



Nuclear Safety Oversight Committee

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January 8, 1981

Enclosed is a copy of the Nuclear Safety Oversight Committee's latest report to the President. Should you have any questions about it, please call me at (202) 653-8468.

Steven Ebbin
Executive Director

Enclosure



Nuclear Safety Oversight Committee

January 5, 1981

The Honorable Jimmy Carter
President of the United States
The White House
Washington, DC 20500

Dear Mr. President:

You have asked us to review the status of emergency planning and response measures in the vicinity of nuclear power plants. This report, prepared in response to your request, reviews efforts under way by the Nuclear Regulatory Commission (NRC) and the Federal Emergency Management Agency (FEMA) and makes suggestions for overall improvement in the management of radiological emergencies.

Prior to the accident at Three Mile Island, emergency planning was a neglected subject, particularly in its off-site aspects. Since then, industry, the federal regulatory agencies, and state and local governments have undertaken substantial efforts to correct these deficiencies. Although many of these efforts are just under way, we believe that they will result in considerable improvements in emergency preparedness at all levels.

This letter addresses three essential matters which appear to us to require additional effort:

- 1) On-site accident response by the Nuclear Regulatory Commission.
 - 2) The development of criteria to guide the Nuclear Regulatory Commission in making protective action recommendations to state and local officials.
 - 3) The intergovernmental structure of off-site planning and response.
1. Emergency Response by the Nuclear Regulatory Commission.

The disorganized response within the Nuclear Regulatory Commission to the Three Mile Island incident has been well

documented. In response to these deficiencies, the Commission has now prepared an Incident Response Plan (NUREG-0728) spelling out how it will respond to future radiological emergencies. The Incident Response Plan is generally responsive to the lessons of Three Mile Island. It clearly designates the Chairman to act on behalf of the Commission during an emergency, it delineates and allocates other emergency responsibilities throughout the organization, and it establishes a "Director of Site Operations" responsible for on-site management and coordination.

Although the Incident Response Plan authorizes the Chairman to delegate emergency management authority to the Director of Site Operations, it does not provide guidelines for when and how such delegation power should be used. At Three Mile Island, the lack of clarity on this point ultimately led to direct Presidential intervention to designate an on-site director. We believe that NRC response to major power plant accidents should be centered on-site as much as possible and that, in any event, the Commission would be well advised to develop, in advance of the fact, a clear philosophy of delegation to an on-site director.

A related issue is the degree of direct supervision which NRC should exercise over utility actions during the course of the accident. To date, the Commission has addressed this controversial and complex issue only by two short paragraphs entitled "spectrum of roles" in NUREG-0730, specifying four degrees of progressive involvement as "monitor only," "advisory," "limited direction," and "assume management."

These four categories of escalating NRC involvement are not accompanied by principles suggesting how much intervention is appropriate in a given emergency. We have previously adverted to the high risk involved in outside intervention in utility management in the course of an accident. There may be highly unusual situations in which direct intervention by NRC in utility management is justified; however, we believe that without guidelines, the categories "limited direction" and "assume management" could become an invitation to over-involvement in accident management by the Commission and its staff.

2. Protective Action Issues.

The ultimate use of an off-site emergency plan is to guide implementation of protective action against actual

or potential releases of radiation. In a radiological emergency, the Commission must be prepared to assess the accident and to make sound recommendations to state and local officials concerning sheltering, evacuation, respiratory protection, use of radio-protective drugs and other protective actions.

While there has been much attention to the mechanics of emergency planning, there has not been sufficient consideration of what protective action advice is warranted in given emergency situations. For example, there is evidence that sheltering may be preferable to evacuation in some cases for the duration of plume passage, yet there is little indication that scenarios for protective action advice are being worked out.

The experience at Three Mile Island suggests that protective action advice will not be coherent unless federal, state, and local officials have developed in advance a common vocabulary and mutual understanding of what protective actions are needed at various emergency levels. While NUREG-0610, Draft Emergency Action Level Guidelines, does address these issues with guidelines for the lower range of radiological emergencies, it provides no guidance whatever for larger emergency scenarios.

