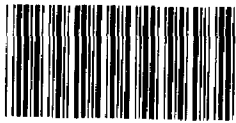


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STATEMENT OF
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ENERGY AND MINERALS DIVISION
BEFORE THE
SUBCOMMITTEE ON ENVIRONMENT, ENERGY AND NATURAL RESOURCES
HOUSE COMMITTEE ON GOVERNMENT OPERATIONS
ON
[EMERGENCY PREPAREDNESS AROUND NUCLEAR POWERPLANTS]

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Mr. Chairman and Members of the Subcommittee:

We welcome the opportunity to be here today to discuss emergency preparedness around nuclear powerplants. On March 30, 1979, we issued a report 1/ to the Congress in which we concluded that areas around nuclear facilities should be better prepared for emergencies. The recent accident at the Three Mile Island nuclear powerplant near Harrisburg, Pennsylvania, underscores the need for sound nuclear emergency preparedness at all governmental levels.

Forty-three States have sizable fixed nuclear facilities within their boundaries. These facilities include 70 commercial nuclear powerplants, and a number of Federal military and nuclear materials production and research reservations. Another 165 nuclear powerplants are being built or planned. The greatest danger from a nuclear accident at one of these

1/"Areas Around Nuclear Facilities Should Be Better Prepared for Radiological Emergencies," EMD-78-110, March 30, 1979.

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facilities is the release of radioactive material into the environment. In the event of an offsite release, public health is threatened in two ways; first, people near the facility can receive unsafe levels of radiation either externally or by breathing-in radioactive material, and secondly, radioactive fallout can contaminate food and water supplies.

Of course, many factors, including weather conditions, wind direction, and the geography of the area, would determine the path of the release and extent of the health hazard. If the analysis indicates a hazard exists, prompt actions are necessary to protect the public from overexposure. These actions may include evacuating and sheltering the public as well as administering medical help and curtailing access to contaminated areas. Actions to prevent or minimize indirect exposure may include controlling access to contaminated foodstuffs and decontaminating foods. Choosing the response that provides maximum health protection for an endangered public is not an easy task. Generally, a number of decisions must be made in a short time with, often times, limited information.

The Nuclear Regulatory Commission (NRC) regulates commercial nuclear powerplants. NRC requires utilities to develop, and test at least annually, onsite emergency plans. These plans must include measures for carrying out the emergency phase of a potential offsite release. The emergency phase involves assessing the situation and initiating the appropriate protective action. Promptly notifying responsible

State and local officials is the most important step. NRC considers the protection phase--evacuation and sheltering --the responsibility of State and local authorities. In the event of an emergency, therefore, the level of protection afforded people living around nuclear powerplants largely depends on (1) the utility's promptness in notifying State and local authorities, and (2) these authorities' response capabilities. We believe this is where emergency preparedness begins to break down. For example, State and local officials we talked to were not confident they would receive prompt notice or be prepared to respond.

We share this lack of confidence. At nuclear powerplants we visited utilities appeared prepared to respond to releases of radioactive materials contained within plant boundaries. However, State and local government planning and preparedness cast doubt on whether effective actions would be taken to protect the public should a significant release extend offsite.

The remainder of my testimony will concentrate on three major areas.

--First, too little attention has been given to insuring that State and local governments develop comprehensive nuclear emergency plans before nuclear powerplants begin operating, and test these plans after plants begin operating.

--Second, emergency planning zones around nuclear powerplants are too small.

--Third, people living near nuclear powerplants are not well informed of potential hazards or emergency procedures.

TOO LITTLE ATTENTION GIVEN TO DEVELOPING
AND TESTING EMERGENCY PLANS

Forty-one States have some type of peacetime nuclear emergency plan and five States are developing or planning to develop plans. Of the 41 States with nuclear emergency plans

--only 9 have tested plans in full-scale drills;

--sixteen have had drills involving some, but not all, people who would be expected to respond to an emergency; and

--the remaining 16 have not tested their plans.

Problems found with plans that were tested indicate that an untested plan would probably be ineffective in handling an emergency situation.

State emergency preparedness

NRC has the primary responsibility for assisting State and local governments in developing nuclear emergency response plans. NRC provides guidance and assistance and formally reviews State plans. When NRC is satisfied that a plan meets its criteria, a formal letter of concurrence with the plan is issued. This is a cooperative process; NRC has no authority to either require States to develop plans or disapprove State plans. At the time we prepared our report, NRC had given its concurrence to 10 State nuclear emergency plans and was

reviewing another 10 plans. Eighteen States with operating commercial nuclear powerplants did not have NRC concurred-plans. Recently NRC concurred in 2 of the 18 States' plans.

To obtain a comprehensive picture of State-level nuclear emergency preparedness we sent questionnaires to each State, the District of Columbia, and Puerto Rico and asked them to assess their preparedness. Forty-one said they have some type of nuclear emergency response plan and five said they are developing or planning to develop such plans. Twenty-seven of the 41 respondents with plans said they were prepared, 5 said they were not, and 9 rated their preparedness as borderline. Only about one-half believed they had adequate resources in the areas of equipment, communications facilities, and trained personnel; while about three-fourths stated that they had satisfactory emergency operations centers. Although 41 respondents said they had nuclear emergency plans, only 9 have tested them in full-scale drills, while 16 have had partial tests. None of the 26 States with operating nuclear powerplants considered themselves unprepared, although 7 rated their preparedness as borderline.

