



Final Exercise Report

Turkey Point Nuclear Power Plant

Licensee: Florida Power and Light

Exercise Date: February 19,2003

Report Date: May 2,2003

**FEDERAL EMERGENCY MANAGEMENT AGENCY
REGION IV**

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TABLE OF CONTENTS

	Page
I. EXECUTIVE SUMMARY	1
II. INTRODUCTION.....	2
III. EXERCISE OVERVIEW	4
A. Plume EPZ Description	4
B. Exercise Participants	4
C. Exercise Timeline	5
IV. EXERCISE EVALUATION AND RESULTS	7
A. Summary Results of Exercise Evaluation - Table 2	7
B. Status of Jurisdictions Evaluated	7
I. STATE OF FLORIDA	10
1.1 State Emergency Operations Center	10
1.2 Forward State Emergency Response Team	10
1.3 Emergency News Center	11
1.4 Dose Assessment/Emergency Operations Facility	11
2. RISK JURISDICTIONS.....	12
2.1 MIAMI-DADE COUNTY	13
2.1.1 Emergency Operations Center	13
2.1.2 LP-I Radio Station.....	14
2.1.3 Protective Actions for Schools.....	14
2.1.4 Reception Center	15
2.1.5 Congregate Care	15
2.1.6 Public Access Areas	16
2.1.7 Traffic Control Points.....	B7
2.1.8 Emergency Worker Decontamination	17
2.1.9 Medical Service Drill (MS-I).....	18

2.2	MONROE COUNTY	18
2.2.1	Emergency Operations Center	18
2.2.2	Traffic Control Points	20
2.2.3	Ocean Reef Route Alerting	20
2.2.4	Emergency Worker Decontamination	21
2.2.5	Reception and Congregate Care.....	21
3.	SUMMARY OF AREAS REQUIRING CORRECTIVE ACTION	23
3.1	2003 ARCAs ISSUED	23
3.1.1	66-03-5.a.1-A-01 Risk Jurisdictions.....	23
3.1.2	66-03-5.a.1-A-02 Miami-Dade County EOC	24
3.1.3	66-03-5.b.1-A-03 Public Access Areas	25
3.1.4	66-03-5.a.1-A-04 Monroe County EOC	25

List of Appendices

APPENDIX 1	ACRONYMS AND ABBREVIATIONS	27
APPENDIX 2	EXERCISE EVALUATORS.....	29
APPENDIX 3	EXERCISE CRITERIA AND EXTENT-OF-PLAY AGREEMENT.....	31
APPENDIX 4	EXERCISE SCENARIO.....	32

List of Tables

Table 1 -	Exercise Timeline	6
Table 2 -	Summary of Exercise Evaluation.....	9

I. EXECUTIVE SUMMARY

On February 19, 2003, the Federal Emergency Management Agency (FEMA), Region IV, conducted a partial participation plume exposure pathway exercise in the emergency planning zone (EPZ) around the Turkey Point Nuclear Power Plant. The purpose of the exercise **was** to assess the level of State and local preparedness in responding to a radiological emergency. This exercise was conducted in accordance with FEMA's policies and guidance concerning the exercise of State and local radiological emergency response plans and procedures.

The previous exercise at this site was conducted on February 21, 2001. The qualifying emergency preparedness exercise was conducted on February 10, 11 and 12, 1982.

FEMA wishes to acknowledge the efforts of the many individuals who participated in this exercise. **The** State of Florida, **Risk** Counties of **Miami-Dade** and Monroe, and the Community of Ocean Reef participated in the Turkey Point Exercise. Protecting the public health and safety is the full-time job of some of the exercise participants and an assigned responsibility **for** others. Still others have willingly sought this responsibility by volunteering to provide vital emergency services to their communities. Cooperation **and** teamwork of all the participants were evident during this exercise.

The State and local organizations, except where noted, demonstrated knowledge of their emergency response plans and procedures and adequately implemented them. No Deficiencies were identified during this exercise; however, there were four Areas Requiring Corrective Action (ARCA) identified during this exercise. One **ARCA** regarded the **timeliness** of activation of the public alert and notification system. Two **ARCAs** concerned the fact that the **initial EAS** messages did not include the minimum information specified in the September 12, 2001 Federal Register Notice. The fourth **ARCA** was issued to Miami-Dade due to the signage in **some** of the parks in the County.

II. INTRODUCTION

On December 7, 1979, the President directed FEMA to assume the lead responsibility for all offsite nuclear planning and response. FEMA's activities are conducted pursuant to **43** Code of Federal Regulations (CFR) Parts 350,451 and 352. These regulations are a key element in the Radiological Emergency Preparedness (REP) Program that was established following the Three Mile Island Nuclear Station accident in March 1979.

FEMA Rule 44 CFR 350 establishes the policies and procedures **for** FEMA's initial and continued approval of State and local governments' radiological emergency planning and preparedness for commercial nuclear power plants. This approval is contingent, in part, on State and local government participation in joint exercises with licensees.

FEMA's responsibilities in radiological emergency planning for fixed nuclear facilities include the following:

- Taking the lead in offsite emergency planning and in the review and evaluation of radiological emergency response plans (RERP) and procedures developed by State and local governments;
- Determining whether such **plans** and procedures can be implemented on the basis of observation and evaluation of exercises of the plans and procedures conducted by State and local governments;
- Responding to requests by the NRC pursuant to the Memorandum of Understanding between the NRC and FEMA (Federal Register, Vol. 58, No. 176, September 14, 1993).
- Coordinating the activities of Federal agencies with responsibilities in the radiological emergency planning process:
 - Department of Commerce
 - Nuclear Regulatory Commission
 - Environmental Protection Agency
 - Department of Energy
 - Department of Health and Human Services
 - Department of Transportation
 - Department of Agriculture
 - Department of the Interior, and
 - U.S. Food and Drug Administration

Representatives of these agencies serve on the FEMA Region IV Regional Assistance Committee (RAC) which is chaired by FEMA.

Formal submission of the RERPs for the Turkey Point Nuclear Power Plant to FEMA Region IV was accomplished by the State of Florida on August 26, 1983. Formal approval of these RERPs was granted by FEMA on February 15, 1984, under 44 CFR 350.

A partial participation plume exposure pathway exercise was conducted on February 19, 2003, by FEMA Region IV to assess the capabilities of State and local emergency preparedness organizations in implementing their RERPs and procedures to protect the public health and safety during a radiological emergency involving the Turkey Point Nuclear Power Plant. The purpose of this report is to present the exercise results and findings on the performance of the offsite response organizations (ORO) during a simulated radiological emergency.

The findings presented are based on the evaluations of the Federal evaluator team, with final determinations being made by the Chief Evaluator and the Co-RAC Chairperson, and approved by the Regional Director.

The criteria utilized in the FEMA evaluation process are contained in:

- NUREG-0654/FEMA-REP-1, Rev. 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," November 1980;
- FEMA- "Areas of Evaluation Methodology," April 25, 2002.

Section III of this report, entitled "Exercise Overview," presents basic information and data relevant to the exercise. This section of the report contains a description of the plume pathway EPZ, a listing of all participating jurisdictions and functional entities which were evaluated, and a tabular presentation of the time of actual occurrence of key exercise events and activities.

Section IV of this report, entitled "Exercise Evaluation and Results," presents detailed information on the demonstration of applicable exercise criteria at each jurisdiction or functional entity evaluated in a jurisdiction-based, issues-only format. This section also contains: (1) descriptions of all Deficiencies and ARCAs assessed during this exercise, recommended corrective actions, and the State and local governments' response, and (2) descriptions of ARCAs assessed during previous exercises and the status of the OROs' efforts to resolve them

III. EXERCISE OVERVIEW

Contained in this section are data and basic information relevant to the February 19, 2003 exercise to test the offsite emergency response capabilities in the area surrounding the Turkey Point Nuclear Power Plant.

A. Plume EPZ Description

The Turkey Point Nuclear Power Plant is owned and operated by Florida Power and Light Company (FP&L). The plant is located in south Florida, southeast of the City of Homestead in Miami-Dade County. Parts of Miami-Dade and Monroe Counties lie within the 10-mile EPZ.

The 10-mile EPZ population is approximately 140,000 residents, mainly north and northwest of the plant. A small portion of Monroe County is included in the EPZ and includes the private resort community known as Ocean Reef, which is an exception area and has primary notification by route alerting. The land use of the EPZ consists mainly of agricultural and light industrial use. Portions of the cities of Homestead and Florida City are within the 10-mile EPZ. In addition, the Homestead Motorsports Complex and numerous public parks and recreational areas along the coast are within the 10-mile EPZ.

B. Exercise Participants

The following agencies, organizations, and units of government participated in the Turkey Point Nuclear Power Plant exercise on February 19, 2003.

STATE OF FLORIDA

Division of Emergency Management
Department of Transportation
Department of Public Safety
Department of Health, Bureau of Radiation Control

RISK JURISDICTIONS

Miami-Dade County
Monroe County

PRIVATE VOLUNTEER ORGANIZATIONS

American Red Cross
Key Largo Volunteer Fire Department
Tavernier Volunteer Fire Department
Mercy Hospital

C. Exercise Timeline

Table 1, on **the** following page, presents the time at which key events and activities occurred during the Turkey Point Nuclear Power Plant exercise on February 19, **2003**.

