

# EMERGENCY PREPAREDNESS BROCHURE

Palisades Power Plant

ALLEGAN, BERRIEN AND VAN BUREN COUNTIES



**IMPORTANT INFORMATION!**  
**READ AND SAVE THIS BROCHURE**

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## SUMMARY AND INDEX



If you hear a steady siren of three to five minutes, tune to a local Emergency Alert System (EAS) radio station for instructions. The primary EAS radio stations for this area are WCSY-FM (103.7) and WQLQ-FM (99.9). The sirens may be used for many types of emergencies. See page 4 for more information.



If you are told to take shelter, stay indoors and close all vents, windows, and doors. More information on this and other precautions can be found on page 5.



If an evacuation is ordered, there would be time for you to leave the area safely. Be prepared – know what to bring, where to go, and possible routes to take on page 31. Plans for the evacuation of schools have been made and are discussed on page 6.



The area within 10 miles of the Palisades plant is the primary emergency planning zone. This is shown on the map on page 9. In an emergency, officials might order actions to be taken within this area.



For information on special provisions for functional needs individuals, see page 7. If you would need special help during an emergency, fill out and mail the card in the brochure.



If there is an accident at the Palisades Power Plant, announcements would be made as to how serious it might be and what the effects on the public might be. For more information on this and facts about radiation, see pages 7-8.



If you are a farmer, food processor or food distributor, this section describes actions which may be necessary to protect the food supply, how you will be notified in an emergency and who to contact for more information. See pages 10-15.

## BEING PREPARED

Please take the time to read this information now. It tells you what you should do in case of an emergency at the Palisades Power Plant in Covert Township. Make sure that all members of your family understand what it says. Talk it over with your neighbors and friends. Some of them may need your help, or you may need theirs. If you know someone who is blind or does not read well, please review this information with them. The best way to be safe in an emergency is to know ahead of time what to do and to help each other. Being prepared means being informed, so please read and save this brochure.

## SAFE & SECURE

Our highest priority at Palisades is to operate our nuclear facility safely and securely. Palisades has put in place layers upon layers of security, with multiple safety systems and emergency back-ups.

## CLEAN ENERGY

Palisades provides reliable and virtually carbon-free electricity. Nuclear power is the single largest contributor to the nation's voluntary program to reduce carbon emissions. The performance gains made by the U.S. nuclear power plants in the past decade have amounted to about half of the voluntary carbon reductions achieved so far by all industries.

## POWERING MICHIGAN

Palisades generates 800 megawatts of reliable electricity, enough to power 800,000 homes in Southwest Michigan.

## COMMUNITY GIVING

The 800 megawatts of safe, clean and reliable electricity generated at Palisades each day powers more than Southwest Michigan homes. To proud Michiganders like us – your friends and neighbors at Palisades – it's equally important to give back to our communities. Through our corporate and foundation giving, we strive to improve the quality of life in Southwest Michigan.

## FOR FURTHER INFORMATION

*For more information, call or write:*

### **Van Buren County Office of Domestic Preparedness**

205 S. Kalamazoo Street  
Paw Paw, MI 49079  
(269) 657-7786  
(269) 657-3101 (Sheriff's Office – 24 Hours)

### **Berrien County Emergency Management**

2100 East Empire  
Benton Harbor, MI 49022  
(269) 983-7141 x4915  
bcoem@berriencounty.org

### **Allegan County Emergency Management**

3271 122nd Avenue  
Allegan, MI 49010  
(269) 673-0571

### **Entergy Palisades**

Palisades Communications Department  
27780 Blue Star Memorial Highway  
Covert, MI 49043  
(269) 764-2333  
www.palisadespower.com  
Twitter: @PalisadesEnergy  
Facebook: EntergyPalisades

## WHAT TO DO IF YOU HEAR THE SIRENS

If you hear the sirens, go indoors. Do not call 911. Tune to a local radio or television station. Emergency broadcast messages telling you what to do would be repeated often.

Early warning of a weather emergency, nuclear power plant accident or other emergency requiring you to act would be made by sounding the sirens. These are located in a 10-mile area around the Palisades plant, as required by the U.S. Nuclear Regulatory Commission (NRC) and the Department of Homeland Security/FEMA. The sirens can be sounded by the Covert Township Fire Department, the South Haven Police Department or the Can Buren County Sheriff's Office.

### PUBLIC WARNING (STEADY SIREN)

A steady siren sound lasting from three to five minutes is a warning of a weather emergency, nuclear power plant accident, chemical spill or other emergency.

The Public Warning System sirens do not have public address capability. If the sirens sound, tune to one of the local radio or television stations listed below for emergency information.

*The sirens are tested at noon on the second Saturday of every month. If the siren closest to you does not work during the monthly test, or if you hear something unusual, please call your local police or sheriff's office.*

If the sirens should sound accidentally, the local radio stations would be able to broadcast that.

#### RADIO STATIONS WHICH WOULD PROVIDE EMERGENCY INFORMATION INCLUDE:

WCSY-FM 103.7	WCXT-FM 98.3
WQLQ-FM 99.9	WYTZ-FM 97.5
WSJM-FM 94.9 and WSJM-AM 1400	WIRX-FM 107.1

#### TV STATIONS WHICH WOULD PROVIDE EMERGENCY INFORMATION INCLUDE:

WNDU TV	WBND TV
WSBT TV	WSJV TV
WOOD TV	WWMT TV
FOX 17	

The Emergency Alert System radio and television stations would broadcast special telephone numbers where you could call with problems or questions. The stations would continue to broadcast emergency information until the emergency is over.

Avoid unnecessary calls to emergency numbers (police, fire, hospital, etc.). These lines must be kept clear for true emergency needs.

