

2014 EPI

emergency preparedness information

PLEASE READ THIS IMPORTANT INFORMATION.
KEEP IT IN A HANDY PLACE FOR READY REFERENCE.

FENOCTM
FirstEnergy Nuclear
Operating Company



Davis-Besse Nuclear Power Plant

For the areas of **Ottawa and Lucas Counties**



2014 EPI

emergency preparedness information

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DEAR RESIDENTS

This brochure contains important information you will need if there is an emergency at the Davis-Besse Nuclear Power Plant. That should not happen, but you need to be prepared. This brochure also provides important information that you can use for other kinds of man-made or natural emergencies.

In a Davis-Besse Nuclear Power Plant emergency there might be danger from radiation. Too much radiation can be harmful to your health. If a serious accident occurs, you might need to leave the area. Response plans are explained in this brochure; they were written by the groups listed on this page.

This information is important – please read it carefully. Discuss it with your family, friends, and neighbors. They may need your help, or you may need theirs. If you know someone who is blind, read this brochure to them. Emergency information also is in your local telephone book.

Remember that the best way to stay safe in an emergency is to know what to do. Stay calm and help each other. This brochure is designed to help you.

Keep this brochure in a handy place for ready reference. Also, emergency information is available in the Ottawa and Lucas County Frontier telephone directories.

This emergency preparedness information can also be found on your county emergency management website.

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**Ottawa County
Emergency Management Agency**
315 Madison Street
Port Clinton, OH 43452-1936
419-734-6900
[http://www.co.ottawa.oh.us/
ottawacoema/index.html](http://www.co.ottawa.oh.us/ottawacoema/index.html)

**Lucas County
Emergency Management Agency**
2144 Monroe Street
Toledo, OH 43604-7122
419-213-6503
www.co.lucas.oh.us
lucascountyalerts.com

**Ohio Emergency
Management Agency**
Ohio Department of Public Safety
2855 West Dublin Granville Road
Columbus, OH 43235-2206
614-889-7150
www.ema.ohio.gov

**Davis-Besse
Nuclear Power Plant**
Emergency Response Section
5501 North State Route 2
Oak Harbor, OH 43449
www.fenoc.com

Emergency Information

YOU MAY HEAR SIRENS SOUND

When you hear an emergency siren, **turn on your radio or TV**. Sirens will be heard in the area around the Davis-Besse Nuclear Power Plant. You also may be warned by loudspeakers used by local fire and police departments (see page 4).

Note: Sirens may be used during any emergency, such as tornado, severe weather, or chemical spill.

LISTEN TO YOUR RADIO/TV

The radio and TV stations listed below will carry Emergency Alert System messages that will tell you about the emergency. It may be a flood, tornado, or nuclear plant emergency. The message will tell you what to do.

Check on your neighbors too; especially the elderly or those who have difficulty seeing or hearing. Make certain they have received the message and know what to do. Be sure they are listening to their radio or TV.

EMERGENCY ALERT SYSTEM STATIONS

FM RADIO STATIONS

- WRVF Toledo 101.5 FM
- WIOT Toledo 104.7 FM

TELEVISION

- WTOL-TV Toledo Channel 11
- WTVG-TV Toledo Channel 13
- WNWO-TV Toledo Channel 24
- WBGU-TV Bowling Green Channel 27
- WGTE-TV Toledo Channel 30
- WUPW-TV Toledo Channel 36

COUNTY ALERT SYSTEMS

Individuals signed up to receive Ottawa County WENS and Lucas County Alerts will receive a notification.

WEATHER RADIOS

Weather radios are another means of learning about emergency conditions. They are available from local electronic stores. Many different models are available, but tone alert models are recommended for those who wish to purchase the radios. These radios are designed to activate if there is a weather emergency and for an emergency at a nuclear power plant. It is important that owners of these radios tune to their Emergency Alert System station upon hearing the tone on the weather radios.

For additional information, see the National Weather Service website on the internet at: www.nws.noaa.gov/nwr.

IF TOLD TO EVACUATE

If told to evacuate, collect the things you will need (see list on page 6). Drive away from the location of the emergency. If you need a place to stay, go to a reception center (see list on page 11). If you do not have a car, get a ride with a friend or neighbor, or go to a pick-up point and a bus will come for you (see page 11).

Children who attend relocating schools will be taken to designated facilities outside the evacuation area. You can pick up your child at one of these designated locations (see page 12).

When the sirens sound

YOU MAY HEAR A SERIES OF THREE MINUTE SIREN SOUNDINGS

HOW WILL I KNOW WHAT TO DO?

SIREN TESTS

Areas around the Davis-Besse Nuclear Power Plant have emergency sirens. The outdoor sirens will sound if there is a recommendation for the public to take protective action such as shelter or evacuation. You also may be warned by loud speakers used by fire and police departments.



SIREN SIGNAL

A steady tone for 3 minutes

When you hear a siren, **TURN ON YOUR RADIO OR TV.** Tune to a local Emergency Alert System station (see page 3). These stations will tell you what to do.

If you require additional emergency information, do not call the Davis-Besse Nuclear Power Plant, the police, or the fire department for information. They need telephone lines open for official calls. Instead, call the Public Information Hotline numbers listed for your county on page 8.

