ALVIN W. VOGTLE ELECTRIC GENERATING PLANT

2019 Emergency Information Calendar

Keep this calendar in a handy place for quick access in the unlikely event of a plant emergency. You can also access our Emergency Preparedness website located at http://snc.news/EPinfo from your mobile device and save it to your home screen.
Dear neighbor,

Plant Vogtle is committed to the relentless pursuit of safety. That includes the safety of our employees, facility and, most importantly, the safety and health of our neighbors. U.S. nuclear facilities are the most heavily regulated in the world, and at Southern Nuclear, we don’t just meet federal standards, we exceed them.

As a neighbor of Plant Vogtle, it’s important that you are informed about our facility.

► Please familiarize yourself with the contents of this calendar, which explains what to do in the unlikely event of an emergency at our plant.

► A Family Emergency Plan in the back of the calendar will help you plan your evacuation and be prepared to respond quickly.

► The Special Needs Card in the back of the calendar is for you or anyone at your location who has a physical condition that would require special assistance in the event of an evacuation. Please complete and return the card to ensure proper assistance.

► You may also view the 2019 Vogtle Emergency Information Calendar online at snc.news/EPinfo or by scanning the QR code below.

► Pole-mounted sirens are installed throughout the 10-mile Emergency Planning Zone around Plant Vogtle. These sirens alert residents to listen to a local radio or television station (alert stations on page 2) for instructions in the unlikely event of an emergency.

► The CodeRED Emergency Notification System may be utilized to contact residents by phone in the event of an emergency. This emergency notification system is used by public safety officials. For additional information, contact your local emergency management agency (contact information on page 1).

If you have any questions about information in the calendar call Plant Vogtle Emergency Preparedness at 706-554-2127.

To learn more about nuclear energy, please call 706-724-5197 or 706-554-9407 to schedule a plant visit, or email veec@southernco.com.

Thank you for your continued support of Plant Vogtle.

Sincerely,

Darin Myers
Vice President
Alvin W. Vogtle Electric Generating Plant
Our 2019 calendar provides an opportunity for you and your family to learn how we produce clean, safe and reliable nuclear energy! Each month, take a tour of our plant and learn a fun fact.

If you want to learn more about our plant and schedule a tour, contact our Energy Education Center by calling 706-724-5197 or 706-554-9407 or emailing veec@southernco.com.
A nuclear reactor uses energy to heat water and create steam. The steam turns a turbine, which is connected to a generator that makes electricity.
Splitting Atoms + Chain Reaction = Energy

Atoms split as they absorb neutrons and create heat. The result is a chain reaction producing nuclear energy.
Creating Nuclear Fuel

Uranium – the key element in nuclear fuel – is mined, made into pellets and loaded into fuel assembly rods. When atoms split inside the pellets, nuclear energy is produced.
March 2019

- Ash Wednesday on Tuesday, March 19
- First Day of Spring on Thursday, March 21
- St. Patrick's Day on Tuesday, March 17
- Daylight Saving Begins on Sunday, March 24

Additional notes:
- Sunday, March 31
Used fuel assemblies are stored in steel and concrete canisters called dry casks. These canisters are designed and tested to prevent a release of radiation even under the most extreme conditions.
<table>
<thead>
<tr>
<th>Sunday</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
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<td>31</td>
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<tr>
<td></td>
<td>31</td>
<td>April Fools’ Day</td>
<td>1</td>
<td>2</td>
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<td>4</td>
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<td>7</td>
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<td>14</td>
<td>15</td>
<td>16</td>
<td>17</td>
<td>18</td>
<td>Good Friday</td>
<td>19</td>
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<tr>
<td>April 2019</td>
<td>21</td>
<td>Easter</td>
<td>22</td>
<td>23</td>
<td>24</td>
<td>25</td>
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<td>28</td>
<td>29</td>
<td>30</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
Nuclear power facilities have multiple layers of protection: structural strength, trained operators, security forces and emergency plans.
May 2019