### WHAT KIND OF INFORMATION YOU WOULD RECEIVE

In case of an accident at the Palisades plant, you would be advised if you needed to take shelter or evacuate. Official instructions and information would be given through the Emergency Alert System on the radio and on television. (See above for specific stations)

## WHAT TO DO IF YOU ARE TOLD TO STAY INDOORS (Shelter in Place)

- Keep calm. Panic is your greatest enemy in any emergency.
- Do not evacuate unless an order is given. Keep the following items together in a safe, easy-to-get-to place: your important papers, checkbook, credit cards, bank account information, emergency cash, cell phone/charger, extra keys, first aid kit, prescription medicines, emergency pet kit, portable radio, flashlight and extra batteries.
- Stay indoors (shelter in place).
- Close all windows and doors. Turn off fans and air conditioners. Bring your pets inside.
- Listen to local Emergency Alert System radio stations for instructions.
- If your building has a basement, take a radio and go there.
- If you must go outside to warn a friend or family member, limit your time outdoors. You might be advised to cover your mouth and nose with a cloth.
- Use the telephone only if absolutely necessary.

## WHAT TO DO IF YOU ARE TOLD TO EVACUATE

- Stay calm. Listen for information over local Emergency Alert System radio stations. If you are in the evacuation area, listen for instructions on the route to take. **Do not call 911.**
- Gather up:
  - o A change of clothing
  - o Two blankets or a sleeping bag for each person
  - o Toilet articles (soap, toothbrush, toothpaste)
  - o Medical supplies (first-aid kit, medicine, prescriptions)
  - o Special baby formulas or food
  - o Pet supplies
- Have a plan for your pets. Keep in mind that currently, reception centers will only accept pets if they are service animals. Make arrangements to stay with relatives, friends, or a pet-friendly hotel outside of the area. Remember to bring your emergency pet kit that includes food, water, dishes, medicines, leashes, tags, and vet records.
- Turn off small appliances and faucets. Turn down the furnace, if it is on, and turn off the furnace fan. Be sure all air conditioners and fans are turned off. Lock all windows and doors.
- Get into your vehicle and go directly to a reception center and register. Reception Center locations would be announced over the Emergency Alert System radio stations listed above. Follow the evacuation routes to the nearest Reception Center and register so family and friends will know where you are. After you have registered you may go to stay with friends or family who live outside of the affected area.

Exit routes would be announced over EAS radio stations. Police would help direct traffic during an evacuation. If you have room in your car, take neighbors or friends who need a ride.

*There would be no need to rush. You would be more likely to get hurt by rushing than by exposure to radiation. Remember, if there was an emergency at Palisades, you would be given plenty of time to take needed action.*

During your absence, police would make sure your property was protected. Only authorized people would be allowed in the evacuated area.

## WHERE TO GO

If an evacuation is ordered, you should follow routes (See map on page 9) which would be announced on the radio. The actions you should take would depend on the nature of the emergency and the weather. You should drive to your Reception Center. Possible Reception Centers Include:

### VAN BUREN COUNTY

#### **Gobles High School**

409 N State St.  
Gobles, MI 49055

#### **Paw Paw High School**

30609 Red Arrow Hwy  
Paw Paw, MI 49079

### BERRIEN COUNTY

#### **Berrien Springs High School**

201 Sylvester Ave  
Berrien Springs, MI

#### **Berrien Springs Middle School**

502 Middle School Drive  
Berrien Springs, MI 49103

### ALLEGAN COUNTY

#### **Fennville High School**

4 S. Memorial Dr.  
Fennville, MI 49408

#### **Otsego High School**

550 Washington St  
Otsego, MI 49078

## IF YOU NEED A RIDE

You may be able to get a ride from a neighbor. If this is not possible, stay inside your home. Make sure that all doors, windows, and air vents are closed. Listen to local emergency broadcast radio and TV stations. A telephone number would be announced over Emergency Alert System radio stations for you to call if you need a ride.

Individuals with functional needs who would need a ride in an evacuation should fill out the form at the end of this brochure now and mail it to the address shown on the form or fill out the form on the app or website. In an emergency, those who have mailed in a form would be picked up at their homes by local emergency workers. **This form should be updated every year.**

## WHAT TO DO IF YOUR CHILDREN ARE IN SCHOOL

Go to the Temporary Host Facility for the school that your child attends. Be sure to use only those roads identified by authorities. Students from South Haven, St. Basil's and St. Paul Lutheran schools would be taken by bus to Fennville (formerly Anna Michen) Middle School in Fennville. Students from Covert School would be taken to Hartford High School. Students from Bangor, BISD Behavioral Education Center (Bangor), and Wood schools would be taken to Bloomingdale High School. Students from Watervliet North Elementary School would be taken to South Elementary. Students from Coloma Intermediate School, Coloma Elementary School and Salem Lutheran Preschool would be taken to Coloma High School. Both students and parents could then choose to stay at a congregate care center until the emergency is over.

## FUNCTIONAL NEEDS POPULATION

For temporary shelter, persons with functional needs would be evacuated by emergency workers to a congregate care center. If you are hospitalized or a resident of a special care facility, special arrangements to transfer you to another facility are included in the hospital or facility's emergency plan. **If you have functional needs and might need assistance in the event of an evacuation, please complete the informational questionnaire on page 21 and return it to the appropriate address listed on the questionnaire.**

## NOTIFYING BOATERS, CAMPERS, AND VACATIONERS

Boaters and fishermen should tune to marine radio channel 16 (156.8 megahertz). Boaters would also be warned by local radio stations. Coastal areas would be patrolled. Visitors at Van Buren State Park would be alerted by voice messages through the public address system or through local radio stations, see page 4.

