

Serial: NPD-NRC-2008-090

December 22, 2008

U.S. Nuclear Regulatory Commission Attention: Document Control Desk Washington, D.C. 20555-0001

SHEARON HARRIS NUCLEAR POWER PLANT, UNITS 2 AND 3 **DOCKET NOS. 52-022 AND 52-023** RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 050 RELATED TO **EMERGENCY PLANNING** 

Reference: Letter from Brian C. Anderson (NRC) to James Scarola (PEC), dated November 18, 2008, "Request for Additional Information Letter No. 050 Related to SRP Section 13.3 for the Shearon Harris Units 2 and 3 Combined License Application"

# Ladies and Gentlemen:

Progress Energy Carolinas, Inc. (PEC) hereby submits our response to the Nuclear Regulatory Commission's (NRC) request for additional information provided in the referenced letter. A response to the NRC request is addressed in the enclosure.

If you have any further questions, or need additional information, please contact Bob Kitchen at (919) 546-6992, or me at (919) 546-6107.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on December 22, 2008.

Sincerely,

Garry D. Miller General Manager

**Nuclear Plant Development** 

Enclosures/Attachments

cc (without Attachments):

U.S. NRC Director, Office of New Reactors/NRLPO

D. Mill

U.S. NRC Office of Nuclear Reactor Regulation/NRLPO

U.S. NRC Region II, Regional Administrator

U.S. NRC Resident Inspector, SHNPP Unit 1

cc (with 2 copies of Attachments):

Mr. Manny Comar, U.S. NRC Project Manager

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# Shearon Harris Nuclear Power Plant Units 2 and 3 Response to NRC Request for Additional Information Letter No. 050 Related to SRP Section 13.3 for the Combined License Application, dated November 18, 2008

NRC RAI#	Progress Energy RAI#	Progress Energy Response
13.03-76	H-0285	Response enclosed – see following pages

Attachments/Enclosures	Associated NRC RAI #	Pages Included
HNP 2008 Safety Information	13.03-76	11 pages
Planta Harris de Energia Nuclear 2008 Informacion Sobre Seguridad	13.03-76	22 pages
HNP Student Safety Information 2008/2009	13.03-76	8 pages
HNP Media Information Guide	13.03-76	36 pages
Harris View (July/August 2008)	13.03-76	2 pages

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NRC Letter No.: HAR-RAI-LTR-050

NRC Letter Date: November 18, 2008

NRC Review of Final Safety Analysis Report

NRC RAI #: 13.03-76

**Text of NRC RAI:** 

SITE-7: Distribution of public information

Basis: 10 CR 50.47(b)(7); 10 CFR 50, Appendix E.IV.D.2; NUREG-0654/FEMA-REP-1;

Evaluation Criterion G.1; Evaluation Criterion G.2

SRP ACCEPTANCE CRITERIA: Requirements A and B; Acceptance Criteria 1 and 2

A. Section G.1, "HARRIS NUCLEAR PLANT," (page G-1) of the Harris Nuclear Plant (HNP) Emergency Plan states that the HNP, in coordination with State and county officials, provide information to residents, businesses, and transients in the 10-mile Plume Exposure Pathway Emergency Planning Zone (EPZ) at least annually however educational and informational materials were not available for review. Provide detailed content of the public education and information program and program materials.

# **PGN RAI ID #:** H-0285

# **PGN Response to NRC RAI:**

Progress Energy coordinates public education and information material development and distribution with the State of North Carolina and Wake, Chatham, Lee, and Harnett counties.

The State of North Carolina Radiological Emergency Response Plan for Nuclear Power Facilities states that the population living within the plume exposure pathway requires educational information which is intended to (1) acquaint the public with the effects of radiation on the human body and the environment; (2) explain precautions to minimize these effects; and (3) explain the methods used to alert and notify the public of an emergency. The Wake, Chatham, Lee, and Harnett County emergency response plans for the Harris Nuclear Plant (HNP) which are contained in Part 2, Section 2 of the North Carolina Radiological Emergency Response Plan also state that information and instructions transmitted to the public during an emergency include (1) geographical areas or political subdivisions of the county within the 10-mile radius of the Harris Plant; (2) travel routes; (3) reception and care center locations in the event of an evacuation; (4) educational information on radiation; and (5) instructions on how the public will be alerted to a potential threat, or an actual emergency condition.

The methods used for distribution of public education and information materials are described in the State of North Carolina Radiological Emergency Response Plan, Harris Nuclear Plant Emergency Plan (PLP-201), and Harris Emergency Program Maintenance procedure, EPM-500, Public Education and Information Program.

Information and education are provided to the public on an annual basis regarding how they will be notified and what their initial actions should be in an emergency at the Harris Nuclear Plant. Information is also provided to the news media for use during an emergency. Public education and information to support the Harris Nuclear Plant includes brochures, calendars, press

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releases, and other written information distributed to residents and transients in the 10-mile Emergency Planning Zone (EPZ) surrounding HNP. The following information is distributed:

- a. Safety Information Calendar/Brochure (in English and Spanish)
- b. Student Safety Information Brochure
- c. Media education material (i.e., Harris Nuclear Plant Media Information Guide)
- d. Periodic HNP newsletter for residents in the 10-mile EPZ (i.e., Harris View)
- e. Other: press releases and on-going, periodic mailings to residents within the 10-mile EPZ (i.e., notification of tone alert radio annual test or notification of siren full volume and growl tests), and availability of qualified personnel to address civic, religious, social, and occupational organizations.

River and lake warning signs are posted for transients in the 10-mile EPZ.

# Resident and School Public Information

The HNP Emergency Preparedness (EP) Unit is responsible for providing an annually updated dissemination of information to the public within the 10-mile EPZ regarding how they will be notified and what their actions should be in an emergency. This information includes, but is not limited to:

- a. Educational information on radiation
- b. Contacts for additional information
- c. What to do in an emergency, such as protective measures (evacuation routes and relocation centers, sheltering, respiratory protection, radioprotective drugs)
- d. Special needs of the handicapped
- e. Tone alert radio information (purpose, operation, placement within the home, how to request repairs)
- f. How emergency response works and who is in control.

The HNP EP Unit provides the Safety Information Calendar/Brochure, Student Safety Information Brochure, periodic newsletter, media education material and an ongoing program of press releases to residents within the 10-mile EPZ. The Student Safety Information Brochure is distributed to day care centers, preschools, and elementary schools within the 10-mile EPZ. Press releases and periodic mailings include information about the annual tone alert radio test and Emergency Alert System (EAS) message; annual full volume test; and quarterly growl test.

# **Transient Public Information**

The HNP EP Unit is responsible for providing annually updated information to transients in the 10-mile EPZ which includes, but is not limited to, distribution of the Safety Information Calendar/Brochure to hotels and motels; periodic newsletter; and river and lake warning signs.

The river and lake warning signs are inspected semiannually and problems are corrected, as needed. The HNP EP staff reviews any changes to lake or river recreation areas and boat ramps with the State of North Carolina Division of Emergency Management and 10-mile EPZ counties annually and coordinates replacement of damaged signs or erection of new signs. The HNP EP Staff tracks this surveillance item in the HNP action tracking program.

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# Media Education Materials

The HNP EP Unit and Corporate Communications Department provides an updated dissemination of information to the news media annually which includes information on the HNP emergency plan; information concerning radiation; and information describing the facility location and personnel responsible for release of public information during an emergency.

The State of North Carolina Division of Emergency Management and Chatham, Harnett, Lee, and Wake County Divisions of Emergency Management provide assistance to Progress Energy with the development and distribution of public education information for residents, transients and development of media education material.

Public education and information materials for Unit 2 and later Unit 3 will be prepared in the future as necessary to support the implementation schedule for the revised Emergency Plan. Such material is expected to be similar to the materials currently in use for existing Progress Energy nuclear facilities. As way of illustration, public information on emergency planning used for Harris Unit 1 is attached. Similar materials for Unit 2 and Unit 3 will be prepared at the appropriate time.

# **Associated HAR COL Application Revisions:**

No COLA revisions have been identified associated with this response.

# **Attachments/Enclosures:**

- 1. Harris Nuclear Plant 2008 Safety Information
- 2. Planta Harris de Energia Nuclear 2008 Informacion Sobre Seguridad
- 3. Harris Nuclear Plant Student Safety Information 2008/2009
- 4. Harris Nuclear Plant Media Information Guide
- 5. Harris View (July/August 2008)

# List of Attachments/Enclosures:

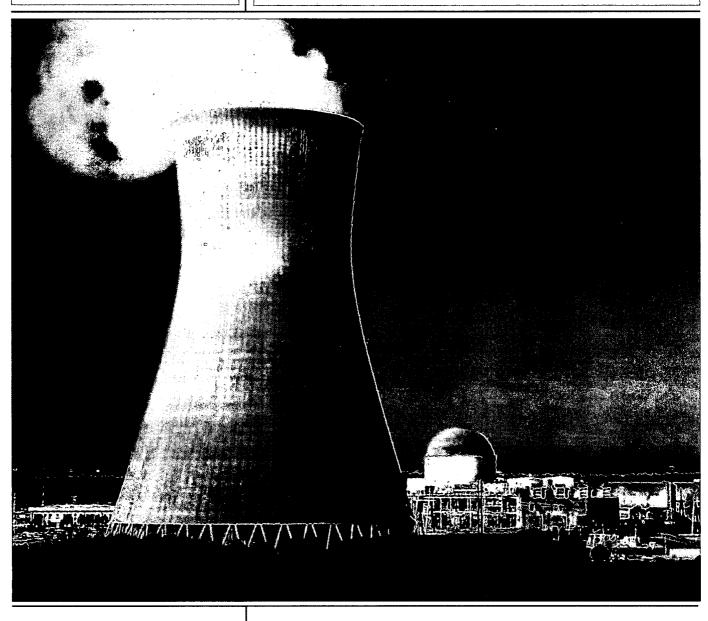
- NRC RAI # 13.03-76 (PGN RAI ID #H-0285):
   Harris Nuclear Plant 2008 Safety Information (11 pages)
- NRC RAI # 13.03-76 (PGN RAI ID #H-0285):
   Planta Harris de Energia Nuclear 2008 Informacion Sobre Seguridad (22 pages)
- NRC RAI # 13.03-76 (PGN RAI ID #H-0285):
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# HARRIS Nuclear Plant

2008

safety information

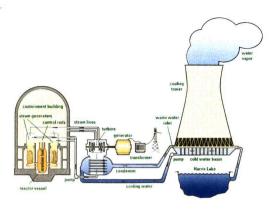


Keep this brochure in: your **car**, your **home**, or a **handy place** so that you will have the information in an emergency. Para recibir una copia de esta información en español, por favor llene sus datos y devuelva la tarjeta adjunta.



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# Generation

- Nuclear plants are similar to other types of power plants.
  High-pressure steam turns propeller-like blades of a turbine
  causing the shaft of a huge generator to spin. Inside
  the generator, coils of wire and magnetic fields interact to
  create electricity.
- Nothing is burned in a nuclear reactor. Uranium fuel generates heat through fission. Atomic particles called neutrons strike a uranium atom causing the atom to split (fission). When the atom splits, tremendous heat is generated and more neutrons are released, triggering more fission and producing a chain reaction.
- The fuel is a solid pellet the diameter of a piece of chalk and about one-half inch long. These pellets are stacked inside long vertical tubes inside the reactor.
- The nuclear reaction can be controlled by inserting special rods among the fuel tubes. These control rods absorb free neutrons preventing them from hitting the uranium atoms and causing fission. These rods can be dropped into the fuel either manually or automatically if needed.

# Safety & Security

- Nuclear plants are built with multiple layers of safety systems and structures designed to protect both the plant and the community. Our safety systems have separate, multiple backup systems to provide additional protection and reliability.
- Containment buildings are reinforced concrete and steel structures that can withstand tremendous forces such as hurricanes, tornados and even earthquakes.

- Nuclear plants are among the most secure industrial facilities in the world. Each facility has a specially trained and equipped security force that monitors and controls access to the plant 24 hours a day.
- Progress Energy operates the Harris Plant with uncompromising safety guidelines monitored by our own stringent internal programs, as well as industry and Nuclear Regulatory Commission guidelines.

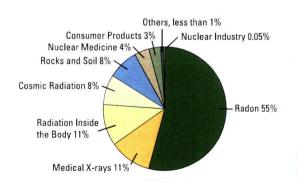
# Radiation

We are constantly exposed to radiation from our natural environment. This is called background radiation. Sources of background radiation include the sun, the air we breathe, soil, plants, building materials and even the human body. We are also exposed to man-made sources of radiation like medical and dental X-rays, smoke detectors and television sets.

You could be exposed to radioactive materials in three ways:

- Radioactive material in the air and on the ground. You can prevent exposure by going to a place with no radioactive material.
- Radioactive material on hair, skin and clothing. Exposure will stop if you wash off the radioactive material.
- Breathing or swallowing radioactive material. Exposure will stop when the material stops giving off radiation or when your body eliminates it.

# **Sources of Radiation Exposure**



Measured in millirem (mR) per year

# There are Three Types of Radiation:

#### Alpha

The least penetrating, it can be stopped by a piece of paper.

#### Beta

It can be stopped by a thin piece of aluminum.

#### Gamma

It can be stopped by lead, water or concrete.

# Sources and Amounts of Radiation:

# Natural Background Radiation

Radon	200 mR
Cosmic radiation	27 mR
Internal radiation	
from human body	40 mR
Rocks and soil	28 mR

Man-made Radiation	
Medical X-rays	39 ml
Nuclear medicine	14 ml
Consumer products	
(TVs. smoke detectors, etc.)	10 m
Other	
(including nuclear power)	2 ml
Total	360 ml

1 2

# **Classification of Emergencies**

There are four different classifications of emergencies that could occur at a nuclear power plant. The classifications help state and county officials and plant personnel determine how they will respond to each kind of problem.

#### **Unusual Event**

This is the least serious of the four emergency classifications. It means there is an event at the plant, but it would not affect the public.

# Alert

This is an event that could reduce the level of safety at the plant. There is still no danger to the public State and county officials and Progress Energy might decide to activate their emergency centers, just in case the situation gets worse.

#### Site Area Emergency

This event could lower the safety of the plant, but probably not enough to pose a danger to the public. The sirens would be sounded to alert the public to listen to local radio and television stations for information and instructions.

#### **General Emergency**

This is the most serious event that could occur at the plant. State and county officials would take action to protect the public. Sirens will be sounded and local radio and television stations will give instructions to the public living in affected areas. They would be told to evacuate from the area, shelter in place or issue Potassium lodide (KI).

# Your Safety is Important to Us

This brochure gives basic information on radiation and information on what to do if there is an emergency at the Harris Plant in New Hill. State and county officials and Progress Energy want you to be prepared so that you and your family would know what to do in an emergency.

The Harris Plant has multiple backup safety systems, so a serious emergency is unlikely to occur. Plant operations are conducted under strict safety rules and are monitored by the Nuclear Regulatory Commission (NRC), a federal agency that regulates the nuclear industry in the United States. As part of regulatory requirements, emergency exercises are conducted every other year with plant personnel and state and county officials participating. This brochure is part of the comprehensive emergency plans developed by the state of North Carolina, Chatham, Harnett, Lee and Wake counties and Progress Energy.

Be sure you understand the information in this brochure so you and your family will be prepared in the unlikely event of an emergency. Discuss this material with family members and friends.

If you know someone who cannot read or is visually impaired, please read this information to them and make sure they understand it.

# The Emergency Alert System

In the unlikely event of an emergency at the plant, numerous polemounted sirens located in the 10-mile emergency planning zone {EPZ} around the plant would be activated to alert the public. Hearing the sirens does not mean you should evacuate.

Sirens are the primary warning system used to alert the public in the event of an emergency. Officials might also travel along selected county and state roads in the 10-mile EPZ in vehicles equipped with flashing lights and loudspeakers. They might also go door-to-door in selected areas. Residents living within the five-mile radius of the plant have been given tone alert radios that will alarm and give a brief instruction if there is an emergency at the plant. To alert people on the waterways, officials in boats will use sirens, loudspeakers, colored smoke and flares.

The sirens are activated by county officials and are tested often to make sure they work properly. The sounding of the sirens is probably just a test, but there could be an emergency at the plant.

If you hear the sirens and are not sure if it is a test of the system or an emergency, tune to one of the radio stations listed on page 5. During an emergency, these stations should stop regular programming to give information and instructions to the public. The sirens will sound several times for three-minute intervals if there is an emergency that could affect the public. Keep the radio tuned for more information. You might be advised to evacuate the area, shelter in place or take potassium iodide (KI).

Some residents in the 10-mile EPZ have been identified as needing special assistance in the event of an emergency. These people should

fill out the Request For Special Assistance card, which is attached inside this brochure

# **Tone Alert Radios**

Residences within the five-mile radius of the Harris Plant have been given tone alert radios. You should always keep the radio plugged in and in a place where you can hear the alarm, particularly at night while sleeping.

In severe weather, a signal sent by the National Weather Service activates an alarm on the radios. The National Weather Service also sends a signal to the radios if there is an emergency at the Harris Plant

When the alarm sounds, you should press the WEATHER bar or button on top of the radio to receive brief instructions. If there is an emergency, you should also tune to a radio or TV station for more details.

The pamphlet that you received with your radio explains how it works. Keep this information in a handy place for quick access. If you have any questions about your radio, call the Progress Energy Carolinas Customer Service Center at 919.508.5400 or 1.800.452.2777. Monday - Friday, 7 a.m. to 9 p.m.

# Taking Shelter in Place

If there is an emergency at the plant, radio or television stations might instruct you to shelter in place as a precaution. By remaining indoors, you reduce exposure to the radioactive materials.

You should follow these steps when told to shelter in place:

- DO NOT go to your child's school. Children will be sheltered and protected by school officials.
- Shelter livestock and give them STORED feed and water, not fresh, Keep pets indoors.
- Go indoors and close all windows and doors. Turn off fans, heating and air conditioning that require outside air. Close any other air intakes.
- 4. Do not use the telephone unless absolutely necessary.
- Cover all open food containers. The food, water and milk supplies in your home are safe to eat and drink.
- 6. Go to a room or basement with few or no windows.
- Stay tuned to a local radio or television station for more emergency information.
- Stay indoors until a local radio or television station reports it is safe to go outside.
- If you must go outside, place a cloth over your nose and mouth.

# Siren Tests

There are three ways the sirens are tested:

#### Silent test

A silent signal is sent to each siren every two weeks. The sirens do not sound during this test.

# Quarterly tests

Every three months the sirens will sound for brief, 5-second full volume tests. Progress Energy, will provide information about the test through the local news media and will post dates of the test on its Web site.

# Full-volume test

All the sirens will sound at the same time for three-minute intervals. A full-volume test is conducted once a year. Progress Energy will provide information about the test through the local news media. Also, look for the announcement in Harris View, a newsletter mailed to residents living within the 10-mile EPZ.

# Radio Tests

The National Weather Service performs a test of the tone alert radios on a weekly basis. Every Wednesday between 11 a.m. and noon, the alarm on the tone alert radio should sound. To know if the alarm is a test or an emergency, press the WEATHER bar or button after the alarm sounds to receive information and instructions. The message that follows the alarm will tell you if it is an emergency or a test. If it is an emergency, the message will tell you what to do.

#### **Radio Stations**

These radio stations will participate in Emergency Alert System (EAS) announcements in the event of an emergency.

If you hear several three-minute-long siren blasts, tune to one of the following stations for information:

94.7 WQDR-FM

105.1 WDCG-FM

Other radio and television stations may also broadcast information and instructions in an emergency.

# Potassium lodide

In cases where you may be exposed to certain types of radioactivity, the North Carolina Department of Health and Human Services may direct you to take Potassium lodide (KI) tablets.

KI is an over-the-counter drug (simple salt) that may reduce the amount of radioactive iodine absorbed by your body's thyroid gland. KI fills your thyroid with iodine so that it cannot absorb any radioactive iodine.

You should only take KI when directed to do so by public health officials. You would be notified whether or not it is advisable to take KI through an Emergency Alert System (EAS) message. Emergency sirens would sound, and normal radio/television broadcasts would be interrupted to instruct the public of what protective actions they should be taking. These instructions could include: evacuate the area, stay inside, and/or take KI.

Should an accidental release of radiation occur, KI will be available at reception centers. If you live within 10 miles of the plant and prefer to have KI on hand, you can contact the following agencies:

Chatham County Health Department Harnett County Health Department 919.542.8214 910.893.7550

Lee County Health Department

919.718.4640 ext.5388

Wake County Human Services 919.212.7000

For general information on KI, you can visit the North Carolina Public Health Preparedness & Response Web page on KI, at www.epi.state.nc.us/epi/phpr/ki/ki.html. You may also contact the Division of Public Health's public information officer at 919.715.4174.

# **Evacuation Procedures**

If there is an emergency at the plant, people in some sub-zones might be asked to evacuate as a precautionary measure. Stay calm. You will only be asked to evacuate if it is necessary. Evacuation routes, reception centers for each sub-zone are listed on pages 13-18.

#### What You Should Do

- Pack necessary items such as the following to take with you:
  - · this brochure
  - two sets of clothing, two blankets or a sleeping bag for each person planning to stay at the care center
  - · toilet articles, bath towels
  - · necessary medication, baby needs
  - · identification, car registration
  - · credit cards, checkbook, cash
  - · portable radio, flashlight, batteries
- Plan now for your pet's care in an emergency. It is recommended
  that you make prior arrangements with friends, relatives, or
  pet boarding facilities. If you decide to leave your pets at
  home, provide them with shelter and a three-day supply of
  food and water. If you need additional information, contact
  your county emergency management agency.
- Do not use the telephone unless absolutely necessary.
- Plan ahead! It is a good idea to drive your evacuation route now so that you are familiar with it. Call your local county emergency management office if you have questions. The telephone numbers for state and county emergency management agencies are listed on page 7.

# As You Evacuate

- If your child attends a school in the 10-mile EPZ, do not go to the school. Children in these schools will be taken by bus to Relocation Schools (listed on pages 11-12).
- School children who live in the 10-mile EPZ and attend a school outside the EPZ will be kept at their schools by school officials until they are picked up by their parents.
- Close car windows and vents. Do not turn on the car air conditioner or heater.
- As you drive, stay tuned to a local radio station for more information.
- 5. Follow the evacuation route to the designated reception center for the area where you live or the relocation school for your child's school. You may stay at the reception center or another location at least 10 miles away from the plant. It's very important that you sign in at the reception centers even if you do not plan to stay there.
- If unfamiliar with the route to travel, follow the blue evacuation signs provided on all major roads.

# **Special Assistance**

Special plans have been made for people identified as needing special assistance. The Request For Special Assistance card inserted in this brochure helps county officials know if you need assistance. Even if you have previously submitted a request card, the information must be updated every year, so please fill out this card and mail it as soon as possible. This information will be handled by county energency management officials in a confidential manner.

You should fill out the special assistance card if:

- You are disabled or hearing impaired.
   Your county officials will keep this
   information on file and will be able to assist you if needed.
- You do not have a car, or cannot ride with someone else. County officials will assist in making arrangements for your transportation out of the EPZ. Special transportation plans and contact phone numbers will be broadcast on local radio and television stations.

Fill out this card, or have someone else complete it for you and mail it in. In the event of an emergency, an automated telephone system will notify individuals requesting special assistance. Testing of this system will be conducted two times during the year. Test date information cards will be mailed in advance to those participating in the special needs notification program.

If you are responsible for someone in a nursing home, rest home or hospital, do not pick them up unless the special care facility has instructed you to do so prior to an emergency. Officials will care for these people and take those needing medical care to hospitals and special care facilities outside the 10-mile area surrounding the plant.

If you have neighbors with special needs you may want to help them to evacuate the area or to shelter in place in their home.

# Emergency Numbers

If you need help during an evacuation, call the number for the county you live in:

Chatham County 919.542.2911

Harnett County 919.832.9111

919.775.8268

Lee County

Wake County

919.856.7044

# **Agricultural Information**

If you are warned that a radiological emergency exists, make arrangements for the safety of your family and farm.

