

PLAN SUMMARY

1. Purpose

The purpose of this plan is to assure that there are adequate measures in place to assist in the protection of the health, safety and welfare of residents and visitors who would be affected by a radiological emergency at the Browns Ferry Nuclear Plant. The Browns Ferry Nuclear Plant is located in Limestone County, approximately _____ miles from _____ County. The facility is owned and operated by the Tennessee Valley Authority (TVA) (licensee).

_____ County lies within the 50-mile Ingestion Pathway Zone (IPZ) of the Browns Ferry Nuclear Plant. See Table 1 for a map of the Browns Ferry Nuclear Plant 50-mile IPZ.

This plan provides guidance for assistance by _____ County in an emergency situation at the Browns Ferry Nuclear Plant.

2. Key Assumptions

- A. Ingestion Pathway Zone (IPZ) is the area within a 50-mile radius of a commercial nuclear power plant in which people may be indirectly exposed to radiation by eating or drinking contaminated food, milk and water.
- B. The safety of the food supply within the 50-mile IPZ could be a concern to members of the agricultural community if a radiological release to the atmosphere occurred. During such a release, both water and land could become contaminated. Eating contaminated foods and drinking contaminated milk and water could have a harmful, long-term effect on your health.
- C. State and local government emergency response organizations are prepared to quickly notify and advise the agriculture community on what actions to take in the event of a radiological emergency. The decision to recommend protective actions will be based on the emergency conditions at the nuclear plant, available information on the amount of radiation that has been released to the environment, and the consideration of the health, economic, and social impacts of the proposed actions. In the State of Alabama, the Department of Public Health's Office of Radiation Control will analyze all data and the State Health Officer will make the appropriate protective action decisions regarding the status of the nuclear power plant, and will provide this information to State EMA to disseminate to the impacted counties in which the protective action decisions will be implemented.
- D. Protective actions can be utilized to prevent or lessen the possibility of persons eating or drinking contaminated food, milk or water by preventing or minimizing contamination of water, milk and food products. Washing, scrubbing, peeling

or shelling fruits and vegetables to remove surface contamination prior to human consumption would be useful information for residents who grow their own crops. Milk and food products may also need to be isolated or contained to prevent its introduction into commerce and to determine whether condemnation or other action is appropriate. Such decisions will be made by ADPH with the cooperation of the Department of Agriculture and Industries.

- E. All required radiological field monitoring within County will be provided and coordinated by state (ADPH Office of Radiation Control). The state will coordinate with County to develop the sampling plan. The sample plan will include sampling and analysis of milk, crops, livestock, poultry, water supply, etc.
- F. All emergency public information will be disseminated through the Joint Information Center (JIC) located at 2055 Market Street, N.E., Decatur, AL.

3. **Effects of Radioactive Deposits on Human Food and Water Supplies**

Depending on the amount of radioactive materials released into the atmosphere and the prevailing weather conditions, people, animals, crops, land and water near the site of the emergency could be affected.

- A. Initial concern would be the condition of fresh milk from dairy animals grazing on pasture and drinking from open sources of water. Sampling for contamination could occur at the farm, the transfer station or the processing plant. If contamination of fresh milk and processed milk products is verified, ADPH will determine whether to dispose of these products or to hold them until safe for consumption.
- B. A later concern would be the possible contamination of vegetables, grains, fruits and nuts. The severity of the impact of the contamination would depend on the time of the year the emergency occurred. The time immediately prior to or during harvest is the most critical period. Crops will be sampled and analyzed by the appropriate government officials to ensure that they are safe for consumption.
- C. An additional concern would be the possible impact of the contamination on livestock and poultry. Pastures, feed and water sources, as well as meat and poultry products will be sampled and analyzed to ensure that the meat and poultry are safe for consumption.
- D. Contamination of drinking water supplies is not likely to be significant. If it occurs, it will probably affect only surface water supplies and not ground wells or underground water sources. The safety of water would be determined by sampling public and private sources. If land becomes contaminated, proper soil management techniques can be implemented to reduce contamination of

crops grown on the land. The procedures recommended would depend on the severity of contamination and the specific crops to be grown.

4. **County Ingestion Preparedness Plan**

While it is unlikely that a serious radiological emergency will occur in this county, it is important that we are prepared for such an event. For County, such preparation includes identifying natural resources, agricultural products and livestock, dairies, and poultry that could be affected in the event of a radiological emergency. Tables 2 - 4 will provide descriptions of agriculture products, livestock, and natural resources common to County. This information will be used to provide guidance to assist ADPH-Office of Radiation Control in developing a sampling plan as described in 2.D.

County Browns Ferry Nuclear Plant 50-mile Ingestion Pathway Zone (IPZ)

Table 1