Emergency workers will check to see if you know about the emergency. To show that you know about the emergency and **DO NOT** need assistance, put the green “WE HAVE BEEN NOTIFIED” card in a window facing the street. If you do not have a card, tie a towel to your door or mailbox. This tells emergency workers going door-to-door that you know about the emergency and do not need assistance. If you **DO NEED** assistance, don’t use the green card or towel. Check on neighbors as time permits, especially those who could need assistance. Confirm that they have received the emergency message and know what to do.

The sirens are tested periodically to make sure they are in good working order if needed in an emergency. **You need not respond to the test.** Local advertising and newspaper articles will advise you of tests in advance. If you hear an emergency siren and, **you have not been told of a test, it sounds for more than five minutes, or it goes on and off several times,** call one of the following numbers and report it:

OTTAWA COUNTY

Emergency Management Agency (419) 734-6900

LUCAS COUNTY

Emergency Management Agency (419) 213-6503

WHAT SHOULD I DO IF I'M TOLD TO TAKE SHELTER?

- Go indoors and stay there. Shelter pets.
- Listen to your local Emergency Alert System radio or television station for emergency information.
- Close all doors, windows, and vents. Turn off all fans, air conditioners, and any other source of outside air.
- You might need to warn a friend or family member. If so, limit time spent outdoors. While outdoors, cover your mouth and nose with a damp cloth or towel. When returning indoors, leave outer clothing outside. Wash your face and hands with mild soap and lukewarm water.
- Children in schools in the affected area will be sheltered there, if necessary. Parents should not try to pick up school children unless advised to do so.
- Use the telephone only if necessary.
- Do not pick produce or fruit. Food, produce, and packaged food already in your home are safe to eat.
- Put the green “WE HAVE BEEN NOTIFIED” card in a window facing the street. If you do not have a card, tie a towel to your door or mailbox. This tells emergency workers going door-to-door that you know about the emergency and do not need assistance. If you DO NEED assistance, don't use the green card or towel.
- If your assistance needs change after you have displayed the towel, remove it from view. Then notify your county emergency management agency or department of emergency services. See phone numbers on page 8.

WHAT SHOULD I DO IF I'M TOLD TO EVACUATE THE AREA?

- Listen for instructions on a local Emergency Alert System station (listed on page 3).
- Prepare your home for a three-day absence; turn off small appliances, faucets, and lights. Turn down the furnace, if it is on. Be sure all air conditioners and fans are off. Lock windows and doors.
- Gather the people in your home. Do not try to pick up children or relatives in schools, hospitals or nursing homes. These facilities have their own emergency procedures.
- Pack necessities. You will find a list on page 6.
- Put the green “WE HAVE BEEN NOTIFIED” card in a window facing the street. If you do not have a card, tie a towel to your door or mailbox. This tells emergency workers going door-to-door that you know about the emergency and do not need assistance. If you DO NEED assistance, don't use the green card or towel.
- If you have special needs and have already informed officials, special services will be provided. If you have not informed officials, do not tie a towel to your door, mailbox, or other object visible from the road.
- If your assistance needs change after you have displayed a towel, remove it from view. Then notify your county emergency management agency or department of emergency services. See phone numbers on page 8.
- If you have pets or livestock, see page 7.
- Leave if evacuation is advised for your area. Use one car per family. Close all car windows and vents. Listen to Emergency Alert System stations (see page 3 for information and proceed to a place more than 10 miles away from the Davis-Besse Nuclear Power Plant. You may want to stay at a reception center (see reception centers listed on page 11). Use the map on page 10.
- Law enforcement officials will control traffic and maintain security in evacuated areas.
- If you do not drive, get a ride from a friend or neighbor. Or go to a pick-up point (see page 11) and a ride will be provided for you.

Preparing for any emergency

WHAT SHOULD I TAKE WITH ME?

TAKE THE ITEMS ON THIS LIST:

- Needed medicines
- Baby food and formula
- Credit cards, checkbook, cash, and important papers
- Two changes of clothing per person
- An extra pair of shoes per person
- Two blankets or a sleeping bag per person
- Toiletries
- Eyeglasses or contacts
- Battery-powered radios
- Batteries
- Flashlight
- First aid kit
- This brochure

WHERE SHOULD I GO?

If an evacuation is recommended, go to the Reception Center for your area. They are listed on the following pages. Listen to a local EAS radio station in your area for any changes. Adhere to the speed limits on the highways. There should be plenty of time for safe evacuation. Evacuation routes could change due to construction, weather, or accidents. Alternate routes should be clearly marked. Emergency personnel will direct traffic.

WHERE WILL THE RECEPTION CENTERS BE?

The Reception Centers will have food, water, medical, and social services. They will help you locate family members.

Reception Centers are listed on page 11.

HOW DO I GET THERE?

Drive your own car. Take only one car per family. If you have room, you may offer a ride to someone without a car. Use the most direct evacuation route (see the map on page 10).

WHAT IF I DON'T HAVE A RIDE?

If you do not have a car, get a ride from a neighbor or friend who has room. If this is not possible, proceed to a pick-up point listed on page 11. The county will provide rides for those who need them.

WHAT ABOUT CHILDREN IN PRESCHOOL AND DAYCARE CENTERS?

Preschools and daycare centers located within 10 miles of the Davis-Besse Nuclear Power Plant have plans for what to do during an emergency. In the event of an emergency, preschool and daycare centers may be canceled using their regular school cancellation process **or** they may close early. Children in affected areas will be sheltered there, if necessary. If told to evacuate, your child will be taken to a predetermined location. For additional information, contact your child's daycare center administrator or contact your local emergency management agency or department of emergency services.

