What Radiation Is

Everything around you is made up of small particles called atoms. The atoms in some matter are "radioactive" and can split to form new matter. When this happens, it gives off energy called "radiation." This energy can be used to make electricity, to treat cancer, and in other helpful ways.

You live with radiation all the time, and take some into your body every day. But sometimes you must be careful how much of this radiation enters your body. If the amount of radiation in the air is large, you must protect yourself from it. Your house or some other building can often be a good shelter if there is too much radiation in the air.

The amount of radiation you take into your body is measured in "millirems." Here are some examples of what you receive in one year, and where it comes from.

- **The earth and space — about 80 millirems**
- **Your food — about 24 millirems**

Most persons living in the St. Charles or St. John the Baptist Parishes get about 100 millirems per year in these natural ways. You may also get radiation in other ways.

- **2 or 3 chest x-rays — about 40 millirems**
- **The material in your house — about 34 millirems**
- **A coast-to-coast airline flight — about 2 millirems**
- **A color TV set — about 1 millirem**

Living next to a plant like Waterford 3 will add less than one millirem per year.

Here is how Waterford 3 works. Uranium atoms in the "reactor core" split to produce heat. This heat makes water hot enough to produce steam. This steam is then used to make electricity in the same way electricity is made in a plant that burns coal or oil.

When the atoms in the core split, radioactive matter is formed. The plant blocks its release in several ways.

1. **Metal fuel rods seal the uranium and most of the radioactive matter inside the core.**
2. **A container with a steel wall 8½ inches thick surrounds the core and seals it in.**
3. **A second container with a steel wall two inches thick is around the first one.**
4. **A concrete wall three feet thick seals in all of the other parts.**

If there is an accident, Waterford 3 can block the release of all or most of the radiation. But in a severe accident, some radioactive matter may be released. If it is, this matter will be carried in the air. If that happens, an emergency will be declared. You may then be asked to do certain things to protect yourself until the wind carries the radioactive matter away.

Radiation Emergencies

There are four kinds of emergencies at nuclear power plants.

1. Unusual Event. A minor problem has taken place. No release of radioactive matter is expected. Federal, State and Parish officials will be told of this. You will not have to do anything.

2. Alert. This is also a minor problem. Small amounts of radioactive matter could be released at the plant. Federal, State and Parish officials will be told of this and will be asked to stand by. It is not likely that you will have to do anything.

3. Site Area Emergency. This is a more serious problem. Small amounts of radioactive matter could be released into the area outside of the plant. Federal, State and Parish officials will prepare to help you if you need to take special action. If such action is needed, the sirens will be turned on. You should then listen to local radio or TV stations for advice.

4. General Emergency. This is the most severe kind of emergency. Radioactive matter could be released outside the plant. Federal, State and Parish officials will work closely with experts at the plant. You may have to protect yourself. If action is needed, the sirens will be turned on. You should then listen to local radio or TV stations for advice.

Remember that a nuclear plant is not like a bomb. It CANNOT explode. You will have time to do what is needed if you have to protect yourself. Please read the rest of this booklet. It will tell you how to prepare for an emergency.

Emergency Action Plans

If an accident occurs at Waterford 3, experts at the plant will help your State and Parish agencies decide how serious it is. You will be told what actions to take, based on the plans described here. Be sure you understand them. If you have any questions while reading this booklet, ask one of these offices for help **now.** That way you will be prepared before an emergency can come up.

- **St. Charles Parish Department of Emergency Preparedness,** Parish Courthouse, 15045 River Road (Highway 18), Hahnville, La., Phone Number (985) 783-5050

- **St. John the Baptist Parish Civil Defense,** Emergency Operations Center, 1801 West Airline Highway, LaPlace, La., Phone Number (985) 652-2222

When Will An Emergency Affect You?

The Nuclear Regulatory Commission (NRC) and the Environmental Protection Agency (EPA) have studied this question. They have learned that you most likely will not have to do anything. If you live as close as ten miles from Waterford 3, though, you should be prepared.

