the final rule. The comments received and the staff's evaluation is contained in NUREG–0684. In addition, the NRC conducted four Regional Workshops to solicit comments; these comments are available in NUREG/CP–0011 (April 1980).[1]

The final regulation contains the following elements:

1. In order to continue operations or to receive an operating license an applicant/licensee will be required to submit its 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 adequate 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. These issues may be raised in NRC operating license hearings, but a FEMA finding will constitute a rebuttable presumption on the question of adequacy,

2. Emergency planning considerations will be extended to "Emergency Planning Zones,"

3. Detailed emergency plan implementing proceudres of licensees/applicants will be required to be submitted to NRC for review, and

4. Requirements in 10 CFR Part 50, Appendix E are clarified and upgraded.

Background

In June 1979, the Nuclear Regulatory Commission began a formal reconsideration of the role of emergency planning in ensuring the continued protection of the public health and safety in areas around nuclear power facilities. The Commission began this reconsideration in recognition of the need for more effective emergency planning and in response to the TMI accident and to reports issued by responsible offices of government and the NRC's Congressional oversight committees.

On December 19, 1979, the Nuclear Regulatory Commission published in the Federal Register (44 FR 75167) proposed amendments to 10 CFR Part 50 and Appendix E to Part 50 of its regulations. Publication of these final rule changes in the Federal Register is not only related to the December 19, 1979 proposed rule changes but also incorporates the proposed changes to 10 CFR Parts 50 and 70 (44 FR 54308) published on September 19, 1979. Interested persons were invited to submit written comments/suggestions in connection with the proposed amendments within 60 days after publication in the Federal Register. During this comment period (in January 1980) the Commission conducted four regional workshops with State and local officials, utility representatives, and the public to discuss the feasibility of the various portions of the proposed amendments, their impact, and the procedures proposed for complying with their provisions. The NRC used the information from these workshops along with the public comment letters to develop the final rule (more than 200 comment letters and the points made in two petitions for rulemaking were also considered).

In addition to the above, on June 25, 1980, the Commission was briefed by three panels of public commenters on the rule, one each comprised of representatives from the industry, State and local governments, and public interest groups. Each panel raised important concerns regarding the final rule. On July 3, 1980, the Commission was briefed by its staff in response to these panels, including several modifications to the proposed final rules. Finally, on July 23, 1980, at the final Commission consideration of these rules, the Commission was briefed by the General Counsel on the substance of conversations with Congressional staff members who were involved with passage of the NRC Authorization Act for fiscal year 1980, Pub. L. No. 96–295. The General Counsel advised the Commission that the NRC final rules were consistent with that Act. The Commission has relied on all of the above information in its consideration of these final rules. In addition, the Commission directs that the transcripts of these meetings shall be part of the administrative record in this rulemaking. However, the transcripts have not been reviewed for accuracy and, therefore, are only an informal record of the matters discussed.

After evaluating all public comment letters received and all the information obtained during the workshops as well as additional reports such as the Presidential Commission and the NRC Special Inquiry Group Reports, the Commission has decided to publish the final rule changes described below.

Description of Final Rule Changes

The Commission has decided to adopt a version of the proposed rules similar to alternative A described in Sections 50.47 and 50.54 in the Federal Register Notice dated December 19, 1979 (44 FR 75167), as modified in light of comments. These rules are consistent with the

[1] Copies of NUREG documents are available at the Commission's Public Document Room, 1717 H Street, NW., Washington, D.C. 20555. Copies 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.

approach outlined by FEMA and NRC in a Memorandum of Understanding (45 FR 5847, January 24, 1980). No new operating license will be granted unless the NRC can make a favorable finding that the integration of onsite and offsite emergency planning provides reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. In the case of an operating reactor, if it is determined that there are such deficiencies that a favorable NRC finding is not warranted and if the deficiencies are not corrected within 4 months of that determination, the Commission will determine expeditiously whether the reactor should be shut down or whether some other enforcement action is appropriate, pursuant to procedures provided for in 10 CFR 2.200–2.206. In any case where the Commission believes that the public health, safety, or interest so requires, the plant will be required to shut down immediately (10 CFR 2.202(f), see 5 U.S.C. 558(c)).

The standards that the NRC will use in making its determinations under these rules are set forth in the final regulation. Wherever possible, these standards may blend with other emergency planning procedures for nonnuclear emergencies presently in existence. The standards are a restatement of basic NRC and now joint NRC–FEMA guidance to licensees and to State and local governments. See 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). In deciding whether to permit reactor operation in the face of some deficiencies, the Commission will examine among other factors whether the deficiencies, are significant for the reactor in question, whether adequate interim compensatory actions have been or will be taken promptly, or whether other compelling reasons exist for reactor operation. In determining the sufficiency of "adequate interim compensatory actions" under this rule, the Commission will examine State plans, local plans, and licensee plans to determine whether features of one plan can compensate for deficiencies in another plan so that the level of protection for the public health and safety is adequate. This interpretation is consistent with the provisions of the NRC Authorization Act for fiscal year 1980, Pub. L. 96–295.

The regulation contains the following three major changes from past practices:

1. In order to continue operations or to recieve an operating license, an applicant/licensee will be required to submit its 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 adequate 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 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 applicant's/licensee's emergency plans are adequate and capable of being implemented. In any NRC licensing proceeding, a FEMA finding will consitute a rebuttable presumption on the question of adequacy. 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 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.

2. Emergency planning considerations must be extended to "Emergency Planning Zones," and

3. Detailed emergency planning implementing procedures of both licensees and applicants for operating licenses must be submitted to NRC for review.

In addition, the Commission is 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. Sections of Appendix E that are expanded include:

1. Specification of "Emergency Action Levels" (Sections IV.B and C)

2. Dissemination to the public of basic emergency planning information (Section IV.D)

3. Provisions for the State and local governmental authorities to have a capability for rapid notification of the public during a serious reactor emergency, with a design objective of completing the initial notification within 15 minutes after notification by the licensee (Section IV.D)

4. A licensee onsite technical support center and a licensee near site emergency operations facility (Section IV.E)

5. Provisions for redundant communications systems (Section IV.E)

6. Requirement for specialized training (Section IV.F)

7. Provisions for up-to-date plan maintenance (Section IV.G)

Applicants for a construction permit would be required to submit more information as required in the new Section II of Appendix E.

Rationale for the Final Rules

The Commission's final rules are based on the significance of adequate emergency planning and preparedness to ensure adequate protection of the public health and safety. It is clear, based on the various official reports described in the proposed rules (44 FR 75169) and the public record compiled in this rulemaking, that onsite and offsite emergency preparedness as well as proper siting and engineered design features are needed to protect the health and safety of the public. As the Commission reacted to the accident at Three Mile Island, it became clear that the protection provided by siting and engineered design features must be bolstered by the ability to take protective measures during the course of an accident. The accident also showed clearly that onsite conditions and actions, even if they do not cause significant offsite radiological consequences, will affect the way the various State and local entities react to protect the public from any dangers associated with the accident. In order to discharge effectively its statutory responsibilities, the Commission must know that proper means and procedures will be in place to assess the course of an accident and its potential severity, that NRC and other appropriate authorities and the public will be notified promptly, and that adequate protective actions in response to actual or anticipated conditions can and will be taken.

The Commission's organic statutes provide it with a unique degree of discretion in the execution of agency functions. *Siegel* v. *AEC*, 400 F.2d 778, 783 (D.C. Cir. 1968), see *Westinghouse Electric Corp.* v. *NRC*, 598 F.2d 759, 771 & n.47 (3d Cir. 1979). "Both the Atomic Energy Act of 1954 and the Energy Reorganization Act of 1974 confer broad regulatory functions on the Commission and specifically authorize it to promulgate rules and regulations it deems necessary to fulfill its responsibilities under the Acts, 42 U.S.C. § 2201(p)." *Public Service Co. of New Hampshire* v. *NRC*, 582 F.2d 77, 82 (1st Cir.), *cert. denied*, 439 U.S. 1046 (1978). *See* 42 U.S.C. 2133(a). As the Supreme Court stated almost 20 years ago, the Atomic Energy Act "clearly contemplates that the Commission shall

by regulation set forth what the public safety requirements are as a prerequisite to the issuance of any license or permit under the Act," *Power Reactor Development Co.* v. *International Union of Electrical Radio Machine Workers*, 367 U.S. 396, 404 (1961). Finally, it is also clear that "Congress, when it enacted [42 U.S.C. 2236] . . ., must have envisioned that licensing standards, especially in the areas of health and safety regulation, would vary over time as more was learned about the hazards of generating nuclear energy. Insofar as those standards became more demanding, Congress surely would have wanted the new standards, if the Commission deemed it appropriate, to apply to those nuclear facilities already licensed," *Ft. Pierce Utilities Authority* v. *United States*, 606 F.2d 986, 996 (D.C. Cir. 1979).