Table 1. Exercise Timeline

DATE AND SITE: February 19, 2003 - Turkey Point Nuclear Power Plant

Emergency Classification Level or Event	Time Utility Declared	Time That Notification Was Received or Action Was Taken					
		SEOC	F-SERT	DOSE	ENC	MIAMI-DADE COUNTY	MONROE COUNTY
Unusual Event	0906	0919				0919	0919
Alert	0947	0959		0947		0959	0959
Site Area Emergency	1112	1117	1214	1112	1121	1116	1118
General Emergency	1220	1235	1222	1220	1225	1235	1232
Simulated Rad. Release Started	1112	1235	1112	1215	1227	1240	1235
Simulated Rad. Release Terminated				1315		1315	
Facility Declared Operational		1010	1220		1050	1140	1120
Declaration of State of Emergency		1303	1303			1214	1200
Exercise Terminated		1500	1447	1500	1500	1449	1447
Early Precautionary Actions: Evacuate Schools Stay Tuned Message Close Parks within 2 mile EPZ Relocate Special Needs Population						0959 1135 1224	1049
1st Protective Action Decision: Stay Tuned						1100	No Concurrence
1st Siren Activation: Ocean Reef Route Alerting						1112	1135
1st EAS Message						1110	1145
2nd Protective Action Decision: Stay Tuned						1211	1211
2nd Siren Activation: Ocean Reef Route Alerting						1214	1238
2nd EAS Message Stay Tuned						1216	1238
3rd Protective Action Decision: Evacuate Zones: 2 mile radius and 1, 2, 3, & 4 Shelter Zones: 6, 7, 8 & 9						1300	1300
3rd Siren Activation						1338	
3rd EAS Message						1338	1338
MI Administration Decision: DRC State workers to Ingest Issue only			1315				1412

9

IV. EXERCISE EVALUATION AND RESULTS

Contained in this section **are the** results and findings of **the** evaluation of all jurisdictions and functional entities, which participated in the February 19, 2003, exercise to test the offsite emergency response capabilities of State and local governments in the 10-mile EPZ around the Turkey Point Nuclear Power Plant.

Each jurisdiction and *functional* entity was evaluated on the basis of its demonstration of criteria delineated in exercise criteria contained in "Evaluation Area Methodology," dated April 25, 2002. Detailed information **on** the exercise criteria and the extent-of-play agreement used in this exercise are found in Appendix 3 of this report.

A. Summary Results of Exercise Evaluation - Table 2

The matrix in Table 2, presents the status of all criteria scheduled **for** demonstration during this exercise, by all participating jurisdictions and functional entities. Exercise criterion is listed by number. The demonstration status of those criteria is indicated by the use **of** the following letters:

- M - Met (No Deficiency **or** ARCAs assessed and no unresolved ARCAs from **prior** exercises)
- D - Deficiency **assessed**
- A - ARCA(s) **assessed** or unresolved ARCA(s) from prior exercise(s)
- N - Not Demonstrated (Reason explained in Subsection B)

B. Status of Jurisdictions Evaluated

This subsection provides information on the evaluation of each participating jurisdiction **and** functional entity, in a jurisdiction based, issues only format. Presented **below is a** definition of the terms used in this subsection relative to objective demonstration status.

- **Met - Listing** of the demonstrated exercise criterion under which **no** Deficiencies or ARCAs were assessed during this exercise and under which no ARCAs assessed during prior exercises remain **unresolved**.
- **Deficiency - Listing** of the demonstrated exercise criterion under which **one** or more Deficiencies was **assessed** during this exercise. Included is a description of each Deficiency and **recommended** corrective actions.
- **Area Requiring Corrective Actions - Listing** of the demonstrated exercise criterion under which one or more ARCAs were assessed during the current exercise or ARCAs assessed during prior exercises **that** remain unresolved.

Included is a description of the ARCAs assessed during this exercise and the recommended corrective action to be demonstrated before or during the next biennial exercise.

- **Not Demonstrated** - Listing of the exercise criterion not demonstrated as scheduled during this exercise and the reason they were not demonstrated.
- **Prior ARCAs - Resolved - Descriptions** of ARCAs assessed during previous exercises which were resolved in this exercise and the corrective actions demonstrated.
- **Prior ARCAs - Unresolved** - Descriptions of ARCAs assessed during prior exercises which were not resolved in this exercise. Included is the reason the ARCA remains unresolved and recommended corrective actions to be demonstrated before or during the next biennial exercise.

The following are definitions of the two types of exercise issues, which could be discussed in this report.

- **A Deficiency** is defined in FEMA-REP-14 as "...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 in the event of a radiological emergency to protect the health and safety of the public living in the vicinity of a nuclear power plant."
- An **ARCA** is defined in FEMA-REP-14 as "...an observed or identified inadequacy of organizational performance in an exercise that is not considered, by itself, to adversely impact public health and safety."

TABLE 2. Summary of Exercise Evaluation

DATE AND SITE: February 19,2003 - Turkey Point Nuclear Power Plant

ELEMENT/Sub-Element	SEOC	F-SERT	DOSE /EOF	ENC	MIAMI-DADE COUNTY	MONROE COUNTY
1. EMERGENCY OPERATIONS MANAGEMENT						
1.a.1. Mobilization	M	M		M	M	M
1.b.1. Facilities		M	M	M	M	M
1.c.1. Direction and Control	M	M			M	M
1.d.1. Communications Equipment	M	M	M	M	M	M
1.e.1. Equipment & Supplies to Support Operations	M	M	M	M	M	M
2. PROTECTIVE ACTION DECISION MAKING						
2.a.1. Emergency Worker Exposure Control		M	M		M	M
2.b.1. Rad Assessment & PARs & PADs Based on Available Information		M	M		M	M
2.b.2. Rad Assessment and PARs and PADs for the General Public		M	M		M	M
2.c.1. Protective Action Decisions for Special Populations					M	M
2.d.1. Rad Assessment & Decision Making for Ingestion Exposure						
2.e.1. Rad Assessment & Decision Making for Relocation, Re-entry & Return						
3. PROTECTIVE ACTION IMPLEMENTATION						
3.a.1. Implementation of Emergency Worker Control		M			M	M
3.b.1. Implementation of KI Decisions		M			M	M
3.c.1. Implementation of PADs for Special Populations					M	M
3.c.2. Implementation of PADs for Schools					M	
3.d.1. Implementation of Traffic and Access Control					M	M
3.d.2. Impediments to Evacuation and Traffic and Access Control					M	M
3.e.1. Implementation of Ingestion Decisions Using Adequate Info						
3.e.2. Implementation of IP Decisions Showing Strategies and Instructional Materials						
3.f.1. Implementation of Relocation, Re-entry and Return Decisions						
4. FIELD MEASUREMENT and ANALYSIS						
4.a.1. Plume Phase Field Measurement & Analysis Equipment						
4.a.2. Plume Phase Field Measurement & Analysis Management						
4.a.3. Plume Phase Field Measurements & Analysis Procedures						
4.b.1. Post Plume Field Measurement & Analysis						
4.b.2. Laboratory Operations						
5. EMERGENCY NOTIFICATION & PUBLIC INFO						
5.a.1. Activation of Prompt Alert and Notification		M			2A*	2A*
5.a.2. Activation of Prompt Alert and Notification 15 Minute (Fast Breaker)						
5.a.3. Activation of Prompt Alert and Notification Backup Alert and Notification					M	M
5.b.1. Emergency Info and Instructions for the Public and the Media		M		M	A	M
6. SUPPORT OPERATIONS/FACILITIES						
6.a.1. Monitoring and Decon of Evacuees and EWs and Registration of Evacuees					M	M
6.b.1. Monitoring and Decon of Emergency Worker Equipment					M	M
6.c.1. Temporary Care of Evacuees					M	M
6.d.1. Transport and Treatment of Contaminated Injured Individuals					M	

LEGEND: A = ARCA M = Met D = Deficiency Blank = Not scheduled for demonstration A* = ARCA assessed to both Counties due to systemic situation and one for each County for Initial EAS message content.

1. STATE OF FLORIDA

1.1 State Emergency Operations Center

The State Emergency Operations Center (SEOC) was efficiently mobilized and staffed by over 50-personnel from essential State Emergency Support Function (ESF) agencies. It was declared operational at 1010 hours. The communications systems supporting the SEOC contain a number of redundant multi-mode networks to establish and maintain contact with Local, State, Federal, Utility, and private entities. The SEOC has a state-of-the-art computer message system, which the cadre effectively utilized to receive, assign, process, and report completion of work assignments. Direction and control of the exercise was professionally managed. The SEOC gave direction and control authority to the Forward State Emergency Response Team (F-SERT) at 1220. The Governor signed the Executive Order, declaring an emergency, at 1303 hours. Support of the emergency response by the SEOC staff continued until termination of the exercise.

- a. MET Criteria 1.a.1, 1.c.1, 1.d.1 and 1.e.1
- h. DEFICIENCY: NONE
- c. AREAS REQUIRING CORRECTIVE ACTION: NONE
- d. NOT DEMONSTRATED: NONE
- e. PRIOR ARCAs - RESOLVED: NONE
- f. PRIOR ARCAs - UNRESOLVED: NONE

1.2 Forward State Emergency Response Team

The F-SERT simulated deployment to the operational area and arrived at the Emergency Operations Facility (EOF) at 1100. Personnel rapidly established communications links and coordinated with FP&L, Miami-Dade and Monroe County representatives. The team leader conducted a conference call with the SEOC and the Counties and advised all that they would take net control at 1220. F-SERT members were proactive and demonstrated a high degree of professionalism.

- a. MET Criteria 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.1, 2.b.2, 3.a.1, 3.b.1 and 5.b.1
- b. DEFICIENCY: NONE
- c. AREAS REQUIRING CORRECTIVE ACTION: NONE
- d. NOT DEMONSTRATED: NONE

- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

1.3 Emergency News Center

The Emergency News Center (ENC) was located in the FP&L corporate offices. The media were lead through a secured stairwell to the second floor briefing room. The ENC had two functions: provide information to the media and to develop emergency alert system (EAS) messages. The process for EAS message development and approval proved cumbersome. Three media briefings were conducted. Spokespersons for the State and Counties accurately relayed information and intentions to the media.

- a. **MET: Criteria 1.a.1, 1.b.1, 1.d.1, 1.e.1 and 5.b.1.**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

1.4 Dose Assessment/Emergency Operations Facility

The utility operator's EOF is an excellent facility from which all participating response organizations can effectively manage ongoing emergency operations. Communication, coordination and the flow of technical information between the utility operator and the applicable State and local government officials were outstanding. The State staff performed independent accident analyses, to include radiological dose assessment; provided direction and control for the State radiological field monitoring teams (not evaluated), and developed appropriate protective actions consistent with the preservation of public health and safety. All State and local government officials deployed to the EOF were well trained, followed applicable procedures, and performed their respective responsibilities professionally and efficiently.

