

NORTHEAST UTILITIES

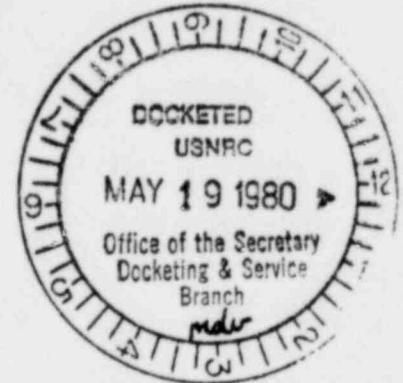


THE CONNECTICUT LIGHT AND POWER COMPANY
THE HARTFORD ELECTRIC LIGHT COMPANY
WESTERN MASSACHUSETTS ELECTRIC COMPANY
HOLYOKE WATER POWER COMPANY
NORTHEAST UTILITIES SERVICE COMPANY
NORTHEAST NUCLEAR ENERGY COMPANY

P.O. BOX 270
HARTFORD, CONNECTICUT 06101
(203) 666-6911

DOCKET NUMBER
PROPOSED RULE PR-Misc. Notice May 14, 1980
NUREG-0654 (21)
(45 FR 9768)

Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555



Dear Sir:

Regarding: NUREG-0654 (FEMA-REP-1)
- For Interim Use and Comment - "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants", January, 1980

Northeast Utilities (NU) is pleased to be given an opportunity to submit comments on the above NUREG document. NU operates the Millstone Nuclear Power Station (MNPS) Units #1 and #2 and the Haddam Neck Plant (HNP); also, NU has under construction MNPS Unit #3. Since 1976, NU has been extensively involved in assisting the State of Connecticut and the fifteen towns within the Low Population Zone (LPZ) of the two nuclear sites in developing emergency plans, training emergency workers and extensively testing the plans. As a consequence of NU's assistance in this regard, the State of Connecticut and these local communities have plans that have received "Concurrence" by the NRC and other responsible Federal agencies.

In its effort to be responsive to other proposed NUREGs (i.e., NUREG-0396, "Planning Basis for Emergency Responses to Nuclear Power Reactor Accidents," NUREG-0553 "Beyond Defense in Depth," and NUREG-0610 "Emergency Action Level Guidelines") and the proposed rule change on emergency planning (i.e., 10CFR50), NU has submitted extensive constructive, as well as critical, comments on these documents. A copy of NU's comments on proposed 10CFR50 is attached as we consider that it is pertinent to many of the points in NUREG-0654. Basically, these comments have described the significant problems with the Emergency Planning Zones (EPZ) concept, the inadequacies in the funding proposals and, more importantly, the consequences of implementing the changes to 10CFR50, (i.e., penalizing the utility and all its customers if a town/state does not comply with the criteria).

In this letter, NU has divided its comments on NUREG-0654 into two categories. The first category deals with our concerns on major issues and the second category deals with a critique of specific criteria.

Acknowledged by card. 5/20/80. mdv...

80060204 36

I. General Comments

- A. NU is appreciably disturbed with the fact that NRC is placing the criteria of NUREG-0654 into de facto use before proper time has been allowed for review by state/local/plant operators. The MNPS and HNP site emergency plans were recently critiqued by an NRC Emergency Planning Review Team using the criteria specified in NUREG-0654 and some additional more recent ones. NU did not have this document when the present site emergency plans were being prepared. NU employees responsible in this area spent the months of November and December addressing the earlier emergency plan criteria specified in October 25, 1979 letter from D. Eisenhut (Division of Operating Reactors) by NRC's specified date of January 1, 1980. Though NU would have addressed these NUREG-0654 criteria in any event, it is regrettable that so much time and effort was spent on formatting, writing and implementing new site plans by January 1, 1980 that will have to be changed to meet new and different proposed requirements issued less than two months later. Also, NU is again being asked to develop a revised emergency plan in a short period of time to criteria which are still changing and will be based on the final, yet to be issued, version of NUREG-0654.

We suggest that the NRC give at least six months to allow for implementation and training of new facility on-site emergency plan requirements. On-site plans should not have major changes for at least two years. Changes to plans can be interim and reviewed by NRC. Only after this should the implementation period of at least six months occur.