PREPARE IN ADVANCE FOR EMERGENCIES.

Keep emergency supplies in a place known to all family members. Read this brochure. Study the map on page 10.

Keep important papers in a safe place. Keep your car filled with fuel. Make a list of things you would take in an emergency. Add them to the list below.

WHAT ABOUT CHILDREN IN SCHOOL?

Complete information is available from your local school district. Children will be cared for at receiving schools until parents come for them. Relocating and receiving schools are listed on page 12. Local radio and TV stations also will tell you the names of these schools.

Do not pick-up your child from the school they attend. They will be taken to another school away from the emergency, if needed.

WHAT ABOUT PATIENTS IN HOSPITALS AND NURSING HOMES?

Information will be available from hospitals, nursing homes, and your county emergency management agency or department of emergency services as to where patients will be transferred if an evacuation is recommended.

WHAT ABOUT THE ELDERLY AND DISABLED?

There will be special assistance for those who need help to leave the area. If you or someone you know may need help, fill out the Special Needs Information Card. The county will get help to you if you need to evacuate. This information will be kept confidential; it will only be used to ensure you are provided help during an emergency.

To learn more, or if your special needs change, call:

OTTAWA COUNTY EMERGENCY MANAGEMENT AGENCY (419) 734-6900

LUCAS COUNTY EMERGENCY MANAGEMENT AGENCY (419) 213-6503

WHAT ABOUT PETS AND SERVICE ANIMALS?

PETS You may not take your pets with you to a Reception Center. Plan now for your pet's care in any emergency. It is recommended that you make prior arrangements with friends, relatives, or pet boarding facilities. If you need more information, call your county emergency management agency or department of emergency services.

SERVICE ANIMAL You may take your service animal with you to a Reception Center. It is recommended that you pack supplies in advance to care for your service animal. If you need more information, call your county emergency management agency or department of emergency services.

WHAT IF I HAVE LIVESTOCK TO CARE FOR?

LISTEN TO YOUR RADIO OR TV FOR INSTRUCTIONS

If there is an emergency, you may be told to put livestock indoors and give them stored feed and protected water.

If told to evacuate, leave your livestock on the farm. Put them in a barn or other shelter, and leave them with water and food.

Federal and state agencies will do follow-up surveys on farm products to check for contamination.

For more information and/or a copy of the "Radiological Emergency Information for Agriculture Producers, Processors, and Distributors" brochure, contact the Ohio Department of Agriculture, 8995 East Main Street, Reynoldsburg, Ohio 43068 or via telephone at 1-800-282-1955.

Why plans are required

WHY DO WE NEED EMERGENCY PLANS?

The law requires emergency plans for every nuclear plant. These plants have been making electricity for more than 50 years. In all that time, no member of the public has been hurt as a result of an accident at a U.S. nuclear power plant. But it is best to be prepared. Your county and state emergency management agencies and department of emergency services have emergency preparedness plans.

WHAT WOULD CAUSE AN EMERGENCY AT THE DAVIS-BESSE NUCLEAR POWER PLANT?

An unusual series of equipment failures or other events could cause an emergency. If radiation might leak from the plant, steps would be taken to protect the public. Your county's and state's preparedness plans are designed to cover any kind of emergency, man-made or natural.

HOW WIDE AN AREA WOULD BE AFFECTED?

A severe emergency could affect an area several miles from the Davis-Besse Nuclear Power Plant. This could happen if radiation was released and spread by the wind. If the wind is calm, only people closer to the plant might need to take action.

The area within about 10 miles from the Davis-Besse Nuclear Power Plant is called the Emergency Planning Zone. Your county and state emergency management agencies and department of emergency services have plans to protect people in this zone, but those plans can be expanded to include an area considerably beyond 10 miles. Plans will be used if there is an emergency. Key parts of the plans are described within this brochure.

WHO DECIDES WHAT THE PUBLIC SHOULD DO IN AN EMERGENCY?

Your county officials decide what you should do. They will be advised by the groups listed on the back cover. Boaters on Lake Erie will be warned by federal and state agencies.

PUBLIC INFORMATION HOTLINES

A public information hotline will **be open during an emergency**. It will have current information. To use it, call one of these numbers:

OTTAWA COUNTY	(419) 734-6900
TTY/TDD	(419) 734-6910
LUCAS COUNTY	(419) 246-8066
STATE OF OHIO	(866) 644-6362
	1(866) OHIOEMA
FIRSTENERGY	(419) 249-5474
	(419) 249-5475

Emergency classifications

Unusual Event, Alert, Site Area Emergency, and General Emergency

1. UNUSUAL EVENT

The least serious, this refers to a small problem that poses no danger to the public, such as a decrease in plant safety or potential security event. No radiation leak is expected; you do not have to do anything. Federal, state, and county officials will be told right away.

2. ALERT

During this minor problem, the plant could experience decreases in safety or a security event. Preparations are made to handle potentially more serious emergencies. Small amounts of radiation could leak inside the plant, but there is no danger to the public and you should not have to do anything. Federal, state, and county officials will be told right away and will begin emergency preparedness actions.