- a. **MET Criteria 1.b.1, 1.d.1, 1.e.1, 2.a.1, 2.b.1 and 2.b.2.**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**

- d. NOT DEMONSTRATED: NONE
- e. PRKOR ARCAs - RESOLVED: NONE
- f. PRIOR ARCAs - UNRESOLVED: NONE

2. RISK JURISDICTIONS

The following ARCA is being assessed as a joint ARCA between Miami-Dade and Monroe Counties because a systemic problem concerning the timeliness of the public alert and notification (A&N) system existed.

Issue No.: 66-03-5.a.1-A-01

Condition: The activities associated with the alert and notification (A&N) of the public were not timely. The first alert and notification sequence took 1 hour and 13 minutes from the time of the emergency classification level (ECL) notification by the utility to the activation of the sirens and the broadcast of the emergency alert system (EAS) message. The second A&N sequence took 58 minutes. The third A&N sequence, the protective action sequence, took 38 minutes from the time of the decision to the activation of the sirens and the broadcast of the EAS message. Miami-Dade and Monroe Counties were responsible for all activities related to the A&N sequences and for the activation of the sirens and the broadcast of the EAS message.

The undue delay with the alerting decision and EAS message reviewing procedures resulted in untimely notification of the public.

Possible Cause: The current procedures for EAS message development and approval were cumbersome and caused substantial delays in the A&N sequences. The procedures demonstrated had the County staff in the ENC workroom develop the EAS message and email them to the EOF, where an individual would carry them around to the various representatives for approval. After they were approved, the messages were faxed to the media outlets and sent back down to the workroom. Once received back in the workroom, the County representative called the EOC to have them activate the siren system. The approval process for the protective action decision EAS message took so long that the Media briefing concerning the protective actions took place slightly before the A&N sequence.

Reference: NUREG-0654, E.5; Annex A FI, CEMP [Ch. 3, Para II.A.]; [Ch. 5, Para III.]; Ch. 7, Para III, and Appendix II Turkey Point Site Plan – Para III, V. and VI.

Effect: The delay in informing the public of the emergency situation and actions to take could have resulted in unnecessary exposure and erosion of public confidence.

Recommendation: Review and revise A&N procedures to ensure that the approval process is timely (i.e. time limits are set to ensure rapid approval and prompt activation of the A&N system) and that County government maintains control of all aspects of public alert and notification.

Schedule of Corrective Actions: To be corrected prior to the next regularly scheduled Turkey Point exercise in 2005.

2.1 MIAMI-DADE COUNTY

2.1.1 Emergency Operations Center

The Assistant Director and the Operations Chief involved a competent and professional staff in the precautionary relocation of schools, evacuation, sheltering in place of the public and initiating back up route alerting when necessary. The modern emergency Operations Center (EOC) and state-of-the-art electronic equipment supported this successful emergency response operation. The issuance of EAS messages and their content need better coordination and timeliness.

- a. **MET: Criteria** 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.1, 2.b.2, 2.c.1, 3.a.1, 3.b.1, 3.c.1, and 5.b.1.
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:**

Issue No.: 66-03-5.a.1-12-02

Condition: The Miami-Dade County Office of Emergency Management (OEM) EAS Message #1 did not provide identification of the government organization and official with the authority for providing the alert signal and instructional message.

Possible Cause: The information may not have been included in the message because it was assumed that the use of Miami-Dade letterhead was sufficient identification.

Reference: Revised Guidance, dated September 12, 2001.

Effect: Without a clear statement as to who is issuing the message, the public could be confused because they would not be sure of the validity of the information.

Recommendation: Review and revise messages to ensure that they contain the minimum information required in the September 12, Federal Register notice on Emergency Alert System Messages.

Schedule of Corrective Actions: To be corrected prior to the next regularly scheduled Turkey Point exercise in 2005.

- a. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs – RESOLVED:** NONE
- f. **PRIOR ARCAs – UNRESOLVED:** NONE

2.1.2 LP-1 Radio Station

Radio Station WIOD (610 AM) was designated as the LP-1 Radio Station to be evaluated during this exercise. Discussions were held with the editors (one from each shift) on duty regarding the procedure for receiving and processing an EAS message. Both individuals were fully aware of the proper procedure and importance of the message and its contents. One message was faxed to the radio station as a test during the exercise where it was properly received and processed.

- a. **MET:** Criterion 5.a.1.
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:** NONE
- f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.1.3 Protective Actions for Schools

On January 16, 2003, joint interviews were conducted at the Miami-Dade EQC with the Safety Manager and Principals/Assistant Principals for eleven of the public schools within the 10-mile EPZ. Plans and procedures are in place for relocating and/or sheltering students in place if relocation is not an option. Individuals charged with the

responsibilities for executing plans and procedures were knowledgeable, conscientious and should be commended for doing an excellent **job**.

- a. **MET** Criterion 3.c.2.
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NQT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

2.1.4 Reception Center

Personnel from Miami-Dade Fire and Rescue provided an excellent demonstration of evacuee monitoring, decontamination and registration. Tamiami Park is a large facility providing space for all required activities. All personnel were knowledgeable of dose limits for turn back and/or call in. The registration process is done initially by Corrections Officers, followed by shelter registration by American Red Cross (ARC) volunteers. Evacuees would, if necessary, be re-located from the in-processing facility to other shelters for as long as required.

- a. **MET: Criteria 3.a.1, 6.a.1 and 6.c.1.**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

2.1.5 Congregate Care

The congregate care facilities are located in a number of the County's public schools. Specific shelters reviewed for *this* evaluation were: Felix Varela, Miami Sunset and Miami Coral Park Senior High Schools, and W. R. Thomas and Doran Middle Schools. Personnel from the ARC organize and staff the facilities and use volunteers as the primary source of manpower. The facilities were well equipped. Sufficient space and ancillary functions such as the kitchen area and sanitary facilities are available to support the

expected number of evacuees for each school. Personnel demonstrated an excellent knowledge of their requirements and duties.

- a. MET: Criterion 6.c.1
- b. DEFICLENCY: NONE
- c. AREAS REQUIRING CORRECTIVE ACTION NONE
- d. NOT DEMONSTRATED: NONE
- e. PRIOR ARCAs - RESOLVED: NONE
- f. PRIOR ARCAs - UNRESOLVED: NONE

2.1.6 Public Access Areas

The evaluator visited 21 of 50 listed public parks. Nine parks were visited in the City of Homestead. Of those nine, three (Angelo Mistretta, Blakey and Ruby George) had no signs posted, and one, (Musslewhite Park) had no signs in Spanish. Of the 12 parks visited in Miami-Dade County, one (Seminole Wayside) had no signs, one (Homestead Bayfront) did not have Spanish on all the signs and one (Modello Wayside) did not have Spanish signs. The remainder of the parks visited had both English and Spanish signs, which were clearly legible. All of the major parks where the majority of the transient population would be expected to gather were well posted.

- a. MET: Criterion NONE
- b. DEFICIENCY. NONE
- c. AREAS REQUIRING CORRECTIVE ACTION:

Issue No.: 66-03-5.b.1-A-83

Condition: Of the parks visited in the City of Homestead, Florida three (Angelo Mistretta, Blakey and Ruby George) did not have any warning signs posted for the transient population. Additionally, Musslewhite Park had no Spanish signs posted. The parks visited in Miami-Dade County had the following results: one park (Seminole Wayside) had no signs, one (Homestead Bayfront) had no Spanish on some signs and one (Modello Wayside) had no Spanish signs.

Possible Cause: Signs were not posted or were possibly *missing* due to vandalism.

Reference: Appendix II Turkey Point Site Plan – Para VIII.A. and NUREG-0654 E.7.

Effect: This could result in confusion to transients during any siren sounding and evacuation.

Recommendation: Assure adequate signage is posted and reviewed on a routine basis.

Schedule of Corrective Actions: To be corrected prior to the next regularly scheduled Turkey Point exercise in 2005.

- d. NOT DEMONSTRATED: NONE
- e. PRIOR ARCAs - RESOLVED: NONE
- f. PRIOR ARCAs - UNRESOLVED: NONE

2.1.7 Traffic Control Points

The officers interviewed were well aware of their roles and responsibilities and how to request additional equipment. The standard process to request special equipment assistance for impediments to traffic flow was also discussed. The officers were very knowledgeable of the use, limits and recording of dosimetry equipment, and to turn in the dosimetry and control sheets at end of shift. The officers understood their responsibilities, followed their instructions, provided correct information, were professional and displayed a positive attitude.

- a. MET Criteria 3.a.1, 3.d.1 and 3.d.2.
- b. DEFICIENCY: NONE
- c. AREAS REQUIRING CORRECTIVE ACTION: NONE
- d. NOT DEMONSTRATED: NONE
- e. PRIOR ARCAs - RESOLVED: NONE
- f. PRIOR ARCAs - UNRESOLVED: NONE

2.1.8 Emergency Worker Decontamination

Miami-Dade Fire and Rescue staff effectively demonstrated monitoring and decontamination of emergency worker vehicles. Emergency workers demonstrated this activity using required personal protective equipment (PPE), as well as decontamination

and monitoring equipment. CDV-700 pancake probes were used for effective monitoring of vehicles. Individuals should be commended for their performance and teamwork.

- a. **MET: Criteria 3.a.1, 6.a.1 and 6.b.1.**
- b. **DEFICIENCY NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION. NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs – RESOLVED: NONE**
- f. **PRIOR ARCAs – UNRESOLVED: NONE**

2.1.9 Medical Service Drill (MS-1)

A medical service drill was held on November 11, 2002 at Mercy Hospital. The paramedic and Emergency Medical Technicians (EMT) were from Miami-Dade Fire/Rescue, wore appropriate PPE and had dosimetry. The hospital and emergency room were prepared for the patient. Appropriate dosimetry readings were taken and recorded and measures were taken for the prevention of cross contamination both with the ambulance and crew and within the hospital emergency room. All personnel performed their duties well and teamwork was evident. Exit procedures were demonstrated in an efficient and professional manner with staff inside the hot zone helping those exiting where necessary.