- B. A good deal of NUREG-0654 criteria are open to interpretation as to the degree of planning necessitated at all state/local/utility levels. As an example, the NRC Emergency Preparedness Team review of the Haddam Neck and Millstone site plans requested information on the method by which local responsible offsite authorities could be notified within 15 minutes following an accident. This 15 minute definition of "prompt" criteria is not found anywhere in NUREG-0654. The NRC/FEMA has not given any specific guidance on this issue. In that these systems could range in price from \$50,000 to \$100,000 (NU estimate) per site, appropriate guidance should be given before this equipment is committed for this purpose.

It would have been more appropriate for NRC/FEMA to review the many existing emergency plans and formulate a "model" emergency plan (as previously promised in the NRC October 10, 1979 letter to all Power Reactor Licensees from D. Eisenhut, acting Director Division of Operating Reactors). This would certainly have pointed out many flaws in the NUREG-0654 criteria while avoiding confusion (and numerous revisions) at the working level.

- C. NUREG-0654 has lists of criteria, some of which are obviously more important than others for proper implementation of an emergency plan. However, NUREG-0654 does not provide a priority list of elements, nor does it specify the degree to which all elements must be addressed in the plan. The development of a "model" plan by NRC/FEMA and/or a priority list of key elements for emergency plans would better aid NRC/FEMA inspectors in determining "Concurrence/Approval" of a plan.
- D. The statement on page 22 of NUREG-0654 that "FEMA and the NRC expect that the nuclear facility operator will have an interest in providing manpower and capital expenditures needed by state and local governments" is entirely inappropriate in a regulatory guidance document, particularly since neither NRC nor FEMA determine utility rate structures. The federal role should be to provide resources, planning guidance, and training; the state/local/utility role should be integrated in sharing costs incurred for planning in that the benefits of such power generation is also shared by all parties. Moreover, the logic of having the nuclear facility operator pay for plans and equipment that are also essential and useful for responding to a "variety of other manmade and natural emergency events" is totally unjustifiable.
- E. The basic concept of NUREG-0654 is that state, local, federal and facility plans (whether one or many) and responses should all be integrated to address each and every nuclear facility affecting them. This effort, for Connecticut, would result in a duplication of work effort, especially for state and local agencies for each of a number of fixed nuclear facilities within 10 to 20 miles of each other when, in fact, the general response would be the same. In fact, NUREG-0654 acknowledges this when it alludes to the upcoming guidance expected for transportation accidents, reprocessing facility accidents, etc.

With this philosophy, there would be a needless overtaxing of state/local/utility planning capabilities, in that their planning efforts would lead to many documents with procedures that are not flexible enough to respond to many types of emergency situations.

- F. Appendix 3 to NUREG-0654 provides an exhibit of physical systems used to notify the public within 10 miles and criteria for ensuring that 100 percent of the people within 5 miles and 90 percent of the people from 5 to 10 miles are notified within 15 minutes. It is NU's observation that FEMA/NRC has not performed feasibility and cost studies on public notification methods. Based upon input from vendors, it appears that sound systems (i.e., sirens) having the capability of producing sound above 10 db average ambient daytime noise levels could cost from \$1 to 2 million dollars per site and that systems capable of adequately warning all people within their homes could cost up to \$10 million per site. With this in mind, it

is NU's recommendation that prototype systems should be developed and tested by FEMA/NRC at representative locations before these vast sums of money are spent at all nuclear sites with the result that they might not meet the suggested criteria.

In regard to the necessity for 15-minute notification of offsite people, it is NU's observation that NRC/FEMA has not presented the necessary value-impact or justification for this criterion. Until this is done it would be imprudent for any local community or state to adopt the 15 minute notification criteria.

Specific Critique

- A. NU disagrees with the comment on page 24 that "A facility operator organization is therefore required to have a recovery organization similar to the one recommended by AIF." Though NU considers the AIF organizational approach useful, the actual emergency organization of the facility should be tailor-made for its particular needs and resources.
- B. On page 36, the subject of emergency classification schemes have been introduced. The facility is required to adopt that in Appendix 1 to NUREG-0654. The state and local communities are required to adopt a scheme consistent with that of the facility. This is quite difficult and unnecessary in that a state classification scheme has to deal with events such as transportation accidents, lost sources, DOD/DOE facility events and nuclear power reactors. We suggest that existing state classifications remain more comprehensive. Maybe FEMA should suggest one that is broader in scope. The one for the State of Connecticut is a reasonably comprehensive one.
- C. There is an inappropriate comment contained on page 39 that it is the operator's responsibility for ensuring that public notification systems are in place. Obviously, these systems are useful for other types of events (i.e., hurricanes, floods, etc.) and it is not proper to have the nuclear plant operator solely responsible for these systems. The responsibility more appropriately belongs with local and/or state officials.
- D. In Section E (page 37) there is the evaluation criterion that procedures should be developed for local/state organizations to notify responding personnel. Emergency response personnel (i.e., state police) already have specific procedures for emergency response to many types of similar events, which makes this criterion unnecessary.
- E. The evaluation criterion (page 43) to have the nuclear operator responsible for running annual seminars for the news media on state/local planning is another attempt to have the nuclear plant operator responsible for a local/state governmental function.