## EMERGENCY CLASSIFICATIONS

One of the four classifications below would be used to describe a nuclear plant emergency. Entergy Palisades would contact federal, state and local authorities in each of the following situations:

1. Notification of an Unusual Event is the least serious of the four warning levels. It means there is a problem at the plant that is being handled by plant workers and does not affect the public. Because of strict federal regulations, some kinds of problems are reported to the NRC and to state and local officials as unusual events even though they pose no danger to the public. The sirens would not be sounded.
2. An Alert is an event that could affect plant safety. Although there is still no danger to the public, county and state officials would begin getting emergency operations centers ready in case the situation gets worse. The sirens would not be sounded.
3. A Site Area Emergency is an event that could possibly affect the public. The sirens may be sounded to alert the public to listen to the emergency broadcast stations for information and instructions.
4. A General Emergency is the most serious of the four classifications. In this situation, state and local authorities would take action to protect the public. The sirens would be sounded. Emergency broadcast stations would give information and instructions. If necessary, some areas could be evacuated.

## FACTS ABOUT RADIATION

Radiation is energy in motion. The form of radiation we are concerned with is "ionizing radiation". This type of radiation is released from radioactive material. It can have enough energy to penetrate living tissue and cause physical and chemical changes within. Radioactive material is all around us. It is in the air we breathe, in the food we eat, and in our homes. It is even in our bodies. Exposure to radiation from these sources of radioactive material is lumped together and called background radiation.

Ionizing radiation also comes from man-made sources. These include medical treatments, X-rays, TV sets and nuclear power plants.

Radiation is measured in units called millirems. The average person receives about 620 millirems of radiation a year from background and medical exposure. Each year we get more radiation from natural sources than we get from nuclear plants. Nuclear power adds very little to how much radiation we get.

#### HOW RADIATION COULD HARM YOU DEPENDS ON:

- The length of time you are exposed.
- How far you are from the radioactive source.
- The amount of your body exposed and which part.
- The amount of radioactive material you breathe or take into your body.

The less radiation you are exposed to, the less chance you have of suffering any harmful effects. If radiation is absorbed by living tissue, it can damage cells. If the damage is slight, or takes place slowly, the body can usually make repairs. But if the damage is great, enough repairs may not be possible, and the health effects could be severe.

#### STATE OF MICHIGAN POTASSIUM IODIDE DISTRIBUTION

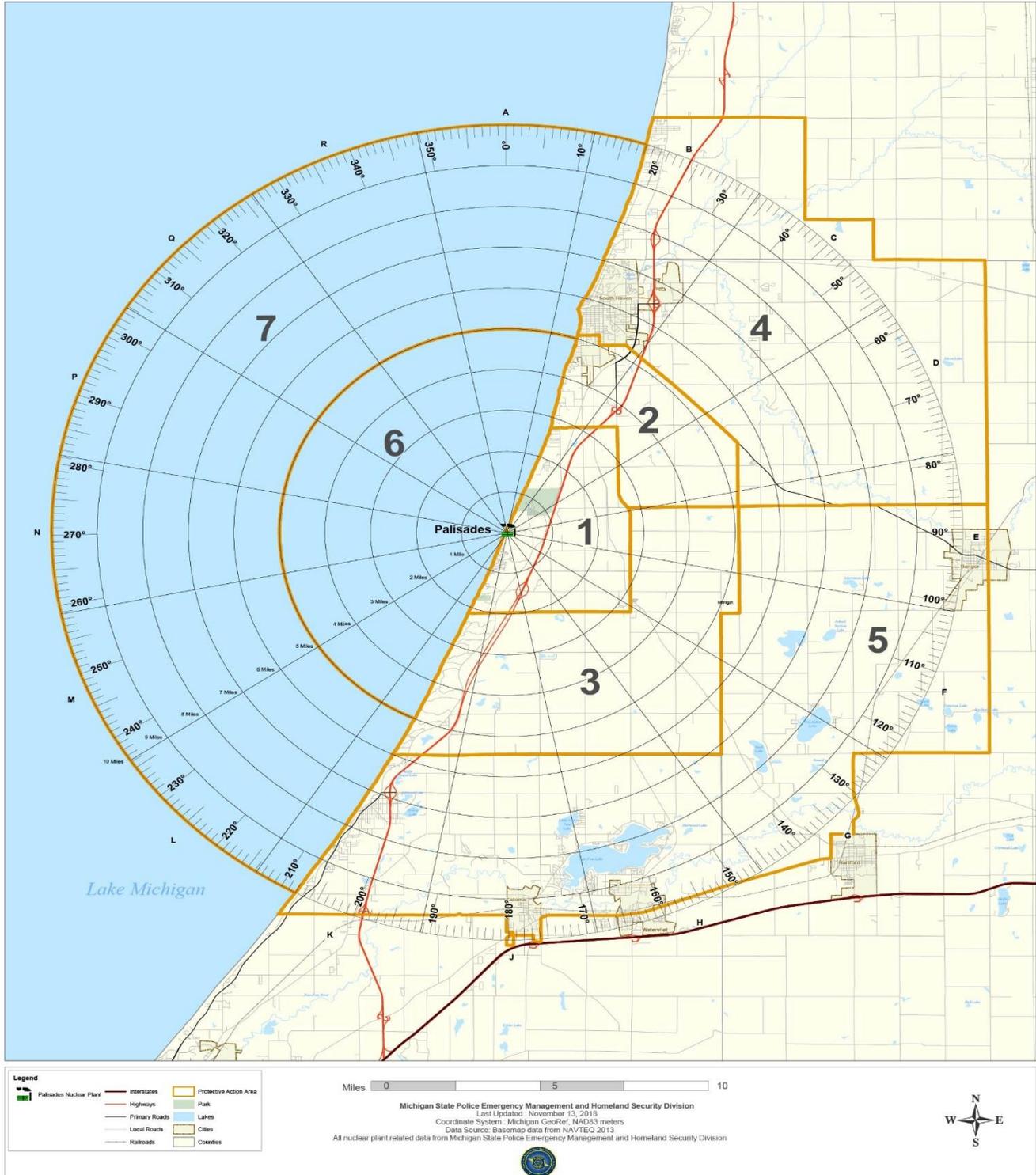
Radioactive iodine (radioiodine) is one of the products that could be released in a serious nuclear power plant accident. Potassium iodide (KI) is a non-radioactive form of iodine that may be taken to reduce the amount of radioactive iodine absorbed by the body's thyroid gland. KI offers protection only to the thyroid gland, and its use would be to supplement evacuation and in-place sheltering.