- **Cinco De Mayo**: May 5
- **Memorial Day**: May 26
- **Armed Forces Day**: May 17
- **Mother’s Day**: May 12
- **Memorial Day**: May 27
Innovating for the Future

We are committed to leading the industry in research and development of advanced technologies to continue generating clean, safe, reliable and affordable nuclear energy for future generations.
We give back to our local communities by supporting organizations that make a positive impact on the health, educational, environmental and cultural needs of our neighbors.
Each of our plants has multiple layers of protection, highly trained employees and strict work practices to ensure the safety and health of the public.
Safety is our number one priority. We have comprehensive safety information, plans and systems in place for the unlikely event of a plant emergency.
Preserving the Environment

Nuclear energy is a 24/7 clean air solution with zero emissions. We protect water quality, preserve wildlife habitats and conserve native plants.
We operate our plants with equipment and systems that meet rigorous federal safety and design regulations.
Our Energy Education Centers are learning centers for surrounding communities. We offer exciting exhibits, hands-on activities and plant tours for visitors of all ages to learn more about nuclear energy and technology.
December 2019

- New Year’s Eve on December 31
- Hanukkah on December 22
- Christmas Eve on December 23
- Christmas on December 24
- Pearl Harbor Remembrance Day on December 7
- First Day of Winter on December 21
Emergency Classifications

1. Notification of Unusual Event - The least serious of the four NRC classifications. It means there is a minor problem at the plant. Because of strict federal regulations, many situations occur that qualify as unusual events. Unusual events pose no danger to the public. You will not need to take any actions unless directed by state and local officials.

2. Alert - An event has occurred that could reduce the plant’s level of safety. There should be no danger to the public. County and state officials will be involved and prepared for any necessary response. You will not need to take any actions unless directed by state and local officials.

3. Site Area Emergency - An event has occurred that could involve major problems with plant systems. Local radio and television stations in the area will provide information and instructions. If you're in an affected area, you will be notified by state and local officials about any actions you need to take.

4. General Emergency - The most serious of the four NRC classifications. Radioactive material could be released outside the plant site. State and local authorities will take action to protect the public. Sirens may be sounded and local radio and television stations will provide information and instructions. If you're in an affected area, you will be notified by state and local officials about any actions you need to take.

Who is Involved in the Emergency Plan?

State and local government agencies have plans to protect you if there is an emergency at Plant Vogtle. Some of the agencies involved are:

- Aiken County, S.C., Emergency Management Agency
- Allendale County, S.C., Emergency Management Agency
- Barnwell County, S.C., Emergency Management Agency
- Burke County Emergency Management Agency
- Georgia Emergency Management and Homeland Security Agency
- South Carolina Emergency Management Division
- South Carolina Department of Health and Environmental Control
- Georgia Department of Natural Resources
- Georgia and South Carolina Governors’ Offices
- Georgia Power
- Southern Nuclear

Any serious emergency would generally develop over time. There would normally be plenty of time for you to be notified and take action.

Emergency Information

During an emergency at Plant Vogtle, a recorded public information line will be activated. Please call 888-847-1186. GeorgiaPower.com will be updated with the latest information about the emergency. To report rumors during an emergency, residents are asked to call 888-823-0406.

State and county 24-hour contact numbers:

- **Georgia Emergency Management and Homeland Security Agency**
  - 800-879-4362 or 800-TRY-GEMA
- **Burke County Sheriff**
  - 706-554-2133
- **South Carolina Emergency Management Division**
  - 803-737-8500
- **Aiken County Sheriff or Aiken County Help Line**
  - 803-642-1761 or 877-648-9900 or 2-1-1
- **Allendale County Sheriff**
  - E-911 or 803-584-8151
- **Barnwell County Sheriff**
  - 803-541-1078

For more information about the Plant Vogtle Emergency Plan, call 706-554-2127. For questions about state and local emergency plans contact:

- **Georgia Emergency Management and Homeland Security Agency**
  - gema.ga.gov • 800-879-4362 or 800-TRY-GEMA
- **Burke County Emergency Management Agency**
  - burkecounty-ga.gov • 706-554-6651
- **South Carolina Emergency Management Division**
  - scemd.org • 803-737-8500
- **Aiken County Emergency Management Agency**
  - aikencounty.sc.gov • 803-642-1623
- **Allendale County Emergency Management Agency**
  - allendalecounty.com • 803-584-4081
- **Barnwell County Emergency Management Agency**
  - barnwellcounty.sc.gov • 803-259-7013

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How Would You Know if There Was an Emergency?

