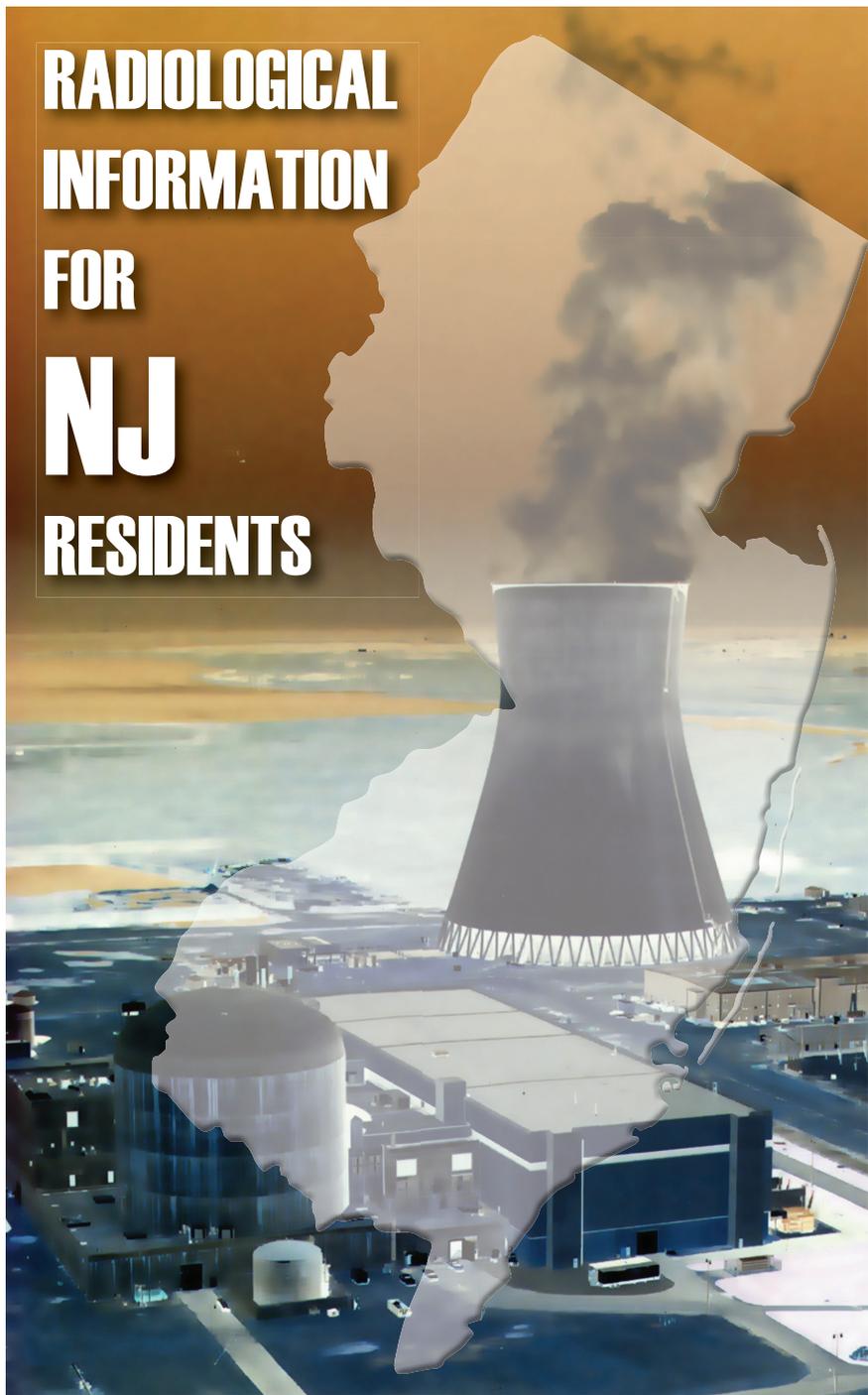


**RADIOLOGICAL  
INFORMATION  
FOR  
NJ  
RESIDENTS**



*This brochure is for all New Jersey residents, but especially those who live more than ten miles from a New Jersey nuclear power plant, do not receive the utility's annual information, and do not receive the Farmer's Brochure. This brochure describes:*

- ▶ *how food and water can become contaminated;*
- ▶ *what steps were taken during and immediately after the incident to prevent contamination or further contamination;*
- ▶ *how the safety of food and water supplies will be ensured; and*
- ▶ *what you can do to protect yourself and your family.*

***During nuclear power plant events:***

If you have additional questions about the safety of the food and water supplies after reading this brochure and listening to the information being broadcast on television and radio or in the newspapers, please call **1-800-792-8314** (Public Inquiry line).

