



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

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October 26, 1979

The Honorable Jack Brooks  
Chairman  
Committee on Government Operations  
U. S. House of Representatives  
Washington, D. C. 20515

Dear Mr. Chairman:

Your letter of August 8, 1979 asked for the Commission's response to a number of conclusions and recommendations in the Committee's report, "Emergency Planning Around U.S. Nuclear Powerplants: Nuclear Regulatory Commission Oversight." The report focuses on many significant elements of NRC's emergency planning responsibilities and suggests changes in our current process.

Although we have initiated several actions to determine how emergency planning should be improved, most key emergency planning issues are as yet unresolved. Therefore, I must give you an interim response to your letter.

On July 17, we issued an Advance Notice of Proposed Rulemaking on 14 emergency planning issues that pertain to many of your Committee's recommendations (see Enclosure 1). For example, the Commission is seeking public comment on what should be the basic objectives of emergency planning, what constitutes effective emergency response plans for State and local agencies and for NRC licensees, should NRC concurrence in the associated State and local emergency response plans be a requirement for nuclear reactor operation, should radiological emergency response drills be required, and how and to what extent should the public be informed. In addition, the Commission has asked for public comments on the recommendations of NRC/EPA task force report addressing emergency planning zones (Enclosure 2). More specifically, the report suggests using generic Emergency Planning Zones for plume and ingestion exposure pathways as a planning basis for State and local emergency response plans. On October 18, the Commission issued its policy statement on the report (Enclosure 3).

We also established a task force on emergency planning to identify and analyze problems with NRC's current emergency planning process. The task force identified 30 problems in the areas of responsibility and authority, the planning process, regulations and guidance, licensing, implementation, and testing and verification capability. The task force report (Enclosure 4) contains specific office tasks to help resolve these problems. Office tasks involve short-term actions, some of which are underway, and long-term actions that form the basis for developing a comprehensive long-range plan for all of NRC's emergency preparedness activities.

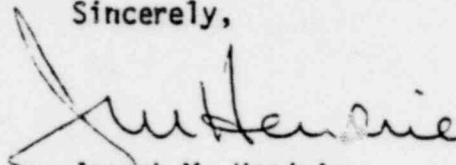
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Our future emergency planning program will be greatly influenced by the resolution of the above issues. In particular, we will closely study all public comments we receive from the rulemaking notice and on the NRC/EPA report. In addition, as a result of the NRC task force report, we have asked our staff to evaluate the organizational aspects of emergency planning at NRC. All of these things, taken with your Committee's recommendations, will help us upgrade our emergency planning activities.

Finally, I have summarized in Enclosure 5 ongoing NRC activities that are specifically related to your recommendations but not directly dependent on the outcome of public comments. It is, of course, our intent to keep all interested Committees in the Congress well informed of major changes that will upgrade our emergency planning program. I hope this information conveys to you the importance and priority we are placing on our emergency planning program.

Sincerely,



Joseph M. Hendrie

Enclosures:

1. Advance Notice of Proposed Rulemaking
2. NRC/EPA Task Force Report
3. NRC Policy Statement
4. Initial Report of NRC Task Force on Emergency Planning
5. NRC Activities Underway

cc: The Honorable Toby Moffett

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NRC Actions Underway Related to  
Recommendations of the Environment, Energy and  
Natural Resources Subcommittee

Readiness and Leadership

RECOMMENDATIONS: Make emergency planning position clear; involve Commission more directly; determine sufficient resources.

Spurred by the Three Mile Accident, the Commission has made emergency planning a high priority item and has taken the following steps for immediate improvement.

1. Established, in June 1979, a task force to examine NRC's current emergency planning process and outline an approach for improvement.
2. On July 17, 1979, issued for comment an Advance Notice of Proposed Rulemaking regarding, among other things, NRC concurred-in State and local plans as a requirement for power reactor operation.
3. Wrote to Governor of each State with or contiguous to operating nuclear power plants where there are no adequate State plans to urge their immediate attention to this area and to offer our assistance in developing an appropriate plan.
4. Increased resources through temporary assignments to the Office of State Programs for the remainder of FY 1979 and requested additional permanent positions in our FY 1980 budget supplemental.

