

Wolf Creek Emergency Planning

To our neighbors, friends and visitors,

The health and safety of the residents and visitors to Coffey County is a top priority. Wolf Creek Nuclear Generating Station has been a part of the Coffey County community for more than 30 years. During that time, Coffey County, the State of Kansas and Wolf Creek Nuclear Operating Corporation (WCNOC) have worked together to continually update and test the radiological emergency preparedness plan. Each year, plans are reviewed and tested. Biennially, the Nuclear Regulatory Commission and the Federal Emergency Management Agency evaluate these plans. Hundreds of WCNOC, State and County employees are involved in this program. All of this is done to ensure that you will be safe in case of an emergency at Wolf Creek Generating Station.

Wolf Creek Generating Station (WCGS) is located in Coffey County, Kansas, about four miles northeast of Burlington. The plant is about 55 miles south of Topeka, 90 miles southwest of Kansas City and 120 miles northeast of Wichita.

An emergency at Wolf Creek, although unlikely, is possible. Fuel in a nuclear plant cannot produce a nuclear explosion; however, it is possible for nuclear power plants to malfunction. A problem with pumps, valves, or pipes inside the plant may cause it to stop operating properly. If problems escalate, it is possible that radioactive material may be released to the environment.

Emergency Classifications

The Nuclear Regulatory Commission established four emergency classifications for nuclear power plants: **Notification of Unusual Event (NUE), Alert, Site Area Emergency and General Emergency.**

An **NUE** is the least serious of the four classifications. Because of strict federal regulations, any event out of the ordinary is reported to federal, state and local authorities. An NUE poses no risk to area residents. A minor problem exists, but a release of radioactive material is not likely.

An **Alert** is declared when an event has occurred that could reduce the level of safety at the plant, but back-up plant systems are available. Emergency agencies are notified and asked to stay in touch, but no action by the public is necessary. A release of radioactive material is not likely.

A **Site Area Emergency** is a more serious event. It is declared when there is a problem with plant safety systems, and a release of small amounts of radioactivity into the air or water into the area around the plant is possible.

A **General Emergency** is the most severe classification. It is declared when an event at the plant has caused a loss of several safety systems that could lead to radioactive material being released outside the plant. State and County officials would take actions to protect the health and safety of the public near the plant. County, state and federal officials are notified at each emergency classification. Officials will work closely with plant personnel to respond to the emergency and will keep you informed of actions you should take.

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What is radiation?

Radiation and radioactive materials are a natural part of our environment. They are in the air we breathe, the food we eat, the soil, our homes and even our bodies. The level of radiation naturally existing in our environment is called “background radiation.” We are also exposed to sources of man-made radiation such as X-ray machines, and color televisions.

The kind of radiation nuclear power plants are concerned with is called ionizing radiation because it can produce charged particles in matter. Ionizing radiation is produced by unstable atoms. Atoms with unstable nuclei are said to be radioactive. To reach stability, these atoms give off, or emit, the excess energy or mass.

Radiation Safety

Wolf Creek personnel take radiation seriously. Many layers of redundant safety systems are used to keep radiation safely contained where it should be—inside the steel, concrete and advanced technology of the nuclear facility. The nuclear industry has a responsibility to protect the public from radiation.

Radiation is naturally present in our environment. It can have either beneficial or harmful effects, depending on its use and control. Congress charged the NRC with protecting people and the environment from unnecessary radiation exposure as a result of civilian uses of nuclear materials. The NRC requires nuclear power plants; research reactors; and other medical, industrial, and academic licensees to use and store radioactive materials in a way that eliminates unnecessary exposure and protects radiation workers and the public.

Commercial nuclear power plants emit small amounts of radiation during routine operation. To promote safety, agencies such as the NRC, Environmental Protection Agency and Departments of Energy and Transportation, establish radiation protection regulations based on internationally recognized scientific studies at U.S. nuclear plants. The NRC sets limits in the amount of radiation that workers can be exposed to annually.

