Chapter 7

PUBLIC INFORMATION AND EDUCATION

I. General

The purpose of Emergency Support Function (ESF) 14, Public Information, is to establish a mechanism that efficiently provides and disseminates information to the general public in the event of a nuclear emergency.

This chapter provides guidance for keeping the public informed about potential hazards present at nuclear power plants, emergency responses required to cope with a radiological emergency and protective measures that can be taken to minimize or alleviate adverse public health effects.

II. Public Information Spokesperson

A. The Florida Division of Emergency Management (FDEM), External Public Affairs Office, serves as the lead agency for ESF 14. Depending on the severity of the situation, the Governor's Press Office and staff may assist with press releases. In the event of a nuclear power plant emergency the Governor, the State Coordinating Officer, or designee, will be in demand for news media interviews and press conferences. The State Coordinating Officer or designee will be the official spokesperson for the State.

B. ESF 14 staff **will** be located in the State Emergency Operations Center (SEOC) in Tallahassee and ***may*** operate on a 24-hour basis to facilitate the flow of public information. A Public Information Officer **will** be deployed as a member of the State Management Team (SMT) to the licensee's emergency news center.

C. A spokesperson **will** be available from each of the major organizations involved in the response. These ***may*** include representatives from the licensee, county commission, county emergency management, county health departments, the State Coordinating Officer or Deputy State Coordinating Officer.

III. Public Information Officers

Public Information Officers (PIOs)are those persons authorized by their organizations to release news and background information to the media, monitor events and summarize information for distribution to responding organizations and the media, coordinate and verify information with all participating organizations, ensure timely notification to the public, assist public information spokespersons and maintain records of news releases and public information.

A. State Public Information Officer

Any information released to the news media from any state agency will be coordinated through the State Public Information Officer in the SEOC or the Deputy State Coordinating Officer in the emergency operations facility.

The State Public Information Officer will:

1. Collect, edit and release information to the media

2. Establish contact with wire services, newspapers, radio and television

3. Assist news media personnel in the performance of their functions including accreditation, identification and obtaining of interviews

4. Coordinate the release of information with the licensee and county PIOs

5. Brief the news media as conditions warrant

6. Coordinate with ESF 5 for situational awareness

7. Ensure the Florida Emergency Information Line is operational before, during, and after an emergency

8. Assign public information staff who will work from the licensee's emergency news center or the SEOC.

B. County Public Information Officers

1. Each Risk county **will** provide a PIO to represent the county at the licensee's emergency news center.

2. Each Host county directly involved in emergency response activities has the option to provide a PIO to represent the county at the licensee's emergency news center.

C. Licensee Public Information Officers

The licensee **will** provide a PIO in the licensee's emergency news center.

IV. Emergency News Facilities

The FDEM will provide space and equipment (i.e. telephone line access, etc.) at the SEOC in Tallahassee for media representatives for the dissemination of information during an emergency.

The affected licensee **will** provide space and equipment (such as telephone line access, etc.) at the emergency news center for media representatives for the dissemination of information during an emergency.

A. Emergency Support Function 14 (Public Information)

ESF 14 at the SEOC serves as the primary location for news and information releases until activation of the licensee's emergency news center.

B. Emergency News Center

The emergency news center serves as the focal point for news and information releases during an emergency. The licensee's emergency news center is located at the licensee's Emergency Offsite Facility (EOF). The Farley Emergency News Center is located near the Alabama Forward Emergency Operations Center in Houston County. From this location, public information staff, including technical experts, from the licensee, state and counties will issue news releases. Periodic news conferences will be conducted as needed at the emergency news center. A spokesperson from each organization will be present at each news conference.

Each licensee will designate an individual who will act as the emergency news center manager and will be responsible for the overall management and coordination of the emergency news center activities to include:

1. Providing adequate physical accommodations, including space and equipment, to conduct media briefings and coordination meetings

2. Establishing briefing schedules

3. Providing background information to include press kits

4. Providing notice of significant events such as evacuations

5. Establishing security protocols to include identification procedures

6. Providing periodic updated releases to wire services

V. Coordination of Media Releases

The dissemination of information to the news media and public will be coordinated by the PIOs from the state, counties, and licensees. Each PIO will collect information regarding emergency operations and protective actions decisions from their respective personnel in the emergency operations centers. The accuracy and validity of this information will be verified orally or by facsimile hard copy. Upon verification of information, the PIOs will develop coordinated news releases. The State Coordinating Officer or designee (when located at the emergency operations facility) and the Department of Health are responsible for reviewing information and determining its validity and accuracy prior to the release of public information by the state. Sample media releases for each appropriate emergency class are included in Figures 7-1 through 7-8.

A. Notification of Unusual Event

Due to the nature of conditions at this emergency class, an informative release of information to the media or public regarding off-site emergency operations or is not anticipated from the state. State and local emergency response agencies will monitor conditions until the event escalates or terminates.

B. Alert

Upon declaration of an Alert, the Public Information Officers will be notified in accordance with standard operating guidelines and placed, at a minimum, on standby status. Public information plans and implementing procedures will be reviewed by the Public Information Officers and informational materials (press packets, emergency forms, etc.) will be made ready, should conditions escalate.

Each Risk county may deploy PIOs to the emergency news center. The licensee may deploy Public Information Officers and an emergency news center manager to the emergency news center.

C. Site Area Emergency and General Emergency

Upon escalation to a Site Area Emergency or General Emergency, ESF 14 **will** activate the Florida Emergency Information Line. The SEOC will serve as the primary

source for information releases until activation of the licensee's emergency news center. Upon activation of the licensee's emergency news center, the State Public Information Officer and support staff will be deployed. Should conditions warrant, these facilities may be activated prior to declaration of a Site Area Emergency or General Emergency.

Each Risk county will dispatch PIOs to the emergency news center. The licensee will dispatch PIOs and a emergency news center manager to the emergency news center.

VI. Rumor Control

The FDEM operates the Florida Emergency Information Line to handle citizens inquiries during an emergency/disaster situation. The Florida Emergency Information Line ***can*** run **24-hour** operations. The Florida Emergency Information Line telephone number and Telephone Device for the Deaf number will be released to the general public upon activation of the SEOC and/or the licensee's emergency news center. During an emergency, other State agency personnel will be used to supplement the Florida Division of Emergency Management (FDEM) staff. Florida Emergency Information Line standard operating guidelines provide for the management and coordination of rumor information and trends. The coordination of rumor trends between the State and Risk counties will occur with calls between representatives of the rumor control personnel for the Florida Emergency Information Line, the emergency news center, and the Risk counties.

Each Risk county will activate similar information lines to answer public inquiries. These telephone numbers are published in the public education booklets that are distributed to residents and transients within each 10-mile emergency planning zone. Each Risk county's information line will also be re-released to the general public upon activation of the SEOC and the emergency news center.

VII. Public Education

A. The licensee and risk counties will coordinate information and materials released to the public to ensure residents and transients are advised of appropriate protective measures to take during a radiological emergency within the 10-mile Emergency Planning Zone (EPZ).

B. Public education materials are revised and disseminated annually to businesses and residents within the 10-mile EPZs of each nuclear power plant site in Florida.

C. Appropriate public notices will be posted in parks, beaches, and other outdoor recreational facilities within the 10-mile EPZ that are under the control of State and local government. These will inform the transient population of appropriate actions to take when they hear an emergency alert signal.

D. Each nuclear power plant also produces a site-specific public information booklet **annually.** The booklets provide, at a minimum, information pertaining to the following:

1. Explanation of radiological concepts
2. Emergency Alert System stations
3. Power plant operations

4. Protective measures

5. Evacuation routes

6. Special needs populations

7. Additional contacts for information

E. At least annually, the licensee, in conjunction with the FDEM and the Risk counties, will conduct media briefings to advise the media of the following information:

1. Emergency plans and procedures

2. The flow of information and role of the media during an emergency

3. Radiation concepts

4. Emergency contact persons

F. This may be accomplished through the use of presentations, detailed evacuation maps, press packets or other educational materials developed by the FDEM, in conjunction with the risk counties and licensees.

FIGURE 7-1
SAMPLE PRESS RELEASE - UNUSUAL EVENT

State Emergency Response Team

NEWS RELEASE No. _____ Date (insert)		Contact: State of Florida (Insert name) / Public Information Officer (Phone Number)
THIS IS A DRILL	**THIS IS A DRILL**	**THIS IS A DRILL**

Division of Emergency Management Receives Notification of an Unusual Event at (Insert name) Nuclear Power Plant

(Insert Origination)-- The Florida Division of Emergency Management has received notification of an Unusual Event at (Insert plant name) Nuclear Power Plant operated by (Insert company name).

An Unusual Event is the first stage in a four-stage series of emergency conditions as classified by the Nuclear Regulatory Commission. The purpose of a Notification of an Unusual Event is to relay pertinent information to the State Emergency Operations Center in case a response is warranted by the Forward State Emergency Response Team.

The Florida Division of Emergency Management was notified of the condition by plant personnel. The Division is currently monitoring the situation at the State Emergency Operations Center in Tallahassee. The State Emergency Operation Center is currently at Level 3 - the monitoring phase, but will be activated and staffed by representatives from State agencies if assistance or a response by the Forward State Emergency Response Team is required.

The Governor is being kept informed of the emergency. Under Florida law, the Governor has the ultimate responsibility for protecting the public health and safety in emergencies that are beyond the capability of local government to control.

The Florida Division of Emergency Management has activated the Florida Emergency Information telephone line, and persons may call to obtain accurate, up-to-date information about the power plant emergency. The toll-free number is 1-800-###-####.

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FIGURE 7-2
SAMPLE PRESS RELEASE - ALERT

State Emergency Response Team

NEWS RELEASE No. _____ Date (insert)		Contact: State of Florida (Insert name) / Public Information Officer (Phone Number)
THIS IS A DRILL	**THIS IS A DRILL**	**THIS IS A DRILL**

The Division of Emergency Management Responds to Alert at (Plant) Nuclear Power Plant

(Insert Origination) - The Florida Division of Emergency Management has responded to an Alert at the (insert name) Nuclear Power Plant operated by (insert company name).

An Alert is the second stage in a four-stage series of emergency conditions as classified by the Nuclear Regulatory Commission. The purpose of an Alert is to relay pertinent plant condition information to the State Emergency Operations Center in case a response is warranted by the State Management Team.

Upon being notified of the condition by Plant personnel, the Division activated the State Emergency Operations Center in Tallahassee and dispatched the State Management Team to the (insert plant name) Nuclear Power Plant in (insert County Name) County. Leading the team is (insert name), who is serving as the State Coordinating Officer's designee. The State Coordinating Officer serves as the Governor's authorized representative.

The Governor is being kept informed of the emergency. Under Florida law, the Governor has the ultimate responsibility for protecting the public health and safety in emergencies that are beyond the capability of local government to control.

The State Emergency Operations Center is currently activated and staffed by representatives from State agencies whose assistance may be required. It will remain open for the duration of the emergency.