#### For the farm:

- Shelter all farm animals, particularly dairy cattle and dairy goats.
- Livestock should only be fed stored feed and protected water.
- · Bring feed into buildings or cover outdoor feed supplies.
- Store as much water as possible for livestock. Cover wells, rain barrels and tanks.

# For the family:

- Place food and water inside a closed area in your house where it cannot be contaminated. Uncovered food brought in from a contaminated area should be cleaned.
- Eggs, potatoes and melons that are cleaned may be eaten.
- Green leafy vegetables should be carefully washed. Remove the outer layers if they were exposed to contamination.
- · Peas and beans require normal cleaning.
- Wash hands thoroughly before eating.

# For farm work:

- Wear protective clothing (similar to that used for pesticide application) when working outdoors for the first few days following the emergency. Remove outer clothing before entering your home or any other clean area. Shower thoroughly as soon as you finish work.
- Wear a dust filter over your nose and mouth when cultivating dry earth or if harvesting corn or feed grains.

# For More Information

If you have questions about any of the safety information you have read in this brochure, you can call or write one of the following offices:

Chatham County Emergency Management 919.542.2911 297 West Street

P.O. Box 613

Pittsboro, NC 27312

Harnett County Emergency Management 910.893.7580 200 North 13th St.

Erwin, NC 28339 After Hours:

Harnett Co. Sheriff's Department 919.832.9111

Lee County Office of Emergency Management 919.775.8279 P.O. Box 1154. Sanford, NC 27331

After Hours:

Lee Co. Sheriff Department 919.718.4561 Sanford Police Department 919.775.8268

Wake County Emergency Management 919.856.6480

Wake County Office Bldg., 14th floor

P.O. Box 550

Raleigh, NC 27602-0550

NC Emergency Management 1.800.858.0368

State Emergency Operations Center

116 West Jones St.

Raleigh, NC 27603-1335

NC Emergency Management 919.575.4122 Central Branch

401 Central Ave. Butner, NC 27509



# Your Quick Reference Safety Information for the Harris Plant

Please take a minute and complete the information below so you will have it in an emergency.

My local radio station is:

My local television station with information is:

My zone on the map is:

The reception center for the zone where I live is:

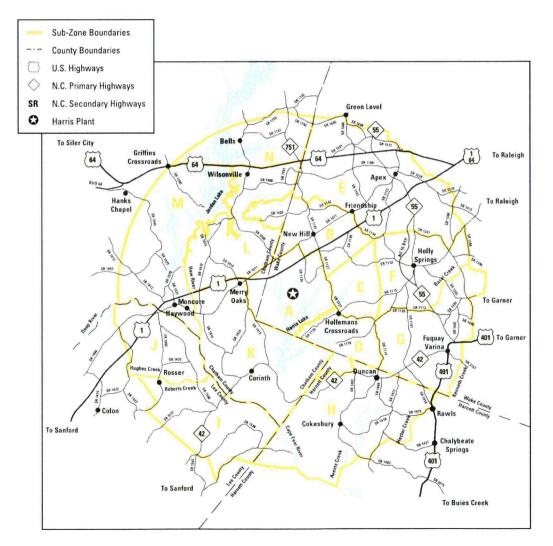
The evacuation route for the zone where I live is:

The relocation school(s) for my child (children) is(are):

Plan ahead! Drive your route now. If you have any questions, call your emergency management office.

# Map of the 10-Mile Area Around the Harris Plant

The map is divided into sub-zones. Each sub-zone is marked with a different letter. If the radio or television station tells you to evacuate, the information on the following pages tells you where to go to be safe. Look at the evacuation route for your sub-zone. Mark the route on the map now so you will have it if you need it. (See evacuation route to reception centers section on pages 13-18.)



# Relocation Schools for Licensed Child Care Centers and Schools

If there is an evacuation of children attending school in the 10-mile EPZ. DO NOT GO TO THE SCHOOL. Children in these schools will be taken by bus to one of the relocation schools listed in the chart on this page.

School children who live in the 10-mile EPZ and attend a school outside the EPZ will be kept at their schools by school officials until they are picked up by their parents.

This chart shows the schools and their locations, the sub-zones where they are located, and the relocation schools where school children would be taken in the event of an emergency. When you have determined the designated relocation school for your child's school, you may do one of the following:

- You may pick up your child at the relocation school and go and stay at the reception center for your sub-zone.
- 2. You may pick up your child at the relocation school and go and stay somewhere other than the reception center, as long as you are 10 miles from the plant.

Your child will be cared for at the relocation school by school and county officials until you arrive.

Facility	Sub-zone	<b>Relocation School</b>
High Schools		

Apex Senior High School	Ε	Sanderson High School (Raleigh)	
Community Partner's Charter High School	F	Southeast Raleigh High School (Raleigh)	
Fuquay-Varina Senior High School	G	Garner Senior High School (Garner)	
Holly Springs High School	F	Southeast Raleigh High School (Raleigh)	

# Middle Schools

Apex Middle School	E	Leesville High School (Raleigh)
Fuquay-Varina Middle School	G	Millbrook High School (Raleigh)
Holly Ridge Middle School	F	Knightdale High School (Knightdale)
Lufkin Road Middle School year-round	Ε	Leesville High School (Raleigh)
St. Mary Magdalene Catholic School	£	Cardinal Gibbons High School (Raleigh)
Salem Middle School year-round	Ε	Leesville High School (Raleigh)

#### **Elementary Schools**

Apex Elementary School	Ε	Sanderson Senior High School (Raleigh)
A. V. Baucom Elementary School year-round	Ε	Leesville High School (Raleigh)
Holly Grove Elementary School year-round	F	Southeast Raleigh High School (Raleigh)
Holly Ridge Elementary School	F	Knightdale High School (Knightdale)
Holly Springs Elementary School year-round	F	Knightdale High School (Knightdale)
Hope Montessori School	E	Sanderson High School (Raleigh)
Lincoln Heights Elementary School	G	Millbrook High School (Raleigh)
Moncure Elementary School	М	Northwood Senior High School (Pittsboro)
The New School, Inc. Montessori	F	Southeast Raleigh High School (Raleigh)
Olive Chapel Elementary School year-round	Е	Leesville High School (Raleigh)
Salem Elementary School year-round	Е	Leesville High School (Raleigh)
Southern Wake Montessori School	F	Southeast Raleigh High School (Raleigh)

# **Child Care Centers**

Child care facilities will move children to the relocation school for the zone where the child care facility is located.

#### 7one

E	Sanderson Senior High School (Raleigh)
F	Southeast Raleigh High School (Raleigh)
G	Garner. High School (Garner)
Н	Harnett Central High School (Angier)
M	Northwood Senior High School (Pittsboro)

# **Relocation School Location Information:**

# Cardinal Gibbons High School (Raleigh)

Adjacent to Carter Finley Stadium on Edwards Mill Rd.

# Southeast Raleigh High School (Raleigh)

Rock Quarry Rd. and Creech Rd., south of I-40

# **Garner Senior High School (Garner)**

From Hwy. 70 east, take Yeargan Rd. right on Coldwater Rd. to Spring Dr.

# **Harnett Central High School (Angier)**

NC Hwy. 210 at the intersection of 1513 (Neil's Creek Rd.) and 1403 (Harnett Central Rd.)

# Northwood Senior High School (Pittsboro)

Take Pittsboro Moncure Rd. north to US 15-501; go north approx. 3 miles north of Pittsboro, turn left on Northwood School Rd.

# Sanderson Senior High School (Raleigh)

Take exit 8 from I-440, north on Six Forks Rd. west on Millbrook Rd. to Dixon Dr.

# Leesville High School (Raleigh)

I-540 to Leesville Rd. exit, head south on Leesville Rd., school on the right. Or I-440 to US 70/Glenwood Ave. North exit. Turn right on Lynn Rd., left on Leesville Rd. School on the left.

# Millbrook High School (Raleigh)

I-440 to Wake Forest Rd. It turns into Falls of Neuse Rd., turn right on Spring Forest Rd., school on the left.

# Knightdale High School (Knightdale)

US 64 east, turn left on Old Knight Rd. Just past Forestville Rd. on the left.



Approximately 325 people turned out on Saturday, Sept. 8, for the second annual Harris Community Day. Visitors enjoyed tours of the plant's control room simulator, talking with plant employees and learning about plant operations, radiation protection, environmental monitoring and emergency preparedness.

# **Reception Center**

A predesignated facility outside the Plume Exposure EPZ (minimum is 15 miles from utility) at which the evacuated public can register, receive radiation monitoring and decontamination, receive assistance in contacting others, receive directions to congregate care centers (if not located with reception center), reunite with others, and receive general information. It generally refers to a facility where monitoring, decontamination and registration of evacuees are conducted.

		Evacuation Routes and Shelter	rs			Evacuation Routes and Shelter	S
Sub-Zone	Description of Sub-Zone	Evacuation Routes	Reception Center	Sub-Zone	Description of Sub-Zone	Evacuation Routes	Reception Center
A Wake County	This portion of the sub-zone includes the Harris Plant and the central portion of the Harris Lake. It is bordered by Old US I and New Hill Hollerman Rd. The lake forms the border to the south.	Shearon Harris Rd. (SR 1134) north to Old US Hwy. 1 (SR 1011). SR 1011 through Apex to US Hwy. 64. US Hwy. 64 to US Hwy. 1-64 north. Follow US Hwy. 1-64 north on I-440 to exit 8B to Six Forks Rd. north to Millbrook Road, left onto Millbrook, right onto Dixon.  OR: Shearon Harris Rd. (SR 1134) to New Hill-Holleman Rd. (SR 1127) north to US Hwy. 1. US Hwy. 1-64 north on I-440 to exit 8B to Six Forks Rd.	Sanderson High School	D Wake County	This portion of the sub-zone includes the southeastern portion of Harris Lake and the area surrounding Cass Holt Rd. The sub-zone is bordered by Bartley Holleman Rd. Rex Rd., Buckhorn-Duncan Rd. and the Wake-Harnett/Wake-Chatham county lines.	Cass Holt Rd. (SR 1116) to Honeycutt Rd. (SR 1126), east to Piney Grove-Wilbon Rd. (SR 1101), south to Wade Nash Rd. (SR 1113), east crossing NC Hwy. 55 to Dickens Rd. (SR 1398), east to James Slaughter Rd. (SR 1399), north to Bass Lake Rd. (SR 1393) through Needmore Crossroads on Hilltop-Needmore Rd. (SR 1393), east to US Hwy. 401, north to US Hwy. 70 east to right onto Coldwater Drive. Right onto Spring Drive.	Garner High School
Chatham County	The portion of the sub-zone includes Chatham County area west of the Harris Plant and is bordered by Old US 1. Christian Chapel Road, and the Chatham-Wake county line.	US Highway 1 south to Moncure-Pittsboro Road (SR 1012), north to NC Hwy. 87 Bypass, west on NC 902 to Chatham Central High School.	Chatham Central High School	Harnett County	This portion of the sub-zone includes the areas surrounding Rollins Mill Road, Hobby Road, and Auger Hole Road. This portion of the sub-zone is bordered by Harnett-Lee county line, Harnett-Wake county line and areas north of NC Hwy 42.	Rollins Mill Road, Hobby Road, and Auger Hole Road south to NC Hwy. 42, east to Oakridge Duncan Road. (SR 1409), south to Christian Light Road (SR 1412), south to Rawls Church Road (SR 1415), to US Hwy. 401, south to Kipling. Then SR 2215 east across NC Hwy. 210 to Harnett Central Middle School.	Harnett Central Middle School
B Wake County	This sub-zone includes the com- munities of New Hill and Bonsal and the areas around the follow- ing roads: Old US Hwy. 1, Humie Olive Rd., New Hill-Olive Chapel Rd., Friendship Rd., US Hwy. 1, Shearon Harris Rd. and New Hill-Holleman Rd.	New Hill-Holleman Rd. (SR 1127) north to US Hwy.  1. Follow US Hwy. 1-64 north on I-440 to exit 8B to Six Forks Rd. north to Millbrook Road, left onto Millbrook, right onto Dixon.  OR: SR 1903 in Chatham County and Barker Rd. (SR 1142) in Wake County to New Hill-Olive Chapel Rd. (SR 1141) south to Old US Hwy. 1 (SR 1011), east through Apex to US Hwy. 64 east to US Hwy. 1-64 and north on I-440 to exit 8B to Six Forks Rd. north to Millbrook Road, left onto Millbrook, right onto Dixon.	Sanderson High School	E . Wake County	This sub-zone includes the town of Apex, the community of Friendship, and the areas surrounding US Hwy: 1, Old US Hwy. 1, US Hwy. 64. NC Hwy. 55, Tingen Rd. and Olive Chapel Rd. The sub-zone is bordered by the Wake-Chatham county line, the community of Green Level, SR 1010, Kildaire	All traffic to NC Hwy, 55 to US Hwy, 1-64 North OR: to NC Hwy, 64 east to US Hwy, 1-64 North THEN: North on I-440 to Exit 8B to Six Forks Rd. North. North on Six Forks Rd. to a left on Millbrook Rd, right onto Dixon Dr.	Sanderson High School
C Wake County	This sub-zone includes the com- munity of Holleman's Crossroads, the northeast portion of Harris Lake, and the	New Hill-Holleman Rd. (SR 1127), south to Avent Ferry Rd. (SR 1115), east to Holly Springs at NC Hwy, 55 Bypass. North NC Hwy, 55 Bypass to Holly Springs Rd. (SR 1152).	Southeast Baleigh High School		Farm Rd., Sunset Lake Rd. and Woods Creek Rd.		
	areas surrounding Avent Ferry Rd. and New Hill Rd.	OR: on New Hill Rd. (SR 1152), east to NC Hwy. 55 Bypass.  OR: From NC Hwy. 55 Bypass east on Holly Springs Rd. (SR 1152) to Tryon Rd. to Gorman St. Gorman St. north to I-440 east to Rock Quarry Road. Right on Rock Quarry Rd. to Southeast Raleigh HS on right.	·	F Wake County	This sub-zone includes the town of Holly Springs, Sunset Lake and Bass Lake, and the areas surrounding NC Hwy, 55 Bypass, Holly Springs Rd., Avent Ferry Rd., Bass Lake Rd. and Cass-Holt Rd.	Avent Ferry Rd. east, to a left on NC Hwy, 55 Bypass.  OR: New Hill Rd. east over NC Hwy 55 Bypass  OR: Main St. to Holly Springs Rd.  OR: Bass Lake Rd. to Holly Springs Rd.  OR Sunset Lake Rd. to Holly Springs Rd.  THEN: East on Holly Springs Rd. to a right on Tryon Rd.  Tryon Rd. to a left on Gorman St. Gorman St. north to  I-40 east to Rock Quarry Rd. Right on Rock Quarry Rd.  to Southeast Raleigh HS on the right.	Southeast Raleigh High School
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		Evacuation Routes and Shelter	S			Evacuation Routes and Shelter	S
Sub-Zone	Description of Sub-Zone	Evacuation Routes	Reception Center	Sub-Zone	Description of Sub-Zone	Evacuation Routes	Reception Center
G Wake County	This sub-zone includes the town of Fuquay-Varina and the areas surrounding NC Hwy. 42, NC Hwy. 55, US Hwy. 401, Piney Grove-Wilbon Rd, Bass Lake Rd., James Slaughter Rd. and Sunset Lake Rd. The sub-zone extends south to the Wake-Harnett county line and east along Kenneth Creek.	Rouse Rd. (SR 1125), east to Piney Grove-Wilbon Rd. (SR 1101), south to Wilbon Rd. (SR 1110), east to NC Hwy 55 into Broad St. Right on Sunset Lake Rd and left onto US 401 North. (Main St.) OR: NC Hwy. 42 East (W. Academy St) to US Hwy. 401 (Main St.) Left on US Hwy. 401 OR: Hilltop-Needmore Rd. to US Hwy. 401 North THEN: US Hwy 401 North to US Hwy. 70 East to a right on Coldwater Dr. and a right on Spring Dr.	Garner High School	J Lee County	This sub-one is bordered by the Deep River and Cape Fear River, and includes areas surrounding Lower Moncure Road, Lees Chapel Road, Rod Sullivan Road, Deep River Road, Lower River Road, Ferrell Road, and US Hwy. 1.	Lower Moncure Rd. (SR 1002) north from Cletus Hall Road to Deep River Rd. (SR 1466), turn left on Deep River Rd. (SR 1466) to US Hwy. 1, south on US Hwy. 1 to NC 78, turn left on NC 78 east (Tramway Road) to Southern Lee High School.  OR: Lower Moncure Rd. (SR 1002), south from Cletus Hall Road to Farrell Rd. (SR 1423), right on Farrell Road to Osgood Rd. (SR 1422), left on Osgood Road to Colon Rd. (SR 1415), right on Colon Road to US Hwy. 1, south on US Hwy. 1 to NC 78, turn left on NC 78 east (Tramway Road) to Southern	Southern Lee High School
Н	This sub-zone includes the	Cokesbury Rd. (SR 1403), Oakridge River Rd.	Harnett Central		····	Lee High School.	
Harnett County	community of Duncan, Camp Agape, Raven Rock Park. West Horse Trail Loop, the areas surrounding Avents Creek and the following roads: NC Hwy. 42, Rawls Church Rd., Baptist Grove Rd., Christian Light Rd., Cokesbury Rd. and River Rd. This sub-zone is bordered by	(SR 1418), Rawls Church Rd. (SR 1415) and Baptist Grove Rd. (SR 1427), east to US Hwy. 401 to Kipling. Then SR 2215, east across NC Hwy. 210 to Harnett Central Middle School.  OR: NC Hwy. 42, east to Oakridge Duncan Rd. (SR 1409), south to Christian Light Rd. (SR 1412), south to Rawls Church Rd. (SR 1415) to US Hwy. 401, south to Kipling. Then SR 2215 east across	Middle School	K Chatham County	This sub-zone includes the communities of Merry Oaks and Corinth, the southern portion of Harris Lake and the areas surrounding the following roads: Old US Hwy. 1, Christian Chapel Rd.,	Christian Chapel Rd. (SR 1912), north from intersection of Moncure-Flat Wood Rd. (SR 1924) to Old US Hwy. 1 (SR 1011), west through Haywood and Moncure, Old US Hwy. 1 (SR 1011), west to Moncure-Pittsboro Rd. (SR 1012), north on Moncure-Pittsboro Road to NC Hwy. 87 Bypass, west on NC 902 to Chatham Central High School.	Chatham Central High School
	the Chatham-Harnett-Wake county lines, Avents Creek, Christian Light Rd., Hector Creek, Rawls Church Rd. and US Hwy. 401.	NC Hwy. 210 to Harnett Central Middle School.			Moncure-Flat Wood Rd., Corinth Rd. and NC Hwy. 42. This sub-zone is bordered by the Chatham-Wake county line (on the south side). Christian Chapel road (on the east side), the Chatham-Harnett county	OR: Old US Hwy. 1 (SR1011), west through Haywood and Moncure to Moncure-Pittsboro Rd. (SR 1012), north to NC Hwy. 87 Bypass, west on US, 64 Business Route, merge onto US. 64 Bypass going west, west to Siler City to East Raleigh St., west to White Oak Rd., and south to Jordan-Matthews High School.	Jordan-Matthews High School
I Lee County	This sub-zone is bordered by the Cape Fear River and the Lee-Harnett county line. It includes the areas surrounding Poplar Springs Church Rd.	Poplar Springs Church Road (SR 1537) west or Buckhorn Road (SR 1538) west to NC Hwy. 42 across 421/Hwy. 87 and continuing straight to NC 78 (Tramway Road), continue on NC 78 to Southern Lee High School.	Southern Lee High School		line, the Cape Fear River, the Haw River and US Hwy. 1.	OR: Christian Chapel Rd. (SR 1912), north past Moncure-Flat Wood Rd. (SR 1924) to Old US Hwy. 1 (SR 1011), west through Haywood and Moncure to Moncure-Pittsboro Rd. (SR 1012), north to NC Hwy. 87 Bypass, west on NC 902 to Chatham Central High School.	Chatham Central High School
	Buckhorn Rd. and NC Hwy. 42. The sub-zone also includes areas northeast of the NC Hwy. 42 and where Lower Moncure Rd. intersects RH Lane Rd.	OR: Buckhorn Rd. (SR 1538), west to East Harrington Road, turn right on Main Street continuing straight to NC Hwy. 42 west, across US 421/Hwy. 87 and continuing straight to NC 78 (Tramway Road), continue on NC 78 to Southern Lee High School.				OR: From intersection of Moncure-Flat Wood Rd. (SR 1924) and Christian Chapel Rd. (SR 1912), south on SR 1924 to Corinth Rd. (SR 1916), south to NC Hwy. 42, west on NC Hwy. 42 across US 421/Hwy. 87 to NC 78 (Tramway road), west on NC 78 to Southern Lee High School.	Southern Lee High School
			<del></del>			OR: Corinth Rd. (SR 1916), south to NC Hwy. 42, west on NC Hwy. 42 across US 421/Hwy. 87 to NC 78 (Tramway road), west on NC 78 to Southern Lee High School.	Southern Lee High School
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		Evacuation Routes and Shelter	\$			Evacuation Routes and Shelter	S
Sub-Zone	Description of Sub-Zone	Evacuation Routes	Reception Center	Sub-Zone	Description of Sub-Zone	Evacuation Routes	Re
L Chatham County	This sub-zone includes the eastern portion of Jordan Lake and the areas around the following roads: Olive Chapel Rd., Tody Goodwin Rd.	US Hwy. 1 south to Moncure-Pittsboro Rd. (SR 1012), north to NC Hwy. 87 Bypass, west on NC 902 to Chatham Central High School. OR: Pea Ridge Rd. (SR 1972) and New Elam Church	Chatham Central High School	N · Chatham County	This sub-zone includes the northern portion of Jordan Lake and the areas surrounding the	NC Hwy. 751, Farrington Rd. (SR 1008), Holland Chapel Rd. and Horton's Pond Rd., south to US Hwy. 64, west to Pittsboro, and north on US Hwy.	No Hig
	Farrington Rd., Poole Rd. east, East Goodwin Rd., New Elam Rd., Pea Ridge Rd., W.H. Jones Rd. and Old US Hwy. 1. This	Rd. (SR 1910), north of US Hwy. 1, north to Beaver Creek Rd. (SR 1008), north to US Hwy. 64, west to Siler City to East Raleigh St., west to White Oak Rd., south to Jordan-Matthews High School.	Jordan-Matthews High School		following roads: Farrington Rd., Horton Pond Rd. and NC Hwy. 751. This sub-zone is bordered by US Hwy. 64. the Chatham- Wake county line, Green Level	15-501 to Northwood High School.  OR: NC Hwy. 751, Farrington Rd. (SR 1008), Holland Chapel Rd. and Horton's Pond Rd., south to US Hwy. 64, west to Siler City to East Raleigh St., west	Jor Hig
	sub-zone is bordered by the Chatham-Wake county line, the eastern shore of Jordan Lake, US Hwy. 1 and the Haw River.	OR: Olive-Chapel Rd. (SR 1901), south to Tody Goodwin Rd. (SR 1900 and SR 1975), west to Beaver Creek Rd. (SR 1008), north to US Hwy. 64, west on US Hwy. 64 (for Northwood High School), north on US Hwy. 15-501. (for Jordan-Matthews High School), west on US Hwy. 64, west to Siler City to East Raleigh St., west to White Oak Rd., south to Jordan-Matthews High School.	Northwood High School or Jordan-Matthews High School		Rd. and Hollands Chapel Rd. Also, all areas east of the Farrington Rd. and Hollands Chapel Rd. intersection to US Hwy. 64 at Wilsonville Crossroads.	to White Oak Rd., south to Jordan-Matthews High School.  OR: NC Hwy. 751, Farrington Rd. (SR 1008), Holland Chapel Rd. and Horton's Pond Rd., south to US Hwy. 64, west to Siler City, west to South Second Ave., south to Old US Hwy. 421 (SR 1176), south to Bear Creek at NC Hwy. 902, west to Chatham	Cha Hig
		OR: US Hwy. 1, south to Moncure-Pittsboro Rd. (SR 1012), north to NC Hwy. 87 Bypass, west on NC 902 to Chatham Central High School.	Chatham Central High School			Central High School.  OR: Green Level Rd. (SR 1742), and Luther Rd. (SR 1743) to NC Hwy. 751, south to US Hwy. 64, west on US Hwy. 64 to Siler City to East Raleigh Street, west to White Oak Road, south to Jordan-Matthews High School.	Jor Hig
M Chatham County	This sub-zone includes the communities of Haywood, Moncure, Hank's Chapel, and Griffin's Crossroads; Jordan	Old US Hwy. 1 (SR 1011), west through Haywood and Moncure to Moncure-Pittsboro Rd. (SR 1012), north to NC Hwy. 87 Bypass, west on NC 902 to Chatham Central High School.	Chatham Central High School	<u></u>			
	Lake; and the areas surround- ing the following roads: North Pea Ridge Rd., Gum Springs Church Rd., Clark Poe Rd., Moncure-Pittsboro Rd., Jordan	OR: South on SR 1971 and SR 1931, west to Moncure-Pittsboro Rd. (SR 1012), north to NC Hwy. 87 Bypass, west on NC 902 to Chatham Central High School.	Chatham Central High School				
Moncure-Pittsl Dam Rd., Mt. V and Providence This sub-zone i US Hwy. 64, th of Jordan Lake, and the Deep K included are ali	Dam Rd., Mt. View Church Rd. and Providence Church Rd. This sub-zone is bordered by US Hwy. 64, the eastern shore of Jordan Lake, the Haw River and the Deep River. Also included are all areas north	OR: Old US Hwy. 1 (SR 1011) through Haywood and Moncure to Moncure-Pittsboro Road (SR 1012), north to NC Hwy. 87 Bypass, west on US 64 Business Route, merge onto US 64 going west, west to Siler City to East Raleigh Street, west to White Oak Road, south to Jordan-Matthews High School.	Jordan-Matthews High School				
	and east from the point where the Rocky River enters the Deep River to US Hwy. 64 at Griffin's Crossroads.	OR: Gum Springs Church Road (SR 1943), to US Hwy. 64 Business Route. Go east on 64 Business Route, merge onto US Hwy. 64 going west, north on US Hwy. 15-501 to Northwood High School.	Northwood High School				
		OR: Gum Springs Church Rd. (SR 1943), to US Hwy. 64 Business Route. Go east on 64 Business Route, merge onto US Hwy. 64 going west, west to Siler City to East Raleigh Street, west to White Oak road, south to Jordan-Matthews High School.	Jordan-Matthews High School				

progress-energy.com

**Reception Center** 

Northwood High School

Jordan-Matthews

Chatham Central

Jordan-Matthews

High School

High School

High School

# **Emergency Numbers**

If you need help during an evacuation, call the number for the county you live in:

 Chatham County
 919.542.2911

 Harnett County
 919.832.9111

 Lee County
 919.775.8268

 Wake County
 919.856.7044

# For More Information

If you have questions about any of the safety information you have read in this brochure, you can call or write one of the following offices:

# Chatham County Emergency Management

919.542.2911 297 West Street P.O. Box 613 Pittsboro, NC 27312

# Harnett County Emergency Management

910.893.7580 200 North 13th St. Erwin, NC 28339 After Hours: Harnett Co. Sheriff's Department 919.832.9111

# Lee County Office of Emergency Management

P19.775.8279
P.O. Box 1154. Sanford, NC 27331
After Hours:
Sanford Police Department
919.775.8268
Lee Co. Sheriff Department
919.718.4561

# **Wake County Emergency Management**

919.856.6480 Wake County Office Bldg., 14th floor P.O. Box 550 Raleigh, NC 27602-0550

## **NC Emergency Management**

1.800.858.0368 State Emergency Operations Center 116 West Jones St. Raleigh, NC 27603-1335

# **NC Emergency Management**

919.575.4122 Central Branch 401 Central Ave. Butner, NC 27509

For more information about the Harris Plant and nuclear power, contact Progress Energy at 919.362-3261 or visit progress-energy.com.



progress-energy.com

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# **Progress Energy**

HNP Emergency Preparedness HNP 01 P.O. Box 165 New Hill, NC 27562

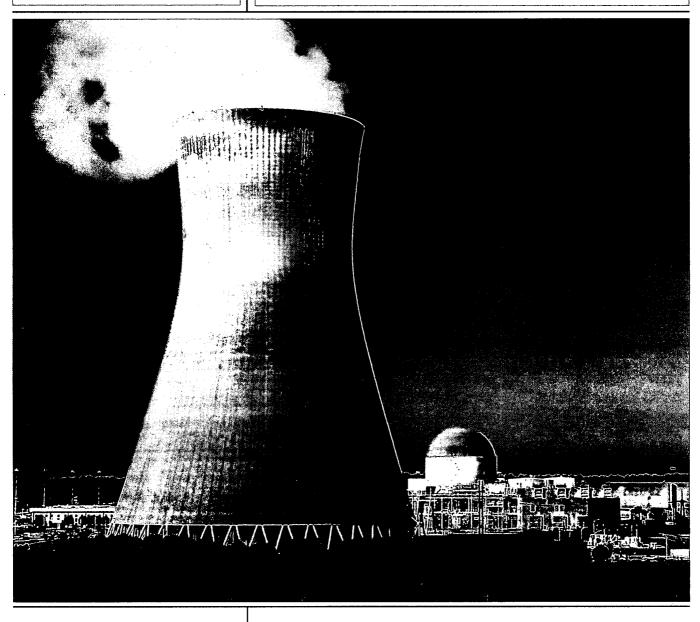




# Planta Harris de Energía Nuclear

2008

Información sobre seguridad

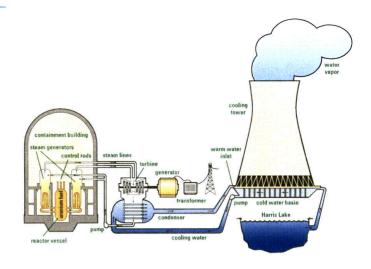


Guarde este folleto en: su **automóvil**, su **hogar** o en un **lugar accesible** para que tenga la información a la mano en caso de una emergencia.



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# Generación

- Las plantas nucleares son similares a otros tipos de plantas de generación de electricidad. El vapor a alta presión hace girar las aspas en forma de hélice de una turbina la cual a su vez hace girar el eje de un enorme generador. Dentro del generador hay arrollados de alambre y campos magnéticos que interactúan para crear electricidad.
- Nada se quema en un reactor nuclear. El combustible de uranio genera calor a través de la fisión. Hay unas partículas atómicas llamadas neutrones que golpean a los átomos de uranio haciendo que se partan (fisión). Cuando se parten, los átomos generan una tremenda cantidad de calor y sueltan más neutrones, lo cual produce más fisión e inicia una reacción en cadena.
- El combustible son pepitas sólidas del diámetro de un pedazo de gis o tiza y de aproximadamente media pulgada de longitud. Estas pepitas están apiladas en largos tubos verticales dentro del reactor.
- El reactor nuclear se puede controlar insertando barras especiales entre los tubos de combustibles. Estas barras de control absorben neutrones libres para evitar que golpeen átomos de uranio y causen fisión. Estas barras se pueden dejar caer en el combustible manual o automáticamente, si es necesario.

# Seguridad y Protección

- Las plantas nucleares se construyen con varios niveles de sistemas y estructuras de seguridad diseñados para proteger a la planta y a la comunidad. Nuestros sistemas de seguridad tienen sistemas separados de respaldo múltiple para dar protección y fiabilidad adicionales.
- Los edificios de contención son de concreto reforzado y estructuras de acero que pueden soportar tremendas fuerzas, tales como las que se producen durante los huracanes, los tornados y hasta los terremotos.

- Las plantas nucleares se encuentran entre las instalaciones industriales más seguras del mundo. Cada instalación tiene un personal de seguridad equipado y capacitado especialmente para supervisar y controlar el acceso a la planta las 24 horas del día.
- Progress Energy opera la planta Harris de acuerdo con rigurosas pautas de seguridad supervisadas por nuestros propios estrictos programas internos y también de acuerdo con pautas de la industria de la energía nuclear y de la Comisión Reguladora de la Energía Nuclear.

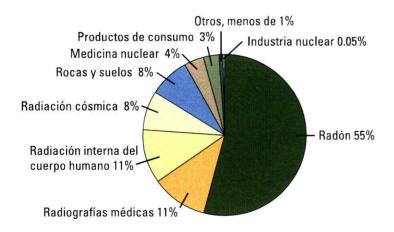
# Radiación

Como habitantes del planeta, estamos constantemente expuestos a radiaciones emitidas por el ambiente natural. Eso se llama radiación de fondo. Las fuentes de la radiación de fondo incluyen el sol, el aire que respiramos, el suelo, las plantas, los materiales usados en la construcción y aun el cuerpo humano. También nos encontramos expuestos a las fuentes de radiación artificial o industrial, como los rayos X de las instituciones médicas y dentales, los detectores de humo y los televisores.

Usted puede estar expuesto a los materiales radiactivos de tres maneras:

- Materiales radiactivos en el aire o en el suelo. Usted puede evitar dicha exposición al ir a un lugar sin materiales radiactivos.
- Materiales radiactivos en el cabello, la piel y la ropa. La exposición cesará si lava su cuerpo y su ropa.
- Materiales radiactivos que se aspiran o ingieren. La exposición cesará cuando los materiales ya no emiten radiación o cuando el cuerpo los elimina.

# Fuentes de la exposición a la radiación



Medido en miliremios (mR) por año

# Existen tres tipos de radiación:

# Alfa

El tipo menos penetrante, una hoja de papel puede detener esa radiación.

# Beta

El tipo que se puede detener con una hoja delgada de aluminio.

#### Gamma

Total

El tipo que se puede detener con plomo, agua o concreto.

# Fuentes y cantidades de radiación:

# Radiación de fondo natural

Radón	200 mR
Radiación cósmica	27 mR
Radiación interna	
del cuerpo humano	40 mR
Rocas v suelos	28 mR

# Radiación artificial o industrial

Radiografías médicas	39 mR
Medicina nuclear	14 mR
Productos de consumo	
(televisores, detectores de humo,	etc.)
	10 mR
Otros	
(incluyendo la energia nuclear)	2 mR

360 mR

# Clasificación de emergencias

Existen cuatro clasificaciones diferentes de emergencias que pudieran ocurrir en una planta de energía nuclear. Estas clasificaciones ayudan a los funcionarios del estado y del condado así como al personal de la planta a determinar la manera en que responderán a cada tipo de problema.

# Acontecimiento inusual

Este es el menos grave de las cuatro clasificaciones de emergencia. Significa que ocurre un acontecimiento en la planta, pero el público no se verá afectado.

#### Alerta

Éste es un evento que puede reducir el nivel de seguridad en la planta.
Nuevamente, el público no está en peligro. Los funcionarios del estado y del condado y la compañía Progress Energy quizás decidan activar sus centros de emergencia, por si empeora la situación.

# Emergencia en los recintos de la planta

Este acontecimiento puede reducir la seguridad de la planta, pero probablemente no lo suficiente como para poner en peligro al público. Se activarían las sirenas para alertar al público a que escuche las estaciones transmisoras locales de radio y televisión para más información e instrucciones.

# **Emergencia general**

Este es el más grave de los acontecimientos que pueden ocurrir en la planta. Los funcionarios del estado y del condado tomarían medidas para proteger al público. Se activarán las sirenas y las estaciones transmisoras locales de radio y televisión darán instrucciones al público que vive en las zonas afectadas. El público será informado si debe evacuar la zona, refugiarse en el lugar donde está o administrarse yoduro pótasico (IK, por sus siglas químicas en inglés).

# Su seguridad es importante para nosotros

Este folleto ofrece información básica sobre la radiación e información sobre lo que usted deberá hacer si ocurre una emergencia en la Planta Harris en New Hill, Carolina del Norte. Los funcionarios del estado y del condado, así como los de la compañía Progress Energy, desean que usted esté preparado para que usted y su familia sepan qué hacer en caso de una emergencia.

La Planta Harris tiene múltiples sistemas de seguridad de respaldo, de modo que es poco probable que ocurra una emergencia grave. Las operaciones de la planta se realizan de acuerdo con reglas de seguridad estrictas y dichas operaciones son vigiladas por la Comisión de Regulación Nuclear, una entidad federal que regula la industria de la energía nuclear en los Estados Unidos. Como parte de los requisitos reguladores, se realizan cada dos años ejercicios simulados de emergencias con la participación del personal de la planta y de los funcionarios del estado y del condado. Este folleto forma parte de los planes detallados que fueron desarrollados por el estado de Carolina del Norte, los condados de Chatham, Harnett, Lee y Wake y la empresa Progress Energy.

Asegúrese de que entienda la información en este folleto para que usted y su familia estén preparados en el caso poco probable de que ocurra una emergencia. Hable y comente la información contenida en este folleto con sus familiares y amigos.

Si sabe de alguien que no puede leer o que tiene problemas con la vista, por favor léales esta información y asegúrese de que la entiendan.

# El sistema de alerta de emergencia

En el caso poco probable de que ocurra una emergencia en la planta, se activarán las numerosas sirenas que se han montado en postes situados a través de la zona de planeamiento de emergencias (ZPE) de 10 millas alrededor de la planta, para alertar al público. Sólo oír las sirenas no quiere decir que tiene que evacuar o desalojar su hogar.

Las sirenas son el primer sistema de advertencia que se usa para alertar al público en caso de una emergencia. Los funcionarios también recorrerán caminos seleccionados del condado y del estado en la ZPE de 10 millas, con vehículos equipados con luces destellantes y altoparlantes. Es posible que también vayan de puerta en puerta en algunas zonas seleccionadas. Los residentes que viven dentro de un radio de cinco millas de la planta han recibido radios con tono de alerta que darán la alarma y breves instrucciones si ocurriera una emergencia en la planta. Para alertar a las personas que se encuentren en los canales costeros de navegación, los funcionarios, en barcos, usarán sirenas, humo de colores y luces de emergencia.

Las sirenas son activadas por los funcionarios del estado y del condado y se hacen pruebas con frecuencia para asegurar que estén funcionando correctamente. El sonido de las sirenas probablemente no es más que una prueba, pero podría haber una emergencia en la planta.

Si oye las sirenas y no está seguro si es una prueba del sistema o una emergencia, prenda el radio y sintonice una de las estaciones radiotransmisoras indicadas en la página 5. Durante una emergencia estas estaciones interrumpirán su programación normal y darán información e instrucciones al público. Si existiera una emergencia que pudiera afectar al público, las sirenas sonarán varias veces a intervalos de tres minutos. Deje el radio prendido para obtener más información. Quizá se le notifique evacuar la zona, refugiarse en el lugar donde está o tomar yoduro pótasico (KI).

Se han identificado a algunos residentes en la ZPE de 10 millas porque necesitarán ayuda especial en caso de una emergencia. Esas personas deben llenar la tarjeta de **Solicitud para Ayuda Especial** que se encuentra dentro de este folleto.

# Radios con tono de alerta

Cada residencia dentro de un radio de cinco millas de la Planta Harris ha recibido un radio con tono de alerta. Ese radio debe estar siempre enchufado y en un lugar donde usted pueda oír la alarma, especialmente de noche cuando duerme.

Durante tiempo inclemente, una señal enviada por el Servicio Meteorológico Nacional activa la alarma en esos radios. El Servicio Meteorológico Nacional también envía una señal a los radios si ocurriera una situación de emergencia en la Planta Harris.

Cuando suene la alarma, presione la barra o el botón de meteorología (WEATHER) que hay en la parte de arriba del radio de alerta para recibir breves instrucciones. Si existiera una emergencia, prenda su radio o televisor y sintonice una estación local para obtener más detalles.

# Refugiarse en el lugar donde está

Si existiera una emergencia en la planta, las estaciones transmisoras de radio y televisión darán la instrucción de que la gente se refugie en el lugar donde está como medida de precaución. Al quedarse adentro, uno reduce su exposición a los materiales radiactivos.

Cuando se le instruye a refugiarse en el lugar donde está, deberá seguir los pasos indicados a continuación:

- NO vaya a la escuela de su(s) hijo(s). Los niños serán refugiados y protegidos por el personal de la escuela.
- Coloque a sus animales domésticos bajo techo y déles alimentos y agua ALMACENADOS y no frescos. Traiga a sus mascotas adentro.
- 3. Vaya adentro y cierre todas las puertas y ventanas. Apague los ventiladores y el sistema de aire acondicionado y calefacción que usa aire de afuera. Cierre cualquier otra toma de aire.
- 4. No use el teléfono a menos que sea absolutamente necesario.
- Cubra todos los recipientes con comida que estén abiertos. Los alimentos, el agua y la leche que están en su hogar son seguros y los puede comer y beber.

# Pruebas de las sirenas

Existen tres maneras en que se prueban las sirenas:

# Prueba silenciosa

Se envía una señal silenciosa a cada sirena cada dos semanas. Durante esta prueba, no se oirán las sirenas:

# Pruebas trimestrales

Cada tres meses las sirenas sonarán brevemente durante 5 segundos como prueba a volumen total. Progress Energy dará información sobre la prueba a través de los medios locales de comunicación y en su página de Internet anunciará las fechas de las pruebas

# Prueba a volumen total

Todas las sirenas sonarán al mismo tiempo a intervalos de tres minutos. Se hace una prueba a volumen total una vez al año. Progress Energy, a través de los medios locales de comunicación, dará información sobre cuándo se hará la prueba. Además, busque los anuncios que aparecen en el Harris View, el boletín que se envía por correo a los residentes que viven dentro de la zona de planeamiento de emergencias (ZPE) de 10 millas de la planta

# Pruebas en el radio

El Servicio Meteorológico Nacional realiza una prueba de los radios con tono de alerta todas las semanas. Cada miércoles entre las 11 a.m. y el mediodía, sonará la alarma en el radio con tono de alerta. Para ver si la alarma es una prueba o una emergencia, oprima la barra o el botón que dice "WEATHER" (clima) después de sonar la alarma, para recibir información e instrucciones. El mensaje que le sigue al sonido de alarma le dirá si es una emergencia o una prueba. Si es una emergencia, el mensaje le dirá lo que debe hacer.

# Estaciones de radio

Las siguientes estaciones de radiotransmisión participarán en los anuncios del Sistema de Alerta en Caso de Emergencia, si ocurriera una.

Si oye varios sonidos de sirena, con tres minutos de duración, sintonice a una de las siguientes estaciones para obtener más información:

94.7

WQDR-FM

105.1

WDCG-FM

Otras estaciones de radio y televisión también transmitirán información e instrucciones en una situación de emergencia.

- Vaya a una habitación con pocas o ninguna ventana o vaya al sótano.
- Deje sintonizada una estación local de radio o televisión para escuchar más información sobre la emergencia.
- Quédese dentro del hogar hasta que una estación local de radio o televisión le informe que es seguro salir afuera.
- Si es imprescindible que salga afuera, tápese la nariz y la boca con un paño.

# Yoduro potásico

En caso de que pudiera quedar expuesto a ciertos tipos de radiactividad, el Departamento de Salud y Servicios Humanos de Carolina del Norte, le puede aconsejar que tome tabletas de yoduro potásico.

El yoduro potásico es un fármaco de venta libre (sal común) que puede reducir la cantidad de yoduro radiactivo absorbido por la glándula tiroidea en su cuerpo. El yoduro potásico llena la tiroides con yodo para que no pueda absorber yoduro radiactivo.

Sólo debe tomar yoduro potásico cuando se lo indiquen los funcionarios de salud pública. Se le notificará si debe tomarlo o no a través de los mensajes del Sistema de Alerta en Caso de Emergencia. Las sirenas de emergencia sonarán, y se interrumpirán las transmisiones normales de radio y televisión para instruir al público sobre las medidas protectoras que deben tomar. Estas instrucciones pueden incluir: evacuar la zona, refugiarse adentro y/o tomar tabletas de yoduro potásico.

Si fuera a ocurrir un escape de radiación, las tabletas de yoduro potásico estarán a disposición en los centros de recepción. Si usted vive dentro de un área de 10 millas alrededor de la planta y prefiere tener tabletas de yoduro potásico a la mano, puede comunicarse con las siguientes entidades:

Departamento de Salud del Condado de Chatham 919.542.8214

Departamento de Salud del Condado de Harnett 910.893.7550

Departamento de Salud del Condado de Lee 919.718.4640
ext.5388

Servicios Humanos del Condado de Wake

Para obtener información general (en inglés) sobre el yoduro potásico (KI) puede ir al sitio de Internet de North Carolina Public Health Preparedness & Response www.epi.state.nc.us/epi/phpr/ki/ki.html. También puede comunicarse con el funcionario de información pública de la División de Salud Pública al 919.715.4174.

919.212.7000

# Procedimientos para desalojar la zona

Si ocurriera una emergencia en la planta, se les podrá pedir a las personas que viven en algunas subzonas que desalojen sus hogares como medida de precaución. Quédese tranquilo. Sólo tendrá que desalojar su hogar si resulta necesario. Encontrará las rutas de evacuación y los centros de recepción para cada subzona listados en las páginas 13-18.

# Lo que debe hacer

- 1. Empaque artículos necesarios para llevarse consigo, tales como:
  - · este folleto
  - para cada persona que se quedará en el centro de asistencia: ropa para dos días, dos frazadas o cobijas o una bolsa de dormir
  - artículos de tocador, toallas de baño
  - medicamentos necesarios, lo que necesite para un bebé
  - identificación, documentos de registro del automóvil
  - tarietas de crédito, chequera, efectivo
  - radio portátil, linterna y baterías o pilas
- 2. Haga planes ahora para la atención de su mascota en caso de emergencia. Se recomienda que haga arreglos previos con amigos, parientes o instalaciones que los hospedan. Si decide dejar a sus mascotas en la casa, póngalos bajo techo y déjelos con suficiente agua y comida para tres días. Si necesita más información, sírvase comunicarse con la entidad de administración de emergencias (emergency management agency) de su condado.
- 3. No use el teléfono a menos que sea absolutamente necesario.
- 4. ¡Haga un plan con anticipación! Es buena idea recorrer su ruta de evacuación ahora para que esté familiarizado con la misma. Llame a la oficina de la entidad de administración de emergencias de su condado si tiene preguntas. Los números de teléfono para las entidades del estado y del condado se encuentran en la página 7.

# Al evacuar

- Si su niño va a una escuela en la zona de planeamiento de emergencias (ZPE) de 10 millas no vaya a la escuela. Los niños en esas escuelas serán llevados por autobús a las Escuelas de Traslado (indicadas en las páginas 11 y 12).
- Los niños de edad escolar que viven dentro de la ZPE de 10
  millas, pero cuyas escuelas están fuera de la ZPE, quedarán en
  su escuela bajo supervisión del personal de la escuela hasta
  que sus padres los pasen a buscar.
- Cierre las ventanillas y las entradas de aire del automóvil. No prenda el aire acondicionado ni la calefacción del automóvil.

# Ayuda especial

Se han hecho planes especiales para las personas que se han identificado como que necesitan ayuda especial. La tarjeta de Solicitud para Ayuda Especial que se encuentra en este folleto le indicará a los funcionarios del condado si usted necesita ayuda especial. Aun si ya ha enviado una tarjeta de solicitud, tendrá que actualizar la información todos los años, de modo que por favor llene esta tarjeta y envíela lo antes posible. Esta información será guardada de manera confidencial por los funcionarios de la entidad de administración de emergencia del condado.

Usted deberá llenar la tarjeta para ayuda especial si:

- Sufre de alguna discapacidad o si tiene problemas de audición. Los funcionarios de su condado guardarán esta información en sus archivos y le podrán ayudar cuando lo necesite.
- No tiene automóvil y si no puede conseguir que otra persona lo transporte. Los funcionarios del condado harán arreglos para transportarlo fuera de la Zona de Planeamiento de Emergencias. Se transmitirán los planes para transporte especial y los números de teléfono para poder comunicarse por las estaciones locales de radio y televisión.