***For Non-Emergencies, please refer to the following:***

[www.ready.nj.gov](http://www.ready.nj.gov)

NJ Office of Emergency Management

P.O. Box 7068

West Trenton, NJ 08628-0068

609-963-6900, ext. 6738

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# CONTAMINATION AND ITS EFFECTS

## *What is radiological contamination and why is it harmful?*

- ▶ the presence of radiation where it does not belong
- ▶ releases energy that may damage the body

Radiological contamination is the presence of radiation where it does not belong. It is harmful to living beings, including people, animals and plants, because radiation can give off energy which may damage the body. The amount of damage that the energy can cause depends on its strength, how much is present, how far away it is from the body, how long the contamination is on or near the body, and how far that particular type of energy can penetrate the body.

## *How can food or water become contaminated?*

- ▶ by direct contact with radioactive material
- ▶ by taking the contamination in

Food or water becomes contaminated when it comes in contact with radioactive dust or debris. For plants and animals, the contamination can be on the surface, taken up by the plant or animal, or both. We may be affected by eating contaminated food.

## *If a plant or animal is contaminated, wouldn't it die?*

- ▶ many plants and animals are less sensitive than people are to radiation's effects

Not necessarily. Most plants and animals are less sensitive to radiation than humans are; that is, they can tolerate a higher amount of radiation and not become ill or show any effects. They may, however, be dangerous to consume. This is why the precautions and the testing described in the rest of this brochure are important and necessary.

# WHAT HAS ALREADY BEEN DONE TO PROTECT THE PUBLIC

*How do you know what areas are contaminated?*

- ▶ through state, county and federal testing

## **FOR A NEW JERSEY POWER PLANT INCIDENT:**

During the release of radiation from the nuclear power plant, the New Jersey Department of Environmental Protection will send field monitoring teams out to measure the amount and types of radiation being released. The counties also have staff that can measure radiation, and they work with the Department of Environmental Protection in the initial monitoring phase.

As soon as possible after the radioactive release ends, the United States Department of Energy sends a fixed winged aircraft over the area suspected to be contaminated. The aircraft has equipment on board which measures the radiation that is deposited on the ground, and maps this radioactive “footprint.” The Department of Environmental Protection verifies the location of the “footprint” and continues to monitor the environment through field sampling.

All of these measurements, whether on the ground or by aerial measurements, tell us not only where the radiation can be found, but which areas are free from contamination.

## **FOR AN OUT-OF-STATE POWER PLANT INCIDENT:**

During the release of radiation from the nuclear power plant the state has field teams measuring the amount and types of radiation in the environment. This information is shared within New Jersey Department of Environmental Protection and with the New Jersey Office of Emergency Management as it becomes available.

As soon as possible after the radioactive release ends, the United States Department of Energy sends a fixed winged aircraft over the area suspected to be contaminated. The aircraft has equipment on board which measures the radiation that is deposited on the

ground, and maps this radioactive “footprint”. The Department of Environmental Protection verifies the location of the “footprint” and continues to monitor the environment through field sampling.

All of these measurements, whether on the ground or by aerial measurements, tell us not only where the radiation can be found, but which areas are free from contamination.

***How are New Jersey residents given information about the incident?***

- ▶ the news media
- ▶ State Public Inquiry Line (1-800-792-8314)

The NJ Governor’s office and the NJ Office of Emergency Management ensure that all information regarding the nuclear accident, including the presence of contamination and on issues of food safety, are publicized in a number of different ways. The media is the primary source of information to the public; however, people should be cautious when watching television, listening to the radio, or reading the newspapers. Official sources should be quoted, and information should be understandable.

If you are ever uncertain about the information given, or if you hear conflicting advice, contact the state’s Public Inquiry Line 1-800-792-8314. The state’s Public Inquiry Line is set up at the New Jersey State Police Headquarters early on in the event. It is staffed by State Police employees who receive accurate and current information about the event. They can also refer your call to the appropriate agency whenever necessary.