**Evacuation and in-place sheltering are the primary means of protection in a radiological emergency. State and county officials will use the Emergency Alert System (EAS) to notify the public of the need to evacuate, to shelter, or to take KI. KI is available to person within 10 miles of Palisades through the Michigan Department of Health and Human Services (MDHHS). Distribution of KI is pre-event and a voucher from MDHHS is needed to obtain this. Detailed instructions on the distribution of KI can be found on pages 17, 18 and 19 of this brochure provided by MDHHS and on their website at [www.michigan.gov/KI](http://www.michigan.gov/KI).**

KI should not be used by people who are allergic to iodine. In the event of an allergic reaction, seek immediate medical attention.

# 10 Mile EPZ & Protective Action Areas

Palisades Nuclear Plant



## **NOTICE TO FARMERS, FOOD PROCESSORS, DISTRIBUTORS**

### **PROTECTING THE FOOD SUPPLY DURING A RADIOLOGICAL EMERGENCY**

This portion of the emergency preparedness booklet outlines plans to protect the food supply in the event of an emergency. Information in this section includes the following:

- How you will be notified in an emergency
- Actions which may be necessary to protect the food supply
- Who to contact for more information

### **SUMMARY**

The public could be exposed to radioactive material in several ways following an accident. At first, particles and gases released into the air could be ingested or inhaled directly. Additional exposure could result from the consumption of food or milk contaminated by traces of the material. Farmers, food processors and distributors will be required to take steps to address the matter of food supply contamination. Proper actions will ensure that contamination is minimized or avoided.

If you are alerted to a radiological emergency by warning sirens or some other means, tune your radio to a local station for immediate and continuous emergency information. You may also contact your Cooperative Extension Service agent or the Michigan Department of Agriculture & Rural Development for specific information. Locations and telephone numbers of local Cooperative Extension Service offices are listed on page 15 of this brochure.

Do not destroy any animals, crops, milk, or feed supplies unless directed to do so. The environmental damage caused by an accident may be short-lived. Steps can generally be taken to make a full recovery possible.

### **WHO PAYS FOR LOST OR DESTROYED FARM PRODUCTS?**

Farmers, food processors and distributors could face serious financial losses following a radiological emergency. However, federal law ensures that such losses will be reimbursed. The Price-Anderson Act, enacted by Congress in 1957, requires that the operators of nuclear power plants and certain other nuclear facilities purchase nuclear liability insurance policies for the protection of the public. As a result, no-fault insurance pools are in place to pay claims promptly without lengthy court hearings. Claimants need only prove that the injury or property damage resulted from the radiological emergency. Commercial insurance policies exclude coverage for nuclear accidents because Price-Anderson's provisions make such coverage unnecessary.

### **CONTAMINATION AND RADIATION**

The term "contamination" is used in this portion of the booklet. It means, quite simply, radioactive material where it is not supposed to be. Food, water or air is considered to be contaminated if it contains more or different types of radioactive material than would normally be present. Our bodies, for example, contain very small amounts of the radioactive elements potassium 40, carbon 14 and tritium. However, we are not considered to be contaminated because these elements exist within us naturally. On the other hand, the presence of strontium 90 (a byproduct of nuclear weapons testing) in food, water or air may be indicative of contamination.

“Radiation” refers to the particles and waves given off by radioactive material. The radiation given off by contaminants could be considered harmful if the levels are high enough and the exposure lasts long enough.

### **HOW CONTAMINATION CAN OCCUR**

Dust-sized radioactive particles released into the air during an accident could fall on fruits, vegetables or grains which could enter the food supply and be eaten by the public. For example, dairy cows and goats could eat grasses covered with radioactive iodine 131. Traces of the iodine could be passed through to the milk and then to consumers. Iodine 131 has the potential to concentrate in the human thyroid gland where it could cause thyroid cancer.

### **PUBLIC WARNING PROCESS**

The state of Michigan is responsible for evaluating the severity of a nuclear emergency and ordering actions to protect the public and the food supply. If you live within 10 miles of the Entergy Palisades Plant, your first warning may be the sounding of local emergency sirens. If you hear a siren, turn your radio or TV on and tune it to a local station for immediate information transmitted through the Emergency Alert System (EAS). If you live farther away, your first notification could come from the news media, EAS broadcasts or Cooperative Extension Service official. You may contact the Michigan Department of Agriculture & Rural Development directly if you have questions about a real or potential emergency.

### **DATA COLLECTION HELPS DETERMINE PROTECTIVE ACTIONS**

Following an accidental release of radioactive material, emergency workers from the Michigan Department of Environment, Great Lakes, and Energy and the Michigan Department of Agriculture & Rural Development will collect air, water and soil samples to determine the existence, amount and location of any contamination. Samples of milk, forage, crops and processed foods may also be obtained. Field data and other factors will be used by the state to determine the best course of action to protect the public and the food supply.

