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CRITICAL MASS ENERGY PROJECT

DOT'ET HULLETR PROPOSED RULE 11-50 (44FR75167)

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February 22, 1980

Secretary of the Commission U.S. Nuclear Regulatory Commission 1717 H Street, N.W. Washington, D.C. 20555 Attn: Docketing & Service Branch

Re: 10 CFR Part 50 Emergency Planning FRN Vol. 44, No. 245

Dear sir/madam:

Enclosed are comments from Public Citizen's Critical Mass Energy Project to the Commission regarding emergency planning for fixed nuclear power plants as published in the Federal Register, Wednesday, December 19, 1979 (Vol. 44, No. 245).

Pursuant to a telephone conversation with Mr. Morrongiello of your office, we are able to submit these comments beyond the February 19 deadline. If there is any problem, feel free to contact this office, as stated above.

Thank you for your cooperation in this matter.

Sincerely, auce Richard P. Pollock, Director OCKETED USNRC FEB 27 1980 > Secretary Office of the

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THE U.S. NUCLEAR REGULATORY COMMISSION

Comments to FRN. Vol. 44,)	Submitted by
No. 245, December 19, 1979 Emergency Planning for)	The Critical Mass
Civil Nuclear Accidents)	Energy Project
10 CFR Part 50		
Appendix E)	February 19, 1980

COMMENTERS

The Critical Mass Energy Project welcomes the opportunity to comment on proposed rules issued by the U.S. Nuclear Regulatory Commission on the matter of 10 CFR, Part 50, emergency planning for nuclear accidents (FRN, Vol. 44, No. 245, Wednesday, Dec. 19, 1979).

CMEP has long been familiar with this problem, first submitting in August, 1975 with the Public Interest Research Group (PIRG) a petition for rulemaking to upgrade radiological emergency planning. That rulemaking petition was denied by the NRC in 1977.

On May 9, 1979, following the nuclear reactor accident at Three Mile Island Unit 2, CMEP, in conjunction with 14 other public interest and labor organizations, re-submitted the PIRG petition, with new additions. That rulemaking petition, which also seeks to enhance and upgrade licensee, local, state and federal emergency planning, is now pending before the Commission.

General Comments

In our view, nuclear emergency planning has been neglected by the Commission despite repeated warnings that significant problems permeate this entire activity. This conclusion was supported by the report of the President's Commission on the Accident at Three Mile Island (hereafter known as the "Kemeny Commission"), the NRC's Special Inquiry Group report (known as the "Rogovin Report"), the U.S. Nouse Government Operations Committee study on emergency plans (known as the "Moffett Report"), and a March 30, 1979 U.S. General Accounting Office study on nuclear accident preparedness.

These reports and studies have well established the importance of the role that emergency planning and proper siting of commercial nuclear power plants should play during the licensing process. Separation of these issues from the issuance of licenses and construction permits has been rejected by all independent and U.S. government studies.

Moreover, previous assumptions that serious accidents are unlikely have now been undermined in the wake of the experiences of Three Mile Island. Other mishaps which have occurred subsequent to the March, 1979 TMI accident reinforce the view that the lack of emergency preparedness is not unique to TMI, but is a shared problem throughout the entire commercial nuclear power

industry. Accidents at New Jersey's Oyster Creek reactor Virginia's North Anna plant, and at TMI-2 in February, 1980, just to name a few, testify to the pervasive character of the problems still afflicting radiological accident preparedness.

In this regard, we endorse the view expressed by the NRC in its proposed rulemaking notice of December 19 that the Commission now regards "emergency planning as equivalent to, rather than as secondary to, siting and design in public protection." As the supplementary information in the FRN correctly notes, "safe. siting and design-engineered features alone do not optimize protection of the public health and safety."

The Kemeny Commission and Rogovin reports on Three Mile Island arrived at this same conclusion independently. The Rogovin Report stated this concept most eloquently:

"In our view, the emergency plan, as a condition of the operating license, should be viewed in the same fashion as an engineered safety system in the plant. The typical plant's technical specifications provide that when engineered safety systems become 'degraded' or inoperable, the plant may have to be shut down if the situation cannot be remedied within a short period of time. Whether an evacuation plan can realistically be executed at a particular time should be treated in the same fashion."