The use of potassium iodide as a thyroid blocking agent also illustrates our point. Nearly two years after Three Mile Island, there is still no uniform federal guidance on use of potassium iodide. The absence of a federal policy recommending either for or against the use of potassium iodide is the least satisfactory alternative of all. In the absence of federal guidance, some states and utilities apparently are stockpiling potassium iodide without clearly developed plans for its public use. The large scale stockpiling of potassium iodide without thoroughly developed plans for its distribution and use is a half measure that could have dangerous implications for public order during an emergency. Conflicting advice, imprecise publicity regarding availability, or faulty distribution schemes could, in the worst case, contribute to panic response by the public.

We therefore believe it to be important for you to instruct the Executive branch to formulate promptly a clear policy advising for or against use of potassium iodide by the public. Our advice is that federal policy should recommend against use of potassium iodide for the general

public until such time as: (1) research has been carried out to clarify the source term for iodine releases thereby demonstrating the need (with respect to which we are communicating with you separately), and (2) clear and convincing plans have been formulated to demonstrate how potassium iodide can be effectively distributed and made available for use when needed. We recognize that while potassium iodide is a highly effective thyroid blocking agent, our concern is its misuse by our uninformed public in inappropriate circumstances.

3. Off-Site Planning and Response.

The Federal Emergency Management Agency has authority to coordinate federal agencies in the non-technical aspects of off-site response. FEMA's preliminary master plan, dated September 30, 1980, sets out an unexceptionable general coordination plan for off-site response by the various federal agencies including the Department of Energy, the Environmental Protection Agency and the Department of Health and Human Services.

The FEMA master plan, however, is still not matched with implementation plans and consistent procedures from the other federal agencies. It appears to us that the task of interagency coordination at the federal level has become mired in ritualistic paper procedures. We therefore recommend to you that all federal agencies identified in the FEMA master plan be given deadlines to produce direct and uncomplicated descriptions of their roles in a radiological emergency and demonstrate that they have established adequate communication links with FEMA. Unless the emergency response by the various Federal agencies is well coordinated, it will not be possible to render the most effective advice and assistance to the states.

State and local governments bear primary responsibility for off-site response, including public notification, advising protective action, and executing protective measures such as evacuation. Off-site emergency planning and response is complicated by the unique intergovernmental nature of such efforts, requiring coordination by multiple units of state, and local governments. Moreover, neither NRC, FEMA, nor any other federal agency exercises direct jurisdiction.

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Both NRC and FEMA regulations require that emergency plans be exercised as a condition of licensing and that periodic exercises be held thereafter. Periodic exercises are, in our opinion, an important means of assuring a higher level of emergency preparedness.

We have reviewed the exercise held in August, 1980, prior to the licensing of North Anna Unit Two. A number of substantive deficiencies appeared in the exercise, the most important of which were communication link deficiencies and lack of adequate local government participation. We recognize that this exercise was the first of its kind and that some divergence from the requirements of NUREG-0654 was probably inevitable. We believe that the planning requirements of NUREG-0654 are overly prescriptive in some areas and suggest that FEMA should, in the future, sort the wheat from the chaff, concentrating on priority items while leaving less critical details to be worked out in an evolutionary manner by the participants.

In many states the process of emergency planning is complicated by unclear statutes and confusing delineation of responsibility among the various levels of state and local governments. While this matter is not a direct Federal responsibility, we believe it is a subject that needs much more attention. We recommend that you request the Advisory Commission on Intergovernmental Relations to study the intergovernmental management of emergencies and make recommendations to the states for legislative changes.

In the final analysis, the ability of hundreds of adequately prepared local officials to act and interact effectively is more important than all the paper that can be generated in advance of the emergency. The federal government should therefore play a strong role in training and technical assistance to state and local governments. While FEMA and its predecessor agencies have rendered a great deal of assistance to the states, we believe the Congress should provide FEMA with additional resources for training and technical assistance.

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We would be happy to provide whatever assistance you may desire in following up the recommendations set out in this letter.

Respectfully,



Bruce Babbitt
Chairman



John Deutch
Committee Member



Marvin Goldberger
Committee Member



Harold Lewis
Committee Member

BB:kae