Llene esta tarjeta o pídale a alguien que se la llene y enviela a la dirección indicada. En caso de una emergencia un sistema telefónico automatizado notificará a las personas que solicitan ayuda especial. Este sistema será probado dos veces por año. Se enviarán tarjetas con anticipación indicando la fecha de la prueba a aquellas personas que han solicitado notificación para ayuda especial.

Si usted es la persona responsable por alguien en una casa de reposo, asilo de ancianos u hospital, no vaya a recogerlos a menos que ese lugar le haya dado instrucciones de hacerlo antes de ocurrir una situación de emergencia. Los funcionarios cuidarán a esas personas y llevarán a los que necesitan atención médica a los hospitales o instituciones de atención especializada fuera del límite de las 10 millas alrededor de la planta nuclear.

Si usted tiene vecinos con necesidades especiales, quizás les quiera ayudar a desalojar la zona o ayudarles a refugiarse en sus hogares.

# Números de teléfono en caso de emergencia

Si necesita ayuda durante la evacuación de la zona, llame al número del condado en aue vive:

Condado de Chatham

919.542.2911

Condado de Harnett

919.832.9111

Condado de Lee

919.775.8268

Condado de Wake

919.856.7044

- Al manejar, siga sintonizado a la estación de radio local para obtener más información.
- 5. Siga la ruta de evacuación al centro de recepción designado para la zona donde vive o la(s) escuela(s) de traslado indicada para la(s) escuela(s) de su(s) hijo(s). Usted se puede quedar en el centro de recepción o en otro lugar por lo menos a 10 millas de la planta. Es muy importante que usted se inscriba en los centros de recepción aun si decide no quedarse ahí.
- Si usted no está familiarizado con la ruta a recorrer, siga los señalamientos azules de evacuación instalados en todos los caminos importantes.

# Información agrícola

Si se le advierte que existe una emergencia radiológica, haga arreglos para la seguridad de su familia y su granja.

# Para la granja:

- Coloque a todos los animales de granja bajo techo, especialmente el ganado lechero y las cabras lecheras.
- El ganado sólo debe ser alimentado con alimentos almacenados y con agua protegida.
- Ponga los alimentos en un edificio o cubra los abastos de alimentos si están a la intemperie.
- Almacene toda el agua posible para el ganado. Cubra los pozos, los tanques y los barriles de agua de Iluvia.

# Para la familia:

- Ponga los alimentos y el agua adentro en un lugar cerrado de su casa donde no se pueda contaminar. Cualquier alimento no cubierto que se trae de una zona contaminada debe limpiarse.
- Se pueden comer huevos, papas/patatas y melones que se han limpiado.
- Las verduras de hojas verdes se deben lavar cuidadosamente.
   Quite las hojas exteriores si las verduras han estado expuestas a la contaminación.
- Chícharos/arvejas y frijoles/habas requerirán el lavado normal.
- Lávese las manos bien antes de comer.

# Para el trabajo de la granja:

- Use ropa protectora (similar a la que usa para la aplicación de pesticidas) cuando trabaja afuera los primeros días después de la emergencia. Quítese la ropa exterior antes de entrar a la casa o a cualquier otro lugar no contaminado. Báñese en la regadera, lavándose bien, en cuanto termine de trabajar.
- Cúbrase la nariz y la boca con un filtro contra el polvo si cultiva tierra seca o si cosecha maíz o granos alimentarios para animales.

# Para obtener más información

Si tiene preguntas sobre cualquier aspecto de la información de seguridad que ha leído en este folleto puede llamar o escribir a las siguientes entidades:

(Administración de Emergencias del Condado de Chatham)
Chatam County Emergency Management 919.542.2911
297 West Street
P.O. Box 613
Pittsboro, NC 27312

(Administración de Emergencias del Condado de Harnett)
Harnett County Emergency Management 910.893.7580
200 North 13th St.
Erwin, NC 28339
Después de horas de oficina:
Departamento del Sheriff del Condado de Harnett 919.832.9111

(Administración de Emergencias del Condado de Lee)

Lee County Office of Emergency Management
P.O. Box 1154, Sanford, NC 27331

Después de horas de oficina:

Departamento del Sheriff del Condado de Lee

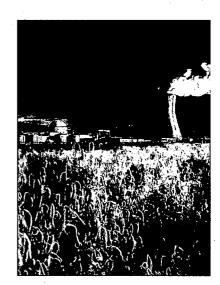
Departamento de Policía de Sanford

919.775.8268

(Administración de Emergencias del Condado de Wake)
Wake County Emergency Management 919.856.6480
Wake County Office Bldg., 14th floor
P.O. Box 550
Raleigh, NC 27602-0550

(Administración de Emergencias de Carolina del Norte)
NC Emergency Management
State Emergency Operations Center
116 West Jones St.
Raleigh, NC 27603-1335

(Administración de Emergencias de Carolina del Norte)
NC Emergency Management 919.575.4122
Central Branch
401 Central Ave.
Butner, NC 27509



# Su referencia rápida para información de seguridad en relación a la Planta Harris

Solicitamos que se tome unos minutos para llenar la información a continuación para que la tenga en caso de una emergencia.

La estación de radio local es

La estación de televisión local con información es:

En el mapa, la zona donde vivo es:

El centro de recepción para la zona donde vivo es:

La ruta de evacuación para la zona donde vivo es:

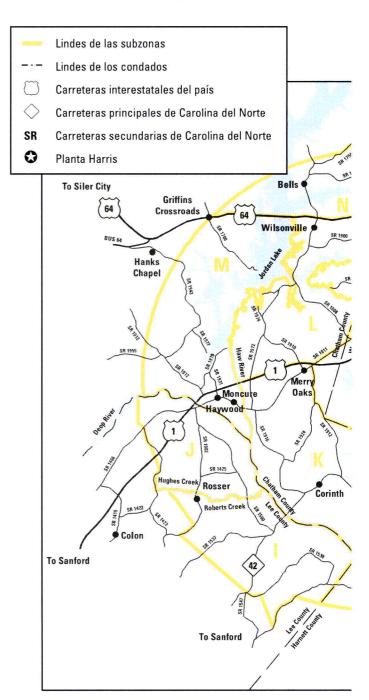
La(s) escuela(s) de traslado para mi(s) niño(s) es (son):

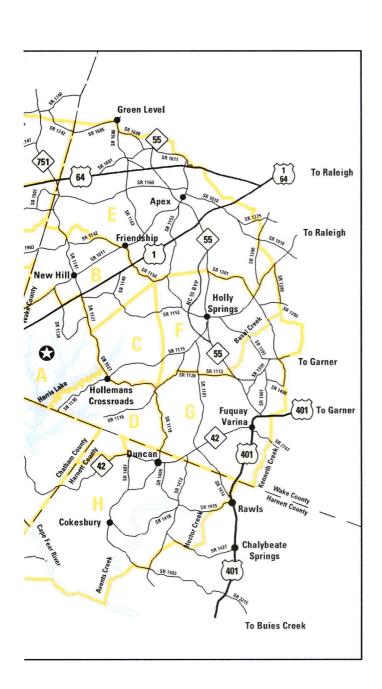
: Haga un plan con anticipación!

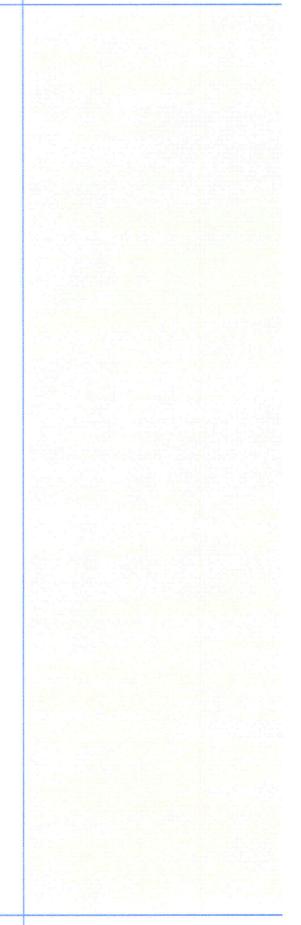
¡Haga un plan con anticipación! Maneje por la ruta ahora. Si tiene preguntas, llame a la entidad de administración de emergencias.

# Mapa de la zona de 10 millas alrededor de la Planta Harris

El mapa se divide en subzonas. Se ha marcado cada subzona con una letra diferente. Si el radio o la televisión da instrucciones para desalojar la zona, la información que se ofrece en las siguientes páginas, le dirá adónde debe ir para estar seguro. Fíjese en la ruta de evacuación de su subzona. Marque la ruta en un mapa ahora para que la tenga a la mano si la llegara a necesitar. (Vea la ruta de evacuación a la sección de los centros de asistencia y recepción, en las páginas 13 a 18.)







# Escuelas de traslado para los centros autorizados para el cuidado de niños y escuelas

Si fuera a ocurrir una evacuación de niños de las escuelas dentro de la Zona de Planeamiento de Emergencias (ZPE) de 10 millas, NO VAYA A LA ESCUELA. Los niños de dichas escuelas serán llevados por autobús a una de las escuelas de traslado indicadas en el cuadro de esta página.

Los niños de edad escolar que viven dentro de la ZPE de 10 millas, pero cuyas escuelas están fuera de la ZPE, quedarán en su escuela bajo supervisión del personal de la escuela hasta que sus padres los pasen a buscar.

Este cuadro muestra las escuelas y los lugares donde cada una se encuentra, las subzonas en que están y las escuelas de traslado adonde se llevarán los niños de edad escolar en caso de una emergencia. Cuando haya determinado la escuela de traslado designada para la escuela de su hijo(a), puede optar por:

- Recoger a su hijo(a) en la escuela de traslado y luego ir al centro de recepción de su subzona y quedarse ahí.
- Recoger a su hijo(a) en la escuela de traslado e irse y permanecer en algún otro lugar distinto al centro de recepción, con tal que sea un lugar fuera del límite de 10 millas alrededor de la planta.

Los funcionarios del condado y de la escuela cuidarán a su hijo(a) en la escuela de traslado hasta que usted llegue.

Institución	Subzona	Escuela de Traslado
Escuelas Secundarias		
Apex Senior High School	E	Sanderson High School (Raleigh)
Community Partner's Charter High Scho	ol F	Southeast Raleigh High School (Raleigh)
Fuquay-Varina Senior High School	G	Garner Senior High School (Garner)
Holly Springs High School	F	Southeast Raleigh High School (Raleigh)
Escuelas Intermedias		
Apex Middle School	E	Leesville High School (Raleigh)
Fuquay-Varina Middle School	G	Millbrook High School (Raleigh)
Holly Ridge Middle School	F	Knightdale High School (Knightdale)
Lufkin Road Middle School year-round	E	Leesville High School (Raleigh)
St. Mary Magdalene Catholic School	E	Cardinal Gibbons High School (Raleigh)
Salem Middle School year-round	E	Leesville High School (Raleigh)
Escuelas Primarias		
Apex Elementary School	E	Sanderson Senior High School (Raleigh)
A. V. Baucom Elementary School year-n	ound E	Leesville High School (Raleigh)
Holly Grove Elementary School year-rou	ınd F	Southeast Raleigh High School (Raleigh)
Holly Ridge Elementary School	F	Knightdale High School (Knightdale)
Holly Springs Elementary School year-re	ound F	Knightdale High School (Knightdale)
Hope Montessori School	E	Sanderson High School (Raleigh)
Lincoln Heights Elementary School	G	Millbrook High School (Raleigh)
Moncure Elementary School	M	Northwood Senior High School (Pittsboro)
The New School, Inc. Montessori	F	Southeast Raleigh High School (Raleigh)
Olive Chapel Elementary School year-ro	und E	Leesville High School (Raleigh)
Salem Elementary School year-round	E	Leesville High School (Raleigh)
Southern Wake Montessori School	F	Southeast Raleigh High School (Raleigh)

# Centros para el Cuidado de Niños

Las instituciones para el cuidado de niños llevarán a los niños a la escuela de traslado para la zona donde se sitúa el centro para cuidado de niños.

# Zona

E	Sanderson Senior High School (Raleigh)
F	Southeast Raleigh High School (Raleigh)
G	Garner High School (Garner)
Н	Harnett Central High School (Angier)
М	Northwood Senior High School (Pittsboro)

# Información sobre Escuelas de Traslado:

# **Cardinal Gibbons High School (Raleigh)**

Al lado del Estadio Carter Finley Stadium sobre Edwards Mill Rd.

# Southeast Raleigh High School (Raleigh)

Rock Quarry Rd. y Creech Rd., al sur de la autopista I-40

# **Garner Senior High School (Garner)**

De la carretera 70 este, tome Yeargan Rd. doble a la derecha en Coldwater Rd. hasta Spring Dr.

# Harnett Central High School (Angier)

Carretera NC Hwy 210 en el cruce de las carreteras 1513 (Neil's Creek Rd.) y 1403 (Harnett Central Rd.)

# Northwood Senior High School (Pittsboro)

Tome la carretera Pittsboro Moncure Rd. hacia el norte de la carretera US 15-501; siga hacia el norte hasta unas 3 millas, aproximadamente, al norte de Pittsboro, dé vuelta a la izquierda en la calle Northwood School Rd.

# Sanderson Senior High School (Raleigh)

Tome la salida 8 del periférico l-440, vaya hacia el norte sobre Six Forks Rd., y doble hacia el oeste en Millbrook Rd. hasta llegar a Dixon Dr.

# Leesville High School (Raleigh)

Tome la autopista I-540 hacia la salida de Leesville Rd. vaya hacia el sur en Leesville Rd., la escuela estará del lado derecho. O bien, tome la autopista I-440 hacia la salida de US 70/Glenwood Ave. vaya hacia el norte. Dé vuelta a la derecha en Lynn Rd., y a la izquierda en Leesville Rd. la escuela estará del lado izquierdo.

# Millbrook High School (Raleigh)

Tome la autopista I-440 hacia la salida de Wake Forest Rd. Esa calle se convierte en Falls of Neuse Rd., dé vuelta a la derecha en Spring Forest Rd., la escuela estará del lado izquierdo.

# **Knightdale High School (Knightdale)**

Tome la avenida US 64 hacia el este, dé vuelta a la izquierda en la calle Old Knight Rd. justo después de pasar la calle Forestville Rd., en el lado izquierdo.



Aproximadamente 325 personas se presentaron el sábado 8 de septiembre al segundo evento anual "Día de la Comunidad Harris." Los visitantes disfrutaron de los recorridos al simulador de control de la planta, las charlas con los empleados y el aprendizaje acerca de las operaciones de la planta, la protección contra la radiación, la observación del medio ambiente y la preparación para casos de emergencia.

# Centro de recepción

Es un establecimiento designado de antemano fuera de la Zona de Exposición, a la nube radioactiva de la Zona de Planeamiento de Emergencias (mínimo a 15 millas de distancia de la planta) en el cual el público evacuado puede registrarse, ser sometido a observación y descontaminación de radiación, recibir asistencia para ponerse en contacto con otras personas, recibir instrucciones para llegar a los centros de reunión y atención -congregate care centres, (si no se localizan en el centro de recepción) reunirse con otras personas y recibir información general. Por lo general, el centro de recepción se refiere al estáblecimiento en el cual la observación, descontaminación y registro de personas evacuadas se lleva a

Subzona	Descripción de la subzona	Rutas de evacuación	Centro de recepción
A Condado de Wake	Esta parte de la subzona incluye la Planta Harris y la parte central del lago Harris Lake. Está lindada a la carretera Old US 1 y a New Hill Hollerman Rd. El lago forma el borde hacia el sur.	Por Shearon Harris Rd. (SR 1134) hacia el norte de la carretera Old US Hwy 1 (SR 1011) SR 1011 atravesando Apex a la carretera US Hwy. 64. US Hwy. 64 a US Hwy. 1-64 norte. Siga la US Hwy 1-64 hacia el norte por el periférico I-440 hasta la salida 8B a Six Forks Rd. hacia el norte hasta Millbrook Road, doblar a la izquierda en Millbrook, y a la derecha en Dixon.	Sanderson High School
		O BIEN, por Shearon Harris Rd. (SR 1134) a New Hill-Holleman Rd. (SR 1127) hacia el norte hasta la carretera US Hwy 1. Por la carretera US Hwy. 1-64 hacia el norte sobre el periférico I-440 hasta la salida 8B a Six Forks Rd.	
Condado de Chatham	Esta parte de la subzona incluye e la zona del Condado de Chatham al oeste de la Planta Harris y está lindado por la carretera Old US 1, Christian Chapel Road y los lin- des entre los condados de Chatham y Wake.	Por la carretera US Highway 1 hacia el sur hasta Moncure-Pittsboro Road (SR 1012), hacia el norte hasta NC Hwy. 87 Bypass (desviación), hacia el oeste a NC 902 hasta Chatham Central High School.	Chatham Central High School
B Condado de Wake	Esta subzona incluye las comu- nidades de Planta Harris New Hill y Bonsal y las zonas que corren a los largo de los siguientes	Por New Hill-Holleman Rd. (SR 1127) hacia el norte a US Hwy. 1. Siga US Hwy. 1-64 hacia el norte sobre el periférico l-440 hasta la salida 8B a Six Forks Rd. hacia el norte hasta Millbrook Road, doblar a la izquierda en Millbrook, y a la derecha en Dixon.	Sanderson High School
	caminos: Old US Hwy 1, Humie Olive Rd., New Hill-Olive Chapel Rd., Friendship Rd., US Hwy. 1, Shearon Harris Rd. y New Hill- Holleman Rd.	O BIEN: Por SR 1903 en el condado de Chatham y Barker Rd. (SR 1142) en el condado de Wake a New Hill-Olive Chapel Rd. (SR 1141) hacia el sur a Old US Hwy. 1 (SR 1011), hacia el este atravesando Apex a US Hwy. 64 East a US Hwy. 1-64 y hacia el norte sobre el periférico I-440 hasta la salida 8B a Six Forks Rd. hacia el norte hasta Millbrook Road, doblar a la izquierda en Millbrook, y a la derecha en Dixon.	
C Condado de Wake	Esta subzona incluye la comu- nidad de Holleman's Crossroads, la parte noreste del Lago Harris y las zonas que corren a lo largo de Avent Ferry Rd. y New Hill Rd.	Por New Hill-Holleman Rd. (SR 1127), hacia el sur a Avent Ferry Rd. (SR 1115), hacia el este a Holly Springs y el NC Hwy. 55 Bypass (desvío). Hacia el norte por el desvío NC Hwy. 55 Bypass a Holly Springs Rd. (SR 1152).	Southeast Raleigh High School
	Them to the term of the term o	O BIEN: Por New Hill Rd. (SR 1152), hacia el este por el desvío NC Hwy. 55 Bypass.	
		O BIEN: Desde el NC Hwy. 55 Bypass (desvío) hacia el este sobre Holly Springs Rd. (SR 1152) a Tryon Rd. a Gorman St. por Gorman St. hacia el norte al periférico I-440 East hasta Rock Quarry Road. Vuelta a la derecha en Rock Quarry Rd. hasta llegar a la escuela Southeast Raleigh HS que está a la derecha.	

Subzona	Descripción de la subzona	Rutas de evacuación	Centro de recepción
D Condado de Wake	Esta parte de la subzona incluye la parte sureste del Lago Harris y la zona que rodea a Cass Holt Rd. Esta subzona está lindada por Bartley Holleman Rd., Rex Rd., Buckhorn-Duncan Rd. y los lindes entre los condados de Wake y Harnett, y de Wake y Chatham.	Por Cass Holt Rd (SR 1116) a Honeycutt Rd. (SR 1126), hacia el este a Piney Grove-Wilbon Rd. (SR 1101), hacia el sur a Wade Nash Rd. (SR 1113), hacia el este cruzando la carretera NC 55 a Dickens Rd. (SR 1398), hacia el este a James Slaughter Rd. (SR 1399), hacia el norte a Bass Lake Rd. (SR 1393), atravesando Needmore Crossroads sobre Hilltop-Needmore Rd. (SR 1393), hacia el este a la carretera US Hwy 401, hacia el norte a la carretera US Hwy 70 hacia el este, a la derecha en Coldwater Drive. A la derecha en Spring Drive.	Garner High School
Condado de Harnett	Esta parte de la subzona incluye las zonas que corren a lo largo de Rollins Mill Road, Hobby Road y Auger Hole Road. Esta parte de la subzona está lindada por los lindes entre los condados de Harnett y de Lee, por los lindes entre los condados de Harnett y de Wake y las zonas al norte de la carretera NC Hwy 42.	Por Rollins Mill Road, Hobby Road y Auger Hole Road al sur hacia NC Hwy. 42, al este hacia Oakridge Duncan Road. (SR 1409), al sur hacia Christian Light Road (SR 1412), al sur hacia Rawls Church Road (SR 1415), hacia la carretera US Hwy. 401, al sur hacia Kipling. Luego SR 2215 al este cruzando NC Hwy. 210 hacia la escuela Harnett Central Middle School.	Harnett Central Middle School
E Condado de Wake	Esta subzona incluye la ciudad de Apex, la comunidad de Friendship y las zonas que corren a lo largo de los caminos US 1, Old US 1, US 64, NC Hwy 55, Tingen Rd. y Olive Chapel Rd. La Subzona está lindada por el linde entre los condados de Wake y Chatham, la comunidad de Green Level, SR 1010, Kildaire Farm Rd., Sunset Lake Rd. y Woods Creek Rd.	Todo el tráfico por la carretera NC Hwy. 55 a US Hwy. 1-64 hacia el norte.  O BIEN: A NC Hwy. 64 hacia el este a US Hwy. 1-64 hacia el norte.  LUEGO: Hacia el norte por el periférico I-440 hasta la Salida 8B a Six Forks Rd. hacia el norte por Six Forks Rd., a la izquierda en Millbrook Rd. y a la derecha en Dixon Dr.	Sanderson High School
F Condado de Wake	Esta subzona incluye la ciudad de Holly Springs, los lagos Sunset Lake y Bass Lake, y las zonas que corren a lo largo de los caminos NC Hwy. 55 Bypass (desvío), Holly Springs Rd., Avent Ferry Rd., Bass Lake Rd. y Cass-Holt Rd	Avent Ferry Rd. al este, a la izquierda en el desvío de NC Hwy. 55 Bypass.  O BIEN: New Hill Rd. al este, por encima del desvío NC Hwy 55 Bypass  O BIEN: Main St. a Holly Springs Rd.  O BIEN: Bass Lake Rd. a Holly Springs Rd.  O BIEN: Sunset Lake Rd. a Holly Springs Rd.  LUEGO: Al este sobre Holly Springs Rd. a la derecha en Tryon Rd. Tryon Rd. a la izquierda en Gorman St.  Gorman St. norte hacia 1-40 este a Rock Quarry Rd. A la derecha en Rock Quarry Rd. a la escuela Southeast Raleigh High School a la derecha.	Southeast Raleigh High School

Subzona	Descripción de la subzona	Rutas de evacuación	Centro de recepción
G Condado de Wake	Esta subzona incluye la ciudad de Fuquay-Varina y las zonas que corren a lo largo de los caminos NC Hwy 42, NC Hwy 55, US Hwy 401, Piney Grove-Wilbon Rd., Bass Lake Rd. y James Slaughter Rd. y Sunset Lake Rd. La subzona se extiende hacia el sur hasta el linde entre los condados de Wake y Harnett y hacia el este a lo largo del arroyo Kenneth Creek.	Por Rouse Rd. (SR 1125) hacia el este a Piney Grove-Wilbon Rd. (SR 1101), hacia el sur a Wilbon Rd. (SR 1110), hacia el este a NC 55 hasta confluir con Broad St. A la derecha sobre Sunset Lake Rd y a la izquierda sobre US 401 Norte. (Main St.)  O BIEN: Por NC Hwy. 42 este (W. Academy St) a US Hwy. 401 (Main St.) A la izquierda en US Hwy. 401  O BIEN: Por Hilltop-Needmore Rd. a US Hwy. 401 Norte LUEGO: Por US Hwy 401 norte a US Hwy. 70 este, dar vuelta a la derecha en Coldwater Dr. y a la derecha en Spring Dr.	Garner High School
H Condado de Harnett	Esta subzona incluye las comunidades de Duncan, Camp Agape, Raven Rock Park, West Horse Trail Loop, la zona que corre a lo largo del arroyo Avents Creek y a lo largo de los caminos: NC Hwy 42, Rawls Church Rd., Baptist Grove Rd., Christian Light Rd., Cokesbury Rd. y River Rd. Esta subzona está lindada por los lindes entre los condados de Chatham, Harnett y Wake, Avents Creek, Christian Light Rd., arroyo Hector Creek, Rawls Church Rd. y la carretera US Hwy 401.	Por Cokesbury Rd. (SR 1403), por Oakridge River Rd. (SR 1418), por Rawls Church Rd. (SR 1415) y por Baptist Grove Rd. (SR 1427) hacia el este de la carretera US Hwy 401 hacia Kipling. Luego SR 2215 hacia el este cruzando NC 210 a la escuela Harnett Central Middle School.  O BIEN: Por la carretera NC 42 hacia el este a Oakridge Duncan Rd. (SR 1409), hacia el sur a Christian Light Rd. (SR 1412), hacia el sur a Rawls Church Rd. (SR 1415) hasta la carretera US 401, hacia el sur a Kipling. Luego por la SR 2215 hacia el este, cruzando la carretera NC 210 a la escuela Harnett Central Middle School.	Harnett Central Middle School
I Condado de Lee	Esta subzona está lindada por el río Cape Fear River y por el linde entre los condados de Lee y Harnett. Incluye los caminos que corren a lo largo de Poplar Springs Church Rd., Buckhorn Rd. y la carretera NC Hwy 42. La subzona también incluye la zona al noreste de NC Hwy 42 hasta el punto en que Lower Moncure Rd. intersecta RH Lane Rd.	Por Poplar Springs Church Rd. (SR 1537) hacia el oeste o Buckhorn Rd. (SR1538) oeste hacia NC 42, cruzando la carretera 421/Hwy 87 y continuar derecho hasta NC 78 (Tramway Road), continuar sobre NC 78 hasta la escuela Southern Lee High School.  O BIEN: Por Buckhorn Rd. (SR 1538), oeste hacia East Harrington Road, doblar a la derecha en Main Street y continuando derecho hacia NC Hwy. 42 oeste, cruzando la carretera US 421/Hwy. 87 y continuando derecho hacia NC 78 (Tramway Road), continuar sobre NC 78 hasta la escuela Southern Lee High School.	Southern Lee High School

# Subzona

# Descripción de la subzona

# Rutas de evacuación

# Centro de recepción

, Condado de Lee Esta subzona está lindada por el río Deep River y el río Cape Fear River, incluye las zonas que corren a lo largo de Lower Moncure Road, Lees Chapel Road, Rod Sullivan Road, Deep River Road, Lower River Road, Ferrell Road y la carretera US Hwy. 1.

