



May 9, 1980



DR. DONALD F. KNUTH
President

Mr. Robert G. Ryan, Director
Radiological Emergency Preparedness
Division
Federal Emergency Management Agency
1725 I St., N.W.
Washington, D.C. 20472

JUNE 1980 NUMBER
PROPOSED RULE PR-NUREG-0654 ①
(45 FR 9768)

Dear Mr. Ryan:

In our previous letter to you of March 14, 1980, we indicated that additional comments on FEMA-REP-1, NUREG-0654, would be sent in response to the Federal Register notice of February 13, 1980, 45 FR 9768. KMC, Inc., in cooperation with over 20 utilities participating in its Coordinating Group on Emergency Preparedness Implementation (see list in Enclosure 1), has maintained continued involvement with the NRC reviewers' use of this document. We are concerned with the inflexible attitude that reviewers adopt based upon guidance contained in the document. Even though the proposed rule itself is in draft form (for comment) and the guidance of FEMA-REP-1, NUREG-0654, was published for interim use and comment, both are accorded the status of inflexible rules. We are convinced that effective emergency planning must be a cooperative effort among the utility, State and local entities, FEMA and the NRC, and needs to consider and adopt plans which match the unique site conditions, rather than to be mandated through a cookbook check list approach.

The Coordinating Group on Emergency Preparedness Implementation provided comments on the advance notice of rulemaking and the proposed rule as well as comments on "guidance" documents. On February 14, 1980, we also requested that the arbitrary fifteen minute warning requirement, footnoted in the proposed rule, be set aside for special consideration. The basic thrust of our comments is and has always been that we endorse the development of additional emergency planning for operating nuclear reactors; however, forcing compliance with hastily conceived and arbitrary

Acknowledged by card. *[Handwritten signature]*

8005230041

Mr. Robert G. Ryan
May 9, 1980
Page 2

requirements which do not permit the consideration of site or facility characteristics, as well as the State/local authority capability, is inappropriate. We would again reiterate our belief that the NRC and FEMA should develop rules or regulations containing broad requirements, and the guidance for reviewers should be flexible and consider facility characteristics as well as site features in suggested methods of meeting the regulations.

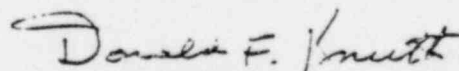
Our general arguments are that the utility industry as a whole, as well as a large cross-section of State and local officials responsible for emergency planning, are pleading for a more rational approach in the proposed regulation and its implementing documents, including FEMA-REP-1, NUREG-0654. We believe these groups are now joined by the Commission's Advisory Committee on Reactor Safeguards, as evidenced by its May 6, 1980 report to the Commission on the rule and NUREG-0654. The ACRS makes several critical points in its report that parallel those contained in our enclosed comments. The Committee notes that several requirements are without bases, that the criterial requirements lack the flexibility necessary for criteria to be effective, and strongly suggests that further review of the "final" rule, particularly by the ACRS, would be appropriate. Likewise, we strongly endorse this advice from the ACRS. We believe such further review by the Committee is essential, and urge FEMA and the NRC to avail themselves of this additional advice.

We have included comments in the attached enclosure where we believe specific requirements should be deleted and be replaced with a functional statement of the objective of the feature. By describing what needs to be accomplished, the experts in emergency planning at the State and local level will have the flexibility to meet the objectives in the most effective manner.

For purposes of completeness, and to aid FEMA in evaluating these comments, we are enclosing copies of our previous formal comments described above.

We would be pleased to meet with your representatives to discuss any or all of our comments.

Sincerely,



Donald F. Knuth

encl.

cc: See Page 3

Mr. Robert G. Ryan
May 9, 1980
Page 3

cc: Mr. Samuel J. Chilk
Secretary, U.S. NRC

Mr. Harold R. Denton
Director, Office of Nuclear
Reactor Regulation, U.S. NRC

Mr. George Jett
General Counsel, FEMA

Mr. John W. McConnell
Assistant Associate Director for
Plans and Preparedness, FEMA

Mr. Brian K. Grimes
Director, Emergency Preparedness
Task Group, U.S. NRC

COORDINATING GROUP ON
EMERGENCY PREPAREDNESS IMPLEMENTATION

American Electric Power Company
Arkansas Power & Light Company
Baltimore Gas & Electric Company
Cincinnati Gas & Electric Company
Commonwealth Edison Company
Consumers Power Company
Detroit Edison Company
Duquesne Light Company
Florida Power Corporation
Florida Power & Light Company
GPU Service Corporation
Jersey Central Power & Light Company
Maine Yankee Atomic Power Company
Mississippi Power & Light Company
Nebraska Public Power District
Northern States Power Company
Omaha Public Power District
Pacific Gas & Electric Company
Public Service Electric & Gas Company
Sacramento Municipal Utility District
Southern California Edison Company
Toledo Edison Company

COMMENTS ON FEMA-REP-1, NUREG-0654 -- "CRITERIA FOR PREPARATION AND EVALUATION OF RADIOLOGICAL EMERGENCY RESPONSE PLANS AND PREPAREDNESS IN SUPPORT OF NUCLEAR POWER PLANTS" -- SUBMITTED BY KMC, INC. AND 22 ELECTRIC UTILITIES OF THE COORDINATING GROUP ON EMERGENCY PREPAREDNESS IMPLEMENTATION

Principal Comment

The rigor with which the individual elements of the evaluation criteria of FEMA-REP-1, NUREG-0654 are being applied to licensee and State/local planning in the field is destroying effective emergency planning by not permitting the knowledge, experience, and expertise of the participants to be brought to bear and solve the problems of emergency preparedness. This prescriptive approach does not permit the application of either judgment or common sense in the development of workable plans. The result is that the plans may not be as workable as they otherwise could be.

The above comment, or its many variations, has been made repeatedly by the utility industry and several of the State and local officials responsible for emergency preparedness; it has been made since the beginning of the effort to upgrade emergency planning in July, 1979. The more it is made, the more entrenched and inflexible the many proliferating requirements have become. The attitudes that foster this approach to regulation are precisely the attitudes that the Kemeny Report and the Rogovin Report warn us of the need for correction in order to apply properly the lessons to be learned from TMI.

The utility industry and the State and local officials responsible for emergency preparedness have demonstrated, and continue to demonstrate that they have learned from TMI and want to put in place effective emergency planning programs. It is impossible for any basically human-oriented endeavor, such as emergency planning, to have a unique set of acceptable solutions. Since the Planning Objectives of FEMA-REP-1, NUREG-0654 are rather general in nature, it must follow that the conforming Evaluation Criteria can be met in some variety of ways. Some variation of the FEMA-REP-1, NUREG-0654 criteria can and should be permitted within the bounds of a demonstrated safety envelope. Introducing some flexibility into the implementation of FEMA-REP-1, NUREG-0654 may well be the last opportunity to apply reason to this aspect of nuclear reactor regulation. FEMA must do this for State and local plans. The NRC must do this for licensee plans.

Additional Technical/Policy Comments

Some elements of the overall program to upgrade emergency response capability, it has been conceded, were developed in their extreme manner primarily to be applicable (in the view of the NRC) as a function of population density surrounding some sites. Examples of this appear to include the out-for-comment-only meteorology and staffing requirements of FEMA-REP-1, NUREG-0654. Other examples of interim use requirements fit this category. Once into the criteria, however, these requirements are being applied to all sites in the interests of standardized treatment without regard to population density. Nothing should be more site-specific than actions taken in areas surrounding a site.

Planning for these actions should likewise be site-specific, or more precisely situation-specific. It goes beyond the province of reasonable regulation to apply these requirements in such a uniform and unilateral fashion. Furthermore, the administrative effort required to keep plans with such detailed criteria effective is unduly excessive. This burden adversely affects the functionality of the plans themselves.

A corollary criticism of FEMA-REP-1, NUREG-0654, which needs to be corrected, is the obvious benefits only to the regulators of such single-minded requirements. Clearly, for FEMA and the NRC, these standardized, inflexible requirements simplify licensing administration. They make regulation easier. One has only to follow instructions and approval of an acceptable emergency plan results. However, that should not be the purpose or the *modus operandi* of regulation. Taking all the judgment out of a review, if it really were possible, does nothing to enhance either nuclear safety or nuclear licensing and regulation. What it does do is drive the regulators and the regulated nuclear industry back to the thinking alleged to be prevalent prior to TMI. We believe the NRC should retreat from that present track, and that FEMA should not allow itself to embark along it. Reconsideration of the implementation of the listed guidance and criteria of FEMA-REP-1, NUREG-0654 to provide some reasonable flexibility in meeting emergency planning safety goals is essential.

The evolution of the emergency preparedness upgrade, although sometimes chaotic, has nonetheless progressed in deliberate stages. To critically evaluate comments on FEMA-REP-1, NUREG-0654 one has to consider them in light of previous comments relating to the upgrade activity. Unfortunately, NRC to date has not really permitted comment, by utility owners or State and local officials, on its rulemaking and emergency plan upgrade program to have any discernible affect on its activities. The nuclear industry has commented in detail on this, as have State and local authorities. We believe this thought underlies FEMA's comments on the NRC proposed rule also. As we commented earlier, it is our view that FEMA-REP-1, NUREG-0654 may be the last opportunity to get emergency planning on a workable track. To provide the background incident to this comment, for the convenience of FEMA and NRC evaluators, we are enclosing copies of the following documents developed by the Coordinating Group on Emergency Preparedness Implementation.

1. Enclosure 3 -- August 29, 1979 letter to the Secretary of the Commission providing comments on the July 17, 1979 Advance Notice of Proposed Rulemaking.
2. Enclosure 4 -- November 26, 1979 letter to the Secretary of the Commission providing a critique of NUREG-0610, "Draft Emergency Action Level Guidelines for Nuclear Power Plants," and a proposed complete redraft of that document.

3. Enclosure 5 -- Petition to the Commission, dated February 14, 1980, for a separate rulemaking proceeding on the issue of notification of all individuals within the plume exposure pathway EPZ within 15 minutes (a footnote in the proposed rule), and a request for a public hearing on the issue.
4. Enclosure 6 -- February 15, 1980 letter to the Secretary of the Commission providing comments on the proposed rulemaking on Emergency Planning.
5. Enclosure 7 -- March 14, 1980 letter to Robert G. Ryan, FEMA, with copies to the NRC, providing comments coupling the proposed rule, FEMA's comments on the proposed rule, and FEMA-REP-1, NUREG-0654.

Enclosure 4, comments on NUREG-0610, merits special additional comment since it has been incorporated into FEMA-REP-1, NUREG-0654 as Appendix 1. The Action Level Criteria developed by KMC and the Coordinating Group is not all that radically different from NUREG-0610. It takes the NUREG document and customizes it to the practical considerations facing a utility in incorporating action level criteria into an emergency plan. Action level criteria are an important and useful part of any emergency plan. It does not follow that such criteria have to be precisely as indicated in NUREG-0610. It is far more important for a utility's action level criteria to mesh with what is accepted and expected by the interfacing State and local authorities in their plans.

Prescriptive requirements that are not wholly satisfactory to the utilities and the State and local authorities will compromise the effectiveness of their composite plan. The NRC should permit variations such as those presented in the KMC draft. FEMA should be satisfied that acceptable action level criteria fit well into the response actions outlined in the State and local plans. In short, this is a plea that FEMA officials consult with the NRC, through actions on the refinement of FEMA-REP-1, NUREG-0654 to establish practical and workable action level criteria requirements that are acceptable to both the utility and the State and local authorities.

Another major emergency planning issue, evolving from the proposed rule through NUREG-0610 and FEMA-REP-1, NUREG-0654, is the 15-minute warning requirement for essentially 100% of the population within the 10 mile plume exposure EPZ. Enclosure 5 outlines some of the practical problems and the lack of necessity of such a stringently-specified requirement. A representative of FEMA, at the New York Workshop on January 15, 1980, indicated FEMA's experience that a lesser design requirement for notifying the populace in a given area will in fact result in all the people being notified. Clearly, the present requirement is far too extreme and has no technical basis in theory or in experience. State and local officials likewise have strong feelings on the necessity for such a requirement.

It seems that FEMA could introduce some reasoned judgment into this requirement. A system of early warning, not as quickly as 15 minutes however, should be established at reactor sites. It should, as FEMA and NRC suggest, consist of a mix of warning devices. In close, two to three miles, it may be appropriate to have heavy coverage. Out from there to the boundary of the plume exposure EPZ there is much more time available for warning, and with that additional time, no demonstrated need for hypothetical 100% coverage. The ACRS advice, in its May 6, 1980 letter, agrees with this view. Further, the ACRS notes the "need to consider the possible risks associated with notification of the public prior to the police and other officials being ready and available to direct and control the responses of people residing near a power plant." Consideration of this point by the ACRS would definitely extend the early warning time well beyond 15 minutes.

A State/local program's early warning system should be judged according to the extent needed early warning capability is in place. The standard for acceptability should vary with distance from the site. Above all, the public should not be warned about an impending radiological release, unless in fact there is an impending radiological release. Following NUREG-0610 in all its specifics would guarantee the needless generation of panic and would be far more harmful than even the lack of an requirement to see if more practical requirements can not be developed. It is a non-linear problem. Simplifying it with a

linear solution does not at all serve the public or the public's needs. Additional comment on this issue is contained in Enclosure 5. Furthermore, before the final implementation of an early warning requirement, FEMA should be satisfied with the technical basis for the requirement. To date, the NRC has not been able to provide a meaningful basis. FEMA should consider work by the Nuclear Safety Analysis Center on this subject. NSAC has attempted to analyze the apparent NRC basis, and to provide a more technically-substantiated basis.

Other Significant Issues

There are several other significant issues raised in FEMA-REP-1, NUREG-0654 that merit comment and serious reconsideration for some flexibility of position. These issues relate to:

1. Minimum staffing requirements
2. Location of EOF within one mile of plant
3. Space for news media at near-site EOF
4. TSC in close proximity to control room
5. Shielding and ventilation in Operations Support Center
6. Meteorological monitoring and data link

These issues embody the peril of the use of inflexible, highly prescriptive criteria in establishing a workable emergency preparedness regime that seek to standardize the material aspects of response capability in otherwise non-standard real world situations.

1. Minimum staffing requirements --

There are several problems with the staffing requirements outlined in Planning Objective B and summarized in Table B-1 (page 31). The least of these problems is that the staffing requirements are at variance with the staffing requirements developed simultaneously by the NRC in accordance with its implementation of the "Action Plans Developed as a Result of the TMI-2 Accident." This anomaly can be corrected easily, of course, in any number of ways. The real problems are that the staffing requirements of FEMA-REP-1, NUREG-0654 are not minimum at all, but were developed in a reaction to perceived problems relating to the population density around sites. Even though the requirements are alleged to be for comment only, they are evolving into generic requirements being applied across the board to all utilities. No distinction is made for plant-specific considerations. In addition to being arbitrary, these staffing requirements do not have the benefit of any written justification in the criteria. Hence, they could also be considered capricious.

The least thought-out aspect of the warning requirements is that relating to additional responses required on-site following the declaration of an emergency. First, there is no distinction made as to the class of emergency requiring these additional resources, presumably on the basis that the classic emergency situation will start as an Unusual Event and progress through the Alert and Site Emergency levels to the General Emergency action level. There is no reasonable basis for using this assumption

when considering manning requirements. To the contrary, when accidents progress in this fashion, sufficient time is available to assemble staff. The guidance, therefore, should be amended to make clear that no additional manning is required for the two lowest action levels. Secondly, requiring such assembly within 30 minutes of the declaration of an emergency is not warranted, and poses undue burden on the operating staff. Studies by the Nuclear Safety Analysis Center have shown that from the standpoint of risk, several hours are available before emergency response is required. Initially, in the development of these criteria, the NRC staff thought one hour would be sufficient. Requiring utility staff to live within 30 minutes of a site is clearly an undue burden when no useful purpose is served by that proximity. One hour may be sufficient time to activate emergency personnel, but in some instances it might take more time for them to report for duty. At the very least, the need for such staff additions must be reexamined to establish which particular personnel, if any, might be needed early on to supplement the normal shift complement. Certainly it must be acknowledged that all supplementary personnel are not needed within the minimum reporting time. In any event, the minimum reporting time must be extended to a more reasonable limit.

2. Emergency Operations Facility located within one mile of the site --

This singular issue illustrates some of the basic problems of the emergency planning upgrade program. Planning objective H (page 44 of FEMA-REP-1, NUREG-0654), relating to "Emergency Facilities and Equipment," is to assure that adequate emergency facilities and equipment to support the emergency response are provided. To that end, Evaluation Criteria 2 calls for the establishment of a "nearsite" Emergency Operations Facility from which evaluation and coordination of all licensee activities are to be carried out and from which the licensee shall provide information to State and local authorities. Nothing about this planning objective is distance-related, yet the criterion suggests that, in most cases, the EOF should be within one mile of the reactor. There is nothing critical about this distance, and no reason why it could not be 10 times one mile. For that matter, it should be equally acceptable for the EOF to be located on-site. However, in implementing this requirement for an EOF, the one mile is becoming a hard and fast rule. Several utilities have located, or are developing, such facilities at farther locations because superior facilities for the EOF exist at those distances. For example, one is to be located four miles from the site at a NIKE site, another ten miles at the local Sheriff's office, still another four miles away at a training facility, another ten miles away at a Forest Fire academy. The issue in all cases should be

communications capability, not proximity to the site. The requirements for communications capability, listed elsewhere in the criteria, are so exhaustive that differences in distance do not matter. Proximity to the site, on the other hand, causes the requirement in the criteria for the establishing of an Alternate EOF, even though the capability requirements for this alternate EOF have not yet been specified. There is no judgment undertaken to determine if these proposals can be acceptable. The simplified NRC approach is that they don't meet the pre-specified criteria, even though no basis for the criteria is given. This "do it our way or else" approach is not sound regulatory practice, in this or any other regulatory arena. Yet it is precisely the foundation for FEMA-REP-1, NUREG-0654. For this particular issue, the acceptance criteria should be: Provide an EOF with a certain minimum housing capability, a certain communications capability among the other centers and the plant, and arrange for backup accommodations in the event they should be needed. In other words, we are pleading with the developers of FEMA-REP-1, NUREG-0654 to examine the response characteristics of a particular emergency preparedness program on its merits, judge it on that basis, not on whether it meets an arbitrary set of criteria that may not reflect as good a program as would otherwise be possible.

3. Space for news media at near site EOF --

Early in the emergency planning upgrade activity a requirement for providing or predesignating a location for news media assemblage developed. Such things as setting aside a high school gym were suggested by the NRC. Now, in FEMA-REP-1, NUREG-0654 this reasonable idea, preserved in criterion G.3.a., has evolved to the point where, in criterion G.3.b, space must be provided at the EOF. It is explained by the NRC that, expecting some 300 representatives of the news media in the event of a serious accident, most would go to the predesignated gym, and 10 to 20 persons would be allowed to go to the EOF. This anomaly tends to crystalize the major criticism of FEMA-REP-1, NUREG-0654, namely that its criteria are either incredibly vague or incredibly specific, with nothing in between. In the case of this requirement, it may not be possible to provide sufficient space in the EOF for representatives of the news media. It certainly will not be possible for the utility, or the NRC for that matter, to dictate to the media the decision on which members can go to the EOF and which can not. All, invariably, will want to be at the EOF. There is no clear way to draw a line. On the other hand, it is extremely important to the management of an emergency situation to minimize distractions. Nothing in the criterion for press coverage should be allowed to interfere with EOF management of the response. The way to assure improvement of the quality of public information, and that is the real goal of the criterion, is to assure that

there is good communication between the EOF and the press briefing center. The present requirement, however, leads one to the conclusion that no matter what is done to try to meet the criterion, it will not be acceptable.