In response to and guided by the various reports and public comments, as well as its own determination on the significance of emergency preparedness, the Commission has therefore concluded that adequate emergency preparedness is an essential aspect in the protection of the public health and safety. The Commission recognizes there is a possibility that the operation of some reactors may be affected by this rule through inaction of State and local governments or an inability to comply with these rules. The Commission believes that the potential restriction of plant operation by State and local officials is not significantly different in kind or effect from the means already available under existing law to prohibit reactor operation, such as zoning and land-use laws, certification of public convenience and necessity, State financial and rate considerations (10 CFR 50.33(f)), and Federal environmental laws. The Commission notes, however, that such considerations generally relate to a one-time decision on siting, whereas this rule requires a periodic renewal of State and local commitments to emergency preparedness. Relative to applying this rule in actual practice, however, the Commission need not shut down a facility until all factors have been thoroughly examined. The Commission believes, based on the record created by the public workshops, that State and local officials as partners in this undertaking will endeavor to provide fully for public protection.

Summary of Comments on Major Issues

The Commission appreciates the extensive public comments on this important rule. In addition to the record of the workshops, the NRC has received over 200 comment letters on the proposed rule changes. The following major issues have been raised in the comments received.

Issue A: NRC Review and Concurrence in State and Local Radiological Plans

1. FEMA is best suited to assess the adequacy of State and local radiological emergency planning and preparedness and report any adverse findings to NRC for assessment of the licensing consequences of those findings.

2. The proposed rule fails to provide objective standards for NRC concurrence, reconcurrence, and withdrawal of concurrence.

3. In the absence of additional statutory authority, the proposed rule frustrates Congressional intent to preempt State and local government veto power over nuclear power plant operation.

4. Procedures and standards for adjudication of emergency planning disputes are not adequately specified in the proposed rule.

Issue B: Emergency Planning Zones (EPZs)

1. Regulatory basis for imposition of the Emergency Planning Zone concept should be expressly stated in the regulation.

2. Provisions regarding the plume exposure pathway EPZ should provide a maximum planning distance of 10 miles.

3. References to NUREG–0396 should be deleted to avoid disputes over its meaning in licensing proceedings.

Issue C: Alternative A and B (in 50.47 and 50.54)

1. Neither alternative is necessary because the Commission has sufficient authority to order a plant shut down for safety reasons and should be prepared to exercise that authority only on a case-by-case basis and when a particular situation warrants such action.

2. No case has been made by the Commission for the need for automatic shutdown, as would be required in alternative B, and certainly no other NRC regulations exist that would require such action based on a concept as amorphous as "concurrence in State and local emergency plans."

3. The idea that the Commission might grant an exemption to the rules that would permit continued operation (under alternative B) has little significance, primarily because 10 CFR Part 50.12(a) already permits the granting of exemptions.

4. The process and procedures for obtaining such exemptions are not defined, nor is there any policy indication that would indicate the Commission's disposition to grant such exemptions.

5. The Commission, in developing this aspect of the proposed rule, must consider its own history. There was time when regulation was characterized by the leaders of the agency by simple and very appropriate expressions. The process was to be "effective and efficient." The application of regulatory authority was to be "firm, but fair." Regardless of the outcome of the "concurrence" issue, the Commission must appreciate that alternative B is not fair. It is not effective regulation.

Issue D: Public Education

Only information required to inform the public about what to do in the event of a radiological emergency need be disseminated. There should be flexibility, in any particular case, as to who will be ultimately responsible for disseminating such information.

Issue E: Legal Authority

1. A few commenters felt that NRC had no authority to promulgate a rule as the one proposed.

2. Other comments were the nature that NRC has statutory authority only inside the limits of the plant site.

3. Some commenters suggested that NRC and FEMA should seek additional legislation to compel State and local governments to have emergency plans, if that is what is necessary.

Issue F: Schedule for Implementation

The schedule for implementing the proposed rule was considered to be unrealistic and in some cases in conflict with various State schedules already in existence. A sampling of the comments on the implementation schedule follows:

1. The 180 days in the schedule is an insufficient amount of time to accomplish tasks of this magnitude; the Federal government does not work with such speed. States are bureaucracies also; there is no reason to assume they can work faster. It took years of working with States to get the plans that are presently concurred in. It is just insufficient time for new concurrences and review. Also, to get a job done within that time frame means a hurried job, rather than an acceptable and meaningful plan.

2. The time provided is inadequate for States to acquire the hardware needed. States must go out for competitive bids just as the Federal government does. Between processing and accepting a bid and actual delivery of equipment, it may take a year to get the hardware. The State budgets years ahead; therefore, if a State or local government needs more money, it may have to go to the

legislature. This is a time-consuming public process that may not fit the Federal schedule.

3. NRC and FEMA could not review 70 or more plans and provide concurrence by January 1, 1981. The Federal government moves slowly. Commenters did not think that NRC and FEMA can review all the plans within the time frame scheduled. If the Federal government cannot meet its schedule, why or how should the States?

4. Funding could not be appropriated by State and local governments before the deadline. It was suggested that the Commission use H. Rept. #96-413, "Emergency Planning U.S. Nuclear Power Plants: Nuclear Regulatory Commission Oversight," for the time frame rather than that in the proposed rule or use a sliding-scale time frame since States are at various stages of completing their emergency plans.

Issue G: Impact of Proposed Rule

1. The proposed regulations were considered by some commenters as unfair to utilities because it was felt they place the utilities in the political and financial role that FEMA should be assuming. NRC is seen as in effect giving State and local governments veto over the operation of nuclear plants. It was questioned whether this was an intent of the rule. In addition, it was felt that utilities, their customers, and their shareholders should not be penalized by a shutdown (with a resulting financial burden) because of alleged deficiencies or lack of cooperation by State and local officials.

2. It was suggested that NRC's Office of Inspection and Enforcement conduct the reviews of the State and local governmental emergency response plans in order to ensure prompt, effective, and consistent implementation of the proposed regulations.

3. One commenter noted that the public should be made aware of the issue of intermediate and long-term impacts of plant shutdowns. Specifically, people should be informed of the possibility of "brownouts," cost increases to the consumer due to securing alternative energy sources, and the health and safety factors associated with those alternative sources.

Issue H: Public Notification

1. Ultimate responsibility for public notification of a radiological emergency must be placed on State and local government.

2. The "fifteen minute" public notification rule is without scientific justification, fails to differentiate between areas close in and further away from the site, and ignores the technical difficulties associated with such a requirement.

Issue I: Emergency Action Levels

Applicants, in cooperation with State and local governmental authorities, should be permitted the necessary flexibility to develop emergency action level criteria appropriate for the facility in question, subject to NRC approval. Inflexible NRC emergency action level standards are not necessary.

Issue J: Training

1. Mandatory provision for training local service personnel and local news media persons is outside of NRC's jurisdiction and is not necessary to protect the public health and safety.

2. Public participation in drills or critiques thereof should not be required.

3. The provision regarding formal critiques should be clarified to mean the licensee is responsible for developing and conducting such critiques.

4. Definitive performance criteria for evaluation of drills should be developed by the licensee, subject to NRC approval.

Issue K: Implementing Procedures

NRC review of implementing procedures is only necessary to apprise the NRC staff of the details of the plans for use by the NRC during the course of an actual emergency.

Issue L: Funding

1. Nuclear facilities, although located in one governmental tax jurisdiction and taxed by that jurisdiction, affect other jurisdictions that must bear immediate and long-term planning costs without having access to taxes from the facility.