- F. The need to have a listing of all monitors (i.e., geophysical, process monitors, etc.) and emergency equipment as specified on page 45 and 46 is not demonstrated. This information should be placed in the emergency procedure equipment lists, not in the plan.
- G. The requirement to have nuclear plant operators responsible (page 66) for the training of state/local agencies involved in emergency response is inappropriate. This should be a federal/state responsibility in that this training may be used for emergency response personnel responding to events at other nuclear facilities. Also, federal/state programs have already been developed and are already being used to train emergency personnel.
- H. The evaluation criterion (page 55), for having protective action recommendations based on protective factors afforded by dwellings, etc. (as specified in footnoted federal documentation) is an overly complicated response. The nuclear plant operator, within short time frames, should (if required) base recommendations on conservative parameters (i.e., all people are outside or not outside).
- I. The requirement to have (page 28) all plans include agreements (with agencies in other plans) and reference to legal instruments is an over duplication of effort when they are already participants in and party to the state plans.
- J. The need to have the on shift staff supported by additional personnel within 30 minutes has not been sufficiently explained. Moreover, this criterion deviates from the criterion (60 minutes) specified in the October 10 and November 21 letter from NRC office of Nuclear Reactor Regulation. The number of personnel required to be on shift should be justified before this decrease in time is mandated.
- K. It is the opinion of NU that at least two conclusions of NUREG-0396 (see page 14 & 15) should be stated in NUREG-0654.
 - 1. There should not be a need to require local decontamination provisions for the general public, nor should there be special decontamination equipment for property and equipment. This conclusion should be stated in Section K, "Radiological Exposure Control," of NUREG-0654.
 - 2. The general public should not be required to participate in test exercises of emergency plans. This conclusion should also be stated in the Section N of NUREG-0654, "Exercises and Drills."
- L. In Appendix 1, NUREG-610, pages 1-13, Notes 4a and 4b, the words "significant releases" and in Note 4c, "large amounts of fission products" are introduced. These create concern as they are not defined. This leaves its interpretation open to individual judgment. Does it mean levels in excess of those on the same page item 1.a and the note to 1.a?

The following are NU's comments on Appendix 2 of NUREG-0654, "Meteorological Criteria for Emergency Preparedness at Operating Nuclear Power Plants". The following responses are made to positions stated on pages 2-1 thru 2-6.

Position 2a "All sites with operating nuclear power plants shall have a viable back-up system and/or procedures to obtain real-time local meteorological data"

The criterion to provide backup information in the same format as the primary system [2c(3)] and the requirement to effect changeover within 5 minutes [2c(3)] appear to effectively eliminate procedures for acquiring backup information and to imply that an automated independent system is required.

The criterion for a redundant power source [1c(4)] and [2c(6)] is not sufficiently explicit: what is required is a power source that does not introduce interruptions or even switching transients that affect the operation or memory of the computer used to gather the meteorological data. Some computers are more sensitive than others in this regard, but the most sensitive would require its own short-term emergency power pack and transient suppression equipment.

Position 3a "All licensees with operating nuclear power plants shall have a demonstrated system for making real-time, site specific, estimates and predictions of atmospheric effluent transport and diffusion during and immediately following an accidental airborne radioactivity release from the nuclear power plant."

The criterion for real-time models [3c(1)] introduces a hardware problem: the burden on the computer memory for data collection and remote interrogation as well as its own internal operating system does not leave much room for the considerable analytical burden of modeling, at least for the size and type of computer we see as suitable for field operations. To provide modeling capability at the field site computer (i.e., at the meteorological tower) we feel would require a core memory greater than 64K. At the present state of the art, this implies a disc system, and is counter to our (sound and proven) philosophy of no moving parts at field sites, which by their nature, are not well controlled computer environments. A much better alternative is to have the models operate on a central, larger computer that can access data from the field computer. This has been our practice in the past, and has been quite successful.