4. TSC in close proximity to control room --

Criterion H.1 requires the establishment of a Technical Support Center in accordance with NUREG-0578. Essentially, this means the TSC should be as close as possible to the control room. We agree the TSC should be on-site. Beyond that, the available (and required) communications link between the TSC and control room render proximity a non-consideration. This is a question of how close is close enough. If a utility elects to construct a special TSC facility on site, properly equipping it to perform its designated functions, it will be as good or better than one established by converting existing space that happens to be near the control room. Either option should be acceptable. Utilities should not be penalized for trying to meet this requirement in the best way possible for their site and their facility. In some cases, a utility may elect to erect a new building to house all of the diverse facilities required by the emergency planning upgrade. Arbitrary distance requirements that would preclude this should not be permitted.

5. Shielding and ventilation requirements in OSC --

Criteria H.9 requires an onsite Operations Support Center, properly characterized as an "assembly area" for backup technical support personnel. Obviously, this cadre is extremely mobile, yet the criterion calls for the OSC to have "adequate capacity, shielding, ventilation, and inventory of supplies, including for example, respiratory protection, protective clothing, portable lighting and communications equipment." One would deduce that inhabitants of the OSC would be expected to stay in that center for the duration. The requirement for the OSC to have this capability is extreme, and should be deleted.

6. Meteorological monitoring and data link --

Appendix 2 of FEMA-REP-1, NUREG-0654 outlines the meteorological criteria to be used for emergency preparedness. The NRC initially provided the understanding that these criteria are offered for comment only, as opposed to "interim use and comment." Even so, Criteria H.8 and I.5 require that utility operators provide meteorological instrumentation and procedures which satisfy the criteria in Appendix 2. Satisfying these incredibly detailed criteria would provide far more than could possibly be used in any realistic emergency response situation.

The criteria obviously were prepared by professional meteorologists to satisfy what they would like to see in the way of data acquisition and transmission. They were not prepared by professional emergency planners to satisfy their needs vis-a-vis data

capability for making emergency response decisions. In fact, it can be argued that such a wealth of meteorological data would work at cross purposes to obfuscate the clear and rapid decisions that would need to be made during an emergency. It is also clear that the drafters of these criteria had in mind applications of a high population density nature. Applying such acceptance criteria at all nuclear sites is neither necessary nor particularly helpful.

There is a fundamentally sound reason why these criteria should not be applied, either to this extent or at this time. It relates to the ongoing efforts of the NRC to set up a nuclear data link. On February 6, 1980 the NRC staff briefed the Commission on its program to set up a data link for all operating facilities. It was envisioned that this system would provide data on up to 100 parameters, including perhaps 40 radiological and meteorological variables. At some time in the near future the NRC will decide precisely which meteorological variables will be required in the data link. These requirements should not be at variance with the requirements of Appendix 2. The NRC and FEMA should wait until this technical review is complete before establishing generic requirements for such data. Requiring early implementation of Appendix 2 will result in the development of two redundant and competing systems, each of which would adversely affect the other. It is certainly proper to wait until the specific requirements have been set before judging the adequacy of utility capability in this area. In fact, it is possible that the NRC and FEMA have this in mind in light of the special treatment of this issue indicated on page 2 of FEMA-REP-1, NUREG-0654.

Other Detailed Comments on Evaluation Criteria

In reviewing FEMA-REP-1, NUPRG-0654, several specific criteria can be identified that deserve or require rewording or other clarification to improve the usefulness and applicability of this planning document. The specifics of a number of these situations, covering subjects other than those discussed previously, are given below.

1. Criterion C.2 (page 34) requires the utility to dispatch personnel to the principal offsite governmental emergency operations centers. However, representatives of all these centers will have gathered in, or will be in direct communications with, the utility's EOF. Management of the response is to be conducted from the EOF. It has the communications to accomplish this. Farming out utility personnel to these other centers, aside from being redundant and unnecessary, may well dilute or short circuit the effectiveness of EOF activities. This requirement should be deleted.

2. Criterion D.1 (page 36) requires word for word compliance with NUREG-0610. As argued previously, some flexibility is essential for effective emergency response capability.

3. Criterion D.2 (page 36) is redundant with regard to D.1 in whatever form D.1 eventually takes, and should be deleted. At the very least, D.2 should be clarified as being applicable to radiological release incidents postulated in the FSAR.

4. Criterion E.3 and E.4 (page 38) relate to transmission of emergency messages. First, it should be clear that the initial contact, which may be police authorities, should not be cluttered

with a pre-analysis of what might be taking place at the site as implied in E.3. Secondly, follow-up messages should not be prescribed as in E.4 since the appropriate authority organizations will already have been activated and will be working with the specific information they need to make necessary emergency response decisions.

5. Criterion E.6 (page 39), by its reference to Appendix 3, overly formalizes the 15 minute warning requirement. It is not appropriate, with this specificity, for this checklist until such time as the issue has been resolved by the NRC and FEMA. Therefore, the parenthetical expression should be deleted. Secondly, the "It should be the operator's responsibility ..." is not appropriate for such criterial check lists, and should be deleted.

6. Criterion E.7 (page 39) is not applicable to the utility operator. However, it should be applicable to local authorities, but the comment on thyroid blocking should be deleted until that issue has been clearly resolved. To date it has not.

7. Criterion H.5 (page 44) is somewhat overstated in requiring the operator to identify and establish onsite monitoring systems to initiate emergency measures. "Systems" is not quite the proper concept. The requirement would be more accurately stated in terms of the operator making provision to acquire data for initiating emergency response.

8. Criterion H.7 (page 45) is misleading owing to its vagueness and can be deleted since the requirement is embodied in Criterion H.6.

9. The NRC and FEMA should examine the radioiodine concentration detection level of 5×10^{-8} μ Ci/cc given in Criterion I.7 (page 48). This capability goes at least two orders of magnitude beyond useful emergency response measurements. Relating detection of radioiodine to PAG levels should result in a more reasonable value of 10^{-6} μ Ci/cc.

10. Criterion J.4 (page 51) overstates basic requirements. First of all, evacuation of non-essential personnel is not necessary for a Site Emergency, and need be effected only for General Emergencies involving significant radiation releases. Secondly, handling of personnel decontamination is already part of every licensed plant operation, and should be used in emergency situations. The separate capability suggested in this criterion unnecessarily complicates emergency practices.

11. The requirements of Criterion J.5 (page 51) relating to accountability of onsite individuals during an emergency needs considerable rethinking and some restudy. It is in fact impossible to maintain such accountability and at the same time maintain a reasonably functioning emergency organization. Since there is no demonstrated need for such accountability, this requirement should not be allowed to compromise emergency response capability.

12. The radiation protection requirements of Criterion J.6 (page 51) need to be made specific. They should be related only to those persons essential to plant operation or for the management of a Site or General Emergency.

13. Criterion J.8 (page 52) on evacuation times should be directed toward State and local authorities as it is correctly in Criterion J.10.l. Appendix 4, as well as Table J-1, however, should be offered as general guidance, not as expressed requirements. Neither the NRC or FEMA is in a position to tell the State and local authorities how to evacuate or how to plan their evacuations. Such guidance should be characterized as examples.

14. Criterion J.10.c (page 52) is the responsibility and within the authority of State and local officials. It should be deleted as a utility operator requirement.

15. Criterion J.10.h (page 54) directs that relocation centers be 15-20 miles from a site. There has been no basis for this requirement given during the upgrade activities, and we think it would be useful for FEMA to meet with State and local officials to determine, on a case-by-case basis, what the requirements for each site situation should be. We believe this is more site-specific than is evident from the drafting of the criterion.

16. Criterion N.2.e(2), page 63, calls for use of spiked samples in Health Physics drills. This is a potentially dangerous practice leading to unnecessary exposure of HP personnel. The criterion should be deleted. In judging the qualifications of a utility operator the NRC should be satisfied that HP personnel have the qualifications and training necessary to do their job. Criterion N.2.e(1) is sufficient for this responsibility from an emergency preparedness point of view.

Dup of 7910090399

Enclosure 3

August 29, 1979

DR. DONALD F. KNUTH
President

Mr. Samuel J. Chilk
Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Chilk:

On July 17, 1979, the NRC published in the Federal Register an Advance Notice of Proposed Rulemaking on "Adequacy and Acceptance of Emergency Planning Around Nuclear Facilities." The Commission seeks comments on a number of listed issues preparatory to further consideration of proposed rulemaking that would adopt additional regulations relating to increased emergency readiness, on the part of local and State authorities, and licensees, for public protection in the vicinity of nuclear power reactors.

KMC, Inc., in cooperation with the following 18 utilities, has reviewed the elements of the Advance Notice and the references thereto, and is pleased to provide detailed comments in support of the proposed rulemaking:

Arizona Public Service Company
Arkansas Power & Light Company
Cincinnati Gas & Electric Company
Consolidated Edison Company of New York, Inc.
Consumers Power Company
Detroit Edison Company
Duquesne Light Company
Florida Power Corporation
Florida Power & Light Company
Nebraska Public Power District
Northern States Power Company
Omaha Public Power District
Pacific Gas & Electric Company
Public Service Electric & Gas Company
Southern California Edison Company
Toledo Edison Company

These above mentioned utilities represent a broad spectrum having 22 nuclear facility sites in all parts of the country, with 39 individual units; 18 in operation, 17 under construction, and four presently undergoing CP review by the NRC.

Mr. Samuel J. Chilk
August 29, 1979
Page 2

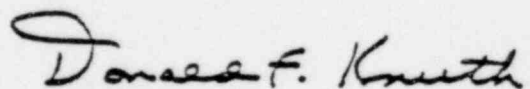
The main thrust of the enclosed detailed comments is that the utilities, State government, local government, and the Federal government, particularly the NRC, are all involved collectively in the necessary emergency planning effort for individual facility sites. We believe participation in emergency planning activities must involve all of the organizations working together. Two particular points should be emphasized. First, to be effective, emergency planning requirements must be simple and straightforward, not complex or exotic. Secondly, the traditional concepts of regulator and regulated do not serve the needs of emergency planning considering that Federal, State and local organizations, as well as licensees, are so intimately involved with the activity. All of these groups need to establish a special working relationship, with all organizations involved participating fully.

The Federal Register notice indicates that, based on the comments it receives from the public and the analyses of the problems presented by the NRC staff, the Commission will determine whether to proceed with a proposed rule for notice and comment and/or whether to make such rule immediately effective. The need to have effective emergency response capability, based upon acceptable emergency planning programs is clearly one of the most far-reaching lessons learned from the Three Mile Island experience. The scope and depth of an Appendix E rule change, and its implementation, deserve the most careful considerations. The concept of an Advance Notice of Proposed Rulemaking to provide extensive discussion of the issues, prior to the drafting of a specific proposed rule, is an excellent initial vehicle for attacking this particular matter. We believe it essential and strongly urge that the Commission adopt a program that would permit further public comment on a specific proposed rule change before making such revised rule effective.

In addition to developing the enclosed detailed comments, we have met with representatives of the Edison Electric Institute to discuss our and their comments on the Advance Notice. We believe there are no inconsistencies between the two sets of comments.

We and representatives from any of the utilities sponsoring the enclosed comments on the proposed rulemaking would be pleased to meet with the Commission or the staff to discuss this material or to answer any questions you may have.

Sincerely,


Donald F. Knuth

encl.

COMMENTS ON ADVANCE NOTICE OF PROPOSED RULEMAKING

ADEQUACY AND ACCEPTANCE OF EMERGENCY
PLANNING AROUND NUCLEAR FACILITIES

Introduction

The Nuclear Regulatory Commission, in its Advance Notice of Proposed Rulemaking, 44 FR 41483 (July 17, 1979), requested comments on certain specified issues relating to emergency response planning. The Advance Notice lists nine direct issues, five indirect issues, and further requests comments on other aspects of emergency planning, including the issues raised in the Critical Mass/PIRG petition for rulemaking, 44 FR 32486 (June 6, 1979).

KMC, Inc., in cooperation with the following 16 utilities, has developed detailed comments on each of the listed issues, two supplemental considerations arising from our review of Report No. 96-413 from the House Committee on Government Operations, and the Critical Mass/PIRG petition.

Arizona Public Service Company
Arkansas Power & Light Company
Cincinnati Gas & Electric Company
Consolidated Edison Company of New York, Inc.
Consumers Power Company
Detroit Edison Company
Duquesne Light Company
Florida Power Corporation
Florida Power & Light Company
Nebraska Public Power District
Northern States Power Company
Omaha Public Power District
Pacific Gas & Electric Company
Public Service Electric & Gas Company
Southern California Edison Company
Toledo Edison Company

Issue 1

What should be the basic objectives of emergency planning?

- a. To reduce public radiation exposure?
- b. To prevent public radiation exposure?
- c. To be able to evacuate the public?

To what extent should these objectives be quantified?

The basic objective of acceptable emergency planning is to help provide reasonable assurance that, in the event of an accident situation, there will be no undue risk to the health and safety of the public. This, of course, is the overall objective of nuclear safety assessment of a facility to be licensed by the NRC. Such a consideration can not be quantified simply, but is in fact quantified through the many elements of the facility design, construction, safety analysis and the NRC's licensing review process.

Effective emergency planning will identify workable onsite and offsite response measures or protective actions that could be taken in radiological emergencies should they be required. Implementation of the planning would serve to limit public radiation exposure, and would include the possibility of evacuation as well as other considerations. The purpose to be served by emergency response planning is to provide persons responsible for taking necessary actions in the event of a radiological emergency with the framework for making reasoned decisions regarding protection of the public. The above considerations are generally reflected in Revision 1 of Regulatory Guide 1.101.

Specific to emergency planning, there can be stated certain goal-oriented objectives that could be described as operational, technical and policy. The operational objective is to achieve integrated planning among all the participant organizations, namely the utility licensee, the State, the local government, and the Federal government. All appropriate emergency response functions within these jurisdictions must be coordinated effectively. Where more than one governing body at any level is directly involved, they should also be participants in the planning activities.

The technical objective is to develop an effective plan, based on simple, straightforward principles, so that the participant organizations can respond to emergency situations in a timely fashion through established and well-understood and tested procedures with a minimum of uncertainty.

The policy objective is to assure that all of the participant organizations' emergency planning and response groups develop close-knit working relationships among themselves. In the event emergency response activities are required, people who know each other and have worked together should be involved.

It is recognized that each emergency planning situation will involve different licensee and government jurisdictions, and that emergency planning activities should be improved. Therefore, goals should be established for each facility/site to meet the above objectives that could include the following:

1. Each participant organization provides the others with information relating to its role in emergency planning vis-a-vis radiological emergencies, and an indication of what it perceives the other participants' roles to be.
2. Meetings among all the participants are scheduled to work on the interfaces of the component plans so a composite plan can be developed.
3. The essential elements of the component plans are identified and analyzed for consistency.
4. The composite plan is evaluated by all groups and simplified to the extent practical. Limitations in organizational capabilities are identified and the plan is further modified, as necessary, to compensate for any such limitations.

5. The composite plan is tested, especially with regard to communications, but also with regard to activation of response centers. Levels of readiness are tested short of that required for an actual emergency. Mobility requirements are checked.
6. Each test is critiqued by the participant organizations. Changes are made based on the experience gained.
7. Periodic meetings (perhaps semi-annually) are scheduled among the participant organizations to review and update the composite planning and response capability.

Target dates should be established for completing the above goals such that, if possible, an improved emergency response capability for any particular nuclear plant site can be functioning within a two year period. Setting of such target dates, with implementation schedules, will transform the goals to achievable milestones.

Issue 2

What constitutes an effective emergency response plan for State and local agencies? For licensees? What are the essential elements that must be included in an effective plan? Do existing NRC requirements for licensees (10 CFR Part 50, Appendix E) and guidance for States (NUREG-75/111) lack any of these essential elements?

For any particular emergency response plan to be effective it must fit together properly with all other participant organizations' response plans, including that of the NRC. This thought,

and the consequent view that it is a composite plan, involving the NRC, the State government, the local government, and the licensee that is needed, is generally discussed in Issue 1 above, and emphasized throughout these comments.

The critical elements that must be included in an effective plan presently are outlined in NUREG-75/111 (as amended by Supplement No. 1) for State and local governments, and in Appendix E to 10 CFR Part 50 and Regulatory Guide 1.101 (Rev. 1) for utilities. In rereviewing these documents, we have identified no missing critical elements.

It is proper that the level of detail beyond that given in Appendix E be presented in guidance documents, rather than in Commission regulations. Rulemaking should provide overview requirements, with implementation left to Regulatory Guides or NUREG reports. Then, when improvements are developed through experience they easily can be incorporated into then-existing emergency planning activities in the most efficient and expeditious manner, without the need for rule change. No amount of rulemaking will make either good or bad emergency plans workable.

Issue 3

Should NRC concurrence in the associated State and local emergency response plans be a requirement for continued operation of any nuclear power plant with an existing operating license? If so, when should this general requirement become effective?

NRC agreement with State and local emergency response plans is an important aspect of effective emergency planning, especially considering that the NRC necessarily should be involved in individual emergency response planning activities. It is also important that the other participant organizations agree with, or at least overtly accept, each other's emergency response plans. In light of NRC's necessary direct involvement in composite planning, it is not necessary to establish a formal requirement, through rulemaking, for official concurrence on a fixed time schedule as a condition for continued operation. What is important is that all participant organizations are working to develop a composite planning program that all can accept, at the earliest possible time.

It is the determination of just when the earliest possible time is that can not be standardized effectively by rulemaking. For example, one should be satisfied with the situation wherein the State and local plans were not yet sufficiently complete for NRC concurrence, but all participant organizations were working diligently toward perfecting a workable, easily-testable composite plan. Emergency planning response, to be and remain effective, must be a dynamic thing, not just another regulatory requirement to be met.

Another important consideration that bears on this issue is the wide variation in present capability for developing State and local plans that presently exists around nuclear plants in this country. There are States and local governments with modest planning programs that are complete or nearly complete. There are also States and local governments with ambitious plans and recently-committed resources that are just getting started in developing plans suitable for NRC concurrence. The timing for completing this activity should not be a license condition, and could not be applied uniformly to all licensees.

Finally, a recognized lesson learned from the Three Mile Island experience is the general need for improved emergency response capability. Such effort is now underway by utility licensees, State governments, local governments, and the NRC. It would be far more beneficial to factor the experience gained into all levels of emergency planning in a deliberate manner, rather than try to do it on a time base calibrated as a requirement for continued plant operation.

Notwithstanding the above arguments in favor of not requiring concurrence prior to license issuance, it is clear that some standard should be established. A reasonable position might be that a fixed time, perhaps on the order of two years, should be established for improvement of plans and obtaining NRC agreement.

If, at the end of that time, agreement is not possible the NRC could take whatever action it deemed appropriate for a particular State/local/licensee situation. It is reasonable for the NRC to provide itself this flexibility as there can be expected to be quite different situations in every case. Thus, the case-by-case approach would be appropriate.

The two year period suggested above appears to coincide with the targeted implementation schedule for recommendations developed by the EDO Task Force on Emergency Planning, the activities presently underway by the Office of Nuclear Reactor Regulation to review emergency planning implementation, and the time period suggested by the House Committee on Government Operations in House Report No. 96-413. In any event, the time period selected should correlate with the final implementation schedule for such emergency planning improvements.