The Florida Division of Emergency Management has activated the Florida Emergency Information 24-hour hotline for citizens to obtain accurate, up-to-date information about the power plant emergency. The toll-free number is 1-800-###-####.

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FIGURE 7-3
SAMPLE MEDIA RELEASE - SITE AREA RELEASE

State Emergency Response Team

NEWS RELEASE No. _____ Date (insert)		Contact: State of Florida (Insert name) / Public Information Officer (Phone Number)
THIS IS A DRILL	**THIS IS A DRILL**	**THIS IS A DRILL**

State Emergency Response Team Advances to (Insert plant name) Nuclear Power Plant

(Insert Origination) - The Florida Division of Emergency Management is responding to a Site Area Emergency at the (insert plant name) Nuclear Power Plant operated by (insert company name).

The Division has activated the State Emergency Operations Center and dispatched the State Management Team to (insert plant name). The State Management Team is coordinating any required actions by State agencies and the Governor. Leading the State's team is (insert name), who is serving as the appointed State Coordinating Officer's designee. The State Coordinating Officer serves as the Governor's authorized representative.

A Site Area Emergency is the third stage in a four-stage series of emergency conditions as classified by the Nuclear Regulatory Commission. It involves a failure of a plant function essential to the protection of public health and safety. Currently, the public is not in danger but should stay tuned to local media for any changes in plant conditions.

The Florida Division of Emergency Management has activated the Florida Emergency Information 24-hour hotline for citizens to obtain accurate, up-to-date information about the power plant emergency. The toll-free number is 1-800-###-####.

###

FIGURE 7-4
SAMPLE PRESS RELEASE - GENERAL EMERGENCY

State Emergency Response Team

NEWS RELEASE No. _____ Date (insert)		Contact: State of Florida (Insert name) / Public Information Officer (Phone Number)
THIS IS A DRILL	**THIS IS A DRILL**	**THIS IS A DRILL**

Forward State Emergency Response Team Responds to a General Emergency at (insert plant name) Nuclear Power Plant

(Insert Origination) - The Florida Division of Emergency Management has responded to a General Emergency at the (insert name) Nuclear Power Plant operated by (insert company name).

A General Emergency is the fourth stage in a four-stage series of emergency conditions as classified by the Nuclear Regulatory Commission. It involves a failure of a plant function essential to the protection of public health and safety. The public is in no danger but should stay alert to any changes in Plant conditions.

Upon being notified of the condition by Plant personnel, The Division activated the State Emergency Operations Center in Tallahassee and dispatched the State Management Team to the utility's (insert name) Nuclear Power Plant in (insert County name) County. Leading the State's team is (insert name), the designee of the State Coordinating Officer. The State Coordinating Officer serves as the Governor's authorized representative.

The Governor is being kept informed of the emergency. Under Florida law, the Governor has the ultimate responsibility for protecting the public health and safety in emergencies that are beyond the capability of local government to control.

The State Emergency Operations Center is activated and staffed by representatives from state agencies whose assistance may be required. It will remain open for the duration of the emergency.

The Division of Emergency Management has activated the Florida Emergency Information 24-hour hotline for citizens to obtain accurate, up-to-date information about the power plant emergency. The toll-free number is 1-800-###-####.

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FIGURE 7-5
SAMPLE MEDIA RELEASE - CONTINUATION OF EVENT

State Emergency Response Team

NEWS RELEASE No. _____ Date (insert)		Contact: State of Florida (Insert name) / Public Information Officer (Phone Number)
THIS IS A DRILL	**THIS IS A DRILL**	**THIS IS A DRILL**

Governor Declares Emergency At (Insert name) Nuclear Power Plant

(Insert Origination) - Governor Rick Scott today declared a state of emergency in (Insert County Names) counties due to the potentially hazardous effects of a radioactive release from the (Insert plant name) Nuclear Power Plant operated by (Insert company name).

The plant condition has been classified at a (Insert condition) level since (Insert time declared) today. A (Insert condition) is the (insert stage #) stage of a four step series of emergency conditions as classified by the Nuclear Regulatory Commission. It involves an (insert designator of condition, ex. General Emergency - actual or imminent substantial core degradation or melting with potential for loss of containment integrity).

Governor Scott also directed all state agencies and the Florida National Guard to provide whatever assistance is requested by the local governments. The Florida Division of Emergency Management is authorized to direct the use of any state and county facilities, including public schools, for the sheltering of evacuees.

The Division has activated the State Emergency Operations Center and dispatched the State Management Team to (insert plant name). The State Management Team is coordinating any required actions by state agencies and the Governor. Leading the State's team is (insert name), the designee of the State Coordinating Officer. The State Coordinating Officer serves as the Governor's authorized representative.

The State Emergency Operations Center is staffed by representatives from state agencies whose assistance may be required. It will remain open for the duration of the emergency.

The Florida Division of Emergency Management has activated an emergency information telephone line that persons may call to get accurate, up to date information about the power plant emergency. The toll-free number is 1-800-342-3557.

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FIGURE 7-6
SAMPLE PRESS RELEASE - EMERGENCY ALERT SYSTEM ACTIVATION

State Emergency Response Team

NEWS RELEASE No. _____ Date (insert)		Contact: State of Florida (Insert name) / Public Information Officer (Phone Number)
THIS IS A DRILL	**THIS IS A DRILL**	**THIS IS A DRILL**

FOR IMMEDIATE BROADCAST - Emergency Alert System ACTIVATION REQUESTED

EMERGENCY ALERT SYSTEM MESSAGE

A **General Emergency** has been declared at the (Insert plant name) Nuclear Power Plant today, (Insert date) _____ at (Insert time) _____. A **General Emergency** is the fourth stage of a four-step series of emergency conditions as classified by the Nuclear Regulatory Commission. It involves actual or imminent substantial core degradation or melting with potential for loss of containment integrity.

OR

A **Site Area Emergency** has been declared at the (Insert plant name) Nuclear Power Plant today, (Insert date) _____ at (Insert time) _____. A **Site Area Emergency** is the third stage of a four-step series of emergency conditions as classified by the Nuclear Regulatory Commission. It involves a failure of a plant function essential to the protection of public health and safety.

In response to this situation, State and county officials have declared a state of Emergency and have ordered all persons within the following zones/areas to **EVACUATE**: **Zones/Areas** _____. At this time, public and recreational facilities in the affected areas have been closed.

*****ENTER EVACUATION ZONES/Areas*****

All residents and visitors leaving the area are to go to the Emergency Reception Centers located in (Insert county name) County or shelters located in (Insert Host County) County. To get there, evacuees should stay on evacuation routes, and follow the direction of traffic control points along the way.

FIGURE 7-6 (Continued)
SAMPLE PRESS RELEASE - EMERGENCY ALERT SYSTEM ACTIVATION

Drivers are advised to close car windows, turn off car fans/vents and use air conditioning only when necessary and be prepared to seek shelter in the nearest building. Keep your radio tuned to one of the following emergency broadcast stations:

(Insert plant name) Nuclear Power Plant Emergency Alert System stations -

WWWW	**---- AM**	**WWWW**	**---- AM**
XXXX	**---- AM**	**XXXX**	**---- AM**
YYYY	**---- FM**	**YYYY**	**---- FM**
ZZZZ	**---- FM**	**ZZZZ**	**---- FM**

More information on the emergency will be released as soon as it is available. Please keep your radio tuned to one of the following emergency broadcast stations for further information.

FIGURE 7-7
SAMPLE PRESS RELEASE - AGRICULTURE EMBARGO

State Emergency Response Team

NEWS RELEASE No. _____
Date (insert)

Contact: State of Florida
(Insert name) / Public Information Officer
(Phone Number)

THIS IS A DRILL THIS IS A DRILL THIS IS A DRILL

Governor Declares Agricultural Embargo

(Insert Origination) - Governor Rick Scott has declared an agricultural embargo for all locally-grown garden and farm produce within the following counties: (Insert Counties). The embargo was declared as a result of the emergency and release of radioactive materials at the (Insert name) Power Plant in (Insert County) County, said officials at the State Emergency Operations Center in Tallahassee.

Until further notice, all roadside vendors in the affected counties are advised to cover their produce and cease sales and distribution of the following locally-grown agriculture products:

* Milk and milk products;
* Fruits and vegetables;
* Fish and shell fish; and
* Honey.

Farmers are advised to prevent livestock from drinking from open water sources such as creeks, ponds and rivers located in the following counties: (Insert Counties):

Dairy cattle and lactating cattle should be put on stored feed and sheltered. All other farm livestock should be put on stored feed if possible. Special care should be given to livestock feed and feeding sites to avoid contamination by airborne contaminates. Harvested hay bales or rolled hay should be covered if possible with plastic or tarpaulins.

The killing and butchering of beef cattle, swine, goats, fowl, poultry and wild game should cease until further notice. The Fish and Wildlife Conservation Commission has suspended all hunting and fishing in the following counties: (Insert Counties). Fishing and sporting activities in (Insert bodies of water) have been suspended until further notice.

For additional information, contact the local agriculture extension agent or the Department of Agriculture and Consumer Services. The Florida Division of Emergency Management has activated the Florida Emergency Information Line, and persons may call to obtain accurate, up-to-date information about the power plant emergency. The toll-free number is 1-800-###-####.

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FIGURE 7-8
SAMPLE PRESS RELEASE – ALL CLEAR

The Governor of Florida has announced that the emergency conditions at the _____ Nuclear Power Plant have ended. It is now safe to return to your residence and/or business. Repeating . . . the emergency conditions in the area of the _____ Nuclear Power Plant have now ended. You may return home and resume normal activities. There is no longer any threat to persons in the area. If you need additional information, you may contact

_____

_____

NOTE TO CORRESPONDENTS:

This message has been issued by authority of the Governor of Florida. Additional information may be obtained from

_____

_____

Date/Time of issue: _____.

Issued by: _____.

Chapter 8

EMERGENCY FACILITIES AND EQUIPMENT

I. General

This chapter describes the emergency response facilities utilized for each of the power plants, the supplies and equipment designated for emergency response and the key personnel and organizations that are anticipated to respond to emergencies at each facility. These emergency response facilities have been established in the vicinity of the power plant to allow for the effective coordination of state, local, federal and licensee resources during an emergency at a nuclear power plant. In order to effectively mitigate against emergency situations at the nuclear power plant these facilities should be located outside the 10-mile Emergency Planning Zone (EPZ).

Impact assessments of offsite radiological emergencies will be performed by the Bureau of Radiation Control (BRC), in accordance with their standard operating procedures.

II. Emergency Response Facilities

A. State Emergency Operations Center

1. The State Emergency Operations Center (SEOC) serves as the coordination point for the State's response for any major emergency. For a more detailed discussion of the SEOC, refer to Section IV.B of the State Comprehensive Emergency Management Plan (CEMP).

2. Staffing of the SEOC will be in accordance with Section IV.D of the CEMP. It is the responsibility of the section chiefs and branch directors to ensure that each response area is adequately staffed in accordance with established operating guidelines.