Por Lower Moncure Rd. (SR 1002) al norte a partir de Cletus Hall Road hacia Deep River Rd. (SR 1466), doblar a la izquierda en Deep River Rd. (SR 1466) hacia la carretera US Hwy. 1, al sur en la carretera US Hwy. 1 hacia NC 78, doblar a la izquierda en NC 78 este (Tramway Road) hacia la escuela Southern Lee High School.

O BIEN: Por Lower Moncure Rd. (SR 1002), al sur a partir de Cletus Hall Road hacia Farrell Rd. (SR 1423), doblar a la derecha en Farrell Road hacia Osgood Rd. (SR 1422), doblar a la izquierda en Osgood Road hacia Colon Rd. (SR 1415), a la derecha en Colon Road hacia la carretera US Hwy. 1, al sur hacia la carretera US Hwy. 1 a NC 78, doblar a la izquierda en NC 78 este (Tramway Road) hacia la escuela Southern Lee High School.

Southern Lee High School

K Condado de Chatham Esta subzona incluye las comunidades de Merry Oaks y Corinth, la parte sur del lago Harris Lake y las zonas a lo largo de los siguientes caminos: Old US Hwy. 1, Christian Chapel Rd., Moncure-Flat Wood Rd., Corinth Rd. y NC Hwy. 42. Esta subzona está lindada por el linde de los condados de Chatham y Wake (en el lado sur), Christian Chapel road (en el lado este)y por el linde entre los condados de Chatham y Harnett, los ríos Cape Fear River y Haw River y la carretera US Hwy. 1.

Por Christian Chapel Rd. (SR 1912), hacia el norte de la intersección de Moncure-Flat Wood Rd. (SR 1924) a la carretera Old US Hwy. 1 (SR 1011), hacia el oeste pasando por Haywood y Moncure, Old US Hwy. 1 (SR 1011), hacia el oeste a Moncure-Pittsboro Rd. (SR 1012), hacia el norte en Moncure-Pittsboro Road hacia el desvío NC Hwy. 87 Bypass, al oeste en NC 902 hacia la escuela Chatham Central High School.

O BIEN: Por Old US Hwy. 1 (SR1011), hacia el oeste pasando por Haywood y Moncure hacia Moncure-Pittsboro Rd. (SR 1012), hacia el norte al desvío NC Hwy. 87 Bypass, al oeste en la carretera US. 64 Business Route, confluir con US. 64 Bypass (desvío) hacia el oeste, ir hacia el oeste a Siler City a East Raleigh St., hacia el oeste a White Oak Rd. y hacia el sur a la escuela Jordan-Matthews High School.

O BIEN: Por Christian Chapel Rd. (SR 1912), hacia el norte pasando Moncure-Flat Wood Rd. (SR 1924) a Old US Hwy. 1 (SR 1011), hacia el oeste pasando por Haywood y Moncure hacia Moncure-Pittsboro Rd. (SR 1012), hacia el norte hacia NC Hwy. 87 Bypass (desvío) hacia el oeste por NC 902 hacia la escuela Chatham Central High School.

O BIEN: Desde la intersección de Moncure-Flat Wood Rd. (SR 1924) y Christian Chapel Rd. (SR 1912), hacia el sur por SR 1924 a Corinth Rd. (SR 1916), hacia el sur a la carretera NC Hwy. 42, hacia el oeste por NC Hwy. 42 cruzando por US 421/Hwy. 87 hacia NC 78 (Tramway road), al oeste por NC 78 hacia la escuela Southern Lee High School.

O BIEN: Por Corinth Rd. (SR 1916), hacia el sur a NC Hwy. 42, hacia el oeste a NC Hwy. 42 cruzando la carretera US 421/Hwy. 87 hacia NC 78 (Tramway road), al oeste por NC 78 hacia la escuela Southern Lee High School.

Chatham Central High School

Jordan-Matthews High School

Chatham Central High School

Southern Lee High School

Southern Lee High School

#### Subzona Descripción de la subzona Rutas de evacuación Centro de recepción L Esta subzona incluye la parte Por la carretera US Hwy. 1 hacia el sur a Moncure-Chatham Central este del lago Jordan Lake y las Pittsboro Rd. (SR 1012), hacia el norte a NC Hwy. High School Condado zonas que corren a lo largo de los 87 Bypass (desvío) al oeste en NC 902 hacia la siguientes caminos: Olive escuela Chatham Central High School. Chatham Chapel Rd., Tody Goodwin Rd., O BIEN: Por Pea Ridge Rd. (SR 1972) y New Elam Jordan-Matthews Farrington Rd., Poole Rd. East, Church Rd. (SR 1910), hacia el norte a la carretera High School East Goodwin Rd., New Elam US Hwy. 1 y hacia el norte a Beaver Creek Rd. (SR Rd., Pea Ridge Rd., W.H. Jones 1008), hacia el norte a US Hwy. 64, hacia el oeste Rd. y la carretera Old US Hwy. a Siler City to East Raleigh St., hacia el oeste a 1. Esta subzona está lindada por White Oak Rd., hacia el sur hacia la escuela el linde entre los condados de Jordan-Matthews High School. Chatham y Wake la orilla oriental del lago Jordan Lake, O BIEN: Por Olive-Chapel Rd. (SR 1901), hacia el la carretera US Hwy. 1 y el río sur a Tody Goodwin Rd. (SR 1900 y SR 1975), hacia Northwood Haw River. el oeste a Beaver Creek Rd. (SR 1008), hacia el High School o norte a US Hwy. 64, hacia el oeste a US Hwy. 64 Jordan-Matthews (para ir a la escuela Northwood High School), hacia High School el norte por US Hwy. 15-501. (para ir a la escuela Jordan-Matthews High School), hacia el oeste US Hwy. 64, hacia el oeste a Siler City a East Raleigh St., hacia el oeste White Oak Rd., hacia el sur hacia la escuela Jordan-Matthews High School. Chatham Central O BIEN: Por US Hwy. 1, hacia el sur a Moncure-High School Pittsboro Rd.(SR 1012), hacia el norte a NC Hwv. 87 Bypass (desvío) hacia el oeste en la carretera NC 902 hacia la escuela Chatham Central High School. Chatham Central Por Old US Hwy. 1 (SR 1011), hacia el oeste, pasan-Esta subzona incluye las comu-Μ High School do por Haywood y Moncure hacia Moncure-Pittsboro nidades de Haywood, Moncure, Rd. (SR 1012), hacia el norte a la carretera NC Hwy. Condado Hank's Chapel y Griffin's 87 Bypass (desvío) al oeste por NC 902 hacia la Crossroads; Jordan Lake y las escuela Chatham Central High School. Chatham zonas que corren a lo largo de los siguientes caminos: North O BIEN: Hacia el sur por SR 1971 y SR 1931, hacia el Chatham Central Pea Ridge Rd., Gum Springs oeste a Moncure-Pittsboro Rd. (SR 1012), hacia el High School Church Rd., Clark Poe Rd., norte a la carretera NC Hwy. 87 Bypass (desvío), al Moncure-Pittsboro Rd., Jordan oeste por NC 902 hacia la escuela Chatham Central Dam Rd., Mt. View Church Rd. High School. y Providence Church Rd. Esta O BIEN: Por Old US Hwy. 1 (SR 1011) pasando por subzona está lindada por la Haywood y Moncure hacia Moncure-Pittsboro Road carretera US Hwy. 64, la orilla Jordan-Matthews (SR 1012), hacia el norte a NC Hwy. 87 Bypass oriental del lago Jordan Lake, High School los ríos Haw River y Deep (desvío), al oeste por US 64 Business Route, confluir con US 64 hacia el oeste, hacia el oeste a Siler City River. También incluye todas a East Raleigh Street, hacia el oeste a White Oak las zonas hacia el norte y hacia Road, hacia el sur a la escuela Jordan-Matthews el este del punto donde el río High School. Rocky River entra al río Deep River en la carretera US Hwy. O BIEN: Por Gum Springs Church Road (SR 1943), a 64 en Griffin's Crossroads. Northwood High US Hwy. 64 Business Route. Ir al este por 64 School Business Route, confluir con US Hwy. 64 hacia el oeste, al norte por US Hwy. 15-501 hacia la escuela Northwood High School. O BIEN: Por Gum Springs Church Rd. (SR 1943), a Jordan-Matthews US Hwy. 64 Business Route. Ir al este por 64 High School Business Route, confluir con US Hwy. 64 hacia el

oeste, al oeste a Siler City a East Raleigh Street, hacia el oeste a White Oak road, hacia el sur a la

escuela Jordan-Matthews High School

#### Subzona Descripción de la subzona

Ν Condado de Chatham

Esta subzona incluye la parte norte del lago Jordan Lake y las zonas que corren a lo largo de los siguientes caminos: Farrington Rd., Horton Pond Rd. y la carretera NC Hwy. 751. Esta subzona está lindada por la carretera US Hwy. 64, el linde entre los condados de Chatham y Wake, Green Level Rd. y Hollands Chapel Rd. Además, todas las zonas hacia el este de la intersección de Farrington Rd. y Hollands Chapel Rd. con la carretera US Hwy. 64 en Wilsonville Crossroads.

# Rutas de evacuación

Centro de recepción

Por NC Hwy. 751 y Farrington Rd. (SR 1008), Holland Chapel Rd. y Horton's Pond Rd., hacia el sur a US Hwy. 64, hacia el oeste a Pittsboro y al norte por US Hwy. 15-501 hacia la escuela Northwood High School.

Northwood High School

O BIEN: Por NC Hwy. 751 y Farrington Rd. (SR 1008), Holland Chapel Rd. y Horton's Pond Rd., hacia el sur a US Hwy. 64, hacia el oeste a Siler City a East Raleigh St., hacia el oeste a White Oak Rd., al sur hacia la escuela Jordan-Matthews High

Jordan-Matthews High School

O BIEN: Por NC Hwy. 751 y Farrington Rd. (SR 1008), Holland Chapel Rd. y Horton's Pond Rd., hacia el sur a US Hwy. 64, hacia el oeste a Siler City, hacia el oeste a South Second Ave., hacia el sur a Old US Hwy. 421 (SR 1176), hacia el sur a Bear Creek y NC Hwy. 902, al oeste hacia la escuela Chatham Central High School.

Chatham Central High School

O BIEN: Por Green Level Rd. (SR 1742), y Luther Rd. (SR 1743) a NC Hwy. 751, hacia el sur a US Hwy. 64, hacia el oeste por US Hwy. 64 a Siler City a East Raleigh Street, hacia el oeste a White Oak Road, al sur hacia la escuela Jordan-Matthews High School.

Jordan-Matthews High School



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## Números de teléfono en caso de emergencia

Si necesita ayuda durante la evacuación de la zona, llame al número del condado en que vive:

Condado de Chatham	919.542.2911
Condado de Harnett	919.832.9111
Condado de Lee	919.775.8268
Condado de Wake	919.856.7044

### Para obtener más información

Si tiene preguntas sobre cualquier parte de la información de seguridad que ha leído en este folleto puede llamar o escribir a las siguientes entidades:

### (Administración de Emergencia del Condado de Chatham) Chatham County Emergency Wanagement

919.542.2911 297 West Street P.O. Box 613 Pittsboro, NC 27312

### (Administración de Emergencias del Condado de Harnett) Harnett County Emergency Management

910.893.7580
200 North 13th St.
Erwin, NC 28339
Después de horas de oficina:
Departamento del Sheriff del Condado
de Harnett
919.832.9111

## (Administración de Emergencias del Condado de Lee) Lee County Office of Emergency Management

919.775.8279
P.O. Box 1154, Sanford, NC 27331
Después de horas de oficina:
Departamento de Policía de Sanford
919.775.8268
Departamento del Sheriff del Condado
de Lee
919.718.4561

### (Administración de Emergencias del Condado de Wake) Wake County Emergency Management

919.856.6480 Wake County Office Bldg., 14th floor P.O. Box 550 Raleigh, NC 27602-0550

### (Administración de Emergencias de Carolina del Norte) NC Emergency Management

1.800.858.0368 State Emergency Operations Center 116 West Jones St. Raleigh, NC 27603-1335

### (Administración de Emergencias de Carolina del Norte) NC Emergency Management

919.575.4122 Central Branch 401 Central Ave. Butner, NC 27509

Para obtener más información sobre la Planta Harris y la energía nuclear, sírvase comunicarse con Progress Energy al 919.362.3261 o visite el sitio en Internet progress-energy.com.



progress-energy.com

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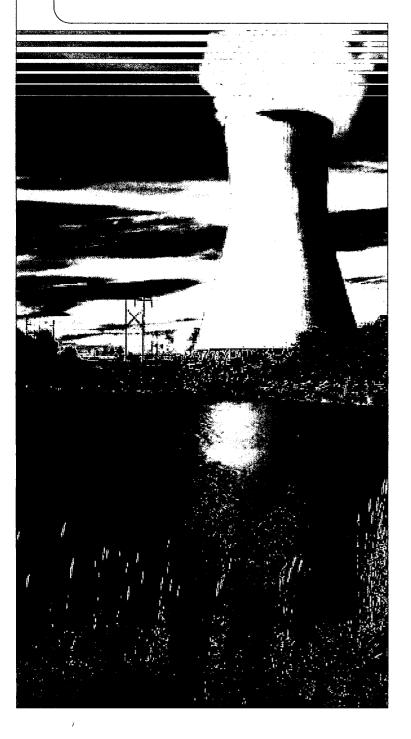
HNP Emergency Preparedness HNP 01 P.O. Box 165 New Hill, NC 27562



HARRIS NUCLEAR PLANT

# Student Safety Information

2008 - 2009



### **Dear Parents and Students:**

Electricity powers our lives. In the U.S., there are 104 reactors providing 20 percent of our country's electricity. The Harris Nuclear Plant is one of them. We are proud to provide you with a safe, efficient and environmentally friendly source of power. The Harris Nuclear Plant alone generates electricity for more than 700,000 homes and businesses. Our more than 650 employees are committed to generating the electricity you need while maintaining a focus on safety and security.

### Committed to your safety and security

We ensure plant safety and security in many ways. First, all nuclear plants are built with multiple layers of protection. We used thick layers of strong materials such as concrete and steel to build the plant. These materials ensure that the plant is able to withstand earthquakes, hurricanes and tornadoes. We also have a well-trained security force that protects the plant 24 hours a day, seven days a week.

Safety is our top priority. Our employees focus on safety continually. We plan, train and participate in practice exercises with federal, state and local emergency agencies to make sure we are prepared in the unlikely event of an emergency. Our drills are coordinated events that involve many agencies and experts, and are similar to the fire and tornado drills you practice in school each year, but on a much larger scale. This brochure is one part of our safety plan. It will tell you what to do, where to go and how to use the emergency preparedness plan that has been designed and tested for your safety.

### Committed to protecting our environment

We are committed to protecting the environment we share. The Harris Nuclear Plant sits on 10,800 acres along a 4,000-acre lake. Our environmental teams ensure that we continue to be excellent environmental stewards. The protected and undeveloped areas around the plant provide the habitat for many species of plants and animals. The N.C. Wildlife Resource Commission manages the lake and some of the land for your enjoyment. Progress Energy also provided the land for the Harris Lake County Park – an excellent place to fish, hike, bike and learn about nature through programs and camps.

Please take the time to read this brochure as a family. Discuss your plans as you would your family's fire escape plan. If you or your parents have questions or would like to schedule a visit to our educational facilities, contact the Harris Energy and Environmental Center by phone at 919.362.3261 or by e-mail at harris.plant@pgnmail.com.

Sincerely,

**Bob Duncan** 

Vice President, Harris Nuclear Plant

Visit our Web site at progress-energy.com

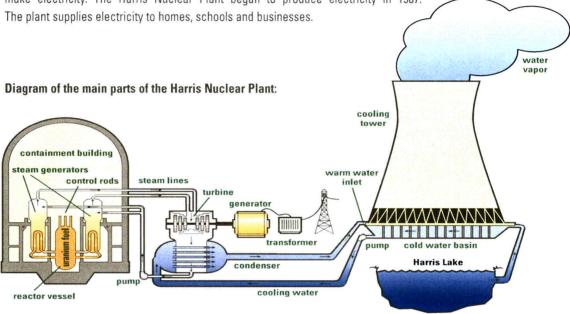


### Why do we need energy?

We need energy to support all parts of our society and our lives. We need it to run our factories and businesses; to heat, cool and light our homes, schools, offices and hospitals; to run our appliances and machines; to give us fuel for cars and airplanes; and to make our food and clothes and all the products we need and use. One of the most important kinds of energy is electricity. Today, we make most of our electricity with fuels like coal, oil, natural gas and uranium (nuclear power).

### What is the Harris Nuclear Plant?

The Harris Nuclear Plant is a power plant located 22 miles southwest of Raleigh in New Hill. It uses the fission (splitting) of uranium atoms to heat water and turn it into steam. The steam drives the plant's turbine generator to make electricity. The Harris Nuclear Plant began to produce electricity in 1987.



### How safe are nuclear power plants?

Very safe. Nuclear power plants have many built-in safety systems. Even if one safety system fails, another is ready to replace it. To make sure that no radiation escapes, the reactor is housed inside a large domed building made of concrete and steel, called a containment building (see the diagram on this page). It is very strong and built to withstand natural disasters such as tornadoes, earthquakes and hurricanes.

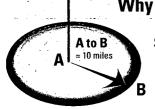
As an extra protection for you, emergency plans have been developed by Chatham, Harnett, Lee and Wake counties, the state of North Carolina and Progress Energy in the unlikely event of an emergency at the Harris Plant.

### How would I know if there is an emergency at the Harris Nuclear Plant?

School officials would be among the first people to know, and they would tell you. Sirens have also been placed in the 10-mile area around the plant to sound if there is an emergency at the plant. They would make a loud, steady sound for about three minutes, several times. This is a signal for you to turn on your radio or television to find out what to do.

If you are at school and the sirens sound, you should remain calm and stay with your class. Your teachers would tell you what to do. You may be taken by bus to a nearby relocation school or you may stay at school until the emergency is over.

### Why would we be taken to a nearby school?



Some schools beyond the 10-mile Emergency Planning Zone (EPZ) serve as relocation schools, places where you would stay until the emergency was over or until you were picked up by your parents. For your safety, you would ride a bus to one of these relocation schools.



School children who live in the 10-mile EPZ and attend a school outside the EPZ would stay at their school with school officials until they were picked up by their parents.

## If there is an emergency at the Harris Nuclear Plant, will all students have to go to relocation schools?

Probably not. To plan for an emergency, the area within 10 miles of the plant has been divided into sub-zones. If there were an emergency at the Harris Nuclear Plant, people in some of these sub-zones might be asked to evacuate, depending on the extent of the emergency, or, people in certain sub-zones might be asked to remain indoors until the emergency is over. Look on the map in this booklet (page 6) to find which sub-zone your school is in and which sub-zone you live in. You may not live in the same sub-zone that your school is in. Look at the map to find out.

### If my school is relocated, can I go home?

No. First, you should go with your class to your relocation school. Sign in and stay with your class. Wait for your parents to pick you up. If people in the sub-zone where you live were evacuated, you would stay at the relocation school until your parents picked you up.

### What happens at a relocation school?

First, you and your classmates would sign in at the relocation school. If you take medication, remind school officials to send it to the relocation school. You may be asked to stay there for several hours or longer. There would be lots of other people there with you. Your parents should listen to the radio or television to find out if your school has been relocated. If your school has been relocated, your parents can join you at the relocation school. You may stay at a reception/care center or stay with family or friends who live outside the EPZ. When the emergency is over, county and state officials will tell you what to do next.

### **Potassium Iodide**

In cases where you may be exposed to radioactive iodine from a radiation release, state health officials may recommend that you take Potassium Iodide (KI) tablets.

KI is a nonprescription medication that may reduce the amount of radioactive iodine absorbed by your body's thyroid gland if taken before or shortly after an exposure to radioactive iodine.

You should only take KI when directed to do so by public health officials. Should an accidental release of radiation occur, KI will be available at your school. You will be notified whether or not it is advisable to take KI through school officials. Additional protective actions could include: evacuating the area, staying inside, and/or taking your KI.

For more information on KI, you can visit the North Carolina Public Health Preparedness and Response page on KI at http://www.epi.state.nc.us/epi/phpr/ki/ki.html.





## What should my parents do if my school is in a sub-zone that is told to stay indoors?

They should NOT try to pick you up. They should listen to the radio or television for instructions. School officials would take care of you. After the emergency is over, your parents could come and get you or you could go home as you usually do after school. If you didn't have a ride home, one would be provided.

### What should I do if I'm at home and the sirens sound?

If you are outside, go inside right away. Turn on the radio or television. Listen for instructions. If the radio or television tells people in your sub-zone to stay indoors or to evacuate, follow the instructions and activate your family plan.

## What should I do if I'm home alone, and the radio or television says to remain inside?

Close the windows and doors. Turn off fans, heating and air conditioning that require outside air. Go to a room or basement with few or no windows. Stay inside and listen to the radio or television for more instructions and emergency information.

## What should I do if I'm home alone, and the radio or television says to evacuate?

You should either wait for your parents to come home and get you OR ride to the reception/care center with a friend or neighbor.