Because naturally occurring radioactive materials can always be found in the environment, Entergy Palisades and the Michigan Department of Environment, Great Lakes, and Energy conduct a continuous program of sample air, water, milk, vegetation and animal life near the Entergy Palisades Plant. In this way, they are able to establish a baseline for comparison in the event of an emergency.

The area designated for post-accident environmental sampling could extend as far as 50 miles from the plant site. Specific instructions regarding the collection and testing process will be made available to farmers, food processors and distributors in the affected area by the Michigan Department of Agriculture & Rural Development.

### **SHELTERING IN AN EMERGENCY**

If you are told to take shelter because of an emergency at a nuclear power plant, limit your outdoor activities as much as possible. Refer to earlier portions of this brochure for specific actions you and your family should take for personal protection. Steps to protect the food supply are different and are outlined in this section of the brochure.

## WHAT TO DO IF AN EVACUATION IS ORDERED

If you live within ten miles of the Palisades Power Plant, you could be evacuated from the area in an emergency. If you must leave your animals, be sure to leave enough water and feed to sustain them until they can be cared for again. You may be permitted, at the direction of the state, to reenter the evacuated area temporarily to tend to the needs of your farm. You will receive specific instructions on routes to use, safety precautions and decontamination procedures. Your Cooperative Extension Service agent will be able to provide animal health and feeding guidance.

## PROTECTION OF LIVESTOCK/DAIRY ANIMALS

It is essential that priority be given to protecting dairy animals because radioactive materials can quickly enter the food chain through milk and other dairy products. If sheltering is required, shelter these animals first.

Shelter livestock in covered barns or sheds unless extremely hot weather or other factors make this impossible. Provide your animals stored feed such as hay, silage and bagged grain. Whenever possible, animals should be provided water drawn from wells. Open sources such as ponds, creeks or rivers should be avoided if possible. These protective measures will minimize the amount of radioactive material available to the animals. Since evacuation of farm animals will not normally be possible after a nuclear accident, sheltering and the use of stored feed and well water are the most effective means of limiting contamination.

Poultry are more resistant to radioactive contamination than other farm animals. Since most are raised in confined facilities and receive stored feed and well water, they can be sheltered in their existing structures. If your poultry animals are normally kept outdoors, they should be brought inside if possible.

If animals have been exposed to radioactive particles carried by winds or rain from the accident site, they should be washed with uncontaminated water before being brought into a shelter.

## SAVE YOUR ANIMALS

Do not destroy any animals unless directed to do so by state or federal authorities. Do not slaughter any animals except for immediate food needs. Generally, animals that are exposed to radioactive contaminants and rainwater will survive and may be marketable and safe for human consumption. Do not allow animals to graze in open fields unless so directed by the state of Michigan, your Cooperative Extension Service agent or other governmental official. Governmental officials may restrict the movement of animals and withhold them from the marketplace if they are suspected to be contaminated, until they are assessed to be safe.

## CONTAMINATED FEED

Only in extreme emergencies may contaminated grain or hay be used for feed. If you must use feed which has been identified as contaminated, you may be able to reduce the level of contamination. For example, if the feed was stored outside, the contamination may be greatest at or near the surface of the feed pile. Removal of the top portion may greatly reduce the amount of contamination present.

Do not dispose of contaminated feed or hay because it may be salvageable over time. You should, however, keep it separated from noncontaminated feed supplies and animals so that the contamination is not spread. Contact your Cooperative Extension Service agent for guidance. Governmental officials

may restrict the movement of feed products and withhold them from the marketplace if they are suspected to be contaminated, until they are assessed to be safe.

### **CONTAMINATED MILK AND OTHER FARM PRODUCTS**

If particles of radioactive material are present in large amounts, you may be advised not to use, consume or sell garden produce or animal products until the environment and food products are sampled and assessed by the Michigan Department of Environment, Great Lakes, and Energy and the Michigan Department of Agriculture & Rural Development. The presence of contamination may not mean that all of your crops will be lost. Iodine 131, an element produced in nuclear plants that could be released accidentally, loses half of its radioactivity in eight days. Milk contaminated at low levels by iodine 131 may be converted to powdered milk or cheese and then stored while the iodine's radioactivity diminishes. It may also be usable as animal feed.

Do not destroy food or feed unless spoilage has made it inedible. Generally, contaminated products may be salvageable after adequate time passes and they are properly processed. Your Cooperative Extension Service agent can provide specific information. Governmental officials may restrict the movement of dairy products and withhold them from the marketplace if they are suspected to be contaminated, until they are assessed to be safe.

### **WATER SUPPLIES**

Store as much water as possible for livestock. Cover open wells, tanks and other storage containers to prevent or limit contamination. Close off the intakes from contaminated water sources (ponds, streams or cisterns) to prevent circulation of contaminated water. Generally, water from wells and water heaters should be safe to use.

Unless soils are highly permeable, contaminants deposited on the ground will normally travel very slowly into the aquifer. Contaminants may fall directly onto the surfaces of lakes or rivers where they can infiltrate groundwater supplies. Streams and lake currents can transport contaminants many miles in a few hours.

### **FISH AND MARINE LIFE**

Fish and other marine life raised in ponds, or taken from rivers, streams or lakes may continue to be harvested unless the Michigan Department of Natural Resources, Michigan Department of Agriculture & Rural Development, and Michigan Department of Environment, Great Lakes, and Energy have determined through laboratory analysis of samples that they are contaminated.

