

# Emergency Action Plan

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## Duane Arnold Energy Center

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Federal regulations require that state and county governments implement emergency plans to protect the public if there is an emergency at the Duane Arnold Energy Center (DAEC). The purpose of these plans is to ensure the public will know what to do in an emergency and how to do it. Information in this section describes actions you may need to take if there is an emergency at the DAEC.

Emergency plans have been developed for an area called the Emergency Planning Zone (EPZ). The EPZ is an approximate ten-mile radius around DAEC. This includes parts of Benton and Linn Counties. Emergency plans for the DAEC are regularly demonstrated for evaluation by the Federal Emergency Management Agency (FEMA) and the Nuclear Regulatory Commission (NRC) to prove they are adequate to protect the health and safety of the public.

## Emergency Planning Zone and Subareas

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The emergency plan provides for identifying subareas within two, five, and ten miles from the DAEC. Some subareas in Cedar Rapids and Marion are beyond ten miles from the DAEC. If an emergency should develop at DAEC, it is not likely to affect all residents in the EPZ. For example, protective actions recommended for subarea #1, an area within two miles of the plant, may not be recommended for other subareas.

The EPZ map in this section shows subareas. Find the number of the subarea where you live. **Note the number of the subarea where you live.**

If there is an emergency, the DAEC will immediately notify Linn and Benton Counties. State and federal officials will also be notified.

## Emergency Alert System

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The Emergency Alert System (EAS) is a group of radio and television stations that broadcast official information during an emergency. If the outdoor warning sirens sound, tune to **WMT Radio (600 AM or 96.5 FM) for up-to-the-minute emergency information. WMT is the official designated EAS Station in this area.**

### Emergency Classifications

Emergency classifications are divided into four categories. Each calls for a certain level of response from plant and government personnel.

- **Unusual Event:** The least serious of the four levels. The event poses no threat to you or to plant employees, but emergency officials are notified. **Public action is not needed.**
- **Alert:** Declared when an event has occurred that could reduce the plant's level of safety, but backup plant systems still work. Emergency agencies are notified and kept informed, but **no action by the public is necessary.**
- **Site Area Emergency:** Declared when an event involving major problems with the plant's safety systems has progressed to the point that a release of some radioactivity into the air or water is possible, but is not expected to exceed Environmental Protection Agency Protective Action Guidelines (PAGs) beyond the site boundary. **Public action may be needed.** Warning sirens are sounded. Instructions for public action are announced on EAS (Emergency Alert System) stations.
- **General Emergency:** The most serious of the four classifications and is declared when an event at the plant has caused a loss of safety systems. Radiation could be released that would travel beyond the site boundary. State and local authorities will take action to protect residents living near the plant.

**Public action is needed.** Warning sirens are sounded. Instructions are announced on the EAS stations.

## Warning Systems

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The public is informed of an emergency by a system of outdoor warning sirens, radio broadcasts over the EAS station and additional warnings communicated by NOAA tone alert Weather Radio. To supplement the warnings provided by the outdoor sirens and EAS, the public is encouraged to purchase a NOAA tone alert Weather Radio. These radios can provide valuable warning and information in *any* emergency situation, and are particularly helpful in situations such as severe weather when the public needs to take immediate action.

The National Weather Service conducts a weekly test of the NOAA Weather/tone-alert Radio system each Wednesday between 11am and noon.

A monthly siren test is conducted the first Wednesday of each month. It starts at approximately 8:45 am and tests the PA system plus the steady and wail tone sirens. **If there is an emergency the sirens will sound with a three-to five-minute steady tone.** This alerts you to tune to local radio stations for emergency information. You will be given specific instructions if you need to go indoors, evacuate, or take other protective actions.

If you hear the sirens, check with neighbors and friends. Make sure they've heard the sirens and understand that they should tune to WMT radio (600 AM or 96.5 FM). **Do NOT use the phone unless you have a special emergency and require help.** Leave the lines open for official emergency business.

Radio and TV stations will inform the public when protective actions are no longer necessary.