Siren Systems
Sirens have been set up within the 10-mile Emergency Planning Zone (EPZ) around Plant Vogtle. These sirens alert people to listen to a local radio or television station. (The sirens sound different than fire trucks, etc.)

The sirens are tested frequently. In addition to normal testing, they are tested during Plant Vogtle’s yearly emergency drill and twice a year during maintenance. The sirens are turned on briefly for these tests. Only one of these tests is audible to residents.

CodeRED Emergency Notification System
The CodeRED Emergency Notification System may be utilized to contact residents by phone in the event of an emergency. For additional information, contact your local emergency management agency (see contact information on page 1).

Other Alerts
- The radio and television stations listed to the right will broadcast a warning.
- In boating and recreational areas, local emergency officials will sound sirens and/or use loudspeakers to warn visitors.

Emergency Alert Stations

<table>
<thead>
<tr>
<th>Radio</th>
<th>Channel</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td>WKXC-FM</td>
<td>99.5</td>
<td>Aiken, S.C.</td>
</tr>
<tr>
<td>WDOG-FM</td>
<td>93.5</td>
<td>Allendale, S.C.</td>
</tr>
<tr>
<td>WBBQ-FM</td>
<td>104.3</td>
<td>North Augusta, S.C.</td>
</tr>
<tr>
<td>WLUB-FM</td>
<td>105.7</td>
<td>North Augusta, S.C.</td>
</tr>
<tr>
<td>WEKL-FM</td>
<td>102.3</td>
<td>North Augusta, S.C.</td>
</tr>
<tr>
<td>WAGT-TV</td>
<td>580</td>
<td>Augusta, Ga.</td>
</tr>
<tr>
<td>WYFA-FM</td>
<td>1071</td>
<td>Waynesboro, Ga.</td>
</tr>
</tbody>
</table>

Television

<table>
<thead>
<tr>
<th>Television</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td>WJBF-TV</td>
<td>Augusta, Ga.</td>
</tr>
<tr>
<td>WRDW-TV</td>
<td>Augusta, Ga.</td>
</tr>
<tr>
<td>WAGT-TV</td>
<td>Augusta, Ga.</td>
</tr>
<tr>
<td>WFXG-TV</td>
<td>Augusta, Ga.</td>
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</tbody>
</table>

Social Media
- [facebook.com/GeorgiaPower](facebook.com/GeorgiaPower)
- [@GeorgiaPower](@GeorgiaPower)

False Alarms
A false alarm of the emergency sirens is possible because of lightning or other events. If you hear the emergency sirens and you hear NO emergency information on an emergency alert station, then the alarm is probably false.

If this happens, please contact the local emergency management agency office with any questions (see phone numbers on page 1).

Emergency Actions

The three actions you may be asked to take to protect yourself are “take shelter,” “go inside, stay inside” or “evacuate.” These three actions are described in the following sections. Be sure you understand them. Officials will tell you what to do based on the type of emergency. For updated information, stay tuned to local radio and television stations. Whatever you are told to do, keep calm, follow directions and minimize phone use for emergency purposes only.

If Told to Take Shelter
Taking shelter means protecting yourself by going inside a building and not breathing outside air. The building could be your house, your workplace or another nearby building. Taking shelter will help keep you safe if there is a small amount of radiation in the air.

If you are told to take shelter, follow these steps:
1. Stay indoors until further notice.
2. Close all doors and windows.
3. Turn off fans, heaters and air conditioners that use outside air. Use your heating or cooling system only to protect life or health.
4. Do not use fireplaces. If your fireplace is in use, put out the fire. Close dampers or any other air intakes.
5. Stay tuned to one of the stations listed on the left for news about the emergency.
6. Shelter your livestock if you can do so easily. Place them on stored feed and protected water.