B. County Emergency Operations Centers

1. Each Risk and Host county affected by a radiological emergency **will** establish a county Emergency Operations Center (EOC) to coordinate the county emergency response. The locations of the county emergency operations centers are identified in the respective site appendices.

2. County EOCs will be activated and staffed in accordance with county emergency management plans.

C. Licensee Emergency Operations Facilities

1. Each licensee **will** establish an Emergency Offsite Facility (EOF) for the management of overall licensee emergency response, including coordination with federal, State and local officials.

2. The licensee EOFs for each nuclear power plant are located at:

   a. Crystal River – Progress Energy training facility, 8200 West Venable Drive, Crystal River, FL 34429.
   b. St. Lucie - Midway substation 9001 Midway Road, Ft. Pierce, FL 34945.
   c. Turkey Point – Florida Power and Light corporate headquarters, 9250 West Flagler Street, Miami, FL 33174.

3. The licensee ***may*** activate the emergency operations facility upon declaration of an **Alert** and will activate it upon the declaration of a **Site Area Emergency** or **General Emergency**, or as emergency conditions warrant.

III. Transportation to Licensee's Emergency Operations Sites

A. The State Management Team (SMT) will travel by the most expeditious manner from Tallahassee to the affected licensee's EOF.

B. Department of Health personnel assigned to field monitoring teams and the Mobile Emergency Radiological Laboratory will travel from Orlando to each of the sites in accordance with procedures. A Department of Health field team is located in Miami and will travel in accordance with established procedures to an emergency at the Turkey Point Nuclear Power Plant.

IV. Joseph M. Farley Nuclear Power Plant

The Alabama Forward Emergency Operations Center is located in the Houston County Courthouse in 114 N Oates Street, Dothan, AL 36303. Southern Nuclear Company also has a common emergency operations facility at the Southern Nuclear corporate headquarters located at 40 Inverness Parkway, Birmingham, AL 35242. Florida is not included within the 10-mile emergency planning zone as the Farley Nuclear Power Plant is located 16 miles north of the Florida-Alabama border on the Chattahoochee River. If offsite radiological monitoring is necessary in the ingestion pathway zone, the Department of Health field monitoring teams will be coordinated through the Mobile Emergency Radiological Laboratory as outlined in the BRC's standard operating procedures.

The Liaison Team will travel to Dothan, Alabama via ground or air transportation. The BRC may, depending on accident conditions, send representatives to this facility to perform functions such as dose assessment.

V. Radiological Response Equipment

A. Laboratory Support

The BRC has a radiochemistry laboratory in Orlando with a full range of capability for analysis of environmental media. The major analytical systems and capabilities are outlined in Figure 8-1.

The BRC also maintains a Mobile Emergency Radiological Laboratory that will be dispatched to the vicinity of the power plant at the time of an emergency. The mobile laboratory provides a wide range of capability for analysis of environmental media and is provided with pre-designated parking locations near each reactor site. The mobile laboratory is self-contained and may be operated without support services when necessary.

The state will analyze collected samples at the Department of Health's Health Physics Lab (Orlando), and the Mobile Emergency Radiological Lab. Additional laboratory assistance may be requested from the United States Department of Energy and the Environmental Protection Agency.

Implementation of the major analytical systems is explained in the BRC's Standard Operating Procedures. Additional laboratory assistance may be requested from the United States Department of Energy.

B. Offsite Monitoring Equipment

Offsite monitoring equipment available for the Department of Health's field teams in Orlando and Miami is outlined in Figure 8-2. Additional radiation survey instruments used in ongoing program activities are located in the Department's offices in Pensacola, Tallahassee, Ft. Myers, Tampa, Jacksonville, Miami, Orlando, Ft. Lauderdale, Lantana, and Winter Haven. Department of Health personnel will maintain inventories of offsite monitoring equipment. Means for equipment calibration, maintenance, and equipment operations are explained in the BRC's standard operating procedures.

FIGURE 8-1
RADIOCHEMISTRY LABORATORY AND ANALYTICAL CAPABILITIES

Type of Sample	Analysis	Equipment Used
Air (particulate filter and radioiodine cartridge)	Gross Alpha, Gross Beta (filter) Gamma Analysis (filter + cartridge) Isotopic Uranium by specific chemistry (filter) Isotopic Plutonium by specific chemistry (filter)	1, 2 3 6 6
Swipes	Gross Alpha, Gross Beta Strontium-89, 90 by specific chemistry Gamma Analysis Isotopic Uranium by specific chemistry Isotopic Plutonium by specific chemistry Tritium, Carbon-14 Nickel-63 by specific chemistry Promethium-147 by specific chemistry	1, 2 1, 2 3 6 6 7, 8 7 7
Fauna	Gamma Analysis	3
Milk	Strontium-89, 90 by specific chemistry, I-131 by specific chemistry, Gamma Analysis	1, 2 1, 2 3
Soil	Gamma Analysis Radium-226 by ingrowth of daughters Tritium, Carbon-14	3 4 7, 8
Vegetation	Gamma Analysis	3
Water	Gross Alpha, Gross Beta Radium-226, Radium-228, Polonium-210, Total Uranium, Strontium-89, 90 all by specific chemistry Gamma Analysis Isotopic Uranium by specific chemistry Isotopic Plutonium by specific chemistry Tritium, Carbon-14 Radon-222 Nickel-63 by specific chemistry Promethium-147 by specific chemistry	1,2 1,2 3 5, 6 5, 6 7 7 7
Ambient Radiation	Gamma Radiation	9

Major Laboratory Equipment:

1. (3) low background, gas flow proportional counters with automatic sample changers including one Tennelec LB5100 Series II, one Gamma Products 5000N and one Gamma Products 5020.
2. (3) Eight-Detector, low background, gas flow, proportional counter systems including a Tennelec LB4110, and (2) Protean MDS-8.
3. Gamma Spectroscopy system consisting of Canberra N type 65% ultra low background HPGE detector, Princeton Gamma Tech N type 41% HPGE detector, Princeton Gamma Tech P type 22% HPGE detector, two Ludlum shielded 2" NaI well counter Canberra Genie 2000 PC analysis software.
4. Gamma Spectroscopy system consisting of two 3 x 3 NaI and two 4 x 4 NaI detectors, one FIDLER detector with Canberra Alpha M for VAX analysis software.
5. (2) Ordela PERALS (Photon Electron Rejecting Alpha Liquid Spectroscopy) spectrometer.
6. (3) Canberra 7401 alpha spectroscopy chambers with PIPS detectors.
7. Packard Tri Carb 2900TR Liquid scintillation counter.
8. Packard Model 307 Sample Oxidizer for preparation of solid samples for H3/C14 analysis.
9. Thermoluminescent dosimetry system consisting of Panasonic Model 716 automatic TLD reader, 300 Panasonic 814 TLD badges.

FIGURE 8-1 continued

Mobile Emergency Radiological Laboratory - Bureau of Radiation Control, Orlando

The Mobile Emergency Radiological Laboratory is a self-contained mobile laboratory that can be driven to a designated berthing location near the nuclear power plant as designated in the Department of Health's standard operating procedures.

The Mobile Emergency Radiological Laboratory is stationed at 2044 All Children's Way, Orlando, FL 32818.

A. Analytical Capabilities

The Mobile Emergency Radiological Laboratory is equipped with a computer based gamma spectroscopy system. It also carries survey instruments, personnel dosimeters, and other supplies used to outfit field teams and operate a contamination control line.

B. Communications

1. State Law Enforcement Radio System (800 Mhz statewide system)
2. Satellite telephone/radio
3. Telephone at prime and alternate berthing stations (Phone numbers listed in Emergency Response Directory)
4. Facsimile
5. Cellular telephone

C. Equipment

Typical quantities and description of inventory item:

1. (1) A.C. generator (10 KW)
2. (2) Gamma spectroscopy systems, one N type and one P type germanium detectors
3. (4) Low-volume air samplers
4. (2) Ludlum Model 3 with alpha scintillation probes (0- 50,000 cpm)
5. (34) Direct reading pocket dosimeters (0-200 mR) with chargers
6. (7) Ludlum 2241 with GM pancake probe (0-999,000 cpm)
7. (1) Ludlum 177-45 frisking station (0-500,000 cpm)
8. (3) Eberline ASP-1 with GM pancake probe (3,600,000 cpm)
9. (25) Electronic Personal Dosimeters (0-1600 R)
10. (1) Ludlum Model 52 Portal Monitor
11. (8) CDV 718 Radiac sets (0-9999 R/hr)
12. (1) Triather Liquid Scintillation Analyzer
13. (1) iSolo portable alpha beta counter
14. (1) Automatic alpha beta counter
15. (1) Ortec Detective EX portable germanium gamma isotopic identifier
16. (20) Thermo RadEye PRD NaI gamma detection meters (1 µR/hr-25mR/hr)
17. (12) Canberra Ultra Radiac EM GM gamma detection instruments (20µR/hr-500 R/hr)
18. Rubber boots, rubber gloves, cloth gloves, cotton coveralls, racal hood units with battery packs and filters and vinyl shoe covers.

FIGURE 8-2
OFFSITE MONITORING EQUIPMENT AVAILABLE TO FIELD TEAMS

A. Orlando

1. Handheld rate meters with alpha scintillation probes and G.M. pancake probes
2. (4) Portable 2500 Watt AC generators
3. (2) Portable gamma spectroscopy system
4. (4) Far West Technology REM500 neutron dose rate instruments (0.1 mR/hr-999 R/hr)
5. (17) Thermo RadEye PRD Alarming Personal Radiation Detectors
6. (12) Ludlum Model 2401-S Gamma Scintillators
7. (12) Ludlum Model 2401-P beta gamma pancake
8. (11) Canberra Model 213 Ultra Radiacs
9. (3) Ludlum Model 19 micro R meters
10. (8) High volume Air pumps
11. (1) ISCO 3700 Portable Water Sampler
12. (10) Ludlum Model 3 with 44-10-17 directional NaI probe.
13. (15000) CDV-742 Self Reading Dosimeters 0-200 R
14. (1,000) Self Reading Dosimeters 0-200 mR, 0-500 mR.

B. Miami

Emergency kit for the Miami field team is stored at the Miami-Dade Emergency Operations Center, 9300 NW 41st Street, and other equipment is at the area office.

1. Emergency Kit containing dosimeters, direct reading with chargers, low volume air samplers, and protective clothing.
2. Neutron instrument (1)
3. Portable gamma spectroscopy system (1)

FIGURE 8-3
RADIOLOGICAL EMERGENCY RESPONSE KITS

* Radiological Emergency Response Kits:

-Vinyl boots, large
-Barricade tape
-Masking tape
-Gloves, disposable
-Coveralls
-Pocket Calculator
-Niptong
-Steel measuring tape
-Smears and folders
-Flashlight bulbs
-Assorted plastic bags
-Entrenchment tool
-Flashlights
-Rain suits
-Plastic sheeting
-Warning signs
-Sample tags
-Pocket knife
-"D" cell batteries

* Available at all regional offices and in field team cars.

