Protective Action Guidelines

During a radiological emergency, state and local officials will use Protective Action Guidelines developed by the U.S. Environmental Protection Agency to determine the appropriate protective actions. The purpose of the protective actions is to prevent or reduce the radiation exposure to the public.

The state and county officials may implement one or both of two protective actions:

> **Evacuation-- Administration of KI-potassium iodide** and leave a designated area that is within the 10-mile Emergency Planning Zone.
>
> **Shelter**-- stay indoors, close all doors and windows and listen to your local radio or television Emergency Alert System Station.

In addition to the protective action guides, officials will consider:

- Plant conditions, such as the potential for a release;
- Projection for potential radiation exposure, including wind speed and direction, and expected duration of the release; and
- Other factors, such as road conditions and the time required for public notification and response.

<u>Evacuation Safety</u>

A 2004 study by Sandia National laboratory found that large-scale evacuations are "very effective and successfully save lives and reduce the potential number of injuries associated with the hazard." The finding held true whether the evacuations were planned or ad hoc.

Starting with a sample of 230 large-scale evacuations between 1990 and 20003, Sandia selected 50 for detailed case studies. They included five evacuations of more than 100,000 people, ranging from 270,000 to 666,000 both for hurricanes. One of the five was the Sept. 11, 2001, evacuation of lower Manhattan after the attack on the World Trade Center. The 50 detailed case studies also included 33 evacuations dealing with technological hazards. No radiological-related evacuations occurred during the time frame covered by the study.

The study found that close coordination among emergency responders, training and exercises contribute to the effectiveness of evacuation. All 50 communities provided training to their emergency response personnel; 40 percent conducted full-scale exercises.

The only event at a U.S. nuclear plant that has required full-scale emergency response was the 1979 accident at Three Mile Island. However, local government officials have

successfully used the emergency response plans developed by the nuclear industry in other emergencies.