If you sometimes stay home alone, you and your parents should work out a plan to get you to the reception/care center. If you plan to ride with a friend or neighbor, have your parents tell them of the plan. Then if your sub-zone is told to evacuate, they will know to take you with them. It is very important that you and your parents make plans after you have read this booklet. If you ride to the reception/care center with a friend or neighbor, leave your parents a note to be sure they know where you are.

## How would my parents be notified in an emergency that I'm either at school or at a relocation school?

Your parents should listen to the radio or television to find out which schools have been closed or evacuated.

### What if we have a tone-alert radio and the alarm goes off?

Homes within a five-mile emergency planning zone around the Harris Nuclear Plant have been given tone alert radios – also known as tone alert weather radios. In the unlikely event of an emergency at the Harris Nuclear Plant and during scheduled tests, the National Weather Service activates an alarm on the radios. Listen to the radio for information. Some radios may require that you press the WEATHER button located at the top of the radio to receive the broadcast.

Tone alert radios also receive severe weather alerts and other broadcasts from the National Weather Service 24 hours a day.

Please refer to your owner's manual and the Harris Nuclear Plant Tone Alert Radios brochure for further instructions. If you have questions concerning your radio, call Progress Energy at 1.800.452.2777.

If you live outside the 5-mile zone, you may consider purchasing a weather radio with S.A.M.E. (Specific Area Message Encoding).



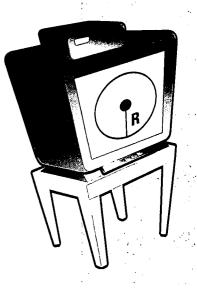
ALERTIECO

## What if I don't hear any instructions on the radio or television after the sirens are sounded?

If you hear sirens go off, it might be a test. Keep listening to the radio or television. If you don't hear anything about the sirens, call your parents or call the county officials who will have information about the sirens.

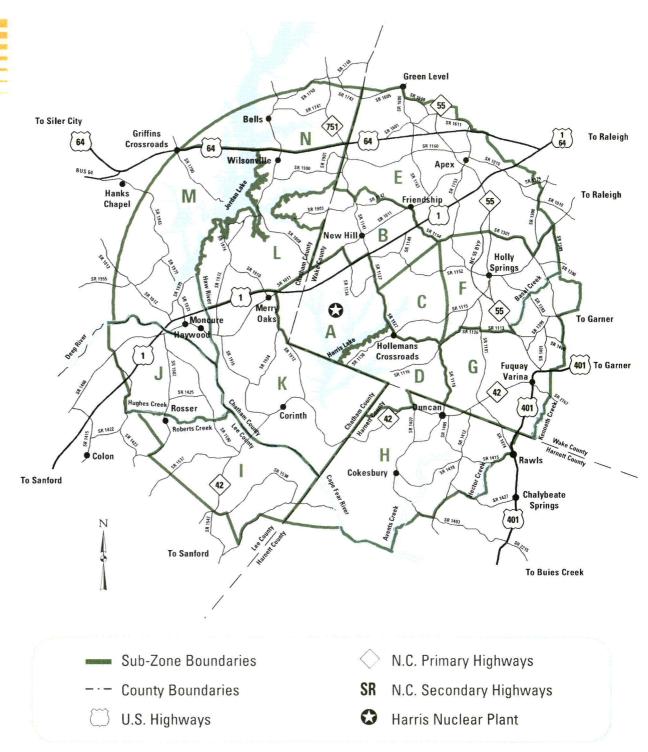
#### The numbers are:

Chatham County Emergency Management	919.542.2911
Harnett County Emergency Management	910.893.7580
(after hours) Harnett County Sheriff's Department	910.893.9111
Lee County Emergency Management	919.775.8279
(after hours) Sanford Police Department	919.775.8268
Wake County Emergency Management	919.856.6480
(after hours) Wake County Sheriff's Department	919.856.6911





### Map of the 10-mile area around the Harris Nuclear Plant



### Relocation schools for licensed child care centers and schools

Facility	Sub-zone	Relocation School
High Schools		
Apex Senior High School (Apex)	Ε	Sanderson Senior High School (Raleigh)
Community Partners Charter High School	F	Southeast Raleigh High School (Raleigh)
Fuquay-Varina Senior High School	G	Garner Senior High School (Garner)
Holly Springs High School	F	Southeast Raleigh High School (Raleigh)
Middle Schools		
Apex Middle School	Ε	Leesville High School (Raleigh)
Fuquay-Varina Middle School	G	Millbrook High School (Raleigh)
Holly Ridge Middle School	F	Knightdale High School (Knightdale)
Lufkin Road Middle School (year-round)	E	Leesville High School (Raleigh)
St. Mary Magdalene Catholic School	Ε	Cardinal Gibbons High School (Raleigh)
Salem Middle School (year-round)	E	Leesville High School (Raleigh)
Elementary Schools		
Apex Elementary School	Ε	Sanderson Senior High School (Raleigh)
A.U. Baucom Elementary School (year-round)	Ε	Leesville High School (Raleigh)
Holly Grove Elementary School (year-round)	F	Southeast Raleigh High School (Raleigh)
Holly Ridge Elementary School	F	Knightdale High School (Knightdale)
Holly Springs Elementary School (year-round)	F	Knightdale High School (Knightdale)
Hope Chapel Preschool	Е	Sanderson High School (Raleigh)
Lincoln Heights Elementary School	G	Millbrook High School (Raleigh)
Moncure Elementary School	M	Northwood Senior High School (Pittsboro)
The New School, Inc. Montessori	F	Southeast Raleigh High School (Raleigh)
Olive Chapel Elementary School (year-round)	E	Leesville High School (Raleigh)
Salem Elementary School (year-round)	Е	Leesville High School (Raleigh)
Southern Wake Montessori School	F	Southeast Raleigh High School (Raleigh)

### **Relocation School Location Information**

### Cardinal Gibbons High School (Raleigh)

Adjacent to Carter Finley Stadium on Edwards Mill Road

### Garner Senior High School (Garner)

From Hwy. 70 east, take Yeargan Rd. right on Coldwater Rd. to Spring Dr.

### Harnett Central High School (Angier)

NC Hwy. 210 at the intersection of 1513 (Neil's Creek Rd.) and 1403 (Harnett Central Rd.)

### Northwood Senior High School (Pittsboro)

Take Pittsboro Moncure Rd. north to US 15-501; go north approx. 3 miles north of Pittsboro, turn left on Northwood School Rd.

#### Leesville High School (Raleigh)

I-540 to Leesville Rd. exit, head south on Leesville Rd., school on the right. Or take I-440 to US 70/Glenwood Ave. North exit. Turn right on Lynn Rd., left on Leesville Rd. School on the left.

### Millbrook High School (Raleigh)

I-440 to Wake Forest Rd. It turns into Falls of Neuse Rd., turn right on Spring Forest Rd., school on the left.

### Knightdale High School (Knightdale)

US 64 east, turn left on Old Knight Rd. Just past Forestville Rd. on the left.

### Sanderson Senior High School (Raleigh)

Take exit 8 from 1-440, north on Six Forks Rd. west on Millbrook Rd. to Dixon Dr.

#### Southeast Raleigh High School (Raleigh)

Rock Quarry Rd. and Creech Rd., south of I-40







### Sponsored by:

North Carolina Division of Emergency Management

Chatham County Emergency Management

Harnett County Emergency Management

Lee County Emergency Management

Wake County Emergency Management

**Progress Energy** 

### **Child care centers**

Child care facilities will move children to the relocation school for the zone where the child care facility is located.

Zone	Facility
E	Sanderson Senior High School (Raleigh)
F	Southeast Raleigh High School (Raleigh)
G	Garner High School (Garner)
Н	Harnett Central High School (Angier)
М	Northwood Senior High School (Pittsboro)
Му	family plan
	vithin the 10-mile EPZ.
My rel	ocation school is
If I am	home alone, I would ride to the reception center with
We wo	ould go to the reception center.*
l will ta	ake these items with me:
☐ Me	dicine
Ch:	ange of clothing
☐ Em	ergency phone numbers

Leave pets at home with plenty of food and water, if possible.

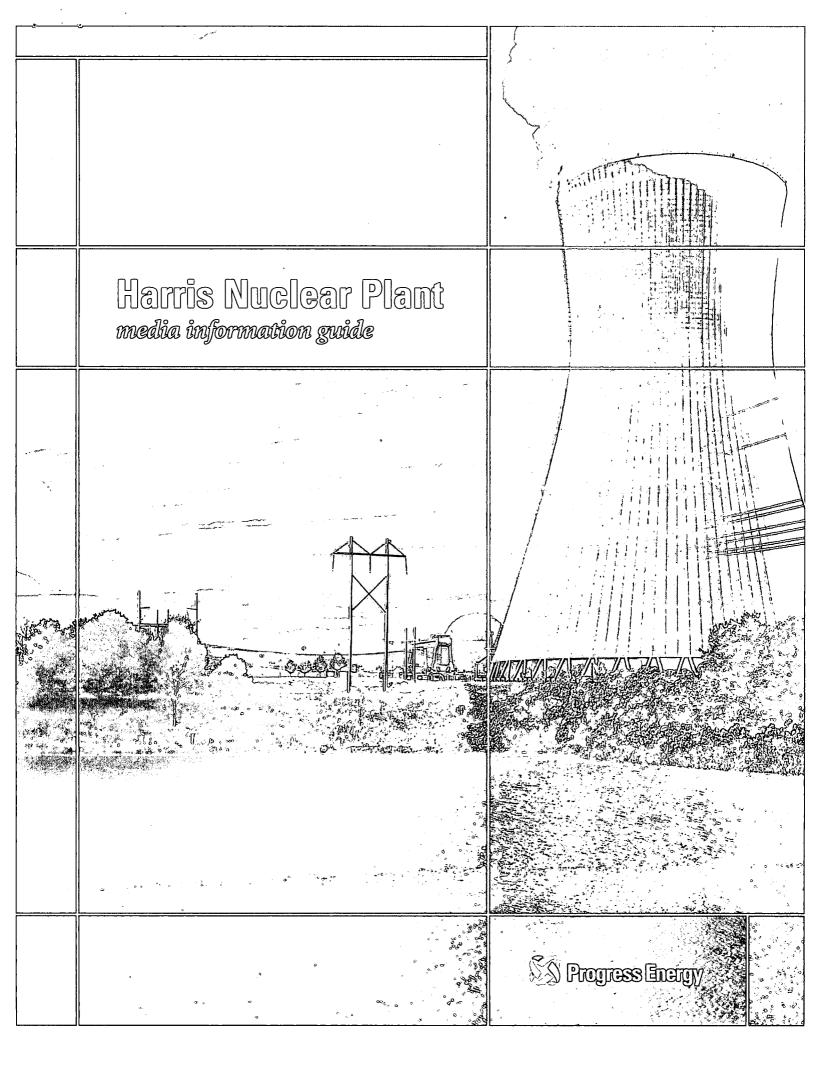
Dad \_\_\_\_\_

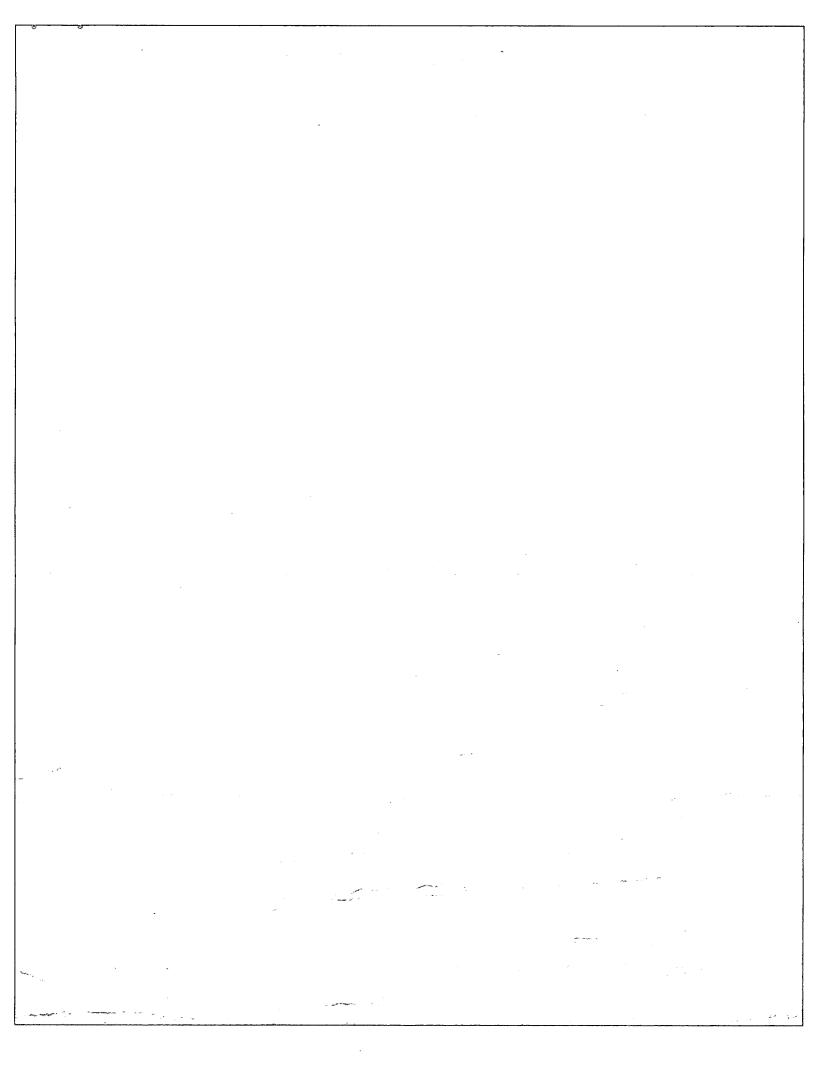
Other \_\_\_\_\_

\*For information on reception centers, see the safety information brochure sent to all homes within the 10-mile EPZ.









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## **Quick facts**

### about the Harris Nuclear Plant

Location	22 miles southwest of Raleigh; 22 miles northeast of Sanford in New Hill, N.C.
Number of units	1 unit
Capacity	approx 900 MW
Reactor type	Pressurized Water Reactor (PWR)
Nuclear steam supply system manufacturer	Westinghouse
Turbine generator manufacturer	Westinghouse
Distinctive feature	526-foot high cooling tower. Water from the cooling tower basin circulates through the plant's condenser, absorbs heat from the steam, and travels back to the cooling tower where it is cooled to be reused.
Cost of plant	\$3.8 billion
Announced	1971
Groundbreaking	1978
Commercial operation	May 2, 1987
Concrete	One-half million yards of concrete (approx. 75 miles of four-lane highway, or enough to stretch from Raleigh to Greensboro)

Cable	
	to run between the East and the West coast
	and half way back
Steel	·
	approximately 456 miles)
Reactor core	Fuel Uranium 22E
neactor core	Number of fuel assemblies – 157
	Refueling schedule – 1/3 of
	assemblies every 18 months
	Fuel enrichment (average) –
	5 percent
Documents.	Maight 205 tops
Reactor vessel	•
	Height – 42 feet
	Inside diameter – 14 feet
	Wall thickness – 8 inches carbon steel
Main condensers	Manufacturar — Wastinghouse
Main Concensers	Maximum cooling water flow –
	-
	500,000 gallons per minute
	Water temperature increase –
	10-15°F
Containment structure	Concrete thickness – 4 1/2 feet
	Steel liner thickness – 5/8 inch
	Inside diameter – 115 feet
	Inside height – 240 feet
	more delight. 240 feet
Steam generators	Number – 3
-	Weight – 340 tons
	Length – 67 feet, 8 inches
	• • • • • • • • • • • • • • • • • • • •



## **Progress Energy**

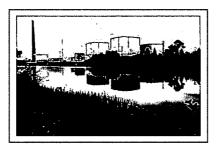
nuclear plant overview

The company operates five reactors at four sites in North Carolina, South Carolina and Florida. It has operated nuclear plants safely for more than 30 years.

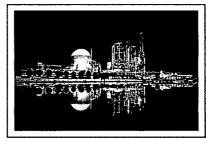
The two-unit Brunswick Nuclear Plant located near Southport, N.C. produces 1,838 MW of electricity. It began operation in the mid-1970s.

The single-unit H.B. Robinson Nuclear Plant located near Hartsville, S.C. produces 710 MW of electricity. Robinson began operation in 1971 and (through predecessor Carolina Power & Light) was the first commercial reactor built in the Southeast.

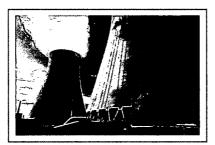
The Crystal River 3 Nuclear Plant located near Crystal River, Fla. produces 838 MW of electricity. It began operation in the mid-1970s.



Brunswick Nuclear Plant



Robinson Nuclear Plant



Crystal River 3 Nuclear Plant



Harris Nuclear Plant

## **History of the Harris Plant**



In the 1960s, then-CP&L began investigating the Harris site for construction of a possible nuclear power plant. From the Triangle area's rapid growth, additional electricity was clearly needed to meet the needs of customers.

In 1971, after extensive planning, the company announced plans to file with the NRC for a construction permit to build the Harris Nuclear Plant. The permit, issued in 1978, gave the company permission to construct a four unit nuclear power plant.

While originally planned for four nuclear reactors, the company only built one reactor due to changing economic conditions and demand. Two reactors were removed from the construction permit in 1981 and, by 1983, it was clear that one generating unit would meet demand. A leveling-off of population growth and energy consumption accounted for why previously forecasted rates were not realized.

During the construction phase, the company hired more than 2,000 employees. Jobs were diverse, ranging from design engineers and nuclear engineers to construction workers, reactor operators and administrative and professional positions. After 16 years of construction, the Harris Plant began generating power for the Carolinas on May 2, 1987.

#### The Harris Name

The company named the plant after Shearon Harris, a former president, chief executive officer and chairman of CP&L. After Harris received a law degree from Wake Forest University, he practiced law and served in the North Carolina General Assembly before coming to CP&L in 1957. He became president in 1963, chief executive in January 1969 and chairman in 1970. He continued as chief executive until Sept. 1979 and as chairman until 1980.

Shearon Harris became a prominent figure within the U.S. energy industry during the 1970s. He was chairman of Electric Energy Institute and helped establish the Electric Power Research Institute. Harris also served as chairman of the U.S. Chamber of Commerce in 1978. He died in 1980.

After 16 years of construction, the Harris Plant began generating power for the Carolinas on May 2, 1987.



## **Historical perspective**

on nuclear power and emergency planning

In the early 1960s, a small power plant at Shippingport, Pa., became the first nuclear plant to generate electricity for commercial purposes. Other small reactors followed in Michigan and California, and by the late 1960s, nuclear power plant construction had taken off around the country.

The Carolinas have a long-standing connection to nuclear power. N.C. State University installed the first reactor in the Carolinas in 1954 for teaching and training purposes. In 1959, CP&L (Progress Energy), Duke Power, South Carolina Electric & Gas and Virginia Electric and Power ordered a small 17-megawatt test reactor at the SCE&G Parr Shoals steam plant northwest of Columbia, S.C. That plant operated from late 1964 to 1967 and provided valuable learning experience for the four utilities, all of whom later built commercial nuclear plants.

In 1971, CP&L's (Progress Energy) Robinson nuclear unit became the first commercial nuclear power plant in the southeastern U.S. In 1975 and 1977, CP&L placed two more nuclear units into commercial operation at its Brunswick Plant near Southport, N.C. Today, more than 100 commercial nuclear units generate electricity in the U.S. Twelve of these units are at seven sites in the Carolinas. The Harris Plant is the newest nuclear unit in the Carolinas. It began commercial operation in May 1987.

During the early days of commercial nuclear power in the U.S., emergency plans were not as detailed as those today. However, on March 28, 1979, emergency preparedness at U.S. nuclear facilities took a new role with the accident at Three Mile Island (TMI) in Pennsylvania. A combination of improper valve alignment, a mechanical malfunction, poor procedures and human error resulted in the partial melting of the reactor core and the release of a small amount of radioactive material into the air. (Findings from the accident show the amount of radiation released from the plant was less than that of two chest x-rays.)

TMI taught the nuclear industry valuable lessons. Significant strides have been made in the safety of reactor operations, redundancy of backup safety systems, plant emergency procedures and emergency plans for the public. One of the most significant lessons learned focused on the importance of providing accurate and timely information to the public.

Findings from the Three Mile Island accident show the amount of radiation released from the plant was less than that of two chest x-rays.

## Safety and security

at the Harris Plant



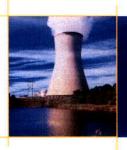
Public safety is the cornerstone of all plant operations. The Harris Plant has a seamless in-depth defense that coordinates closely with local, state and federal officials, including the military. The Harris Plant has one of the best security forces in the industry. Officers are mainly former military. They are heavily armed and work at the plant around the clock. They receive extensive training and are equipped with the latest technology.



Since September 11, Progress Energy has committed more than \$33 million to enhancing security at our nuclear plants and to expand the size of the security force, increase training, extend security perimeters and add new barriers. The U.S. Nuclear Regulatory Commission (NRC) is the federal agency that monitors and regulated all nuclear power plants. The plant is constantly in contact with this agency as well as the national intelligence community. The NRC requires each commercial nuclear power plant to hold a biannual, federally evaluated emergency exercise as part of its licensing procedure. The Department of Homeland Security and the Federal Emergency Management Agency require each plan to involve off-site emergency response participation in a federally evaluated emergency exercise every two years. Additionally, each reactor in the U.S. has two on-site NRC inspectors who have full access to all company documents and meetings.

The Price-Anderson Act, originally passed by Congress in 1957 and most recently amended in 1988, requires nuclear power plants to maintain financial protection in the event of a nuclear accident. In effect, the U.S. public currently has nearly \$9 billion of insurance protection for such an accident, paid for by the nation's utilities, not the federal government.

Officers are heavily armed and work at the plant around the clock.

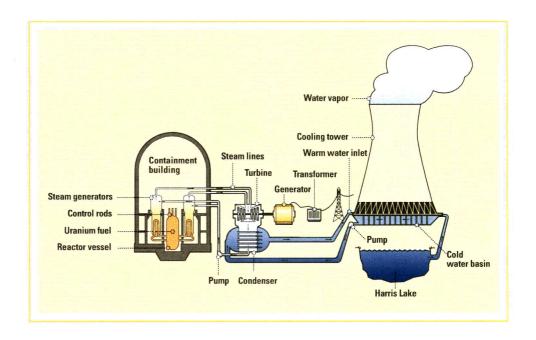


## How a nuclear plant works

Nuclear power plants are not so different from other kinds of power plants. High-pressure steam turns the propeller-like blades of a turbine, which spins the shaft of a huge generator. Inside the generator, coils of wire and magnetic fields interact to create electricity.

Nothing is burned or exploded in a nuclear reactor. The uranium fuel generates heat through a process called fission. The uranium is contained in solid pellets about the diameter of a piece of chalk and about one-half inch long. These pellets are stacked inside long vertical tubes within the reactor.

As certain atoms in the pellets are struck by atomic particles, they split – or fission – to release particles of their own. These particles, called neutrons, strike other atoms, splitting them. This sequence of one fission triggering others, and those triggering more, is called a chain reaction. When the atoms split, they also release heat.



The nuclear reaction can be controlled by rods inserted among the tubes holding the fuel. The control rods can absorb neutrons and prevent them from hitting atoms which can fission. The nuclear reaction can be regulated by the manipulation of control rods into and out of the core.

Commercial nuclear power plants in the U.S. are either boiling water reactors (like Progress Energy's Brunswick Plant) or pressurized water reactors (like Progress Energy's Robinson, Harris and Crystal River plants). Both types of reactors are cooled by water.

In boiling water reactors, the water boils to steam directly in the reactor vessel. The steam is then used to make electricity by spinning the turbine to drive the electric generator.

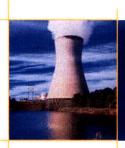
In pressurized water reactors, the reactor water is kept under pressure to prevent it from boiling. This hot water is then pumped to a steam generator, where heat is transferred to a completely separate supply of water. This separate water boils to steam, which is used to spin the turbine driving the electric generator.