3. SITE AREA EMERGENCY

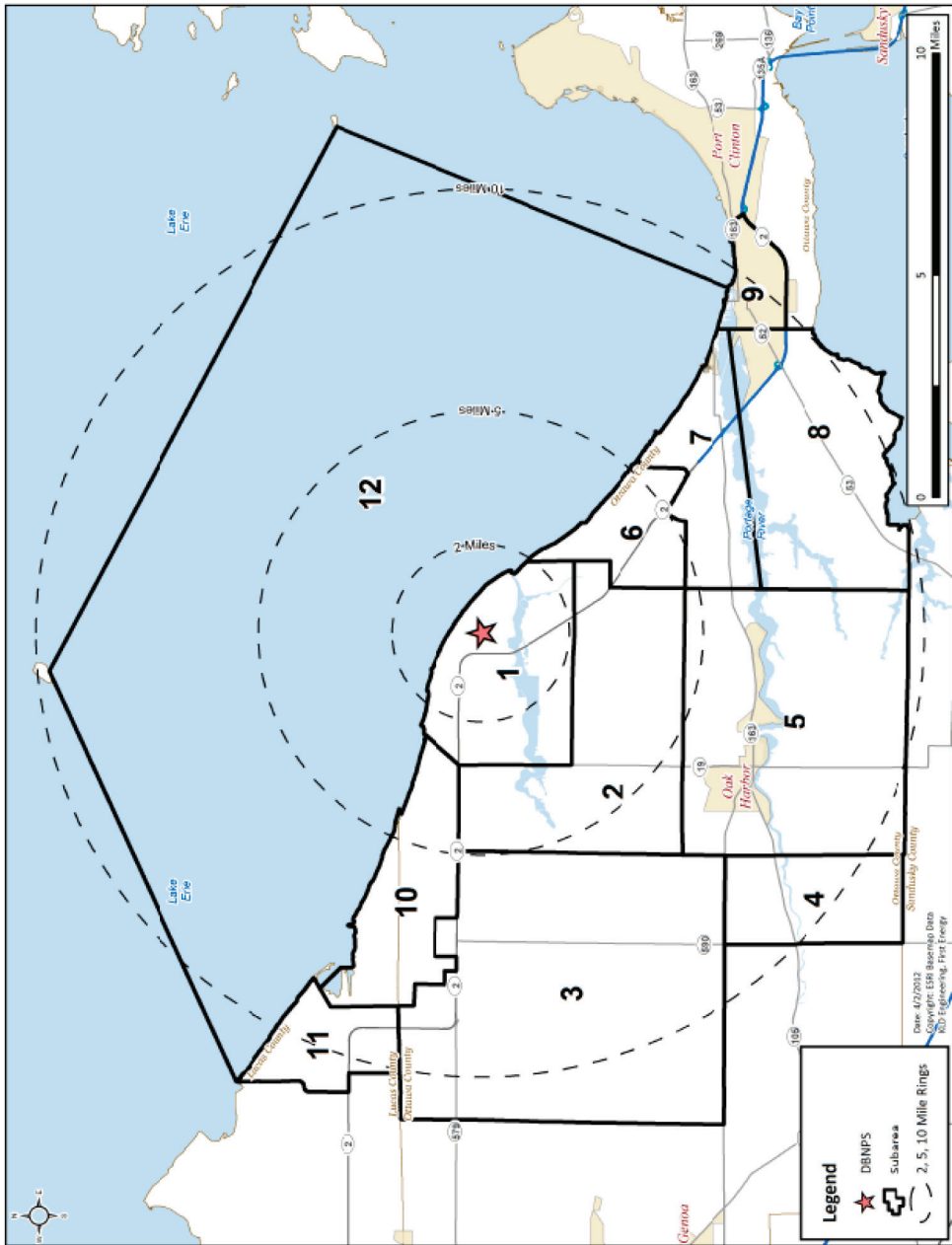
This is a more serious problem, such as plant equipment needed for safe operations is affected or a security event occurs. Radiation releases are not expected to exceed federal limits beyond the plant boundaries. If you hear the sirens, listen to a radio or TV station that broadcasts Emergency Alert System messages and carefully follow instructions. Federal, state, and county officials will be told right away and will act to ensure public safety.

4. GENERAL EMERGENCY

This is the most serious problem. Events are in process or have happened that may involve possible problems with plant equipment or security. These events may affect safe plant operations. Radiation could be released outside plant boundaries. Federal, state, and county officials will work with plant officials. You may have to protect yourself as described in this section. When the sirens sound, listen to one of the Emergency Alert System radio or TV stations for instructions and carefully follow them. If necessary, people in some areas will be advised to seek shelter or evacuate.

Evacuation Information

10-MILE EMERGENCY PLANNING ZONE AND EVACUATION ROUTES



**PICK-UP POINTS
FOR PEOPLE
WHO NEED A
RIDE**

**RECEPTION
CENTERS**

If you need transportation or any other assistance during an evacuation.

- Remain indoors and listen to a local EAS station. DO NOT place the green “WE HAVE BEEN NOTIFIED” card in a window. An emergency worker will come to your door and help you. You will be transported to a Reception Center where you will be provided additional help.

FREMONT ROSS HIGH SCHOOL

1100 North Street
Fremont, OH 43420

SANDUSKY HIGH SCHOOL

2130 Hayes Avenue
Sandusky, OH 44870

EISENHOWER INTERMEDIATE SCHOOL

331 S. North Curtice Road
Oregon, Ohio 43616

Relocation Information

Children attending any of the schools, nursery schools and daycare centers in following townships will be relocated.