While we support the elevation of emergency preparedness considerations to equal stature with that of engineering safeguards, we do not, however, endorse the view advanced by some we NRC what is that technical designs can substitute for either low population siting or workable emergency plans. As the Rogovin Report stated:

"In the past, the NRC has consistently regarded 'engineered safeguards,' i.e., automatic emergency safety systems within the plant as a permissible tradeoff permitting the location of a plant near a heavily populated area. . . Our

analysis of how close the accident at Three Mile Island came to a situation in which evacuation might have been required on a precautionary basis, at least, leads us to conclude that this philosophy simply is not valid. Evacuation must be considered as an <u>independent</u> means of protection for citizens living near a nuclear plant, over and above the engineered safety systems designed to mitigate an accident and to prevent releases."(Emphasis in original)

The Moffett report also underscored this points

"But recall the critical assumption which underlies all of this analysis: the engineered safety systems are assumed to work during an accident. If these man-made systems fail, the analysis collapses. In short, if a severe accident occurs, defeating the safety features, the 'safest' plants become in actuality the least safe, for they are located in the most densely populated areas and thus are likely to cause the greatest injury to the public."

This observation strikes at the heart of the proposed rule. NRC wishes to determine if atomic reactors should be permitted to operate if a state lacks a "concurred" or approved state emergency plan and/or other major evacuation deficiencies. CMEP rejects this notion of continued operation under these conditions as contrary to public safety. This type of policy subjects an innocent public to radiation risk due to company error or mechanical failures, without offering the public any tools to devise adequate protective measures.

Linking adequate emergency planning to issuance or maintenon ance of licenses has been endorsed by every major federal study released since the TMI accident. But to continue to permit the operation of nuclear reactors without workable accident evacuation plans is like, in the words of Ralph Nader, "jumping out of an airplane with your parachute on order."

"The way they are operating now," Mr. Nader said, testifying before the U.S. House Subcommittee on Environment, Energy and Natural Resources on May 7, 1979, "it is like building a skyscraper and then deciding what fire evacuation procedures have to be implemented."

CMEP endorses the concept that nuclear power plants that operate in areas where local and state emergency plans are poor or inadequate should be temporarily shut down until such time as tested and workable plans are in place. To permit continued operation instills no incentive to upgrade their emergency/ evacuation plans, undermining the entire thrust of "linkage" between adequate radiologocal emergency ...anning and licensing.

By way of analogy, when major technical specifications are not met or when the key engineering safety systems are inoperable, the Commission will not permit nuclear reactos to function. The same principle should be applied to emergency plans. Reactors should not be in operation when basic emergency plans are not in place.

If a licensee believes that an exemption is in order despite the absence oF a workable plan, then specified procedures should be followed to evaluate the licensee or applicant's request. Nopefully, the procedures will be invoked in a timely manner, with adequate public notice and participation. The criteria for an exemption should be rigorous. As the Rogovin Report concluded, "We recommend that once criteria for minimum workable evacuation areas are established by the NRC, plants that cannot meet these criteria should be allowed to continue to operate only upon a determination by the President that the temporary continued operation of the plant is certified to be vital to the national interest. It is contrary to the gublic interest to permit the continued

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operation of high risk facilities while the governmental organizations, private institutions, and the general public are denied the means to protect the selves should there be a release of radiation from the facility.

Findings of Major Studies

A wide variety of studies, reports, surveys and panel investigations by authorities in the field of emergency planning for nuclear accidents have been completed. The clearest findings which stand out concerning this matter are:

- o There is a complete lack of local plans around most of the nation's commercial nuclear facilities. Funding, equipment, and training have been almost universally unavailable to local areas.
- o The consequences of a severe nuclear accident could be "many tens of miles" away from a site, according to the Kemeny Commission. The Rogovin Report called the NRC proposed _0-mile planning zone "inadequate as an arbitrary " cutoff point."
- o At virtually all exercises designed to test emergency plans for nuclear reactors, there has been found a general lack of good communications from licensee to governmental bodies, including federal departments and agencies. "There was a lack of communication at all levels" at TMI, the Kemeny Commission stated.
- Accident assessment at most nuclear plants are poor. The ability to obtain accurate information in a timely manner did

not occur at IMI. Nor was there effective off-site radiation monitoring arrays to determine the magnitude or seriousness of releases.

- On-site plans for physicians and medical facilities at TMI were poor. Medical facilities at TMI were useless during the .
 accident because of their proximity to contaminated areas.
- Existing emergency plans on site are not designed for protracted crises.
- NRC requires the submission of only the sketchiest emergency and evacuation plans at the construction permit and operating license stages.
- o There is considerable doubt whether general off-site evacuation could be undertaken in time at most reactor sites. At the Oconee plants in North Carolina, a local official estimated that it would take 5 to 7 hours to alert and evacuate people. The plant is in a relatively remote area.
- o There is considerable doubt whether evacuation is possible at all in some sites: Indian Point, Zion, Turkey Point, Bailly and others are in or nearby heavy population areas.
- Exercises or drills to test nuclear emergency plans are far too infrequent and unrealistic.
- o There is no public education to inform residents living in surrounding communities about the expected nature of accidents, the notification process and the types of emergency protective actions, including evacuation which could be anticipated.
- o State emergency plans are often weak. About 60 percent of the operating reactors in the United States are in states where statewide nuclear emergency plans have not yet been concurred by the NRC. Michigan and Ohio have no state radio-

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logical emergency plans at all, despite 13 planned or operating nuclear power plants in the two states combined. There is an emerging consensus among civil defense and public health officials that the present stage of concurrence deals with a checklist, not a realistic, "living" plan to cope with nuclear emergencies. State civil defense and emergency preparedness officials in states which have received concurrence, such as those in New York, Connecticut, New Jersey, and South Carolina have said for the record that they are no closer to an acceptable evacuation capability than before receiving concurrence.