**\* PLEASE READ AND KEEP THIS EMERGENCY INFORMATION \***

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## Protective Actions

### Accidental Siren Sounding

If you hear a siren but no EAS message is broadcast, please call:

- Linn County Emergency Management Agency at 363-2671 (Off-hours at 398-3511)
- Benton County Emergency Management Agency at 472-4519 (Off-hours 472-2337)

**DO NOT** call 911 if a siren sounds.

### Possible Emergency Actions

Concern for public safety in a nuclear emergency is because of the possibility of a radioactive release. Protective actions may be needed to avoid or limit radiation exposure to the public. Protective actions are directed by state and county officials. Actions recommended will depend upon plant conditions at DAEC and weather conditions. The actions recommended may be to take shelter or evacuate. **Respond promptly to all instructions. You do not need to rush.**

### If You Are Told To Take Shelter

- DO NOT pick up children at schools, preschools, or day care centers. They will be indoors and taken care of there.

### If indoors:

- Remain there until further notice.
- Shut all windows and doors.
- Turn off all ventilation (furnaces, fireplaces and air conditioning).
- Cover open food containers.

### If outdoors:

- Go indoors immediately and follow the instructions above.
- Wash hands and face before eating and handling food.
- Take a lukewarm shower if possible.

### Everyone:

- Tune to the official EAS Station, WMT Radio (600 AM or 96.5 FM).
- **Use telephone for emergencies only.**

### If Told To Evacuate

- Evacuation is a precautionary move recommended for your safety. Please evacuate promptly once the recommendation is made.
- Evacuation can last for a few hours or days. Plan for a two- or three-day absence. Turn off small appliances, faucets, and ventilation systems. Lock doors and windows.
- Pack necessities. See the checklist on the next page. Add items you might need.
- If directed by medical authorities, pick up relatives in nursing homes or hospitals.
- Residents with children in Benton and Linn County schools in an affected subarea will be able to pick up children at the designated Temporary Relocation Center (TRC). (See Temporary Relocation Center chart.)
- Leave pets indoors with stored food and water for several days, or take them to a private kennel. Public relocation centers do not have places for pets.

- **Take this portion of the phone book with you and follow instructions given in EAS messages.**
- Tie a white cloth to your front door. This indicates to emergency workers you have left your home.
- Drive safely. Use suggested evacuation routes. (See map.) Stay tuned to WMT Radio (600 AM or 96.5 FM) for updated information.
- Keep windows and vents closed if you are driving in a subarea that is being evacuated.
- Law enforcement agencies will provide traffic control and will maintain security in evacuated areas.
- Follow directions provided by local authorities to your designated Relocation Center. Relocation Centers are established to monitor evacuees for radiological contamination. Short-term housing and food is provided. Please go to the Relocation Center for monitoring and registration even if you and your family do not need housing.
- You and your family can return to an evacuated area when informed by an EAS message or relocation center manager. State and local officials will make this decision.

Primary Emergency  
Alert Station  
WMT 600 AM or 96.5 FM  
Cedar Rapids

### DAEC INFORMATION LINES

*The Emergency Response Plan for the Duane Arnold Energy Center is available by calling:*

Call United Way   
**2-1-1**<sup>TM</sup>  
Get Connected. Get Answers.

A 24-hour information and referral service for public information.

# Emergency Action Plan

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## Farm Information

### “What do I have to do?”

Farmers, food processors, and distributors in Linn and Benton Counties are sent a separate brochure. This brochure gives information about actions needed to protect the food chain if there is an emergency at the DAEC. Farmers may need to put livestock in buildings and, if possible, provide them with feed stored in sheds or silos and protected water from covered stock tanks. In an emergency, information is provided to those who are affected. Copies of the brochure, “State of Iowa Radiological Emergency Information for Farmers, Food Processors, and Food Distributors,” are available from your County Extension Service. In Linn County call 377-9839. In Benton County call 472-4739.

## Special Needs

Because of physical limitations or medical conditions, you or members of your household may need assistance in an evacuation. Please complete and return the SPECIAL NEEDS INFORMATION CARD included either in a telephone book (metropolitan residents) or in the mail (rural residents). This information will be kept confidential. The information collected will be used by emergency management officials for assessing the communities need for emergency transportation and shelter for planning purposes. *Even if you have returned a card in previous years, please complete and return a card this year.* To request a SPECIAL NEEDS CARD, please call 211 United Way (a 24-hour information and referral service), or contact your local -emergency management office.

## The Elderly and Disabled

The elderly and disabled can ask for assistance in an evacuation by calling the following:

- Linn County Emergency Management Agency at **398-5171** or **363-2671**.
- Benton County Emergency Management Agency at **472-4519**.