TOWNSHIP	RECEIVING SCHOOL	RECEIVING SCHOOL ADDRESS
BENTON TOWNSHIP	Fremont Ross High School	1100 North Street, Fremont, OH 43420
CARROLL TOWNSHIP	Fremont Ross High School	1100 North Street, Fremont, OH 43420
SALEM TOWNSHIP	Fremont Ross High School	1100 North Street, Fremont, OH 43420
OAK HARBOR	Fremont Ross High School	1100 North Street, Fremont, OH 43420
ROCKY RIDGE	Fremont Ross High School	1100 North Street, Fremont, OH 43420
HARRIS TOWNSHIP <i>(East of State Route 590)</i>	Fremont Ross High School	1100 North Street, Fremont, OH 43420
BAY TOWNSHIP	Sandusky High School	2130 Hayes Avenue, Sandusky, OH 44870
ERIE TOWNSHIP	Sandusky High School	2130 Hayes Avenue, Sandusky, OH 44870
PORT CLINTON	Sandusky High School	2130 Hayes Avenue, Sandusky, OH 44870
JERUSALEM TOWNSHIP	Clay High School	5665 Seaman Road, Oregon, OH 43616

Potassium Iodide (KI)

WHAT IS POTASSIUM IODIDE (KI)?

KI is an over-the-counter drug that may reduce the amount of radioactive iodine absorbed by the body's thyroid gland. KI saturates a person's thyroid with nonradioactive iodine so that it cannot absorb any radioactive iodine. KI offers a degree of protection only to the thyroid gland and only in cases when the release contains radioactive iodine. KI does not protect any part of the body, other than the thyroid. In cases where the public may be exposed to certain types of radioactivity, state and local health officials may advise the public to take KI tablets.

WHEN SHOULD I TAKE KI?

The public should take KI during an emergency only when directed by public health officials. A TV and radio Emergency Alert System message will be broadcast and public health officials will tell you when to take KI.

If taken before or shortly after a radiological exposure, potassium iodide blocks the thyroid gland's ability to absorb radioactive iodine. Remember that KI offers protection only to the thyroid gland and its use would be to supplement evacuation and sheltering. Evacuation and sheltering are the primary means of protection in a radiological emergency. Evacuating the area or sheltering, based on directions given by state and county officials, is the best protective action to take in the unlikely event of a radioactivity release from the Davis-Besse Nuclear Power Plant. If you evacuate without being exposed to radioactive iodine, there is no need to take KI. The use of KI by persons in the Emergency Planning Zone is voluntary.

WHAT IF I AM ALLERGIC TO IODINE?

KI should not be used by people allergic to iodine. In the event of an allergic reaction, contact a physician immediately. Additional information about KI is available online: www.odh.ohio.gov/odhprograms/rp/techs/kipolicy.aspx

WHERE DO I GET KI?

If members of the public who live within 10 miles of the plant would prefer to have KI on hand, it can be picked up at the following locations:

OTTAWA COUNTY HEALTH DEPARTMENT

1856 East Perry Street, Port Clinton, OH 43452-4200
(419) 734-6800
www.ottawahealth.org/

TOLEDO-LUCAS COUNTY HEALTH DEPARTMENT

635 North Erie Street, Toledo, OH 43604
(419) 213-4100

Radiation and Nuclear Energy

WHAT IS RADIATION?

Radiation has been part of our natural environment since the Earth was formed. The planet is bathed in cosmic radiation from outer space, and radioactive materials naturally present in the soil, rocks, air and seawater also emit this type of energy. From the very beginnings of human civilization, radiation has been part of everyday life.

SOURCES OF RADIATION

We are exposed to small amounts of radiation every day. It is in the air we breathe. It is in the food we eat. It is even inside our own bodies. It is normal to be exposed to small amounts of radiation. But to be safe you should limit the amount. Radiation doses to people are measured in millirem. The average American receives over 300 millirem of radiation per year from nature. Medical procedures, such as CT scans, add about the same amount of radiation dose.

HOW IS RADIATION CONTROLLED?

The U.S. Environmental Protection Agency and the U.S. Nuclear Regulatory Commission are the principal federal agencies responsible for establishing radiation protection regulations. EPA establishes standards to protect the general environment. The NRC prescribes and enforces limits on the amount of radiation that workers and members of the public can receive from commercial use of radioactive materials.

Radiation safety is based on time, distance and shielding. The less time spent near a source, the less radiation received. The greater the distance from a source, the less radiation received. Shielding also plays a vital role. For example, dentists place a lead blanket on patients receiving X-rays. Used nuclear power plant fuel is stored underwater or in steel-lined concrete containers to protect people from penetrating radiation such as gamma rays.

Although scientists have found no adverse health effects from doses lower than 10,000 millirem, radiation experts recommend keeping doses from man-made sources as low as reasonably achievable.