Continued on next page
7. Do not leave your home or shelter. Stay indoors until you receive official notice that it is safe to go out or until you are instructed to evacuate your home.
8. If you must go outside, protect your breathing by placing a damp cloth or towel over your nose and mouth. To provide more protection, fold the cloth over several times before placing it over your nose and mouth.

If Told to Go Inside, Stay Inside
Go inside, stay inside means protecting yourself by going inside any type of building, home or business. This action will keep you safe if there is a security event occurring at the plant. There is no danger of a radiation release at this time.

If you are told to go inside, stay inside, follow these steps:
1. Go indoors and stay until further notice.
2. Lock all doors and windows.
3. If you observe suspicious activity, call local law enforcement immediately.
4. Do not drive unless it is an emergency.
5. Stay tuned to one of the stations listed on page 2 for news about the emergency.

If Told to Evacuate Your Home
Evacuation means that you and anyone who is with you should move to a place that is greater than 10 miles away from the facility.

▶ Go first to your reception center/shelter. Reception centers/shelters are listed on page 6. Look at the map on page 7, find your reception center and know how to get there.
▶ You may need to be checked for contamination. This can be done at your reception center/shelter.
▶ Sign in when you get there to help keep track of all persons during an emergency.

NOTE: It is important for you to register at your reception center/shelter, even if you do not intend to stay there. This allows officials to verify you are safe and out of the area. Law enforcement officers will make every effort to protect your property while you are away. For the safety and convenience of others, alcoholic beverages, firearms and pets should not be brought to the reception center/shelter. Residents will receive instructions on where they can shelter their pets from state and county agencies.

If you are told to evacuate, follow these steps:
1. Stay calm. If you already know where to go, how to get there and what to take, that will help you. You will have time to do what you need to do.
2. Stay tuned to one of the stations listed on page 2 for news about the emergency.
3. Gather what you and your family will need. You will likely have to be away from home for a few days. Take these things along if you can:
   ▶ This calendar
   ▶ Some way to identify yourself, such as a driver’s license or other important papers with proof of address
   ▶ Cash, checkbook and credit cards
   ▶ Glasses, prescription drugs and other important medicines
   ▶ Personal toiletry items (toothbrush, comb, etc.)
   ▶ Baby supplies
4. Remember to do the following before you leave:
   ▶ Shelter your livestock, especially dairy animals, if you can do so easily. Leave enough water and stored feed for several days. Residents will receive instructions on where they can shelter their pets from state and county agencies.
   ▶ Turn off all appliances except your refrigerator and freezer. Turn off lights and water faucets.
   ▶ Lock all windows and outside doors. Law enforcement will patrol the evacuated area.
   ▶ Tie a white cloth to the front doorknob of your house or to the mailbox. The white cloth will signal to emergency workers that you have left the area safely.
   ▶ Remind nearby friends and neighbors about the need to evacuate. Do not use the phone for this since the lines will be needed for official calls.
   ▶ Use your own car if you can. If you have room, check to see if any of your neighbors need a ride. If you know someone who has a physical or mental disability, give them a ride if possible. If you need a ride and have already sent in a special needs card, an emergency worker will pick you up. If you have not sent in the card, the radio or television will give the phone number to call to be picked up. You can also call your county emergency management agency office (listed on page 1).

NOTE: A special needs card for a Plant Vogtle emergency is located on the back of this calendar. If you or someone you know would be unable to evacuate himself or herself, fill out the special needs card on the back of this calendar and mail it now.

Continued on next page
Turn on your car radio for more information.

Follow the route you have marked on the map on page 7. Traffic control officials will help guide you on your trip.

Close car windows and vents. Keep the air conditioner and heater off. It is okay to recirculate air inside the car.

5. Drive carefully. Go straight to the reception center/shelter, even if you plan to stay with friends or at a motel. Your belongings and clothing may be checked for contamination. The reception center/shelter will record your temporary address or location.