### **CROPS IN THE FIELD**

Standing crops should generally be allowed to grow to maturity. The level of radiation exposure to plants that is likely to occur will not affect their growth. Most contaminants will be washed off or will diminish in strength naturally to safe levels during the growing process. If special harvesting procedures are necessary, your Cooperative Extension Service agent will advise you.

Pasture and forage plants usually retain very little radioactive material deposited on them. The extent to which they collect and retain contaminants depends on the amount and type of contaminants involved, foliage characteristics and the amount of rain and wind occurring after the accident. Governmental officials may restrict the movement of agricultural products and withhold them from the marketplace if they are suspected to be contaminated, until they are assessed to be safe.

### **FRUITS AND VEGETABLES IN THE FIELD**

Unprotected plants may have particles of contaminants on their surfaces. Leaves, pods and fruits should be washed, brushed, scrubbed or peeled before eating. Some leafy vegetables may be eaten after removal of the outer layers and a thorough washing.

Ripe fruit and vegetables may be lost through spoilage if high levels of contamination prevent the entry of field workers to harvest them. Those that do not need to be harvested immediately can be salvaged later when the area has been determined to be safe for harvesting.

### **HONEY AND APIARY PRODUCTS**

Honey and bee hives may be sources of contamination if radioactive contamination is detected in the area. Honey and bee hives will be sampled and analyzed by the Michigan Department of Environment, Great Lakes, and Energy and the Michigan Department of Agriculture & Rural Development if contamination is apparent. Contact your Cooperative Extension Service agent for guidance. Governmental officials may restrict the movement of food products and withhold them from the marketplace if they are suspected to be contaminated, until they are assessed to be safe.

### **ROOTS AND TUBERS**

Potatoes, carrots and similar plants can generally be eaten after they are thoroughly washed and peeled to remove soil particles and contaminants.

### **OTHER PLANTS OR WILDLIFE**

Wild plants, such as native herbs, mushrooms, dandelion greens, spearmint, peppermint or wintergreen may have particles of contamination on their surfaces. They should be washed, brushed, scrubbed or peeled before eating.

Wild game, such as deer, rabbit, squirrel, pheasant or partridge, may have ingested contaminants through their normal browse. You may be advised by the Department of Environment, Great Lakes, and Energy and the Michigan Department of Agriculture & Rural Development not to consume wild game until it has been sampled and assessed as safe.

### **WEATHER AND TIME PLAY A PART**

All radioactive materials lose their radioactivity over time. Inert gases released from commercial nuclear plants lose their radioactivity in a matter of minutes, for example. Wind or heavy rain tend to remove radioactive material rapidly from plant surfaces. In some cases, however, hard rain falling on contaminated soil could splash the soil onto plant surfaces, thus increasing the amount of radioactive material on low-standing plants.

### **SOIL RECOVERY**

Several steps may be taken to restore soils contaminated in an accident. Nonuse for a period of time may be required. In a worst-case situation, heavily contaminated soil may require removal and disposal elsewhere. Such a drastic action may not be feasible for large fields but may be appropriate for small plots or areas such as walkways near buildings where frequent human contact is likely. In less severe situations, fiber crops may be planted instead of fruits and vegetables. Deep plowing may be employed to keep radioactive contaminants below the root zone while the radioactivity decays over time. Liming may be used to limit the absorption of specific radioactive elements by crops. The Natural Resources

Conservation Service of the U.S. Department of Agriculture will provide farmers with guidance as to the best means of restoring valuable soils to productive use.

### FOOD PROCESSORS AND DISTRIBUTORS

Following a radiological emergency, governmental officials may restrict the movement of food products and withhold them from the marketplace if they are suspected to be contaminated. These products should not be released until they are considered to be safe for consumption, or until a decision has been made to dispose of them. You will be instructed how to safely handle and dispose of contaminated food products by the Michigan Department of Agriculture & Rural Development.

### COOPERATIVE EXTENSION SERVICE AGENTS

BELOW IS A LIST OF COOPERATIVE EXTENSION SERVICE OFFICES NEAR THE ENTERGY PALISADES PLANT:

Van Buren County  
(269) 657-8213  
Administration Building  
Suite 201  
219 East Paw Paw Street  
Paw Paw, MI 49079

Allegan County  
(269) 673-0370  
3255 122nd Avenue  
Allegan, MI 49010

Berrien County  
(269) 944-4126  
1737 Hillandale Road  
Benton Harbor, MI 49022

### GLOSSARY OF TERMS

**Background Radiation** - Radiation from natural radioactive materials in the environment. Includes solar and cosmic radiation and radioactive materials in the upper atmosphere, the ground, building materials, and the human body. The level of normal background radiation in southwest Michigan is about 100 millirems per year.

**Congregate Care Center** - A public or private building that may be used to lodge or care for evacuees.

**Department of Homeland Security/FEMA** - An agency of the federal government. It is responsible for coordinating state and local

government plans to prepare for, lessen impacts of, and respond to emergencies of any kind.

**Dose** - A term which, when applied to radiation, describes the amount of energy absorbed in body tissue (see millirem).

**Emergency Alert System (EAS)** - This is a national public warning system that allows TV and radio broadcasters, cable television systems, wireless cable systems, satellite digital audio radio service providers, direct broadcast satellite service providers and wireline video service providers to permit state and local authorities to deliver important emergency information such as AMBER (missing children)

alerts, emergency weather information, and specific hazard information, such as for a nuclear power plant emergency, targeted to a specific area.

**Emergency Operation Center (EOC)** - A place where state and local government officials manage the response to an emergency. It is usually a police or sheriff's building equipped with backup power, telephone and radio.