2. As the radius of planning requirements becomes greater, few facilities are the concern of a single county. The planning radius often encompasses county lines, State lines, and in some instances, international boundaries.

3. As new regulations are generated to oversee the nuclear industry and old ones expanded, there is an immediate need to address fixed nuclear facility planning at all levels of government, beginning at the lowest and going to the highest. All levels of government need access to immediate additional funds to upgrade their response capability.

4. It is well understood that the consumer ultimately must pay the price for planning, regardless of the level in government at which costs are incurred. It becomes a matter of how the consumer will be taxed, who will administer the tax receipts, and what is the most effective manner in which to address the problem.

5. The basis for effective offsite response capabilities is a sound emergency preparedness program. Federal support (funding and technical assistance) for the development of State and local offsite capabilities should be incorporated into FEMA's preparedness program for all emergencies.

Issue M: General

The States support Federal oversight and guidance in the development of offsite response capabilities. However, many States feel the confusion and uncertainty in planning requirements following Three Mile Island is not a proper environment in which to develop effective capabilities nor does it serve the best interests of their citizens. The development of effective nuclear facility incident response capabilities will require close coordination and cooperation among 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 associated 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. These were treated as public comments rather than petitions and were considered in developing the final rule.

The Commission has placed the planning objectives from 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, 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 objectives. The Commission also notes that at the May 1, 1980 ACRS meeting, the Atomic Industrial Forum representative encouraged the use of the planning objectives from NUREG-0654 in the final regulations in order to

reduce ambiguity and provide specificity to the final regulation.

Based on the above, the Commission has decided to modify the proposed rule changes in the areas discussed in paragraphs I through X below.

I. FEMA/NRC Relationship

In issuing this rule, NRC recognizes the significant responsibilities assigned to 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). On December 7, 1979, the President issued a directive assigning FEMA lead responsibility for offsite emergency preparedness around nuclear facilities. The NRC and FEMA immediately initiated negotiations for a Memorandum of Understanding (MOU) that lays out the agencies' roles and provides for a smooth transfer of responsibilities. It is recognized that the MOU, which became effective January 14, 1980, supersedes some aspects of previous agreements. Specifically, the MOU identifies FEMA responsibilities with respect to emergency preparedness as they relate to NRC as the following:

1. To make findings and determinations as to whether State and local emergency plans are adequate.
2. To verify that State and local emergency plans are capable of being implemented (e.g., adequacy and maintenance of procedures, training, resources, staffing levels and qualification, and equipment).
3. To assume responsibility for emergency preparedness training of State and local officials.
4. To develop and issue an updated series of interagency assignments that delineate respective agency capabilities and responsibilities and define procedures for coordination and direction for emergency planning and response.

Specifically, the NRC responsibilities for emergency preparedness identified in the MOU are:

1. To assess licensee emergency plans for adequacy.
2. To verify that licensee emergency plans are adequately implemented (e.g., adequacy and maintenance of procedures, training, resources, staffing levels and qualifications, and equipment).
3. To review the FEMA findings and determinations on the adequacy and capability of implementation of State and local plans.
4. To make decisions with regard to the overall state of emergency preparedness (i.e., integration of the licensee's emergency preparedness as determined by the NRC and of the State/local governments as determined by FEMA and reviewed by NRC) and issuance of operating licenses or shutdown of operating reactors.

In addition, FEMA has prepared a proposed rule regarding "Review and Approval of State Radiological Emergency Plans and Preparedness" (44 FR 42342, dated June 24, 1980). According to the proposed FEMA rule, FEMA will approve State and local emergency plans and preparedness, where appropriate, based upon its findings and determinations with respect to the adequacy of State and local plans and the capabilities of State and local governments to effectively implement these plans and preparedness measures. These findings and determinations will be provided to the NRC for use in its licensing process.

II. Emergency Planning Zone Concept

The Commission notes that the regulatory basis for adoption of the Emergency Planning Zone (EPZ) concept is the Commission's decision to have a conservative emergency planning policy in addition to the conservatism inherent in the defense-in-depth philosophy. This policy was endorsed by the Commission in a policy statement published on October 23, 1979 (44 FR 61123). At that time the Commission stated that two Emergency Planning Zones (EPZs) should be established around each light-water nuclear power plant. The EPZ for airborne exposure has a radius of about 10 miles; the EPZ for contaminated food and water has a radius of about 50 miles. Predetermined protective action plans are needed for the EPZs. The exact size and shape of each EPZ will be decided by emergency planning officials after they consider the specific conditions at each site. These distances are considered large enough to provide a response base that would support activity outside the planning zone should this ever be needed.

III. Position on Planning Basis for Small Light-Water Reactors and Ft. St. Vrain

The Commission has concluded that the operators of small light-water-cooled power reactors (less than 250 MWt) and the Ft. St. Vrain gas-cooled reactor may establish smaller planning zones which will be evaluated on a case-by-case basis. This conclusion is based on the lower potential hazard from these facilities (lower radionuclide inventory and longer times to release significant amounts of activity in many scenarios). Guidance regarding the radionuclides to be considered in planning is set forth 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.

IV. Rationale for Alternatives Chosen

In a few areas of the proposed rule, the Commission identified two alternatives that it was considering. Many public comments were received on these alternatives; based on due consideration of all comments received as well as the discussions presented during the workshops, the Commission has determined which of each pair of alternatives to retain in the final rule.

In Sections 50.47 and 50.54 (s) and (t), the alternatives dealth with conditioning the issuance of an operating license or continued operation of a nuclear power plant on the existence of State and local government emergency response plans concurred in by NRC.* The basic difference between alternatives A and B in these sections was that, under alternative A, the proposed rule would require a determination by NRC on issuing a license or permitting continued operation of plants in those cases where relevant State and local emergency response plans had not received NRC concurrence. Denial of a license or shutdown of a reactor would not follow automatically in every case. Under alternative B, shutdown of the reactor would be required automatically if the appropriate State and local emergency response plans had not received NRC concurrence within the prescribed time periods unless an exemption is granted.

After consideration of the public record and on the recommendation of its staff, the Commission has chosen a text for Sections 50.47 and 50.54 (s) and (t) that is similar to, but less restrictive than, alternative A in the proposed rule. Rather than providing for the shutdown of the reactor as the only enforcement action and prescribing specific preconditions for the shutdown remedy, the final rule makes clear that for emergency planning rules, like all other rules, reactor shutdown as outlined in the rule is but one of a number of possible enforcement actions and many factors should be considered in determining whether it is an appropriate action in a given case. This Commission choice is consistent with most of the comments received from State and local

* See Section V for a discussion concerning "concurrence."

governments and is consistent with the provisions of Section 109 of the NRC fiscal year 1980 Authorization Act. Alternative B was seen by some of the commenters as potentially causing unnecessarily harsh economic and social consequences to State and local governments, utilities, and the public.

State and local governments that are directly involved in implementing planning objectives of the rule strongly favor alternative A since it provides for a cooperative effort with State and local governments to reflect their concerns and desires in these rules. This choice is responsive to that effort. In addition, the industry strongly supported alternative A as being the more workable of the two alternatives.

In Appendix E, Sections II.C and III, alternative A would require an applicant/licensee to outline ". . . corrective measures to prevent damage to onsite and offsite property," as well as protective measures for the public. Alternative B addresses only protective measures for the public health and safety. The Commission has chosen alternative B because public health and safety should take clear precedence over actions to protect property. Measures to protect property can be taken on an ad hoc basis as resources become available after an accident.

In Appendix E, under Training, alternative A would provide for a joint licensee, Federal, State, and local government exercise every 3 years, whereas alternative B would provide for these exercises to be performed every 5 years at each site. The Commission has chosen alternative B because the Commission is satisfied that the provision that these exercises be performed every 5 years for each site will allow for an adequate level of preparedness among Federal emergency response agencies. In addition, under these regulations, each licensee is required to exercise annually with local governmental authorities. Furthermore, Federal emergency response agencies may have difficulty supporting exercises every 3 years for all of the nuclear facilities that would be required to comply with these rule changes.