For more information on the industry’s radiation guidelines and safety standards, see the NRC’s Radiation Protection Web page or the EPA’s Radiation Protection Web page.
(<http://www.nrc.gov/about-nrc/radiation.html> and <http://www.epa.gov/radiation/federal/>)

The Health Physics Society is a nonprofit organization of professionals in various fields of science who aim to promote radiation safety. It provides information to organizations that deal with radioactive materials, from academia to medicine to government to the nuclear industry. The society’s *Radiation Answers* website provides detailed information on where radiation comes from and how it is used and debunks common myths. For more information check out their Web page: <http://www.hps.org/>

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How is radiation measured?

The dose people receive from radiation exposure is measured in millirem. The average background radiation dose received by a person living in the United States is about 620 millirem per year. This includes dose received from medical, consumer products, occupational and environmental sources. Persons living near a commercial nuclear power station receive less than one additional millirem per year from normal plant operation.

Annual U.S. Estimated Radiation Dose per Person

Average annual effective dose (mrem)	
Radon and other radionuclides we eat, drink, or breathe	257
Radiation from soils, rocks, building materials	21
Cosmic radiation	33
<u>Human-made sources</u>	<u>311</u>
Total	622

Most of the radiation dose we receive is from naturally occurring sources—most of this is from radon. The next largest dose is from medical radiation. The smallest dose we receive (less than one percent) is from nuclear power plant emissions and fallout from past atomic bomb detonations.

Effects of radioactive deposits on food and water

Radiological effects on people, animals, crops, land and water depend on the amount of radioactive material released into the atmosphere, time of year and weather conditions.

Of initial concern is the condition of fresh milk from dairy animals grazing on pasture and drinking from open water sources. A later concern is the possible contamination of vegetables, grains, fruits and nuts.

Contamination of drinking water supplies is not likely. If it occurs, it will probably affect only surface water supplies and not ground wells or underground water sources.

If you have questions about radiological emergency preparedness in Kansas, contact:

Adjutant General's Department
Kansas Division of Emergency Management
Technological Hazards Section Chief
State Defense Building
2800 SW Topeka Blvd.
Topeka, KS 66611-1287 (785) 274-1408

Effects of radioactive deposits on livestock

During an emergency, livestock may require shelter and protected food. Leave a supply of food and water available for animals. Place food and water in covered areas to minimize potential radioactive contamination. The Coffey County Agricultural Extension Office will answer questions and can help with your livestock and agricultural protection planning. Contact them at:

Coffey County Courthouse
110 S. 6th Street
Burlington, KS 66839
(620) 364-5313

http://www.coffeycountyks.org/emergency_management_section

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How will you be told about an emergency?

For a Wolf Creek emergency, tornado or natural disaster, warning sirens will be turned on for about three minutes. Coffey County residents who do not live near sirens are provided tone alert radios which turn on automatically when there is an emergency alert broadcast. For more information or to receive a tone alert radio, contact:

Coffey County Emergency Management
110 S. 6th Street, Burlington, KS 66839
(620) 364-2721

Should you use the phone?

During emergencies, phone lines and cellular systems are needed for official business. Do not use your telephone or cellular phone unless you need information to dispel rumors or other advice. If necessary, call: (800) 362-1137 (Wolf Creek facility) or (800) 354-3831 (Topeka facility).

During an emergency, information may be viewed on the plant web site: <http://www.wcnoc.com>

Emergency alert broadcasts

Emergency alert broadcasts are carried on the Emergency Alert System (EAS). These area radio and TV stations broadcast EAS messages:

<u>FM Radio</u>	<u>AM Radio</u>	<u>TV</u>
WIBW 94.5*	WIBW 580	WIBW-TV (Ch. 13)
KSNP 97.7	KOFO 1220	KOAM-TV (Ch. 7)
KFFX 104.9		
KMXN 92.9		

* Primary EAS station—broadcasts 24 hours a day.

Emergency actions you might need to take

You may be asked to shelter in place, protect your breathing or evacuate.

If told to shelter-in-place, go inside your house or other building. Stay inside until radio or TV broadcasts report you can leave safely. Close all windows and doors. Turn off heating and cooling systems. Put out fires in fireplaces or stoves. Close flues. Go to the basement. Take a portable radio if you have one. Keep your pets inside.

If told to protect your breathing, cover your nose and mouth with a dampened handkerchief folded into eight layers, or towel folded into at least two layers.

