



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

MAY 19 1980

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50-32D

Mr. E. Mikofalvy
142 Brunswick Drive
Avon Lake, Ohio 44012

Dear Mr. Mikofalvy:

This is in reply to your letter of April 2, 1979, to President Carter about nuclear power plants. I am sorry for the long delay in responding, but we have been very busy with the aftermath of the Three Mile Island accident.

The Nuclear Regulatory Commission is committed to protect the public health and safety. The TMI accident resulted in a need for changes in the approach to safety. The Nuclear Regulatory Commission has found that actions recommended by its own staff and by the President's Commission on the Accident at Three Mile Island in the areas of human factors, operational safety, emergency planning, nuclear power plant design and siting, health effects, and public information are necessary and feasible. Interim measures have been taken, and under review is an Action Plan that will include new or improved safety objectives, detailed criteria for their implementation, and various implementation deadlines. An additional containment structure that you suggested is not considered necessary or feasible.

You asked how to know what news is important and what safety precautions to take in case of a nuclear emergency. It is important to rely on the State and local authorities designated to handle such an emergency. The responsible organization in the State of Ohio is the Disaster Services Agency, Adjutant General's Department, 2825 West Granville Road, Worthington, Ohio 43085. Before obtaining information applying specifically to Ohio, you may be interested in the enclosed copy of a booklet from the Pennsylvania Emergency Management Agency on "What You Should Know About Nuclear Radiation Incidents."

Sincerely,

A handwritten signature in black ink, appearing to read "Harold R. Denton".

Harold R. Denton, Director
Office of Nuclear Reactor Regulation

Enclosure:
As stated

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**EMERGENCY
INFORMATION**



**What You Should
Know About Nuclear
Radiation Incidents**

Commonwealth of Pennsylvania
PENNSYLVANIA EMERGENCY
MANAGEMENT AGENCY
HARRISBURG, PENNSYLVANIA

Fellow Pennsylvanians:

This booklet, concerning the hazard of a nuclear power plant incident, is being released for two reasons. First, the public is not as well informed about nuclear power and the nature of radiation as it is about other dangers such as floods or tornadoes. Second, the public living near nuclear power plants needs to know that there are protective measures available to ensure their safety if an incident occurs.

Heretofore, the likelihood of a serious accident occurring at a nuclear power plant was thought to be very small. The recent incident at Three Mile Island changed that. The Commonwealth of Pennsylvania believes it has a responsibility to publish the basic facts and to inform people of the measures they could be advised to take.

The Pennsylvania Emergency Management Agency has comprehensive plans which are kept current describing actions to be taken in the event of an emergency. It works in close coordination with elements of the Federal, State, county and local governments to provide for the protection of life and property and the maintenance of health and safety.

Sincerely,
William W. Scranton III
Lieutenant Governor
Chairman, Pennsylvania Emergency
Management Council

PURPOSE OF THIS BOOKLET

This booklet is about nuclear power plants. It tells what the effects of a nuclear power plant incident could be and what you should do to protect yourself.

WHAT IS A NUCLEAR POWER PLANT INCIDENT?

A nuclear power plant incident is the abnormal release by a nuclear power plant of radioactive material to the surrounding countryside.

HOW LIKELY IS AN INCIDENT?

The chances of a serious nuclear power plant incident occurring are remote compared to the threat of natural and other accidental disasters such as floods, tornadoes and hazardous chemical spills. Nevertheless, the Commonwealth believes that citizens should know what to do if a serious nuclear power plant incident occurs.

WHAT ARE THE HAZARDS?

A variety of industrial plants pose some hazard to the public. Usually these hazards affect only the people who work in the plants, but sometimes the general public living near industrial plants are threatened by fires, explosions, and the escape of harmful liquids or gases. People living near nuclear power plants face a similar risk.

A nuclear power plant, like many industrial plants, releases water vapors from its cooling towers everyday. This water vapor is not radioactive and should cause no concern. Nuclear power plants also release

small quantities of radioactive materials into the air and water under controlled conditions. These planned releases are normal and in harmless amounts. They are monitored on a continuing basis by the plant and by Commonwealth agencies.

If a nuclear power plant incident occurs, there could be a release of a large quantity of radioactive material into the water or into the air. If there is an abnormal release of radioactive material into the water, those communities downstream of the plant will be notified to stop pumping water until the radioactive material has passed by. If there is an abnormal release of radioactive material into the air, protective action you should take will depend upon the size of the release and prevailing weather conditions.