If your home or the place you work is on the map inside this booklet, an emergency may or may not affect you. An accident could affect some parts of the map and not others. That will depend on where the wind is coming from, how strong it is, and on how severe the accident is. To help you know if you will have to take some action or not, the map has these 16 sections.

- A1, A2, A3, A4
- B1, B2, B3, B4
- C1, C2, C3, C4
- D1, D2, D3, D4

In an emergency, radio and TV stations will tell which sections on the map will be affected. Unfold the booklet **at this time** and pick out the section of the map where you live. Put that number in the blank on the front of this booklet to make it easy to find later if you need it. Then come back to this page and read on.

How Will You Be Told About The Emergency?

Outdoor sirens will be turned on if there is an emergency in your Parish. These sirens have been put in the best places in the St. Charles and St. John the Baptist Parishes for you to hear them. Firemen and deputies may drive through the area to warn you, too. If you are in a marsh or swamp, you will be warned by State or Parish Officials. If you are in a boat on the River, the sirens on the shore will warn you. The Coast Guard may also warn you.

The sirens will sound only during testing and during emergencies.

- **Tests** — Local governments will test outdoor sirens at noon on the first Thursday of each month. These are just tests. You do not need to do anything.
- **Emergencies** — If there is an emergency, you will hear a wavering sound that stays on for 3 to 5 minutes. This means that you should turn on your radio or TV. These stations will tell you which sections of the map are affected by the emergency. They will also tell you what actions to take if you are in one of the affected sections.
  - **Radio - WWL-870 AM**
  - **Radio - WLMG - 101.9 FM**
  - **TV - Channels 4-WWL, 6-WDSU, 8-WVUE, 12-WYES, 26-WGNO, COX 6 (St. Charles) and Time Warner Channel 55 (St. John).**

Should You Use The Phone?

If there is an emergency, the phone lines will be needed for official business. **Do not** use your phone unless you or someone you know is injured or too sick to do what is needed. If you must use the phone, keep your call very short. This booklet and your radio and TV will tell you what actions you might need to take. Read it through and be sure you understand it. Clear up all questions you have **now,** not later.

Do not listen to rumors. Turn on your radio or TV for up-to-date information during an emergency.

What Are The ACTIONS You Might Need To Take?

The three actions you might be asked to take are called **Protect Your Breathing, Shelter In Place, or Evacuate.** They are described at right. Be sure you are clear about them. If you have neighbors who are hard of hearing or do not see well, please help them. Be sure they know what they are supposed to do in an emergency. Fill out the **Special Needs Card** in this booklet and mail it for them if they cannot do this themselves. Use this card also if you or someone you know needs a wheelchair or needs special help for some other reason. That way you can be sure to get the special help needed.

What If You Are Told To PROTECT YOUR BREATHING?

This means you should take these steps.

- Cover your nose and mouth with a handkerchief or other cloth.
- Close the windows and doors if you are in a building or a car.
- Turn off heating or cooling systems. Turn off window or attic fans.

What If You Are Told To SHELTER IN PLACE?

This means you should protect yourself inside your house or some other building. This is a good action to take if there is a short release or small amount of radiation in the air. If your children are in school, they will be protected by school officials. Take these steps to protect yourself.

- Go inside if you are outside. When inside, stay there until your radio or TV says you can leave safely. This is most likely to be after a few hours, rather than a day or more.
- Close all doors and windows.
- Turn off heating or cooling systems. Turn off window or attic fans.
- Keep your pets inside.
- Listen to one of these radio or TV stations for further instructions.
  - **Radio - WWL-870 AM**
  - **Radio - WLMG - 101.9 FM**
  - **TV - Channels 4-WWL, 6-WDSU, 8-WVUE, 12-WYES, 26-WGNO, COX 6 (St. Charles) and Time Warner Channel 55 (St. John).**

What If You Are Told To EVACUATE?

This means that you should move to a place more than ten miles from Waterford 3. Plans have been made to give you housing at special reception centers if you need it. Be sure all members of your family know where to meet in an emergency. That way you will not have to call them on the phone at that time.

The reception centers are listed on the chart inside this booklet. Unfold it and follow the steps to locate your reception center and how to get there.

D-2