If told to evacuate, leave your house as you would if leaving for a few days. Take essentials such as medications, eyeglasses, extra clothes, bedding, towels, dentures, toiletries, baby supplies, checkbook, credit cards and identification. Tie a white cloth to the outside of your front door if you live in town, or to your mailbox if you live in the country to let officials know that you have evacuated. If you need a ride, call (620) 364-8446.

The subzone map identifies the 22 subzones around the plant.

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Residents in ALL subzones evacuate to the Lyon County Reception Center at the Neosho Rapids Grade School, 240 N. Commercial, Neosho Rapids. This facility is a reception center for monitoring, registration and evacuee decontamination if needed. Other routes may be preferred depending on a given situation, location or road condition. Officials at the reception center will guide you through the monitoring process.

When you evacuate, stop at the Lyon County Reception Center. This helps emergency officials and family members find you and know you are safe. Notify the facility staff if you need medical care or special help. Directions will be provided at the reception center for those who need shelter.

As you leave your home, check on neighbors and friends to make sure they are aware of the emergency. Patients in hospitals and residents in nursing homes will be taken to Emporia. Listen to your radio and television for exact housing locations. Coffey County prisoners will be taken to Emporia and housed in appropriate facilities.

Children in public school will be taken to the Reception Center at Neosho Rapids Grade School. Private schools, day care providers and babysitters should have evacuation plans that they communicate to parents in case of an emergency at Wolf Creek.

Family readiness

Prepare a list of the items your family will need if you are asked to evacuate. The list will help you quickly gather:

- * important papers
- * bedding
- * dentures
- * portable radio
- * medicines
- * checkbook
- * extra clothing
- * tool kit
- * eyeglasses
- * prescription drugs
- * flashlight
- * baby supplies
- * credit/debit cards
- * identification

For more information on preparing a list, check out: <http://www.ready.gov/america/getakit/index.html>

Potassium iodide (KI)

KI is used in certain situations to protect the thyroid gland from taking in radioactive iodine. If taken before or within an hour of exposure to radioactive iodine, KI can block about 90 percent of the radioactive iodine from being absorbed by the thyroid gland.

After careful consideration of all factors involved in the distribution of a thyroid-blocking agent such as KI, the State of Kansas determined that potassium iodide provides no significant enhancement to public protection beyond that which can be effectively achieved through the implementation of the existing and modified protective actions defined within the emergency plan.

The State will not stockpile and administer KI to the general public. The State's strategy is that the general public can be adequately safeguarded by timely implementation of other protective actions such as evacuation and/or in-house sheltering. While the State does not intend to recommend the use of KI by the general public, it acknowledges that individual members of the public may elect to obtain and use the drug voluntarily if they so desire.

For more information about KI, visit the Federal Drug Administration Web page: www.fda.gov/cder/guidance or call 301-827-4573.

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Subzone Descriptions and Evacuation Routes

Residents in ALL subzones evacuate to the Lyon County Reception Center in Neosho Rapids. When you arrive, officials will direct you where to park.

Subzone CCL (Coffey County Lake)—CCL includes Coffey County Lake and the adjacent land open to the public, including the Wilson Cadman Wildlife Education Area.

Evacuation route: Travel north on Highway 75 to I-35. Take I-35 to Exit 141 for KS-130 toward Neosho Rapids/Hartford. Travel two and one-half miles to Neosho Rapids. Turn right onto 6th Street, then left onto Commercial Street.

Subzone CTR—CTR includes Wolf Creek Generating Station and Country Estates subdivision. CTR does not include Sharpe, New Strawn or Burlington. CTR is bordered on the west by Highway 75; on the north by 17th Road; on the east by Reaper Road; and on the south by 12th Road.

Evacuation route: Travel north on Highway 75 to I-35. Take I-35 to Exit 141 for KS-130 toward Neosho Rapids/Hartford. Travel two and one-half miles to Neosho Rapids. Turn right onto 6th Street, then left onto Commercial Street.

Subzone E-1—E-1 is bordered on the west by Reaper Road; on the north by 16th Road; on the east by Underwood Road; and on the south by 12th Road.