## Hearing-Impaired

Hearing-impaired persons can receive information in an emergency situation on their Telephone Device for the Deaf (TDD) by calling these phone numbers:

Benton County residents - Benton County Sheriff's Office at **472-2337**

Linn County residents - Cedar Rapids Police at **286-5491** OR Linn County Sheriff at **398-4016**

## Hospitals and Nursing Homes

If there is an emergency at the DAEC, hospitals and nursing homes may be asked to provide shelter or evacuate patients. Depending on medical conditions, patients may be released to friends or relatives, or relocated to facilities outside the EPZ. Intensive care and other patients unable to withstand evacuation will be sheltered at their care facility. Information about hospital and nursing home patients will be issued in the EAS messages.

## Transportation

If possible, use your own transportation. If you can't, follow these guidelines:

- Persons in the Cedar Rapids Metropolitan area can go to the nearest bus stop and wait for free pickup. They will be taken to a Relocation Center.

## If you live in a rural area:

- Linn County residents can call the Transportation Officer at the Linn County Emergency Management Agency at 398-5171 or 363-2671.
- Benton County residents can call the Benton County Emergency Management Agency at 472-4519.

## Things to take if told to evacuate:

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### Medical Items

- Medicine(s)
- Glasses
- Special diet foods

### Personal Items

- Special soaps
- Shaving items
- Toothbrush/toothpaste
- Sanitary items

### Bedding

- 2 blankets per person or sleeping bag
- Pillow(s)

### Extra Clothing

- Clothes for two days for each person
- Shoes

### Identification and Important Papers

- Driver's license
- Social Security Card

### Baby Supplies

- Baby food/formula
- Diapers
- Baby bottles

### Miscellaneous

- Cash / checkbook / credit cards
- Flashlight
- Portable radio with batteries
- Extra car keys
- \_\_\_\_\_
- \_\_\_\_\_

**Primary Emergency  
Alert Station  
WMT 600 AM or 96.5 FM  
Cedar Rapids**

# Emergency Action Plan

## School Information

If school evacuation is recommended, children from schools in subareas that may be affected will be moved to designated Temporary Relocation Centers (TRCs). Parents of children attending school in the EPZ can pick up children at the designated TRC as indicated in the chart at right. **This includes all public and private schools, preschools, and day care centers inside the EPZ.** If the general public is evacuated, any students remaining at a TRC will be taken to designated Permanent Relocation Centers. EAS stations will broadcast the location to which students are taken.