Specific Comments

As stated above, as a general proposition the Critical Mass Energy Project supports Alternative B. Under this option, nuclear facility licensees will have to shut down their power plants by an appropriate deadline, if their state governments have not received concurrence, or if concurrence is being withheld by the NRC or FEMA for radiological emergency/evacuation plans. The Alternative A process of merely issuing a "show cause" order for shutdown but permitting the continued operation of the plants during the ensuing deliberations is unacceptable. It is an unspecified process with vague criteria. It will only cause needless delay in upgrading protective measures for the public and prolong the period of time in which a high risk system is being employed without the benefit of such protective actions. CMEP also believes that the highest standard for exemptions must be employed; certification from the President must be issued affirming that the

plant's continued operation is in the vital interests of the United States.

Specific Comments for Part 50

Part 50.33(g): CMEP proposes that the 10/50-mile emergency radius proposed for this section be amended to 30/100 miles.

<u>Rationale</u>: In 1976 the American Physical Society endorsed the notion that evacuation requirements might extend as far as 37 miles from a fixed nuclear facility. During the accident at TMI, **conside**ration for a 20-mile evacuation was contemplated. And in the draft version of the Rogovin Report, a 30-mile evacuation radius was cited as an appropriate standard. The final Rogovin document rejects the current 10-mile figure as "arbitrary" and only a starting point.

The NRC/Environmental Protection Agency report on emergency planning for Light Water Reactors (NUREG 0396) endorsed emergency planning for the ingestion pathway (food, livestock and water) of 100 miles from a nuclear facility in its draft report. The planning basis should be organized along these lines and not on the "compromise" figure of 50 miles which prevailed.

Part 50.47(a) Emergency Plans--Alternative B.

<u>Rationale</u>: The vagueness of "an opportunity" the applicant will have makes Alternative A undesirable. The exemption request cited in Alternative B following a shutdown specifies procedural rights, criteria and a more orderly approach for all sides, including the public, to have all matters considered.

Under no circumstances should a commercial nuclear reactor be permitted to operate beyond the diadline for the imposition of adequate safeguards designated by an acceptable emergency preparedness plan. Licensees will certainly have ample opportunity to improve deficiencies during the grace period. Failure beyond this date to upgrade plans should not be tolerated. Moreover, as referred above by the Rogovin Report, engineering designs in and of themselves do not constitute an acceptable substitute for weak or ineffective emergency programs.

Part 50.54(s) Condition of Licenses--Alternative B.

Rationale: Licensees will have ample opportunity under Alternative B to demonstrate that deficiencies in a state emergency plan are not significant, thereby enabling continued operation. But public health and safety, not the financial convenience of the licensee, should be of uppermost consideration. To regain the public confidence in the wake of Three Mile Island, commercial nuclear facilities need to be regulated in the most conservative fashion. To adopt Alternative A, where plants need not be shut down if concurrence has not been received within 180 days makes a mockery of the concept that emergency plans have been elevated to a level of primacy equivalent to that of engineered design features of nuclear power plants.

Part 50.54(t) Alternative B.

<u>Rationale</u>: If one year after the passage of this proposed rule, a state plan does not warrant concurrence and Tails to correct identified deficiencies within four months of the finding of non-concurrence, the reactor ought to be shut down. Procedural remedies, namely application for an exemption, are available under Alternative B.

Licensees must appreciate the gravity of operating without

an acceptable of effective nuclear emergency plan. Unfortunately, the attitude among licensees has not been especially responsive. Reactor owners bear major responsibility for getting state and local emergency response mechanism in order. The public should not be penalized by being exposed to the prospects of accidents without compensating in-place protection. Responsible and prudent and would reject Alternative A and embrace firm measures embodied in Alternative B.

<u>Part 50.54(u)</u> CMEP endorses at least a 12-month review of licensee emergency plans stated here. But if a plan is to be a realistic or "living plan," the review must not be a "paper plan," but one which is tested or exercised under realistic conditions. A mere "review" or "audit" is insufficient.

<u>Part 50.54(v)</u> CMEP endorses the timetable provided herein. Six months is ample time to mobilize resources, provide organization, devise plans and test them to determine their practicality. The township of Waterford, Conn. accomplished these goals well within that specified time period for researching and organizing an actual evacuation drill in the region surrounding the Millstone nuclear power plant site.

