Miami-Dade County, Florida Emergency Operations Center (EOC)

Radiological Emergency 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 emergencies at the Turkey Point Nuclear Power Plant.

Background

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

Radiological preparedness plans should contain procedures describe mechanisms for protecting the staff and clients 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 (Criterion J.10.d), describes the responsibilities that public and private school officials have to protect the health and safety of their students during a radiological emergency.

Planning Document

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

1. Geographic areas subject to radiological emergency planning
2. Methods for receiving notifications that an emergency exists at nuclear plant
    a. Warning Sirens
    b. All-Hazard Radios
    c. Emergency Alert System (EAS) messages
3. The Emergency Classification System that defines the severity of nuclear 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 the taking of shelter (e.g., 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 nuclear plant so they can tune to local media outlets (i.e., radio or TV) for specific emergency information.

   Should a warning siren malfunction, public safety 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 recommended for 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 Office of Emergency Management (OEM).

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

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. The classifications are (in order of severity):

An UNUSUAL EVENT is the least significant of the four emergency classifications. It involves a minor mechanical or security event. No public action is needed.

An ALERT indicates that an equipment or security event of increasing significance may affect plant safety. There is no impact to the public but Public Safety Officials may take some preparatory activities or share information with the public, as needed. Residents should monitor communications from their County Public Safety Officials.

A SITE AREA EMERGENCY involves a serious equipment or security event affecting plant safety. Sirens would sound to alert the public to listen to local radio and television stations for information. Radiation levels outside the plant property should not exceed federal guidelines but Public Safety Officials may take some precautionary actions and share information or instructions with the public. Residents should monitor communications and prepare to take action as directed by their Public Safety Officials.

A GENERAL EMERGENCY involves a very serious equipment or security event affecting plant safety. Sirens would sound. Public Safety Officials would act to protect the public. Instructions for people in the affected areas would be provided by local radio or television stations. Radiation levels outside the plant may exceed federal guidelines.

ROLE OF LOCAL GOVERNMENT

1. **Direction and Coordination**
   Local government will assess the threat associated with an emergency at the nuclear 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 nuclear 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. The Florida Health Department, Bureau of Radiation Control (BRC), Florida Power & Light (FPL) and federal agencies will use modeling data, plant conditions and field team information to conduct an assessment of the nuclear plant's condition and make protective action recommendations to Miami-Dade Public Safety Officials.

3. **EMERGENCY RECEPTION CENTER (ERC)**
   The Emergency Reception Center (ERC) is set up by Public Safety Officials 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 to evacuees at the ERC include:
   - Monitoring for radiological contamination & decontamination services
   - Temporary sheltering
   - Family reunification
   - Emergency health screening for potassium iodide
   - Stress management counseling
   - Direction to emergency shelters

4. **SAMPLING**
   Once a release has occurred, the Bureau of Radiation Control (BRC) will take air, soil, and water samples from exposed locations. 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 used to communicate hazard and protective action information to the public.

PLANNING CONSIDERATIONS 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 utilize 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 of the 10-mile EPZ is the preferred method of protecting people from radiation exposure. Evacuation orders will be implemented after consultation among the emergency response organizations regarding 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 determines it is safe to return to 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 are inadequate, “early dismissal” of school children to parents or guardians may be a viable evacuation mechanism.
  - School officials/administrators will follow internal procedures for ensuring the orderly and safe release of children to their parents by designating a pick-up point(s).

- Should there be children that have not been picked up by parents by the emergency classification of "Site Area Emergency" then school officials should contact the M-D OEM for guidance and/or assistance.
- Depending on circumstances, the Miami-Dade Corrections Department may be able to assist with the transportation of the school's remaining populations to the Emergency Reception Center.
- School officials will be responsible for implementing reunification measures for children and their families.
- If any of the special facility population is in need of medical attention during this period, school officials should contact 9-1-1.
- At the notification of an "Alert" the Miami-Dade Office of Emergency Management may notify special facilities in the 10-mile EPZ of the emergency classification level and the need to begin emergency preparations, such as:
    - Suspension of all outdoor activities and movement of children indoors.
    - Active monitoring of emergency broadcasts on the radio, television, and all hazard radio messages.
    - Engagement of parents and guardians with emergency messaging.

- **Seeking Shelter**
  Taking shelter indoors (e.g., shelter in place) protects individuals from becoming contaminated with radioactive material associated with a release at the nuclear 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. Taking shelter indoors would typically be done for areas that are not directly downwind from the nuclear plant. In a quickly evolving accident, taking shelter 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.

Appendix 1. Emergency Planning Zone (EPZ) Map