**Emergency Planning Zones (EPZ)** - Two zones around the Palisades plant. The primary EPZ, with a radius of 10 miles, is established to control airborne radiation exposure. The secondary zone, with a radius of 50 miles, has been established to keep people and animals from eating contaminated food. For these two zones, emergency actions could be ordered for your protection.

**Functional Needs** - The needs of an individual who under usual circumstances is able to function on their own or with support systems. However, during an emergency, their level of independence is challenged.

**Joint Information Center (JIC)** - The place where news reporters receive official information on a nuclear plant accident from government and utility officials. Rumor control response and public inquiry information are provided to the public by telephone.

**Millirem** - A unit used to measure radiation doses. It is 1/1,000th of a rem (Roentgen Equivalent Man), a unit of radiation that measures impact on human cells.

**NRC** - U.S. Nuclear Regulatory Commission, the federal agency that regulates the nuclear industry.

**Potassium Iodide (KI)** - A non-radioactive form of iodine that may be taken to reduce the amount of radioactive iodine absorbed by the body's thyroid gland.

**Protective Actions** - Emergency measures that are taken to prevent or minimize radiation exposure.

**Radiation** - Energy in the form of rays or particles which are given off by radioactive material. May consist of alpha, beta or gamma.

**Radioactive Material** - Material that spontaneously gives off energy in the form of waves or particles.

**Reception Center** - A school at least 15 miles from the plant for registration of evacuees and assignment of people to a congregate care center during an emergency.

**Shielding** - Material, such as lead or concrete, used to stop or reduce direct exposure to radiation by blocking it. The building materials of your house could act as partial shielding against direct radiation from a passing radioactive cloud if you were told to take shelter. The greater the amount of shielding between you and the source of radiation, the lower your exposure.

**Temporary Host Facility** - A school used to temporarily hold children who have been evacuated from schools within the 10-mile EPZ.

## MICHIGAN DEPARTMENT OF HEALTH AND HUMAN SERVICES POTASSIUM IODIDE (KI) FACTS

KI is available at no cost to people who live or work within 10 miles of a nuclear power plant in Michigan. This insert explains what KI is used for and how you can get it. Save this page and take the completed voucher (on page 20) to a participating pharmacy for KI.

### WHAT IS KI?

KI (the chemical name for the drug “potassium iodide”) is a non-prescription iodine pill. Iodine is an element that is found in nature and is also an important part of your diet. Because iodine is so important for your health, it is added to table salt. However, the iodine in the KI pill is much stronger than the iodine in table salt. Table salt cannot be used as a replacement for KI.

### HOW DOES KI WORK?

In the unlikely event of a serious accident at a nuclear power plant, radioactive iodine could be released into the air. Like regular iodine, radioactive iodine can be stored in your thyroid gland. This can cause thyroid cancer or other thyroid problems over time. Children are most at risk of thyroid injury from exposure to radioactive iodine. KI protects your thyroid by filling it up with a safe form of iodine so that it can't take in radioactive iodine.

It is important for you to know that KI does not protect your whole body from radioactive material. KI only protects your thyroid gland.

**HOW CAN I GET KI?** Take the voucher to one of the participating pharmacies listed there. The pharmacy will provide you with the amount of KI that you need. Place the KI in a safe, dry location and keep it in its foil packet. You should keep it on hand as part of your emergency supply kit. Be sure to get your KI now. You will not be able to get it from the pharmacy during a nuclear power plant emergency.

### WHEN SHOULD I TAKE KI?

**Take KI only if a “General Emergency” has been declared at the nuclear power plant near you.** If the emergency sirens sound for three minutes or more, tune to your local radio or television station. Follow the instructions given by emergency officials. You may be instructed to shelter-in-place or evacuate. You should only take KI if the radio or TV announcements say that the power plant has declared a “General Emergency”, the most serious type of plant emergency.

If you are told to evacuate and don't have your KI readily available, don't waste time searching for it. Evacuating or sheltering-in-place is the best way to protect yourself from harm due to radiation.

### HOW MUCH KI SHOULD I TAKE?

One dose protects the thyroid for 24 hours. You should be safely evacuated within the 24-hour time.

*If you already have KI tablets from this program, check the expiration date on the box. If it has expired, go to one of the pharmacies listed below to replace your KI with a new supply.*

### PARTICIPATING PHARMACIES:

MEIJER PHARMACIES

1920 Pipestone Rd, Benton Harbor, MI

1223 Phoenix St, South Haven, MI

5019 Red Arrow Highway, Stevensville, MI

5150 S. Franklin, Michigan City, IN

### **USE THE INFORMATION LISTED BELOW TO TAKE THE CORRECT AMOUNT FOR ONE DOSE.**

- Adults over 18 years of any weight including pregnant or breastfeeding women should take two 65 mg tablets.
- Children 12 years to 18 years who weigh at least 150 pounds should take two 65 mg tablets.
- Children 12 to 18 years who weigh less than 150 pounds should take one 65 mg tablet.
- Children 3 years to 12 years should take one 65 mg tablet.
- Children 1 month to 3 years should take 1/2 of a 65 mg tablet, crushed into liquid. (Instructions for crushing and mixing will be provided by the pharmacy.)
- Babies at birth to 1 month should be given 1/4 of a 65 mg tablet, crushed into liquid. (Instructions for crushing and mixing will be provided by the pharmacy.)

### **WHAT SIDE EFFECTS COULD I HAVE FROM TAKING KI?**

Side effects are unlikely when KI is used at the recommended dose and for a short time. Minor side effects can include an upset stomach, skin rash or a metallic taste. An allergic reaction can have more serious symptoms like fever, joint pain, swelling of the face or body or trouble breathing. Severe shortness of breath requires immediate **medical attention!**

### **WHO SHOULD NOT TAKE KI?**

You should not take KI if:

- You are allergic to iodine. A shellfish allergy may not mean that you are allergic to iodine. Talk to your physician or allergist if you have a shellfish allergy.
- You have dermatitis herpetiformis (DH) or hypocomplementemic urticarial vasculitis syndrome (HUVS), very rare skin conditions.