While you are away from home, local officers will patrol the area to protect property. Officials will decide when you can go home to check on animals and to pick up other items.

When the emergency has ended, public officials will tell you through the news media when it is safe to go home.

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Evacuation Routes and Information

**Evacuation Route 1**
- Ben Hatcher Road to Shell Bluff Spur to Georgia Highway 80 to Georgia Highway 56 to Burke Veterans Parkway/US-25 S to GA 24 N to Southside Dr. to Burke County High School

**Evacuation Route 2**
- Hancock Landing Road to Botsford Church Road to Seven Oaks Road to Cates Mead Road to Highway 56 to Burke Veterans Parkway/US-25 S to GA 24 N to Southside Dr. to Burke County High School

**Evacuation Route 3**
- Ebenezer Church Road to Highway 23 to Thompson Bridge Road to Georgia Highway 24 to Southside Dr. to Burke County High School

**Evacuation Route 4**
- Brigham’s Landing Road to Georgia Highway 23 to Tom Bargeron Road to Georgia Highway 24 to Southside Dr. to Burke County High School
- Royal Road to Stoney Bluff Road to Georgia Highway 23 to Tom Bargeron Road to Georgia Highway 24 to Southside Dr. to Burke County High School

**Evacuation Route 5**
- (Zone G-10, Cowden Plantation)
  - West on County Road 5 to County Road 63 north to County Road 57 west to U.S. Highway 278 north to South Carolina Highway 302 north to South Aiken High School

**Evacuation Route 6**
- South on South Carolina Highway 125 to U.S. Highway 278 to Allendale-Fairfax High School

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Information for Farmers, Food Processors and Distributors

State and local emergency response officials may issue special preventive and emergency protective actions for farmers, food processors and distributors. Those instructions may include:

- Cover outside feed supplies with a tarpaulin or other appropriate material.
- Cover open water sources such as wells, rain barrels, tanks, cisterns, etc.
- Remove dairy animals, poultry and other livestock from pasture. Shelter them if possible and provide them with protected feed and water.
- Do not use fresh milk from your dairy animals, vegetables from your garden or eggs from your poultry.
- Cover harvested crops or store them indoors.
- Do not process or distribute agricultural products until they have been sampled by appropriate government officials and found to be free of contamination.
- Do not engage in dust-producing activities such as cultivating, disk ing, bailing or harvesting.
- Wash, scrub, peel or shell fresh fruits and vegetables before eating them.
- Wash hands thoroughly before preparing or eating food.
- If ordered to evacuate, provide plenty of food and water for your animals. Make sure shelters are well ventilated during hot weather. Farmers will have opportunities to return to their farms to care for their livestock, under supervision of emergency workers.

Emergency officials will advise you what to do based on the type of emergency and other factors such as the distance of your farm or facility from the plant and the prevailing wind conditions. Follow their instructions to prevent or minimize contamination of food products.
Chain reaction — a reaction that causes itself to repeat.

Cold shutdown — when the cooling-water temperature in the reactor is below the boiling point and the pressure is reduced to atmospheric pressure.

Coolant — a fluid, usually water, used to cool a nuclear reactor and transfer heat energy.

Containment — the steel and concrete structure, along with the various components, that surround and isolate the reactor.

Contamination — the presence of unsealed sources of radioactive material in a place where it is not desired.

Control rods — movable rods used to slow down or stop a nuclear chain reaction.

Core — the central part of a nuclear reactor that contains the fuel assemblies.

Curie — the basic unit used to describe the strength of radioactivity in a sample of material.

Dosimeter — a device that can be worn and used to measure the radiation a person receives over a period of time.

Emergency Core Cooling System — an emergency system designed to return coolant to the reactor core if coolant is lost.

Emergency Planning Zone (EPZ) — the 10-mile area around the plant. This area is required to have special emergency plans.

Fission — the splitting or breaking apart of atoms into two or more new atoms. The process releases energy and produces heat.