There are several auxiliary matters that bear on this subject. One approach to the question of the usefulness of Federal coordination of emergency planning activities might be to consider the establishment of regional councils involving NRC, State governments, local governments, and licensees, and coordinated by regional FEMA groups. It might be advantageous for the NRC and FEMA to explore this idea further with representatives of the other involved organizations.

Noting that the NRC is already working very closely with the States on each individual State program, it should be possible to provide motivation to the States to develop acceptable plans. Direct funding, as discussed under Issue No. 5, and providing training opportunities, discussed under Issue No. 12, are examples of possible elements of such motivation.

Finally, it is reasonable in setting requirements relating to State and local government emergency response programs to specify that utility applicants and licensees are required to cooperate with the State and local governments. As indicated in response to Issue No. 12, utilities should also offer to provide appropriate training opportunities to these organizations.

Issue 4

Should prior NRC concurrence in the associated State and local emergency response plans be a requirement for the issuance of any new operating license for a nuclear power plant? If so, when should this general requirement become effective?

The reasoning put forth under Issue 3 above applies also to Issue 4. Prior NRC concurrence in State and local response plans should not be a requirement for issuance of an operating license. The goals for effective emergency planning are the same for both situations, and the time required to develop satisfactory plans are the same. Furthermore, testing of the plans

will be far more meaningful, and will provide a much better basis for judging acceptability once the plants are completed and in operation. On balance, the needs of emergency planning are better served if concurrence in State and local plans is not a pre-licensing condition.

Issue 5

Should financial assistance be provided to State and local governments for radiological emergency response planning and preparedness? If so, to what extent and by what means? What should be the source of the funds?

Consideration of the question of financial assistance to State and local governments must be consistent with the objectives of developing acceptable, composite planning capability among the participants -- the utility licensee, the State, the local government, and the NRC. The solution to this complex problem can not be and should not be attempted to be solved through NRC rulemaking that relates to "Adequacy and Acceptance of Emergency Planning Around Nuclear Facilities." Federal financial assistance should be provided to State and local governments to help motivate and ensure effective planning.

The approach to the financial assistance question can be different for State and local programs. For the State, it might be sufficient for the Federal government to offer matching funds, up to a specified dollar limit. Obviously States with more than

one reactor site involved will need more complex planning, and this should be taken into account in determining fund limits. Additionally, annual maintenance funding should be provided to States with acceptable planning programs as an incentive for maintaining good programs.

Local planning and response capability is extremely important in composite planning. Capability, site-to-site, will vary considerably. The local governments directly involved nearest the sites, perhaps at the county level for standardized treatment of this issue, may also need to be subsidized.

Issue 6

Should radiological emergency response drills be a requirement? If so, under whose authority: Federal, State or local government? To what extent should Federal, State, and local governments, and licensees be required to participate?

Presently, licensees are required to conduct periodic emergency response drills. The points of consideration in Issue 6 are whether they should be joint drills, and whether they should be required.

A program for periodic joint drills, including participation by the NRC, particularly using the Office of Inspection and Enforcement's Incident Response Center, should be developed, and such drills and follow-up critiques should be conducted.

This is an important part of any composite emergency planning and response activity. It does not follow, however, that having such a program in place needs to be a requirement, at least for initial NRC concurrence in emergency response plans. Further, a Federal requirement for joint drills may be subject to legal challenge on behalf of the State and/or local governments. What is important is that all of the participant organizations, including the NRC, are working toward the establishment of an effective program for conducting drills or exercises. Merely establishing a requirement will not accomplish this, and could be counterproductive to the working relationships needed for effective joint planning activities of the individual organizations involved.

Effective joint drills can not be conducted unless they are planned by a coordinating group that would involve representatives of the licensee, the State government, the local government, and the NRC. All of these persons should be encouraged to plan such drills and to provide useful critiques subsequently.

Issues 8 and 14 also focus on the question of conducting drills. The comments provided on these issues outline additional considerations that are consistent with the views stated above.

Issue 7

How and to what extent should the public be informed, prior to any emergency, concerning emergency actions it might be called upon to take?

Public information, concerning emergency actions it might be called upon to take, should be disseminated by local officials; however, accidents relating to radiological emergencies should not be emphasized over other emergencies having similar consequences. The State or local government has a responsibility to advise its citizens about emergency preparedness, be it radiological or other industrial or transportation accidents, fires, floods, storms, earthquakes, etc. All can be viewed in the same context, whether the action involved is evacuation, sheltering, or other protective measures.

As an adjunct to the composite planning activity of the NRC, the State, the local government, and licensee, it does seem appropriate for the NRC and the licensee to provide the State and local government with information concerning radiological emergency response that would be useful in informing the public regarding possible actions that might be required in an emergency.

Issue 8

What actions should be taken in response to the recommendations of the joint NRC/EPA Task Force Report (NUREG-0396/EPA 520/1-78-016)?

The summary conclusions and recommendations of the Joint Task Force report can be characterized as follows:

- . A spectrum of radiological accidents (perhaps even including Class 9 events) should be considered in emergency planning.
- . Emergency Planning Zones, ranging out to about ten miles from the plant for the plume exposure pathway, and out to about 50 miles for the ingestion pathway should be established for which emergency response planning is warranted.
- . Time frames and radiological characteristics of releases should be established for the spectrum of accidents identified in item 1.

Consideration of what actions to take regarding the NRC/EPA recommendations must strongly be influenced by the State role in effective emergency planning, and the necessity of the four-group team of NRC, State, local official, and licensee to make the necessary emergency planning decisions for the individual sites and environs. Such considerations, as suggested also by the response to Issue No. 6, may not and in some cases can not be handled adequately by imposition of requirements by rule. As discussed below, the recommendations of NUREG-0396 can be accommodated in a far more effective manner.

In developing a composite emergency planning program involving the utility licensee, the State government, the local government, and the NRC, some representative radiological emergencies should be postulated for developing plans and for subsequent testing exercises. A minimum of three levels should be considered: (1) a low level release with no offsite exposures which would nonetheless test the communications network; (2) a moderate level release with no significant exposures anticipated which would test communications and ability to bring emergency response groups to a standby state of readiness; and (3) a higher level release that would also test the mobilization of the response groups (short of any actual evacuation, but including offsite monitoring). The low level test would be the most frequent, with the moderate and higher level tests scheduled at much longer intervals.

The important consideration, during the next two years, is to get a composite emergency response plan to an effective state of readiness. In many cases, a two year schedule to accomplish this will be a very tight time frame. Such activities should not be burdened by additional considerations of whether or not Class 9 accident situations can or should play a role in emergency planning. It is much more important to base emergency

planning activities on truly realistic accident situations, rather than on hypothetical situations that go far beyond present bases for the safety assessment itself. Such studies could, however, be considered by the composite group after a perfected plan is in place and operationally verified.

Consideration of Emergency Planning Zones, as defined in NUREG-0396, will be a useful tool in polishing and further perfecting existing composite response plans. The most important initial activity, however, is to perfect emergency response planning for the far more important Low Population Zone (the present standard), before expanding such planning to greater distances. Work on integrating EPZ's, including determining the extent to which planning is required for such zones should be undertaken by the various composite groups only after acceptable integrated response plans have been developed and tested. Each site situation will be quite different, and will involve highly specialized implementation considerations. Further consideration of EPZ planning, however, will serve to test the productivity and usefulness of the periodic meetings described in item 7 of the response to Issue 1.

A very crucial question relating to the use of EPZ's is the extent to which emergency planning activities are applied to the EPZ. Recognizing that the extent of planning necessary and

possible diminishes with distance from a plant site, it is reasonable to conclude that requirements beyond the Low Population Zone, out to the boundary of the 10 mile EPZ, should be less than those for the area of the LPZ. Merely extending the requirements out to a limit of 10 miles is an unreasonable simplification of the problem. Recognizing, as the NRC/EPA Task Force does, that "judgment should be used in adopting this distance [the EPZ boundary] based upon considerations of local conditions such as demography, topography, land characteristics, access routes, and local jurisdictional boundaries" it is logical to leave the size of the boundary and the extent of emergency planning required to the individual planning groups for each group to determine.^{1/} Furthermore, the extent of engineered safety features provided for each plant should be a factor in each individual determination.

Additional comments relating to the use of the presently required LPZ as a basis for emergency planning, rather than amending the present Appendix E to require the EPZ concept, were provided to the NRC's Office of Standards Development in a May 15, 1979 letter from KMC, Inc. This letter was in response to the then-proposed amendment to Appendix E, 43 FR 37473 (August 23, 1978). In that letter, KMC, and the Utility Group on Emergency Planning recommended an alternative to the proposed amendment as follows:

^{1/} Other local conditions such as meteorology and wind persistence also should be considered in setting the EPZ boundary.

"For nuclear power reactors the licensee is responsible for emergency planning provisions to reduce exposures from an accidental release of radioactivity up to and including those amounts postulated to occur in accordance with the recommendations of 10 CFR 100 for design basis accidents. This planning shall include areas encompassed by the low population zone (LPZ) as specified by 10 CFR 100 of the NRC regulations. The licensee shall be prepared to provide designated governmental emergency planning authorities with information regarding actual or potential radiological releases from the plant as may effect people or property in the event of an accident. If the emergency planning of the designated governmental authority considers emergency actions at specified radiation levels or encompasses an area larger than the LPZ the licensee's plan should provide predictive values and provision for notification of the designated governmental authority consistent with those objectives."

This recommendation is consistent with the discussion of this issue presented herein, and underscores the point that consideration of the use of Emergency Planning Zones is meaningful only on a case-by-case basis.

Time frames and radiological characteristics of releases are an integral part of the spectrum of accidents and should be established. More than one set of times and characteristics should be developed for each postulated radiological emergency situation.

The real usefulness of spectrum of accident, time frame, and radiological characteristics variations is that it affords a wide selection of postulated situations for response testing

purposes. This, in turn, will make the tests themselves more useful, and will provide better information to use in improving emergency response capability.

Issue 9

Under what circumstances and using what criteria should a licensee notify State, local, and Federal agencies of incidents, including emergencies? When, how, to what extent, and by whom should the public be notified of these incidents?

Licensee notification of incidents, to be reported to the NRC, is specified in 10 CFR 20.403. Appendix E to 10 CFR Part 50 requires licensee emergency plans to contain arrangements for notification of appropriate State and local agencies in case of emergency. Regulatory Guide 1.16 outlines the reporting of operating information for the reporting requirements section of individual licensee Technical Specifications.

Consistent with Regulatory Guide 1.101, licensees should notify State and local agencies of emergencies having radiological consequences offsite and non-radiological situations such as fires and explosions at the site. Beyond that, notification ought to be limited to those things upon which the licensee, the State, and the local government agree as a consequence of their composite development of their emergency plans.

There is not a single answer to determining when, how, to what extent, and by whom the public should be notified of

such incidents. In general, notification relating to matters that are confined to the site should be handled by the licensee, perhaps with confirmation by the State and/or local government. In the event of an offsite emergency, public notification in accordance with the requirements of the composite emergency planning agreements should probably be handled by the State and/or local government, with essentially simultaneous announcements by the other groups. This implies that some amount of evaluation and coordination is necessary prior to notification. It is important for these situations that all groups are heard from, as well as for one group to be officially responsible for the public notification.

Auxiliary Issues

The Advance Notice of Proposed Rulemaking indicates the Commission is interested in receiving comments on five auxiliary issues, the Critical Mass/PIRG petition, and other related issues. Comments on these matters follow.

Issue 10

How and to what extent should the concerns of State and local governments be incorporated into Federal radiological emergency response planning?

Consideration of State and local government concerns should be a part of the development of Federal radiological emergency response planning, especially in the future when more experience has been gained through increased emphasis on the need for composite

planning. Identification of such concerns can best be handled by the NRC, as a participant in the development of individual composite plans. Following evaluation and analysis by the NRC, those practical matters within the purview of the NRC could be incorporated into its planning activities.

Issue 11

How should Federal agencies interface with State and local governments and the licensee during emergencies?

These groups should interface with each other through the mechanism of the composite plan. All of the component plans, including the NRC's response capability have to blend together into a logical, workable, testable composite program. If the component plans meet these composite criteria, the interfaces will connect properly, and the coordination will be assured through continued meetings and test exercises suggested in response to Issue 1 and Issue 6. With these interfaces worked out in advance, every group should know what to expect of the other groups.

Specifically, the role of Federal agencies should be advisory in nature, with a back-up capability to provide additional assistance should it be requested in specific situations. What is further required, somewhat beyond the scope of this issue, is established coordination among the various Federal agencies. The individual planning groups should have up-to-date information on this coordination to assist them in their planning activities.

Issue 12

Should the licensees be required to provide radiological emergency response training for State and local government personnel? If so, to what extent? Should the Federal government provide such training? If so, to what extent?

Licensees should not be required to provide radiological emergency response training. However, they should offer to provide such training that would be related to the specific site or sites in the particular State and local jurisdictions. This training would be similar to that provided for general plant personnel. Training needs will vary from case to case, but can be identified and reassessed as part of the critiques following response drills.

The Federal government is in a position to provide some level of academic training, particularly in areas of health physics and other technical specialties. This type of training could be offered perhaps as a form of financial assistance discussed in Issue 5.

Issue 13

To what extent should reliance be placed on licensees for the assessment of the actual or potential consequences of an accident with regard to initiation of protective action? To what extent should this responsibility be borne by Federal, State or local governments?

Presently, licensee emergency plans are required (Appendix E) to include means for determining the magnitude of any release of radioactivity from the facility, as well as criteria

for determining the time when protective measures should be considered both onsite and offsite to protect public health and safety. Recognizing that, in the event of an offsite emergency, the timeliness of a response may be short, the initial reliance for consequence assessment should be placed on the licensee. The adequacy of the licensee's capability in this regard can be verified through the NRC's inspection program.

In accident situations of more than a few hours duration, the capability of the State and Federal Government can and should be brought into play. It is always useful to have independent verification of an assessment of accident consequences, both from measurements and by calculations to aid in making any necessary emergency response decisions.

An important consideration, within the bounds of this issue, in improving emergency response capability is the question of the extent and type of offsite measurements needed during an emergency. Before specific requirements are set down, it should be assured that the equipment necessary is readily available, and can be used easily in an accident situation. The eventual final report of the "Interagency Task Force on Offsite Instrumentation to Follow the Course of an Accident" will be useful in helping to make these determinations. Following the publication of the final report, it might be helpful for the NRC to

conduct a Workshop, with participation by instrument manufacturers, reactor vendors, A/E firms, and utility licensees to discuss how best to provide augmented monitoring capability.

Issue 14

Would public participation in radiological emergency response drills, including evacuation, serve a useful purpose? If so, what should be the extent of the public participation?

In looking at pros and cons of evacuation drills it is easy to identify the cons; i.e., physically dangerous, lack of public acceptance, possibility of developing the "cry wolf" syndrome, and excessive cost vs. uncertain benefit.

Beyond the imbalance of considerations listed above, is a special problem particularly significant in considering many, but not all, emergency response situations. In many cases, sheltering will be preferable to evacuation. Public participation in evacuation drills might tend to develop a negative reaction in that people might be more prone to evacuate in situations where sheltering is a better alternative.

The specific matter of evacuation exercises as part of any emergency planning drills was extensively considered in the responses to the previous PIRG petition (Docket PRM 50-14). The report by the Stanford Research Institute entitled "Importance of Preparatory Measures in Disaster Evacuations" (docketed

August 26, 1976) provides well-reasoned discussion why "public participation in practice drills would produce no benefit, may tend to degrade effectiveness, and should be deemphasized."

On balance, public participation would not be useful to the public. The response to Issue 7 speaks to the extent the public should be involved through public information programs.

Supplemental Considerations

The Commission has asked for comments on emergency planning issues other than those outlined in the Advance Notice of Proposed Rulemaking. Of the several conclusions and recommendations in the House Committee on Government Operations, Report No. 96-413, most issues fall within the considerations of the Advance Notice and have been addressed, as appropriate, in the text of these Utility Group comments. There are two issues, however, that deserve supplemental comment. These relate to emergency planning at the Construction Permit stage of review, and NRC review of emergency procedures as part of the Operating License review. A statement of these issues and the responses follow:

Committee Recommendation 3(d)

With regard to state and local planning for nuclear emergencies, the NRC should require, by rule, as a condition for the issuance of a construction permit for a nuclear powerplant, the existence of both a state emergency plan for the state in which the plant is sited and, for that site and each additional nuclear plant site in that state, a local plan that comply with the NRC standards contained in the rule incorporating upgraded Commission requirements for State and local plants, particularly with regard to the adequacy of planning by local governments and the demonstrated capability for evacuation.

The requirement for completed and acceptable State and local plans at the CP stage is unwarranted and impractical. Some assurance level of review is reasonable at the CP stage,

but none of the four parties involved -- the NRC, the State, the local government, or the applicant -- will be in a position to provide the response planning capability envisioned that early in the licensing process. It is during the period of construction, between the CP and the OL, that the State and local governments can work to develop acceptable plans with the licensee and the NRC with a specific "as-built" plant to use as a frame of reference for the necessary planning.

State and local planning, at best, is a difficult task. To burden these jurisdictions with this activity before the plant is completely designed, and at least partially built will do nothing to encourage effective emergency planning. Further, such a requirement must have a basis in law. It is not evident that the Atomic Energy Act provides that basis, and it might in fact provide a basis to the contrary.

The concept of "demonstrated capability for evacuation" is dangerously oversimplified. There is no such generic thing. It is possible to demonstrate such capability in specialized instances, but not in the context of written requirements by rule, and certainly not in such early planning stage as would exist necessarily prior to the granting of a construction permit.

Committee Recommendation 2(a)(IV)

With regard to the plans required of utility companies operating nuclear powerplants, the NRC should require the submission for approval during the licensing process of emergency procedures.

Emergency procedures represent the implementation details of an already-approved utility emergency plan. The judgment of adequacy of implementation is made presently by onsite review conducted by the Office of Inspection and Enforcement, as are all other plant implementation procedures. To bring this more directly into the licensing process would limit the flexibility to improve such procedures as changing circumstances might dictate. There is no corresponding benefit to be gained to balance the loss of this capability.

A more appropriate alternative to this perceived problem would be to increase the I&E inspection effort in this area. To a further point, such review is not a design or paper review, it is at least to some extent a hardware review. This also suggests that onsite assessment by I&E inspectors is the proper vehicle for accomplishing this function.

Critical Mass/PIRG Petition

The issues outlined in the Commission's Advance Notice of Proposed Rulemaking, 44 FR 41483 (July 17, 1979), very effectively cover the considerations that should be involved in any future emergency planning rulemaking. It would seem to be quite appropriate for the Commission now to consider the CM/PIRG petition, 44 FR 32486 (June 6, 1979), as comments from the petitioning groups in response to the Advance Notice of Proposed Rulemaking. To that extent, there is no need for the Commission to process further the CM/PIRG petition as a vehicle for separate rulemaking.

The CM/PIRG petition lists six specific provisions. In response to the Commission's request, the following summary comments are provided.

1. Coordinated Offsite Emergency Response Plan -- The issue, focusing only on evacuation and a vague 50 mile planning zone, is much too narrow for effective consideration. Issues 1, 2, and 8, and the comments on those issues come more clearly to the points at hand.

The matter of incurred costs and/or financial assistance is treated in a shallow manner. The question, more sharply focused in Issue 5 of the Advance Notice,

can not be disposed of by simply stating that the licensee will be responsible for all costs. As indicated in the comments on Issue 5, resolution of this issue is not appropriate for this rulemaking activity.