Regional offices are located at:

Tallahassee
4042 Bald Cypress Way
Tallahassee, FL

Pensacola
414 North 75th Ave
Pensacola, FL

Orlando
2044 All Children's Way
Orlando, FL

Ft. Myers
2295 Victoria Ave
Ft. Myers, FL

Ft. Lauderdale
780 Southwest 24th St
Ft. Lauderdale, FL

Winter Haven
225 Avenue D Northwest
Winter Haven, FL

Jacksonville
705 Wells Rd, Suite 300
Orange Park, FL

Miami
401 NW 2nd Ave
Miami, FL

Orlando
400 West Robinson
Orlando, FL

Lantana
1199 West Lantana Rd
Lantana, FL

Tampa
4508 Oak Fair Blvd, Suite 108
Tampa, FL

Chapter 9

ACCIDENT ASSESSMENT

I. General

This chapter describes the responsibilities for assessing the offsite impacts of a radiological emergency at a nuclear power plant and its effects on the health and well being of the residents and visitors of Florida. The state's capability for making accident assessments and performing field monitoring are described and carried out according to the Bureau of Radiation Control's (BRC) standard operating procedures.

II. Initial Assessment

The licensee will provide accident assessment and protective action recommendations to the Risk counties, and the State Management Team (SMT). The results of the assessment will be reported to state and local organizations in accordance with Chapter 5 (Notification and Activation) of this Annex.

III. Field Monitoring

A. Resources and Capabilities

Field monitoring within the Plume Exposure Pathway around nuclear power plant sites is provided by health physicists from the BRC. Laboratory support and equipment available for use by the field monitoring team is identified in Chapter 8 of this Annex. The specific systems and methods for radiation measurement, location and tracking of the radioactive plume, airborne radioiodine concentration measurement, and estimating integrated dose from actual and projected dose rates are outlined in the BRC's standard operating procedures. The BRC's Mobile Emergency Radiological Laboratory will serve as the sole point for receiving samples for analysis during the initial phase of emergency response.

B. Activation of Field Teams

Upon receipt of notification of an emergency, the BRC Duty Officer (on-duty 24-hours daily) will contact the State Watch Office for verification and then contact the appropriate county Emergency Operations Centers (EOC) to determine what, if any, protective actions have been implemented. The BRC Duty Officer will use existing information, in accordance with established Department of Health procedures, to evaluate the potential for offsite exposure and to determine the adequacy of Protective Actions. Based upon the evaluation, the BRC Duty Officer will determine whether to activate emergency field teams and/or the Mobile Emergency Radiological Laboratory.

C. Coordination of Assessment and Monitoring Activities

The coordination of field assessment and monitoring activities is the responsibility of the BRC under Emergency Support Function (ESF) 8, as defined in Chapter 2 of this Annex.

D. Local Government's Role

The counties will implement decisions based on radiological monitoring data provided by the licensee or the BRC Team in accordance with county emergency response plans and procedures.

IV. Additional Assessment and Monitoring Support

A. Emergency Management Assistance Compact

When it is determined that an accident at a nuclear power plant cannot be adequately controlled with resources available to state radiological response personnel, a request will be forwarded to the SEOC by ESF 8 BRC for the additional resources needed. The request will contain the following information:

1. Description of the problem
2. Type of resources needed
3. Which state has the resources
4. Where the resources need to be delivered
5. Clear direction to assembly point or point of delivery
6. Estimated time the resources will be needed
7. If resources include people, what arrangements have been made for housing, etc

If the Governor, State Coordinating Officer, or designee concurs with the need for assistance as requested, the Governor, the State Coordinating Officer or designee will contact the Governor or designee of the Emergency Management Assistance Compact state that has the resources and request the specified assistance.

B. National Response Framework

The provisions of the National Response Framework (NRF) will be used for federal interagency coordination for radiological emergency response. Under the NRF, the Department of Energy coordinates federal offsite radiological environmental monitoring and assessment activities as the lead technical organization in the Federal Radiological Monitoring and Assessment Center, regardless of who is designated the federal coordinating agency. The Federal Radiological Monitoring and Assessment Center will be established at or near the incident location in coordination with the Department of Homeland Security, the coordinating agency, other federal agencies, and state and local authorities.

In addition, the Department of Energy's Region 3 office at the Savannah River Site maintains a Radiological Assistance Program. A Radiological Assistance Program response is tailored based on the scale of the event and additional Radiological Assistance Program teams and resources can be deployed as necessary.

Activation of these assets will occur when the Department of Energy has been notified that a radiological emergency has occurred and that federal assistance has been requested. These requests may be made by the BRC Operations Officer or the State Coordinating Officer.

The following personnel and equipment resources are available and will be provided on request:

1. Radiological monitoring and environmental specialists with supporting equipment
2. Aerial radiological monitoring equipment
3. Fixed and mobile laboratory support
4. Remote handling equipment
5. Technical assistance in predicting the dispersion of radioactivity into the environment
6. Medical consultation on the treatment of injuries complicated by radioactive contamination
7. Technical support for emergency public information

Federal Radiological Monitoring and Assessment Center and Radiological Assistance Program teams will work to ensure the coordination between State, local and federal agencies.

C. The Southern Mutual Radiation Assistance Plan

The Southern Mutual Radiation Assistance Plan provides mutual aid in responding to radiation accidents upon request. The plan describes the monitoring and assessment capabilities of each participating state. The following states have signed into agreement with the plan: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia.

I. General

This chapter establishes the means and responsibilities for controlling radiological exposures to emergency workers involved in an emergency response. Emergency response organizations will limit exposure to emergency workers by limiting the amount of time spent in radiation areas, limiting entry into radiation areas to the maximum extent possible, using protective clothing, respirators or decontamination when necessary, using dosimetry and radiation monitors to track worker's exposures and authorizing the use of potassium iodide to emergency workers when directed by the Bureau of Radiation Control (BRC) Operations Officer as per BRC standard operating procedures.

II. Exposure Monitoring

A. Emergency Worker Dosimetry

Each Risk and Host county involved in response operations or monitoring and decontamination activities will have a Radiation Safety Officer in the county Emergency Operations Center (EOC) that will be responsible for monitoring exposure of county emergency personnel. The Radiation Safety Officer will issue, as appropriate, dosimeters (including direct-reading and thermoluminescent dosimeter badges) to emergency workers.

The Department of Health maintains a contract with a dosimetry company that is certified by the National Voluntary Laboratory Accreditation Program to provide thermoluminescent dosimeter badges to State Emergency Response Team personnel. These dosimeter badges are stored in each risk and host county and the Florida Division of Emergency Management building in Tallahassee. The Department of Health also maintains an additional supply of thermoluminescent dosimeter badges in Orlando.

B. Dose Records

Emergency personnel, except for the BRC, will be issued a Radiation Exposure Record Form as shown in Figure 10-1. Each emergency worker is responsible for:

1. Recording the direct-read dosimeter reading every 30 minutes

2. Reporting the exposure readings to their supervisor every six hours

3. Reporting to their supervisor when direct-read dosimeter readings reach 100 mR and 500 mR

4. Returning the all dosimetry and the radiation exposure record form(s) to their supervisor at the end of the emergency

Emergency worker thermoluminescent dosimeter badges will be returned to the BRC when the emergency is over or conditions have returned to normal. The BRC will then send the thermoluminescent dosimeter badges to the vendor for reading. The BRC will receive all emergency worker exposure records from the vendor. Records will be sent to the appropriate Radiation Safety Officer for distribution to the workers. A copy will be retained by the BRC.

III. Authorization of Exposure in Excess of Protective Action Guides

The BRC exposure limit is 500 millirem per day and 5000 millirem for the duration of the emergency. These doses will be limited to the level specified in Figure 10-3.

The Chairperson of the Board of County Commissioners or designee may, after consultation with the BRC Operations Officer, authorize exposure in excess of 500 mR for county emergency response personnel.

The State Coordinating Officer or designee may, after consultation with the BRC Control Operations Officer, authorize exposure in excess of 500 mR for State Management Team (SMT) personnel.

IV. Potassium Iodide (KI)

Potassium Iodide can be used to saturate the human thyroid gland with stable iodine and thus prevent the absorption of inhaled or ingested radioactive iodine. Potassium Iodide does not protect other parts of the body against radiation exposure and does not protect the thyroid from external radiation. The greatest percentage of thyroid protection occurs when Potassium Iodide is administered at or about the time of exposure.

A. Authorization for the Use of Potassium Iodide (KI)

During an incident where the thyroid committed dose equivalent due to radioactive iodine is projected to be 5 rem or greater, actions to administer Potassium Iodide should be taken. The BRC Operations Officer will authorize the use of Potassium Iodide for emergency workers, difficult to move populations, and the general public.

B. Emergency workers and difficult-to-move individuals

The State has determined Potassium Iodide will be furnished for emergency workers and difficult-to-move people in accordance with the BRC's standard operating procedures.

To provide for issuance of Potassium Iodide to emergency workers and difficult-to-move individuals, approximately 87,000 single doses of liquid Potassium Iodide (5,800 bottles, 15 adult doses per bottle) have been stored at the following locations:

Citrus County Public Health Unit
3700 W. Sovereign Path
Lecanto

Bureau of Radiation Control
2044 All Children's Way
Orlando

Citrus County EOC
3549 Saunders Way
Lecanto

St. Lucie County EOC
15303 W. Midway Road
Ft. Pierce

Levy County EOC
9010 NE 79th Avenue
Bronson

Martin County EOC
800 SE Monterey Road
Stuart

Miami-Dade Fire Headquarters
9300 NW 41st Street
Miami

Monroe County EOC
151 Marine Avenue
Tavernier

Ocean Reef Public Safety Office 100 Anchor Drive Ocean Reef	Florida Division of Emergency Management 2555 Shumard Oak Blvd. Tallahassee

Potassium Iodide can be issued upon the recommendation of the BRC Operations Officer. Counties can then implement their own plans for dispensing potassium iodide.

Workers should continue to take recommended doses of Potassium Iodide daily until risk of significant exposure to radioiodine by either inhalation or ingestion no longer exists.

C. Members of the Public

Potassium Iodide will be issued to members of the general public in accordance with the county health department's procedures. To provide for issuance to the public, doses are strategically stored near nuclear power plant sites. During an emergency, if supplies at one or more locations run low, additional supplies from other sites will be brought in.

V. Decontamination

Action levels for determining the need for decontamination of emergency personnel and/or equipment are shown in Figure 10-2.

A. Bureau of Radiation Control field team personnel who have been in contaminated or potentially contaminated areas will be monitored at the Mobile Emergency Radiological Laboratory. Contaminated personnel will be processed prior to being relieved from duty.