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Utility Plans

RECOMMENDATIONS: Upgrade standards for emergency planning and incorporate requirements into a rule that retrospectively covers all operating nuclear power plants as well as all new applicants; include in customers' electric bills information on the risks of nuclear energy and planned protective actions if an accident occurs; improve public information procedures.

Upgrading of utility plans is being carried out essentially through team reviews. The staff is conducting reviews of licensee preparedness through team visits to nuclear power plant sites and will evaluate updated facility plans against

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Appendix E to 10 CFR Part 50 ("Emergency Plans for Production and Utilization Facilities"), Regulatory Guide 1.101 (additional guidance) and the draft acceptance criteria contained in the attachment.

The criteria have five objectives: (1) to assure effective coordination of emergency activities among all organizations having a response role; (2) to assure early warning and clear instructions to the population-at-risk in the event of a serious radiological emergency; (3) to assure continued assessment of actual or potential consequences onsite and offsite; (4) to assure effective implementation of emergency measures in the environs; and (5) to assure continued maintenance of an adequate state of emergency preparedness.

If Appendix E and Parts 50.33 and 50.43 are revised, it will be done in conjunction with our rulemaking efforts. Depending on the outcome of public comments on the issues involved in rulemaking, the guidance will be revised to reflect more details on evacuation plans, emergency planning zones (both onsite and offsite), accident assessment, and protective and corrective measures and identification and coordination of response organizations in the event of an accident. Proposed revisions are described more specifically in the last 14 pages of SECY 79-499.

In addition, NRC has had dedicated telephone lines installed between the NRC Incident Response Center and each reactor control room. Auxiliary lines are expected to be installed by the end of the year.

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## State and Local Plans

RECOMMENDATIONS: Upgrade requirements for State and local plans and incorporate requirements into a rule that should be the basis against which all State plans are reviewed; review state plans for effectiveness, including evacuation; require a State and local plan that complies with the rule above as a condition for the issuance of a construction permit and operating license; suspend all operating licenses of nuclear power plants in States where no acceptable State and local plans exist.

The staff is developing acceptance criteria for State and local government emergency plans. The staff is also working with the Federal Emergency Management Agency (FEMA) to prepare an improved emergency planning guidance document for the States and local governments by June 1980. In the interim, the staff is continuing to evaluate and reevaluate plans as part of the voluntary Federal program of assistance to State and local governments.

In addition to this in-house review of State plans, the effectiveness of these plans and the need for revisions will be determined during annual exercises that are required to maintain NRC concurrence.

Within the program for upgrading licensee's emergency plans, the response capability of local organizations will be emphasized. The acceptance criteria for upgrading plans list specific provisions that will be in the plans of local authorities.

The recommendation to promulgate a rule requiring State and local emergency plans that meet NRC standards as a precondition to issuance of a construction permit or an operating license is a valid concern. However, our final decision on incorporating requirements into a rule will depend on the outcome of rulemaking, the comments of which we are receiving and beginning to analyze. We expect to develop a rule by the end of the year.

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Regarding the suspension of operating licenses of nuclear power plants where there is no NRC-approved State and local emergency plans, the staff has already taken steps with States to help assure plans receive NRC concurrence by June 30, 1980. Contingencies of this deadline that need to be considered are:

(1) the cooperation of the States involved and the Federal agencies that assist the NRC in plan review and concurrence, (2) the use of existing planning guidelines and concurrence criteria, and (3) the availability of adequate staff in the Office of State Programs and the NRC Regions.

Planning Basis for State and Utility Plans :

RECOMMENDATIONS: Replace Low Population Zone with Emergency Planning Zones (EPZ's) as planning basis and require by rule State and local plans for plume and ingestion pathway EPZ's around each nuclear power plant.