- a. **MET: Criteria 3.a.1 and 6.d.1.**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUWNG CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- E. **PRIOR ARCAs - UNRESOLVED: NONE**

2.2 MONROE COUNTY

2.2.1 Emergency Operations Center

The Operations Chief effectively managed the EOC. Frequent briefings and updates were held throughout the exercise. Key agency leaders participated in the exercise at the EOC

and via telephone from the EOF. The Emergency Management Director discussed protective action recommendations (PAR) and decisions with County leadership at the EOF, and with the Emergency Management Director at the Miami-Dade EOC. Calls were received by rumor control and rumors were reconciled. The facility was small, however, necessary equipment to include communications and supplies were available to support the exercise. Security was provided by the Key Largo Sheriff's Office.

a. MET: Criteria 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.1, 2.b.2, 2.c.1, 3.a.1, 3.b.1, 3.c.1, 5.a.3 and 5.b.1.

b. DEFICIENCY: NONE

c. AREAS REQUIRING CORRECTIVE ACTION:

Issue No.: 66-03-5.a.1-A-04

Condition: The Monroe County Emergency Management EAS Message # 1 did not provide:

1. Authority issuing the message.
2. A statement that an emergency exists at *the* plant.
3. Reference to Radiological Emergency Preparedness specific emergency information (e.g. brochures and information in telephone books) for use by the public during an emergency.
4. A closing statement to stay tuned for additional information or that the population tune to another station for additional information.

Possible Cause: The information may not have been included in the message because it was assumed that the public was in no immediate danger and Monroe County was identified in the message.

Reference: Revised Guidance dated September 12, 2001.

Effect: Without a clear statement as to who is issuing the message, reference material and stay tuned messages, the public could be confused because they would not be sure of the validity of the information.

Recommendation: Review and revise all messages to insure that they contain the minimum information required in the September 12, Federal Register notice on Emergency Alert System Messages.

Schedule of Corrective Actions: To be corrected prior to the next regularly scheduled Turkey Point exercise in 2005.

d. NOT DEMONSTRATED NONE

- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

2.2.2 Traffic Control Points

The County Sheriff's Deputy successfully demonstrated traffic control points (TCP) during an interview. The Deputy was knowledgeable of the duties and requirements of traffic control including the standard process to request equipment (tow-truck, wrecker or other special equipment) assistance to vehicles that break down or other impediments to traffic flow. The Deputy was knowledgeable of dosimetry use, limits, recording methods, and end of shift turn in requirements. The Deputy understood the responsibilities, provided correct information, was professional and displayed a positive attitude.

- a. **MET: Criteria 3.a.1, 3.d.1 and 3.d.2.**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- E. **PRIOR ARCAs - UNRESOLVED: NONE**

2.2.3 Ocean Reef Route Alerting

At 1145, Public Safety personnel were dispatched to conduct route alerting in zones 9 through 14. The Public Safety Officer drove through each of the six zones and simulated reading a pre-scripted message over the vehicle's public address system alerting the residents to a SAE at Turkey Point and instructing them to monitor their radio or the Ocean Reef Community television station. The Public Safety Officer was equipped with dosimetry, thermoluminescent dosimetry (TLD) and potassium iodine (KI). He demonstrated knowledge of his dosimetry and the record keeping requirements, for his dosimeter and KI. The officer was knowledgeable of check times, call-in, and turn back values for the self-reading dosimeters.

- a. **MET: Criteria 1.d.1, 1.e.1, 3.a.1 and 5.a.3.**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**

- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

23.4 Emergency Worker Decontamination

Key Largo Volunteer Fire Department and Tavernier Volunteer Fire and Rescue staffs effectively demonstrated monitoring and decontamination of emergency workers and their vehicles. Command and control was excellent with no clarification **needed** when directions were given. Emergency workers demonstrated this activity using required PPE, as well as appropriate decontamination and monitoring equipment. CDV-700 pancake probes were used for effective monitoring of vehicles. Personnel interviewed were knowledgeable of KI; how it would be issued, and how to complete the required documentation. Participants should be commended for their performance and teamwork.

- a. **MET: Criteria 3.a.1, 6.a.1 and 6.b.1.**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs- RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

2.2.5 Reception and Congregate Care

Reception and congregate care activities were demonstrated at Key Largo Elementary School. Fire and ambulance personnel from the Key Largo Volunteer Fire Department demonstrated monitoring and decontamination of evacuees and the ARC was on hand to register evacuees and manage congregate care functions. Emergency workers demonstrated proper monitoring techniques and knowledge of their dosimetry, and KI. ARC personnel had all equipment necessary to register and shelter evacuees. All personnel participating in the exercise were knowledgeable of and enthusiastic about their roles and responsibilities.

- a. **MET: Criteria 3.a.1, 6.a.1 and 6.c.1**
- b. **DEFICIENCY: NONE**

- c. AREAS REQUIRING CORRECTIVE ACTION NONE**
- d. NOT DEMONSTRATED: NONE**
- e. PRIOR ARCAs - RESOLVED: NONE**
- f. PRIOR ARCAs - UNRESOLVED: NONE**

3. SUMMARY OF AREAS REQUIRING CORRECTIVE ACTION

3.1 2003 ARCAs ISSUED

3.1.1 66-03-5.a.1-A-01 Risk Jurisdictions

Condition: The activities associated with the alert and notification (A&N) of the public were not timely. The first alert and notification sequence took 1 hour and **13** minutes from the time of the emergency classification level notification (ECL) by the utility to the activation of the sirens and the broadcast of the emergency alert system (EAS) message. The second A&N sequence took 58 minutes. The third A&N sequence, the protective action sequence, took **38** minutes from the time of the decision to the activation of the sirens and the broadcast of the EAS message. Miami-Dade and Monroe Counties were responsible for all activities related to the A&N sequences and for the activation of the sirens and the broadcast of the EAS message.

The undue delay with the alerting decision and EAS message reviewing procedures resulted in untimely notification of the public.

Possible Cause: The current procedures for EAS message development and approval were cumbersome and caused substantial delays in the A&N sequences. The procedures demonstrated had the County staff in the ENC workroom develop the EAS message and email them to the EOF, where an individual would carry them around to the various representatives for approval. After they were approved, the messages were faxed to the media outlets and sent back down to the **workroom**. Once received back in the workroom, the County representative called the EOC to have them activate the siren system. The approval process for the protective action decision EAS message took so long that the Media briefing concerning the protective actions took place slightly before the A&N sequence.

Reference: NUKEG-0654, E.5; Annex A FL CEMP [Ch. 3, Para II.A;] [Ch. 5, Para III;] Ch. 7, Para III,

and Appendix II Turkey Point Site Plan – Para III, V. and VI.

Effect: The delay in informing the public of the emergency situation and actions to take could have resulted in unnecessary exposure and erosion of public confidence.

Recommendation: Review and revise A&N procedures to ensure that the approval process is timely (i.e. time limits are set to ensure rapid approval and prompt activation of the A&N system) and that County government maintains control of all aspects of public alert and notification.

Schedule of Corrective Actions: To be corrected prior to the next regularly scheduled Turkey Point exercise in 2005.

3.1.2 66-03-5.a.1-A-02
Miami Dade County
EOC

Condition: The Miami-Dade County Office of Emergency Management (OEM) EAS Message #1 did not provide identification of the government organization and official with the authority for providing the alert signal and instructional message.

Possible Cause: The information may not have been included in the message because it was assumed that the use of Miami-Dade letterhead was sufficient identification.

Reference: Revised Guidance, dated September 12, 2001.

Effect: Without a clear statement as to who is issuing the message, the public could be confused because they would not be sure of the validity of the information.

Recommendation: Review and revise messages to ensure that they contain the minimum information required in the September 12, Federal Register notice on Emergency Alert System Messages.

Schedule of Corrective Actions: To be corrected prior to the next regularly scheduled Turkey Point exercise in 2005.

**3.1.3 66-03-5.b.1-A-03
Public Access Areas**

Condition: Of the parks visited in the City of Homestead, Florida three (Angelo Mistretta, Blakey and Ruby George) did not have any warning signs posted for the transient population. Additionally, Musslewhite Park had no Spanish signs posted. The parks visited in Miami-Dade County had the following results: one park (Seminole Wayside) had no signs, one (Homestead Bayfront) had no Spanish on some signs and one (Modello Wayside) had no Spanish signs.

Possible Cause: Signs were not posted or were possibly missing due to vandalism.

Reference: Appendix II Turkey Point Site Plan – Para VIII.A. and NUREG-0654 E.7.

Effect: This could result in confusion to transients during any siren sounding and evacuation.

Recommendation: Assure adequate signage is posted and reviewed on a routine basis.

Schedule of Corrective Actions: To be corrected prior to the next regularly scheduled Turkey Point exercise in 2005.

**3.1.4 66-03-5.a.1-A-04
Monroe County
EOC**

Condition: The Monroe County Emergency Management EAS Message # 1 did not provide:

1. Authority issuing the message.
2. A statement that an emergency exists at the plant.
3. Reference to Radiological Emergency Preparedness specific emergency information (e.g. brochures and information in telephone books) for use by the public during an emergency.
4. A closing statement to stay tuned for

additional information or **that** the population tune to another station for additional information.

Possible Cause: The information **may** not have been included in the message because it was assumed **that** the public **was in** no immediate danger and Monroe County was identified in the message.

Reference: Revised Guidance dated September 12, 2001.

Effect: Without a clear statement **as** to who is **issuing the** message, reference material and stay tuned messages, the public could be confused because they would not be sure of the validity to the information.

Recommendation: Review **and** revise all messages to insure that they contain the **minimum** information required in the September 12, Federal Register notice on Emergency Alert **System** Messages.

Schedule of Corrective Actions: To be corrected **prior to** the next regularly scheduled Turkey Point exercise in 2005.

APPENDIX 1

ACRONYMS AND ABBREVIATIONS

The **following** is a list of the acronyms and abbreviations, which may have been used in this report.