The duration of the hazard from a nuclear power plant incident could be several hours or several days depending upon the seriousness of the incident. The area affected



could also vary from a few feet from the plant to a several square mile area surrounding or downwind from the plant. The hazard posed would be in the form of radiation given off by radioactive materials that could be emitted in abnormally large quantities in a nuclear power plant incident.

WHAT IS RADIATION?

There is nothing new or mysterious about radiation. All of us are exposed to radiation every hour of every day of our lives; radiation from the sky in the form of cosmic rays and from natural radiation in rocks and minerals. We breathe and eat very small amounts of radioactive materials without even knowing it. For more than half a century, doctors and scientists have worked with X-rays and other forms of penetrating radiation with much medical and scientific benefit.

How does radiation affect us? Think how sunlight behaves. In the northern part of the world, the winter's slanting sun rays seldom cause sunburn, but the hotter rays of the summer sun often do. Still, just a few moments in midsummer sun will not give you a tan or cause burning. You have to stay in the sun's direct rays for some time to get burned. What's more, bad sunburn on the face and hands may hurt, but it won't seriously harm you. On the other hand, burning over your whole body can make you very sick.

Somewhat in this way, the harm that can come to you from radiation will depend upon the nature and power of the rays and particles that strike you, upon the length of time you are exposed to them, upon



how much of your body surface is struck by them and upon how much radioactive material you breathe or ingest into your body. A large dose of radiation is more damaging than a small one. The same dose received over a short period of time is more damaging than if it is received over a longer period. Unborn and very young children are more sensitive to radiation than are older children and adults.

Animals, including farm animals, can also be affected by radiation. Farm crops, garden vegetables and other living plants are much more resistant to radiation. Plants are only affected by very high doses.

HOW IS RADIATION DETECTED?

Radiation can not be detected through any of the senses, but it can be detected with the aid of instruments designed for that purpose. Experts using these instruments are continually monitoring radiation levels around nuclear power plants. If a nuclear power plant incident occurs, this monitoring will be increased to obtain accurate information for all areas that might be affected. Official information on radiation

levels in your area and what actions you should take will be provided to you.



HOW CAN YOU PROTECT YOURSELF FROM RADIATION?

There are two sound, simple and effective steps you can take to protect yourself if a nuclear power plant incident occurs. These steps will help reduce potential radiation exposure.

One step is taking cover or going to shelter (which means going indoors). Should a small puff of radioactive material rise from the plant and move fairly quickly away, people within a predictable area downwind from the plant may have to go indoors and remain there until the cloud passes and the hazard no longer exists. Emergency TV and Radio broadcast messages relating to the need for people to go to shelter, or "take cover", will be addressed to individuals in the area concerned. They will also contain specific instructions as to what you should do for your own self-protection.



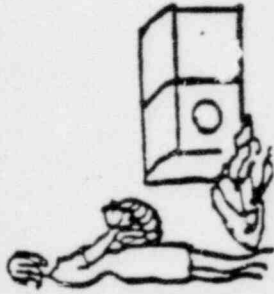
Should you be directed to go to shelter, there will be several things you need to do when you get there.

Close all outside doors and windows and leave them that way. This will help to keep out any radioactive materials which may be outdoors. Also, turn off air intakes.



Efforts should be made to keep radioactive materials from getting inside your body. If you have just come in from outside, wash your face and hands, particularly before you handle or eat any food. Pre-

ferably, take a shower and wash any clothes you were wearing while in the radiation area. If small amounts of radioactive materials happen to have gotten on your face and hands, washing will rid you of them and will help to keep you from breathing in or swallowing any of the materials. Every effort should be made to keep radioactive materials from getting inside your body where they sometimes can do most harm.



Take precautions with food. Immediately cover up or put in your refrigerator any "open" foods not in covered containers. This will keep any radioactive materials which might seep into the house from contaminating foodstuffs. It will be safe to eat or drink anything in cans, bottles or other sealed containers.



Keep your radio or TV turned on and listen for further emergency instructions. Don't use the telephone—leave all lines open for emergency communications.

Stay in your place of shelter until you receive official notice that it is safe to go out. Special arrangements will be made by local officials to take care of school children and hospital patients. Others not at home should take the best available shelter.