2. Tests of the Plan -- As noted in response to Issue 14, evacuation drills should not be a part, and do not need to be a part, of emergency plan testing. The testing scheme outlined in response to Issue 6 provides a more balanced consideration of the problem.

The proposal for drills at the construction permit stage is without merit. At that time, the licensee facilities for such testing are not available, and can not be until the facility has been constructed. These facilities will be an integral part of the Federal/State/local/licensee network for emergency response capability. Meaningful testing at the CP stage is not possible, and no requirement for such testing has been identified.

Specification of the areas over which a response plan should be tested will be different for each facility, and should be subject to consideration of the NRC/State/local/licensee planning group on a case-by-case basis. Useful guidance in that regard is provided in NUREG-0396.

(See response to Issues 8 of the Advance Notice.)

3. Offsite Radiological Monitoring -- As indicated in response to Issue 13, a detailed consideration of any upgraded requirements for offsite monitoring should take into account the findings and recommendations of the Interagency Task Force on Offsite Instrumentation to Follow the Course of an Accident. Arbitrary criteria, as set down in this provision of the CM/PIRG petition may not be meaningful.
4. Public Notice and Hearings -- Information to the public is covered in response to Issue 7 of the Advance Notice. The responsibility for this activity is shared among the State government, the local government, and the licensee. It would not be appropriate for the licensees to presume to do this unilaterally. Therefore, the elaborate information program envisaged by the CM/PIRG petition would be inappropriate, and as a practical matter, not too productive.

The matter of a separate public hearing on emergency response planning is an unnecessary step. Emergency planning can be and is an issue for consideration in NRC public hearings at the CP and OL stages of review

of a license application, and can be considered, as appropriate, at those times. If, on the other hand, the CM/PIRG petition is suggesting periodic public meetings, involving representatives of the NRC, the State, the local government, and the licensee to discuss emergency planning at a particular site, that would be appropriate.

5. Consideration of Emergency Protection in Licensing and Siting -- Although emergency response planning capability is somewhat site-related, it does not follow that consideration of this matter should be a part of the siting criteria. Site suitability, and for that matter, site safety can be determined by the NRC without the necessity to review and improve a completed emergency plan. Further, as noted in the above comments to Provision 2 of the CM/PIRG petition, such detailed consideration of emergency planning is neither necessary nor appropriate at the construction permit stage of review.
6. Emergency Response Plans for Existing Reactors and Interim NRC Safety Action -- All operating plants have emergency plans that have been approved by the NRC. The issue, as noted in the Advance Notice, really relates to composite planning involving especially the

State and local governments. Responses to most of the issues specified in the Advance Notice speak to this point. The licensing question raised by the CM/PIRG petition, if it has any merit at all, does not appear to really focus on something that can be remedied by enhanced emergency response capability.

In summary, the general matters raised by the CM/PIRG petition are being considered effectively by the Commission's Advance Notice of Proposed Rulemaking. There is no need for additional consideration of the CM/PIRG petition, except as comments in response to the Advance Notice.



Enclosure 4

November 26, 1979

DR. DONALD F. KNUTH
President

Dup of F 7912210053

Mr. Samuel J. Chilk
Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Chilk:

In response to Mr. Denton's September 19, 1979 letter requesting comments on NUREG-0610, "Draft Emergency Action Level Guidelines for Nuclear Power Plants," KMC, Inc., in conjunction with 21 utilities participating in our Coordinating Group on Emergency Preparedness Implementation, is pleased to offer the enclosed comments. A list of the participating utilities is also enclosed.

The comments we have developed are structured into 1) a critique of NUREG-0610, and 2) a revised draft of the Action Level Guidelines which we believe are suitable for incorporation into a utility's emergency plan or supporting procedures. Although minor changes to this revised draft could be made to conform to some recent suggestions by the NRC staff, we believe the enclosed version represents sufficiently reasoned consideration to be useful to the Commission in its deliberations on this subject.

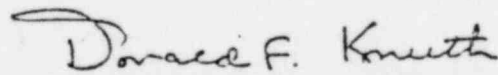
There are considerations of the Action Level Guidelines that go beyond detailed comments of the individual elements of NUREG-0610. These considerations are reflected implicitly in the enclosed comments, but deserve special emphasis. Although NUREG-0610 is excellent initial guidance, it would not be appropriate to assume that it could or should be incorporated in any individual emergency plan en toto. The actual Action Level Criteria in a specific plan must be linked to the facility/site situation associated with it, and must be compatible with the State/local plans and acceptable to the State/local authorities. Although general structuring of such guidelines is useful, one should expect individual guidelines to be somewhat different in each case. Emergency planning effectiveness is far too important to be flawed by mandated requirements that don't fit the circumstances at issue.

One of the most significant problems with the effectiveness of NUREG-0610 is that the programmed responses for the "Notification of Unusual Event" and "Alert" levels are too severe for the initiating conditions expected for those classes. Nothing useful is served in emergency response by overreacting to low level emergencies. We believe the enclosed comments describe a more practical and meaningful response for these two action levels.

The general question of immediate public notification is perhaps more appropriate for discussions on the staff's Acceptance Criteria for Emergency Planning. Our October 11, 1979 letter to Mr. Denton requested that the Acceptance Criteria be published for public comment, especially comment by affected State and local authorities. However, there is one aspect of this question that very directly relates to NUREG-0610. The Action Level Guidelines suggest that immediate public notification be activated for site emergencies. While this is appropriate for emergencies falling into the general emergency class, it is not at all appropriate for the lower level of significance of site emergency events. The events of this lower level class are not worthy of alarming all of the people within a 10 mile radius of the plant when, by definition, there are no specifically predicted exposures as a consequence of the site emergency. We request that the Commission give special attention to this proposed staff requirement as we believe it will undermine emergency planning effectiveness rather than to potentially improve it.

In closing, we appreciate the opportunity to comment on the guidelines of NUREG-0610, and hope to have the opportunity to participate in any future Commission activities designed to logically tie together all of the presently diverse activities underway relating to the matter of emergency preparedness.

Sincerely,



Donald F. Knuth

encl.

COORDINATING GROUP ON EMERGENCY
PREPAREDNESS IMPLEMENTATION

American Electric Power Company
Arizona Public Service Company
Arkansas Power & Light Company
Baltimore Gas & Electric Company
Cincinnati Gas & Electric Company
Consolidated Edison Company of New York, Inc.
Consumers Power Company
Detroit Edison Company
Duquesne Light Company
Florida Power Corporation
Florida Power & Light Company
Maine Yankee Atomic Power Company
Nebraska Public Power District
Northern States Power Company
Omaha Public Power District
Pacific Gas & Electric Company
Public Service Electric & Gas Company
Sacramento Municipal Utility District
Southern California Edison Company
Toledo Edison Company

CRITIQUE OF PROPOSED INTERIM
EMERGENCY ACTION LEVEL CRITERIA
(NUREG-0610)

INTRODUCTION

As with most critiques, this discussion of the proposed action level criteria outlined in NUREG-0610 goes to some length to point out the problems and impracticalities of implementation of the subject document. It does not fairly discuss all of the things that truly represent an improvement from the less-specific elements of Reg. Guide 1.101 that speak to this topic. However, in the enclosure to this critique the action level criteria have been redrafted in an attempt to overcome the perceived shortcomings of the interim draft. In this redraft, the positive aspects of the interim criteria have been retained, emphasized, and incorporated.

In critically evaluating the interim criteria, it becomes clear that it is not always possible to establish specific boundaries of emergency action levels, and at the same time incorporate very diverse initiating events within those boundaries. A compromise has had to be drawn between keeping the response actions simple, and also making them clearly appropriate to the various initiating conditions. Considerable detailed clarification and judgment has had to be injected into the examples of potential emergency situations perceived to make them fit the discrete action levels established.

The significance of action level criteria guidance (i.e., NUREG-0610) lies in its intended use. Each facility emergency plan must contain action level criteria to be used by the operating staff in initiating appropriate emergency response to incident/accident situations. The criteria should be as standard and straightforward as possible, but each facility's criteria must be tailored to the specific characteristics of that facility, its utility organization, and the organization and capabilities of the associated State and local authorities. General guidance can be developed, as is shown in the enclosure, but the actual criteria to be used will need to be individual for each case.

NEED FOR GENERAL GUIDANCE

The purposes and bases for the individual action levels need to be considerably expanded from that tersely provided in NUREG-0610 to facilitate use of the criteria by operating staffs.

In addition, since the example initiating conditions that go with each action level are so dissimilar in nature, some clarification regarding the individual examples is also required. The problem is that not all of the examples in a given class have anywhere near the same degree of significance. In the enclosure to this critique the revised action level criteria have incorporated the above concerns.

GENERAL COMMENTS

The broadest criticism of the interim action level criteria is that for the two lower levels of response, Notification of Unusual Event and Alert, the responses suggested far outweigh the significance of the events considered to fall in those classes. Many of the example initiating events themselves are sufficiently trivial in terms of emergency response planning to not warrant exercising the licensee/State/local preparedness capability. To the contrary, a good case can be made that requiring preparedness response for such events of little or no safety significance will degrade the response capability by overexercising it.

On the other hand, the response actions and the example initiating conditions for the two higher levels of response, Site Emergency and General Emergency, are pretty well correlated. As a result, in the proposed revision to the action level criteria in the enclosure, few changes other than clarifications have been suggested.

CHARACTERISTICS OF INDIVIDUAL ACTION LEVELS

1. Notification of Unusual Event -- These conditions, as illustrated by the examples for this class, will likely occur much more frequently than once or twice per unit-year. Many are simply not worthy of emergency response action, and the requirements for such action does not contribute to offsite emergency preparedness. This level of action, however, is appropriate for the overall criteria because it does put the operating staff in an "emergency response" frame of mind in dealing with such situations.

2. Alert -- This next higher level of action involves situations that can be expected to be terminated quickly. They are significant from the standpoint of emergency response that notification of offsite authorities, as an advisory, would be appropriate. There is little value in activating the Emergency Operations Center, and only marginal value in activating the other centers except perhaps for a few of the example initiating conditions. In general, full activation of the centers should not be required unless there is a clear danger that the initiating event may degrade into a Site Emergency.
3. Site Emergency -- For situations of this degree of significance it is appropriate to take the next step in emergency response and activate the centers. However, there are some examples that deserve to be listed as site emergencies, but do not in turn deserve to require center activation. For this level of response, it is appropriate that the public notification system is on standby, and can be activated if the situation further degrades. Even so, where public notification is appropriate, it should be made clear that notification of all members of the public within the EPZ is not necessary. Just as the emergency action levels (and examples) call, in some instances, for consideration of a two mile precautionary evacuation (or sheltering), so should the precautionary notification, if required, be activated for that distance.

At the threshold of the site emergency, the importance of use of plant instrumentation to guide emergency response comes into play in the action level criteria. However, there are so many variables involved in going from plant instrument readings of a non-yet accident to significant exposures to the public that mandatory public notification or evacuation based on instrument readings alone is inappropriate. Such readings may usefully serve as conservative indicators for determining when to mobilize various emergency organizations, but decisions on when to alert the public should be left to the judgment of emergency officials.

4. General Emergency -- In general, it is hard to quarrel with the required responses for the highest level of response. As can be seen from examination of the detailed comments and specific proposed changes for this class of emergency, little change is suggested. However, when viewed from the standpoint of local authority response, there may be some potential problem

with the broad spectrum of accident conditions in the general emergency classification for any situation where a general emergency is declared initially. The structure of the action level criteria generally postulates an inconsequential incident progressing deliberately through several discrete stages to an accident situation with measurable offsite consequences. If the scenario unfolds in that manner, the response can be pre-programmed. If it does not, rapid action at the local level will be required that does not follow the outlines of the action level criteria. This problem is discussed in more detail in the following section.

LOCAL AUTHORITY CONSIDERATIONS

In order for a uniform classification system for emergency response to be of benefit it must give the offsite group to which the initial contact is made some idea of the potential severity of the accident. It must be recognized that the first person contacted is often times not a person with much technical background. In many cases, this contact will be the local Sheriff's office, the one County office that is manned 24 hours a day, seven days a week. The initial transmittal of information must indicate the potential severity of the accident, and more importantly, whether or not there are any immediate actions to take prior to the time the County emergency organization can be convened.

This suggests two extreme considerations that should be reflected in acceptable action level criteria. First, for minor occurrences, no immediate notification should be required. It is important that the Sheriff's office not be burdened with non-emergency notifications in the guise of emergency response activity. When they are needed for emergency response, they will need to know the situation is important. Secondly, there may be situations in a general emergency when immediate evacuation (out to two miles as suggested in NUREG-0610) or sheltering is indicated. There must be nothing in the emergency plan (specifically in the action level criteria) that would compromise this capability. For this reason, the general emergency classification may need to be considered categories of response that more accurately reflect the probable size of the affected area for near-term evacuation. (It may be appropriate to handle this in the detailed implementing procedures, rather than in the emergency plan itself.)

Action level criteria specific to individual plants may also need to consider the notification of more than one local authority. Notwithstanding, the critical local organization, responsible immediately offsite, needs to be the first notified.

STATE AUTHORITY CONSIDERATIONS

In an ideal situation, the State emergency response classifications would be identical in word and meaning with those approved by the NRC for use in a utility's emergency plan. As a practical matter, such a high degree of uniformity is more than can be expected, especially in situations where more than one State is involved. It should be sufficient to assume that the classifications are sufficiently the same to permit the desired response to the initiating action.

Notification of the State would follow the local government notification. It should be structured to advise the State of the existing situation at the plant, as well as what recommendations have been given to the local authority, and what actions are being undertaken by the local authority. Where more than one State is involved, the emergency plan will need to be clear as to which State is the first to be notified.

SPECIFIC PROPOSED CHANGES TO ACTION LEVELS AND EXAMPLE INITIATING CONDITIONS.

The following items describe specific changes suggested to the individual action level responses and the example initiating conditions outlined in NUREG-0610. In addition, the bases for these suggested changes is provided.

Notification of Unusual Event

Purpose -- Clarified to emphasize NUE as a state of readiness from emergency planning standpoint and to establish systematic handling of information for decision-making. Test of offsite communication link deleted; this is a benefit to be obtained, but is not a purpose for establishing action level criteria. (This was deleted for all levels.)

Expected Frequency -- For the spectrum of example initiating conditions, once or twice per year per unit is too low for planning purposes. Frequency specified as "several times per year per unit."

Licensee Actions ---- Major change relates to deleting prompt State/local notification for these low level, relatively insignificant events. In general, it is important not to activate the offsite response system for matters that are not worthy of such action. Principally, this is owing to the fact that the nature of "Unusual Events" is such that they would be expected to be closed out quickly, rather than to escalate to a more severe class. If, on the other hand, such notification is specifically desired by State or local officials it can be incorporated into action level criteria for specific plants. For followup, a verbal notification to offsite authorities, and a subsequent press release is sufficient because the information is advisory in nature.

Example Initiating Conditions: Notification of Unusual Event

1. "ECCS initiated" clarified to involve valid initiation signal.
2. Instantaneous effluent limits exceeded properly reflects emergency action situation.
3. High coolant activity sample tied to Tech Specs; i.e., to the level requiring plant shutdown.
4. Temperature/pressure values tied to Tech Spec limits.
5. Leak rate limits specified at level requiring plant shutdown.
6. Failure of safety or relief valves clarified to those in the reactor coolant system.
7. Loss of all offsite power is consistent with emergency action level situation.

10. Fire -- 10 minutes measured after firefighting efforts have begun. Offsite contact is required, but is limited to routine call to local fire department.
11. Loss of alarm or monitoring capability is appropriate, but examples given on assessment capability is not at all safety-related, and is not appropriate. Plant computer and meteorological instrumentation specifically excluded as examples.
12. Security threat has been deleted from all classes of the action level criteria. Security matters are and should be covered adequately by the Security Contingency Plans for each facility. Putting security matters into the action level criteria is harmful in that it may dilute the effectiveness of security preparedness. It is also otherwise unnecessary.
13. For natural phenomena, "beyond usual levels" must be strongly emphasized to avoid relatively routine weather advisories creeping into emergency planning.
 - a. An unusual earthquake detected on station seismic instrumentation is appropriate as an unusual event. (Emergency planners should appreciate that in areas of common earthquake activity, for example California, the unusual event threshold may be quite high.)
 - c. A tornado, to be significant, should be classed as crossing the site boundary rather than just "near site."
 - c. Hurricanes, where appropriate, are significant only from the standpoint of having probable impact on station operation.
14. Two changes have been made regarding "Other Hazards." First, train derailment onsite has been clarified to apply only to those sites with active rail lines crossing the site. Secondly, turbine failure has been deleted owing to its ambiguity and lack of significance. However, "turbine failure causing casing penetration" has been retained at the Alert level class, which is really the threshold for significance of such events.

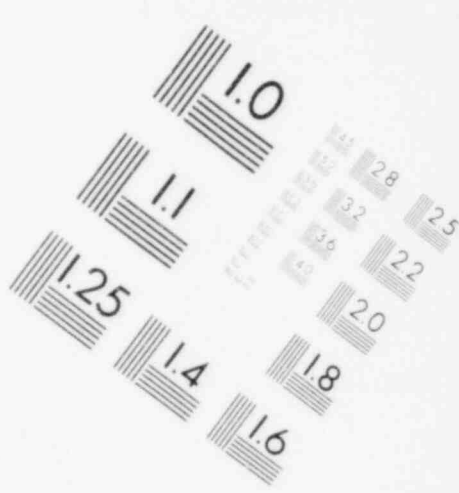
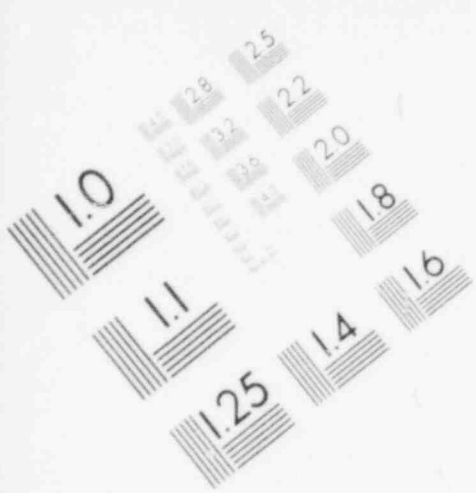
15. "Other plant conditions exist that warrant increased awareness..." has been retained, but directed to the plant operating staff, which is appropriate for this action level. Such an instruction is appropriate to cover occurrences not previously outlined by example. However, the thought (in NUREG-0610) that such things as cooldown rate exceeding Tech Specs, or pipe cracking were deleted as being inappropriate examples of other conditions worthy of emergency planning considerations. Their threshold of significance is too low for them to be an emergency preparedness consideration.
16. Transportation of contaminated injured individuals has been clarified with "seriously injured," and with a notation that only local authority notification is required. Further, an instance of this sort would not be an appropriate matter for a press release.