A&N	Alert and Notification
ARC	American Red Cross
ARCA	Area Requiring Corrective Action
CFR	Code of Federal Regulations
DEM	Division of Emergency Management
EAS	Emergency Alert System
ECL	Emergency Classification Level
EMT	Emergency Material Technician
ENC	Emergency News Center
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
EPZ	Emergency Planning Zone
ESF	Emergency Support Function
FEMA	Federal Emergency Management Agency
FP&L	Florida Power & Light Company
F-SERT	Forward-State Emergency Response Team
GE	General Emergency
KI	Potassium Iodide
NUREG-0654	NUREG-0654/FEMA-REP-1, Rev. 1, <i>"Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants. November 1980"</i>
OEM	Office of Emergency Management
ORO	Offsite Response Organization
FAD	Protective Action Decision
PAR	Protective Action Recommendation
PIO	Public Information Officer
PPE	Personal Protective Equipment
RAC	Regional Assistance Committee
REP	Radiological Emergency Preparedness

RERP	Radiological Emergency Response Plan
SAE	Site Area Emergency
SEOC	State Emergency Operations Center
TCP	Traffic Control Point
TLD	Thermoluminescent Dosimeter

APPENDIX 2

EXERCISE EVALUATORS

The following is a list of the personnel who evaluated the Turkey Point Nuclear Power Plant exercise on February 19, 2003. The organization represented by each evaluator is abbreviated below.

EPA	- Environmental Protection Agency
FDA	- Food and Drug Administration
FEMA	- Federal Emergency Management Agency
ICF	- ICF Consulting, Incorporated
NRC	- Nuclear Regulatory Commission
USCG	- United States Coast Guard

Thomas E. Reynolds Co-RAC chairman

<u>EVALUATION SITE</u>	<u>EVALUATOR</u>	<u>ORGANIZATION</u>
Chief Evaluator	Helen Wilgus	FEMA

STATE OF FLORIDA

State Emergency Operations Center	Henry Christainsen	ICF
Forward State Emerg. Response Team	Helen Wilgus	FEMA
	Bill Larrabee	ICF
Emergency News Center	Larry Robertson	FEMA
	Rosemary Samsel	ICF
Dose Assessment/ Emergency Operations Center	Robert Trojanowski	NRC

MIAMI-DADE COUNTY

Emergency Operations Center	Robert Perdue	FEMA
	Tom Trout	FDA
Protective Action for Schools	Eddie Hickman	FEMA
Reception Center	Alejandro Fernandez	ICF
	Roy Smith	ICF

<u>EVALUATION SITE</u>	<u>EVALUATOR</u>	<u>ORGANIZATION</u>
Congregate Care	Doug Stutz Rosemary Samsel	ICF ICF
Public Access	Rick Button	EPA
LP-1 Radio Station	Doug Stutz	ICF
Emergency Worker Decontamination	Eddie Hickman Roy Smith	FEMA ICF
Traffic Control Points	Roy Smith	ICF

MONROE COUNTY

Emergency Operations Center	Eddie Hickman	FEMA
Reception and Congregate Care	Joseph Canoles	FEMA
Emergency Worker Decontamination	Helen Wilgus Tom Reynolds	FEMA FEMA
Traffic Control Points	Helen Wilgus	FEMA
Ocean Reef Route Alerting	Joseph Canoles	FEMA

APPENDIX 3

EXERCISE CRITERIA AND EXTENT-OF-PLAY AGREEMENT

Because the exercise criteria are intended for use at all nuclear power plant sites and because of variations among offsite plans and procedures, an extent-of-play agreement is prepared by the State and approved by FEMA to provide evaluators with guidance on expected actual demonstration of the criteria.

A. Exercise Criteria

Attached is the specific radiological emergency preparedness criteria scheduled for demonstration during this exercise.

B. Extent-of-Play Agreement

The extent-of-play agreement on the following pages was submitted by the State of Florida and approved by FEMA Region IV in preparation for the Turkey Point Nuclear Power Plant exercise on February 19, 2003.

(Final Report Only)

1. EMERGENCY OPERATIONS MANAGEMENT

1.a – Mobilization:

Criterion 1.a.1: OROs use effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner. (NUREG-0654, A.4; D.3, 4; E.1, 2; H.4)

Extent of Play

Responsible OROs should demonstrate the capability to receive notification of an emergency situation from the licensee, verify the notification, and contact, alert, and mobilize key emergency personnel in a timely manner. Responsible OROs should demonstrate the activation of facilities for immediate use by mobilized personnel when they arrive to begin emergency operations. Activation of facilities should be completed in accordance with the plan and/or procedures. Pre-positioning of emergency personnel is appropriate, in accordance with the extent-of-play agreement, at those facilities located beyond a normal commuting distance from the individual's duty location or residence. Further, pre-positioning of staff for out-of-sequence demonstrations is appropriate in accordance with the extent-of-play agreement.

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent-of-play agreement.

Miami-Dade: EOC personnel will be pre-positioned. Emergency management staff with EOF responsibilities will remain at the EOC until the activation of the EOF. Upon activation of the EOF Miami-Dade OEM will deploy appropriate staff to that facility.

Monroe: Personnel with EOC responsibilities will be pre-notified in and directed to report to the EOC at 8:00 AM on the morning of the exercise. Emergency Management staff with EOF responsibilities will assemble in the cafeteria at the FP&L Headquarters Building (where the EOF is located) until activation of the EOF. Monroe County Office of Emergency Management will deploy appropriate staff to that facility. Monroe County staff assigned to the Miami-Miami-Dade EOC will pre-deploy to that facility.

State (SEOC, FSERT, ENC):

- **SEOC:** Personnel will be in place by 9:00 AM in anticipation of the notification of a Site Area Emergency.
- **FSERT:** Will pre-position at the EOF at approximately 8:30 AM in anticipation of the EOF being declared operational
- **DOWBRC:** BRC will pre-position field teams, the mobile laboratory & the sample prep vehicle. EOF personnel will arrive within one hour after the Alert emergency classification declaration. ***For training purposes only***

1.b – Facilities:

Criterion 1.b.1: Facilities are sufficient to support the emergency response. (NUREG-0654, H.3)

Extent of Play

Facilities will only be specifically evaluated for this criterion if they are new or have substantial changes in structure or mission. Responsible OROs should demonstrate the availability of facilities that support the accomplishment of emergency operations. Some of the areas to be considered are: adequate space, furnishings, lighting, restrooms, ventilation, backup power and/or alternate facility (if required to support operations).

Facilities must be set up based on the ORO's plans and procedures and demonstrated as they would be used in an actual emergency, unless noted above or otherwise indicated in the extent-of-play agreement.

Miami-Dade: The Miami-Dade EOC will be fully activated to demonstrate this objective.

Monroe (Ocean Reef): Monroe County EOC will be fully activated to demonstrate this objective.

State (FSERT, DOSEEOF, ENC): in agreement

1.c – Direction and Control :

Criterion 1.c.1: Key personnel with leadership roles for the ORO provide direction and control to that part of the overall response effort for which they are responsible (NUREG-0654, A.1.d; A.2.a, b)

Extent of Play

Leadership personnel should demonstrate the ability to carry out essential functions of the response effort, for example: keeping the staff informed through periodic briefings and/or other means, coordinating with other appropriate OROs, and ensuring completion of requirements and requests

All activities associated with direction and control must be performed based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless otherwise noted above or indicated in the extent-of-play agreement.

Miami-Dade: Miami-Dade County QEM will assume control of local operations upon activation of the EOC. Local response will be coordinated from the EOC. Protective Action Decisions and county wide emergency response policy determinations will be made at the EQF.

Monroe: Monroe County Office of Emergency Management will assume control of local operations upon activation of the EOC. Local response will be coordinated from the EOC. Protective action decisions and countywide emergency response policy determinations will be made at the EOF.

State (SEOC, FSERT): In Agreement

1.d – Communications Equipment:

Criterion 1.d.1: At least two communication systems are available, at least one operates properly, and communication links are established and maintained with appropriate locations. Communications capabilities are managed in support of emergency operations. (NUREG-0654, F.1, 2)

Extent of Play

OROs will demonstrate that a primary and at least one backup system are fully functional at the beginning of an exercise. If a communications system or systems are not functional, but exercise performance is not affected, no exercise issue will be assessed.

Communications equipment and procedures for facilities and field units should be used as needed for the transmission and receipt of exercise messages. **All** facilities and field team should have the capability to access at least one communication system that is independent of the commercial telephone system. Responsible OROs should demonstrate the capability to manage the communication systems and ensure that all message traffic is handled without delays that might disrupt the conduct of emergency operations. OROs should ensure that a coordinated communication link for fixed and mobile medical support facilities exists. The specific communications capabilities of OROs should be commensurate with that specified in the response plan and/or procedures. Exercise scenarios could require the failure of a communications system and the use of an alternate system, as negotiated in the extent-of-play agreement.

All activities associated with the management of communications capabilities must be demonstrated based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless otherwise noted above or in the extent-of-play agreement.

Miami-Dade: Hot Ring Down and landline telephone communications will be demonstrated as primary and back-up systems, respectively.

Monroe (Ocean Reef): Hot Ring Down and landline telephone communications will be demonstrated as primary and backup systems, respectively.

State (SEOC, FSERT, ENC): In Agreement

- **DOSE/EOF (DOH/BRC):** BRC will use communication equipment as stated in SOP 3.

1.e – Equipment and Supplies to Support Operation:

Criterion 1.e.1: Equipment, maps, displays, dosimetry, potassium iodide (KI), and other supplies are sufficient to support emergency operations. (NUREG-0654, H.7,10; J.10.a, b, e, J.11; K.3.a)

Extent of Play

Equipment within the facility (facilities) should be sufficient and consistent with the role assigned to that facility in the ORO's plans and/or procedures in support of emergency operations. Use of maps and displays is encouraged.