***What precautions have been taken early in the incident to prevent contamination of the food supply?***

- ▶ animals were placed on stored feed
- ▶ traffic was diverted during the release

When the nuclear power plant or the state believes that a radioactive release could occur, farmers downwind of the nuclear plant are told to bring their dairy animals inside. Farmers receive this information

through messages broadcast over the Emergency Broadcast System. Farmers are also advised not to allow animals to graze, eat uncovered feed, or drink water from uncovered sources. The animals are to be placed on stored feed and covered water supplies. This is especially important for dairy animals because radioactive iodine (one of the contaminants which might be released from the nuclear plant) can concentrate in milk.

If radiation was released from the plant before the message to bring animals inside was broadcast, or if the farmers did not have time to take all the precautions advised, animals may have received some contamination. New Jersey will test the food products from these animals before they are marketed. The testing is described more fully in the next section.

Also, once the release begins, traffic is diverted to prevent the transportation of food products through areas where it may become contaminated.



# WHAT WILL BE DONE AND IS CURRENTLY BEING DONE TO PROTECT THE PUBLIC

## *Will all food supplies be tested immediately?*

- ▶ milk tested immediately and regularly
- ▶ other products just prior to market

The first product which is tested is milk. Milk testing begins as soon as the State identifies areas with radioactive contamination, as described earlier. Testing of milk from farms in contaminated areas will continue until the milk is safe.

All other food supplies will be tested as close to market time as possible. This is because radiation on the plant or animal might decay or be washed away by rain. An early test might have a higher level of radiation than if the product is tested just prior to harvest or market. On the other hand, a plant or animal could absorb contamination from the soil or from its food over time. A radiological measurement taken earlier could have lower levels of radiation than one taken at harvest time.

## *Why does milk get such a high priority in testing?*

- ▶ radiation in milk can injure a child

Radioactive iodine might be one of the contaminants released from the nuclear power plant. Iodine that is deposited on grass and eaten by grazing cows can concentrate in their milk. Children are the primary consumers of milk, and radioactive iodine may damage a child's thyroid. This makes it very important to prevent or reduce exposure of the cows to radioactive iodine, and to keep contaminated milk from the market. This is why farmers are advised to shelter dairy animals as early as possible during the incident. The prevention of exposure of radioactive iodine to dairy cows was described on page four.

### ***Who decides what food is safe, and how?***

- ▶ the Governor, with state and federal guidance and advice

The Governor of the State of New Jersey makes all decisions on the safety of the food supply of New Jersey residents. He is advised by the New Jersey Departments of Agriculture, Environmental Protection, and Health, and the State Office of Emergency Management. Recommendations are made based upon results obtained by laboratory testing conducted by the Department of Environmental Protection. The test results are compared to guidance given by the federal government, including the United States Department of Agriculture, the Food and Drug Administration, and the Environmental Protection Agency.

### ***How is the public informed of these decisions?***

- ▶ the media
- ▶ Public Inquiry line (1-800-792-8314)

As described earlier, the Governor's office and the State Office of Emergency Management ensure that all information regarding the nuclear accident, including issues of food safety, is publicized.

### ***What will happen to contaminated food, water or milk?***

- ▶ may be released for use, held, or condemned

Depending on the type and amount of radiation, food will be released to market, held for radiological decay, or condemned. Food which is not contaminated, or has very low levels of radiation (that are not expected to cause adverse health effects) may be released to the market. This means they will be processed and sold in the normal manner.

At the other end of the spectrum, food with high levels of contamination will be condemned and destroyed in a safe manner.

Food products with intermediate levels of contamination (which vary according to the kind of food and the type of radiological contamination present) may be held in storage. They will be stored

until the radiation levels decrease (decay) to a natural, or background level. Food will be held for decay if all of the following conditions are met:

- 1) the radioactivity will decay in a short period of time (before the food is spoiled or past its shelf life);
- 2) there are facilities which can process or hold the contaminated product; and
- 3) the Governor approves.

If any of these conditions are not met, the product will be destroyed.

***Will food which is contaminated be mixed with food which is uncontaminated so that it can be sold?***

- ▶ it is illegal to mix contaminated and uncontaminated foods

No. The Food and Drug Administration prohibits the mixing of contaminated foods with uncontaminated foods, no matter what the source of contamination.