The description of Class B models [3c(1)] is somewhat vague, but seems to imply mesoscale three-dimensional (or quasi-three-dimensional) dispersion modeling such as might be done by the Lawrence Livermore Laboratory Code ADPIC. It is not reasonable to try to operate a model of this type (even a downscaled version) on a field computer, or to try to completely automate it so it can be accessed without human oversight. The essence of these two comments is that data collection and remote interrogation functions, which are reasonably simple and straight-forward, should be separated from modeling functions, which are complex and need to be more clearly explained by the NRC.

Position 4a "All systems producing meteorological data and effluent transport and diffusion estimates at sites with operating nuclear power plants shall have the capability of being remotely interrogated."

The criterion for a 300 BAUD ASCII terminal 4c(3)1, though common and reliable, is strangely primitive compared to the hardware and software sophistication implied in the rest of the document. If the data sent to this terminal is to be input to other models, there are more automated means.

The enormous cost to implement this meteorological requirement (up to \$700,000) could be greatly exceeded in that more recent NRC thinking on EAL's require less reliance on elaborate meteorological computer data systems.

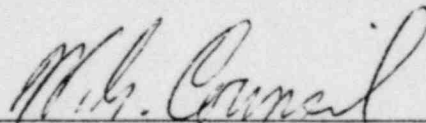
In conclusion, NU believes that some of the criteria listed in NUREG-0654 are excessive. It is NU's opinion that some of the more important requirements be tested on a prototype basis before being implemented on a grand-scale with its associated high costs - anywhere from \$1 to \$10 million per site dependent on power level and locations of people to be warned. In addition, NRC/FEMA should develop a model emergency plan for state and towns to give better guidance on the depth to which certain criteria must be addressed. Also, NU does not believe that these criteria should be implemented (see I.A. above) prior to the time that FEMA/NRC has received and assessed all industry/government comments. In addition, a value-impact evaluation of the NUREG-0654 criteria must be made prior to its implementation. The cost data provided in our comments are supplied for this reason.

Finally, NU does not believe that the nuclear operator should be held responsible and liable for the implementation of state and local planning criteria specified in NUREG-0654. Rather, NU believes that these responsibilities should be more appropriately in the domain of the state/local authorities and that new Federal regulations from FEMA and additional funding mechanisms from FEMA or NRC should be pointed in this direction.

NU hopes that these comments will be of value to you and please feel free to contact us if you desire clarification of any item.

Very truly yours,

CONNECTICUT YANKEE ATOMIC POWER COMPANY
NORTHEAST NUCLEAR ENERGY COMPANY
NORTHEAST UTILITIES SERVICE COMPANY



W. G. Council
Vice President

NORTHEAST UTILITIES



February 21, 1980

Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Sir:

- Regarding:
- (a) Federal Register Notice, Vol. 44, No. 245, December 19, 1979, 10CFR50, Emergency Planning
 - (b) Federal Register Notice, Vol. 45, No. 14, January 21, 1980, 10CFR50, Emergency Planning: Draft Negative Declaration for Proposed Rule Changes.

Northeast Utilities (NU) is pleased to be given the opportunity to submit comments on the above proposed rule change. NU operates Millstone Units 1 and 2 and the Haddam Neck nuclear facilities and has under construction Millstone Unit 3. NU has been extensively involved, since 1976, in assisting the State of Connecticut and the fifteen towns within the low population zones (LPZ) of the two nuclear sites in developing emergency plans, training emergency workers, and testing the plans. The State of Connecticut and these local communities have plans that have been concurred in by the NRC.

Northeast Utilities has also submitted extensive comments on the NRC documents NUREG-0396, "Planning Basis for Emergency Responses to Nuclear Power Reactor Accidents," NUREG-0553, "Beyond Defense in Depth," and NUREG-0610, "Emergency Action Level Guidelines," which are used as the basis and rationale for this proposed rule change. In the comments it was indicated that NU has significant problems with the technical basis for the emergency planning zones (EPZ's) in NUREG-0396 and the cost estimates and proposed funding mechanisms in NUREG-0553.

We recognize that comments on this rule change were due by February 19, 1980. We are sorry for the small delay and request that you consider our comments.

The following general comments are:

1. The adoption of the 10-mile regulation is based on a core melt and breach of containment.

DUPLICATE DOCUMENT

Entire document previously entered into system under:

AND **8004070126**

No. of pages: **5**

Dup of 800407