V. Definition of Plan Approval Process

The term "concurrence" has been deleted from the proposed regulations and replaced with reference to the actual procedure and standards that NRC and FEMA have agreed upon and are implementing. According to the agreed upon procedure, FEMA will make a finding and determination as to the adequacy of State and local government emergency response plans. The NRC will determine the adequacy of the licensee emergency response plans. After these two determinations have been made, NRC will make a finding in the licensing process as to the overall and integrated state of preparedness.

It was pointed out to the Commission at the workshops and in public comment letters that the term "concurrence" was confusing and ambiguous. Also, there was a great deal of misunderstanding with the use of the term because, in the past, the obtaining of NRC "concurrence" in State emergency response plans was voluntary on behalf of the States and not a regulatory requirement in the licensing process. Previously too, "concurrence" was statewide rather than site-specific.

VI. Fifteen-Minute Notification

The requirement for the capability for notification of the public within 15 minutes after the State/local authorities have been notified by the licensee has been expanded and clarified. It also has been removed as a footnote and placed in the body of Appendix E. The implementation schedule for this requirement has been extended to July 1, 1981. This extension of time has been adopted because most State and local governments identified to the Commission the difficulty in procuring hardware, contracting for installation, and developing procedures for operating the systems used to implement this requirement.

The Commission is aware that various commenters, largely from the industry, have objected to the nature of the 15-minute notification requirement, indicating that it may be both arbitrary and unworkable.

Among the possible alternatives to this requirement are a longer notification time, a notification time that varies with distance from the facility, or no specified time. In determining what that criterion should be, a line must be drawn somewhere, and the Commission believes that providing as much time as practicable for the taking of protective action is in the interest of public health and safety. The Commission recognizes that this requirement may present a significant financial impact and that the technical basis for this requirement is not without dispute. Moreover, there may never be an accident requiring using the 15-minute notification capability. However, the essential rationale behind emergency planning is to provide additional assurance for the public protection even during such an unexpected event. The 15-minute notification capability requirement is wholly consistent with that rationale.

The Commission recognizes that no single accident scenario should form the basis for choice of notification capability requirements for offsite authorities and for the public. Emergency plans must be developed that will have the flexibility to ensure response to a wide spectrum of accidents. This wide spectrum of potential accidents also reflects on the appropriate use of the offsite notification capability. The use of this notification capability will range from immediate notification of the public (within 15 minutes) to listen to predesignated radio and television stations, to the more likely events where there is substantial time available for the State and local governmental officials to make a judgment whether or not to activate the public notification system.

Any accident involving severe fuel degradation or core melt that results in significant inventories of fission products in the containment would warrant immediate public notification and consideration, based on the particular circumstances, of appropriate protective action because of the potential for leakage of the containment building. In addition, the warning time available for the public to take action may be substantially less than the total time between the original initiating event and the time at which significant radioactive releases take place. Specification of particular times as design objectives for notification of offsite authorities and the public are a means of ensuring that a system will be in place with the capability to notify the public to seek further information by listening to predesignated radio or television stations. The Commission recognizes that not every individual would necessarily be reached by the actual operation of such a system under all conditions of system use. However, the Commission believes that provision of a general alerting system will significantly improve the capability for taking protective actions in the event of an emergency. The reduction of notification times from the several hours required for street-by-street notification to minutes will significantly increase the options available as protective actions under severe accident conditions. These actions could include staying indoors in the case of a release that has already occurred or a precautionary evacuation in the case of a potential release thought to be a few hours away. Accidents that do not result in core melt may also cause relatively quick releases for which protective actions, at least for the public in the immediate plant vicinity, are desirable.

Some comments received on the proposed rule advocated the use of a staged notification system with quick notification required only near the plant. The Commission believes that the capability for quick notification within the entire plume exposure emergency planning zone should be provided, but recognizes that some planners may wish to have the option of selectively actuating part of the system during an actual response. Planners should carefully consider the impact of the added decisions that offsite authorities would need to make and the desirability of establishing an official communication link to all residents in the plume exposure emergency planning zone when determining whether to plan for a staged notification capability.

VII. Effective Date of Rules and Other Guidance

Prior to the publication of these amendments, two guidance documents were published for public comment and interim use. These are NUREG–0610, "Draft Emergency Action Level Guidelines for Nuclear Power Plants," (September 1979) and 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). It is expected that versions of these documents, revised on the basis of public comments received, will be issued to assist in defining acceptable levels of preparedness to meet this final regulation. In the interim, these documents should continue to be used as guidance.

VIII. Hearing Procedures Used in Implementation of These Regulations

Should the NRC believe that the overall state of emergency preparedness at and around a licensed facility is such that there is some question whether a facility should be permitted to continue to operate, the Commission may issue an order to the licensee to show cause, pursuant to 10 CFR 2.202, why the plant should not be shut down. This issue may arise, for example, if NRC finds a significant deficiency in a licensee plan or in the overall state of emergency preparedness.

If the NRC decides to issue an order to show cause, it will provide the licensee the opportunity to demonstrate to the Commission's satisfaction, for example, that the alleged deficiencies are not significant for the reactor in question, whether adequate interim compensating actions have been or will be taken promptly, or whether other compelling reasons exist for reactor operation. Finally, pursuant to 10 CFR 2.202(f), the Commission may, in appropriate circumstances, make the order immediately effective, which could result in immediate plant shutdown subject to a later hearing.

IX. Funding

In view of the requirements in these rule changes regarding the actions to be taken in the event State and local government planning and preparedness are or become inadequate, a utility may have an incentive, based on its own self interest as well as its responsibility to provide power, to assist in providing manpower, items of equipment, or other resources that the State and local governments may need but are themselves unable to provide. The Commission believes that in view of the President's Statement of December 7, 1979, giving FEMA the lead role in offsite planning and preparedness, the question of whether the NRC should or could require a utility to contribute to the expenses incurred by State and local governments in upgrading and maintaining their emergency planning and preparedness (and if it is to be required, the mechanics for doing so) is beyond the scope of the present rule change. It should be noted, however, that any direct funding of State or local governments solely for emergency preparedness purposes by the Federal government would come through FEMA.

X. Exercises

On an annual basis, all commercial nuclear power facilities will be required by NRC to exercise their plans; these exercises should involve exercising the appropriate local government plans in support of these facilities. The State may choose to limit its participation in exercises at facilities other than the facility (site) chosen for the annual exercise(s) of the State plan.

Each State and appropriate local government shall annually conduct an exercise jointly with a commercial nuclear power facility. However, States with more than one facility (site) shall schedule exercises such that each individual facility (site) is exercised in conjunction with the State and appropriate local government plans not less than once every 3 years for sites with the plume exposure pathway EPZ partially or wholly within the State, and not less than once every 5 years for sites with the ingestion exposure pathway EPZ partially or wholly within the State. The State shall choose, on a rotational basis, the site(s) at which the required annual exercise(s) is to be conducted; priority shall be given to new facilities seeking an operating license from NRC that have not had an exercise involving the State plan at that facility site.

The Commission has determined under the criteria in 10 CFR Part 51 that an environmental impact statement for the amendments to 10 CFR Part 50 and Appendix E thereof is not required. This determination is based on "Environmental Assessment for Final Changes to 10 CFR Part 50 and Appendix E of 10 CFR Part 50, Emergency Planning Requirements for Nuclear Power Plants" (NUREG–0685, June 1980). Comments on the "Draft Negative Declaration; Finding of No Significant Impact" (45 FR 3913, January 21, 1980) were considered in the preparation of NUREG–0685.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and Sections 552 and 553 of Title 5 of the United States Code, notice is hereby given that the following amendments to Title 10, Chapter I, Code of Federal Regulations, Parts 50 and 70, are published as a document subject to codification.

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.

* * * * *

(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 local emergency response needs and

[1] Emergency 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.

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

capabilities as they are affected by such conditions as demography, topography, land characteristics, access routes, and jurisdictional boundaries. The size of the EPZs 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 such actions as are appropriate to protect the food ingestion pathway.

2. A new § 50.47 is added.

§ 50.47 Emergency plans.

(a)(1) No operating license for a nuclear power reactor will be issued unless a finding is made by NRC that the state of onsite and offsite emergency preparedness provides reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency.

(2) 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 applicant's onsite emergency plans are adequate and capable of being implemented. In any NRC licensing proceeding, a FEMA finding will constitute a rebuttable presumption on a question of adequacy.

