

**Miami-Dade County, Florida
Department of Emergency
Management & Homeland
Security**

**Radiological Emergency
Preparedness Program**

**Planning Guidelines
for
Special Facilities**

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Purpose

This guidance document was developed to provide owners and administrators of public and private schools, including licensed and government supported pre-schools and day care centers, with the necessary information for developing emergency plans in the unlikely event of a radiological emergency at the Turkey Point Nuclear Power Plant.

Background

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 government 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

In an effort to assist this population group, the Department of Emergency Management & Homeland Security (DEM&HS) has identified resources and detailed information for use by the responsible parties. Special facility officials should use these documents as the foundation for their emergency plan. This document and accompanying attachments will provide information to school officials that will describe:

1. Emergency Classification System
2. Turkey Point Warning Sirens
3. All-Hazard Radios
4. Emergency Alert System (EAS) messages
5. Emergency Reception Center
6. Required planning for Special Population Facilities
7. Role of Miami-Dade County government

1. Emergency Classifications

Four classes of emergencies have been established to define emergency conditions at a Nuclear Plant. This emergency classification system will typically develop sequentially; however, the possibility exists that an accident at the plant could result in the immediate declaration of any of the emergency classes.

An UNUSUAL EVENT is a situation that is either in the process of occurring or has occurred which indicates a potential degradation of the level of safety at the plant. No releases of radioactive material requiring off-site response or monitoring are expected unless further degradation of safety systems occurs. The purpose of this emergency classification is to assure that all on-plant and off-plant response personnel are aware of the situation and are prepared to respond should conditions become more serious.

The plant control room declares an ALERT if there is an actual or potential degradation of the level of safety at the plant. Radioactive releases that may occur are expected to be limited to small fractions of the Environmental Protection Agency (EPA) Protective Action Guide exposure levels and will not significantly affect off-site areas. The Director of Miami-Dade County Department of Emergency Management & Homeland Security (DEM&HS) may direct the activation of the Emergency Operations Center (EOC) to facilitate the coordination of increased response activities at this emergency classification level or higher.

A SITE AREA EMERGENCY describes actual or potential failures of plant safety systems. Radioactive releases that may occur are not expected to affect areas beyond the plant boundary. When the plant declares a Site-Area Emergency, considerations for public safety require immediate and continued attention.

A GENERAL EMERGENCY indicates actual or imminent reactor core structural failure or melting. This classification serves to identify the worst-case situation resulting in radioactive releases in excess of EPA Protective Action Guideline levels off-plant. The Emergency Operations Center (EOC) will be fully operational and engaged in protective action for the general public. Emergency response operations will not de-escalate until plant conditions return to Alert status or lower.

2. Turkey Point Warning Sirens

There are 49 Turkey Point Warning Sirens within the 10-Mile Emergency Planning Zone (EPZ) (see Attachment 1 for map). They are controlled and activated from two independent computer systems. The primary computer is located at the main office of the Miami-Dade County Department of Emergency Management & Homeland Security (DEM&HS), the back-up computer is located at the Miami-Dade 911 Communication Center. The Turkey Point warning sirens are tested quarterly on the first Friday of: March, June, September, and

December. The siren system is programmed to deliver a warning sound and emergency messages in multiple languages.

3. Emergency Alert System (EAS)

Emergency information is time sensitive. Once it becomes evident that public protective action is needed, the EOC will transmit copies of applicable EAS messages to the media within 15 minutes of the decision to implement an emergency protective action. Once initial protective measures have been implemented, all subsequent EAS messages will contain a protective action component. In other words, if an EAS message instructs the public to evacuate zones 2, 3, and 4, all subsequent EAS messages will repeat the protective measure (evacuate zones 2, 3, and 4) until such time that the protective measure is no longer necessary or is superseded by another protective action. This will insure that the public receives clear and consistent emergency information.

4. All-Hazard Radios

All hazard radios (i.e., NOAA weather alert radios) are located in key locations throughout the 10-mile Emergency Planning Zone (EPZ), these locations include hospitals, schools, government offices and nursing homes. The system is activated by the National Weather Service and can be initiated by the Miami-Dade Department of Emergency Management & Homeland Security (DEM&HS). It is not intended to convey detailed information. Rather it is another layer in the alerting system. All-hazard radios can be purchased at most local electronics stores.