Fuel assemblies — a group of fuel rods.

Fuel pellets — pencil eraser-sized uranium oxide pellets. A reactor core may contain millions of pellets.

Fuel rods — long, hollow tubes of zirconium metal that contain stacks of fuel pellets.

Half-life — the length of time it takes for a radioactive substance to lose one-half of its radioactivity.

Millirem — a unit used to measure radiation dose.

Nuclear Regulatory Commission (NRC) — the government agency that regulates the nuclear power industry.

Plume — something such as smoke, steam or water that rises into the air in a tall, thin shape.

Radiation — energy released in the form of tiny particles or electromagnetic waves. Radiation is also emitted when you have a medical x-ray.

Reactor core — the central portion of a nuclear reactor containing nuclear fuel, water and the control mechanism, as well as the supporting structure.

Reactor trip (SCRAM) — refers to the insertion of control rods into the fuel core of the reactor, stopping the fission process.

Reactor vessel — the thick steel vessel that contains the fuel, control rods and coolant.

Roentgen Equivalent Man (REM) — common unit used for measuring human radiation doses, usually in millirem (1,000 millirem = 1 rem).

Shielding — any material, such as lead or concrete, used around a nuclear reactor to protect workers and equipment.

Spent fuel — used nuclear fuel awaiting disposal.

Uranium — a radioactive element found in natural ores. Uranium is the basic fuel of a nuclear reactor.
How to Determine Your Zone

Notice on the map (page 7) that the 10-mile area has been divided into zones. The number by the zone letter tells the distance (in miles) between that area and the plant.

Government officials will give instructions on which zones are affected and what actions should be taken. You should know the zone in which you live and work.

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<thead>
<tr>
<th>Zones</th>
<th>Evacuation Routes</th>
<th>Reception Centers</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>Evacuation Route 2 or 3</td>
<td>Burke County High School Southside Dr. Burke County</td>
</tr>
<tr>
<td>B-5</td>
<td>Evacuation Route 3 or 4</td>
<td>Burke County High School Southside Dr. Burke County</td>
</tr>
<tr>
<td>C-5</td>
<td>Evacuation Route 2 or 3</td>
<td>Burke County High School Southside Dr. Burke County</td>
</tr>
<tr>
<td>D-5</td>
<td>Evacuation Route 2</td>
<td>Burke County High School Southside Dr. Burke County</td>
</tr>
<tr>
<td>E-5</td>
<td>Evacuation Route 1 or 2</td>
<td>Burke County High School Southside Dr. Burke County</td>
</tr>
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<td>F-5</td>
<td>Evacuation Route 1 or 2</td>
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</tr>
<tr>
<td>B-10</td>
<td>Evacuation Route 4</td>
<td>Burke County High School Southside Dr. Burke County</td>
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<tr>
<td>C-10</td>
<td>Evacuation Route 3 or 4</td>
<td>Burke County High School Southside Dr. Burke County</td>
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<tr>
<td>D-10</td>
<td>Evacuation Route 2, 3 or 4</td>
<td>Burke County High School Southside Dr. Burke County</td>
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<tr>
<td>E-10</td>
<td>Evacuation Route 1, 2 or 3</td>
<td>Burke County High School Southside Dr. Burke County</td>
</tr>
<tr>
<td>F-10</td>
<td>Evacuation Route 1</td>
<td>Burke County High School Southside Dr. Burke County</td>
</tr>
<tr>
<td>G-10</td>
<td>Evacuation Route 5 Cowden Plantation</td>
<td>South Aiken High School Pine Log Road Aiken County</td>
</tr>
<tr>
<td>H-10</td>
<td>Evacuation Route 6 Creek Plantation</td>
<td>Allendale-Fairfax High School U.S. 278 Allendale County</td>
</tr>
<tr>
<td></td>
<td>If directed north on South Carolina 125 to Highway 63, take Evacuation Route 5. If directed south on South Carolina 125, take Evacuation Route 6.</td>
<td>Allendale-Fairfax High School U.S. 278 Allendale County</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Savannah River Site</td>
</tr>
</tbody>
</table>
Radiation

What Is Radiation?