We believe it prudent to resolve all aspects of emergency preparedness before nuclear powerplants begin operating. We recommended that NRC allow nuclear powerplants to begin operating only where State and local emergency response plans meet all of NRC's planning criteria. In commenting on a draft of our report, NRC disagreed, stating its belief that

State and local nuclear emergency plans are not essential in determining whether nuclear powerplants can be operated without undue risk to public health and safety. Public statements by NRC Commissioners since the Three Mile Island nuclear accident indicate that NRC's position on the issue may be changing.

Local government emergency preparedness

States have primary responsibility during the cleanup phase of a peacetime nuclear emergency. States may play a limited role during the initial emergency because their resources and personnel are generally located too far away to start immediate protective measures. Thus, local authorities are initially responsible for protecting public health and safety within their jurisdictions. They are not, however, always prepared to handle nuclear emergencies.

Although local authorities are generally expected to be the first to respond to a nuclear accident with an offsite release, they usually do not have the expertise or capabilities to determine whether any health hazards might exist. Basically, local authorities depend on NRC to provide them with such information, ^{but} NRC has not always advised local authorities of the potential health hazards, ^{or} of the roles local authorities would be expected to play in responding to a nuclear emergency at a commercial nuclear facility.

We noted that while some local authorities in the vicinity of commercial nuclear powerplants were prepared for

handling nuclear emergencies, others were not. For example, neither the State nor local authority near one powerplant had evacuation plans even though the utility considered evacuation to be the primary offsite emergency protective measure. In other cases, local governments with nuclear emergency plans had not tested them. Testing their plans would, ~~we believe,~~ improve emergency preparedness. Where tests have been made areas identified as needing improvement included

- inadequate communication between the various agencies participating in the test,
- confusion regarding responsibility and authority for coordinating and implementing emergency measures, and
- inadequate offsite radiological monitoring procedures.]

In our report, we recommended that before NRC permits a commercial nuclear powerplant to begin operating, it should require license applicants to make agreements with State and local governments assuring their full participation in annual emergency tests over the life of the facility.

EMERGENCY PLANNING ZONES AROUND COMMERCIAL
NUCLEAR POWERPLANTS ARE TOO SMALL

Emergency planning zones around nuclear powerplants are much smaller than the area that could be affected by a large radiological release. The zones are usually areas within 5 miles or less of powerplants and are not based on carrying out emergency actions to protect the public. As a result, nuclear emergency plans and procedures developed on the basis

of such criteria are not adequate in overall coverage to comply with Environmental Protection Agency (EPA) recommendations for taking nuclear emergency protection actions.

In November 1978, a joint EPA and NRC task force recommended that emergency planning zones around nuclear powerplants be increased to about 10 miles. Based on a review of potential accidents at nuclear reactors, the task force believed this to be the most likely area where immediate emergency actions, such as evacuation, might have to be taken for large accidental releases. We believe NRC should adopt this recommendation as a minimum. NRC's staff told us that the recommendation is currently out for public comment.

THE PUBLIC SHOULD BE BETTER INFORMED
OF EMERGENCY PROCEDURES

The success of all emergency planning depends on public reaction to the information and directions provided if a radiological release at a fixed nuclear facility threatened public health and safety. It can be expected that the public's response will be no better than its understanding of the hazards and its preparedness to take recommended protective actions. We found that people living in areas near nuclear powerplants could be better informed of the potential hazards or the actions that might be necessary to avoid or minimize exposure. While some local emergency agencies have attempted to encourage dispensing this type of information, public interest has not been great. In addition, utilities

could also arrange for greater distribution of information to the public.

We believe a serious weakness in assuring the overall preparedness of nuclear emergency response planning results from the absence of some requirement for public information about the (1) potential hazards present at nuclear facilities, (2) emergency response required to cope with a nuclear emergency, and (3) protective measures that can be taken to minimize or avoid public health effects. Without some prior knowledge of what to expect and what to do, the public may not react quickly or as cooperatively as the situation demands. Dissemination of such information would require a coordinated effort on the part of Federal, State, and local authorities, and perhaps utilities.

In our report, we recommended that NRC require that the people living near nuclear facilities be provided with information about the potential hazard, the emergency actions planned, and what to do in the event of an accidental radiological release.

CONCLUSION

While my testimony discusses emergency preparedness deficiencies around nuclear powerplants, our report also identifies problems with the nuclear emergency response plans at Department of Energy and Department of Defense facilities. In fact, we believe that the personnel at these Government facilities, and the State and local governments which may

be affected, are generally less prepared to respond to nuclear emergencies than at commercial nuclear powerplants.

The Federal Emergency Management Agency (FEMA), established on April 1, 1979, brings together the Federal responsibilities for peacetime and wartime emergency planning. This new agency is to serve as a single point of contact for State and local governments for Federal emergency planning and preparedness. The new agency does not, however, automatically assume the primary policymaking and coordination role for radiological emergency response planning. NRC will retain its responsibilities for assisting State and local governments to develop plans for responding to emergencies around nuclear facilities unless FEMA assumes this responsibility through administrative action.

While we recognize that NRC has an important role in emergency response planning around commercial nuclear powerplants, we believe that as the focal point for Federal emergency planning and preparedness activities, FEMA--not NRC--should make policy and coordinate radiological emergency response planning as a part of its overall emergency planning and preparedness activities. Thus, in our report we recommended that FEMA:

--Assume the responsibility for making policy and coordinating radiological emergency response planning around all nuclear facilities.

--Broaden radiological emergency planning assistance
to State and local governments around Department of
Defense and Department of Energy nuclear facilities.)

We understand that FEMA is now considering our recommendations.

Mr. Chairman, this concludes my testimony. I would be
pleased to respond to your questions.