Both reactor types use a solid fuel made of two types, or isotopes, of the element uranium. One isotope, U-235, makes up less than one percent of natural uranium, but is easily fissionable. The other isotope, U-238, makes up most of natural uranium but is practically non-fissionable. Through a process known as enrichment, the concentration of U-235 is increased to three to four percent. However, the concentration of U-235 is still so low that a bomb-like explosion is impossible.

In addition to the numerous engineered safety features built into U.S. nuclear plants, several natural features help ensure the reactor's safe operation. The solid fuel pellets resist the effects of high temperature and corrosion during reactor operation. The low concentration of U-235 means the chain reaction tends to slow down as it gets hotter. The fuel pellets are stacked in slender tubes made of a special zirconium steel alloy that resists heat, radiation and corrosion.

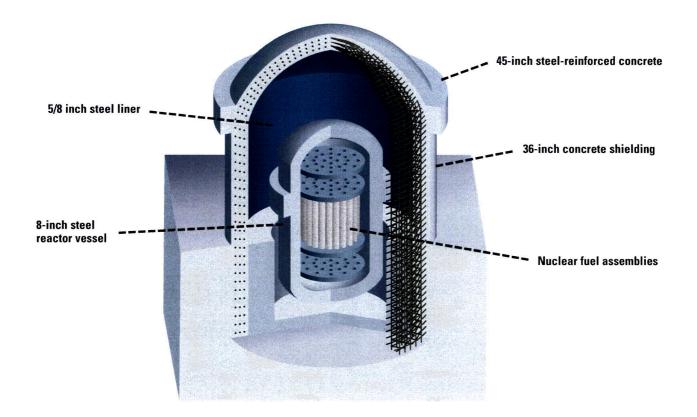
The U.S Department of Energy forecasts that electricity demand in the U.S. will increase 50% by 2025. New emission-free nuclear power plants will be needed to help meet the rising demand and protect our nation's air quality.

The U.S Department of Energy forecasts that electricity demand in the U.S. will increase 50% by 2025.



## Safety

in containment construction



## Radiation



### There are three important points to remember about radiation:

- 1 Radiation is naturally occurring and cannot be totally avoided.
- The benefits of using radioactive materials far outweigh the small risk from man-made radiation.
- 3 Nuclear power contributes very little to our total radiation dose.

Radiation is energy emitted in the form of waves or particles. Radiation includes such things as light and radio waves, but the word is most often used to refer to ionizing radiation. Radiation is a natural part of our environment and has always existed on earth (see chart on page 12).

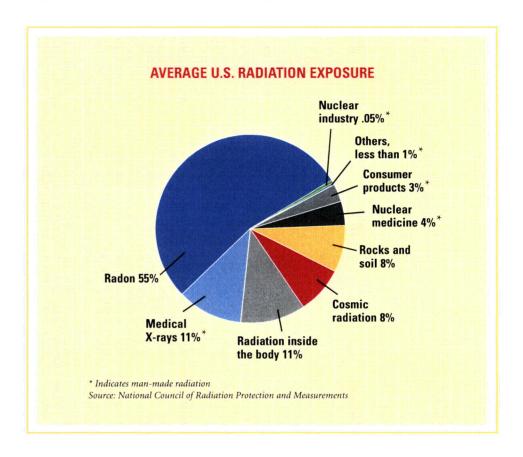
When an atom breaks down or is split by a neutron, particles having energy and waves of energy are released from the nucleus. Elements that release energy in this manner are called radioactive. Some elements are naturally radioactive and other radioactive materials are man-made.

The effect of ionizing radiation on people is measured in a unit called a rem (Roentgen Equivalent Man) or more often in a smaller unit called a millirem (1/1,000th of a rem). The U.S. government has established a limit of 100 millirem per year for any member of the public in addition to natural and medical radiation exposure. The federal government limits the maximum amount of radiation exposure at the boundary of nuclear plant to 5 millirem per year.

Any exposure under 5,000 millirem is generally considered low-level exposure. Although we know that very large doses of radiation are harmful, no ill effects have been seen directly for exposures lower than 50,000 millirem.

Most people are not aware of all the sources of radiation in our environment. We receive natural radiation from cosmic rays, from rocks and soil, from radon gas, from water and other sources. Small portions of radioactive elements appear in practically all matter, including our own bodies. Background radiation is unavoidable and varies from location to location. The higher the elevation, the more cosmic rays a particular area receives. In certain areas of Brazil and India, residents receive more than 1,000 millirem a year from the soil alone.

Small portions of radioactive elements appear in practically all matter, including our own bodies. We also receive radiation from a number of man-made sources. X-rays provide the vast majority of man-made exposure for most people. However, many consumer products (such as televisions and smoke detectors) also contain very small amounts of radioactive material. In addition, flying in a plane increases radiation exposure.



27 millirem40 millirem28 millirem
28 millirem
20 (11111116111
39 millirem
14 millirem
10 millirem
2 millirem

## **Emergency preparedness**

at the Harris Plant



The purpose of nuclear power plant emergency preparedness programs is to protect the health and safety of the public and plant personnel.

In addition to a biannual emergency exercise, Progress Energy and surrounding counties frequently test the siren warning system around the Harris Plant to ensure the siren system works properly. A three minute test of the siren system is conducted annually, low-volume tests are conducted quarterly, and silent tests are conducted every two weeks. Also, tone alert weather radios have been distributed to residents who live within five miles of the Harris Plant. These radios, and the sirens, would alert the public of an emergency at the plant. Additionally, a dedicated telephone system for use by the state and surrounding counties is tested on a monthly basis.

Progress Energy works closely with state and local emergency officials to develop and implement the most comprehensive, detailed emergency plans that would be used in the unlikely event of an emergency at the plant. Any emergency that might affect people living near the Harris Plant would likely develop over a period of time and would allow time for adequate warning to area residents to take necessary safety precautions.

#### If an emergency occurred...

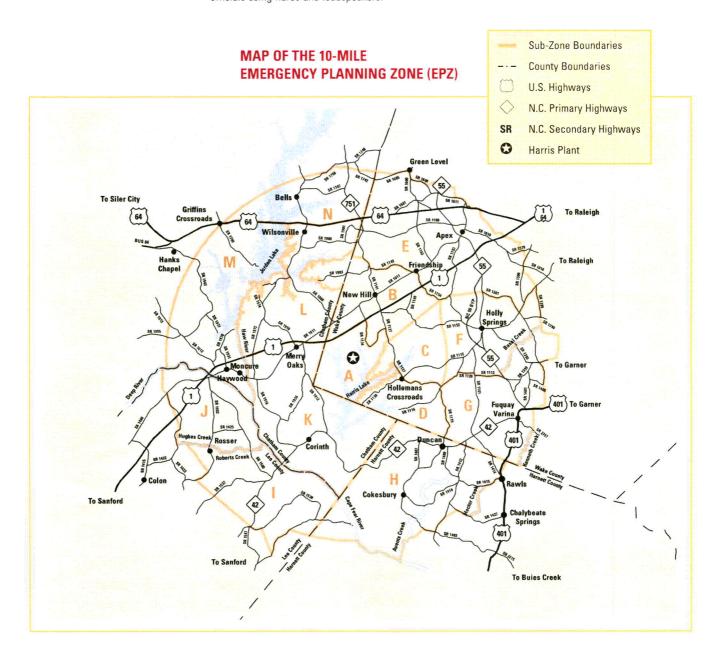
Progress Energy would immediately notify officials in Chatham, Harnett, Lee and Wake counties as well as state and federal officials. State and local emergency officials might sound the sirens near the plant if notification to the general public is needed. The 81 sirens are strategically placed in a 10-mile radius of the plant. This area is known as the Emergency Planning Zone or EPZ.

If the sirens do sound, area residents should immediately tune to a local television or radio station for emergency information and instructions that would be broadcast over the Emergency Alerting System (EAS) network.

### The sounding of sirens is NOT a signal for the public to evacuate.

If there were a release of radiation from the plant, residents might be asked to take shelter in their homes with doors and windows closed. Or the public may be asked to evacuate a particular area. Residents within 10 miles of the plant have been provided a Safety Information Brochure containing instructions for taking shelter and evacuating.

In addition to EAS notification, state and local officials may notify residents of an emergency by using loudspeakers and knocking on doors in rural areas. Boaters on Harris Lake would not only be alerted by sirens sounding, but would also receive evacuation notice (if necessary) from local law enforcement officials using flares and loudspeakers.



## **Nuclear emergency**

response terms



Emergencies that could occur at a commercial nuclear power plant are classified into four categories of ascending seriousness. These categories are set by the Nuclear Regulatory Commission (NRC). They tell plant, county and state officials what they should do for each type of problem.

- **1. Unusual event:** This is the least serious of the four classifications. It means there is an issue at the plant that would not affect the public.
- **2. Alert:** This is an event that could reduce the plant's level of safety. There is still no danger to the public. If appropriate, county and state officials would prepare emergency centers in case the situation should worsen.
- **3. Site area emergency:** This is an event that could lower the plant's level of safety, but not enough to pose a danger to the public. The sirens could be sounded to alert the public to listen to local radio and television stations for information and instructions.
- **4. General emergency:** This is a more serious event. State and local officials would take action to protect the public. Sirens would be sounded and local radio and television stations would give information and instructions. People in affected areas would be advised to stay indoors or to evacuate.

The North Carolina Division of Emergency Management is the principal agency for responding to radiological emergencies. Local response agencies that would provide assistance in evacuations, emergency communications and traffic control include Chatham, Harnett, Lee and Wake counties and municipal government agencies.

The Nuclear Regulatory Commission, Federal Emergency Management Agency, and the U.S. Department of Energy Radiological Assistance Team may become involved in emergency response activities.



## **Media information centers**

during emergencies

#### **Joint Information Center**

The Joint Information Center is located in Raleigh. The media briefing area for this facility is located at the Progress Energy Customer Service Center, 160 Rush Street, Raleigh, NC.

The Joint Information Center provides a location for public information personnel from Progress Energy; Chatham, Harnett, Lee and Wake counties; the State of North Carolina; the NRC; FEMA; and other emergency response agencies.

Once the Joint Information Center is established, staff there would gather accurate and current information regarding the emergency condition, issue news releases and hold news briefings.

The Joint Information Center is part of the Progress Energy emergency communications network.

#### **Near-Site Media Center**

Prior to the activation of the Joint Information Center, Progress Energy's Harris Plant site communications representatives will address media inquiries pertaining to the Harris Plant, telephone 919-362-2160. A near-site media center would be set up at the Harris Energy and Environmental Center on State Road 1113 in New Hill. (To reach the center, turn off U.S. 1 at the New Hill exit and turn left at the stop sign.) Members of the media can report here for periodic briefings and press conferences, or they may call the center at 919-362-3261.

Alternatively, the news media may contact Progress Energy's corporate media communications staff, telephone 919-546-6189 (24-hour number). In the unlikely event of an emergency at the plant that would require the establishment of the Joint Information Center, the telephone lines for this facility will be made available as soon as possible.

## **Additional emergency**

response facilities



In addition to the Joint Information Center, several emergency response facilities are set up to coordinate on-site and off-site response during an emergency. The following is a list of the other facilities:

#### **Emergency Facilities at the Harris Plant site**

- Technical Support Center (TSC): would be activated for operations, engineering and health physics
  managers to provide information support to plant operations during an emergency. Drawings, technical
  specifications and visual displays are located in this facility.
- Operational Support Center (OSC): would be staffed by operations, plant maintenance, health physics
  technicians, environmental and chemistry technicians, fire and rescue personnel, and other plant emergency
  support personnel. As requested by the plant control room or TSC staff, emergency teams would be
  dispatched from this location to perform response activities.
- Emergency Operations Facility (EOF): would be activated for overall emergency management response
  activities including coordination with federal, state and local officials. If needed, requests for protective
  action for the public would be recommended by the EOF staff to county and state officials.

### **Other Emergency Facilities**

- State Emergency Operations Center (EOC): located in the Administration Building at 116 West Jones
   Street in Raleigh. This center would be staffed by state, federal and local authorities with Progress Energy
   providing liaison personnel. The state EOC is tied into the Progress Energy emergency communications
   network and provides state authorities a location from which they can direct off-site activities. Emergency
   equipment is also maintained in the EOC.
- State Emergency Response Team (SERT): composed of representatives from numerous state agencies, the Red Cross, the Salvation Army and other volunteer agencies. SERT is responsible for directing all off-site emergency response activities. Many SERT members are located in the state EOC.
- County Emergency Operations Centers (EOCs): where county authorities would direct off-site activities
  within their jurisdiction. These county facilities would coordinate all off-site emergency activities until SERT
  assumes direction and control of emergency response actions. For the Harris Plant, there would be four
  EOCs—one each in Chatham, Harnett, Lee and Wake counties.





## **Used fuel storage**

at the Harris Plant

#### Overview and history

- The company has managed used nuclear fuel and other nuclear waste byproducts safely and efficiently
  for more than 30 years. Our used fuel plan provides a responsible, proven means of storing fuel rods
  used to generate electricity.
- In December 1998, Progress Energy requested an amendment to the operating license for the Harris
  Plant from the U.S. Nuclear Regulatory Commission (NRC). The amendment sought to obtain permission
  to open two already built fuel pools in the Harris Plant used fuel storage facility.
- Progress Energy requested permission to activate the additional storage pools because the U.S. Department of Energy has not build a permanent used fuel storage facility as mandated by Congress. The federal facility proposed for Yucca Mountain, NV has been approved by Congress and the president, and is now under review by the NRC. Since 1983, the company has contributed \$540 million to the federal waste fund to finance a permanent solution for used fuel storage that was supposed to be available in 1998 overall, the industry has contributed nearly \$16 billion.
- The Harris Plant has additional storage because it was built to handle used fuel from four reactors.
   Because only one reactor was built, the plant has ample room to continue providing the decade-long process of safe, interim storage of used fuel rods from the company's Harris, Brunswick and Robinson plants. We only store used fuel rods from Progress Energy nuclear plants.
- After Progress Energy received NRC approval and the Atomic Safety Licensing Board concurrence, we began using one of the additional pools (Pool C) in July 2001. The fourth pool (Pool D) will not be needed for another 10-15 years.
- The company has been safely transporting used fuel from Robinson and the Brunswick Nuclear Plant for more than 15 years. In 2005, Progress Energy began dry cask storage of used fuel at the Robinson Nuclear Plant. Brunswick is currently the only plant in the Carolinas shipping used fuel to the Harris Plant. Both "wet" and "dry" storage methods are equally safe. Shipping is scheduled to end by 2008.

Since 1988, a year after the Harris Plant began producing electricity for customers, we have safely stored used fuel in a steel-and-concrete facility built to withstand tornadoes, earthquakes and hurricanes.

#### Safety and experience

- Our plan involves using the same technology in the same building at
  the same site, taking the same number of annual shipments and
  storing them in the same way that we have safely stored used fuel
  rods at the Harris Plant for more than a decade and as a company
  for more than 30 years.
- Since 1988, a year after the Harris Plant began producing electricity for customers, we have safely stored used fuel in a steel-and-concrete facility built to withstand tornadoes, earthquakes and hurricanes.



Fuel storage pool

- Our operators are highly trained professionals who are skilled in using this proven technology. Pool storage
  is the industry standard. Every reactor in the United States uses pool storage for at least the first five years
  after fuel is removed from the reactor. The technology has been used safely by the industry since the 1950s.
- Progress Energy generates about 40 percent of the electricity its customers use through nuclear facilities
  and has been recognized by industry groups as a leader in safety. The Harris Plant consistently receives
  excellent safety ratings from the NRC, which maintains an on-site supervisory staff.

#### Storage of used nuclear fuel rods

Progress Energy uses uranium fuel pellets to power the generators at its four nuclear plants. The pellets
are placed end-to-end inside metal rods. The rods are bundled into assemblies. The fuel rods produce heat
that turns water into high-pressure steam, which forces a turbine generator to turn, producing electricity.
After four to six years, the fuel in the rods is depleted and has to be replaced. About one-third of the fuel
rods in a reactor are replaced at each scheduled refueling.



Fuel pellet

 At the Harris Plant, the fuel rod assemblies are stored in steel-lined chambers inside a highly secure building with massive concrete-and-steel walls. The facility has been built to withstand tornadoes and earthquakes and has extensive monitoring systems. Inside the secure chamber, the used fuel rod assemblies are carefully positioned in racks covered by 23 feet of water for cooling. Progress Energy generates about 40 percent of the electricity its customers use through nuclear facilities and has been recognized by industry groups as a leader in safety.



## **Nuclear security Q&A**

#### **SAFETY**

### 1 Who is responsible for ensuring plant safety?

The operator of a nuclear plant has the responsibility to ensure that it is operated safely, and Progress Energy's nuclear plants have safety records that are among the best in the nation. The U.S. Nuclear Regulatory Commission (NRC) is the organization charged by the federal government with oversight of all the nation's nuclear power plants. The NRC sets standards for both plant design and personnel, reviews our operations and conducts regular inspections of plant operations and security. There are permanent NRC representatives at each of our nuclear facilities, providing oversight, along with our own professional staff, to ensure safe operation.

### 2 How safe are nuclear power plants in case of an accident?

Nuclear plants are designed with multiple layers of safety systems and structures, designed to both protect the plant itself and protect the community. There is the outer containment structure, built of reinforced concrete (4 1/2 to 6 feet of concrete with a steel liner) and the reactor vessel itself, made of steel that ranges from 8 to 12 inches in thickness. The reinforced concrete containment structures have been designed to withstand the impact of hurricanes, tornadoes, floods and airborne objects with tremendous force. State-of-the-art computer modeling techniques determined that typical nuclear plant containment structures, used fuel storage pools, fuel storage containers and used fuel transportation containers would withstand severe impact forces despite some concrete crushing and bent steel. In all cases, public security would be protected.

Nuclear plants also have multiple safety and plant shutdown systems. All of these systems have their own backup systems that are physically separate, to provide even more protection and reliability.

### 3 How is the plant protected from illegal entry or sabotage?

Nuclear plants are among the most secure industrial facilities in the world. There are many physical barriers to forced entry. Heavily armed security forces monitor the plant around the clock. These security forces use sophisticated electronic surveillance equipment that scans the area surrounding the plant. The plant is also built with locked access vaults that prevent those without computer-readable security clearances from entering vital areas of the plant.



The NRC sets standards for both plant design and personnel, reviews our operations and conducts regular inspections of plant operations and security.

### 4 What about nuclear waste?

Once nuclear fuel has been used to generate power, it is still radioactive and requires safe and secure storage. This "used fuel" is stored either in "dry storage" (specially designed and fully lined concrete canisters) or in "wet storage" (submerged under 23 feet of water in fortified concrete, steel-lined pools). Progress Energy uses both methods and they are considered equally safe. In February 2001, the NRC released a study of used fuel storage pool accident risk that took into account acts of sabotage and concluded "the risk is low," largely because there should be adequate time to begin alternate cooling procedures even after an extremely severe event that might release water from the fuel pool.

Under current law, the U.S government is responsible for arranging long-term storage for used fuel from the nation's nuclear power plants. The Department of Energy and President Bush have recommended a remote site at Yucca Mountain, Nevada, as the nation's permanent nuclear waste repository. Progress Energy's customers have paid more than \$540 million since 1983 into a Federal Waste Fund to fund a federal repository. Nationwide, more than \$16 billion has been contributed. Once the government has approved a long-term storage site, Progress Energy plants will be able to ship used fuel there for permanent storage.

### Are nuclear plants protected against terrorist attacks?

In addition to being guarded 24 hours a day by well-trained security officers, our nuclear plants have plans already prepared to defend the facilities from terrorists. These plans involve support from local, state and federal law enforcement. The NRC conducts security drills at all plants around the country on a regular basis, and all of the Progress Energy nuclear plants have performed very well on these security tests. We are in constant communication with the NRC and the national intelligence community for current information on security threats. In addition to our own security personnel, the U.S. military is on call to respond to protect nuclear power plants if necessary.

Has plant security been increased?

Yes. Our plants have operated on heightened security since the attacks on September 11, 2001 just as they did after the 1993 World Trade Center bombing and the Oklahoma City bombing. In the interest of security, we cannot discuss specific measures that are being taken at our nuclear plants. Under federal law, this information must be kept confidential. These new security measures include additional restrictions on access, as well as an increased security presence and closer coordination with our partners in intelligence, military, law enforcement and emergency response at the federal, state and local level.

Tight security at nuclear facilities is nothing new. The plants have always been guarded 24 hours a day by heavily armed, well-trained security personnel. All of Progress Energy's nuclear plants have performed very well on the government's security tests, including the NRC's mock terrorist attacks. In fact, none of our plants has ever failed one of these security tests.

In addition to being guarded 24 hours a day by well-trained security officers, our nuclear plants have plans already prepared to defend the facilities from terrorists.

### 7 What about terrorists targeting used fuel storage or shipping?

Used fuel is stored in secure and protected facilities. In addition to the physical design and on-site protection that exists, used fuel storage facilities would be a very small target for an aircraft assault.

The federal government also closely regulates the shipment of used fuel, with measures that under federal law we are required to keep confidential. The fuel is shipped in specially designed, fortified shipping casks, and security is coordinated with state and local law enforcement. Progress Energy has been safely shipping used nuclear fuel by rail for more than 14 years, and our ability to do so allows us to continue to operate our nuclear facilities. Once the federal government opens its national used fuel storage site, all U.S. nuclear plants will be required to send their used fuel there for long-term storage.

### **EMERGENCY PREPAREDNESS**

### 1 What if there is an accident or attack at a nuclear plant?

All of our nuclear plants have contingency plans and support agreements with state and local law enforcement and emergency management officials in the unlikely event of an accident or terrorist attack. These detailed plans include procedures for notifying the public of the measures they should take to protect themselves. These measures may include evacuation of surrounding areas if the local or state officials decide this action is necessary. Each of Progress Energy's nuclear facilities maintains a program of community outreach and education for those who live near the plants.

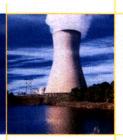
### [2] Who is responsible for protecting citizens in the event of an incident?

Local counties where plants are located, state and federal agencies including the NRC and the Federal Emergency Management Agency (FEMA), and Progress Energy work together to establish and maintain emergency response plans for nuclear plants and the surrounding communities. Progress Energy works closely with community members and coordinates with emergency management officials at the state and local level who are responsible for measures intended to provide public protection in the event of an emergency. The plans are regularly updated and drilled four times a year. Performance on these practice sessions is evaluated and graded by FEMA every two years. Federal and local law enforcement agencies are in close contact with the plants throughout the year and participate in some of the drills. All of our plant community emergency response agencies have always performed well on these drills.

The emergency management plans are regularly updated and drilled four times a year.

## The environment

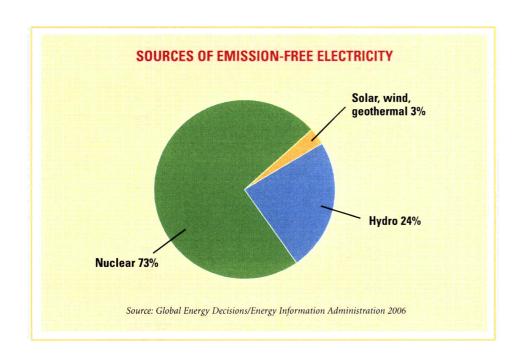
and the Harris Plant



### **INCREASING SUPPORT FOR NUCLEAR**

"Thirty years on, my views have changed, and the rest of the environmental movement needs to update its views, too, because nuclear energy may just be the energy source that can save our planet from another possible disaster: catastrophic climate change."

- Patrick Moore, founder of Greenpeace
- Nuclear plants release no air or greenhouse gas emissions. Air emissions include nitrogen oxide, sulfur dioxide, which are associated with smog and acid rain, and mercury which is a neurotoxin; greenhouse gas emissions are carbon dioxide, which is associated with climate change.
- Nuclear energy is the largest source of emission-free electricity in the U.S., comprising 73 percent of all emission-free sources.