B. All emergency personnel will be monitored at appropriate county monitoring and washdown stations. Personnel who are contaminated will be processed through appropriate county monitoring and washdown stations. Contaminated personnel that have been injured will be treated at medical facilities identified in Chapter 12 (Medical and Public Health Support) of this Annex.

C. All contaminated tools, clothing, equipment and other material that cannot be decontaminated will be placed in plastic bags, tagged and placed in suitable containers for later disposition, under the direction of the county Health Department and the State Department of Health.

FIGURE 10-1
RADIATION EXPOSURE RECORD FORM

NAME: _____
AGENCY/DEPT: _____
SS #: _____ DOB: _____
DOSIMETER #: _____ TYPE: _____
DATE: _____ TIME: _____

Time	Dosimeter Reading	Total Exposure	Location
0			
0+30			
1+00			
1+30			
2+00			
2+30			
3+00			
3+30			
4+00			
4+30			
5+00			
5+30			
6+00			

REPORT TO YOUR SUPERVISOR.

Record of Potassium Iodide Consumption

Date	Time	Int.	Date	Time	Int.

(Front)

INSTRUCTIONS

Charge your dosimeter and enter the best reading obtainable on the first line (0). Read the dosimeter and record the reading every 30 minutes. Report exposure readings to your supervisor every 6 hours, or when your dosimeter indicates an exposure reading of 100 mR (Milliroentgens).

Begin a new card every 6 hours. The Dosimeter Badge issued to you is to be worn at all times and turned in only when requested by your supervisor.

Exposure in excess of 500 mR (Milliroentgens) must be authorized.

(Back)

Above is a sample of a 3" X 5" card which may be used as an individual Incident Radiation Exposure Record form. This form may be used in conjunction with the permanent radiation exposure record obtained from the thermoluminescent dosimeter badge.

FIGURE 10-1 continued

Name: _____ Dept/Agency:_____

Social Security Number: _____ Age:_____ Date of Birth:_____
Dosimeter Badge:_____ Dosimeter CDV 138:_____
Dosimeter CDV730:_____

Other: _____

Date/Time (of initial or reading)	Initial Reading	Date/Time (of final reading)	Final Reading	Net Exposure	Area or Zone Location

Total Exposure: _____

Signature: _____ Date: _____

Authorized by: _____ Date: _____

If no blank forms are available please use the back of this one for additional space.

FIGURE 10-2
DECONTAMINATION ACTION GUIDES

HIGH RADIATION AREAS[a] (0.1 to 5.0 mR/hr gamma exposure rates)

When Measured	Closed Window	Recommended Actions
Before Decontamination	less than 2 x background and less than 0.5 mR/h above background	Unconditional release
	greater than 2 x background or greater 0.5 mR/h above background	Decontaminate (equipment held for decay/disposal)
After Decontamination	less than 2 x background and less than 0.5 mR/h above background	Unconditional release (may leave monitoring/ decon station)
	greater than 2 x background or greater than 0.5 mR/h above background	Continue decon or send to low background decon station (equipment as above)

LOW RADIATION AREAS (less than 0.1 mR/hr gamma exposure rates)

When Measured	Open Window	Recommended Actions
Before decontamination	less than 2 x background greater than 2 x background	Unconditional release Simple decontamination
After simple decon (e.g. flushing with water and/ or wiping)	less than 2 x background greater than 2 x background	Unconditional release Full decontamination
After full decon (e.g. washing or scrubbing with soap or solvent followed by flushing with water)	less than 2 x background greater than 2 x background less than 0.5 mR/hr[b]	Unconditional release People continue full decon. Release animals/equipment
After additional full decontamination effort	less than 2 x background greater than 2 x background less than 0.5 mR/hr[b] greater than 0.5 mR/hr[b]	Unconditional release Send people to special care Release animals/equipment Use informed judgement to control animals/equipment

[a] Only done in early phase of large particulate release accidents otherwise set up in low background area.

[b] Closed window measurements.

FIGURE 10-3
EMERGENCY WORKER DOSE LIMITS

Guidance on Dose Limit for Workers Performing Emergency Services

Dose limit[a] rem	Activity	Condition
5	all	lower dose not practicable
10	protecting valuable property	lower dose not practicable
25	life saving or protection of large populations	lower dose not practicable
>25	life saving or protection of large populations	on a voluntary basis to persons fully aware of the risks involved (see Fig. 10-4 & 10-5)

[a] Total effective dose equivalent during an emergency situation.

FIGURE 10-4
HEALTH EFFECTS ASSOCIATED WITH WHOLE-BODY DOSES

Health Effects Associated with Whole-Body Doses Received within a Few Hours[a]

Whole Body Dose (rad)	Early Fatalities[b] (percent)	Whole Body Dose (rad)	Prodromal Effect[c] (percent affect)
140	5	50	2
200	15	100	15
300	50	150	50
400	85	200	85
460	95	250	98

[a] Risks will be lower for protracted exposure periods.

[b] Supportive medical treatment may increase the dose at which these frequencies occur by approximately 50 percent.

[c] Forewarning symptoms of more serious health effects associated with large doses of radiation.

FIGURE 10-5
HEALTH EFFECTS ASSOCIATED WITH WHOLE-BODY DOSES

Approximate Cancer Risk to Average Individuals from 25 rem Effective Dose Equivalent Delivered Promptly

Age at exposure	Appropriate risk of premature death (deaths per 1,000 persons exposed)	Average years of life lost if premature death occurs
20 to 30	9.1	24
30 to 40	7.2	19
40 to 50	5.3	15
50 to 60	3.5	11

Chapter 11

PROTECTIVE RESPONSE

I. General

The purpose of this chapter is to establish the range of protective actions that are available to state and local governments for the protection of the public in the plume exposure and Ingestion Pathway Zones (IPZ) in the event of an accidental release of radioactive material from a nuclear power plant.

II. Protective Measures

A. Plume Exposure Pathway

The primary risk for the Plume Exposure Pathway may include external whole body or internal inhalation exposure from the passing radioactive plume. Protective actions to reduce the general public's risk of exposure include evacuation or shelter in place. Potassium Iodide may be used to reduce the risk from the thyroid's absorption of radioactive iodine. Each of these protective actions is addressed in greater detail in each respective site plan.

B. Ingestion Pathway Zone

The primary risk for the ingestion pathway is from the ingestion of contaminated water or foods. The Bureau of Radiation Control (BRC) has adopted protective action guides that are consistent with federal guidance provided by the Food and Drug Administration. Lists and maps for monitoring and assessment data, land use data, dairies, food processing plants, water sheds, water supply intake and treatment plants and reservoirs will be provided to the risk and ingestion counties. The Florida Division of Emergency Management (FDEM) will coordinate with the appropriate state and local agencies to ensure that the Division has best data available.

III. Concept of Operations

Offsite response to a radiological incident at a nuclear power plant is divided into three phases: the early emergency response phase, the intermediate phase, and the recovery phase.

A. Early Emergency Response Phase (Plume)

1. Emergency Plans

   a. The State of Florida Comprehensive Emergency Management Plan (CEMP) outlines State agencies that have a lead or support role during a declared emergency. These roles are shared by many State agencies: The Department of Health is the lead State agency for exposure pathway responses and the FDEM is responsible for overall state coordination of non-technical radiological resources under this Annex. Other State agencies may also be involved in implementing protective actions to reduce the public's risk of exposure.

   b. Federal agencies may provide assistance as outlined in the National Response Framework Nuclear/Radiological Incident Annex.

2. Field Monitoring

   a. The Bureau of Radiation Control (BRC) Operations Officer at the licensee Emergency Offsite Facility (EOF) will be responsible for the coordination and implementation of all field monitoring and sampling activities. Decisions as to where sampling will occur will be made jointly involving staff from the Department of Health, the Florida Department of Agriculture and Consumer Services and the Florida Department of Environmental Protection.
   b. Once the Federal Radiological Monitoring and Assessment Center is operational, the BRC will dispatch a representative along with the Mobile Emergency Radiological Laboratory and field teams to the center. State and federal monitoring teams will be integrated and analytical data from field sampling and monitoring will be sent to the emergency operations facility or other field emergency operations centers as the situation warrants.
   c. State and local staff rosters are maintained by each respective agency.

3. Protective Actions

   a. To protect the public from exposure to or inhalation of radioactive materials, protective actions will be developed and implemented according to the protective action decision process given in Chapter 4 of this Annex. These protective action decisions are then implemented through county emergency response agencies and public alert and notification systems.
   b. Early phase protective action recommendations are generally based on conditions at the plant and projected (calculated) doses. Field measurements (i.e., the analysis of field air samples and beta/gamma measurements) within the emergency planning zone are compared with calculated doses to verify plume location and plant conditions and to confirm the presence or absence of particulates and/or iodines.

B. Intermediate Phase

The intermediate phase begins when the nuclear power plant situation has stabilized, there is no further radioactive release offsite, and reliable environmental measurements are available for use as a basis for decisions on additional protective actions, especially those involving ingestion. It extends until these additional protective actions are terminated. This phase may overlap the early and late phases and may last from weeks to many months.

1. Any precautionary ingestion protective actions implemented during the early phase will still be in effect at the beginning of the intermediate phase. Additional responsibilities include but are not limited to:

   a. Citizen decontamination, registration, and evacuee monitoring points shall be established in the affected counties in accordance with

procedures spelled out in the site plans (Appendices I-IV of this Annex).

b. Environmental sampling within the 10-mile EPZ and the 50-mile Ingestion Pathway Zone (IPZ) will be directed by staff at the Federal Radiological Monitoring and Assessment Center to define the limits of the area of radiological deposition and levels of radioactive contamination in agricultural and dairy products, and water sources. Additional information about sampling procedures and priorities are available in the BRC's standard operating procedures. The BRC, The Department of Agriculture and Consumer Services, and the United States Department of Energy will assist.

c. The FDEM compiles data in reference to the location of major food producers, processors, distributors, dairies, and surface water systems within the ingestion pathway zone. The Department of Agriculture and Consumer Services, in conjunction with the BRC, is responsible for the development of procedures for utilizing this information to keep affected food producers, processors, and distributors informed about protective actions and required post-incident response actions.

d. Maps for recording information on the status of the emergency and for monitoring key land use and other ingestion-related data will be developed and maintained by the county emergency management.

e. Initiating or continuing the investigation of long-term agricultural land management practices (e.g., soil removal, crop rotation, tillage, etc.) which reduce future contamination of feed and food crops.