Alert

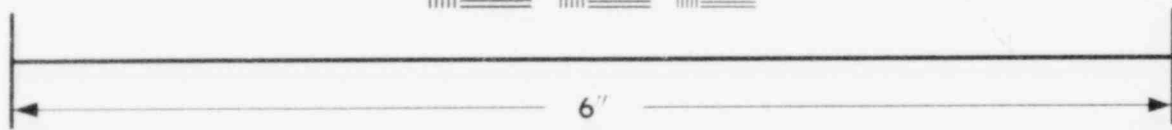
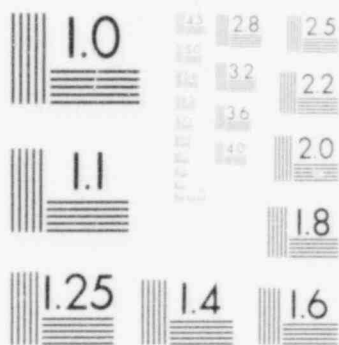
Licensee Actions -- Since the Alert class of incidents begin to take on significance from an emergency preparedness standpoint, it is appropriate to retain prompt notification of offsite authorities. However, most Alert situations can be expected to be over quickly, and consistent with the definition of Alert events, it is sufficient to bring the emergency centers and monitoring teams to a state of readiness (standby status), preparatory to actual activation should that later be required. The Licensee Actions have been reworded to reflect this requirement. However, a requirement is also added (see item 7) for those situations involving significant offsite releases (as contemplated by some Alert class examples) to activate the centers and monitoring teams and to notify the offsite authorities to do the same. This approach has been selected to accommodate the wide range of possible incident situations that could fall within the Alert class.

Other proposed changes are to provide hourly updates (rather than the too-frequent 15 minutes) and for verbal summary and press release of close out within 24 hours. Shortening this requirement to eight hours does not provide sufficient time for responsible reporting, and does allow time for adequate management attention for events of this level of significance.

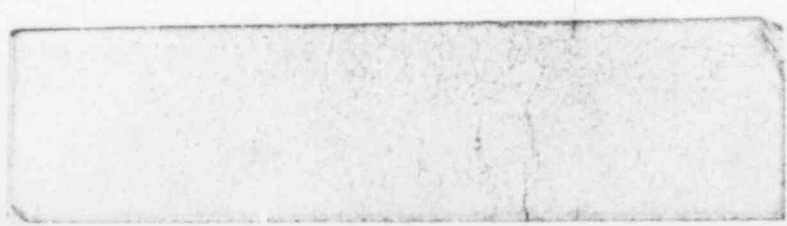
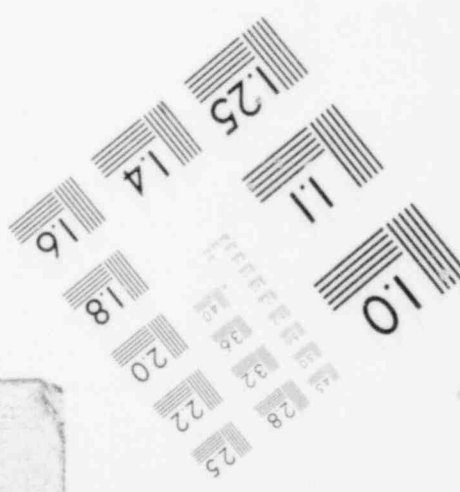
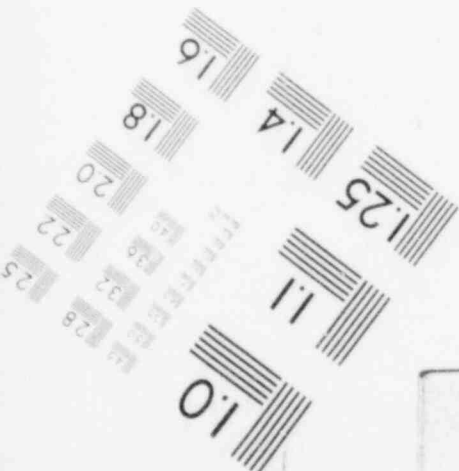
State/local Authority Actions -- Charges to the actions made to coincide with the charges to Licensee Actions discussed above.



**IMAGE EVALUATION
TEST TARGET (MT-3)**



MICROCOPY RESOLUTION TEST CHART



Example Initiating Conditions: Alert

1. Item "b" clarified to exclude iodine spike, which was covered in Unusual Event class.
3. Generalized to multiple steam generator tube failure. The gpm leak rate is significant, not a specific number of tubes.
4. Clarified to indicate two different events.
5. Primary coolant leak rate specified with reactor at operating temperature and pressure making this event an operational consideration.
6. Characterizes high radiation levels as "unexpected."
7. Power loss time limit specified; i.e., loss for more than 15 minutes.
10. Wording clarified to relate to ability to achieve cold shutdown.
13. Time period added to make fire event more significant than similar event at Unusual Event level.
15. Effluent limit changed from 10 times Tech Spec instantaneous to 1000 times the limit. Ten times or 100 times the limit would not get to the 1 mr at the site boundary PAG valve except over a long time period. With the consideration of 1 mr in two hours, a multiplier of 1000 would be more consistent.
16. Security example deleted (covered by Contingency Plan).
17. Natural phenomena events related to time when plant is in operation.
18. Item "b": Missile impacts deleted on basis of sufficient vagueness to be unquantifiable. Significant effects from such an occurrence would result in emergency response activity without this specific example. Item "d" clarified that toxic or flammable gases cause potential habitability problems.
19. General caveat deleted as not being applicable to Alert level examples in accordance with prescribed Licensee Actions for the Alert Level class.

Site Emergency

Licensee Actions -- Clarify dispatch of monitoring teams requirement to be for instances where radiation releases appear imminent. (Not all Site Emergency situations involve potential releases directly.)

Although the 8 hour written summary after closeout requirement was retained, as a practical matter, both State and local authorities will have been sufficiently involved with Site Emergencies that a mutual period for formal followup can easily be agreed upon among the principals involved.

State/local Authority Actions -- At the inception of a site emergency, the local authorities initially need to assure that the system for public notification is on standby status and ready for activation when the subsequent decision is made to notify the public.

Offsite monitoring, consistent with the similar Licensee Action, is related to those instances where radiation releases appear imminent.

The system to place animals on stored feed is not activated initially for site emergencies. It is placed on standby. There is a time delay for such a requirement, and it can be initiated when a specific decision for such action is made.

An additional, precautionary action for recommending sheltering or evacuation is added to the Site Emergency action level for those situations where significant releases are predicted to occur and poor dispersion conditions exist or are predicted.

Example Initiating Conditions: Site Emergency

3. Number of steam generator tube failures is left unspecified. The significant parameter is amount of leakage on the order of several hundred gpm.
8. Word clarification that the event is "loss of capability to achieve plant hot shutdown."

10. Clarification that the fire is "beyond the design level" to reflect the amount of fire protection required in plants through NRC's fire protection upgrading. Essentially, this means that for a Site Emergency fire, there is an inability to shut down the plant or extinguish the fire.
13. Security item deleted; covered in Contingency Plans.
14. Site emergency earthquake clarified to reflect that level of safety concern; i.e., core or safety system damage probable. For floods, etc., the "failure of protection" of vital equipment at lower levels would have been covered at Alert level and would not have been closed out until situation had stabilized or been escalated. Wind example clarified to indicate "sustained" situation to avoid gusty conditions as requirement for declaring a site emergency.
15. Item "c" focuses on those vital areas essential for safe shut-down where evacuation of the area constitutes a safety problem. Other vital areas would be adequately covered by the Alert class.
16. General caveat deleted as effectively being covered by the radiation and exposure limits already in the Site Emergency action level.

General Emergency

Purpose -- Minor clarification in item 4: "Provide current information for the public and consultation with offsite authorities."

State/local Authority Actions -- Add to item 3 on recommending sheltering, "or evacuation as appropriate."

Example Initiating Conditions: General Emergency

3. Delete security initiator; covered by Contingency Plan.

DEVELOPING OF REVISED CRITERIA

As a result of incorporating the above comments, the proposed revised Action Level Criteria, for guidance in developing Action Level Criteria for use in individual licensee emergency plans, would be as indicated in the following "Enclosure."

EMERGENCY ACTION LEVELS FOR NUCLEAR POWER FACILITIES

Current NRC emergency planning acceptance criteria^{1/} require the establishment of Emergency Action Levels with implementing criteria for declaring and managing specific classes of emergency. Four classes of Emergency Action Levels are established which replace the classes in Regulatory Guide 1.101, each with associated examples of initiating conditions. The classes are:

Notification of Unusual Event

Alert

Site Emergency

General Emergency

The purpose of this standardized classification is to provide a broad framework within which specific emergency actions and notifications can be taken in response to abnormal plant situations. It is not possible to predetermine all such situations, and therefore the examples incorporated into any emergency plan can do no more than provide illustrative guidance. It is likewise not possible to meaningfully simplify all such examples into the four action levels and establish identical response patterns for each example in a given class. Considerable judgment

^{1/} Emergency Planning Review Guideline Number One -- Revision One -- Emergency Planning Acceptance Criteria for Licensed Nuclear Power Plants (September 7, 1979).

and clarification will be needed for the individual examples to assure that their inclusion into the action level criteria does not render the basic emergency plan unworkable. Such clarification is provided for the examples used herein.

In general, the rationale connecting the four action level classes is to provide a mechanism for timely notification of particular events which could lead to significant consequences given subsequent operator error or equipment failure or which might be indicative of more serious conditions not at the time fully appreciated. The gradation of the action level classes provides more elaborate response preparations for more serious indicators. Notwithstanding the goal to develop consistent response actions within each class, some judgment must be exercised in taking general response actions for those events that do not clearly fit into a particular class, but nonetheless obviously deserve to be in that class as opposed to any of the other action level classes. A general discussion on each of the action level classes is given below.

Notification of Unusual Event

Unusual Events, as used for emergency planning purposes, generally characterize off-normal plant conditions that may not in themselves be particularly significant from an emergency preparedness standpoint, but could reasonably have the potential

to increase in significance if proper action is not taken or if circumstances beyond the control of the operating staff render the situation more serious from a safety standpoint. Taken as a class, the frequency of the initiating conditions for such unusual events may be several times a year. It is important that the implementing details of the response program for Unusual Events do not adversely affect the corresponding programs for the other, more significant action level classes.

The basic response to the Unusual Event occurrence is for the shift supervisor to notify appropriate plant personnel of the particulars of the event and an assessment of the safety significance of the event. This should normally be accomplished within 15 minutes of the occurrence. If there are no indications that the event is escalating, the appropriate plant personnel can report the incident to company management, who in turn will make arrangements for notifying the NRC through the LER program, issuing a press release, and providing advance copies to the appropriate local and State officials. The notification should be accomplished within a 24-hour period following the event.

If, on the other hand, the assessment does not lead to the conclusion that the event has been terminated safely, or it is not unambiguous that the event is being terminated safely, the requisite action will be to escalate the action level to a more severe class.

Alert

At the Alert action level small releases of radioactivity may occur (greater than technical specification limits for normal operation, but not life-endangering). It is the lowest level where emergency offsite response may be anticipated. Even so, from the standpoint of Federal, State, or local authorities the emergency response is one of establishing an organization to monitor the event and to make preparations for countermeasures should the accident degrade to a more severe condition. For some of these conditions activation of the Emergency Operations Center might be appropriate, and some confirmatory radiation monitoring offsite could be involved. For most of the Alert events, however, the plant would be quickly brought to a safe condition and releases would be trivial. Any such events would not require these extra measures, and further would not require emergency response notification beyond that provided for Unusual Event conditions.

From the standpoint of emergency preparedness response, the Alert action level will probably be the most difficult to deal with in terms of the judgment needed to make the appropriate implementing decisions. In general, one does not expect untoward safety consequences for Unusual Event conditions. One does, however, anticipate that emergency response capability will be needed for Site and General Emergencies. Alert conditions, being in

between these extremes, will be hardest to preclassify with set response routines, and in many cases will be subject to judgment based on the specific details of the event in question.

Site Emergency

The Site Emergency action level reflects conditions where there is a clear potential for significant releases, such releases are likely, or they are occurring, but in all cases where a core meltdown situation is not indicated based on current information. For all of these situations the offsite emergency planning authority should be notified as soon as a site emergency has been declared. Furthermore, the onsite Technical Support Center, the onsite Operational Support Center, and the near-site Emergency Operations Center should be activated. Care should be taken in alerting the offsite authorities to distinguish whether the "significant releases" are merely potential, likely, or actually occurring. Response of offsite authorities will be guided initially by this determination.^{2/}

General Emergency

The General Emergency action level reflects accident situations involving actual or imminent substantial core degradation

^{2/} For example, such initiating conditions as earthquake greater than SSE, high flood level, fire affecting safety systems, etc. are not normally appropriate initiators for requiring the dispatch of monitoring teams.

or melting with the potential for loss of containment. Immediate notification of offsite authorities and activation of the response center (if not already activated) is required. Immediate followup action requires an assessment of whether an evacuation or sheltering is indicated, and if an evacuation is indicated, whether it can be completed prior to significant release and transport of radioactive material to the affected areas. The recommendation for no offsite action involving the public, sheltering out to a fixed distance, or evacuation out to a fixed distance should be communicated to the offsite authorities at the soonest possible time following the declaration of a General Emergency.

Action Level Criteria

The following tables outline the licensee and offsite authority actions for each of the four emergency action levels. Some background information on release potential and expected frequencies for the various classes is provided in this material. Note that there is a wide band of uncertainty associated with the frequency estimates. Associated example initiating conditions are provided with each table.

Clarifications are provided in the lists of example initiating conditions that would require a modification of the prescribed response. For example, most of the listed initiating conditions for the Alert level class are events that can be expected to be terminated quickly, and therefore do not require immediate notification of offsite authorities. Only those events which have the clear potential for escalating to a site emergency warrant other than a prompt advisory to offsite authorities.

The example initiating conditions listed after the immediate actions for each class are intended as general guidelines on the types of conditions that should be selected to establish specific in-plant instrumentation readings which could be relied on to confirm or modify, at an early point in time, the action level response initiated by the plant operating staff. However, whether the event was an alert, a site emergency or a general emergency, there are many variables involved in going from plant instrument readings of a pre-accident situation to significant exposures to the public. Such readings may usefully serve as conservative criteria for determining when to mobilize various emergency organizations, but final decisions on when to alert the public are still left to the judgment of emergency officials.

In utilizing the action level criteria as the basis for initiating emergency response activity there may be instances when the plant operating staff can not determine quickly which of two action levels is appropriate for a particular occurrence. In those cases, the occurrence should be treated as belonging to the higher of the action levels and the appropriate response for that level should be initiated.

<u>Class</u>	<u>Licensee Actions</u>	<u>Local Offsite Authority Action</u>
Notification of Unusual Event	1. Augment on-shift resources if required	1. Provide fire assistance if requested.
<u>Class Description</u> Unusual Events are in process or have occurred which indicate a potential degradation of the level of safety of the plant.	2. Assess and respond 3. Close out with verbal summary to offsite authorities within 24 hours and issue press release	

or

Purpose
 Purpose of Unusual Event action level is to (1) have operating staff come to a state of readiness from the standpoint of emergency response in the event the handling of the initiating condition needs to be escalated to a more severe action level class, and (2) provide for systematic handling of Unusual Events information and its related decision-making.

- 4. Escalate to a more severe class

Release Potential
 No releases of radioactive material requiring offsite response or monitoring are expected unless further degradation of safety systems occurs.

Expected Frequency
 Several times per year per unit.

EXAMPLE INITIATING CONDITIONS: NOTIFICATION OF UNUSUAL EVENT

1. ECCS actuation involving a valid initiation signal (automatic or manual initiation to ameliorate condition influenced by ECCS Parameter).
2. Radiological effluent technical specification instantaneous limits exceeded.
3. Fuel damage indication. Examples:
 - a. High offgas at BWR air ejector monitor (greater than 500,000 uci/sec; corresponding to 16 isotopes decayed to 30 minutes; or an increase of 100,000 uci/sec within a 30 minute time period).
 - b. High coolant activity sample requiring plant shutdown.
 - c. Failed fuel monitor (PWR) indicates increase greater than 0.1% equivalent fuel failures within 30 minutes.
4. Abnormal coolant temperature and/or pressure or abnormal fuel temperatures outside of technical specifications limits.
5. Exceeding either primary/secondary leak rate technical specification or primary system leak rate technical specification requiring shutdown.
6. Failure of a safety or relief valve to close (reactor coolant system).
7. Loss of all offsite power or loss of onsite AC power capability. (Needs no press release if followed by normal recovery or shutdown required by technical specifications.)
8. Loss of containment integrity requiring shutdown by technical specifications.
9. Loss of engineered safety feature or fire protection system function requiring shutdown by technical specifications (e.g., because of malfunction, personnel error, or procedural inadequacy).
10. Fire within the plant lasting more than 10 minutes after fire-fighting efforts have begun (only requires routine call to local fire department).

11. Indications or alarms on process or effluent parameters not functional in control room to an extent requiring plant shut-down or other significant loss of assessment or communication capability (not including loss of plant computer or meteorological instrumentation).
12. Natural phenomenon being experienced or projected beyond usual levels (when plant is in operation).
 - a. Earthquakes (detected on station seismic instrumentation).
 - b. 50 year flood or low water, tsunami, hurricane surge, seiche (as appropriate).
 - c. Tornado crosses site boundary.
 - d. Hurricane (if appropriate) with probable impact on station operation.
13. Other hazards being experienced or projected.
 - a. Aircraft crash onsite or unusual aircraft activity over facility.
 - b. Train derailment onsite (for those sites with active rail lines crossing site).
 - c. Near or onsite explosion.
 - d. Near or onsite toxic or flammable gas release.
14. Other plant conditions exist that warrant increased awareness on the part of the plant operating staff from an emergency preparedness point of view.
15. Transportation of contaminated seriously injured individual from site to offsite hospital (requires only notification of local authority).
16. Rapid depressurization of PWR secondary side.

<u>Class</u>	<u>Licensee Actions</u>	<u>State and/or local Offsite Authority Actions</u>
<p><u>Alert</u></p> <p><u>Class Description</u></p> <p>Events are in process or have occurred which involve an actual or potential substantial degradation of the level of safety of the plant.</p>	<ol style="list-style-type: none"> 1. Promptly inform State and/or local offsite authorities of alert status and reason for alert as soon as discovered. 2. Augment resources by bringing on-site technical support center, on-site operational support center and near-site emergency operations center (EOC) to standby status. 3. Assess and respond 4. Bring on-site monitoring teams and associated communications to standby status. 5. Provide periodic plant status updates to off-site authorities (at least every hour until status of event changes significantly). 6. Provide periodic meteorological assessments to offsite authorities and, if any significant off-site releases are occurring, dose estimates for actual releases. 	<ol style="list-style-type: none"> 1. Provide fire assistance if requested. 2. Augment resources by bringing near-site EOC and any other primary response center personnel to standby status. 3. Alert to standby status other key emergency personnel including monitoring teams and associated communications. 4. Prepare to provide confirmatory offsite radiation monitoring and ingestion pathway dose projection if actual releases substantially exceed technical specification limits. 5. Maintain alert status until verbal closeout or de-escalation. <p style="text-align: center;"><u>or</u></p> <ol style="list-style-type: none"> 6. Escalate to a more
<p><u>Purpose</u></p> <p>Purpose of offsite alerts is to (1) assure that emergency personnel are readily available to respond if situation becomes more serious or to perform confirmatory radiation monitoring if required, and (2) provide offsite authorities current status information.</p>		
<p><u>Release Potential</u></p> <p>Limited releases of up to 10 curies of I-131 equivalent or up to 10⁴ curies of Xe-133 equivalent.</p>		
<p><u>Expected Frequency</u></p> <p>Once in 10 to 100</p>		

EXAMPLE INITIATING CONDITIONS: ALERT

1. Severe loss of fuel cladding
 - a. High offgas at BWR air ejector monitor (greater than 5 ci/sec; corresponding to 16 isotopes decayed 30 minutes).
 - b. Very high coolant activity sample (e.g., 300 uci/cc equivalent of I-131, but not an iodine spike).
 - c. Failed fuel monitor (PWR) indicates increase greater than 1% fuel failures within 30 minutes or 5% total fuel failures.
2. Rapid gross failure of one steam generator tube with loss of offsite power.
3. Rapid failure of steam generator tubes (e.g., several hundred gpm primary to secondary leak rate).
4. Steam line break with a) significant (e.g., greater than 10 gpm) primary to secondary leak rate or b) MSIV malfunction.
5. Primary coolant leak rate greater than 50 gpm with reactor at operating temperature and pressure.
6. Unexpected high radiation levels or high airborne contamination which indicate a severe degradation in the control of radioactive materials (e.g., increase of factor of 1000 in direct radiation readings).
7. Loss of offsite power and loss of all onsite AC power for more than 15 minutes.
8. Loss of all onsite DC power.
9. Coolant pump seizure leading to fuel failure.
10. Loss of capability to achieve plant cold shutdown.
11. Failure of the reactor protection system to initiate and complete a scram which brings the reactor subcritical.
12. Fuel handling accident with release of radioactivity to containment or fuel handling building.