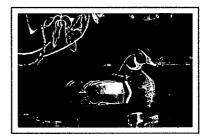


- The Harris Plant alone prevents approximately 4.7 million tons of CO2 emissions a year (PGN environmental services).
- In 2005, U.S. nuclear plants prevented approximately 682 million metric tons of carbon dioxide from entering the atmosphere (NEI).
- Because of increased capacity factors, nuclear plants are able to further prevent air pollution from fossil plants. License extensions will contribute further to prevented emissions.
- Nuclear plants have helped states comply with the federal Clean Air Act.
- Over a plant's life cycle (construction, operation, dismantling and disposal), nuclear energy emits a small
  amount of air and greenhouse gases. Yet the lifecycle of nuclear energy is among the lowest of any forms
  of electricity generation. In fact, for greenhouse gases, the amount is comparable with the amount emitted
  by hydroelectric power and is less than all other available sources wind, solar, biomass, natural gas and
  coal (NEI).

Cooling water discharged from nuclear plants has no harmful pollutants and must meet federal EPA and state standards for temperature.

#### Minimal environmental impact

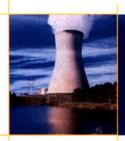
- Nuclear plants meet strict standards for radiation emissions: They are carefully designed, built and monitored
  to prevent releases of radioactive materials. The Environmental Protection Agency (EPA) and the U.S. Nuclear
  Regulatory Commission (NRC) enforce strict standards.
- Nuclear plants have one of the smallest environmental footprints of any generating source or manufacturing process.
- They use very little land compared to renewable sources.
   To build the equivalent of a 1,000-MW plant, a solar park would have to be more than 35,000 acres, and a wind station would require more than 150,000 acres (NEI). The Harris Plant produces 900 MW and the total site area is approximately 11,000 acres.



 Cooling water discharged from nuclear plants has no harmful pollutants and must meet federal EPA and state standards for temperature. Cooling water never comes in contact with radioactive materials.  The Harris Lake was constructed on 4,100 acres of land near the plant site to serve as a source of cooling water to the plant. It is part of the Cape Fear River drainage basin and was created by construction of an earthen dam across Buckhorn Creek approximately two miles above the Cape Fear River.



- Tritium is a byproduct of the nuclear reactor process.
   Tritium occurs naturally in low concentrations in the environment, and plant personnel monitor the areas around the plant to make sure tritium levels are below federal standards.
- Nuclear plants provide habitats for aquatic ecology and endangered and protected species.
- Nuclear plants reduce, eliminate or manage all waste by products, and they are one of few industries
  established since the industrial revolution that has managed and accounted for nearly all of its
  byproduct material.



### Possible nuclear expansion

at the Harris Plant

Since the company built the Harris Plant in 1987, no new baseload generation plants have been added. Since that time, the company has grown by 500,000 customers. Approximately 300,000 new customers are expected to be added by 2016.

In late 2005, the company notified the U.S. Nuclear Regulatory Commission (NRC) of plans to submit a combined license in 2007 or 2008 for the possible addition of a second



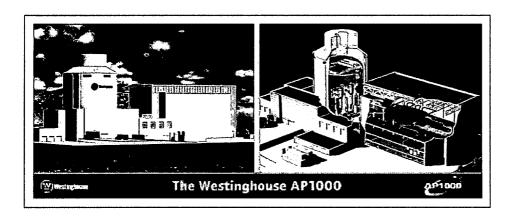
reactor at the Harris Plant site. A decision to build has not yet been made.

#### The Site

After evaluating multiple sites, the Harris site was chosen for a number of factors. Among them are available transmission to accommodate the additional generation, land and water. Because the site was originally designed for four reactors, much of the infrastructure is already in place to accommodate an additional reactor. The availability of transmission lines reduces the project's overall cost. The site has 35 square miles of land for expansion and an ample supply of water for cooling. The location of the Harris site is important because it is in close proximity to the largest customer load.

### Technology

The company has chosen the Westinghouse AP 1000 advanced 1,100 MW reactor design for possible new nuclear generation in both the Carolinas and Florida. This will serve approximately 792,000 homes. The reactor uses a passive safety design and engineering simplicity to enhance reliability while reducing costs. It uses 87 percent less cable, 83 percent less pipe, 50 percent fewer valves and 35 percent fewer pumps than reactors in operation today.





## **Community contributions**

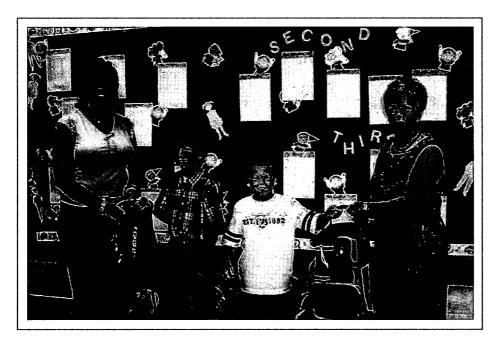
- The Harris Plant positively impacts an eight-county region economically and supports nearly 2,000 jobs region-wide including direct Harris employees.
- The Harris Plant supports more than \$120 million in regional income.
- The Energy and Environmental Center conducts numerous outreach activities to local school groups as well as teacher training.

#### **Annual events**

- Employees participate in the Progress Energy Employee Giving Campaign. Since 2001, they have raised nearly \$3 million. The campaign supports non-profit agencies in the counties surrounding the plant and throughout the company's service area.
- Employees have "adopted" Moncure School and serve as mentors to the students.



Plant employees took part in a full day of community outreach projects in Pittsboro to lend a helping hand to the Chatham County Partnership for Children and the Family Violence and Rape Crisis Service Center.



Harris Nuclear Plant employees participate in an annual Book Bag Drive. Book bags and boxes of supplies which included items such as notebooks, pencils, paper and rulers were delivered to schools in our neighboring counties.

- Employees hold a book bag drive to collect book bags and school supplies to donate to local schools.
- Employees help needy families each Christmas through the Wish Upon a Star program.
- Employees also raise money for Special Olympics by participating in various events.
- Employees volunteer for the Meals on Wheels program.
- Also, plant personnel are active in other volunteer activities, including the American Cancer Society, local fire and rescue squads, Take a Kid Fishing program and many others.
- The Harris Plant sponsors the Earth Day celebration and the Electrical Vehicle Challenge at the Harris Lake County Park.



### **Glossary of terms**

**Background radiation:** Radiation that is naturally occurring in the environment, typically from cosmic rays filtering down through the atmosphere and radon gas filtering up through the soil. Background radiation is present everywhere, at all times, and varies greatly depending on geographical location.

**Baseload plant:** A plant that produces electricity at a constant rate and runs continuously in order to meet the basic electricity needs of customers, whether demand (or load) is high or low.

Cask: A heavily shielded container used to store and/or ship radioactive materials, including used fuel.

**COL:** Combined Operating License; the license combines what were previously individual licenses for the design and operation of a nuclear plant, granted by the Nuclear Regulatory Commission.

**Cooling tower:** A hollow structure in which water from the plant's condenser is cooled, releasing its heat through water evaporating into the air. The emission from a cooling tower is simple water vapor, similar to a rain cloud.

**Control rods:** Control rods are made of a material that absorbs neutrons. They can be manipulated into and out of the core to act as on/off switches for the fission chain reaction. When the control rods are raised, fission increases and more heat is produced; when lowered, the chain reaction slows down. The reactor can be quickly shut down by rapid insertion of the control rods into the reactor core.

**FERC:** The Federal Energy Regulatory Commission, or FERC, is an independent agency that regulates the interstate transmission of natural gas, oil and electricity. FERC also regulates natural gas and hydropower projects.

Fission: The splitting apart of an atom's nucleus, releasing a large amount of heat energy.

**NRC:** The U.S. Nuclear Regulatory Commission, or NRC, regulates the nuclear power industry and all other uses of nuclear materials in the United States.

**Nuclear energy:** The tiny nucleus at the center of the atom contains the most powerful force ever discovered. This force gives us nuclear energy, sometimes called atomic energy. The most complicated element that occurs in nature is uranium. The nuclear fuel used in nuclear power plants is a rare form of uranium called uranium-235. When the nucleus of a uranium-235 atom is struck by a neutron, it breaks apart and more neutrons shoot out. These new neutrons strike other uranium nuclei, causing them to split and give out still more neutrons. In this way, more and more nuclei split, and many atoms give up their energy at once. In a nuclear power plant, control rods are lowered into the reactor to keep the reaction in check. But the uranium still gets very hot, and so a coolant, a liquid or a gas, moves through the reactor. When the hot coolant leaves the reactor, it goes to a boiler to make steam. It is this steam that powers generators to make electricity for our homes and factories.

**Nuclear fuel:** Enriched uranium that is used as the heat source necessary for producing steam to turn the turbines and generate electricity from a nuclear power plant. The reactor contains about 91 tons of uranium dioxide in the form of solid pellets that serve as the heat source for producing steam. Each pellet is about the thickness of a piece of chalk and approximately one-half inch long.

**Potassium iodide:** Potassium iodide (also called by its name as an element, KI) is an over-the-counter drug (a simple salt) that may reduce the amount of radioactive iodine absorbed by your body's thyroid gland. KI fills your thyroid with iodine so that it cannot absorb any radioactive iodine. In North Carolina, local health departments distribute KI to residents within a 10-mile radius of nuclear plants for use in case of an emergency.

**Radiation:** Radiation is energy emitted in the form of waves or particles. When an atom breaks down or is split by a neutron, particles having energy and waves of energy are released from the nucleus. Elements that release energy in this manner are called radioactive. Some elements are naturally radioactive and other radioactive materials are man-made. More than 80 percent of the radiation we are exposed to comes from such natural sources such as sunlight, soil, and certain types of rocks.

**Radiation barriers:** Three barriers are designed to keep the radioactive by-products of the fission process away from the environment during both normal and accident conditions.

- The fuel rod: Most fission products remain bound inside the ceramic uranium pellets. These pellets are stacked and sealed inside fuel rods made of zirconium alloy. The fuel rods are joined together into fuel assemblies. The zirconium alloy coating provides the first of three radiation protective barriers.
- The reactor coolant system: The heat generated by the fuel is removed by the reactor coolant system,
  which circulates through the fuel assemblies. The reactor coolant system is totally enclosed and provides
  the second of the three radiation protective barriers.
- The containment building: The reactor coolant system is totally enclosed in this building. This massive building is an air-tight, cylindrical concrete building with 4-1/2-foot concrete walls reinforced with steel, a dome 2-1/2 feet thick and a base 12 feet thick. This is the third radiation protective barrier.

**Refueling:** About one-third of the uranium in a reactor is removed or replaced every 18 to 24 months for refueling. A reactor must be shut down to be refueled, so plants enter a period called a refueling outage. Progress Energy refueling outages typically last approximately 30 days, or longer, depending on the scope of work to be accomplished with the plant offline.

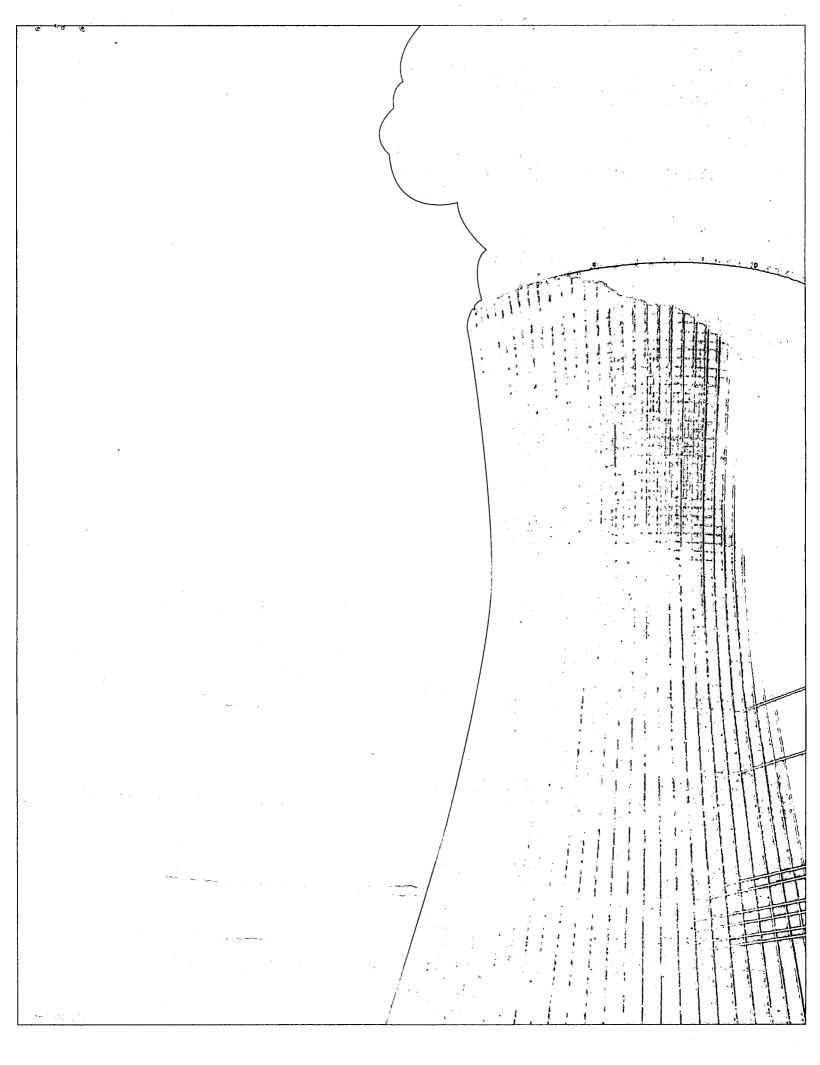
**Used fuel:** Nuclear fuel rods that are no longer useful for generating electricity but are still radioactive and must be stored safely. Fuel is typically useful for approximately four and a half years.

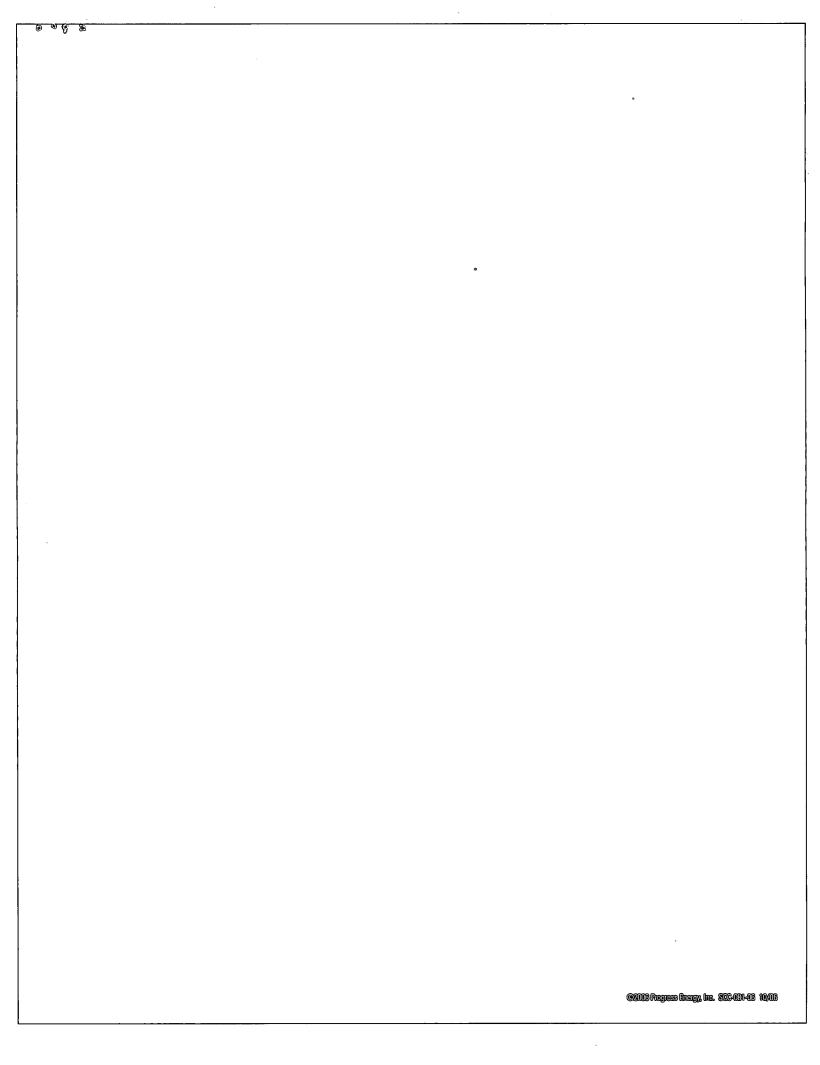
**Transformer:** A device that changes the voltage of an electric current either higher (step-up) or lower (step-down).

**Turbine:** An engine in which a wheel of curved vanes (blades) is attached to the driving shaft. The pressure of steam, water, or air against the vanes causes the shaft to turn.

**Uranium:** This metal is one of the heaviest of all known elements. It was named after the planet Uranus. Uranium gives off radioactivity. As it loses atomic particles, it decays and ends up, after millions of years, as lead. People working with uranium often need protective clothing to shield their bodies from radiation damage. Uranium is the fuel used to make nuclear energy in nuclear power plants. It is mined in many countries.

**Watt:** A unit of power used to specify the rate at which electrical energy is dissipated. One kilowatt equals 1,000 watts; 1 megawatt equals 1 million watts, or 1,000 kilowatts.





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# **Harris View**

Harris Plant highlights sustainability

at Earth Day event

In April, Progress Energy employees highlighted the company's commitment to balancing economic and environmental issues by sponsoring the annual Earth Day celebration at the Harris Lake County Park.

Employees from the real estate section encouraged land conversation by presenting loblolly pine tree saplings along with planting and caring instructions to visitors. The environmental services section displayed a variety of fish from the lake, including largemouth bass, bluegill and several species of catfish for public viewing to demonstrate the health of the lake's ecosystem. Visitors to the Progress Energy booth could also learn more about the Harris Plant and Progress Energy's plans for meeting the energy needs of this growing region. Visitors were also given compact fluorescent light bulbs and information on how to save on their energy bills.

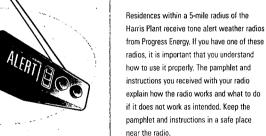
Located along the shoreline of Harris Lake, the 680-acre park is home to many varieties of wildlife and draws 100,000 visitors annually. For information on Harris Lake County Park. which is managed by Wake County Parks, Recreation and Open Space, call 919.387.4342 or visit wakegov.com/parks/harrislake.



If you have questions about the Harris Nuclear Plant, please e-mail us at: harris.plant@pgnmail.com or call 1.919.362.3261.



### Tone alert radios



You should always keep the radio plugged in, turned on, tuned to the frequency for your

area and located in a place so that it can be heard, especially while you are sleeping. You should also keep a battery in the radio in the event of a power outage.

If there is an emergency at the Harris Plant, a weather emergency, or if the radios are being tested, the radio will sound an alarm. When you hear the alarm, follow the instructions provided with your radio to receive information and instructions.

If you have questions about tone alert radios, please call 800.452.2777.

Quarterly "growl" test (full-volume, short-duration test lasting approximately five seconds)

2008 Siren Test Schedule

#### **◀ SEPTEMBER 9, 2008**

Annual full-volume test (full-volume test lasting approximately three minutes)

#### **◀ NOVEMBER 12, 2008**

Quarterly "growl" test (full-volume, short-duration test lasting approximately five seconds)

All siren tests-both the "growl" and annual tests-are scheduled to occur between 10 and 11 a.m. on the designated dates. The tests are conducted to make sure each siren works properly.

Tone alert radios, provided to residents within five miles of the plant, will be tested on Nov. 2, 2008. at approximately 6 p.m.

A random telephone survey will be conducted following the test to ensure that a certain percentage of residents heard the test. Residents who have radios will also receive letters prior to the test.



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#### We stand corrected

In the April 2008 issue of Harris View on the economic impacts of the Harris Plant, Harnett County was inadvertently omitted from a list of counties affected by the plant. The article should have noted that the plant has substantial economic impacts on eight surrounding counties: Harnett, Chatham, Durham, Johnston, Lee, Moore, Orange and Wake. This was noted by several astute readers who recognized that their county — and a key plant neighbor — was left out.

#### New VP named at Harris

Chris Burton became the Harris Plant's new vice president on July 14, 2008, replacing Bob Duncan, who was named to the new position of vice president — Nuclear Operations in the corporate office. Burton has worked in the nuclear industry for more than 30 years, starting his career at Florida Power & Light, then moving to various managerial roles, most recently serving as director — Site Operations at Harris, Chris and his family live in Cary.

# Harris to host third annual Community Day on Saturday, September 6

The Harris Plant will host its third annual Community Day at the Harris Energy & Environmental Center on Saturday, September 6, from 10 a.m. to 2 p.m. Plant neighbors will have an opportunity to learn about plant operations, emergency preparedness, environmental monitoring and energy efficiency. Tours of the control room simulator will also be offered, and refreshments will be available.

When: Saturday, September 6

Time: 10 a.m. to 2 p.m.
Where: Harris Energy &

Environmental Center 3932 New Hill-Holleman Rd.

New Hill. NC

(approximately 1.2 miles from Exit 89 heading toward Harris Lake)



## Harris Plant sirens are outdoor warning system

Did you know the purpose of the sirens in the 10-mile Emergency Planning Zone around the plant is to serve as an outdoor warning system in the event of an emergency? Residents sometimes call the plant after a siren test to explain that they could not hear the siren inside their home. The primary means of communication in an emergency are messages broadcast through commercial radio and television stations. Information would also be available via tonealert weather radios, which are provided to residents within five miles of the plant.

If there were ever a real emergency at the plant requiring the sirens to be sounded, local

radio and television stations would broadcast information and instructions to the public.

The alert notification sirens around the Harris Plant are tested annually at full volume, silently every two weeks and for a short-duration test every quarter.

If you hear a loud, steady sound coming from one of the sirens around the Harris Plant, tune your radio to an Emergency Alert System (EAS) station. In our area, your primary EAS stations are 94.7 FM or 105.1 FM. Hearing a siren does not mean you should evacuate.

## Find energy saving tips at SavetheWatts com

Reliable energy is important to all of us. When we flip the light switch, we expect the power to come on.

Providing that level of certainty is a responsibility Progress Energy takes very seriously. That's why we're putting our experience and expertise to work now, planning the power plants and other facilities necessary to provide that same level of reliability in the future.

The company is carefully weighing its options in preparing to meet growing electricity needs in the Carolinas and Florida. Progress Energy is committed to keeping our electricity reliable and affordable, our air clean and healthy, and our economy thriving. Just as important, we're committed to keeping our customers and communities involved in our plans and our progress.

Progress Energy has launched the "Save the Watts" campaign to encourage participation in Progress Energy's energy-efficiency programs.



The campaign educates customers about the benefits of efficiency as a tool for managing energy use and lowering your power bills.

To learn more, visit SavetheWatts.com.

# NRC holds public meetings on new plant application

The Nuclear Regulatory Commission (NRC) held two public meetings on June 10 in Holly Springs on the environmental review for two new reactors proposed for the Harris site. Progress Energy submitted an application to Holl NRC in February. Progress Energy has not made a decision to build a new nuclear plant, but is working to keep the option available for the future. The NRC review process takes

approximately three years. Information from the June 10 meetings will be considered by the NRC when it prepares a draft environmental impact statement (EIS). The public will have an opportunity to review and comment on the EIS at a future meeting, probably in Summer 2009. For more information on the federal approval process for new reactors, visit nrc.gov.

# Learn about nuclear power at the Harris Energy and Environmental Center

The Harris Energy and Environmental Center, located about one mile from the Harris Nuclear Plant, features exhibits and programs on how nuclear energy is used to produce electricity. The center is currently in the second phase of planned renovations, so there could be some restrictions on tours later this fall. Three new exhibits were installed in late 2007 and six new exhibits are slated for installation at the end of the year.

Programs and films, generally geared toward middle school, high school, college students and adults, can be arranged by calling the E&E Center at 919.362.3261 or sending an e-mail to harris.plant@pgnmail.com.

All group programs and individual visits must be arranged by appointment in advance, and are scheduled on weekdays during normal business hours.