2. Re-entry

a. Re-entry operations will be coordinated from the emergency operations facility by the State Coordinating Officer or designee.

b. Limited non-emergency worker entries into access-controlled areas (restricted zones) will be permitted for the performance of emergency services, and to provide food and water to livestock within the area.

c. Decisions to relax protective measures and allow recovery and re-entry into an evacuated area require a continuous assessment of the radiological situation. The assessment is accomplished by the analysis of radiological monitoring data from air samples, milk, water, and direct radiation measurements. The BRC will determine the feasibility of re-entry into evacuated areas and recommend the appropriate actions to the State Coordinating Officer or designee.

d. Access control points will be established and enforced by the counties. They will be used to control all movement into or within a restricted zone. Normally, they will be established in uncontaminated areas.

e. Agriculture control points will be established by the Department of Agriculture and Consumer Services and co-located with the access control points. They will be used to restrict the flow of all food-stuffs and commercial products from a restricted zone. Food control staff will perform direct radiation surveys of all items leaving the restricted zone to ensure all non-consumable items (personnel, pets,

household items, etc.) leaving the restricted zone meets the acceptable contamination limits.

f. Individuals entering the access-controlled area will be issued personal dosimetry (direct reading and dosimeter badges) at the appropriate county emergency operations center prior to entry. They must be given a brief explanation of the hazards within the area and, if practical, escorted within the area by an emergency worker provided by the Department of Health.

Actions to protect the public from the ingestion of radioactively contaminated food or water (e.g., embargo and/or disposal of contaminated food or animals, shut down of surface water intakes for public water supply systems, curtailment of hunting or fishing) will be determined and recommended by the BRC and jointly reviewed by appropriate state and county representatives before presentation to the State Coordinating Officer or designee for final approval.

C. Late Phase (Recovery Phase)

The recovery phase begins when recovery actions designed to reduce radiation levels in the environment to acceptable levels for unrestricted use are commenced, and ends when all recovery actions have been completed. This period may extend from months to years. Some restricted zones may remain because of long-term or permanently uncorrectable contamination at levels hazardous to public health. Humanitarian relief, short-term recovery efforts, and long-term recovery efforts will be conducted in accordance with the CEMP.

1. Radiological Assessment

   a. The investigation of long-term agricultural land management practices (e.g., soil removal, crop rotation, tillage, etc.) that reduce future contamination of feed and food crops will be continued during this phase.
   b. The identification of long-term impacts on indigenous and migratory wildlife.
   c. The determination of human doses due to ingestion, living on contaminated land, etc.

2. Decontamination

   a. A Decontamination and Restoration Plan will be established with coordination from affected counties, the BRC, the Department of Agriculture and Consumer Services, and federal response resources. The Decontamination and Restoration Plan will address citizen decontamination points, decontamination of buildings and structures, decontamination of agricultural properties, and disposal of contaminated materials.
   b. The decontamination and restoration of buildings and structures will be conducted with priority given to essential basic services (i.e., general government, fire, law enforcement, utilities, etc.)

c. Evaluation of decontamination activities will be conducted by the Department of Health with assistance from federal response agencies.

4. Return

a. Relaxation of protective action decisions will be recommended jointly by county, state, and federal agencies and authorized by the State Coordinating Officer.
b. Human services assistance and financial assistance for individuals and businesses will be conducted in accordance with the CEMP.

5. Relocation

a. Recommendations for restricted zones will be jointly developed by county, state, and federal agencies and authorized by the State Coordinating Officer.
b. Human services assistance and financial assistance for individuals and businesses will be conducted in accordance with the CEMP.

IV. Protective Action Guides

A. The decision to implement protective actions will be based on the comparison of numerous accident parameters (e.g., release duration and magnitude, weather conditions, etc.) to established protective action guides. Protective action guides for decision-making during the early phase, intermediate phase, and for ingestion of contaminated agricultural products are identified in Figures 11-1 through 11-3 respectively.

B. In coordination with the licensee, counties and federal agencies present, the BRC Operations Officer located at the licensee's EOF will recommend protective actions to the impacted counties and the State Coordinating Officer or designee based on dose projections to the public. The State Coordinating Officer or designee and the impacted counties will then make and implement joint protective action decisions.

C. In circumstances where there is an immediate release of radioactive material, the State Emergency Response Team Chief present in the State Emergency Operations Center, or the senior government official in the county EOC, can implement protective action decisions. Prior to the time when the Department of Health Operations Officer arrives at the licensee's EOF, the licensee will be responsible for making protective action recommendations directly to the counties and advising the State Emergency Operation Center.

V. Evacuation

A. Evacuation of the general public normally will be initiated if doses greater than or equal to 1 rem whole body or 5 rem to the thyroid are projected. The public is required to be evacuated if doses greater that or equal to 5 rem or above to the whole body, or 25 rem or above to the thyroid are projected.

Evacuation is the primary protective action for the general public, unless there are circumstances where the evacuation would involve a greater risk than the radiation exposure.

B. Maps showing evacuation routes, evacuation areas, pre-selected monitoring and sampling points, reception centers and shelters in designated host areas and population distribution around each facility are included in each respective site plan. Each site plan includes means for the notification, protection and relocation of all segments of the resident and transient population including mobility-impaired persons. Each site plan also includes evacuation time estimates. Each county will use the existing day-to-day means for dealing with potential impediments to evacuation and means for controlling access to evacuation areas.

C. The affected power plant will order the evacuation of non-essential personnel from the site upon declaration of a Site Area Emergency or higher, however, this evacuation may occur at lesser emergency levels.

VI. In-place Sheltering

In-place sheltering of the general public can be recommended if projected doses are not anticipated to exceed 5 rem whole body or 25 rem to the thyroid. In-place sheltering may be used for short term releases or if there impediments to evacuations that pose a greater risk of exposure. In-place sheltering also enables a population to be positioned so that communications can be carried out in a timely manner.

VII. Potassium Iodide (KI)

Potassium Iodide can be used in those situations where evacuation is not an acceptable protective action for populations that are difficult to move such as prison inmates, hospital and nursing home patients, or others with impaired mobility.

FIGURE 11-1
RECOMMENDED PROTECTIVE ACTION GUIDANCE FOR THE EARLY PHASE OF AN INCIDENT[a]

Protective Action Guide (projected dose[b])	Protective Actions	Comments
TEDE 1 to 5 rem Thyroid CDE 5 to 25 rem Skin SDE 50 to 250	Evacuation or Sheltering	Evacuation (or, for some situations, sheltering[c]) should normally be initiated at a TEDE of 1 rem.

[a] Adapted from Environmental Protection Agency Manual of Protective Action Guides and Protective Actions for Nuclear Accidents, May 1992, page 2-6.

[b] TEDE: total effective dose equivalent, CDE: committed dose equivalent, SDE: shallow dose equivalent.

[c] Sheltering may be the preferred Protection Action Guide when it will provide protection equal to or greater than evacuation, based on factors such as source term characteristics, and other temporal and site specific factors.

FIGURE 11-2
PROTECTIVE ACTION GUIDES FOR EXPOSURE TO DEPOSITED RADIOACTIVITY DURING THE INTERMEDIATE PHASE OF A NUCLEAR INCIDENT[a]

Projected dose in rem	Protective Action	Comments
greater than or equal to 2	Relocate the general population[c].	Beta dose to skin may be up to 50 times higher.
less than 2	Apply simple dose reduction techniques[d].	These protective actions should be taken to reduce doses to as low as practicable levels.

[a] Environmental Protection Agency Manual of Protective Action Guides and Protective Actions for Nuclear Accidents, May 1992, page 4-4.

[b] The projected sum of effective dose equivalent from external gamma radiation and committed effective dose equivalent from inhalation of re-suspended materials, from exposure or intake during the first year. Projected dose refers to the dose that would be received in the absence of shielding from structures or the application of dose reduction techniques. These Protective Action Guides may not provide adequate protection from some long lived radionuclides, therefore, doses in any single year after the first can not exceed 0.5 rem and the cumulative dose over 50 years including the first and second years can not exceed 5 rem.

[c] Persons previously evacuated from areas outside the relocation zone defined by this Protective Action Guide may return to occupy their residences. Cases involving relocation of persons at high risk from such action such as hospital patients under intensive care should be evaluated individually.

[d] Simple dose reduction techniques include scrubbing and/or flushing hard surfaces, soaking or plowing soil, minor removal of soil from spots where radioactive materials may have concentrated, and spending more time than usual indoors or in other low exposure rate areas.

FIGURE 11-3
PROTECTIVE ACTION GUIDES FOR INGESTION OF CONTAMINATED FOODS[a]

Type of Dose[b]	Organ of Interest	Projected Dose
Committed effective dose equivalent	Whole Body	5 mSV / 0.5 rem
Committed dose equivalent	Individual tissue or organ	50 mSV / 5 rem

[a] FDA document Accidental Contamination of Human Food and Animal Feeds; Recommendations for State and Local Agencies dated August 13,1998

[b] Whichever is more limiting.

Chapter 12

MEDICAL AND PUBLIC HEALTH SUPPORT

I. General

This chapter describes the arrangements that have been made for medical services for radiologically contaminated individuals. This chapter includes provisions for emergency care and transportation of victims of accidents, sudden illness and medically incapacitated persons among the population affected by evacuation and relocation during a radiological emergency.

Personnel from the Department of Health will coordinate the delivery of medical support services to victims of radiological accidents. The Department of Health Emergency Coordinating Officer will be notified by the Florida Division of Emergency Management (FDEM) and will in turn activate the proper Department of Health personnel.

II. Medical Support

A radiological emergency at a nuclear power plant can present actual or potential radiological health hazards to individuals within the affected area. It is imperative that capabilities exist for treating contaminated or acutely irradiated individuals. An ongoing capability for emergency care and transportation of victims of accidents and sudden illness and special needs populations during evacuation must also exist.

Coordination of the delivery of medical and health service for victims of radiological emergencies is the responsibility of the Department of Health as the lead agency for Emergency Support Function (ESF) 8. The Department of Health Emergency Coordinating Officer is designated by the Secretary of the Department for the response and recovery efforts associated with a disaster. The Department of Health will coordinate with medical and health facilities, and emergency transport services in those areas of the state potentially affected by radiological emergencies. Communications between local hospitals and ambulance services will be performed via local emergency medical services communication systems.

The Department of Health will annually update the list of medical and health facilities that have the capability to treat radiologically contaminated or acutely exposed individuals (refer to Figure 12-1). These lists will be coordinated with the FDEM and will include the name, location, type of facility, capacity, and any special radiological capabilities.

III. Hospitals and Ambulance Service

Hospitals and other emergency medical service facilities that are capable of providing medical support for any injured individual and which have provided a letter of agreement with the licensee are identified in Figure 12-1. However, there are no agreements directly with the Department of Health. Ambulance services are listed in Figure 12-2.

