



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

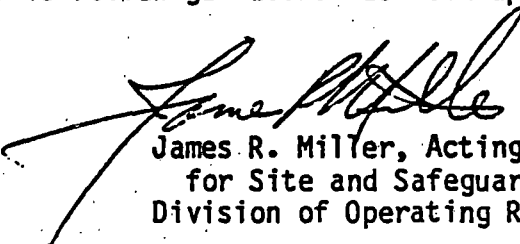
SEP 7 1979

MEMORANDUM FOR: Emergency Planning Staff

FROM: James R. Miller, Acting Assistant Director
for Site and Safeguards

SUBJECT: EMERGENCY PLANNING REVIEW GUIDELINE NUMBER ONE -
REVISION ONE - EMERGENCY PLANNING ACCEPTANCE CRITERIA FOR
LICENSED NUCLEAR POWER PLANTS

Enclosed is Emergency Planning Review Guideline Number One - Revision One - Emergency Planning Acceptance Criteria for Licensed Nuclear Power Plants. The review guideline supercedes Review Guideline Number One dated August 17, 1979. This review guideline is to be used to review upgraded emergency plans for operating plants and near term OL's. This review guideline has been approved by NRR management.


James R. Miller, Acting Assistant Director
for Site and Safeguards
Division of Operating Reactors

Enclosure:
As stated

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Emergency Planning Acceptance Criteria
for Licensed Nuclear Power Plants

INTRODUCTION

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.

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

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.

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.