

**Miami-Dade County, Florida
Department of Emergency
Management**

**Radiological Emergency
Preparedness Program**

**Planning Guide for
Special Facilities**

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Purpose

This guidance document was developed to provide facility owners and administrators with information to assist in the development of emergency plans for responding to emergencies at the Turkey Point Nuclear Power Plant that include off-site consequences.

Background

In a nuclear power plant accident, the hazard is exposure to potentially dangerous levels radiation. Exposure can occur as a result of radiation emissions from a radioactive plume (i.e., release), or it can result from radiation emission from contaminants deposited by the plume as it passes overhead.

Radiological preparedness plans should contain procedures describe mechanisms for protecting the population the organization serves.

Miami-Dade County Code, Chapter 8 B, Section 15 states: “special facilities are required to have a plan in place to be self sufficient in an emergency that would require evacuation due to a natural or technological disaster.” Special facilities are institutions that include, but are not limited to assisted living facilities, schools (public and private), day care centers, elderly centers and other organizations.

The joint Federal Emergency Management Agency (FEMA) and Nuclear Regulatory Commission (NRC) guidance document, NUREG-0654/FEMA-REP-1, requires local governments to contact public and private school officials to assure they address the appropriate planning for protecting the health and safety of their students from a commercial nuclear power plant emergency.

Planning Document

This document provides information to facility owners and administrators that describe:

1. Geographic areas subject to emergency planning
2. Methods for receiving notifications that an emergency exists at the Plant
 - a. Turkey Point Warning Sirens
 - b. All-Hazard Radios
 - c. Emergency Alert System (EAS) messages
3. Description of the system (i.e., Emergency Classification System) that defines the severity of Plant emergencies
4. Role of government
 - a. Direction and coordination
 - b. Emergency facilities

- c. Radiological monitoring and sampling
- 5. Protection strategies
- 6. Planning elements for Special Facilities

Emergency Planning Zone

Federal planning guidelines have established emergency planning zones (EPZ) associated with nuclear power plants. The 10-mile Plume Exposure Zone (see *Appendix 1*) is the area that could be impacted by public protective actions such as evacuation or shelter-in-place.

Emergency Notification

Several mechanisms are in place to alert the public to developing emergencies at the nuclear plant and provide direction and information on protective action, should they become necessary:

1. Warning Sirens

There are warning sirens throughout the 10-mile EPZ. The purpose of the warning sirens is to alert the public to emergencies at the Plant so they can tune to local media outlets (i.e., radio or TV) for specific emergency information.

Should a warning siren malfunction, police agencies conduct route alerting with vehicle mounted public address speakers. To ensure siren reliability, the warning sirens are tested quarterly on the first Friday of: March, June, September, and December.

2. All-Hazard Radios

All-hazard radios, sometimes referred to as weather radios, are located in hospitals, schools, government offices, nursing homes, and other special facilities throughout the 10-mile EPZ. The radios are activated by the National Weather Service in coordination with the Miami-Dade Department of Emergency Management (DEM). Like the warning sirens, the radios are intended to alert the public to listen to local media for emergency information.

All-hazard radios can be purchased at most local electronics stores.

3. Emergency Alert System (EAS)

EAS messages are used to communicate time-sensitive emergency protective measures and information to the public. Once it becomes evident that public protective measures are needed, the Miami-Dade Emergency Operations Center will transmit EAS messages to the media for dissemination to the public.

Emergency Classifications

Four classes of emergencies have been established to define emergency conditions at a nuclear plant.

An UNUSUAL EVENT indicates that events are in process or have occurred which indicate *potential degradation in the level of safety of the plant*. No release of radioactive material requiring offsite response or monitoring is expected unless further degradation occurs.

An ALERT indicates that events are in process or have occurred which involve an actual or potential substantial degradation in the level of safety of the plant. Any releases of radioactive material from the plant are expected to be limited to a small fraction of the Environmental Protection Agency (EPA) protective action guides (PAGs).

A SITE AREA EMERGENCY involves events in process or which have occurred that result in actual or likely major failures of plant functions needed for protection of the public. Any releases of radioactive material are not expected to exceed the EPA PAGs except near the site boundary.

A GENERAL EMERGENCY involves actual or imminent substantial core damage or melting of reactor fuel with the potential for loss of containment integrity. Radioactive releases during a general emergency can reasonably be expected to exceed the EPA PAGs for more than the immediate site area.

Emergency classifications are likely to, but may not, develop sequentially:

1. *UNUSUAL EVENT*
2. *ALERT*
3. *SITE-AREA EMERGENCY*
4. *GENERAL EMERGENCY*

ROLE OF LOCAL GOVERNMENT

1. Direction and Coordination

Local government will assess the hazard associated with an emergency at the Plant and implement procedures for alerting the public of the situation and corresponding actions. Additionally, local government dispatches equipment and responders to implement preparatory and precautionary measures that could go into effect if emergency conditions warrant:

- Traffic control points
- Early closure of recreational outdoor facilities
- Staging of response equipment in proximity to the hazard area

2. Accident Assessment

Control Room personnel at the Plant are responsible for conducting technical assessments of the Plant's condition and taking steps to correct or minimize the effects of a developing emergency. Accident assessment data and recommended protective action, if applicable, are provided to Miami-Dade Department of Emergency Management (DEM) and Florida Division of Emergency Management (FDEM). As resources are deployed for the incident, the Florida Bureau of Radiation Control (BRC), Florida Power & Light (FPL) and federal agencies will use modeling data, plant conditions and field team information to conduct the technical assessment of the Plant's situation and make protective action recommendations to the Miami-Dade Incident Commander.