FIGURE 12-1
EMERGENCY MEDICAL SUPPORT FACILITIES WITH LICENSEE AGREEMENT

HOSPITALS & ADDRESS	TYPE	CAPACITY	SPECIAL SERVICES	LICENSEE AGREEMENT
CRYSTAL RIVER AREA				
Citrus County				
Citrus Memorial Health System 502 W. Highland Boulevard Inverness, FL 34452	County	198	General Medical & Surgical	Yes
Seven Rivers Regional Medical Center 6201 N. Suncoast Boulevard Crystal River, FL 34428	Corporate For Profit	128	General Medical & Surgical (Excluding Obstetrics)	Yes
TURKEY POINT AREA				
Miami-Dade County				
Baptist Hospital of Miami 8900 South West 88th Street Miami, FL 33176	Corporate Non Profit	513	General Medical & Surgical	Yes
Mercy Hospital 3663 South Miami Avenue Miami, FL 33134	Church Operated Non Profit	391	General Medical & Surgical	Yes
ST. LUCIE AREA				
St. Lucie County				
HCA Lawnwood Medical Center 1700 S. 23rd Street Ft. Pierce, FL 34950	Corporate For Profit	335	General Medical & Surgical	Yes
Martin County				
Martin Memorial Hospital 300 Hospital Drive Stuart, FL 34995	Corporate Non Profit	336	General Medical & Surgical	Yes

FIGURE 12-2
AGREEMENTS FOR AMBULANCE SERVICE SUPPORT

AMBULANCE SERVICE	DEPARTMENT OF HEALTH AGREEMENT
Citrus County Nature Coast Emergency Medical Service	**YES**
St. Lucie County St. Lucie County - Fire District	**YES**
Martin County Martin County Emergency Medical Service	**YES**
Miami-Dade County Miami-Dade County Fire/Rescue Department	**YES**

I. General

This chapter establishes guidelines for recovery and return operations when a radiological emergency has been brought under control and no further significant releases are anticipated. Decisions to relax protective measures which have been implemented in a nuclear power plant emergency will be based on an evaluation of radioactive exposure levels which exist at the time of consideration and on the projected long-term exposure which may result in dose commitments to residents and transients in the affected area. An example recovery and return plan is outlined in Figure 13-1. The protective action guides for the intermediate phase are listed in Chapter 11 (Protective Response) of this Annex.

II. Recovery

All recovery operations will be coordinated and directed from the licensee's Emergency Offsite Facility (EOF) by the State Coordinating Officer or designee. The State Coordinating Officer, the impacted counties, Bureau of Radiation Control (BRC), federal agencies (including the Nuclear Regulatory Commission, Department of Energy and Environmental Protection Agency), and the licensee will coordinate regarding the suitability and feasibility of allowing re-entry into the impact area. Prior to allowing public access to potentially contaminated areas, the BRC field teams will evaluate the environmental conditions in the affected areas by conducting direct radiation measurements and collecting environmental samples for laboratory analysis. Land and aerial sampling will proceed from the perimeter of affected areas to the interior.

In-state laboratory analysis of collected samples may be performed at the Department of Health's Health Physics Lab (Orlando) and at the Mobile Emergency Radiological Lab. Additional laboratory assistance may be requested from the United States Department of Energy (Savannah River Site) and the Federal Radiological Monitoring and Assessment Center.

In the event the licensee must release limited amounts of radioactive gases to proceed with their recovery efforts, the releases shall be coordinated with the State Coordinating Officer or designee, BRC, and local authorities.

III. Return

Return operations will be coordinated from the licensee EOF by the State Coordinating Officer or designee.

When environmental conditions in the affected areas are safe for public access, the BRC Operations Officer will recommend to the State Coordinating Officer or designee that protective actions can be relaxed and return operations can begin. No return will be authorized without the concurrence of the State Coordinating Officer or designee. Risk counties will coordinate local return activities from their emergency operation centers, and will keep the State Emergency Operations Center (SEOC) informed. Cleared areas will be opened when clearly definable geographic boundaries are available such as highways, streets and waterways.

IV. Estimates of Population Exposure

Estimates of population exposure will be made following return based on methods developed in the United States Environmental Protection Agency's Manual of Protective Action Guides and Protective Actions for Nuclear Power Plants (EPA 400-R-92-001, May 1992).

FIGURE 13-1
SAMPLE RECOVERY AND RETURN PLAN

I. CURRENT STATUS

A. Plant Conditions

1. As of __(local time)__ , __(current date)__ a _____ condition exists at _____ Nuclear Power Plant.

2. A release of_____ occurred as a result of damage to_____.

B. Recommended Protective Actions

1. A radius of 2 miles around the plant has been evacuated. This affects the following:

   Areas / Zones:

2. Coastal waterways have been evacuated a distance of____miles from the plant.

3. The following areas/zones have been evacuated within a 10-mile radius of the plant:

   Areas / Zones:

4. In place sheltering has been recommended for the following:

   Areas / Zones:

5. Potassium Iodide (KI) has been issued to all emergency personnel within a 10-mile radius of the plant.

C. Offsite Conditions

1. The plume extends to a distance of approximately ____ miles from the plant within the following areas/zones:

   Areas / Zones:

2. The State Emergency Operation Center, _____ County Emergency Operation Center, _____ County Emergency Operation Center, the Emergency Operation Facility, and the Emergency News Center are operational. Overall management of the emergency is being coordinated through the Emergency Operation Facility and the State Emergency Operation Center.

3. Roadblocks to limit ingress and egress into the area have been established by State and local officials. Local law enforcement agencies, State Emergency Support Function 16 (Law Enforcement) and State Emergency Support Function 1 (Transportation) are maintaining these roadblocks at the following locations:

4. State Emergency Support Function 13 (Military Support) and State Emergency Support Function 16 helicopters have been dispatched to assist recovery operations.

FIGURE 13-1 continued

5. State Emergency Support Function 8 (Health and Medical Services) has restricted transportation of agricultural and dairy products within a 10-mile radius of the plant.

6. Radiological monitoring assistance has been requested from Alabama, Georgia, Mississippi, and South Carolina. Additional monitoring, sampling and laboratory assistance has been requested from United States Environmental Protection Agency-Montgomery, and United States Department of Energy-Savannah River Operations.

II. RECOVERY OPERATIONS

All recovery and return operations will be directed from the EOF by the State Coordinating Officer or designee. The Department of Health personnel will remain in the EOF to coordinate recovery and return operations. The coordination and direction of other State agency personnel will emanate from the SEOC.

A. Recovery - In-Place Sheltering Areas/Zones

1. As requested by _____ and _____ counties to relax protective action recommendations in those areas/zones where in-place sheltering has been implemented, the areas/zones listed below will be screened beginning at their farthest distance from plant and working inward toward the plant boundary.

   Areas / Zones:

2. Samples will be collected from water systems, soil, dairies and milk processors, and edible foodstuffs within the areas/zones listed below. State Emergency Support Function 8 personnel will assist in this effort. State Emergency Support Functions 13 & 16 helicopters and State law enforcement vehicles are available to transport personnel and samples.

   Areas / Zones:

3. In-state laboratory analysis of collected samples will be performed by the Florida Department of Health's health physics laboratory in Orlando and the Florida Department of Health's Mobile Emergency Radiological Laboratory. Additional laboratory support has been requested, and is available, from the Department of Energy-Savannah River Operations Lab & Mobile Lab. Transportation of samples to these labs will be coordinated by the State Emergency Operation Center.

B. Recovery - Evacuated Areas/Zones

1. The areas/zones listed below will be screened beginning at their farthest distance from plant and working inward toward the plant boundary.

   Areas / Zones:

   All other sectors will be screened from a distance of 0-2 miles beginning at 2 miles and working inward. Aerial and land survey teams comprised of State agency personnel, and those additional monitors requested through mutual aid (local, State

FIGURE 13-1 continued

and federal) will screen each area/zone in detail by reviewing sections of land no larger than one square mile. State Emergency Support Functions 13 and 16 helicopters and vehicles with assist local agencies with the transport of personnel and samples.

2. Samples will be collected of water systems, soil, dairies and milk processors, and edible foodstuffs within plume exposure pathway and surrounding area. The Department of Agriculture and Consumer Services will assist in this effort as a support agency to State Emergency Support Function 8.

3. In support of State Emergency Support Function 16 the Florida Fish and Wildlife Conservation Commission will assist in the collection of shellfish and other marine samples within a 2-mile radius of the plant.

4. State Emergency Support Function 16, with assistance from the U.S. Coast Guard, will maintain security along the marine blockade until protective actions have been relaxed and return allowed.

5. Any "hot spots" identified by survey teams will be marked off and secured by local and State law enforcement personnel.

6. Transportation of samples to available laboratories for analysis will be coordinated through the State Emergency Operation Center.

7. The Emergency Operation Facility will maintain maps identifying areas/zones that are priority screening regions as well as those areas that have been screened. The Emergency Operation Facility will also ensure that exposure records are maintained for all emergency personnel involved in screening or sample collecting activities.

III. RETURN OPERATIONS

A. Procedures

1. Upon determination by survey/monitoring teams that an area is safe, the Department of Health and the County Health Department will make recommendations to the State Coordinating Officer and the respective Board of County Commissioners or their designees to relax the protective actions for that area.

2. No return will be authorized without concurrence of the State Coordinating Officer. Cleared areas will be opened only when clearly definable boundaries are available.

3. The dosimeters and exposure records of those emergency workers within relaxed areas will be collected and transported to the Radiation Safety Officer. Exposure records will be maintained for each emergency worker.

4. As areas are opened for return, roadblocks and other means for restricting access to the area will be relocated to prohibit return beyond that point. As a region is relaxed, normal crime prevention policies and procedures will be re-

enacted. Local and State law enforcement personnel will coordinate and assist the return of evacuees into the clear areas. Identification of evacuees should be checked.

FIGURE 13-1 continued

5. As a general rule, evacuees from hospitals, nursing homes, and other special needs facilities will be returned after the return of the general population. State Emergency Support Function 8 and State Emergency Support Function 6 will accommodate these persons needs and provide any additional support.

Chapter 14

EXERCISES AND DRILLS

I. General

Exercises and drills must be conducted periodically to evaluate the adequacy of this Annex and to ensure the skills of offsite emergency response organizations are maintained. Results of drills and exercises provide a basis for changes in the response plans, implementing procedures and training focuses.

II. Exercises

An exercise is an event that tests the integrated capability and a major portion of the basic elements existing within emergency preparedness plans and organizations. The emergency preparedness exercise will simulate an emergency that may result in offsite radiological releases that would require response by offsite authorities. Exercises will be conducted as set forth in the Nuclear Regulatory Commission and the Federal Emergency Management Agency rules and will be evaluated by federal observers.

Florida is required to participate in a joint exercise at some site on a rotational basis at least every two years. When not fully participating in an exercise at a site, the State will partially participate at that site to support the full participation of appropriate local governments.

A. Full Participation Exercise

A full participation exercise is a joint exercise designed to fully demonstrate the emergency preparedness and response capabilities of the state and respective county governments. This exercise will include mobilization of state and county response organizations identified in this plan, and will be conducted jointly with the licensee's required exercise. The site for this exercise will alternate so that it will be conducted at a different facility every two years.

B. Partial Participation Exercise

A partial participation exercise is designed to fully demonstrate the emergency preparedness and response capabilities of county governments surrounding a nuclear power plant site. This exercise allows for partial State participation to support mobilization of county response organizations identified in the specific site appendix and will be conducted jointly with the licensee's annual exercise at least every two years.

Partial participation by the State is acceptable when the State is participating in a full participation exercise at a different site that year. The State may choose, for the purpose of cross-training emergency personnel, to support this exercise through the partial activation of emergency operations centers and mobilization of the State Management Team.