13. Fire of greater than 10 minute duration potentially affecting safety systems' performance.
14. All alarms (annunciators) lost.
15. Radiological effluents greater than 1000 times technical specification instantaneous limits (an instantaneous rate which, if continued over 2 hours, would result in about 1 mr at the site boundary under average meteorological conditions).
16. Severe natural phenomena being experienced or projected (when plant is in operation)
 - a. Earthquake greater than OBE levels.
 - b. Flood, low water, tsunami, hurricane surge, seiche near design levels.
 - c. Any tornado striking facility.
 - d. Hurricane winds near design basis level.
17. Other hazards being experienced or projected
 - a. Aircraft crash on facility.
 - b. Known explosion damage to facility affecting plant operation.
 - c. Entry into facility environs of toxic or flammable gases causing potential habitability problems.
 - d. Turbine failure causing casing penetration.
18. Evacuation of control room anticipated or required with control of shutdown systems established from local stations.

State and/or local
Offsite Authority
Actions

Class

Licensee Actions

Emergency

Class Description

Events are in process or have occurred which involve actual or likely major failures of plant functions needed for protection of the public.

Purpose

Purpose of the site emergency warning is to (1) assure that response centers are manned, (2) assure that monitoring teams are dispatched, (3) assure that personnel required for evacuation of near-site areas are at duty stations if situation becomes more serious, and (4) provide current information for and consultation with offsite authorities.

Release Potential

Releases of up to 1000 ci of I-131 equivalent or up to 1000

1. Promptly inform State and/or local offsite authorities of site emergency status and reason for emergency as soon as discovered.
2. Augment resources by activating on-site technical support center, on-site operational support center and near-site emergency operations center (EOC)
3. Assess and respond.
4. Dispatch on-site and off-site monitoring teams and associated communications for instances where radiation releases appear imminent.
5. Provide a dedicated individual for plant status updates to offsite authorities and periodic press briefings (perhaps joint with offsite authorities).
6. Make senior technical and management staff onsite available for consultation with NRC and State on a periodic basis.
7. Provide meteorological and dose estimates to offsite

1. Provide any assistance requested.
2. Augment resources by activating near-site EOC and any other primary response centers.
3. Assure that system for public notification of emergency status is on standby and initiate preparations for subsequent public periodic updates.
4. Dispatch key emergency personnel including monitoring teams and associated communications for instance where radiation releases appear imminent.
5. Alert to standby status other emergency personnel (e.g., those needed for evacuation) and dispatch personnel to near-site duty stations.
6. Provide offsite monitoring results to licensee and others and jointly assess them.
7. Continuously assess information from licensee and offsite monitoring

EXAMPLE INITIATING CONDITIONS: SITE EMERGENCY

1. Known loss of coolant accident greater than makeup pump capacity.
2. Degraded core with possible loss of coolable geometry (indicators should include instrumentation to detect inadequate core cooling, coolant activity and/or containment radioactivity levels).
3. Rapid failure of steam generator tubes (several hundred gpm leakage) with loss of offsite power.
4. BWR steam line break outside containment without isolation.
5. PWR steam line break with greater than 50 gpm primary to secondary leakage and indication of fuel damage.
6. Loss of offsite power and loss of onsite AC power for more than 15 minutes.
7. Loss of all vital onsite DC power for more than 15 minutes.
8. Loss of capability to achieve plant hot shutdown.
9. Major damage to spent fuel in containment or fuel handling building (e.g., large object damages fuel or water loss below fuel level).
10. Fire beyond the design level affecting safety systems. (Inability to shut down the plant or extinguish the fire.)
11. All alarms (annunciators) lost for more than 15 minutes and plant is not in cold shutdown or plant transient initiated while all alarms lost.
12. a. Effluent monitors detect levels corresponding to greater than 50 mr/hr for $\frac{1}{2}$ hour or greater than 500 mr/hr W.B. for two minutes (or five times these levels to the thyroid) at the site boundary for adverse meteorology.
b. These dose rates are projected based on other plant parameters (e.g., radiation level in containment with leak rate appropriate for existing containment pressure) or are measured in the environs.

13. Severe natural phenomena being experienced or projected with plant not in cold shutdown
 - a. Earthquake greater than SSE levels and core or safety system damage probable.
 - b. Flood, low water, tsunami, hurricane surge, seiche greater than design levels.
 - c. Sustained winds in excess of design levels.
14. Other hazards being experienced or projected with plant not in cold shutdown.
 - a. Aircraft crash affecting vital structures by impact or fire.
 - b. Severe damage to safe shutdown equipment from missiles or explosion.
 - c. Entry of toxic or flammable gases into vital areas essential for safe shutdown where evacuation of the area constitutes a safety problem.
15. Evacuation of control room and control of shutdown systems not established from local stations in 15 minutes.

<u>Class</u>	<u>Licensee Actions</u>	<u>State and/or local Offsite Authority Actions</u>
General Emergency	<ol style="list-style-type: none"> 1. Promptly inform State and/or local offsite authorities of general emergency status and reason for emergency as soon as discovered (Parallel notification of State/local). 2. Augment resources by activating on-site technical support center, on-site operational support center and near-site emergency operations center (EOC) 3. Assess and respond. 4. Dispatch on-site and offsite monitoring teams and associated communications. 5. Provide a dedicated individual for plant status updates to offsite authorities and periodic press briefings (perhaps joint with offsite authorities). 6. Make senior technical and management staff onsite available for consultation with NRC and State on a periodic basis. 7. Provide meteorological and dose estimates to 	<ol style="list-style-type: none"> 1. Provide any assistance requested. 2. Activate public notification of emergency status and provide public period updates. 3. Recommend sheltering or evacuation as appropriate for 2 mile radius and 5 miles downwind and assess need to extend distances. 4. Augment resources by activating near-site EOC and any other primary response centers. 5. Dispatch key emergency personnel including monitoring teams and associated communications. 6. Dispatch other emergency personnel to duty station within 5 mile radius and alert all others to stand status. 7. Provide offsite monitoring results to licensee and others and jointly assess these. 8. Continuously assess information from licensee and offsite monitoring with regard to changes to protective actions already initiated for public and mobilizing evacuation
<u>Class Description</u>		
<p>Events are in process or have occurred which involve actual or imminent substantial core degradation or melting with potential for loss of containment integrity.</p>		
<u>Purpose</u>		
<p>Purpose of the general emergency warning is to</p> <ol style="list-style-type: none"> 1) initiate predetermined protective actions for public, (2) provide continuous assessment of information from licensee and offsite measurements, (3) initiate additional measures as indicated by event releases or potential releases, and 4) provide current information for the public and consultation with offsite authorities. 		
<u>Release Potential</u>		
<p>Releases of more than 1000 ci of I-131 equivalent or more than 10^6 ci of Xe-133 equivalent.</p>		
<u>Expected Frequency</u>		

EXAMPLE INITIATING CONDITIONS: GENERAL EMERGENCY

1. a. Effluent monitors detect levels corresponding to 1 rem/hr W.B. or 5 rem/hr thyroid at the site boundary under actual meteorological conditions
- b. These dose rates are projected based on other plant parameters (e.g., radiation levels in containment with leak rate appropriate for existing containment pressure with some confirmation from effluent monitors) or are measured in the environs.

Note: Consider evacuation only within about 2 miles of the site boundary unless these levels are exceeded by a factor of 10 or projected to continue for 10 hours

2. Loss of 2 of 3 fission product barriers with a potential loss of 3rd barrier, (e.g., loss of core geometry and primary coolant boundary and high potential for loss of containment).

Note: Consider 2 mile precautionary evacuation. If more than gap activity released, extend this to 5 miles downwind.

3. Other plant conditions exist; from whatever source, that make release of large amounts of radioactivity in a short time period possible, e.g., any core melt situation. See the specific PWR and BWR sequences.

- Notes:
- a. For sequences where significant releases are not yet taking place and large amounts of fission products are not yet in the containment atmosphere, consider 2 mile precautionary evacuation. Consider 5 mile downwind evacuation (45° to 90° sector) if large amounts of fission products are in the containment atmosphere. Recommend sheltering in other parts of the plume exposure Emergency Planning Zone under this circumstance.
 - b. For sequences where significant releases are not yet taking place and containment failure leading to a direct atmospheric release is likely in the sequence but not imminent and large amounts of fission products in addition to noble gases are in the containment atmosphere, consider precautionary evacuation to 5 miles and 10 mile downwind evacuation (45° to 90° sector).

- c. For sequences where large amounts of fission products other than noble gases are in the containment atmosphere and containment failure is judged imminent, recommend shelter for those areas where evacuation cannot be completed before transport of activity to that location.
- d. As release information becomes available adjust these actions in accordance with dose projections, time available to evacuate and estimated evacuation times given current conditions.

EXAMPLE PWR SEQUENCES

1. Small and large LOCA's with failure of ECCS to perform leading to severe core degradation or melt. Ultimate failure of containment likely for melt sequences. (Several hours available for response)
2. Transient initiated by loss of feedwater and condensate systems (principal heat removal system) followed by failure of emergency feedwater system for extended period. Core melting possible in several hours. Ultimate failure of containment likely if core melts.
3. Transient requiring operation of shutdown systems with failure to scram. Core damage for some designs. Additional failure of core cooling and makeup systems would lead to core melt.
4. Failure of offsite and onsite power along with total loss of emergency feedwater makeup capability for several hours. Would lead to eventual core melt and likely failure of containment.
5. Small LOCA and initially successful ECCS. Subsequent failure of containment heat removal systems over several hours could lead to core melt and likely failure of containment.


Note: Most likely containment failure mode is meltthrough with release of gases only for dry containment; quicker and larger releases likely for ice condenser containments for melt sequences or for failure of containment isolation system for any PWR.

EXAMPLE BWR SEQUENCES

1. Transient (e.g., loss of offsite power) plus failure of requisite core shut down systems (e.g., scram or standby liquid control system). Could lead to core melt in several hours with containment failure likely. More severe consequences if pump trip does not function.
2. Small or large LOCA's with failure of ECCS to perform leading core melt degradation or melt. Loss of containment integrity may be imminent.
3. Small or large LOCA occurs and containment performance is unsuccessful affecting longer term success of the ECCS. Could lead to core degradation or melt in several hours without containment boundary.
4. Shutdown occurs but requisite decay heat removal systems (e.g., RHR) or non-safety systems heat removal means are rendered unavailable. Core degradation or melt could occur in about ten hours with subsequent containment failure.
5. Any major internal or external events (e.g., fires, earthquakes, etc.) which could cause massive common damage to plant systems resulting in any of the above.

Dup of 800306069
8002200572
February 14, 1980

DR. DONALD F. KNUTH
President



Mr. Samuel J. Chilk
Secretary of the Commission
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Docketing and Service Branch

Dear Mr. Chilk:

KMC, Inc., on behalf of itself and the utilities listed in the enclosed petition, requests, pursuant to 10 C.F.R. §2.802, that the NRC set aside for separate rule-making the portion of its proposed Emergency Planning rule related to the arbitrary and totally unjustified requirement that all persons within ten miles of a nuclear power facility be alerted within fifteen minutes after detection of an incident. As further described in the petition, we and others, including affected states and local jurisdictions, believe that without segregation of this issue from the general emergency plan and separate rulemaking action, including further study by the Staff and other Federal and state agencies, and an adequate hearing on this very critical issue, the consideration of this matter by the Commission will be totally deficient in that only the views of the proponents will be heard. At the regional Emergency Preparedness Workshops, this position was voiced by responsible state officials including Erie Jones of the state of Illinois */ who stated an objection not only to the fifteen minute alert requirement, but also to the heavy-handed manner the NRC was taking in forging this rule. In part he stated:

I don't think that we should be expected to come up with a counter-

*/ Transcript of Chicago Emergency Preparedness Workshop, Tuesday, January 22, 1980, page 141.

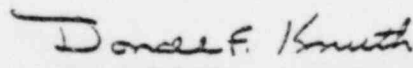
proposal in a matter of a few days or a few weeks when allegedly NRC has had six to eight months to come up with a proposal. Now, you are asking for comment in a relatively short time and asking for us to come up with a counter-proposal that you are suggesting may be better than yours.

I suggest, sir, that what you are saying is confirming what I said in a letter to NRC, that the proposed change is, in fact, a fait accompli, and that we are here in an effort to discuss something that we have little input into as local and state personnel, as we have had little input in the past.

We believe that the proposed rule is not only unwarranted, but may be counterproductive and indeed, lead to confusion, panic and unnecessary risks with regard to evacuation. An arbitrary fifteen minute alerting requirement cannot be justified for each and every reactor site.

While we endorse the expeditious development of additional emergency planning for each operating nuclear facility; we nevertheless believe that an adequate emergency plan for each facility can be developed including appropriate alerting methods that are related to the type and size of the facility as well as the site characteristics without use of the arbitrary fifteen minute time period. Thus, this particular matter can and should be segregated for special consideration by the Commission under special procedures to protect the interests of all affected groups while the comments on the remainder of the emergency planning rule are considered and a final emergency planning rule promulgated. Should it prove necessary, the final alerting criteria could be added to the emergency plan requirements at a later time without additional undue cost or difficulty.

Sincerely,


Donald F. Knuth

Enclosure

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)
)
10 CFR Part 50)
APPENDIX E - EMERGENCY PLANS)
FOR PRODUCTION AND UTILITIZATION)
FACILITIES)

Docket No. PRM _____

Dup of
8002200578

PETITION FOR RULEMAKING

Pursuant to the 10 CFR §2.802, KMC, Inc. on behalf of itself and the utilities listed in Attachment A (hereinafter referred to as "Petitioners") hereby petitions the Nuclear Regulatory Commission (NRC or Commission) to amend 10 CFR Part 50 Appendix E -- Emergency Plans for Production and Utilitization Facilities to modify the presently proposed requirements for alerting persons within the plume exposure pathway Emergency Planning Zone (EPZ). The responsibility for determining the criteria and timing for alerting such individuals clearly resides with the appropriate State and/or local entities having responsibility for protecting the citizenry, acting with the Federal authority vested in the Federal Emergency Management Agency (FEMA).

We submit that all regulatory requirements on a licensee should be consistent and recognize the interrelating and interdependent responsibilities of cognizant Federal, State, and local jurisdictions. No arbitrarily set time period for notification is

appropriate for all situations. In view of the far reaching implications and importance of this "alert" issue, we ask that a separate rulemaking proceeding be established to allow it to be evaluated separately from the other issues relating to emergency planning.

In its proposed rule published for comment in the Federal Register on December 19, 1979, the Commission placed a requirement for alerting and providing prompt instructions to the public within the 10-mile plume exposure pathway Emergency Planning Zone. By footnote the NRC indicated a further requirement that essentially complete alerting of the public should be accomplished within 15 minutes. Further NRC guidance on this issue is documented in Section II.B.5 of "Emergency Planning Acceptance Criteria for Licensed Nuclear Power Plants" which states that State and local plans are required to describe the resources that will provide warning and instruction to the population in the EPZ within 15 minutes. A further requirement states that the testing of the communications system should continue to assure that the warning criterion can be met.

While we agree and fully support the NRC's goals of improving emergency planning in the vicinity of nuclear power plants, there has to be a recognition which is heretofore lacking in NRC regulations and issuances that FEMA, not NRC, has lead responsibility

for requirements pertaining to offsite emergency planning. To require, on a generic basis, that all persons be alerted out to ten miles from a nuclear power plant within 15 minutes of an incident is unnecessary from a safety standpoint and such is an arbitrary and capricious requirement.

It is therefore proposed that Appendix E requirements pertaining to Notification Procedures be amended to state as follows:

"Administrative and physical means, and the time requirements for notifying Federal, State and local officials for warning of the public for evacuation or other protective measures shall be described."

Guidance for NRC review of State and local plans on acceptable times for warning as a function of distance from the plant site as well as ease of taking protective action should be developed as part of this rulemaking. Consideration of such factors as downwind distance, ease of taking protective measures (such as evacuation), type and characteristics of power plant must all be weighed in making any judgment on the adequacy of the warning systems associated with a particular plant. Setting a uniform but arbitrary time for warning, which is but one element in the overall chain of actions that might be required, will not serve to improve the emergency plans of a utility or the emergency planning efforts of the involved State and local agencies as well as FEMA.

The Petitioners as listed in Attachment A are interested persons within the meaning of 10 CFR 2.802 in that the listed utilities own and/or operate nuclear power plants and are responsible for the design and construction of such plants subject to the requirements of 10 CFR 50.34 and 10 CFR Part 50 Appendix E.

A memorandum in support of the Proposed Rulemaking which more fully sets forth the justifications for the proposed rule is attached as Attachment B. The subject matter of this petition has been discussed with the responsible members of the NRC staff.

Because of the importance of this issue, good cause exists to consider this element of emergency planning separately and apart from the rest of the proposed rule. Further study by the staff to justify what must now be considered a completely arbitrary time period and additional time for FEMA and State and local officials as well as affected utilities and members of the public to review such studies is necessary before the Commission can intelligently pass on the wisdom of the proposal. Further procedural safeguards may be a necessary part of this rulemaking. In the meantime the other proposed changes to Appendix E can be considered and acted upon. Use of a case-by-case standard for determining who should be alerted to a particular incident and in what timeframe while the Commission is considering the

alert issue would not result in any adverse effect on safety. Moreover, implementing the Commission's final rule on alerting members of the public at a future time would not be more difficult or costly.

Respectfully submitted,

KMC, Inc.

By Donald F. Knuth

Donald F. Knuth
1747 Pennsylvania Ave., N.W.
Washington, D.C. 20006
202/223-3163

Date: 2/14/80

LIST OF PETITIONING UTILITIES

American Electric Power Company
Baltimore Gas & Electric Company
Cincinnati Gas & Electric Company
Commonwealth Edison Company
Consumers Power Company
Detroit Edison Company
Duquesne Light Company
Florida Power & Light Company
Jersey Central Power & Light Company
Maine Yankee Atomic Power Company
Mississippi Power & Light Company
Nebraska Public Power District
Northern States Power Company
Omaha Public Power District
Pacific Gas & Electric Company
Public Service Electric & Gas Company
Southern California Edison Company

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)
)
10 CFR Part 50)
APPENDIX E - EMERGENCY PLANS)
FOR PRODUCTION AND UTILITIZATION)
FACILITIES)

Docket No. PRM _____

Dup of

MEMORANDUM OF PETITIONERS
IN SUPPORT OF
PROPOSED RULEMAKING

8002200581

Introduction

On July 17, 1979, the NRC published in the Federal Register an Advanced Notice of Proposed Rulemaking on "Adequacy and Acceptance of Emergency Planning Around Nuclear Facilities" (44 Fed Reg 75167). The Commission in that publication sought to receive early comments on a number of issues in preparation for a rule-making proceeding on emergency preparedness. Over 113 public comments to that invitation were received; unfortunately, the NRC staff was not allowed sufficient time to receive, read or digest the comments offered by the many respondents. By a memorandum dated July 31, 1979, the Commission requested expedited rule-making and the NRC staff in its Commission Action Paper, SECY-79-591, dated October 26, 1979, responded to that request. The opening section of that paper indicated the proposed interim rule was hastily written:

"The haste with which this paper was prepared precluded the critical review normally given to actions of comparable significance. Consequently, the staff is concerned that important considerations related to the workability of the proposed rule changes may have been overlooked and that all significant impacts to NRC, applicants, licensees, and State and local governments may not have been identified."