The recommendations of the NRC/EPA Task Force on Emergency Planning (NUREG-0396) includes use of EPZ's as the planning basis for guidance to State and local governments in developing emergency plans. The Commission is deferring decision on these recommendations until comments in the rulemaking proceeding are received and analyzed. Regulations requiring use of EPZ's would likely be done in conjunction with the overall rulemaking that is expected to be completed in January 1980. The rule would apply to all States affected by nuclear power plants.

In the interim, the acceptance criteria being used in team reviews, described earlier, provides for prompt notification and protective actions with the Emergency Planning Zones discussed in NUREG-0396.

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Nuclear Power Plant Siting

RECOMMENDATIONS: Review existing emergency response capability including evacuation feasibility; require by rule, in the licensing process, establishment of effective response capability.

Public comments have been requested on NUREG-0396 which scopes offsite emergency planning guidance. Meanwhile, the staff is reexamining emergency response capability, particularly evacuation. NRR has teams reviewing, on a site-by-site basis, existing licensee emergency response capability. Among other things, the maximum sized zone will be evaluated during their review. Also, the teams will evaluate the evacuation plan and/or other protective measures for the EPZ associated with the exposure and ingestion pathways. Again, specific criteria used in assessing response capability is described in detail in the attachment.

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Emergency Planning Acceptance Criteria  
for Licensed Nuclear Power Plants

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INTRODUCTION

2. Licensees will submit updated facility plans either before ~~or~~ after the site visit by the NRR review team, together with the appropriate State and local plans, which will be evaluated collectively against the requirements of Appendix E to 10 CFR Part 50, the positions set forth in Regulatory Guide 1.101, and the acceptance criteria contained herein. The ~~criteria~~ contained herein will be used in conjunction with the aforementioned ~~regulations~~ and guidance to assure that the following emergency planning ~~objectives~~ have been achieved.

- (1) Effective coordination of emergency activities among all organizations having a response role.
- (2) Early warning and clear instructions to the population-~~at~~-risk in the event of a serious radiological emergency.
- (3) Continued assessment of actual or potential consequences both onsite and offsite.
- (4) Effective implementation of emergency measures in the environs.
- (5) Continued maintenance of an adequate state of emergency preparedness.

It should be noted that the planning herein identified for the Emergency Planning Zones (NUREG-0396) need not be fully implemented at this time in order to meet the acceptance criteria. Evaluation of the planning for the plume exposure pathway should be based on what is feasible on the time scale

of these reviews with firm commitments to extend such provisions throughout the entire Emergency Planning Zone by January 1, 1981. Also, the Commission has not yet spoken on the "50 mile" aspect of the Emergency Planning Zone associated with the ingestion pathway. Hence, the use of the related acceptance criteria in the evaluation need not be applied to the full extent implied in NUREG-0396. However, the plans must demonstrate that a capability exists to protect the public from exposure via the ingestion pathway.

#### ACCEPTANCE CRITERIA

- I. To assure effective coordination of emergency activities among all organizations having a response role
  - A. Licensee plans will:
    1. Provide for an emergency coordinator at all times, including an individual onsite at the time of an accident, having the authority and responsibility to initiate any emergency actions within the provisions of the emergency plan, including the exchange of information with authorities responsible for coordinating offsite emergency measures.
    2. Provide for the augmentation of the minimum onsite emergency organization within 60 minutes for all classes of emergencies above the "alert" level.
    3. Identify and define by means of a block diagram the interfaces between and among the onsite functional areas of emergency activity, licensee headquarters support, local services support, and State and local government response organizations. The

above shall include the onsite technical support center and the operational support center as discussed in NUREG-0578.

4. Describe the location and role of the onsite technical support center. See item 3 of Section 3.3.3.b of Appendix A to NUREG-0578 (e.g., communications with NRC and the offsite emergency operations center).
5. Describe the location and role of the onsite operational support center. See item 3 of Section 2.2.2.c of Appendix A to NUREG-0578.
6. Provide for the dispatch of a representative to the principal emergency operations center established by the offsite agencies (not required if licensee's offsite emergency operation center is at the same location as that described in item I.B.4).