EXAMPLES OF RADIATION DOSES

PUTTING RADIATION DOSE IN CONTEXT

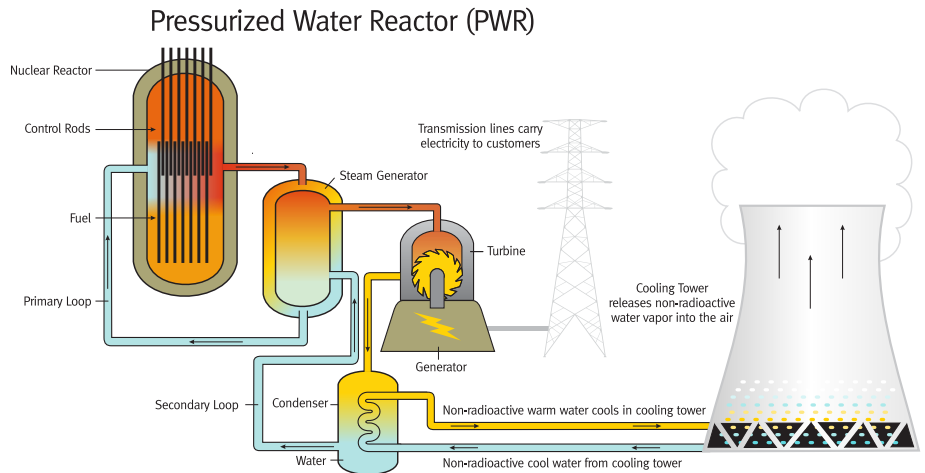
SOURCE	ANNUAL DOSE
Smoke detector in the home	0.008 millirem
Living within 50 miles of a nuclear power plant	0.009 millirem
Living within 50 miles of a coal-fired power plant*	0.03 millirem
Roundtrip flight from New York City to Los Angeles	5 millirem
Medical X-ray	10 millirem
Food and water consumed throughout the course of one year	30 millirem
Mammogram	100 millirem
Average annual exposure for a nuclear power plant worker	120 millirem
Average annual exposure from natural radiation	300 millirem
CT Scan	1,000 millirem
NRC's annual limit for occupational exposure	5,000 millirem
Cardiac catheterization or coronary angiogram	5,000 millirem

*Coal contains naturally radioactive elements.
Sources: U.S. Environmental Protection Agency, Health Physics Society.

If you would like more information on radiation, write to the Davis-Besse Nuclear Power Plant, Emergency Response Section, 5501 North State Route 2, Oak Harbor, Ohio 43449 or visit the FirstEnergy Nuclear Operating Company website at www.fenoc.com.

Nuclear Energy

THE ENERGY OF THE ATOM IS CALLED NUCLEAR ENERGY



Davis-Besse Nuclear Power Station produces electricity much like a coal power plant. The main difference is the type of fuel. The fuel used in a nuclear plant is uranium.

Uranium atoms are split to produce energy. This energy heats water which passes through a steam generator and then back to the reactor. Steam is formed from a separate water volume in the steam generator. The steam pushes against the blades of a turbine causing them to turn. An electric generator is attached to the turbine; as the turbine spins, electricity is produced.

The uranium fuel is in long metal fuel rods. Each rod is 12 feet long. There are 208 fuel rods in a fuel assembly. The reactor core is made up of 177 fuel assemblies. The reactor core is inside the reactor vessel. The reactor vessel is filled with purified water.

Control rods located on top of the reactor start and stop the chain reaction that produces heat. When the rods are withdrawn, the nuclear chain reaction occurs, producing heat.

Davis-Besse is a pressurized water reactor. This means that the water inside the reactor is under pressure so the water will not boil. The water temperature reaches 606° F as it passes through the core. The water then travels along tubes through the steam generator and back to the reactor. This is known as the primary loop. After it has passed through the steam generator, the water has “cooled” down to 558° F.

When the water passes through the steam generator, its heat is transferred to the secondary loop. The heat is transferred, without the water in the primary loop and secondary loop ever coming in contact with the other. These are known as closed loops. The water in the secondary loop boils to steam in the steam generator. This steam flows to the turbine generator. It is here that the steam’s energy is made into electricity.

SAFETY IN DEPTH

When the steam leaves the turbine, it comes in contact with pipes carrying cooling water. As the steam cools, it changes back into water. The third loop contains the water that is cooled by the large cooling tower located at Davis-Besse. The water vapor you see rising from the cooling tower IS NOT radioactive.

After about 24 months of operating time, some of the used fuel is replaced. This is known as refueling. During the refueling, about one-third of the used fuel assemblies are replaced with fresh fuel.

The used fuel is placed in a reinforced and steel-lined concrete pool of water. In early 1996, the oldest used fuel assemblies were removed from the Davis-Besse pool and placed in a dry fuel storage system.

In this system, used fuel is sealed in a metal container. The container is then housed in a thick concrete structure. The system location is in the secured area at the Davis-Besse plant.

Experienced engineers and designers use a unique “safety-in-depth” philosophy as they design, construct and operate nuclear power plants. They apply this philosophy first in a series of safety systems designed to detect and prevent virtually any possible type of accident before it can take place. Sensors monitor virtually every component and activity in a nuclear plant and immediately alert operators to even the slightest variation from the norm.

And then – in case a problem still occurs – nuclear plants contain a series of safety systems that will keep its impact to a minimum or simply shut down the plant. Layers of protective barriers are designed to contain any potential hazard and prevent radioactive materials from reaching the outside environment. This safety-in-depth philosophy is applied to every piece of safety-related equipment and process in a nuclear plant.