Radiation is simply a process where energy travels from one point to another by waves or particles, like the waves on the surface of a pond. Radiation comes in various forms. A great example is the sun: It provides radiation in the form of visible radiation (light) that can be seen, as well as invisible radiation (infrared) that can be felt. Radiation is used every day to improve our quality of life, from medical treatments to warming leftovers.

There are two forms of radiation: non-ionizing – radio waves and visible light, and ionizing – also called atomic or nuclear radiation. Both forms are distinguished by the way they interact with material. Ionizing radiation, which is normally associated with nuclear power plants, is naturally emitted from all material in our world – the ground, the sky and things around us. Even people and the family pet emit atomic radiation. In the United States, radiation or dose is measured in units called REM, an acronym for “Roentgen Equivalent Man.” The unit relates the amount and type of ionizing radiation a person receives to the effect it has on our bodies. On average, a person in the United States will receive 620 millirem per year (1000 millirem = 1 rem).

Current federal laws limit the dose that a member of the public, including people living near a nuclear facility, can receive from a nuclear power plant. That limit is 100 millirem per year and as low as reasonably achievable. Southern Nuclear facilities operate at a very small fraction of the limit. Facilities continuously monitor plant releases for radioactivity.

As with other things encountered in our world, our bodies have excellent processes to handle radiation found in nature and from man-made sources. Sometimes the body will simply absorb the energy and eliminate it as heat, similar to the heat produced by rubbing your hands together. In events in which the cell structure is impaired, the cell may elect to repair the area, or the cell may cease to function. This is the same process used by the cell many times a day to address various conditions, from guarding against a cold to the aging of the cell.

Note: Total slightly exceeds 100% due to rounding of values in each category.

This chart shows that the nuclear power industry is only a small contributor to your average radiation exposure.

Sources and amounts of natural background radiation
(measured in millirem per year)

- Cosmic rays: 40
- Air: 120
- Soil and rocks: 50
- Food and water: 30

Sources and amounts of man-made radiation
(measured in millirem per year)

- Diagnostic X-rays: 30
- Coast-to-coast airline flight: 3
- Living next to a nuclear plant: Less than 0.1

Source: National Council on Radiation Protection and Federal Aviation Administration
How Plant Vogtle Works

Pressurized Water Reactor

At a nuclear facility such as Plant Vogtle, fuel rods in the reactor core contain uranium oxide pellets. The uranium atoms in the pellets undergo what is called a “chain reaction,” where they split, or fission, creating heat. When water is pumped from the bottom of the reactor up around the hot fuel rods, it absorbs the heat without boiling because it is kept under high pressure, like a pressure cooker. This “superheated” water is sent through tubes in a steam generator where cooler water surrounds it and boils to steam. The two water sources remain separated from each other; only the heat is transferred. The steam turns blades on a turbine generator, causing it to spin a magnet inside a coil of wire. The motion causes electrons to move along the wire in a constant flow called an electric current. Cooling water from the cooling tower condenses the remaining steam and flows back to the cooling tower where excess heat is given off as a mist above the tower.

Savannah River Site

The Savannah River Site is a key U.S. Department of Energy industrial complex responsible for environmental stewardship, environmental cleanup, waste management and disposition of nuclear materials. Specifically, the Savannah River Site processes and stores nuclear materials in support of national defense and U.S. nuclear nonproliferation efforts. The site also develops and deploys technologies to improve the environment and treat nuclear and hazardous wastes left from the Cold War.

The Savannah River Site was constructed during the early 1950s and produced materials used in nuclear weapons, primarily tritium and plutonium-239. Original construction consisted of five reactors, two chemical separations plants, a heavy water extraction plant, a nuclear fuel and target fabrication facility, a tritium extraction facility and waste management facilities. While current missions remain the highest priority, the Savannah River Site leadership place great importance on developing broader missions for SRS that use its unique capabilities in order to address critical national missions in environmental stewardship, clean energy and national security.