On November 13, 1979, the NRC staff, in an Information Report to the Commissioners, SECY-79-591B, provided its preliminary analysis of public comments. The paper tabulated the responses into the areas of interest to the NRC and characterized the tone of each commentor's response for each issue. In the public meeting concerning this matter before the Commission the commentors' views were not characterized in any greater detail.

The proposed rule on emergency planning was revised during the period of Commission review through deliberations with the Office of the General Counsel (OGC) and the Office of Policy Evaluation (OPE); a revised version was proposed in an Information Report, SECY-79-591C. This version, as published for public comment, contains the requirements which are the subject of this petition. Although it is certain that those responding to the request for comments on this proposed rulemaking will include their views on the issue of warning the populace within the plume exposure pathway of the Emergency Planning Zone within 15 minutes, the importance and implications of this proposed requirement

are sufficiently great to merit removal of this issue from the interim upgrade for separate consideration. The previous track record of staff consideration of public comments submitted as a result of the advance notice of rulemaking leading to the present draft of the proposed rule is a further reason that this matter be subject to hearings to ensure adequate consideration of all viewpoints.

Basis for Emergency Planning

In evaluating accidents at nuclear power plants the potential offsite consequences have traditionally used a conservative set of assumptions. To meet the NRC's siting criteria, each facility must demonstrate a capability to mitigate accident doses below guideline values at the exclusion boundary for a two hour exposure period and at the low population zone distance for the duration of the accident. Although in some circles there is a perception that the Three Mile Island Accident, as the worst accident in the nuclear power reactor history, had radioactive releases from the fuel in excess of a design basis accident, such is not the case. The radioactivity released to the containment was less than that assumed for a design basis accident (DBA) and the rate of release was certainly not instantaneous as assumed in the siting criteria. In addition, the offsite doses were much less than guideline values or protective action guides as promulgated by the Environmental Protection Agency.

The Commission in its rulemaking proceeding has proposed a plume exposure pathway Emergency Planning Zone (EPZ) of 10 miles as an appropriate distance. If one accepts this as a policy determination as based upon the defense-in-depth philosophy, a large conservatism is introduced in the process.

In planning for contingencies within the EPZ it must be recognized that the State and/or local agencies have the responsibility for taking actions to protect its citizens. Initiation of protective measures such as an evacuation are the responsibility of cognizant State and/or local officials; any dilution of the response authority or implication that the utility also has that responsibility is a disservice to the cognizant public officials. The utility does have, as it properly should, the responsibility to promptly inform and to advise the designated cognizant public officials of any event which could affect the health and safety of the public. In its advisory role, the utility should be expected (and required) to provide timely and accurate assessments of incident, but should not be expected to be jointly responsible for administering the activities of the state or local officials.

Timeliness of Emergency Actions

The required extent and rapidity of completing an emergency action in response to a reactor incident is dependent upon a number of variables. The potential consequences from a postulated reactor accident are a function of the type and size of the facility as well as the engineered safety features that are built in to mitigate accidents. In addition, the distance downwind from the reactor and the prevailing winds are important considerations in the evaluation, as is the extent of action that must be taken to protect the individuals. Recognizing that the warning phase is just the first step in the emergency action sequence, specifying in the regulations a limiting time for the warning phase which is independent of all other variables will not contribute to sound emergency planning and is unnecessary and very possibly counterproductive. Uniform requirements and plans in the entire ten mile emergency planning zone are unwarranted; wind direction and distance from the reactor permit varied resource capabilities in the sectors surrounding a facility. For example, uniform alert to all persons within 10 miles could trigger an evacuation causing traffic jams, where a more orderly limited phased alerting process would be significantly more effective. A more rapid general alert would be indicated close in to the plant only and as one moves away from the

plant an orderly phased alerting system such as one keyed to actual data from the facility or from onsite or offsite monitoring stations or units is necessary.

As part of our proposed rulemaking FEMA must be given guidance on the required speed for action as a function of distance from the plant; generic guidance can be developed for FEMA's guidance based upon the size, type and nature of equipment installed in a plant. There have been a number of such generic studies already completed that provide time to release of radioactivity and estimates of potential doses for a large spectrum of accidents. We believe developing this information into a Regulatory Guide (or comparable document fitting FEMA procedures) to be much preferable to arbitrarily selecting and specifying a time for the warning phase to the exclusion of all other relevant parameters. Since FEMA has been given overall responsibility for the implementation of offsite emergency actions, we believe it inappropriate that the NRC, through regulations on utility operators, usurp that agency's responsibility by its arbitrary and capricious action.

Conclusion

Based on the foregoing we conclude that the NRC regulations pertaining to notification requirement of licensees should state:

"Administrative and physical means, and the time requirements for notifying Federal, State and local officials for warning of the public for evacuation or other protective measures shall be described."



February 15, 1980

DR. DONALD F. KNUTH
President

Mr. Samuel J. Chilk
Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dup of
8003040086

Dear Mr. Chilk:

KMC, Inc., in cooperation with 22 utilities participating in its Coordinating Group on Emergency Preparedness Implementation, has developed the enclosed comments in response to the Commission's Notice of Proposed Rulemaking on Emergency Planning, 44 FR 75167 (December 19, 1979). The Group has participated in the Commission's regional meetings and Workshops on emergency planning, has commented extensively on NUREG-0610, and will provide detailed comments on the Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants (NUREG-0654).

Our comments embody all technical and procedural aspects of the proposed rulemaking. A significant comment, found in the enclosed Introduction, is a suggestion that the Commission should offer a public hearing on this rulemaking to allow interested persons, particularly State and local officials, and licensees, to petition for leave to participate as parties in the proceeding.

Sincerely,

Donald F. Knuth
Donald F. Knuth

encl.

COMMENTS ON PROPOSED RULE -- EMERGENCY PLANNING

Introduction

The Nuclear Regulatory Commission, in its Notice of Proposed Rulemaking, 44 FR 75167 (December 19, 1979) invited comments on proposed rules relating to emergency planning: a revised 10 CFR 50.33(g); a new section 50.47; new paragraphs 50.54(s), (t), (u), and (v); and a revised Appendix E to 10 CFR 50.

KMC, Inc., in cooperation with the following 22 utilities, has developed detailed comments on the principal elements of the proposed rule, and herein proposes alternative language for the Commission's consideration.

American Electric Power Company
Arkansas Power & Light Company
Baltimore Gas & Electric Company
Cincinnati Gas & Electric Company
Commonwealth Edison Company
Consumers Power Company
Detroit Edison Company
Duquesne Light Company
Florida Power Corporation
Florida Power & Light Company
GPU Service Corporation
Jersey Central Power & Light Company
Maine Yankee Atomic Power Company
Mississippi Power & Light Company
Nebraska Public Power District
Northern States Power Company
Omaha Public Power District
Pacific Gas & Electric Company
Public Service Electric & Gas Company
Sacramento Municipal Utility District
Southern California Edison Company
Toledo Edison Company

In the Summary and Supplemental Information portions of the Federal Register notice the Commission also invites comments on the supporting value/impact analysis and further acknowledges the information received in response to its Advance Notice of Proposed Rulemaking (44 FR 41483, July 17, 1979). Owing to a lack of NRC staff resources and insufficient time for reasoned consideration, the value/impact analysis is too superficial to be at all meaningful in this rulemaking proceeding. Further, there is no evidence that the information received in response to the Advance Notice has in any way influenced the development of the proposed rule.

In the meantime, the NRC staff has gone forward implementing the proposed rule before it is formally adopted by the Commission, is requiring licensees to conform to NUREG-0610, "Draft Emergency Action Level Guidelines," with essentially no permitted variation -- effectively using NUREG-0610 with the force of an established rule -- and has developed "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants" (NUREG-0654), for further interim use and comment, in such detail that licensees are permitted practically no leeway in trying to develop workable emergency planning programs. This skewed approach to regulation and licensing is having a destabilizing influence on the utility

industry's efforts to achieve effective emergency planning programs and will have similar effects on State and local programs. As requirements and their interpretations continue to change without well-considered "pro's and con's" the result may well be that of the development of emergency plans which meet the requirements laid down by the NRC, that look good on paper, but that have implementation problems that render emergency preparedness ineffective. The purpose of the rulemaking process is to develop reasoned requirements, not to ratify hastily created strictures that strangle the normal licensing process. The present approach, which has evolved to a level of common occurrence, clearly puts the cart before the horse, and in the long run will destroy the improvements in the functioning of the licensing process that would otherwise have been a beneficial result of TMI.

Such guidance would not have the necessary force of law in the courts, and does not stand up well in the face of the proposed rulemaking. It merely represents only one of several acceptable alternative approaches to emergency preparedness. This rulemaking should permit reasoned consideration of such alternatives. General aspects of emergency preparedness are properly handled by rulemaking. More specific considerations need to be handled, as a matter of implementation, on a case-by-case basis.

A series of NRC-sponsored Workshops was held in January, 1980 to explain the proposed rule and to permit, among other things, State and local officials to air their concerns regarding the implementation of the rule. The Workshops failed in this regard, particularly in New York, but in the other regions as well, principally because the State and local officials as well as licensees did not get the opportunity to participate in the manner as envisioned by the NRC staff in its notice advertising the Workshops. Instead of participant discussions, as intended, the meetings at best were little more than question and answer sessions.

In light of all this, the Commission has built an inadequate record upon which to formulate its emergency planning requirements. Any deficiencies in the proposed rule are not being considered and, as a consequence of the requirements without rules, a "wait and see" attitude will develop inevitably. This should be the last thing the Commission wants to achieve.

The Notice of Proposed Rulemaking indicates the Commission view that emergency planning should be equivalent to, rather than as secondary to, siting and design in public protection. However, the elements of the proposed rule, and the NRC staff actions toward its implementation, clearly show that emergency planning is being taken far beyond the level of acceptability for siting

and design of nuclear power reactors. The Commission needs to be satisfied with the siting, design, and emergency planning elements associated with particular license situations. It should not, however, need to specify in such extreme detail a singular set of requirements for acceptability as it has in the matter of emergency planning.

The momentum of the emergency planning program needs to be brought back under control. The proper forum is through rule-making; however, to accomplish this objective the Commission should consider more effective measures to allow interested persons, particularly State and local officials, and licensees, to have their experience and expertise brought into the decision-making process. One way to accomplish this is with the offer by the Commission of a hearing on the rulemaking issues. In this way, and perhaps only in this way at this point, will persons whose interests are affected really have the opportunity to meaningfully participate in the emergency planning rulemaking.

There is an alternative to the present course of action unfolding in this rulemaking proceeding. One technical basis for the alternative is embodied in the following detailed comments. Effective consideration of these and other comments, in response to the Commission's invitation in this matter, will probably only be possible through a public proceeding.

Comments on Requiring NRC Concurrence of State/Local Emergency Plans as a License Condition

The general concept of being satisfied that there are acceptable State and local emergency plans developed in conjunction with required licensee plans is certainly reasonable in the regulatory framework for licensed power reactors. This could be described and identified as "concurrence," and indeed licensees are already working with the State and local authorities to achieve this state of preparedness. However, there are several reasons why it is inappropriate to make NRC "concurrence" in State and local plans a specific regulation in 10 CFR 50. These reasons are the following:

1. "Concurrence" is an ill-defined, and perhaps indefinable, term, and as such it has no place in regulations. Its use in NRC activities covers a wide spectrum of meaning. To some it means "agreement on all the details of a specific matter and how they are expressed in the document setting forth the matter." To others it means "no objection to the thrust of the matter and how it is expressed." Many persons adopt a sense of what their concurrence means, but not a definition. However, that "sense" falls somewhere between these two interpretations. Few people interpret concurrence in the same fashion, and most are able to interpret

what they mean by concurrence only in the context of the particular matter in which their concurrence is sought. Furthermore, to some extent at least, the agreements of the NRC/FEMA Memorandum of Understanding supersede the simplistic concept of "concurrence." It is for these reasons that the general requirement for concurrence is inappropriate in the regulations.

On the other hand, what is appropriate is a regulatory acceptability of a particular situation, in this case an acceptable State/local emergency plan. A regulator should be satisfied that the plan is adequate, recognizing that some elements of the plan will need further development for useful improvement. The regulator is responsible to see that such improvements are developed. Critical flaws in a plan should be corrected or ameliorated before a licensing decision on acceptability is made and before resources irretrievably are committed to implementation. Less than critical flaws can and should be corrected without affecting the decision. The overall safety review of a facility is conducted on this basis, and it should be perfectly acceptable to employ this basis for the review of emergency plans.

2. It is not possible to be completely satisfied with any particular plan at any pre-specified point in time. Considering the President's mandate in his response to the recommendations of the Kemeny Commission, it will be FEMA's responsibility to take the lead in off-site emergency planning and response and complete by June, 1980 the review of State emergency plans in those states with operating reactors. FEMA appreciates that local preparedness needs the most upgrading and perfecting, and in light of the enormous workload involved in carrying out the President's directive, more than six months of intensive effort will be required. In any event, the NRC in its regulations should not impose artificial deadlines on FEMA's responsibilities, or otherwise impair the ability of FEMA to conduct the required reviews in an efficient and effective manner. Further, §50.47 should clearly state the FEMA responsibility. Language from the NRC/FEMA Memorandum of Understanding to the point that FEMA shall "make findings and determinations as to whether State and local emergency plans are adequate and capable of implementation" would be appropriate.

3. The aspects of requiring concurrence in State/local plans within a fixed time period or requiring licensees to shut down their nuclear power plants is a well-ventilated issue that has found its way into the proposed rule. The NRC staff, in formulating the basis for this proposed requirement, has cited continually the GAO Report EMD-78-110, the Senate version of the NRC Authorization Bill for FY 80 (S. 562), the report of the Subcommittee on Environment, Energy and Natural Resources of the House Committee on Government Operations (House Report No. 96-413), and the report of the Kemeny Commission. However, compelling considerations from the converse of that argument have not been cited.

President Carter, in his response to the recommendations of the Kemeny Commission stopped short of embracing the hazy concept of "NRC concurrence" or "withdrawal of such concurrence" as a means of supporting and carrying out the recommendations on emergency planning and response. The House of Representatives, in its authorization bill H.R. 2608 incorporating H.R. 5297, specifically and deliberately did not include such a requirement.

Two considerations fall from the development of this issue. Both lead to the conclusion that, at this time, the "concurrence" rule is inappropriate. First, the early emphasis on a regulation requiring concurrence as a licensing requirement was born from a perceived view that the attention being paid to emergency planning by the utilities, by the NRC, and by State and local jurisdictions was inadequate. However, in light of the TMI experience, all of these groups have devoted considerable energy to improving emergency planning. It has been one of the foremost activities of the NRC and the utilities in the last eight months, at a time when many other problems have likewise received considerable attention, and there is ample evidence that the State and local jurisdictions are working hard on the problem. Likewise, FEMA is mobilizing its considerable resources to make this activity one of its major programs. A simple conclusion can be drawn: There is no longer the need for the initial forcing function. The organizations involved have gotten the message and are responding in a proper manner. No further push in that direction is needed.

The second consideration relates to the relationship between (1) the law as passed by the Congress and signed by the President, and (2) an agency's regulations implementing that law. In this case, clearly the issue has been considered (and at this time is still being considered) by the Congress. There should be no concern that this issue was not raised and deliberated. If the Congress passes the NRC Authorization Bill for FY 80 it either will or will not contain a provision relating to this issue. Following the signing of the bill into law by the President, the NRC regulations should be made to conform to the law. Thus, if the requirement is in the law, then it should be in the Commission's regulations. If it is not in the law, then it should not be in the regulations. In either case, the resulting regulation will properly reflect the sense of the Congress and the will of the President. Furthermore, it is a specious view to conclude that the "concurrence" requirement should be put in the rule in lieu of its being in the law because the Congress might permit such flexibility. Sufficient Commission flexibility already exists in the authority to condition licenses. The Commission granting itself less flexibility through rulemaking is not logical.

4. One aspect of the "concurrence" rule deserving special comment relates to actions to be taken by the NRC against a utility in the event the NRC withdraws its concurrence of an associated State/local emergency plan. In the alternatives outlined in the proposed rule the Commission would, four months after an uncorrected deficiency warranting withdrawal of concurrence, require the licensee to show cause why it should not shut down the plant, or in the alternative, to automatically shut down the plant. The flavor of these alternatives permeate other aspects of the concurrence rule. However, as a threat to continued plant operation they are particularly inappropriate. The Commission has all the authority it needs to issue show cause orders or to shut down plants as it deems necessary to meet existing safety problems. It does not need a special rule to cover emergency planning. More importantly, use of such authority is properly exercised by the Commission to fit the circumstances of a particular situation. Decisions regarding plant shutdown should be based on such particular circumstances. The responsibility and authority of a regulatory agency such as the NRC should not be abrogated by putting in place a rule that would shield it from

such decisions at the time when they should be made; i.e., when a particular set of circumstances dictates the need for such a decision. One should be very careful that a situation is not created that would preclude desirable alternatives at a later date by foreclosing on all options with publication of such stringent requirements in a formal rule.

5. In the event that the eventual NRC FY 80 Authorization Act requires some form of official review of State and local plans as a condition of licensing (an ill-defined "concurrence" is not the proper concept), attention should be given to the Alternative A and Alternative B approaches in the proposed rule. In Alternative A, the proposed rule would require a licensee to successfully persuade the Commission, absent "concurred in" State and local plans, that operation of its plant should be permitted to continue. If it failed to do so, the plant would be required to shut down.

The essential thrust of Alternative B is that, absent "concurred in" State and local plans, the plant be required to shut down automatically, and remain down until the plans have received NRC concurrence or the Commission grants an exemption to the licensee that would permit operation.

It bears repeating that neither alternative is necessary. The Commission has sufficient authority to order a plant shut down for safety reasons, and, we believe, should be prepared to exercise that authority only on a case-by-case basis and when a particular situation so warrants such action. However, clearly consistent with these comments, Alternative A would be much preferred to Alternative B. 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." Moreover, the idea that the Commission might grant an exemption to the rules that would permit continued operation (under Alternative B) has little significance. 10 CFR Part 50.12(a) permits the granting of exemptions. 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.

The Commission, in developing this aspect of the proposed rule, must consider its own history. There was a 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.

Considering all the above, and assuming that the concept of "concurrent in State and local plans" does not become a matter of law, the proposed §50.47 and §50.54(s) and (t) should be revised as follows and adopted in this revised form in the final rule.

§50.47 Emergency plans

Emergency response plans submitted by an applicant in accordance with §50.33(g) shall be developed in consultation with the various Federal, State, and local entities having responsibilities for emergency planning. The lead for review of the offsite plans resides with the Federal Emergency Management Agency (FEMA). FEMA shall make findings and determinations as to whether State and local emergency plans are adequate and capable of implementation. FEMA also chairs the Federal Interagency Central Coordinating Committee for Radiological Emergency Response Planning and Preparedness. If notified by FEMA that there are critical deficiencies in the offsite plans associated with an applicant's onsite plan, the NRC may require, in consultation with FEMA, compensating features to be provided by the applicant.