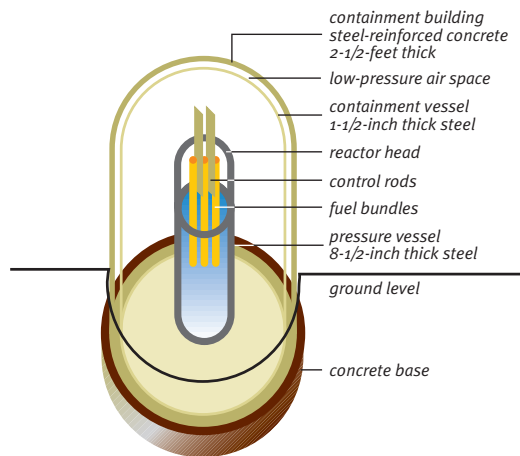
One of the most important examples of this philosophy is the series of physical barriers designed to prevent the accidental release of radioactive material. FirstEnergy’s plants, like all others in the country, include distinct layers of physical protection:

- The individual fuel pellets are encased in a ceramic shell that is designed to contain most of the radiation resulting from the fissioning of the uranium fuel.
- The fuel rods that contain the pellets are made of a zirconium alloy that captures radioactive gas that may have escaped from the fuel pellets.
- The reactor vessel, which holds the “core” of fuel assemblies submerged in water, is composed of steel walls up to 8½" thick. It is designed to contain any radiation that may have escaped from the fuel rods.
- The containment vessel surrounding the reactor vessel has steel walls that are at least 1½" thick.

SAFETY IN DEPTH

- The containment building itself is a structure unique to nuclear power plants. It surrounds the entire reactor and all related equipment with steel-reinforced concrete walls more than 2-feet thick.
- The U.S. Nuclear Regulatory Commission requires nuclear power plants to be able to withstand the most severe natural phenomena that may occur in the region where they are located, including earthquakes, tsunamis, hurricanes, tornadoes, fires and floods. The NRC requires additional safety margins to account for any uncertainties and to ensure the plant can remain safe in the event that an accident and a severe natural phenomenon occur at the same time.

This series of barriers helps ensure that no hazardous level of radiation escapes from the plant into the environment.



EMERGENCY PREPAREDNESS

In cooperation with local, state and federal agencies, FirstEnergy has established emergency procedures for protecting the health and safety of the public in case of an incident at one of its nuclear power stations. These procedures are part of the extensive emergency plans for each plant. All U.S. nuclear power plants – including Beaver Valley, Davis-Besse and Perry – have emergency plans that must pass rigorous standards set by the Nuclear Regulatory Commission and the Federal Emergency Management Agency. These emergency response plans are tested regularly.

Emergency Weather Information

STORM SAFETY

The following information on weather related emergencies is presented at the request of Ottawa and Lucas counties who are solely responsible for its content.

Weather related emergencies – storms, tornadoes, blizzards, flooding – are some of the kinds of emergencies that could happen in this area. These emergencies can be a threat to residents and visitors. The following information will help prepare your family in the event of a weather related emergency.

Thunderstorms can happen at anytime. Severe thunderstorms can bring heavy rains, high winds, and lightning. When severe thunderstorms threaten your area, listen to your local radio or TV station. These stations will provide updated information. You should know the following terms used to describe storm threats:

Severe Thunderstorm Watch – Conditions are right for a severe storm.

Severe Thunderstorm Warning – A severe storm has been observed or has been detected by radar.

Take these steps when severe thunderstorms or lightning are a threat:

- Go inside a home, large building, or car (not a convertible).
- Do not use the telephone, except for emergencies. Do not use bathtubs, water faucets and sinks. Metal pipes can conduct electricity.
- A car offers some protection from lightning but can be a dangerous place to be during a flash flood or tornado.

If you are outside, and there is no time to reach a safe building or car, follow these rules:

- Do not stand under a tall tree in an open area, a hilltop, in an open field, or on the beach.
- Get away from open water.
- Get away from tractors and other metal farm equipment.
- Get away from motorcycles, bicycles, golf carts, and scooters. Do not hold metal objects, such as golf clubs.

TORNADOES

A tornado is a violent storm with whirling winds of up to 300 miles per hour. A tornado spins like a top and may sound like the roaring of an airplane or train. Sirens may sound. When you hear a siren, turn on your radio or TV. Tune to a local station. These stations will provide updated information and tell you what to do. You should know the following terms used to describe tornado threats:

Tornado Watch – A tornado may occur in or near your area. Listen to a radio or television station (see page 3), or another local station. These stations will provide updated information.

Tornado Warning – A tornado has been seen, or has been shown by radar. If a tornado warning is given for your area, take shelter immediately.

If you are at home – Go to a corner of your basement and take cover under something sturdy. If your home has no basement, take cover in a small room (such as a closet or bathroom) or under sturdy furniture on the lowest floor in the center part of the house. Stay away from windows. Do not remain in a trailer or mobile home if a tornado is approaching; take cover elsewhere in a nearby shelter or lie flat in the nearest ditch, ravine, or depression.

If you are in a building – go to an inside hallway on the lowest floor or to a designated shelter area.

If you are outside – take cover and lie flat in the nearest ditch and cover your head with your arms.

If you are in a car – get out and take shelter in the nearest ditch, ravine, or culvert and cover your head with your arms.

WINTER STORMS

Areas that normally have mild winters can be hit with a major snow storm, extreme cold or blizzards. You should know the following terms used to describe winter weather conditions:

Winter Weather Advisory – Winter weather conditions, such as cold, ice, and snow are expected to delay travel, cause major problems, or create other types of dangerous conditions.

Winter Storm Watch – heavy accumulations of snow or ice are possible.

Winter Storm Warning – heavy snow, sleet, or freezing rain is expected.