The Savannah River Site occupies approximately 310 square miles along the Savannah River, principally in the Aiken and Barnwell counties of South Carolina. There is considerable distance between these operating facilities and the site boundary.

The states of Georgia and South Carolina and local (county) governments have detailed plans for response to an emergency at the Savannah River Site. These plans provide for appropriate protective actions. In the event of an emergency at the Savannah River Site, you would use the same evacuation routes, shelters and information as in a Plant Vogtle emergency. All of this information is detailed in this calendar.
Benefits of Nuclear Energy

Serving our plant neighbors is a top priority in everything we do – we strive to be one of the greatest assets in the community. Our goal is to be an economic engine powered by quality jobs and community service. Simply put – we want life to be better because we are here.

Last year, Citizens of Georgia Power, our employee community service organization, spent 8,500 hours on volunteer projects in the community. Among many community projects, our 2017 Vogtle 1-4 United Way pledge campaign raised more than $250,000 for the United Way of the CSRA and the local agencies that it supports.

Although our main focus is on our local community, it’s also important that we recognize the benefits of nuclear energy to our entire country as we work to safely provide affordable, reliable energy and improve our environment.

We support local and state economies.
Did you know that the average nuclear plant spends approximately $40 million annually in wages? In Georgia alone, more than $908 million of materials, services and fuel are purchased annually from more than 1,000 local companies. Also, nuclear plants pay approximately $16 million in state and local taxes.

We protect the environment.
Nuclear energy produces more clean-air energy than any other energy source. It provides 91 percent of Georgia’s emission-free electricity and 62 percent of all U.S. emission-free electricity. More than 23 million metric tons of carbon dioxide are prevented by Georgia’s nuclear facilities. This is equal to what would be released by more than 4.4 million passenger cars. That’s more than all the cars registered in the state of Georgia!

We care about your safety.
Nuclear facilities are held to the highest of standards by the federal government and its inspectors. There are comprehensive plans in place – in partnership with local, state and federal agencies – that prepare for the unexpected and provide layer upon layer of redundant safety features.

We are the most reliable.
Nearly 100 nuclear facilities in the U.S. provide about 20 percent of all electricity in the country. These facilities generate electricity 24 hours a day, seven days a week.

Efficiency is the core.
One uranium fuel pellet is about the size of a pencil eraser and creates as much energy as one ton of coal or 17,000 cubic feet of natural gas. A typical large nuclear energy facility produces enough electricity for nearly 723,000 homes while using only 20 metric tons of uranium fuel each year.
Family Emergency Plan

Be prepared to rapidly respond to a plant event by completing this simple evacuation checklist.

We live in zone ______________________. Our reception center/shelter is ________________. Our evacuation route is ______________________.
(See emergency map on page 7) If you cannot determine your zone, please contact Plant Vogtle Emergency Preparedness at 706-554-2127.

Other Important Numbers and Information:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Special Needs Card — Please complete and return if needed

Some people may need special help if there is an emergency at Plant Vogtle.

Please fill out and mail the Special Needs Card if you or someone you know:

► needs help to travel.
► has a physical or mental condition which requires assistance.

Fill out a separate card for each person who needs special help in an emergency. Please type or print as clearly as you can. If you want more of these cards, check that space and tell how many you need and where they should be sent.

Southern Nuclear keeps all information confidential.

Name of person who needs help:

Home address (street or rural route):

City: _______ State: _______ Zip Code: _______

Phone #: (Home) _______ (Work) _______ (Cell) _______

Please check the reason or reasons that special help would be needed in an emergency. This person:

___ has no way to travel.
___ uses a wheelchair.
___ is deaf or hard of hearing.
___ must stay in bed.
___ is blind or does not see well.
___ uses a kidney machine or other support machine.
___ does not read well.
___ needs help for another reason. Please say why below.

________________________________________________________________________

Please send me:

___ more of these cards ___ # needed ___ more calendars ___ # needed

My name is:

Address (street or rural route):

City: _______ State: _______ Zip code: _______

Phone #: _______