The second step you may be advised to take is evacuation. In the event that larger amounts of radioactive materials escape over a prolonged period, it may be necessary for people to move out of the area and stay out until advised to return.



If it is necessary to evacuate an area, notice of need for the action will come to you primarily by radio or television. Here, too, the message will be addressed to those people in the area and will include any special instructions which might be called for by the particular situation.

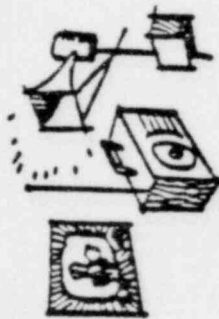
Again, special arrangements will be made

to take care of school children, the sick, and the disabled.

The procedures here will not be very different from those followed during a flood alert when people may be advised to evacuate their homes for a period of time until the danger from flood waters passes.

HOW WILL YOU LEARN OF A NUCLEAR INCIDENT?

How will you find out about an incident and what will you be asked to do? Should there be need for you to go to shelter or evacuate, you will be notified of the fact by radio and television broadcasts and by other means. The message—repeated as often as necessary—will be broadcast by local stations, operating on their regular frequencies.



The incident could occur at night or other times when many are not regularly listening. To get the attention of those who do not have their sets turned on, the first emergency broadcast message will be preceded, or shortly followed by a public sounding of an "Attention Signal" on local sirens, horns or whistles. That long, steady blast—not a wailing or warbling signal—will last for three to five minutes. It will

mean, "Turn on your radio or television set and listen carefully!"



To make sure that everyone concerned "gets the word" emergency broadcast messages relating to shelter or evacuation will be repeated at frequent intervals. In addition, State and/or local police and fire departments and other agencies will act to help "spread the word". This may be accomplished by the use of sound trucks, bullhorns or even a knock on your door. When you receive alert information, a knock on your neighbors' doors will help to assure that everyone "gets the word".

Don't use the telephone to try to get emergency information. That seldom will bring results and it could tie up lines urgently needed for emergency operations aimed at your protection.

Always remember these key facts:
If you hear the Attention Signal, Turn on your radio or TV set.
Don't use the telephone.



HOW WOULD RESPONSE TO A NUCLEAR INCIDENT BE MANAGED?

Each nuclear power plant licensee is required to develop an emergency plan to cope with any incident, however remote. Detailed plans have also been developed by State, county and local government to protect people living within the vicinity of the plant. If a nuclear power plant incident does occur, your government officials will act to minimize the consequences to you and your family.



However remote the possibility of an incident, the Commonwealth believes it has a responsibility to publish the basic facts and to inform people of the measures they could be advised to take.

**WHAT TO DO
IN A NUCLEAR
POWER PLANT INCIDENT**

In case of a **take cover** alert do the following:

1. Remain indoors; close all windows and doors; turn off fans and air conditioning.
2. Tune to your local radio or television station to await further instructions.
3. Do not attempt to call your friends and neighbors; this might tie up telephone lines which should be kept open.

In case of an **evacuation** alert do the following:

1. Close all doors and windows; turn off stoves, heaters, fans and air conditioning.
2. Tune to your local radio or television station to await further instructions.
3. Do not attempt to call your friends and neighbors; this might tie up telephone lines which should be kept open.
4. When instructed to do so, leave the area calmly in your, or your neighbor's private vehicle on the routes designated.
5. If you do not have transportation call your local civil defense director or police department and transportation will be provided.
6. If you do not have a place to go outside the area, a place will be provided for you in an evacuation center.

IMPORTANT TELEPHONE NUMBERS

Local Civil Defense Director _____
Local Police Department _____
Local Fire Department _____

1st NRC

142 Brunswick Dr.
Avon Lake, Ohio 44012
April 2, 1979

Mr. J. Carter, President
White House
Washington, D. C.

Dear Mr. Carter,

There are three things I want to write to you about:

1. Unfortunatly, most people, including myself, don't know enough about nuclear power. Those things can cause the most worry. I know that my advice about nuclear power plants doesn't mean much but would it help to build another structure, even another cylinder, with all the known safety equipment around the three existing cylinders in Pennsylvania? It would probably be very expensive, but if it could save some lives, it would be worth it.
2. How is one to know what news is important? Most news is treated pretty much the same.
3. In case of a nuclear emergency, could you please tell me the safest precautions my family can take? Where should they go and for how long? What should they do, if anything?

A concerned citizen.

Respectfully,



E. Mikofalvy