Evacuation route: Travel north to 16th Road, west to Trefoil Road, then north to I-35. Take I-35 to Exit 141 for KS-130 toward Neosho Rapids/Hartford. Travel two and one-half miles to Neosho Rapids. Turn right onto 6th Street, then left onto Commercial Street.

Subzone E-2—E-2 is bordered on the west by Underwood Road; on the north by 16th Road; on the east by Yearling Road; and on the south by 12th Road.

Evacuation route: Travel north to 16th Road, west to Trefoil Road, then north to I-35. Take I-35 to Exit 141 for KS-130 toward Neosho Rapids/Hartford. Travel two and one-half miles to Neosho Rapids. Turn right onto 6th Street, then left onto Commercial Street.

Subzone JRR (John Redmond Reservoir) —JRR includes all areas on and immediately adjacent to John Redmond Reservoir. JRR does not include New Strawn, Ottumwa or Jacobs Creek.

Evacuation route: Travel west on 12th Road to Angus Road, then north to Neosho Rapids. Turn left onto 6th Street, and then left onto Commercial Street.

Subzone N-1—N-1 is bordered on the west by Highway 75; on the north by 20th Road; on the east by Quail Road; and on the south by 17th Road. N-1 includes Sharpe and the Coffey County Airport.

Evacuation route: Travel north on Highway 75 to I-35. Take I-35 to Exit 141 for KS-130 toward Neosho Rapids/Hartford. Travel two and one-half miles to Neosho Rapids. Turn right onto 6th Street, then left onto Commercial Street.

Subzone N-2—N-2 is bordered on the west by Highway 75; on the north by Old Highway 50; on the east by Quail Road; and on the south by 20th Road. N-2 includes Halls Summit.

Evacuation route: Travel north on Highway 75 to I-35. Take I-35 to Exit 141 for KS-130 toward Neosho Rapids/Hartford. Travel two and one-half miles to Neosho Rapids. Turn right onto 6th Street, then left onto Commercial Street.

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Subzone NE-1—NE-1 is bordered on the west by Quail Road; on the north by 20th Road; on the east by Trefoil Road; and on the south by 16th Road.

Evacuation route: Travel east to Trefoil Road then north to I-35. Take I-35 to Exit 141 for KS-130 toward Neosho Rapids/Hartford. Travel two and one-half miles to Neosho Rapids. Turn right onto 6th Street, then left onto Commercial Street.

Subzone NE-2—NE-2 is bordered on the west by Quail Road; on the north by Old Highway 50; on the east by Trefoil Road; and on the south by 20th Road. NE-2 includes Waverly.

Evacuation route: Travel east to Trefoil Road then north to I-35. Take I-35 to Exit 141 for KS-130 toward Neosho Rapids/Hartford. Travel two and one-half miles to Neosho Rapids. Turn right onto 6th Street, then left onto Commercial Street.

Subzone NE-3—NE-3 is bordered on the west by Trefoil Road; on the north by 22nd Road; on the east by Yearling Road; and on the south by 16th Road.

Evacuation route: Travel west to Trefoil Road then north to I-35. Take I-35 to Exit 141 for KS-130 toward Neosho Rapids/Hartford. Travel two and one-half miles to Neosho Rapids. Turn right onto 6th Street, then left onto Commercial Street.

Subzone NW-1—NW-1 is bordered on the west by Homestead Road; on the north by 20th Road; on the east by Highway 75; and on the south by 17th Road. NW-1 includes Ottumwa.

Evacuation route: Travel west on 19th Road to Fauna Road, then north to I-35. Take I-35 to Exit 141 for KS-130 toward Neosho Rapids/Hartford. Travel two and one-half miles to Neosho Rapids. Turn right onto 6th Street, then left onto Commercial Street.

Subzone NW-2—NW-2 is bordered on the west by Homestead Road from 20th Road to 22nd Road, and by Iris Road from 22nd Road to Old Highway 50; on the north by Old Highway 50; on the east by Highway 75; and on the south by 22nd Road.

Evacuation route: Travel west on 22nd. Turn north on Angus Road towards Neosho Rapids. Turn left onto 6th Street, and then left onto Commercial Street. Or, travel west on Old Highway 50 to KS-130 toward Neosho Rapids/Hartford. Travel two and one-half miles to Neosho Rapids. Turn right onto 6th Street, then left onto Commercial Street.