All instruments, should be inspected, inventoried, and operationally checked before each use. Instruments should be calibrated in accordance with the manufacturer's recommendations. Unmodified CDV-700 series instruments and other instruments without a manufacturer's recommendation should be calibrated annually. Modified

CDV-700 instruments should be calibrated in accordance with the recommendation of the modification manufacturer. A label indicating such calibration should be on each instrument or calibrated frequency can be verified by other means. Additionally, instruments being used to measure activity should have a range of readings sticker affixed to the side of the instrument. The above considerations should be included in 4.a.1 for field team equipment; 4.c.1 for radiological laboratory equipment (does not apply to analytical equipment); reception center and emergency worker facilities' equipment under 6.a.1; and ambulance and medical facilities' equipment under 6.d.1

Sufficient quantities of appropriate direct-reading and permanent record dosimetry and dosimeter chargers should be available for issuance to all categories of emergency workers that could be deployed from that facility. Appropriate direct-reading dosimetry should allow individual(s) to read the administrative reporting limits and maximum exposure limits contained in the ORO's plans and procedures.

Dosimetry should be inspected for electrical leakage at least annually and replaced, if necessary. CDV-138s, due to their documented history of electrical leakage problems, should be inspected for electrical leakage at least quarterly and replaced if necessary. This leakage testing will be verified during the exercise, through documentation submitted in the Annual Letter of Certification, and/or through a staff assistance visit.

Responsible OROs should demonstrate the capability to maintain inventories of KI sufficient for use by emergency workers, as indicated on rosters; institutionalized individuals, as indicated in capacity lists for facilities; and, where stipulated by the plan and/or procedures, members of the general public (including transients) within the plume pathway EPZ.

Quantities of dosimetry and KI available and storage location(s) will be confirmed by physical inspection at storage location(s) or through documentation of current inventory submitted during the exercise, provided in the Annual Letter of Certification submission, and/or verified during a Staff Assistance Visit. Available supplies of KI should be within the expiration date indicated on KI bottles or blister packs. As an alternative, the ORO may produce a letter from a certified private or State laboratory indicating that the KI supply remains potent, in accordance with U.S. Pharmacopoeia standards.

At locations where traffic and access control personnel are deployed, appropriate equipment (e.g., vehicles, barriers, traffic cones and signs, etc.) should be available or their availability described.

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent-of-play agreement.

Miami-Dade: This equipment will be checked and verified by FEMA during a Site Visit on December 12, 2002. Dosimeters will also be checked prior to the exercise.

Monroe (**Ocean Reef**): Same as Miami-Dade (site visit for Monroe County is scheduled for December 9, 2002).

State (SEOC, FSERT, ENC): Dosimetry and KI will not be distributed from the SEOC or from the EOF. A discussion on issuance of dosimetry and KI to **State** Emergency Workers can be provided by the REP Technical Expert at the EOF, if necessary.

- **DOSE/EOF (DOH/BRC):** BRC will use equipment and supplies as stated in SOPs.

2. PROTECTIVE ACTION DECISION MAKING

2.a – Emergency Worker Exposure Control:

Criterion **2.a.1:** OROs use a decision making process, considering relevant factors and appropriate Coordination, to ensure that an exposure control system, including the **use** of KI, is in place for emergency workers including provisions to authorize radiation exposure in excess of administrative limits or protective action guides. (**NUREG-0654, K.4, J.10.e, f**)

Extent of Play

ORO's authorized to send emergency workers into the plume exposure pathway EPZ should demonstrate a capability to meet the criterion based on their emergency plans and procedures.

Responsible OROs should demonstrate the capability to make decisions concerning the authorization of exposure levels in excess of preauthorized levels and to the number of emergency workers receiving radiation dose above pre-authorized levels.

As appropriate, OROs should demonstrate the capability to make decisions on the distribution and administration of KI as a protective measure, based on the ORO's plan and/or procedures or projected thyroid dose compared with the established Protective Action Guides (PAGs) for KI administration.

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent-of-play agreement.

Miami-Dade: Use of KI, by Emergency Workers and institutionalized persons, will be demonstrated through discussion.

Monroe: Use of KI by Emergency Workers will be demonstrated through discussion.

State (FSERT, DOSEEOF):

- **FSERT:** Information relative to State Emergency Worker exposure control will be provided through discussions with the REP Technical **Expert** in the EOF.
- **DOSEEOF (DOH/BRC):** BRC will use dosimetry and instrumentation as stated in SOPs. Field operations *For training purposes only*.

2.b- Radiological Assessment and Protective Action Recommendations and Decisions for the Plume Phase of the Emergency:

Criterion 2.b.1: Appropriate protective action recommendations are based on available information on plant conditions, field monitoring data, and licensee and ORO dose projections, as well as knowledge of onsite and offsite environmental conditions. (NUREG-0654, I.8, 10 and Supplement 3)

Extent of Play

During the initial stage of the emergency response, following notification of plant conditions that may warrant offsite protective actions, the ORO should demonstrate the capability to use appropriate means, described in the plan and/or procedures, to develop protective action recommendations (**PAR**)for decision-makers based on available information and recommendations from the licensee and field monitoring data, if available.

When release and meteorological data are provided by the licensee, the ORO also considers these data. The ORO should demonstrate a reliable capability to independently validate dose projections. The types of calculations to be demonstrated depend on the data available and the need for assessments to support the PARs appropriate to the scenario. In **all** cases, calculation of projected dose should be demonstrated. Projected doses **should** be related to quantities and units of the PAG to which they will be compared. PARs should be promptly transmitted to decision-makers in a prearranged format.

Differences greater than a factor of 10 between projected doses by the licensee and the ORO should be discussed with the licensee with respect to the input data and assumptions **used**, the use of different models, or other possible reasons. Resolution of these

differences should be incorporated into the PAR if timely and appropriate. The ORO should demonstrate the capability to **use** any additional data to refine projected doses and exposure rates and revise the associated PARs.

All activities must be based on the ORO's **plans** and procedures and completed as they would be in an actual emergency, unless noted above **or** otherwise indicated in the extent-of-play agreement,

Miami-Dade: Miami-Dade will demonstrate **the** coordination of Protective Action Decisions with the SERT, Monroe County, FPL, BRC, and the operations element at the EOC prior **to** finalizing the implementation of Protective Action Decisions.

Monroe: Monroe County will demonstrate the coordination of Protective Action Decisions **with** the SERT, Miami-Dade County, FPL, BRC, and the operations element at the EOC prior to finalizing the implementation of Protective Action Decisions.

State (FSERT, DOSE/EOF):

FSERT: In Agreement

- **DOSE/EOF (DOH/BRC):** BRC will use the **RASCAL** dose assessment code as stated in SOPs.

Criterion 2.b.2: A decision-making process involving consideration of appropriate factors and necessary coordination is used to make protective action decisions (PAD) for the general public (including the recommendation for the use of KI, if ORO policy). (NUREG-0654, J.9, 10.f, m)

Extent of Play

Offsite Response Organizations (OROs) should have the capability **to** make both initial and subsequent PADs. They should demonstrate the capability to make initial PADs in a timely manner appropriate **to** the situation, based on notification from the licensee, assessment **of** plant status and releases, and **PARs from** the utility and ORO staff.

The dose assessment personnel may provide additional PARs based on the subsequent dose projections, field monitoring data, **or** information on plant conditions. The decision makers should demonstrate the capability **to** change protective actions as appropriate based **on** these projections.

If the ORO has determined that KI will be used as a protective measure for the general public under offsite plans, then the ORO should demonstrate the capability to make decisions on the distribution and administration of KI as a protective measure for the general public to supplement sheltering and evacuation. This decision should be based on the ORO's plan and/or procedures or projected thyroid dose compared with the established PAG for KI administration. The KI decision making process should involve close coordination with appropriate assessment and decision-making staff.

If more than one ORO is involved in decision-making, OROs should communicate and coordinate PADs with affected OROs. OROs should demonstrate the capability to communicate the contents of decisions to the affected jurisdictions.

All decision-making activities by ORO personnel must be performed based on the ORQs plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent-of-play agreement.

Miami-Dade: This objective will be demonstrated through discussions and coordination at the EOF.

Monroe: This objective will be demonstrated at the EOF

State (FSERT, DOSEEOF):

- **FSERT:** In Agreement
- **DOSEEOF (DOW BRC):** BRC will use the RASCAL dose assessment code as stated in SOPs.

2.c – Protective Action Decisions for Protection of Special Populations:

Criterion 2.c.1: Protective action decisions are made, as appropriate, for special population groups. (NUREG-0654, J.9, J.10.d, e)

Extent of Play

Usually, it is appropriate to implement evacuation in areas where doses are projected to exceed the lower end of the range of PAGs, except for situations where there is a high-risk environment or where high-risk groups (e.g., the immobile or infirm) are involved. In these cases, examples of factors that should be considered are: weather conditions, shelter availability, availability of transportation assets, risk of evacuation vs. risk from the avoided dose, and precautionary school evacuations. In situations where an institutionalized population cannot be evacuated, the administration of KI should be considered by the OROs.

Applicable OROs should demonstrate the capability to alert and notify all public school systems/districts of emergency conditions that are expected to or may necessitate protective actions for students. Contacts with public school systems/districts must be actual.

In accordance with plans and/or procedures, OROs and/or officials of public school systems/districts should demonstrate the capability to make prompt decisions on protective actions for students. Officials should demonstrate that the decision making process for protective actions considers (that is, either accepts automatically or gives heavy weight to) protective action recommendations made by ORO personnel, the ECL at which these recommendations are received, preplanned strategies for protective actions for that ECL, and the location of students at the time (for example, whether the students are still at home, en route to the school, or at the school).

All decision-making activities associated with protective actions, including consideration of available resources, for special population groups must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent-of-play agreement.

Miami-Bade: A list of PSN in the EPZ, and procedures for carrying out their protection, will be made available for review at the EOC. PSN will not be moved

Monroe: There are no PSN in the Monroe County EPZ

3. PROTECTIVE ACTION IMPLEMENTATION

3.a – Implementation of Emergency Worker Exposure Control:

Criterion 3.a.1: The OROs issue appropriate dosimetry and procedures, and manage radiological exposure to emergency workers in accordance with the plans and procedures. Emergency workers periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart. (NUREG-0654, K.3.a, b)

Extent of Play

ORO should demonstrate the capability to provide appropriate direct-reading and permanent record dosimetry, dosimeter chargers, and instructions on the use of dosimetry to emergency workers. For evaluation purposes, appropriate direct-reading dosimetry is defined as dosimetry that allows individual(s) to read the administrative reporting limits (that are pre-established at a level low enough to consider subsequent calculation of Total Effective Dose Equivalent) and maximum exposure limits (for those emergency workers involved in life saving activities) contained in the ORO's plans and procedures.