B. State/local plans will:

1. Identify authorities responsible for coordinating offsite emergency activities for the Emergency Planning Zones discussed in NUREG-0396.
2. Designate the authority and specific responsibility for each coordinating authority.
3. Describe the concept of operations from the perspective of each official having a coordinating role, including the operational interrelationships of all Federal, State, and local organizations providing emergency support services.

4. Identify the predetermined location of the Emergency Operations Center to be used for the coordination of all offsite emergency support activities.
5. Describe the communication plan for emergencies, including titles and alternates for both ends of the communication links and the primary and backup means of communication. Where consistent with the agency function, these plans will include:
  - a. Provision for prompt and assured activation of the State/local emergency response network.
  - b. Provision for administrative control methods for assuring effective coordination and control of Federal, State, and local emergency support activities.
  - c. Provision for communications with contiguous State/local governments within the Emergency Planning Zones.
  - d. Provision for communications with Federal emergency response organizations.
  - e. Provision for communications with the nuclear facility, State and/or local emergency operations centers, and field assessment teams.

II. To assure early warning and clear instructions to the population-at-risk in the event of a serious radiological emergency

A. Licensee plans will:

1. Provide an emergency classification scheme as set forth in Regulatory Guide 1.101.

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2. Establish specific criteria, including Emergency Action Levels (EAL) as appropriate, for declaring each class of emergency.
  - a. EALs for declaring a "site emergency" will include instrument readings and system status indications corresponding to an airborne fission product inventory within containment which, if released, could result in offsite doses equivalent to the lower limit of the EPA Protective Action Guides (PAG) for exposure to airborne radioactive materials.
  - b. EALs for declaring a "general emergency" will include instrument readings and system status indications corresponding to an airborne fission product inventory within containment which, if released, could result in offsite doses equivalent to the upper limit of the EPA Protective Action Guides (PAG) for exposure to airborne radioactive materials.
3. Provide a clear and explicit methodology for relating EALs to PAGs.
4. Identify the onsite capability and resources to properly assess and categorize accidents including:
  - a. Instrumentation for detection of inadequate core cooling.  
See item 3 of Section 2.1.3.b of Appendix A to NUREG-0578.
  - b. Radiation monitors. See item 3 of Section 2.1.8.b of Appendix A to NUREG-0578.
5. Provide for recommending protective actions to the appropriate State and local authorities, based on projected dose to the population-at-risk, in accordance with the recommendation set forth in Table 5.1 of the Manual of Protective Action Guides

and Protective Actions for Nuclear Incidents, EPA-520/1-75-001. Upon declaration of a "general emergency", immediate notification shall be made directly to the offsite authorities responsible for implementing protective measures within the Emergency Planning Zone as discussed in NUREG-0396.

6. Describe the onsite communications capability for assuring contact with the offsite authorities responsible for implementing protective measures including a primary and backup means of communications.
7. Provide for periodic dissemination of educational information to the public within the plume exposure Emergency Planning Zone regarding the potential warning methodology in the event of a serious accident.

B. State/local plans will:

1. Identify authorities having a response role within the Emergency Planning Zone as discussed in NUREG-0396.
2. Designate the authority and specific responsibility for each of the responding authorities.
3. Provide for 24 hours/day manning of communication link by authorities responsible for implementing offsite protective measures.
4. Provide an emergency classification scheme that is consistent with that established by the licensee.
5. Describe the resources that will be used if necessary to provide early warning and clear instructions to the populace within the

Emergency Planning Zone associated with the plume exposure pathway (NUREG-0396) within 15 minutes following notification from the facility operator (e.g., tone alert systems, sirens and radio/TV).

6. Provide for posting information regarding the potential warning methodology and expected response in areas visited by transients within the Emergency Planning Zone (e.g., recreational areas).
7. Identify prewritten emergency messages for response organizations and the public consistent with the classification scheme.
8. Provisions for testing the overall communications link to assure that the criteria specified in item 5 above is met on a continuing basis.