Appendix E--Emergency Planning and Preparedness for Production

and Utilization Facilities

I. PSAR - C - Alternative B.

<u>Rationale</u>: To make an effective determination of the desirability of a proposed site, there needs to be more than raw sketches about the feasibility to protect the jublic following an emergency. Alternative A is vague, constituting no substantive improvement over the current, discredited emergency planning requirements. Additionally, state officials identified by the PSAR should "sign off" or otherwise certify that the proposals being submitted to NRC are workable and realistic. Too frequently, the plans are only paper plans, divorced from the practical realities of the needs of a general mobilization, public notification logistics, limitations of evacuation routes, etc.

III FSAR -Alternative A.

At many active nuclear sites, industrial complexes, businesses, farmlands, and residential areas are adjacent or nearby. The FSAR must spell out what measures will be undertaken to minimize damage to property as well as what measures will be adopted to protect public health. The property provision is important for addressing the ingestion pathway, which might call for the embargoeing or destruction of food products.

IV Content of Emergency Plans--Addition of the following provisions: A. Organization

(9) A description of equipment and facilities available, their proximity to the site, backup arrangements and supplies in the event such equipment or facilities are contaminated or are otherwise unavailable during the crisis.

(10) Alternative arrangements for the organization due to time of day, or season(s), changing weather conditions typical of the area, etc., shall be specified. Alternative assignments should the also be cited.

(11) Organizational arrangements for protracted crisis shall be completed.

(12) Contracts with firms, detailing available services should be specified.

(13) Evaluation of off-site resources and capabilities. These include assessing the capability and weaknesses of governmental agencies for evacuation, treatment of injured, emergency transportation systems, etc.

B Assessment Actions -- Add the following passage:

To demonstrate the ability to assess the magnitude of an accident, the means for accident assessment shall be documented with material, including contracts with specific firms for services needed for radiation monitoring, TLD processing, etc. As an emergency is prolonged, accident assessment demands will intensify. Prior planning and preparedness will assure greater reliability of accident damage estimates, which can lead to correct judgements concerning protective measures needed to safeguard offsite health and safety.

C Activation of Emergency Organization -- Add the following:

"The entire spectrum of emergency conditions, <u>including</u> <u>Class 9 accidents</u>, which involve the alerting or activation of progressively larger segments. . ."

Delete the words, "The existence, but not" in the last sentence and substitute with "Both the existence and the details. . . ."

Rationale: The NRC/EPA task for on emergency planning has recommended, with specificity, that Class 9 accidents be considered for the purposes of nuclear accidents. It should be spelled out here.

The details of the message authentication scheme should be reviewed annually by NRC/FEMA. Implementation of a communication system can -- and is -- as important as the overall plan and can mean the difference between a workable method for relaying ' vital information, or garbling it.

D Notification Procedures -- Revise

 The notification system should not only be "described," but tested four times a year as an unannounced drill. Both on-site and off-site agencies should be involved in the tests.

CMEP supports the concept of yearly public notice.
Such notice is long overdue.

3. Public notification systems should be tested more regularly than the overall system, since the delivery of correct instructions and accurate information is vital during emergencies. It is one of the weakest links in the communication system. The public notification system should be tested monthly in the Emergency Planning Zone. The model of the Emergency Broadcast System for radio and television licensees is an appropriate counterpart for the special radiological emergency program.

E Emergency Facilities & Equipment -- Revise

Introductory Paragraph - add the concept that provisions should be made for both describing equipment inventories and <u>maintaining</u> that inventory. Proper maintenance of equipment is at least as important as mere possession.

7. Hospital facilities located both within the EPZ and outside the zone should certify their capability to handle contaminated or injured licensee employees or members of the public.

10. Add: All arrangements shall be certified annually by authorized officials and/or agencies cited in this section. All emergency equipment shall by regularly inspected by FEMA or NRC officials to ensure they are being maintained in good condition and that there is a reasonable assurance they will operate as planned.

F Training -- Add

k. add new section: Those individuals involved with the ingestion pathway (farmers, local water purification officials, food processors, food distributors, etc.)

For paragraph following section j. add: The concept of public participation is not well developed in this section. Actual exercizes have been successfully undertaken to test emergancy preparedness -- with public participation -in such places as Waterford, Conn., (Millstone), Wilmington, N.C. (Brunswick with positive results.)

For section 1. and 3 of this section revise: change the joint federal, state and local exercises from 3 years, (Alternative A) or 5 years (Alternative B) to every year. A living system is only assured through regular testing. With the changes in organizations, personnell and responsibilities, a 3 year hiatus could be deterimental to overall planning.