(b) The onsite and offsite emergency response plans for nuclear power reactors must meet the following standards: [1]

(1) Primary responsibilities for emergency response by the nuclear facility licensee and by State and local organizations within the Emergency Planning Zones have been assigned, the emergency responsibilities of the various supporting organizations have been specifically established, and each principal response organization has staff to respond and to augment its initial response on a continuous basis.

(2) On-shift facility licensee responsibilities for emergency response are unambiguously defined, adequate staffing to provide initial facility accident response in key functional areas is maintained at all times, timely augmentation of response capabilities is available and the interfaces among various onsite response activities and offsite support and response activities are specified.

(3) Arrangements for requesting and effectively using assistance resources have been made, arrangements to accommodate State and local staff at the licensee's near-site Emergency Operations Facility have been made, and other organizations capable of augmenting the planned response have been identified.

(4) A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee, and State and local response plans call for reliance on information provided by facility licensees for determinations of minimum initial offsite response measures.

(5) Procedures have been established for notification, by the licensee, of State and local response organizations and for notification of emergency personnel by all organizations; the content of initial and followup messages to response organizations and the public has been established; and means to provide early notification and clear instruction to the populace within the plume exposure pathway Emergency Planning Zone have been established.

(6) Provisions exist for prompt communications among principal response organizations to emergency personnel and to the public.

(7) Information is made available to the public on a periodic basis on how they will be notified and what their initial actions should be in an emergency (e.g., listening to a local broadcast station and remaining indoors), the principal points of contract with the news media for dissemination of information during an emergency (including the physical location or locations) are established in advance, and procedures for coordinated dissemination of information to the public are established.

(8) Adequate emergency facilities and equipment to support the emergency response are provided and maintained.

(9) Adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use.

(10) A range of protective actions have been developed for the plume exposure pathway EPZ for emergency workers and the public. Guidelines for the choice of protective actions during an emergency, consistent with Federal guidance, are developed and in place, and protective actions for the ingestion exposure pathway EPZ appropriate to the locale have been developed.

(11) Means for controlling radiological exposures, in an emergency, are established for emergency workers. The means for controlling radiological exposures shall include exposure guidelines consistent with EPA Emergency Worker and Lifesaving Activity Protective Action Guides.

(12) Arrangments are made for medical services for contaminated injured individuals.

(13) General plans for recovery and reentry are developed.

(14) Periodic exercises are (will be) conducted to evaluate major portions of energency response capabilities, periodic drills are (will be) conducted to develop and maintain key skills, and deficiencies identified as a result of exercises or drills are (will be) corrected.

(15) Radiological emergency response training is provided to those who may be called on to assist in an emergency.

(16) Responsibilities for plan development and review and for distribution of emergency plans are established, and planners are properly trained.

(c)(1) Failure to meet the standards set forth in paragraph (b) of this subsection may result in the Commission declining to issue an Operating License; however, 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 adequate interim compensating actions have been or will be taken promptly, or that there are other compelling reasons to permit plant operation.

(2) Generally, the plume exposure pathway EPZ for nuclear power plants 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 local emergency response needs and capabilities as they are affected by such conditions as demography, topography, land characteristics, access routes, and 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. 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.

* * * * *

[1] These standards are addressed by specific criteria in NUREG-0654; FEMA-REP-1 entitled "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.

(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 Commission. The licensee shall furnish 3 copies of each proposed change for approval; and/or 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, 10 CFR Part 20, 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 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 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)(1) Each licensee who is authorized to possess and/or operate a nuclear power reactor shall summit 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 EPZ, as well as the plans of State governments wholly or partially within an ingestion pathway EPZ.[1,2] Ten (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 local emergency response needs and capabilities as they are affected by such conditions as demography, topography, land characteristics, access routes, and 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. The plans for the ingestion pathway EPZ shall focus on such actions as are appropriate to protect the food ingestion pathway.

(2) For operating power reactors, the licensee, 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 if 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 shutdown 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 adequate interim compensating actions have been or will be taken promptly, or that there are other compelling reasons for continued operation.

(3) The NRC will base its finding on a review of the 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 adequate and capable of being implemented. Nothing in this paragraph shall be construed as limiting 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 persons who have no direct responsibility for implementation of the emergency preparedness program. The review shall include an evaluation for adequacy of interfaces with State and local governments and of licensee drills, exercises, capabilities, and procedures. The results of the review, along with recommendations for improvements, shall be documented, reported to the licensee's corporate and plant management, and retained for a period of five years. The part of the review involving the evaluation for adequacy of interface with State and local governments shall be available to the appropriate State and local governments.

(u) Within 60 days after the effective date of this amendment, each nuclear power reactor licensee shall submit to the NRC plans for coping with emergencies that meet standards in § 50.47(b) and the requirements of Appendix E of this Part.

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

Appendix E—Emergency Planning and Preparedness for Production and Utilization Facilities[1]

Table of Contents

[1] Emergency 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.

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

[1] NRC 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

Footnotes continued on next page

II. The Preliminary Safety Analysis Report
III. The Final Safety Analysis Report
IV. Content of Emergency Plans
V. Implementing Procedures

I. Introduction

Each applicant for a construction permit is required by § 50.34(a) to include in the 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 the 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 Parts 50 and 70 involve considerations different than those associated with nuclear power reactors. Consequently, the size of Emergency Planning Zones [2] (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 as 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 EPZs in the case of nuclear power reactors as well as the means by which the standards of § 50.47(b) will be met.

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.

C. Protective measures to be taken within the site boundary and within each EPZ to protect health and safety in the event of an accident; 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 of offsite agencies in the event of an emergency.

(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 who are not employees of the licensee but whose assistance may be needed in the event of a radiological emergency.

G. A preliminary analysis that 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 nuclear power plant applicant shall perform a preliminary analysis of the time required to evacuate various sectors and distances within the plume exposure pathway EPZ for transient and permanent populations, noting major impediments to the evacuation or taking of protective actions.

H. A preliminary analysis reflecting the need to include facilities, systems, and methods for identifying the degree of seriousness and potential scope of radiological consequences of emergency situations within and outside the site boundary, including capabilities for dose projection using real-time meteorological information and for dispatch of radiological monitoring teams within the EPZs; and a preliminary analysis reflecting the role of the onsite technical support center and of the near-site emergency operations facility in assessing information, recommending protective action, and disseminating information to the public.

III. The Final Safety Analysis Report

The Final Safety Analysis Report shall contain the plans for coping with emergencies. The plans shall be an expression of the overall concept of operation; they shall 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 with 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 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, the emergency response plans submitted by an applicant for a nuclear power reactor operating license shall contain information needed to demonstrate compliance with the standards described in Section 50.47(b),[4] and they will be evaluated against those standards. The nuclear power reactor operating license applicant shall also provide an analysis of the time required to evacuate and for taking other protective actions for 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 definition of authorities, responsibilities, and duties of individuals assigned to the licensee's emergency organization and the means for 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;

b. Plant staff emergency assignments;

c. Authorities, responsibilities, and duties on 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, by position and function to be performed, of the licensee's

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Footnotes continued from last page
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.

[2] EPZs 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 local emergency response needs and capabilities as they are affected by such conditions as demography, topography, land characteristics, access routes, and 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 shall consist of an area about 50 miles (80 km) in radius.

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

[4] These objectives are addressed by specific criteria in NUREG-0654; FEMA-REP-1 entitled "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.

headquarters personnel who will be sent to the plant site to augment the onsite emergency organization.

4. Identification, by position and function to be performed, 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, and other appropriate governmental entities.

5. Identification, by position and function to be performed, of other employees of the licensee with special qualifications for coping with emergency conditions that 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 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's emergency organization.

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

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

B. Assessment Actions

The means to be used for determining the magnitude of and for continually assessing the impact 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, the Commission, and other Federal agencies, and the emergency action levels that are to be used for determining when and what type of protective measures should be considered within and outside the site boundary to protect health and safety. 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 on 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 that involve the alerting or activating of progressively larger segments of the total emergency organization shall be described. The communication steps to be 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 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. The emergency classes defined shall include: (1) notification of unusual events, (2) alert, (3) site area emergency, and (4) general emergency. These classes are further discussed in NUREG–0654; FEMA–REP–1.