Check with your doctor if:

- You already have a thyroid condition.
- You are unsure whether or not to take KI.

### **HOW DOES THIS PROGRAM APPLY TO BUSINESSES?**

Businesses can obtain KI for their employees, clients, or patients. Businesses with more than 400 employees/clients/patients should call or e-mail the Michigan Department of Health and Human Services (MDHHS) to arrange for delivery of KI. If a business chooses to participate in the program, it is responsible for having a dispensing plan that complies with these instructions. If your business chooses not to participate, you can provide a copy of this insert to your employees so that they can obtain their personal supply of KI.

*For more information go to MDHHS website, [www.michigan.gov/ki](http://www.michigan.gov/ki), call MDHHS at (517) 335-8150 between 8:00 a.m. and 5:00 p.m., or send an e-mail to [mdhhs-ki@michigan.gov](mailto:mdhhs-ki@michigan.gov).*

### **MICHIGAN DEPARTMENT OF HEALTH AND HUMAN SERVICES POTASSIUM IODIDE (KI) VOUCHER**

To get KI, fill out the form on page 20 and take it to one of the pharmacies listed at the bottom. You must live or work within 10 miles of the Palisades plant, be 18 years or older, and provide government-issued photo ID.

**READ THIS INFORMATION BEFORE SIGNING THE VOUCHER. SIGNING THE FORM MEANS THAT YOU AGREE TO AND UNDERSTAND THE FOLLOWING:**

I understand that:

- KI is an over-the-counter, non-prescription drug.
- KI is to be taken only when a General Emergency has been declared at the Palisades power plant.
- KI is NOT a substitute for evacuation or sheltering-in-place. I will follow the instructions of emergency officials.
- KI only protects the thyroid gland from radioactive iodine. It does not protect the rest of the body. In a nuclear power plant emergency, there could be health risks from other forms of radiation.
- Although taking KI is usually safe, it can cause problems in people who have thyroid disease or are allergic to iodine. People who have dermatitis herpetiformis or hypocomplementemic urticaria vasculitis (HUVS), two very rare skin diseases, should not take KI without first talking to their doctor.

**I agree that:**

- I will follow all instructions on how to use potassium iodide (KI).
- I will hold the pharmacy harmless from all liability, claims, suits or actions related to the use, delivery, labeling, and packaging of KI.

**ADDITIONAL INFORMATION FOR BUSINESSES**

- I own or represent the business/institutions named on the next page.
- This business/institution will provide information on dosing and medical contraindications to all employees/clients prior to distributing KI. This information is provided in each box of KI and on the MDHHS website at [www.michigan.gov/ki](http://www.michigan.gov/ki).

*This KI program is run by the Michigan Department of Health and Human Services. If I have questions I can call (517) 335-8150 or send an e-mail to [mdhhs-ki@michigan.gov](mailto:mdhhs-ki@michigan.gov) for more information.*

**MICHIGAN DEPARTMENT OF HEALTH AND HUMAN SERVICES POTASSIUM IODIDE (KI) VOUCHER**

By signing this form, I agree that I have read the information provided in this insert and that I am obtaining KI for people who live or work within 10 miles of the Palisades nuclear power plant.

COMPLETE 1 OR 2:

**1. FOR A HOUSEHOLD**

Your Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ Zip: \_\_\_\_\_

Telephone: \_\_\_\_\_ County: \_\_\_\_\_

Number of people living in your home: \_\_\_\_\_ Ages: \_\_\_\_\_

**2. FOR A BUSINESS**

Name of Business: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ Zip: \_\_\_\_\_

Contact Name: \_\_\_\_\_ Telephone: \_\_\_\_\_

Number of employees/patients/residents/clients: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**PARTICIPATING PHARMACIES:**

**MEIJER PHARMACIES**

1920 Pipestone Rd, Benton Harbor, MI

1223 Phoenix St, South Haven, MI

5019 Red Arrow Highway, Stevensville, MI

5150 S. Franklin, Michigan City, IN

PHARMACY USE ONLY		
# of Boxes dispensed:	Lot#:	Date Dispensed:
Pharmacy Name:		City:

**INDIVIDUALS WITH FUNCTIONAL NEEDS**

If you need assistance, fill out this form, fold in half and mail to the appropriate address listed below.

Date: \_\_\_\_\_

- I am hard of hearing Yes No
- I have impaired vision Yes No
- I am a part-time resident Yes No

(List months of year you are here): \_\_\_\_\_

I am (otherwise disabled): \_\_\_\_\_

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I would need a ride in an evacuation Yes No

Other Special Needs (explain): \_\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_ City: \_\_\_\_\_

Home Phone: \_\_\_\_\_ Cell Phone: \_\_\_\_\_

Any special directions to get to your house?  
\_\_\_\_\_  
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**CARDS SHOULD BE UPDATED ANNUALLY AND SENT TO THE APPROPRIATE ADDRESS**

**IF YOU LIVE IN ALLEGAN COUNTY SEND TO:**

Allegan County Emergency Management 3271 122nd Avenue, Allegan, MI 49010

**IF YOU LIVE IN BERRIEN COUNTY SEND TO:**

Berrien County Emergency Management 2100 East Empire, Benton Harbor, MI 49022

**IF YOU LIVE IN VAN BUREN COUNTY SEND TO:**

Van Buren County Office of Domestic Preparedness 205 S. Kalamazoo Street, Paw Paw, MI 49079