Each emergency worker should have the basic knowledge of radiation exposure limits as specified in the ORO's plan and/or procedures. Procedures to monitor and record dosimeter readings and to manage radiological exposure control should be demonstrated.

During a plume phase exercise, emergency workers should demonstrate the procedures to be followed when administrative exposure limits and turnback values are reached. The emergency worker should report accumulated exposures during the exercise as indicated in the plans and procedures. **ORQs** should demonstrate the actions described in the plan and/or procedures by determining whether to replace the worker, to authorize the worker to incur additional exposures or to take other actions. If scenario events do not require emergency workers to seek authorizations for additional exposure, evaluators should interview at least two emergency workers, to determine their knowledge of whom to contact in the event authorization is needed and at what exposure levels. Emergency workers may use any available resources (e.g., written procedures and/or coworkers) in providing responses.

Although it is desirable for all emergency workers to each have a direct-reading dosimeter, there may be situations where team members will be in close proximity to each other during the entire mission and adequate control of exposure can be effected for all members of the team by one dosimeter worn by the team leader. Emergency workers who are assigned to low exposure rate areas, e.g., at reception centers, counting laboratories, emergency operations centers, and communications centers, may have individual direct-reading dosimeters or they may be monitored by dosimeters strategically placed in the work area. It should be noted that, even in these situations, each team member must still have their own permanent record dosimetry.

Individuals without specific radiological response missions, such as farmers for animal care, essential utility service personnel, or other members of the public who must re-enter an evacuated area following or during the plume passage, should be limited to the lowest radiological exposure commensurate with completing their missions.

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent-of-play agreement.

Miami-Dade: (*out of sequence*) Will demonstrate this objective during the emergency wash down drill on January 8, 2003 at 9:00 AM at the Tamiami Park Youth Fair Grounds. Emergency workers will receive high and low range dosimeters. **This activity can be re-demonstrated during the evaluation, if and when necessary, in order to satisfy the requirements of the criteria.**

Monroe: (*out of sequence*) This will be demonstrated on February 17 at 6:00 PM at the Key Largo Fire Department. **This activity can be re-demonstrated during the evaluation, if and when necessary, in order to satisfy the requirements of the criteria.**

State (FSERT):

- FSERT: Will be accomplished through discussions with the REP Technical Expert in the EOF.
- **DOI/BRC:** BRC will use dosimetry and instrumentation **as** stated in SOPs. For *training purposes only*

3.c – Implementation of Protective Actions for Special Populations:

Criterion 3.c.1: Protective action decisions are implemented for special populations other than schools within areas subject to protective actions. (NUREG-0654, J.10.c, d, g)

Extent of Play

Applicable OROs should demonstrate the capability to alert and notify (for example, provide protective action recommendations and emergency information and instructions) special populations (hospitals, nursing homes, correctional facilities, mobility impaired individuals, transportation dependent, etc.). OROs should demonstrate the capability to provide for the needs of special populations in accordance with the ORO's **plans** and procedures.

Contact with special populations and reception facilities may be actual or simulated, as agreed to in the Extent of Play. Some contacts with transportation providers should be actual, as negotiated in the extent of play. All actual and simulated contacts should be logged.

All implementing activities associated with protective actions for special populations must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, **unless** noted above or otherwise indicated in the extent-of-play agreement.

Miami-Dade: A list of PSN, and a list for carrying out their protection, will be available for review at the EOF. PSN will not be moved.

Monroe: There are currently no PSN's in the EPZ in Monroe County.

Criterion 3.c.2: **OROs/School** officials implement protective actions for schools. (NUREG-0654, J.10.c, d, g)

Extent of Play

Public school systems/districts shall demonstrate the ability to implement protective action decisions for students. The demonstration shall be made as follows: **At** least one school in each affected school system or district, as appropriate, needs to demonstrate the implementation of protective actions. The implementation of canceling the school day, dismissing early, or sheltering should be simulated by describing to evaluators the procedures that would be followed. If evacuation is the implemented protective action, all activities to coordinate and complete the evacuation of students to reception centers, congregate care centers, or host schools may actually be demonstrated or accomplished through an interview process. If accomplished through an interview process, appropriate school personnel including decision making officials (e.g., superintendent/principal, transportation director/bus dispatcher), and at least one bus driver (and the bus driver's escort, if applicable) should be available to demonstrate knowledge of their **role(s)** in the evacuation of school children. Communications capabilities between school officials and the buses, if required by the plan and/or procedures, should be verified.

Officials of the school system(s) should demonstrate the capability to develop and provide timely information to OROs for use in messages to parents, the general public, and the media on the status of protective actions for schools.

The provisions of this criterion also apply to any private schools, private kindergartens and day care centers that participate in REP exercises pursuant to the ORO's plans and procedures as negotiated in the extent-of-play agreement.

All activities must be based on the OROs plans and procedures and completed, as they would be in an actual emergency, unless noted above or otherwise indicated in the extent-of-play agreement.

Miami-Dade: (*outofsequence*) Eleven schools will be interviewed on January 16, 2003, between 9:00 AM and 2:00 PM. This activity can be re-demonstrated during the evaluation, if and when necessary, in order to satisfy the requirements of the criteria.

Monroe: There are no public schools within Monroe county's EPZ.

3.d – implementation of Traffic and Access Control.

Criterion **3.d.1**: Appropriate traffic and access control is established. Accurate instructions are provided to traffic and access control personnel. (NUREG-0654, J.10.g, j)

Extent of Play

OROs should demonstrate the capability to select, establish, and staff appropriate traffic and access control points, consistent with protective action decisions (for example, evacuating, sheltering, and relocation), in a timely manner. OROs should demonstrate the capability to provide instructions to traffic and access control staff on actions to take when modifications in protective action strategies necessitate changes in evacuation patterns or in the area(s) where access is controlled.

Traffic and access control staff should demonstrate accurate knowledge of their roles and responsibilities. This capability may be demonstrated by actual deployment or by interview, in accordance with the extent-of-play agreement.

In instances where OROs lack authority necessary to control access by certain types of traffic (rail, water, and air traffic), they should demonstrate the capability to contact the State or Federal agencies with authority to control access.

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent-of-play agreement.

Miami-Dade: (out of sequence) Will demonstrate this objective, in conjunction with the emergency wash down drill on January 8, 2003, at 9:00 AM, at Tamiami Park, with one officer from the Miami-Dade Police Department. Discussion will take place in the EOC regarding paragraphs one and three. ***This activity can be re-demonstrated during the evaluation, if and when necessary, in order to satisfy the requirements of the criteria.***

Monroe: (out of sequence) Will demonstrate this objective in conjunction with the wash down drill at 6:00 PM on February 17, 2003 at the Key Largo Fire Department. Discussion will take place in the EOC regarding paragraphs one and three. This activity can ***Be re-demonstrated during the evaluation, if and when necessary, in order to satisfy the requirements of the criteria.***

Criterion 3.d.2: Impediments to evacuation are identified and resolved.
NUR REG-0654, **J.10.k**)

Extent of Play

OROs should demonstrate the capability, as required by the scenario, to identify and take appropriate actions concerning impediments to evacuation. Actual dispatch of resources to deal with impediments, such as wreckers, need not be demonstrated; however, all contacts, actual or simulated, should be logged.

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent-of-play agreement.

Miami-Dade: (*out of sequence*) Miami-Dade Police will demonstrate this through interviews at Tamiami Park on January 8, 2003 at 9:00 AM. *This activity can be re-demonstrated during the evaluation, if and when necessary, in order to satisfy the requirements of the criteria*

Monroe (Ocean Reef): Monroe County Sheriff's Office will demonstrate this by interview during the exercise.

4. FIELD MEASUREMENT AND ANALYSIS

4.a – Flume Phase Field Measurements and Analysis:

Criterion 4.a.1: The field teams are equipped to perform field measurements of direct radiation exposure (~~cloud~~ and ground shine) and to sample airborne radioiodine and particulates. (NUREG-0654, **H.10; I.7, 8, 9**)

Extent of Play

Field teams should be equipped with all instrumentation and supplies necessary to accomplish their mission. This should include instruments capable of measuring gamma exposure rates and detecting the presence of beta radiation. These instruments should be capable of measuring a range of activity and exposure, including radiological protection/exposure control of team members and detection of activity on the air sample collection media, consistent with the intended use of the instrument and the ORO's plans and procedures. An appropriate radioactive check source should be used to verify proper operational response for each low range radiation measurement instrument (less than 1 R/hr) and for high range instruments when available. If a source is not available for a high range instrument, a procedure should exist to operationally test the instrument

before entering an area where only a high range instrument can make useful readings.

All activities **must** be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent-of-play agreement.

State(DOSE/EOF):

DOSE/EOF (DOH/BRC): BRC will use instrumentation and measurement techniques as stated in SOPs. *For training purposes only*

Criterion 4.a.2: Field teams are managed to obtain sufficient information to help characterize the release and to control radiation exposure. (NUREG-0654, H.12; 1.8, 11; J.10.a)

Extent of Play

Responsible Offsite Response Organizations(OROs) should demonstrate the capability to brief teams on predicted plume location and direction, travel speed, and exposure control procedures before deployment.

Field measurements are needed to help characterize the release **and** to support the adequacy of implemented protective actions or to be a factor in modifying protective actions. Teams should be directed to take measurements in such locations, at such times **to** provide information sufficient to characterize the plume and impacts.

If the responsibility to obtain peak measurements in the plume has been accepted by licensee field monitoring teams, with concurrence from OROs, there is no requirement for these measurements to be repeated by State and focal monitoring teams. If the licensee teams do not obtain peak measurements in the plume, it is the ORO's decision as to whether peak measurements are necessary to sufficiently characterize the plume. The sharing and coordination of plume measurement information among all field teams (licensee, Federal, and ORO) is essential. coordination concerning transfer of samples, including a chain-of-custody form, to a radiological laboratory should be demonstrated.