D. Notification Procedures

1. Administrative and physical means for notifying local, State, and Federal officials and agencies and agreements reached with these officials and agencies for the prompt notification 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 appropriate officials, by title and agency, of the State and local government agencies within the EPZs.[3]

2. Provisions shall be described for yearly dissemination to the public 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, 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. Signs or other measures shall also be used to disseminate to any transient population within the plume exposure pathway EPZ appropriate information that would be helpful if an accident occurs.

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 a 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 administrative and physical means have been established for alerting and providing prompt instructions to the public within the plume exposure pathway EPZ. 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 for the State and local governmental officials to make a judgment whether or not to activate the public notification system. Where there is a decision to activate the notification system, the State and local officials will determine whether to activate the entire notification system simultaneously or in a graduated or staged manner. The responsibility for activating such a public notification system shall remain with the appropriate government authorities.

E. Emergency Facilities and Equipment

Adequate 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 impact of 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 physicians and other medical personnel qualified to handle radiation emergencies onsite;

6. Arrangements for transportation of contaminated injured individuals from the site to specifically identified 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. A licensee onsite technical support center and a licensee near-site emergency operations facility 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; each system shall have a backup power source.

All communication plans shall have 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 the function of the governmental agency, these arrangements will include:

a. Provision for communications with contiguous State/local governments within the plume exposure pathway EPZ. 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 among the nuclear power reactor control room, the onsite technical support center, and the near-site emergency operations facility; and among the nuclear facility, the principal State and local emergency operations centers, and the field assessment teams. Such communications systems shall be tested annually.

d. Provisions for communications by the licensee with NRC Headquarters and the appropriate NRC Regional Office Operations Center from the nuclear power reactor control room, the onsite technical support center, and the near-site emergency operations facility. Such communications shall be tested monthly.

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 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.

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 shall describe provisions for the conduct of emergency preparedness exercises. Exercises shall test the adequacy of timing and content of implementing procedures and methods, test emergency equipment and communication networks, test the public notification system, and ensure that emergency organization personnel are familiar with their duties. Each licensee shall exercise at least annually the emergency plan for each site at which it has one or more power reactors licensed for operation. Both full-scale and small-scale exercises shall be conducted and shall include participation by appropriate State and local government agencies as follows:

1. A full-scale exercise which tests as much of the licensee, State, and local emergency plans as is reasonably achievable without mandatory public participation shall be conducted;

a. For each site at which one or more power reactors are located and licensed for operation, at least once every five years and at a frequency which will enable each State and local government within the plume exposure pathway EPZ to participate in at least one full-scale exercise per year and which will enable each State within the ingestion pathway to participate in at least one full-scale exercise every three years.

b. For each site at which a power reactor is located for which the first operating license for that site is issued after the effective date of this amendment, within one year before the issuance of the operating license for full power, which will enable each State and local government within the plume exposure EPZ and each State within the ingestion pathway EPZ to participate.

2. The plan shall also describe provisions for involving Federal emergency response agencies in a full-scale emergency preparedness exercise for each site at which one or more power reactors are located and licensed for operation at least once every 5 years;

3. A small-scale exercise which tests the adequacy of communication links, establishes that response agencies understand the emergency action levels, and tests at least one other component (e.g., medical or offsite monitoring) of the offsite emergency response plan for licensee, State, and local emergency plans for jurisdications within the plume exposure pathway EPZ shall be conducted at each site at which one or more power reactors are located and licensed for operation each year a full-scale exercise is not conducted which involves the State(s) within the plume exposure pathway EPZ.

All training, including exercises, shall provide for formal critiques in order to identify weak areas that need corrections. Any weaknesses that are identified shall be corrected.

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 for a nuclear power reactor or a license to possess nuclear material, 3 copies of 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 each of the licensee's emergency plan implementing procedures to the Director of the appropriate NRC Regional Office with 10 copies to the Director of Nuclear Reactor Regulation. Three copies each of any changes to maintain these implementing procedures up to date shall be submitted to the same NRC Regional Office with 10 copies to the Director of Nuclear Reactor Regulation or, if appropriate, the Director of Nuclear Material Safety and Safeguards within 30 days of such changes.

PART 70—DOMESTIC LICENSING OF SPECIAL NUCLEAR MATERIAL

2. Section 70.32 is amended by adding paragraph (i) to read as follows:

§ 70.32 Conditions of licenses.

* * * * *

(i) Licensees required to submit emergency plans in accordance with § 70.22(i) shall follow and maintain in effect emergency plans approved by the Commission. The licensee may make changes to the approved 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, Section IV, 10 CFR Part 50. The licensee shall furnish the Director of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, with a copy to the appropriate NRC Regional Office specified in Appendix D, Part 20 of this Chapter, each change within six months after the change is made. Proposed changes that decrease the effectiveness of the approved emergency plan shall not be implemented without prior application to and prior approval by the Commission.

* * * * *

(Sec. 161b., i., and o., 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 11th day of August 1980.

For the Nuclear Regulatory Commission.

Samuel J. Chilk,

Secretary of the Commission.

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10 CFR Part 50

Emergency Planning: Negative Declaration; Finding of no Significant Impact for Effective Rule Changes

AGENCY: U.S. Nuclear Regulatory Commission.

ACTION: Final negative declaration; finding of no significant impact.

SUMMARY: The Nuclear Regulatory Commission's regulations require that the environmental impact of certain regulatory actions, including substantive amendments to 10 CFR Part 50, be evaluated to determine if an environmental impact statement should be prepared. If it is determined an environmental impact statement need not be prepared, a negative declaration will be issued. The NRC has evaluated the environmental impact of the proposed changes to Part 50 dealing with emergency planning requirements for nuclear power plants (published elsewhere in this issue), and has determined that the rule changes will not have a significant impact on the human environment. Therefore, an environmental impact statement will not be prepared, and a negative declaration is being issued.

DATES: The rule changes for emergency planning will become effective November 3, 1980.

ADDRESSES: Copies of the Final Environmental Assessment, NUREG-0685, and the comments received by the Commission may be examined in the Commission's Public Document Room at 1717 H Street NW., Washington, D.C.

and at local Public Document Rooms. Single copies of the final Environmental Assessment (NUREG–0685) are available for purchase through the NRC GPO sales program for $4.25 (USNRC, Attention Sales Manager, Washington, D.C. 20555).

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

SUPPLEMENTARY INFORMATION: On January 21, 1980 the Nuclear Regulatory Commission published a "Draft Negative Declaration; Finding of No Significant Impact" (45 FR 3913, January 21, 1980) for proposed changes to 10 CFR Part 50, §§ 50.33, 50.47, 50.54 and Appendix E that deal with emergency planning requirements for nuclear power plants (44 FR 75167, December 19, 1979). A draft Environmental Assessment accompanied the draft Negative Declaration. The comment period ended on February 18, 1980.

Sixteen sets of comments were submitted and have been analyzed. Although all 16 commenters felt that the draft Environmental Assessment was inadequate to support the Finding of No Significant Impact, the staff analysis does not support this view. The commenters suggested that some points in the draft Environmental Assessment were in error, some required much more detailed discussion, and some points had been ignored. The errors have been corrected and do not significantly affect the earlier conclusion. The levels of detail and the omissions are generally related to the penalties associated with noncompliance with the rule. The staff originally judged that invocations of the noncompliance penalties (i.e., nuclear power plant shutdown) would be infrequent and of short duration and the associated impacts would thus be insignificant. Commenters asserted that there will be frequent and long-term shutdowns which will have severe impacts which would require detailed consideration in an Environmental Impact Statement. The staff analysis has supported the judgment of infrequent, short-term shutdowns and thus concludes that no additional detailed studies are necessary.

Minor revisions have been made in the environmental assessment reflecting comments received, but its conclusions have not been altered. Based on this assessment, a final determination has been made by the Director, Office of Standards Development, that the proposed rule changes will not have a signficant impact on the human environment and, therefore, that an environmental impact statement will not be prepared for these rule changes.

Analysis of Comments

The groups that submitted comments are identified on the Table together with their principal comments. No comments were received from State or local governments, other Federal agencies, or public interest groups.