Subzone S-1—S-1 is bordered on the west by Highway 75; on the north by 12th Road from Highway 75 east to Native Road then by 11th Road from Native Road east to Quail Road; on the east by Quail Road; and on the south by 9th Road.

Evacuation route: Travel west on 11th Road to Highway 75, then north to I-35. Take I-35 to Exit 141 for KS-130 toward Neosho Rapids/Hartford. Travel two and one-half miles to Neosho Rapids. Turn right onto 6th Street, then left onto Commercial Street.

Subzone S-2—S-2 is bordered on the west by Highway 75; on the north by 9th Road; on the east by Quail Road; and on the south by Highway 58. S-2 includes Quail Meadows subdivision.

Evacuation route: Travel south to Highway 58, then west to Angus Road. Take Angus Road north to Neosho Rapids. Turn left onto 6th Street, and then left onto Commercial Street.

Subzone SE-1—SE-1 is bordered on the west by Quail Road; on the north by 12th Road; on the east by Trefoil Road; and on the south by 9th Road.

Evacuation route: Travel south to Highway 58, then west to Angus Road. Take Angus Road north to Neosho Rapids. Turn left onto 6th Street, and then left onto Commercial Street.

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Subzone SE-2—SE-2 is bordered on the west by Trefoil Road; on the north by 12th Road; on the east by Yearling Road; and on the south by 8th Road. SE-2 includes Aliceville.

Evacuation route: Travel south to Highway 58, then west to Angus Road. Take Angus Road north to Neosho Rapids. Turn left onto 6th Street, and then left onto Commercial Street.

Subzone SE-3—SE-3 is bordered on the west by Quail Road; on the north by 9th Road; on the east by Trefoil Road; and on the south by Highway 58. SE-3 includes LeRoy.

Evacuation route: Travel west on Highway 58 to Angus Road. Take Angus Road north to Neosho Rapids. Turn left onto 6th Street, and then left onto Commercial Street.

Subzone SE-4—SE-4 is bordered on the west by Trefoil Road; on the north by 8th Road; on the east by Wayside Road; and on the south by Highway 58.

Evacuation route: Travel west on Highway 58 to Angus Road. Take Angus Road north to Neosho Rapids. Turn left onto 6th Street, and then left onto Commercial Street.

Subzone SW-1—SW-1 is bordered on the west by Iris Road; on the north by 13th Road; on the east by Highway 75; and on the south by 10th Road. SW-1 includes Burlington.

Evacuation route: Travel west on 12th Road to Angus Road. Take Angus Road north to Neosho Rapids. Turn left onto 6th Street, and then left onto Commercial Street. Or, travel north on Highway 75 to I-35. Take I-35 to Exit 141 for KS-130 toward Neosho Rapids/Hartford. Travel two and one-half miles to Neosho Rapids. Turn right onto 6th Street, then left onto Commercial Street.

Subzone SW-2—SW-2 is bordered on the west by Iris Road; on the north by 10th Road; on the east by Highway 75; and on the south by Highway 58.

Evacuation route: Travel south to Highway 58, then west to Angus Road. Take Angus Road north to Neosho Rapids. Turn left onto 6th Street, and then left onto Commercial Street.

Subzone W-1—W-1 is bordered on the west by Juneberry Road; on the north by 17th Road; on the east by Highway 75; and on the south by 13th Road. W-1 includes New Strawn, Remers Point and Hillview Addition, but not Burlington.

Evacuation route: Travel north on Highway 75 to I-35. Take I-35 to Exit 141 for KS-130 toward Neosho Rapids/Hartford. Travel two and one-half miles to Neosho Rapids. Turn right onto 6th Street, then left onto Commercial Street.

Subzone W-2—W-2 is bordered on the west by Emmer Road; on the northeast by John Redmond Reservoir; on the east by Iris Road; and on the south by 10th Road. W-2 includes Jacobs Creek.

Evacuation route: Travel west on 12th or 16th Road to Angus Road. Take Angus Road north to Neosho Rapids. Turn left onto 6th Street, and then left onto Commercial Street.