**Primary Emergency Alert Station**  
**WMT 600 AM or 96.5 FM**  
**Cedar Rapids**

**DAEC INFORMATION LINES**

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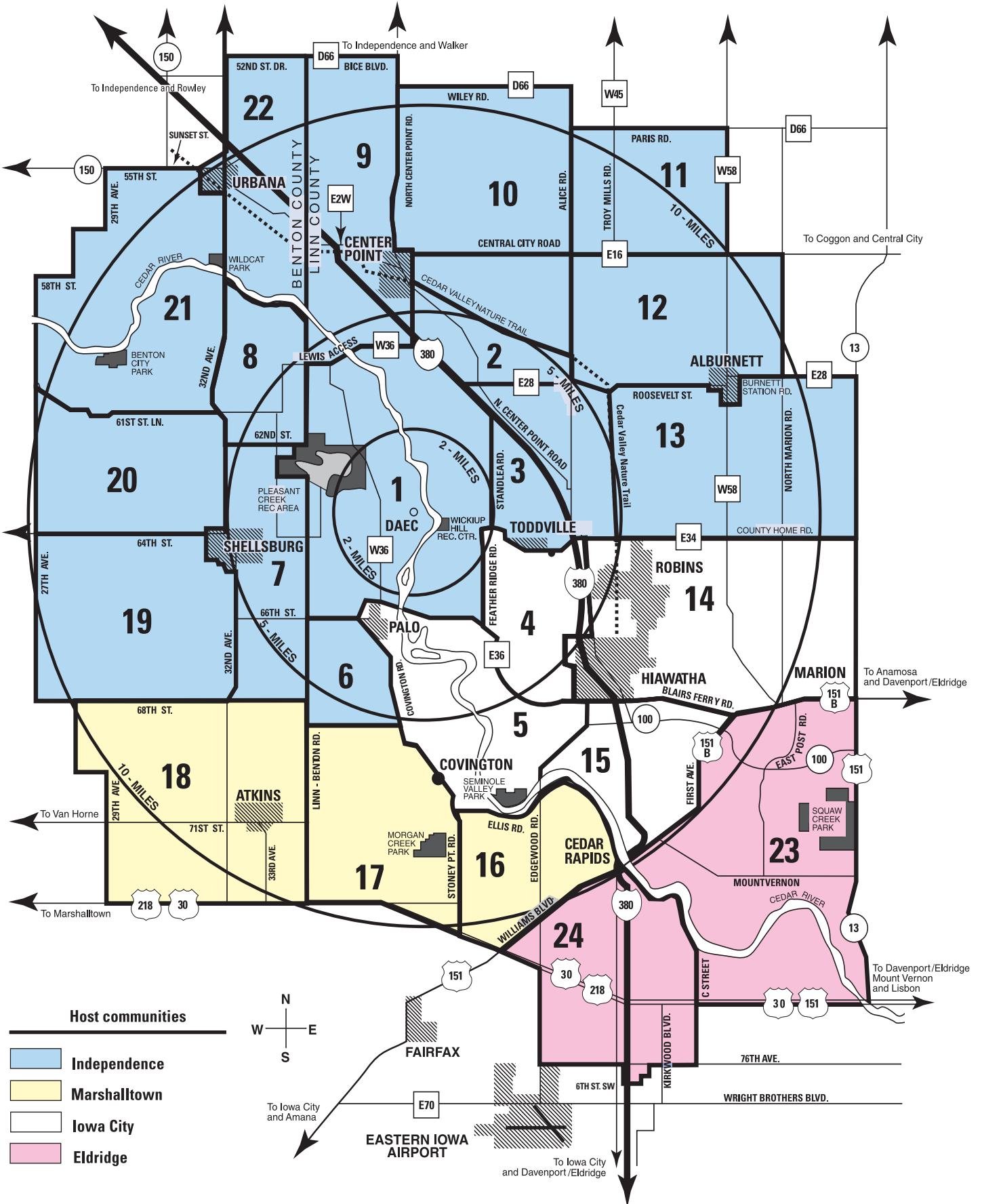
## Temporary Relocation Centers for Schools, Preschools and Day Care Centers

Subarea	If Your Child Attends
16	Cedar Rapids Community Schools and affiliated preschools & day cares (Northwest) <i>Cleveland, Harrison, Hoover, Jackson, Madison, and Truman</i> <b>Relocate to Amana (Amana School)</b>
16	Cedar Rapids Community Schools <i>Roosevelt, Taft Alt., Taft Middle, Jefferson HS.</i> <b>Relocate to Tiffin (Clear Creek-Amana High School)</b>
12	Alburnett Community Schools <b>Relocate to Coggon (Coggon Elementary Center)</b>
5, 14, 15, 16, 23, 24	All Metro Area Catholic Schools Preschools and Day Cares <b>Relocate to Iowa City (City High School)</b>
15	Good Shepherd Lutheran Day School
15	Isaac Newton Christian Academy and Preschool
15	Summit School
5, 14, 15, 16	Preschools and day care centers not otherwise listed <b>Relocate to Iowa City (Southeast Junior High)</b>
15	Cedar Rapids Community Schools and affiliated preschools & day cares (Northeast) <i>Arthur, Franklin, Garfield, Harding, Kennedy, Kenwood, Pierce, Polk, Wright</i>
14	<i>Hiawatha Elementary School</i>
14	<i>Nixon Elementary School</i>
4	<i>Andrews Christian Academy</i>
4	<i>Viola Gibson Elementary</i>
24	College Community Schools (Prairie)
24	College Community Early Childhood Center
24	Four Oaks Day Treatment Center Day Care & Headstart <b>Relocate to Iowa City (West High School)</b>
14	Linn-Mar Community Schools <b>Relocate to Mount Vernon (Cornell College)</b>
23	Marion Independent Schools <b>Relocate to Mount Vernon (Middle School)</b>