5. EMERGENCY RECEPTION CENTER (ERC)

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

Other services available at the ERC include:

- Medical & Health Services (Emergency Medical Services)
- Stress Management Counseling (Stress Management for children and Adults)
- Family Reunification (Assistance with reunifying evacuating families)
- Temporary Sheltering (Temporary Shelters for Evacuees)
- Monitoring & Decontamination (Radiation monitoring and Decontamination of evacuees and vehicles)
- Direction to emergency shelters (If necessary short and long term shelters for evacuees)

6. Special Population Facility (School) Planning Requirements

School officials should document in their plans the criteria for determining the proper protective actions as well as time frames for implementation. Additionally, school officials should identify in their plans the following institution-specific information:

- Name and location of school;
- Type of school and age grouping (e.g., private elementary school, grades kindergarten through sixth);
- Total population (students, faculty and other employees);
- Means for effecting protective actions (e.g. Shelter-in-place, evacuation or early dismissal);
- Transportation resources if conducting a self-evacuation or supporting letters of agreement if resources are being provided from external sources;
- Name and location of relocation center(s), and transport route(s), if applicable.

Include a means for alerting and notifying appropriate persons and groups associated with the schools and the students including:

- Identification of the organization responsible for providing emergency information to the schools. (see attachment 2 DEM&HS Protective Action Guidelines);
- The method for contacting and providing emergency information on recommended protective actions to school officials. (See attachment 2 DEM&HS Protective Action Guidelines);
- The method (e.g., telephone call) for contacting and activating designated transportation providers, if applicable; and
- The method for notifying parents and guardians of the status and location of their children.

7. Role of Miami-Dade County government

I. General

- A. This procedure assumes that Plant emergencies will develop gradually, thereby giving response agencies sufficient opportunity to activate response facilities.
- B. In a nuclear power plant accident, the hazard to the general public is exposure to radiation. Exposure can occur as a result of radiation emissions from the passing radioactive plume, or it can result from radiation emission from contaminants deposited by the plume as it passes overhead.
- C. Federal guidance suggests that even a “major” accident at a nuclear plant will not pose a severe radiological threat to the public.

- D. There are approximately 170 private schools and day care centers within the 10-mile Emergency Planning Zone (EPZ).
- E. The Florida Department of Health considers evacuation as an effective protective measure. This requires transportation assets to facilitate the movement of special facility populations within the effected area of the EPZ to a predetermined location outside the EPZ. The “early dismissal” of students/children to parents is another means of achieving evacuation.
- F. Should a release be imminent, or an actual release occur, only those areas that are downwind of the plant would need to evacuate.
- G. All hazard radios are one of the notification tools used to alert special populations of an emergency at the Turkey Point Nuclear Power Plant. Many private schools and day care centers within the 10-mile EPZ are equipped with these radios. As an alternate means of contact these facilities can be notified by telephone by the Florida Department of Children and Families.
- H. FPL and the Bureau of Radiation Control (BRC) will make recommendations in the form of evacuations, sheltering-in-place, a combination of evacuation and sheltering-in-place, or other protective actions. Recommendations will include the size of the area that the recommendation applies to. The area description will be in the form of “miles downwind” and “affected areas.”

II. Early Dismissal

- A. At the notification of an “Alert” the Miami-Dade Department of Emergency Management & Homeland Security (DEM&HS) may notify all private schools and day care centers in the 10-mile emergency planning zone (EPZ) by all hazard radio or telephone of the emergency classification level and the need to begin emergency preparations.
- B. School officials/administrators should consider suspension of outdoor activities and move children inside.
- C. Depending on the facilities evacuation capabilities (e.g., transportation needs, etc.) an “Early Dismissal” decision may be appropriate. In this case, the facility should notify parents or guardians of the precautionary early release decision and ask them to pick up their children.

- D. 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).
- E. School officials/administrators should monitor emergency broadcasts on the radio and television and be aware of additional all hazard radio messages.
- F. If any of the special facility population is in need of medical attention during this period, school officials should contact 911.
- G. If children are still present at the school when an emergency classification of "Site Area Emergency" is issued, school officials should contact the M-D OEM for guidance and/or assistance.
- H. The Miami-Dade Corrections Department has a limited number of vehicles that can assist with the transportation of the school's remaining populations (i.e., children and staff) to the Emergency Reception Center.
- I. School officials will be responsible for the safety and supervision of evacuated children and for implementing reunification measures for children and their families.