III. To assure continued assessment of actual or potential consequences both onsite and offsite

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A. Licensee plans will:

1. Identify the onsite capability and resources to provide valid and continuing assessment throughout the course of an accident including:
  - a. Post-accident sampling capability. See item 3 of Section 2.1.8.a of Appendix A to NUREG-0578.
  - b. In-plant iodine instrumentation. See item 3 of Section 2.1.8.c of Appendix A to NUREG-0578.
  - c. Plots showing the containment radiation monitor reading vs. time following an accident for incidents involving

100% release of coolant activity, 100% release of gap activity, 1% release of fuel inventory, and 10% release of fuel inventory.

2. Identify the capability and resources for field monitoring in the environs of the plant including the additional dosimetry specified in the revised technical position issued by the NRC Radiological Assessment Branch for the Environmental radiological monitoring program.

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B. State/local plans will:

1. Identify the agencies having a radiological ~~assessment~~ role within the Emergency Planning Zones as discussed in NUREG-0396, including the lead agency for data coordination.
2. Designate the specific responsibilities for each agency having an assigned assessment role.
3. Describe the arrangements established with the Department of Energy Regional Coordinating Office for radiological assistance under the RAP and IRAP programs.
4. Designate a centralized coordination center for the receipt and analysis of all field monitoring data.
5. Describe the methods and equipment to be employed in determining the magnitude and locations of any radiological hazards following liquid or gaseous radioactivity releases.

IV. To assure effective implementation of emergency measures in the environs

A. Licensee plans will:

1. Provide written agreements with each Federal, State, and local agency and other support organizations having an emergency response role within the Emergency Planning Zones as discussed in NUREG-0396. The agreements will identify the emergency measures to be provided and the mutually acceptable criteria for their implementation.

B. State/local plans will:

1. Designate protective action guides and/or other criteria to be used for implementing specific protective actions in accordance with the recommendations of EPA regarding exposure to a radioactive gaseous plume (EPA-520/1-75-001) and with those of HEW/FDA regarding radioactive contamination of human food and animal feeds as published in the Federal Register of December 15, 1978 (43 FR 58790).
2. Designate the informational needs (e.g., dose rates, projected dose levels, contamination levels, airborne or waterborne activity levels) for implementing the protective actions identified in item 1 above.
3. Describe the evacuation plan and/or other protective measures for the Emergency Planning Zone associated with the plume exposure pathway (NUREG-0396) including:

- a. Maps showing evacuation routes as well as relocation and shelter areas.
  - b. Population and their distribution around the nuclear facility.
  - c. Means for notification of all segments of the transient and resident population.
  - d. Plans for protecting those persons whose mobility may be impaired due to such factors as institutional confinement.
  - e. Provisions for the use of radioprotective drugs, particularly for emergency workers, including quantities, storage, and means of distribution.
  - f. Means of effecting relocation.
  - g. Potential egress routes and their projected traffic capacities under emergency use.
  - h. Potential impediments to use of egress routes, and potential contingency measures.
4. Describe the protective measures to be used for the Emergency Planning Zone associated with the ingestion pathway (NUREG-0396) including the methods for protecting the public from consumption of contaminated foodstuffs.
  5. Provide for maintaining dose records of all potentially exposed emergency workers involved in response activities.

V. To assure continued maintenance of an adequate state of emergency preparedness

A. Licensee plans will:

1. Provide, in addition to the drills and exercises identified in Regulatory Guide 1.101, a joint exercise involving Federal, State, and local response organizations. The scope of such an exercise should test as much of the emergency plans as is reasonably achievable without involving full public participation. Definitive performance criteria will be established for all levels of participation to assure an objective evaluation. This joint test exercise will be scheduled about once every five years.

B. State/local plans will:

1. Provide for emergency drills and exercises to test and evaluate the response role of the agency, including provisions for critique by qualified observers.
2. Provide for participation in the joint Federal, State, local and licensee exercise described in A.1 above.
3. Describe the training program for those individuals having an emergency response assignment.
4. Provide for periodic review and updating of the emergency response plans of the agency.