Subarea	If Your Child Attends
23	Cedar Valley Christian School and Preschool
23	Grace Baptist School <b>Relocate to Mount Vernon (Washington Elementary)</b>
23 and 24	Preschools and day care centers not otherwise listed <b>Relocate to Mount Vernon (Cornell College)</b>
9	Pointer Pup Preschool
22	Little People Day Care & Learning Center Center Point – Urbana Community Schools, Center Point Head Start and Urbana Preschool <b>Relocate to Rowley (South Elementary School)</b>
24	Trinity Lutheran School and Preschool Cedar Rapids Community Schools & Pre Schools <i>Erskine, Grant Wood, Johnson, Monroe</i> <b>Relocate to Solon (Lakeview Elementary School)</b>
23	Cedar Rapids Community Schools & affiliated preschools & day cares (Southeast) <i>McKinley, Metro, Metro Parent-Child Center, and Washington</i> <b>Relocate to Solon (High School)</b>
24	Cedar Rapids Community Schools & affiliated preschools & day cares (Southwest) <i>Coolidge, Grant, Taylor, Van Buren, and Wilson Elementary &amp; Middle</i> <b>Relocate to Springville (Elementary or High School)</b>
18	Atkins Elementary School and Preschool <b>Relocate to Van Horne (Benton Community High School)</b>
7	Vinton/Shellsburg Community Schools: <i>Shellsburg Attendance Center, Vinton Attendance Center**</i> <b>Relocate to Vinton (Tilford Middle School)</b>
** Only those students residing in the Emergency Planning Zone (EPZ).	

See large map on following page for subareas.

# Emergency Action Plan



**Host communities**

- Independence
- Marshalltown
- Iowa City
- Eldridge



To Iowa City and Amana

**EASTERN IOWA AIRPORT**

To Iowa City and Davenport/Eldridge



# Emergency Action Plan

## Facts About Radiation

Radiation has surrounded the earth since time began. There are several types of radiation – natural radiation and human-made radiation. Natural radiation is found in radon gases, potassium in food and water, cosmic rays from the sun, and uranium, radium, and thorium in the earth's crust. Human-made radiation is used in X-rays, smoke detectors, and in the production of electricity by a nuclear powered generating facility like the Duane Arnold Energy Center.

Radiation is invisible, silent, tasteless, and odorless, but it can be measured with special instruments. To measure the amount of radiation a person receives, a unit called a millirem (mR) is used. One mR is equal to viewing color TV an hour a day for one year. The average chest

x-ray is 10-20 (mR). The average person living in Iowa receives 300 to 400 mRs per year from naturally occurring sources called "background".

The effects of **radiation** depend upon the length of time you are exposed, the distance from the source, and the amount of radioactive materials that are inhaled or ingested into the body. Your health or physical condition can also affect your reaction to radiation exposure. For example, the younger you are, the more rapidly your cells develop, thus the more sensitive you are to radiation.

The Environmental Protection Agency (EPA) sets strict guidelines to control radiation exposure. The purpose of these guidelines is to protect the public, the environment, and workers in the

nuclear industry. The Nuclear Regulatory Commission (NRC) is responsible for implementing and enforcing these guidelines.

Nuclear-powered generating facilities are designed and built to keep radiation inside the plant buildings. Radiation levels are constantly monitored both inside and outside the plant. **In 30 years of nuclear power production in the U.S., no deaths or serious injuries among the public caused by radiation have been recorded.** Even so, you should be familiar with the protective actions discussed in this section. This can help you keep exposure within acceptable limits in an emergency.

## Sources of Emergency Information

This information has been prepared by the Duane Arnold Energy Center in cooperation with the Iowa Homeland Security Emergency Management Division, Benton County Emergency Management Agency, and Linn County Emergency Management Agency. You may obtain further information from any of the following persons:

### David L. Miller

Administrator  
Iowa Homeland Security Emergency  
Management Division  
Hoover State Office Building  
Level A  
Des Moines, IA 50319  
515/281-3231

### Scott E. Hansen

Coordinator  
Benton County Emergency Management  
County EOC  
111 E. 4th St. - Courthouse  
Vinton, IA 52349  
319/472-4519

### Paul R. Sullivan

Manager – Emergency Planning  
Duane Arnold Energy Center  
3313 DAEC Road  
Palo, IA 52324  
319/851-7191 or 851-7011

### Media Inquiries

Renee Nelson – Manager, Communications  
Duane Arnold Energy Center  
3313 DAEC Road  
Palo, IA 52324  
319/851-7140

### Walter E. Wright

Director  
Linn County Emergency Management Agency  
Community Training and Response Center  
6301 Kirkwood Blvd. SW PO Box 1387  
Cedar Rapids, IA 52406  
319/363-2671

**\* PLEASE READ AND KEEP THIS EMERGENCY INFORMATION \***