§50.54 Conditions of licenses

(s) Each licensee who is authorized to possess and/or operate a nuclear power reactor shall submit 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 the plume exposure pathway EPZ, as well as a discussion of provisions to protect the food ingestion pathway of State governments wholly or partially within the ingestion pathway EPZ. ^{1/} The Commission has determined that the plume exposure pathway EPZ for nuclear power reactors shall consist of an area about 10 miles in radius and the ingestion pathway EPZ shall consist of an area about 50 miles in radius, unless the applicant/licensee justifies lesser distances.

The appropriate State and local offsite emergency plans shall be reviewed by FEMA. (This is anticipated to be completed for operating plants within 180 days of the effective date of the final amendments.) If notified by FEMA that there are critical deficiencies in the offsite plans associated with a licensee's onsite plan, the NRC may require, in consultation with FEMA, compensating features to be provided by the licensee.

(t) If, after 180 days following the effective date of these amendments, and during the operating license period of a nuclear power reactor, FEMA notifies the NRC of critical deficiencies in the offsite emergency plans associated with that reactor, that are not corrected within four months of such notification, the NRC may require compensating features to be provided by the licensee.

^{1/} Emergency Planning Zones (EPZ's) are discussed in NUREG-0396, "Planning Basis for the Development of State and Local Government Radiological Emergency Response Plans in Support of Light Water Nuclear Power Plants."

In the above proposed revision to §50.54 the phrase "or by January 1, 1981, whichever is sooner" has been deleted. Although this thought was subject to some deliberation by the Commission, it does deserve further reconsideration. §50.54(s) requires submittal of State and local plans 60 days after the effective date of the rule. Assuming the NRC provides such plans to FEMA for review, only on the order of 120 days are targeted for such review -- not an abundant amount of time. If January 1, 1981 should be sooner than the 180 day period, the time available for FEMA's review would be unnecessarily shortened. Since all other time constraints are in terms of elapsed time rather than particular dates, this requirement should be expressed in terms of elapsed time for consistency. However, the time period for FEMA review of State and local plans has been, and should be, stated as a target, not as a licensing deadline. The same comments apply to proposed §50.54(v).

Other changes to §50.54(s) above, relating to the plume exposure and ingestion pathway EPZ's are described and justified in the following section of these comments relating to §50.33(g).

To complete the review of §50.54, some clarifying comment is appropriate for §50.54(u). A periodic review of a licensee's emergency preparedness program is appropriate. The called-for "independent" review in proposed §50.54(u) could, however, lead to questions in the hearing process where, for example, other

parties to the proceeding might challenge any degree of independence as not adequate. The ambiguity of an independent review would support such difference of opinion. What is appropriate is some form of management review and audit by the licensee, which could be carried out by contractor if the licensee so desired. The important feature, however, is that it be a management review, and that it be conducted on an annual basis. In light of this, §50.54(u) should read as follows:

§50.54(u) The licensee of a nuclear power reactor shall provide for the development, revision, implementation and maintenance of its emergency preparedness program. To this end, the licensee shall conduct a management review of its emergency preparedness program annually. The review shall include a review and audit of licensee drills, exercises, capabilities, and procedures. The results of the review and audit, along with recommendations for improvements, shall be documented, reported to the licensee's corporate and plant management, and kept available at the plant for inspection for a period of five years.

Use of Emergency Planning Zones (EPZ's) in Setting Requirements for Emergency Preparedness

§50.33(g), and elsewhere in the proposed rule, discusses the establishment of the 10 and 50 mile Emergency Planning Zones. The Commission has, as a matter of policy, already adopted the 10 and 50 mile zone concepts for emergency planning purposes. That should be made clear in the proposed rule. To preserve the specificity of the proposed rule, the discussion as to exact size and configuration of the EPZ's is better left to the clarifications presented in NUREG-0396, and should be deleted in the

rule. In fact, the EPZ boundaries, as discussed in NUREG-0396 clearly were established as enveloping distances. It may be that for some situations, lesser distances could be justified. Therefore, the proposed rule on EPZ's should specify the 10 mile and 50 mile zone boundaries unless the applicant/licensee can justify such lesser distances.

A further needed clarification of the proposed rule relates to ingestion pathway planning. The rule clearly intends that such planning be related to protecting the food chain. However, the clarifying statement in the proposed rule to that effect is so far removed physically from the requirement that the requirement becomes ambiguous. Further, there is some ambiguity in the proposed rule in identifying information relating to ingestion pathway planning as "emergency plans." Clearly, these plans are not at all the same as the emergency plans required for the plume exposure pathway EPZ. Therefore, the requirement and its clarifying statement should be combined as follows:

". . . as well as a discussion of provisions to protect the food ingestion pathway of State governments wholly or partially within the ingestion pathway EPZ."

Thus, §50.33(g) should read:

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), as well as a discussion of provisions to protect the

food ingestion pathway of State governments wholly or partially within the ingestion pathway EPZ. ^{1/} The Commission has determined that the plume exposure pathway EPZ for nuclear power reactors shall consist of an area about 10 miles in radius and the ingestion pathway EPZ shall consist of an area about 50 miles in radius, unless the applicant/licensee justifies lesser distances.

^{1/} Emergency Planning Zones (EPZ's) are discussed in NUREG-0396, "Planning Basis for the Development of State and Local Government Radiological Emergency Response Plans in Support of Light Water Nuclear Power Plants."

Similar language should be adopted for §50.54(s) as indicated in earlier comments.

Requirement for the Submittal of Detailed Procedures

Section V. of the proposed Appendix E requires submittal of detailed implementing procedures, 10 copies to the NRC Regional Office and 10 copies to NRC Headquarters. Although providing detailed procedures to the NRC is abnormal, and there has been no need established for such detailed information to support the review process, there is one acceptable reason for the requirement, namely for information useful in the event of an accident situation requiring activation of onsite and offsite emergency organizations, especially the Office of Inspection and Enforcement Incident Response Center. The use of the word "submitted" is not appropriate in this proposed rule as it could be confused

with the requirement for application amendments, clearly not contemplated in connection with supplying information to the Office of Inspection and Enforcement.

In the event the NRC might not consider such information proprietary and might plan to place this information in its public document rooms, the rule should make clear that copies supplied for that purpose should delete telephone numbers included in the procedures.

Therefore, Section V. should be revised as follows:

V. Implementing Procedures

No less than 180 days prior to scheduled issuance of an operating license, 10 copies each of the applicant's detailed implementing procedures for its emergency plan shall be supplied to NRC I&E Headquarters and to the appropriate NRC Regional Office for use in NRC Incident Response Center activities in the event such activities are required. Provided that, in cases where the operating license is scheduled to be issued less than 180 days after the effective date of this rule, such implementing procedures shall be supplied as soon as practicable. Within 60 days after the effective date for compliance under §50.54(v) with the revised Appendix E, licensees who are authorized to operate a nuclear power facility shall supply 10 copies each of the licensee's emergency plan implementing procedures to NRC I&E Headquarters and to the appropriate NRC Regional Office for use in NRC Incident Response Center activities in the event such activities are required. As necessary to maintain them up to date thereafter, 10 copies each of any changes to these implementing procedures shall be supplied to NRC I&E Headquarters and to the same NRC Regional Office within 30 days of such changes.

Requiring Use of NUREG-0610

NUREG-0610, outlining draft action level criteria, was completed in September, 1979, and distributed for public comment. At the time of publication of the proposed rule the Commission had not yet considered NUREG-0610 or its public comments. A footnote in the Supplementary Information section of the proposed rule indicates a final version of NUREG-0610 will be published in early 1980. It does not indicate the Commission will review and approve the final version. The NRC staff, to date, has shown little inclination to accept action level criteria other than that specifically appearing in the draft NUREG-0610. Furthermore, it is being used with the force of a rule, which is not appropriate. The Commission must allow some flexibility in establishing action level criteria for individual emergency plans to be effective. Action level criteria, to some extent at least, depend on case-by-case situations of State/local/utility relationships. It is essential that the Commission carefully review the final proposed Action Level Criteria prior to its being applied in a licensing process, and in any event, not permit it to be applied without variation as if the NUREG itself were a regulation.

The same footnote in the proposed rule indicates that "upgraded and revised acceptance criteria for evaluating emergency preparedness plans will be issued for comment and may be included

in the Commission's regulations." This document, which supersedes the acceptance criteria in use by the NRC's review teams only since September, 1979, was published jointly by the NRC and FEMA as NUREG-0654 (FEMA-REP-1) in January, 1980, for "interim use and comment." These requirements, without the benefit of due rulemaking process, are likewise being applied with the force of regulations. Commission review of NUREG-0654 is essential. Advice of the ACRS and the Regulatory Requirements Review Committee is needed to assist the Commission in its consideration of these detailed requirements.

Drafting of NUREG-0610 was accomplished prior to the establishing of FEMA's responsibilities for offsite emergency planning. NUREG-0654 was published in cooperation with FEMA, and in fact incorporates the initial draft of NUREG-0610 within its cover. Both documents contain considerable State/local requirements that are now within FEMA's jurisdiction and responsibility. These requirements should be deleted from specific NRC guidance, and especially should not be incorporated into NRC Rules and Regulations. FEMA, in consultation with the NRC, will set its own requirements, but they should be applied within the framework of the FEMA program. This is the case even though FEMA might adopt NRC-developed guidelines as their own. Such a proper approach will resolve the NRC dilemma that it is setting down requirements for groups (State and local agencies) over which it has no jurisdiction, and with the establishing of FEMA's role by the President, over which it (the NRC) has no responsibility.

The use of such instruments as NUREG-0610 and NUREG-0654 as "compulsory guidance" raises a far more serious problem with the NRC's evolving approach to regulation. Why have these NUREG's taken on such a level of requirement? Why was the Regulatory Guide process not used? The virtue of Regulatory Guides is that they are reviewed and approved, in advance, by the ACRS and the NRC's Regulatory Requirements Review Committee. Where is the expert and management review of the NUREG's? It is not embodied in the concept of "Interim Use and Comment," especially when the comment is not considered. However bad or good these NUREG documents are, they both deserve and require the mature consideration available through the same process used for Regulatory Guides.

Requiring Prompt Alerting of the Public

The unreviewed Acceptance Criteria "requires" 15 minute notification of the public within the 10 mile EPZ. The unreviewed NUREG-0610 "requires" public notification even for action levels as low as a Site Emergency, when a radiation release is only hypothetical. Notwithstanding, a footnote in Section D3 of the proposed Appendix E indicates "it is expected that the capability will be provided to essentially complete alerting of the public within the plume exposure pathway EPZ within 15 minutes of the notification by the licensee of local and State officials." This staff expectation, an excellent example of regulation by footnote, is quite arbitrary, with no evidence of a supporting

analysis to indicate that such stringent measures are necessary, or for that matter possible to achieve. Indeed, laying aside the lack of necessity, utilities are finding that it is not possible to develop a system that would notify essentially everyone within an area of a maximum of about 314 square miles in as short a time frame of 15 minutes. The staff has made it clear that it is looking to the use of sirens, tone alerts, etc., and would not accept what is described as the "Paul Revere" system.

Notification of the public in the event of a release of radioactivity serious enough to require sheltering or evacuation is a very important element of emergency preparedness. Recognizing that:

1. The present arbitrary staff requirement may not be implementable;
2. State and local officials have the ultimate control of such notification and should have a strong voice in determining the requirements;
3. The Federal regulatory responsibility for the activity now rests with FEMA, which understandably has not yet had the opportunity to develop and analyze appropriate requirements; and
4. The Commission has indicated the present rulemaking is of an interim nature, and further rulemaking could be anticipated;

we believe that this issue should be set down for separate rule-making action. The matter is far too important to be lost in the shuffle of the present rulemaking. In addition, it might be appropriate for such rulemaking to be a joint FEMA-NRC undertaking. To this end, KMC, Inc. is planning to petition the Commission for separate rulemaking and to request a public hearing on this issue.

Additional Comments on Proposed Appendix E

Consistent with the comments offered on proposed §50.33(g), §50.47, §50.54(s)(t)(u) & (v), the following additional comments are offered on the proposed Appendix E.

1. The footnote in "I. Introduction" references NUREG-0610 as guidance to applicants. NUREG-0610 is in a separate comment process, and has not yet been considered by the Commission. Since the disposition of this report has not been determined, it should not be referenced in Appendix E. Furthermore, such reference flies in the face of the NRC's avowed disposition not to develop such prescriptive regulations.

2. The footnote in "II. Preliminary Safety Analysis Report" repeats the discussion on Emergency Planning Zones proposed in §50.33(g). The footnote is redundant and should be deleted in Appendix E, or at least made consistent with the final version of §50.33(g).

3. A modified Alternative B of Section II.C should be selected over Alternative A. Alternative B properly outlines the considerations relating to protective measures that are appropriate for the construction permit stage of review. However, at the PSAR CP stage of review it is not necessary nor possible to provide "procedures by which these measures are to be carried out." The requirement for such procedures should be deleted in the final rule.

4. In Section III., "The final Safety Analysis Report," the Commission should adopt Alternative B since this paragraph more accurately reflects the NRC review to be undertaken of the elements of the FSAR as required in Section IV.

5. In Section IV.D, "Notification Procedures," paragraph 2 should be revised as follows:

2. Provisions shall be described for the yearly dissemination to the public within the plume exposure pathway EPZ of basic emergency planning information, methods of notification, and the protective actions planned if an accident occurs, as well as a listing of local broadcast network that will be used for dissemination of information during an emergency.

Information relating to the possibility of nuclear accidents is gratuitous in the context of emergency planning and should not be required by regulation. Information on the potential human health effects of such accidents and their causes is the subject of ongoing Federal, if not international, debate and there is

no present Federally accepted information package available that could be provided to the public by licensees. The dissemination of such information is clearly a Federal prerogative.

6. Also in Section IV.D, paragraph 3 should be revised as follows:

3. Administrative and physical means, and the time required, shall be described for alerting and providing timely instructions to the public within the plume exposure pathway Emergency Planning Zone.

Previous comment has detailed the reasons for deleting the footnote relating to the expectation of 15 minute notification. In addition, the last sentence of this paragraph should likewise be deleted. The thought that "it is the applicants' responsibility to ensure that such means exist, regardless of who implements this (public notification) requirement" has no place in this (or any other) regulation. There will need to be acceptable State/local plans, they will be reviewed under the responsibility of FEMA, and alerting will be an element of these plans. This issue is adequately and appropriately covered in the proposed regulation. The fact that the NRC may not have direct authority in such matters should not be indirectly stated in the manner chosen in paragraph 3.

7. Section IV.F, "Training," speaks to the need for joint test exercises. Alternative A suggests a frequency of three years, and Alternative B suggests five years. Previous staff guidance has recommended five years, and this appears to be consistent with many licensee and State planning activities. There does not appear to be any identifiable benefit for increasing the frequency from 5 years to 3 years; thus, Alternative B (5 years) should be adopted.

The rule should be clarified regarding the scope of the exercises. The proposed rule speaks to testing as much of the emergency plans as is reasonably achievable without involving full public participation. The use of the word "full" implies that, for example, less than 99% may not be acceptable. The Commission does not have that in mind, but it could raise questions in the hearing process. Since there is no requirement in the proposed rule for public participation, the word "full" should be deleted from this section of Appendix E.

An additional clarification is required regarding the establishing of definitive performance criteria and for the formal critiques. In both cases, the phrase "by the participating authorities" should be added. That appears to be the intent of the rule, and it should be stated clearly.

The proposed Section F would require an initial joint exercise within one year of the effective date of this amendment. However, the State and local authorities might not have appropriate upgraded emergency plans developed and capable of implementation within the presently targeted six months time period from the effective date. In some cases, particularly involving local planning, the time period may be even longer. It would be consistent to allow about a year from the implementation date of the plans before a joint exercise would be required. For standardized treatment, however, it would be appropriate to set that time limit at 18 months from the effective date of the rule to provide an adequate period in which to develop the joint exercise program.

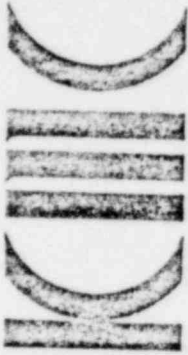
There is a final consideration in Section F of great significance in some instances. The five (or three) year frequency for joint drills is based on one facility -- one group of local authorities -- one State situation. However, some states have several reactor sites, or they are within the EPZ's of States with a particular reactor site. Such States could conceivably be involved in joint exercises of one kind or another every few months over the five year (or three) period. In such situations it would be appropriate to allow the State some leeway in meeting the requirement for participation, perhaps on the order of a limit of three exercises in any five year period.

Taking into account the above, the last two paragraphs of Section F should be revised as follows:

The plan shall describe provisions for the conduct of yearly drills and exercises to test the adequacy of timing and content of implementing procedures and methods, to test emergency equipment and communication networks, and to ensure that emergency organization personnel are familiar with their duties. Such provisions shall specifically include participation by offsite personnel as described above as well as other State and local governmental agencies. The plan shall also describe provisions for a joint exercise involving the 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 public participation. Definitive performance criteria shall be established by the participating authorities for all levels of participation to ensure an objective evaluation. This joint Federal, State, and local exercise shall be:

1. for presently operating plants, initially within 18 months of the effective date of this amendment and once every five years thereafter.
2. for a plant for which an operating license is issued after the effective date of this amendment, initially within 18 months of the issuance of the operating license and once every five years thereafter.

For those States with multiple reactor sites, or States adjoining other States with reactor sites, participation by the State in no more than three such joint drills shall be required in any five year period. All training provisions shall provide for formal critiques by the participating authorities in order to evaluate the emergency plan's effectiveness and to correct weak areas through feedback with emphasis on schedules, lesson plans, practical training, and periodic examinations.



March 14, 1980

DR. DONALD F. KNUTH
President

Mr. Robert G. Ryan, Director
Division of Radiological Emergency
Preparedness
Federal Emergency Management Agency
1725 I St., N.W.
Washington, D.C. 20472

Dup of
8004250071

Dear Mr. Ryan:

KMC, Inc., in cooperation with over 20 utilities participating in its Coordinating Group on Emergency Preparedness Implementation, is developing comments on FEMA-REP-1, NUREG-0654 ("Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Powerplants") in response to FEMA's and the NRC's notice in the Federal Register, 45 FR 9768, February 13, 1980. Copies of the comments will be forwarded to you as soon as they are completed, and will also be filed with the Office of the Secretary of the NRC.

The utilities in the Coordinating Group have, of course, been deeply involved with all aspects of upgraded emergency preparedness considerations over the last year, and have carefully followed, individually and collectively, all of the activities of the NRC in this area. KMC has, among other things, provided comments to the NRC on its Advance Notice of Proposed Rulemaking and the Proposed Rule, attended the regional meetings and many of the site review meetings on emergency planning, prepared a detailed analysis on NUREG-0610, and petitioned the Commission for a separate rulemaking proceeding on the issue of the 15-minute public warning in the event of a Site or General Emergency. As a consequence of this involvement, and our experience with the evolving emergency preparedness requirements, we have become quite concerned over the unilateral fashion the NRC has adopted in dealing with this problem. Utility views, as well as advice and opinions from State and local officials (the true experts with the real responsibility for emergency response), have just not been accommodated in the development of the present emergency preparedness regimen. One "bright light" we have seen is FEMA's comments to the NRC on the Proposed Rule.