The main point of each set of comments was that an Environmental Impact Statement should be prepared for the rule changes and that the Environmental Assessment ". . . inadequately addresses the environmental impact of the Emergency Planning Proposed Rule and the economic and social impacts on U.S. industry of long-term or permanent premature shutdowns of nuclear plants" (AEP). The comments have been reconstructed into 14 general criticisms, which have been analyzed for their relevance to the validity of the conclusions in the "Draft Negative Declaration; Finding of No Significant Impact."

One matter warrants additional mention here. An assumption was made in preparation of the DEA that shutdowns of nuclear power plants as a result of actions taken under these rule changes would be infrequent and of short duration. This assumption is critical to the decision that an Environmental Impact Statement should not be prepared. The basis for this assumption was that, since State and local authorities have the responsibility, in common with the NRC, to protect public health and safety and are concerned with meeting the energy needs of their citizens, it is likely that they will cooperate to ensure the continued safe operation or timely commencement of safe operation of nuclear generation capability within their jurisdiction. The only significant adverse reaction by the State and local governments that must bear this burden has been that complications in funding of State programs and lead time for equipment acquisition might make it difficult to completely satisfy all of the planning and preparedness requirements by the date set forth in the proposed rule changes. As a direct result of this, the deadline for plans and implementation has been extended to April 1, 1981, and the deadline for having warning systems in place has been extended to July 1, 1981. These extensions should be sufficient in most cases.

It should also be noted that the Commission has chosen the alternative that requires Commission action to initiate a shutdown. Conditions are specified in the regulation that the Commission will use in each case to determine whether a shutdown is warranted. When considered together, the lack of any significant adverse comment from State and local governments, the necessity for Commission action before a plant will be shut down, and the conditions for whether a shutdown is warranted, all argue convincingly that the assumption that shutdowns will be infrequent and of short duration is sound. Thus, the assumption is retained in the final Environmental Assessment (NUREG–0685) and the impacts of extended shutdowns are not considered valid impacts of these rule changes.

The 14 reconstructed general comments and a discussion of each follow:

1. *Three commenters (see Table) contend that alternatives to the proposed rule changes are inadequately addressed. They specifically mention alternative ways of achieving the same end such as proposing legislation.*

In view of the existing safety record of the nuclear industry and the lack of effective preparation for the TMI accident, the Commission had the following three alternatives from which to choose:

A. The Commission could take no immediate action itself while encouraging other parties, i.e., the Congress, other Federal Agencies, the States, and the utilities themselves to take effective action. This "no action" alternative would be counter to the Commission's legislative mandate to protect public health and safety. In fact, the TMI accident was a clear indication that this "urging without requiring" emergency preparedness had proved to be ineffective. This alternative clearly could not stand in the face of the Commission's responsibility in this area.

B. The Commission is a regulatory agency and has as one of its chief tools the authority to issue regulations that bind those parties that it regulates. If an effective method for achieving protection of public health and safety is available through promulgation of regulations with specific requirements and penalties and conditions governing those requirements and penalties, this should be the proper way for the Commission to proceed.

C. If the Commission judged that danger to public health and safety was significant and imminent because of continued operation of existing plants while effective regulations are developed, it had the authority to impose immediate shutdowns until a solution could be found. The safety record of nuclear power, including the

TMI accident, does not support an industry-wide judgment of imminent, significant danger. However, potential does exist for significant harm to the public in the event of a severe accident and the events at TMI suggest that plans must be made to account for this potential problem. Notwithstanding this potential, given the likelihood of an accident requiring off-site emergency protective measures, immediate industry-wide shutdown and the attendant severe long-term impacts are not warranted.

Alternatives A and C are clearly unacceptable. The discussion of alternatives in the Final Environmental Assessment has not been changed from that in the Draft Environmental Assessment.

2. *Seven commenters (see Table) assert that the impacts of shutdowns are underestimated and that shutdowns of multiple unit plants or several in the same State were not considered.*

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[7590-01]

Matrix Display of Commenters and Major Comments

Major Comments \ Commenters[1]	AIF	Yank. At.	Com. Ed.[2]	Con. Ed.	AEP	EEI	LLLM	NU	PASNY	BG&E	D & L	Duke	SPP&T	DOE	LNRA&T
1. Alternatives inadequately addressed	X	X													X
2. Impacts of shutdowns underestimated (costs)	X	X		X			Endorses EEI		Endorses EEI	X			X	X	X
3. Health effects of fossil substitution underestimated	X			X										X	X
4. Challenge assumption of infrequent, short-duration shutdowns	X	X		X	X	X	X		X				X		X
5. Judgement on State cooperation unsubstantiated	X	X	X	X	X									X	X
6. Long-term impacts not addressed	X			X	X					X					X
7. Psychological and physical risks of false alarms not evaluated	X	X								X		X		X	X
8. Use of fuel-mix improper, variation in cost of replacement power			X		X					X		X		X	
9. Significant impacts due to linkage between approval and continued operation		X		X		X	X		X						
10. Proposed rule prior to FEMA		X									X				
11. Costs too low (15 minute warning system not included)		X						X			X	X	X	X	X
12. Decisions granting exemptions or resumption of operation should be classified as categorical exclusions under Commission's NEPA regulations			X												
13. No consideration of costs to utilities											X	X			
14. No consideration of plants under construction															X

[1] Key to Commenters

AIF - Atomic Industrial Forum
Yank. At. - Yankee Atomic Electric Co.
Com. Ed. - Commonwealth Edison[2]
Con. Ed. - Consolidated Edison Company of New York, Inc.
AEP - American Electric Power Service Corporation
EEI - Edison Electric Institute
LLLM - LeBoeuf, Lamb, Leiby & MacRae (for five utilities)
NU - Northeast Utilities
PASNY - Power Authority of the State of New York
BG&E - Baltimore Gas and Electric
D & L - DeBevois & Liberman (for three utilities)
Duke - Duke Power Company
SPP&T - Shaw, Pittman, Potts & Trowbridge (for eight utilities)
DOE - U. S. Department of Energy
LNRA&T - Lowenstein, Newman, Reis, Axelrod & Toll (for two utilities)

The DEA was prepared with the understanding that ever increasing fuel prices make it difficult to make stable predictions of the costs of replacement power. While individual values of replacement costs may be in error, the upper end of the range of costs of replacement power, which is compared in the Environmental Assessment to the costs of compliance, is only changed by about 36% when the heat rate is changed as suggested. The response to comment eleven indicates that the costs of compliance were also underestimated. the relative comparison of these two costs was used to demonstrate the strong economic incentive that exists for all parties to strive for effective emergency planning and preparedness. The staff agrees that the net plant heat rate assumed in the DEA is low and therefore changed the assumed heat rate from 9,400 Btu/kWh to.11,000 Btu/kWh. Accordingly, the cost figures have been modified in the Final Environmental Assessment; but these modifications do not alter the conclusions of the Environmental Assessment.

The question of multiple-plant shutdowns because of a common reason, i.e., an unacceptable State plan or multiple units on a site where the local plan is unacceptable, is a more difficult problem. The State plans are only a part of the overall Federal Emergency Management Agency (FEMA) program to enhance the ability of State governments to handle emergencies. The economic incentive for the utilities to help the States in every way possible should result in the preparation of plans and equipment for a nuclear plant emergency that will be a sound, significant contribution to the overall capability of a State to handle many different kinds of emergencies. The provision of conditions that permit issuance of an operating license or continuation of operation, the extension of the compliance date and deadline for warning systems to be in place, and the record of cooperation from the States up to the present time make it unlikely that any State's program will be so deficient that shutdown of all plants in the State will be required.

The potential that an unsatisfactory local plan might result in the shutdown of all units on a specific site appears to be significantly greater. Depending on the size and number of the units involved, the incentive of the utility for aiding the local governments is also greater. The potential magnitude of the impact of shutdown in these cases is two to three times greater than for the single unit case, and this determination has been added to the Environmental Assessment. In any case, it would appear that whether these impacts, if severe enough, constitute "other compelling reasons" to permit continued operation will be determined in the individual reviews.