III. Shelter-In-Place

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 is a primary protective action strategy since the populace would be in greater danger from attempting an evacuation than from the exposures to low levels of radiation that could result from a nuclear release.

- A. School officials/administrators should suspend outdoor activities and move children inside.
- B. School officials/administrators should instruct staff to close all 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.
- C. School officials/administrators should monitor emergency broadcasts on the radio and television and be aware of additional all hazard radio messages.
- D. The "special facility" population will continue in this mode of protective action until otherwise advised by emergency response officials.

- E. If any of the “special facility” population is in need of medical attention during this period, school officials should contact 911.

Attachment 2 (Protective Actions Guidelines)

Accident Assessment

Control Room personnel at the Turkey Point Nuclear Plant are responsible for conducting a technical assessment of the Plant's condition and for taking steps to correct or minimize the effects of the emergency. They will communicate initial accident assessment data and recommended protective action, if applicable, to County Department of Emergency Management & Homeland Security (DEM&HS) 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 at the Florida Power & Light's (FPL) Emergency Operations Facility (EOF).

Protective Action Decision Making

The primary long-term health concern associated with an exposure to radiation is cancer. According to the Biological Effects of Ionizing Radiation Committee V (BEIR V), the risk of cancer death is 0.08% per rem of exposure for doses received acutely and 0.04% per rem for doses received over a long period of time. As the exposure amount increases, the risk of cancer also increases.

Protective Action Guides have been developed by the Bureau of Radiation Control (BRC) and are consistent with federal guidelines. Department of Health personnel will use Environmental Protection Agency Protective Action Guide Manual 400-R-92-001 as a guide for recommending protective actions.

Protective action options include:

- Evacuation
- In-place sheltering
- Early dismissal of childcare facilities
- Restricting access into affected areas
- Preventing the consumption and distribution of food and water

The principal exposure source within the plume includes whole body exposure to gamma radiation from radioactive gas, and possibly radioactive particles (dust and dirt). In-place sheltering and/or evacuation, and controlled access would be the principal protective actions.

Florida Power & Light (FPL) will provide recommendations for protective actions to the Miami-Dade Emergency Operations Center (EOC). The EOC can choose to accept such recommendations or implement more stringent protective actions.

Evacuation

Time permitting, the decision to implement recommendations will be made jointly at the EOF by the Miami-Dade Incident Commander, the Monroe County Incident Commander, and the Governor, or any of their authorized representatives. In instances where State involvement in initial decision-making is not possible, the decision to take protective actions for Miami-Dade County will be made by the Miami-Dade County Incident Commander. Evacuation of one (1) or more evacuation areas is the preferred method of protecting the residents of the 10-mile EPZe from radiation exposure. Evacuation orders will be implemented after consultation between the Miami-Dade Emergency Operations Center (EOC) and the Florida Power & Light's (FPL) Emergency Operations Facility on the evacuation implications (timing, traffic control, special needs, etc.).

When a release above the Protective Action Guide is anticipated, the action of Miami-Dade County will always be to evacuate 360 degrees around the plant for at least 5 miles (Areas 1, 2, 3 and 4). Any threat to the core of the reactor will also be just cause for the same evacuation.

Access control would be done by Miami-Dade Police Department and other law enforcement agencies through the use of roadblocks and barricades at strategic points in the 10-mile Emergency Planning Zone (EPZ). Residents and transients would be directed away from the restricted areas. Access control will primarily be enacted in conjunction with evacuations or pending evacuations, but may become necessary for other reasons. 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 not be stopped along evacuation routes to check for contamination because massive traffic congestion would preclude the prompt and safe evacuation of the area. Evacuees will be encouraged to go to the Tamiami Park Emergency Reception Center (ERC) for monitoring and decontamination.

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.

Sampling

Once a release has occurred, Bureau of Radiation Control (BRC) teams will take samples from exposed agriculture and water 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).

Certain procedures can be instituted to protect food items and livestock. These include, but are not limited to:

- Removal of cows or other livestock from pastures and placing them on stored feed
- Quarantine of potentially contaminated milk
- Cut-off of contaminated water supplies
- Washing of all harvested produce

Additional guidance from the Bureau of Radiation Control (BRC), the Florida Department of Agriculture and the Miami-Dade Agricultural Cooperative Extension (AgXtn) should be obtained prior to the implementation of the above measures to assure their adequacy under the existing conditions.