3. EMERGENCY RECEPTION CENTER (ERC)

The Emergency Reception Center (ERC) is designed to register and assist evacuees with access to emergency services. The Miami-Dade County ERC is located at Tamiami Park, SW 107 Avenue, between SW 8 Street and Coral Way (SW 24 Street).

Services available at the ERC include:

- Monitoring & Decontamination (radiation monitoring and decontamination of evacuees)
- Temporary Sheltering (temporary shelters for evacuees)
- Family Reunification (assistance with reunifying evacuating families)
- Medical & Health Services (Emergency Medical Services)
- Stress Management Counseling (stress management for children and adults)
- Direction to emergency shelters (If necessary short and long term shelters for evacuees)

4. SAMPLING

Once a release has occurred, Bureau of Radiation Control (BRC) teams will take air, soil, and water samples from exposed sites. Maps for recording survey and monitoring data, key land use data, dairies, food processing plants, water sheds, water supply intake and treatment plants and reservoirs will be maintained by the Florida Division of Emergency Management (FDEM) and used to communicate hazard and protective action information to the public.

Planning Elements for Special Facilities

Special facility owners and operators should ensure their emergency plans effectively describe the management of incidents that might threaten the population served by the facility. Planning elements include:

- The direction and control structure the facility will for decision making and resource management;

- Mechanisms for receiving emergency alerts, notifications and information;
- Communication mechanisms for relaying emergency actions and information to staff and others (e.g., clients, guardians);
- Special considerations that may apply to segments of the population the serve (e.g., disabilities, remote locations);
- Roles and responsibilities of staff and others (e.g., vendors, guardians);
- Resources available for emergency actions (e.g., vehicles, alternate facilities)
- Criteria for implementing emergencies actions (e.g. siren sounding, emergency classification);
- Protective action procedures.

Protective Actions

Protective action can include several options. Below are the most common:

- **Evacuation**
Movement of populations away from hazard areas is an effective protective measure. Evacuation requires transportation assets to facilitate the movement of populations to locations outside the emergency planning zone.

Evacuation of one (1) or more areas is the preferred method of protecting people within of the 10-mile EPZ from radiation exposure. Evacuation orders will be implemented after consultation between the Miami-Dade Emergency Operations Center (EOC) and the Emergency Operations Facility on the evacuation implications (timing, traffic control, special needs, barriers to evacuation, meteorological conditions, etc.).

Traffic and access control will facilitate evacuation while limiting entry into the hazard areas. Evacuated areas will remain inaccessible to the general public until such time that sampling proves that it is safe to return into the area. Tow-trucks will be dispatched to clear roads of vehicles that break down or otherwise impede traffic flow.

Evacuees will be encouraged to go to the Tamiami Park Emergency Reception Center (ERC) for radiological monitoring and decontamination.

- **Early Dismissal**
In situations where transportation assets are not available or inadequate, “early dismissal” to parents or guardians may be a viable evacuation mechanism.
 - At the notification of an “Alert” the Miami-Dade Department of Emergency Management (DEM) may notify special facilities in the 10-mile emergency planning zone (EPZ) of the emergency classification level and the need to begin emergency preparations. Special facilities should:
 - Consider suspending outdoor activities and move clients / residents inside.
 - Monitor emergency broadcasts on the radio and television and be aware of additional all hazard radio messages.

- Follow internal procedures for ensuring the orderly and safe release of clients / residents to their guardian / parents at a designating a pick-up point(s).
- Plan for the movement of clients / residents not picked up by a parent / guardian.
- Plan for reunification measures at alternate facilities for clients and residents not picked up by a parent / guardian.
- Should there be clients / residents that have not been picked up by the emergency classification of “Site Area Emergency” the facility should coordinate additional actions with the DEM.

- **In-Place Sheltering**

In-place sheltering protects individuals from becoming contaminated with radioactive material emanating from a release at the Plant. Individuals will be instructed to seek shelter inside buildings or homes, close all doors, windows or other external openings in the structure, and remain inside until otherwise instructed by the authorities. In most instances, air conditioning shut-off would not be necessary. EAS messages and press releases will contain specific guidance on appropriate protective measures. In-place sheltering would typically be done for areas that are not directly downwind from the Plant. In a quickly evolving accident, in-place sheltering may be considered a primary protective action strategy where the populace would be in greater danger from attempting an evacuation than from the exposures to radiation that may be received from a release. Actions that would be implemented during shelter-in-place situations include:

- Suspend outdoor activities and move everyone inside.
- Close doors, windows or other external openings in the structure and remain inside until otherwise instructed. In most cases, air conditioning will not need to be shut off.
- Monitor emergency broadcasts on the radio and television and be aware of additional safety related messages or instructions.
- Continue in this mode of protective action until otherwise advised by emergency response officials.
- If anyone in the facility is in need of emergency medical attention during this period, contact 9-1-1.