Blizzard Warning – heavy snow, winds, and dangerously low temperatures are expected. Blizzards can cause severe weather conditions such as zero visibility and life threatening wind chill.

WHAT TO DO:

- Listen to a radio or television station listed on page 3 of this brochure, or another local station. They will provide updates on weather conditions.
- Keep a battery powered portable radio in working order; keep extra batteries.
- Have flashlights, battery powered lamps, and extra batteries.
- Keep antifreeze in your car's radiator. Carry a winter car kit that includes the following:
 - Flashlight
 - Tow chain or rope
 - Shovel
 - Bag of sand or salt
 - Extra mittens, gloves, hats, boots
 - Windshield scraper
 - Blanket
 - Emergency flares

IF A BLIZZARD TRAPS YOU IN YOUR CAR:

- Pull off the highway, stay calm and remain in your vehicle.
- Do not set out on foot. A building may seem close but be too far to walk in a deep snow.
- Set your hazard lights to “flashing” and hang a cloth or distress flag from the window.
- If you run your car engine to keep warm, open a window slightly for ventilation. This will protect you from possible carbon monoxide poisoning. Keep snow cleared away from the exhaust pipe.

NOTE: Be careful not to use up battery power. Balance the use of radio, heat, and lights.

- In extreme cold, use road maps, seat cover, and floor mats for warmth.
- Use your coat as a blanket.

FLOODING

Floods are the most common and widespread of all natural hazards. Some floods develop over a period of days, but flash floods can result in raging water in just a few minutes. Sirens may sound. When you hear a siren, turn on your radio or TV. Tune to a local station. These stations will provide updated information and tell you what to do. You should know the following terms used to describe flooding conditions:

Flood Forecasts – mean rainfall may be heavy enough to cause rivers to overflow their banks or melting snow may be mixing with rainfall to produce similar effects.

Flood Warnings – forecasts of impending floods that describe the affected river, lake, or tidewater, the severity of flooding (minor, moderate, or major) and when and where the flooding will begin.

Flash Flood Watches – mean heavy rains (that may cause sudden flash flooding in specified areas) may occur. Understand that a flash flood can occur without visible sign of rainfall in your area. Be alert to a possible emergency which will require immediate action.

Flash Flood Warnings – mean flash flooding is occurring or imminent along certain streams and designated areas. Move to high ground immediately.

WHAT SHOULD YOU DO

- Listen to a radio or television station (see page 3), or another local station in your area. These stations will provide updated information.
- Keep a stock of food that requires no cooking or refrigeration. Store drinking water in clean, closed containers.
- Learn your community's flood evacuation routes and where to find higher ground.
- If instructed, turn off utilities at the main switches or valves. Disconnect electrical appliances, but do not touch any electrical equipment if you are wet or standing in water.
- If your car stalls in a flooded area, abandon it! You and your car could be swept away.
- Never attempt to drive through a flooded roadway, turn around and go the other way.

POWER OUTAGE

Here are some suggestions to make your situation easier and safer to deal with while your electric utility company is working to restore your service.

Check with your neighbors. If you are the only one without power, or only a few appliances won't work, check to see if a fuse is blown or a circuit-breaker is tripped. If neighbors are without power too, please call your electric company.

Your phone call is the only way for your electric utility company to know that you're without power. If lines are busy, please wait a reasonable time and call again.

Listen to newscasts on a battery-operated radio. During major power disruption, stations often will broadcast reports on the extent of the trouble and the approximate time electric service will be restored.

Turn off major appliances that should not be in operation when the power comes back on. Do leave a light on so you'll know when normal service has been restored. Do not use appliances if light is dim, indicating low voltage.

Open refrigerators and freezers as little as possible. Food will keep for hours if door-opening is kept to a minimum. If the outage is lengthy, contact a dry ice distributor.

In an emergency, if you cannot reach your electric company, contact the local police or fire department to report downed power lines or other dangerous conditions. They may be able to contact the electric company or render assistance.

Stay away from, and never touch, downed lines under any circumstances. Emergency situations and adverse weather conditions place severe demands on utility crews. Your patience and understanding is appreciated. Utility crews will work hard to clear hazards and to restore your service as quickly as possible.

DO NOT DISCARD

Important Safety Information

OTTAWA COUNTY EMERGENCY MANAGEMENT AGENCY

315 Madison Street
Port Clinton, OH 43452-1936
419-734-6900
www.co.ottawa.oh.us/ottawacoema

LUCAS COUNTY EMERGENCY MANAGEMENT AGENCY

2144 Monroe Street
Toledo, OH 43604-7122
419-213-6503
www.co.lucas.oh.us

OHIO EMERGENCY MANAGEMENT AGENCY

Ohio Department of Public Safety
2855 West Dublin Granville Road
Columbus, OH 43235-2206
614-889-7150
www.ema.ohio.gov

DAVIS-BESSE NUCLEAR POWER PLANT

Emergency Response Section
5501 North State Route 2
Oak Harbor, OH 43449
www.fenoc.com

Sign Up For **Emergency Alerts**

Ottawa/Lucas County Emergency Alerts

Designed to instantly reach cell phones, mobile devices, and email in the event of an emergency.



OTTAWA COUNTY ALERTS

<http://www.co.ottawa.oh.us/ottawacoema/index.html>
Ottawa County EMA: 419-734-6900

LUCAS COUNTY ALERTS

lucascountyalerts.com
Lucas County EMA: 419-213-6503