C. Ingestion Pathway Exercise

An ingestion pathway exercise will be conducted by each site at least once every six years on a rotational basis as set forth in Federal Emergency Management Agency (FEMA) and Nuclear Regulatory Commission rules and guidelines. An ingestion pathway exercise is designed to demonstrate the emergency preparedness and response capabilities of counties within 50 miles of a commercial nuclear power plant.

D. Non-Required Exercise

Non-required exercises are not mandated by federal regulation. However, a training exercise may be conducted for the benefit of participating agencies, organizations, the State Emergency Response Team and State Management Team.

E. Remedial Exercise

1. A remedial exercise may be required if, during a nuclear power plant federally evaluated exercise, specific portions of the exercise demonstrate inadequacies, deficiencies and/or items requiring corrective actions.

2. A deficiency is an observed or identified inadequacy of organizational performance in an exercise that could cause a finding that offsite emergency preparedness is not adequate to provide reasonable assurance that appropriate protective measures can be taken to protect the health and safety of the public living in the vicinity of a nuclear power plant in the event of a radiological emergency. Because of the potential impact of deficiencies on emergency preparedness, they are required to be promptly corrected through appropriate remedial actions including remedial exercises, drills or other actions.

3. An area requiring corrective action is an observed or identified inadequacy of organizational performance in an exercise that is not considered, by itself, to adversely impact public health or safety. Correction of any areas requiring corrective action should be verified before or during the next biennial exercise.

F. Scheduling and Scenario Development

1. Exercises will be scheduled jointly by the licensees, the Florida Division of Emergency Management (FDEM), the Bureau of Radiation Control (BRC), Risk and Host counties and, if appropriate, the ingestion counties. Exercise objectives and the scenarios for the exercises will be developed and prepared jointly by the licensees, the FDEM and Risk and Host counties.

2. Scenarios will be varied from year to year so all major elements of the plan, and preparedness organizations, are tested within a six-year period. The scenarios will include but not be limited to the following:

    a. Objectives of the exercise and appropriate evaluation criteria
    b. Dates, time period, places, and participating organizations
    c. Simulated events
    d. Time schedule of simulated and initiating events
    e. Narrative summary describing the conduct of the exercise
    f. Description of arrangements for advance materials to be provided to observers

3. The combined exercise scenario, with the exception of non-required exercises, will be submitted by the FDEM State Exercise Officer to the FEMA for approval no later than 60 days prior to the exercise date. A briefing will be scheduled for participating personnel immediately prior to the exercise.

Exercise objectives are due to the FEMA Agency 90 days prior to an evaluated exercise.

G. Critique and Reports

1. A critique will be conducted after each exercise to evaluate the capability of participating state and local governments to implement emergency preparedness plans and procedures in response to a nuclear power plant emergency. Observers from the FDEM, the BRC or other non-participating Risk counties will observe, evaluate and critique off-site response during each annual exercise.

2. Participating agencies will be requested to submit critique notes in writing as input for an after-action report on the exercise. The after-action report will contain all weaknesses and strengths noted and will be grouped according to operational area. The report will then be forwarded to the appropriate operational section for implementation and correction.

III. Drills

A drill is a supervised instruction period aimed at developing, testing and monitoring technical skills necessary to perform emergency response operations. A drill may be a component of an exercise. Each drill will be evaluated by the coordinator for that particular drill.

In addition to the required exercise, radiological drills will be conducted annually as indicated.

A. Communications Drills

Communications between the licensees, State and Risk counties will be tested monthly. Communications with federal emergency response organizations will be tested quarterly. Communications between the nuclear power plants, State and local emergency operations centers and field assessment teams will be tested annually. The test of communications with field assessment teams will be incorporated into the exercises.

B. Medical Drills

Emergency medical service drills involving a simulated radiologically contaminated individual(s) will be conducted annually for each site. Participation by local emergency medical services and contract hospitals will be required for evaluation by the FEMA biennially because of each site having two hospitals.

C. Radiological Monitoring Drills

Radiological monitoring drills for state and appropriate county radiological monitors will be conducted as part of the required exercises. These drills will include collection and analysis of sampling media, provisions for communications, and record keeping.

D. Health Physics Drill

Health physics drills for state emergency response personnel will be conducted semi-annually involving response to and analysis of simulated elevated airborne and liquid samples and direct radiation measurements in the environment. One drill will be conducted in conjunction with the scheduled exercise the other will be conducted in conjunction with annual training.

RADIOLOGICAL EMERGENCY RESPONSE TRAINING

I. General

The purpose of this chapter is to establish a training program that will ensure that the radiological emergency response training mandated in NUREG-0654 is provided for emergency response personnel for decision making, planning, and response. A radiological emergency response training program has been developed. As part of this program the Statewide Radiological Training Task Force has been developed. The Task Force is comprised of various county, licensee and state personnel. The task force meets annually to oversee training needs and address training policy recommendations.

II. Training Levels

The state is responsible for ensuring that the State Emergency Response Team personnel receive adequate training annually. Each county is responsible for ensuring that county emergency personnel receive adequate training annually.

The training program is established with three separate levels. These levels are as follows:

A. Level I

Level I training is designed to provide a **basic overview** of the radiological emergency preparedness program. It can be used as an orientation to new state and county employees or presented to such citizen groups as churches, homeowner associations or any type of public awareness program.

B. Level II

Level II training is designed to give State and county agencies a **basic understanding** of emergency response plans and procedures.

C. Level III

Level III training will give **specific training** to each agency according to their role as outlined in the state's Radiological Emergency Management Plan. Training time will vary according to the specific training requirements.

Specialized training courses offered by federal, state, county or private agencies will be used to the extent practical. These include, but are not limited to:

1. Radiological Emergency Response Operations
2. Radiological Emergency Preparedness Planning
3. Radiological Emergency Management
4. Decontamination and Dose Assessment
5. Handling of Radiation Accidents by Emergency Personnel
6. Fundamentals Course for Radiological Monitors
7. Fundamentals Course for Radiological Response Team

8. Hospital Emergency Department Management of Radiation Accidents

III. Training Standard

Personnel who would normally be used in a radiological emergency shall receive formal radiological emergency preparedness training. Formal training for additional emergency personnel will be at the discretion of each state and local governmental entity. Formal refresher training will be provided on an annual basis. Radiological emergency planners, at all levels, shall receive continuous radiological planning course specific training that consists of industry, event, or other activity courses deemed appropriate to enhance their skills.

IV. Organizations Requiring Training

The state and local organizations which require radiological emergency response training and the required levels of training are shown in Figures 15-1 through 15-3.

Specific tasks and responsibilities of each State and local agency are listed in the radiological emergency training standard operating procedures according to the appropriate site involved.

Additional state agency training will be provided based on local governments' resource short falls. Risk, Host, and Ingestion Pathway counties will identify the type and amount of personnel resources required of the state to supplement their local response organizations operations.

V. Training Schedule

Training will be conducted as required or a minimum of once per year. Each State and local agency listed in Figures 15-1 through 15-3 will receive Level I, II or III training annually. State and local trainers will determine the appropriate level of training required by each agency based on existing emergency response plans and procedures. Specialized courses will be scheduled as appropriate. All newly assigned emergency response personnel will receive training within one year of assignment.

FIGURE 15-1
LEVELS OF INSTRUCTION NEEDED FOR RISK & HOST COUNTY PERSONNEL

PERSONNEL	LEVEL I	LEVEL II	LEVEL III									
			DIRECTION AND CONTROL	ALERT NOTIFICATION AND COMMUNICATIONS	ACCIDENT ASSESSMENT	TRANSPORTATION	RECEPTION AND CARE	MONITORING AND	RADIATION EXPOSURE CONTROL	PUBLIC HEALTH AND MEDICAL	INGESTION PATHWAY	PUBLIC INFORMATION
Fire	X	X		X				X				
Ambulance & Emergency Medical Sevices	X	X						X	X	X		
Sheriff & Police	X	X		X					X			
County Commission *	X											
American Red Cross Chapter *	X						X					
Hospital(s) *	X							X	X	X		
County Emergency Management	X	X	X	X	X			X	X		X	X
County Health Department *	X							X	X	X	X	
County Agriculture Agent(s) *	X								X		X	X
Public Works *	X							X	X			
County/City Marine Law Enforcement *	X	X		X					X			
County Public Information Officer *	X	X										X
County Engineer *	X											
Emergency Operations Center Staff	X	X										
City Council(s) *	X											
School Administration *	X	X		X		X						

* These groups will receive training if a training opportunity is identified and available. The training program will then be tailored to the specific needs of the group.

FIGURE 15-2
LEVELS OF INSTRUCTION NEEDED FOR STATE PERSONNEL

PERSONNEL	LEVEL I	LEVEL II	LEVEL III									
			DIRECTION AND CONTROL	ALERT NOTIFICATION AND COMMUNICATIONS	ACCIDENT ASSESSMENT	TRANSPORTATION	RECEPTION AND CARE	MONITORING AND	RADIATION EXPOSURE CONTROL	PUBLIC HEALTH AND MEDICAL	INGESTION PATHWAY	PUBLIC INFORMATION
FL Department of Health (ESF-8) Headquarters	X	X										
Bureau of Radiation Control	X	X	X	X	X			X	X	X	X	X
DOH District Offices	X	X										
FL Department of Law Enforcement (ESF 16)	X	X		X					X		X	
Florida Highway Patrol (ESF 16)	X	X		X					X		X	
Florida Fish and Wildlife Conservation Commission (ESF 16)	X	X		X					X		X	
FL Department of Environmental Protection (ESF 10)	X	X							X		X	
FL Department of Agriculture and Consumer Services (ESF 11 and 17)	X	X							X		X	
FL Department of Transportation (ESF 1 and 3)	X	X				X			X			
FL Division of Emergency Management	X	X	X	X							X	X
FL ESF Emergency Coordinating Officers	X											
American Red Cross (ESF 6)	X	X					X					
Civil Air Patrol (ESF 1)	X											
Florida National Guard *	X											
United States Coast Guard *	X											

* These groups will receive training if a training opportunity is identified and available. The training program will then be tailored to the specific needs of the group.

FIGURE 15-3
LEVELS OF INSTRUCTION NEEDED FOR INGESTION COUNTY PERSONNEL

	Plant & Plan Orientation	Radiological Orientation
County Emergency Management *	X	X
County / Regional Agriculture Agent(s) *	X	X
Emergency Operation Center Staff *	X	X
Fire **	X	X
Ambulance / Emergency Medical **	X	X
Sheriff / Police *	X	X
Hospital(s) **	X	X
County Commission **	X	
County Health Department **	X	
County Public Information Officer **	X	
American Red Cross Chapter **	X	
Public Works **	X	

* Curriculum will be tailored to the need of the agency/personnel being trained

** These groups will receive training if a training opportunity is identified and available. The training program will then be tailored to the specific needs of the group.