3. *Four groups comment that health effects of fossil substitution are underestimated in the draft Environmental Assessment and that other effects are ignored.*

The critical assumption in the draft and final Environmental Assessment is that shutdowns will be infrequent and of short duration. In such a case, the fossil generating capacity is simply that which is available for normal replacement power during refueling and maintenance outages and would probably be used in periods of peak demand until the utility phases it out of the generating system completely. (The impacts are thus ones that occur anyway, but at a different time. Short, infrequent shutdowns will only change the time period for suffering an impact that will most likely be felt eventually anyway.) For such short-term replacement, no new plants will be built. The draft and final Environmental Assessment accepts these impacts as a consequence of infrequent and brief shutdowns. (A more accurate analysis might conclude that there is zero cumulative impact because the useful life of the replacement capability is unaltered.) The discussions in the Final Environmental Assessment are unaltered on this subject.

4. *Nine commenters challenged the assumption that shutdowns would be infrequent and of short duration and questioned the lack of treatment of the availability of replacement capacity.*

The assumption that shutdowns will be infrequent and of short duration is critical to the validity of the Environmental Assessment. At the time when the Draft Environmental Assessment was prepared, this assumption was based on the assertion that State and local governments (having in common with NRC the responsibility to protect public health and safety) will cooperate to provide fully for protection of the public. Since that time, the Commission, in cooperation with FEMA, has been working diligently to help State and local governments develop satisfactory emergency plans and programs. The response of the State and local governments has confirmed the validity of the earlier assumption. In addition, no State or local government provided any comment on the Draft Environmental Assessment, thus indicating at least tacit agreement with the basis for the assumption.

Since the basis for the assumption of infrequent shutdowns has not received substantive challenge from the parties directly involved, but there has instead been activity that tends to confirm the assumption, it will remain as a fundamental assumption of the final Environmental Assessment.

The availability of replacement capacity also hinges on this assumption. Part of the purpose of reserve capacity is replacement during plant outages. As long as shutdowns are infrequent and of short duration, they should fit into this normal pattern of utilization of replacement capacity. No additional discussions of this topic have been prepared for the final Environmental Assessment.

5. *Seven commenters contend the judgment that ". . . it is likely that the States will cooperate to assure the continued safe operation or timely commencement of safe operation of nuclear generation capability within their jurisdiction" is unsubstantiated.*

While this assumption was made in the absence of first-hand information, the experience of the Commission since December 1979, in attempting to work with state and local government officials, has confirmed the accuracy of this assumption.

6. *Five commenters assert that impacts of long-term shutdowns are not addressed.*

The assumption that shutdowns will be infrequent and of short duration defines the scope of this Environmental Assessment. As described above, long-term shutdowns are not the expected result of these rule changes. The goal of these rule changes is timely implementation of adequate emergency plans and programs. The draft and final Environmental Assessment address the impacts of this action based on the expected consequences and practical considerations of implementation of the provisions of the rule changes. No analysis of the effects of long-term shutdowns has been added to the final Environmental Assessment.

7. *Six commenters contend that psychological and physical risks to the public of false alarms are not evaluated.*

The Emergency Action Level Guidelines (NUREG–0610) recommend notification of the public when a "Site Emergency" has been declared. The expected frequency of an event of this type is predicted to be 1 in 100 to 1 in 5,000 per reactor per year. The high end of this range indicates that two such warnings might occur over the effective life (40 years) for every five units. The low end indicates one event over the life of 125 units. Far from causing excessive psychological and physical risks, this

kind of behavior should lead to a more accurate public perception of the true incidence of risk from nuclear power facilities and a more practical and considered response to an emergency when one occurs. No change has been made in the final Environmental Assessment.

8. *Five commenters assert that the use of the mix of fuels already in use in the State is a poor predicter of what would be the fuel replacement capacity for a specific plant shutdown.*

A generic assessment must make some averaging assumptions or become hopelessly lost in detail. In this case, the commenters are correct that this is a "gross assumption." It is, however, sufficient to establish the range of costs for replacement power, which is the way the detailed information was used. No change has been made in the mix of fuels used to generically assess the range of costs of replacement power.

9. *Five commenters observe that all of the significant impacts are due to linkage between adequacy of emergency plans and continued plant operation.*

These commenters agree that the impacts of compliance are insignificant and that if there were no penalty associated with inadequate emergency preparedness then an Environmental Assessment or no Environmental Assessment would be appropriate. The thrust of the rule is to protect the public through adequate emergency planning. The thrust of the shutdown provision is to protect the public in the event that adequate provision has not been and is not being made to provide adequate emergency planning and preparedness.

The decision of how the public should be protected has been made, i.e., either emergency planning and preparedness is adequate or a plant may be placed in a condition of safe shutdown. The State and local authorities have the responsibility to determine which option is in the best interest of their citizens. The linkage remains in the effective rule changes. No additional discussion has been provided in the final Environmental Assessment.

10. *Two commenters observed that the proposed rule was issued prior to the expanded role of FEMA in emergency planning for nuclear power plants.*

The NRC and FEMA are working closely to establish and carry out their respective roles in emergency planning for nuclear power plants. The effective rule has been changed to reflect this change in relationship between the two agencies. However, the substantive provisions of the rule have not changed, only the parties responsible for specific actions.

11. *Seven commenters assert that the costs of implementation are too low and that there may not be enough time allowed to achieve adequacy in all areas of emergency planning and preparedness.*

The draft Environmental Assessment based its estimates of cost of implementation on information contained in "Beyond Defense in Depth: Cost and Funding of State and Local Government Radiological Emergency Response Plans and Preparedness in Support of Commercial Nuclear Power Stations," NUREG–0553, October 1979. This report did not consider the costs of a warning system that would effectively warn everyone within 10 miles within 15 minutes of the time when the decision to warn the public is made. The cost estimates in the draft Environmental Assessment thus do not include the costs of 15-minute notification. The estimates provided by the commenters have been used to revise the cost estimate in the final Environmental Assessment. It should be noted that all cost figures are approximate and are only intended to give an estimate of the normal magnitude of costs and fees associated with building and operating a nuclear power plant. Significant variations from these costs for individual cases should be expected.* These changes do not affect the earlier conclusions of the draft Environmental Assessment.

In response to comments that more time might be needed, the deadline for plans and implementation to be completed has been extended to April 1, 1981, and the deadline for installation of warning systems has been extended to July 1, 1981 to allow for procurement problems. Appropriate changes have been made in the Environmental Assessment but the earlier conclusions remain unaffected.

12. *One commenter suggested that decisions on shutdowns, allowing continued operation despite inadequate plans, or the resumption of operation after a shutdown should be listed in 10 CFR Part 51 as a categorical exclusion.*

The categorical exclusions in Part 51 are those Commission actions that have been judged as a class not to have any significant environmental impact and thus have been excluded from further consideration under those portions of the Commission's regulations that implement the National Environmental Policy Act of 1969. The Commission will consider this as a comment on the ongoing rulemaking on 10 CFR Part 51 (45 FR 13739).

13. *Two commenters noted that no consideration was given to the costs to the utilities of those portions of the rule changes that upgrade previous onsite requirements.*

This oversight has been corrected. While these costs added a significant increment to the total cost of implementation, this total cost is still low compared to the reference costs of (1) replacement power, (2) tax and fee burden, and (3) capital investment. While several of the cost figures in the final Environmental Assessment have been revised upward, the comparison of these costs has remained unchanged and the conclusions of the Environmental Assessment are unchanged.

14. *One commenter observed that there is no consideration given to plants under construction.*

The cost estimates were forecast for all plants scheduled to be operating by the time the rule was to become effective. To go beyond this period would only complicate the estimates with future costs of greater uncertainty. The purpose here was to present an approximation of the relative significance of the cost impacts to determine whether a more detailed analysis is necessary. The relative magnitude of these costs is well established by the information at hand and these are clearly sufficient to support a decision without the preparation on environmental impact statement.

Dated at Bethesda, Maryland, this 6th day of August 1980.

For the Nuclear Regulatory Commission.

Robert B. Minogue,

Director, Office of Standards Development, U.S. Nuclear Regulatory Commission.

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* Northeast Utilities indicated costs as much as 2.5 times those quoted in the Environmental Assessment but also cited unusual complications such as large numbers of local governments that escalated their costs. Since this single estimate was not confirmed by other State or utility commenters, the values were considered beyond the usual range of costs.