***How safe is it to hunt or fish in the area?***

- ▶ information will be posted
- ▶ contact your County or State Game Warden or the State Public Inquiry line before hunting or fishing

Hunting and fishing areas which were or have the potential for radiological contamination will be monitored periodically. If radiation is found at levels which could affect people using the areas, the areas will be restricted. If contamination is found at levels which would not adversely affect visitors but could be taken up by the wildlife, the animals will be monitored, and restrictions on hunting or fishing will be posted. Fish or game may require monitoring for radiation before they can be brought home or to a butcher.

Migratory wildlife, including game birds, could present a problem outside of the affected area, if the animal became contaminated

and then moved to an unaffected area. Contact your county game warden, or call the public inquiry line if you suspect that the wildlife you hunt has migrated from a contaminated area.

## WHAT INDIVIDUALS CAN DO

*If food is contaminated, can it be made safe?*

- ▶ simple procedures may remove radiation

If the contamination is only on the surface, it is possible that the contamination can be removed by thoroughly washing the surface, or by removing the outer, contaminated layer (such as peeling vegetables or fruit). If food is contaminated internally, but the contamination is short-lived, it may be safe after a certain period of time. This will be determined by laboratory testing. You can get information through the media or the public inquiry line.

In cases where food cannot be made safe, it will be destroyed in a safe manner.

*Should I destroy the food from my garden?*

- ▶ State or local officials will advise you

If you live in an area which had radiological contamination, you will be advised of any general recommendations regarding radiation in your area, including whether or not garden produce is safe to eat. If you are uncertain about the safety of your garden produce, you should avoid eating it until it is tested, or until gardens near yours are tested. If the food is contaminated, you will be given information about decontamination, storage or disposal.

Depending on the type and amount of radiation deposited, you may also be advised on future planting. You may be told to deep plow, or to plant a non-food product for a season, or, as a last resort, your soil may be removed and replaced.

### *Is the food in my house safe to eat?*

- ▶ it will depend upon contamination levels in your home
- ▶ assistance will be provided as determined by testing

If you live in an area which was not affected by contamination, the food in your house will not have any contamination, either. If your area had some contamination, food which was packaged in airtight containers (such as cans or sealed plastic bags) will be uncontaminated. Food in the refrigerator or freezer will also be free from contamination. If radiological contamination is found in your home, you will be given advice or assistance about how to remove the contamination. Usually washing the surface of the package, or the exterior of the refrigerator, with soapy water will remove the contamination. If further steps need to be taken, advice specific to your situation will be provided.

## **OTHER QUESTIONS**

### *If an area has radioactive contamination that can affect the food supply, why is it considered safe for children and pets to live here?*

- ▶ there may be low levels or quickly decaying radiation
- ▶ protective actions may be recommended

Depending upon the amount and type of radiation, people may be told that an area is safe to live in, or they may be temporarily or permanently moved out of the area. These decisions will be based on testing of the area, and residents will be advised accordingly. Wherever necessary, testing will be repeated at appropriate intervals. In areas where contamination is present but no evacuation is required, you may be advised not to grow vegetables for a period of time, not to allow children to play on the lawn, or not to leave pets outside overnight. Some types of radiation decay quickly. If the short-lived forms of radiation are the main hazard, you will be told what precautions are necessary to minimize your exposure to radiation.

### ***Should pregnant women take special precautions?***

- ▶ protective actions recommended will protect the fetus

The actions which are recommended to the public will also protect the fetus. In some instances, homes in which pregnant women reside will receive higher priority in radiological monitoring. Pregnant women should inform their health care providers of the results of any radiological monitoring, and refer all of their health questions and concerns to the health care provider.

### ***What should I do about lawn furniture? the kids' swing set? my swimming pool?***

- ▶ advice will be given based upon testing

Depending on the area you live in, the amount and type of radioactive contamination to your area, and the materials (wood, metal, plastic) which may be contaminated, you may be advised to:

- use your yard as you always did;
- leave everything alone for a short period of time (a few weeks to a month or two) to allow the weather to remove contamination;
- scrub down the surfaces with water and soap or other special product, or
- dispose of your belongings

Your area will be tested for radiological contamination, and advice specific to you will be given as the test results become available.

### ***Who's going to pay for everything?***

- ▶ Nuclear power plant licensees through American Nuclear Insurers

Each nuclear utility in the country is required to contribute to an insurance pool to cover catastrophic events. This insurance fund will pay for all documented and covered expenses, including relocation expenses, lost wages, crop loss, and clean-up. Information on how you can file a claim can be obtained from the media, or by calling the public inquiry line.