OROs should use Federal resources as identified in the Federal Radiological Emergency Response Plan (FRERP), and other resources (for example, compacts, utility, etc.), if available. Evaluation of this criterion will take into consideration the level of Federal and other resources participating in the exercise,

All activities must be based on the ORO's **plans** and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent-of-play-agreement.

State (DOSEEOF):

- **DOSEEOF (DOH/BRC):** RRC will use instrumentation and measurement techniques as stated in SOPs. For *training purposes only*.

Criterion 4.a.3: Ambient radiation measurements are made and recorded at appropriate locations, and radioiodine and particulate samples are collected. Teams will move to an appropriate low background location to determine whether any significant (**as** specified in the plan and/or procedures) amount of radioactivity has **been** collected on the sampling media. (NUREG-0654, I 9)

Extent of Play

Field teams should demonstrate the capability **to** report measurements and field data pertaining to the measurement of airborne radioiodine and particulates and ambient radiation **to** the field team coordinator, dose assessment, or other appropriate authority. If samples have radioactivity **significantly** above background, the appropriate authority should consider the need for expedited laboratory analyses of these samples. OROs should share data in a timely manner with all appropriate OROs. All methodology, including contamination control, instrumentation, preparation of samples, and a chain-of-custody form for transfer to a laboratory, will be in accordance with the ORO's plan and/or procedures.

ORO's should use Federal resources as identified in the **FRERP**, and other resources (for example, **compacts**, utility, etc.), if available. Evaluation **of** this criterion will take into consideration the level of Federal and other resources participating in the exercise. All activities must be based on the **ORO's** plans and procedures and completed as they would be in an actual emergency, unless noted above or **otherwise** indicated in the extent-of-play agreement.

State (DOSEEOF):

- **DOSEEOF (DOH/ BRC):** BRC will use instrumentation and measurement techniques as stated in SOPs. For *training purposes only*.

Sub-Element 4.c—Laboratory Operations

Criterion 4.c.1: The laboratory is capable of performing required radiological analyses to support protective action decisions. (NUREG-0654, C3; J.11)

Extent of Play

The laboratory staff should demonstrate the capability to follow appropriate procedures for receiving samples, including logging of information, preventing contamination of the laboratory, preventing buildup of background radiation due to stored samples, preventing cross contamination of samples, preserving samples that may spoil (for example, milk), and keeping track of sample identity. In addition, the laboratory staff should demonstrate the capability to prepare samples for conducting measurements,

The laboratory should be appropriately equipped to provide analyses of media, as requested, on a timely basis, of sufficient quality and sensitivity to support assessments and decisions as anticipated by the ORO's plans and procedures. The laboratory (laboratories) instrument calibrations should be traceable to standards provided by the National Institute of Standards and Technology. Laboratory methods used to analyze typical radionuclides released in a reactor incident should be as described in the plans and procedures. New or revised methods may be used to analyze atypical radionuclide releases (for example, transuranics or as a result of a terrorist event) or if warranted by circumstances of the event. Analysis may require resources beyond those of the ORO.

The **laboratory staff** should be qualified in radioanalytical techniques and contamination **control** procedures,

OROs should use Federal resources as identified in the FRERP, and other resources (for example, compacts, utility, nuclear insurers, etc.), if available. Evaluation of this criterion will take into consideration *the* level of Federal and other resources participating in the exercise.

All activities must be based on the ORO's plans and procedures and completed *as* they would be in an actual emergency, unless noted above or otherwise indicated in the extent-of-play agreement.

State (DOSE/EOF):

- **DOSE/EOF (DOH/BRC):** BRC will use instrumentation and measurement techniques as stated in SOPs. *For training purposes only*

5. EMERGENCY NOTIFICATION AT PUBLIC INFORMATION

5a – Activation of the Prompt Alert and Notification System:

Criterion 5.a.1: Activities associated with primary alerting and notification of the public are completed in a timely manner following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. The initial instructional message to the public must include as a minimum the elements required by current FEMA REP guidance. (10 CFR Part 50, Appendix E.IV.D and NUREG-0654, E.5, 6, 7)

Extent of Phv

Responsible Offsite Response Organizations (OROs) should demonstrate the capability to sequentially provide an alert signal followed by an initial instructional message to populated areas (permanent resident and transient) throughout the 10-mile plume pathway EPZ. Following the decision to activate the alert and notification system, in accordance with the ORO's plan and/or procedures, completion of system activation should be accomplished in a timely manner (will not be subject to specific time requirements) for primary alerting/notification. The initial message should include the elements required by current FEMA REP guidance.

Offsite Response Organizations (OROs) with route alerting as the primary method of alerting and notifying the public should demonstrate the capability to accomplish the primary route alerting, following the decision to activate the alert and notification system, in a timely manner (will not be subject to specific time requirements) in accordance with the ORO's plan and/or procedures. At least one route needs to be demonstrated and evaluated. The selected route(s) should vary from exercise to exercise. However, the most difficult route should be demonstrated at least once every six years. All alert and notification activities along the route should be simulated (that is, the message that would actually be used is read for the evaluator, but not actually broadcast) as agreed upon in the extent-of-play. Actual testing of the mobile public address system will be conducted at some agreed-upon location. The initial message should include the elements required by current FEMA REP guidance.

For exercise purposes, timely is defined as "the responsible ORO personnel/representatives demonstrate actions to disseminate the appropriate information/instructions with a sense of urgency and without undue delay." If message dissemination is to be identified as not having been accomplished in a timely manner, the evaluator(s) will document a specific delay or cause as to why a message was not considered timely.

Procedures to broadcast the message should be fully demonstrated as they would in an

actual emergency up to the point of transmission. Broadcast of the message(s) or test messages *is not* required. The alert signal activation may be simulated. However, the procedures should be demonstrated up to the point of actual activation,

The capability of the primary notification system to broadcast an instructional message on a 24-hour basis should be verified during an interview with appropriate personnel **from** the primary notification system.

All activities for this criterion must be based on the ORO's plans and procedures and completed as they **would** be in an actual emergency, except as noted above or otherwise indicated in the extent-of-play agreement.

Miami-Dade: Once the final decision to implement Protective Actions is made, a silent test of the sirens will be demonstrated in conjunction with the simulated release of EAS messages.

Monroe: (*out of sequence*) Notification to Ocean Reef Public safety to commence route alerting will be demonstrated in conjunction with the simulated release of EAS messages. A silent route alerting simulation of one route will be demonstrated on February 19, 2003. ***This activity can be re-demonstrated during the evaluation, if and when necessary, in order to satisfy the requirements of the criteria.***

Criterion 5.a.3: Activities associated with FEMA approved exception areas (where applicable) are completed within 45 minutes following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. Backup alert and notification of the public is completed within 45 minutes following the detection by the ORO of a failure of the primary alert and notification system. (NUREG-0654, E. 6, Appendix 3.B.2.c)

Extent of Play

Offsite Response Organizations (OROs) with FEMA-approved exception areas (identified in the approved Alert and Notification System Design Report) 5–10 miles from the nuclear power plant should demonstrate the capability to accomplish primary alerting and notification of the exception area(s) within **45** minutes following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. The 45-minute clock will begin when the OROs make the decision to activate the **alert** and notification system for the first time for a specific emergency situation. The initial message should, at a minimum, include: a statement that an emergency exists at the plant and where to obtain additional information.

For exception area alerting, at least one route needs to be demonstrated and evaluated.

The selected route(s) should vary from exercise to exercise. However, the most difficult route should be demonstrated at least once every six years. All alert and notification activities along the route should be simulated (that is, the message that would actually be used is read for the evaluator, but not actually broadcast) as agreed upon in the extent-of-play. Actual testing of the mobile public address system will be conducted at some agreed-upon location.

Backup alert and notification of the public should be completed within 45 minutes following the detection by the ORO of a failure of the primary alert and notification system. Backup route alerting only needs to be demonstrated and evaluated, in accordance with the ORO's plan and/or procedures and the extent-of-play agreement, if the exercise scenario calls for failure of any portion of the primary system(s), or if any portion of the primary system(s) actually fails to function. If demonstrated, only one route needs to be selected and demonstrated. All alert and notification activities along the route should be simulated (that is, the message that would actually be used is read for the evaluator, but not actually broadcast) as agreed upon in the extent-of-play. Actual testing of the mobile public address system will be conducted at some agreed-upon location.

All activities for this criterion must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, except as noted above or otherwise indicated in the extent-of-play agreement.

Miami-Dade: If there is a siren site down, after Miami-Dade County simulates siren sounding, this objective will be demonstrated (backup route alerting around that site) by discussion at the EOC.

Monroe (Ocean Reef): There are no sirens in Monroe County (see 5.a.1.)

5.b – Emergency Information and Instructions for the Public and the Media:

Criterion **5.b.1: OROs** provide accurate emergency information and instructions to the public and the news media in a timely manner. (NUREG-0654, **E. 5, 7; G.3.a, G.4.c**)

Extent of Play

Subsequent emergency information and instructions should be provided to the public and the media in a timely manner (will not be subject to specific time requirements). For exercise purposes, timely is defined as “the responsible ORO personnel/representatives demonstrate actions to disseminate the appropriate information/instructions with a sense of urgency and without undue delay.” If message dissemination is to be identified as not having been accomplished in a timely manner, the evaluator(s) will document a specific

delay or cause as to why a message was not considered timely.

The ORO should ensure that emergency information and instructions are consistent with protective action decisions made by appropriate officials. The emergency information should contain all necessary and applicable instructions (for example, evacuation instructions, evacuation routes, reception center locations, what to take when evacuating, information concerning **pets**, shelter-in-place instructions, information concerning protective actions **for schools** and special populations, public inquiry telephone number, etc.) **to** assist the public in carrying out protective action decisions provided to them. The ORO should also be prepared to disclose and explain the Emergency Classification Level (ECL) **of** the incident. At a minimum, this information must be included in media briefings **and/or** media releases. OROs should demonstrate the capability to use language that **is** clear and understandable **to the public** Within both the plume and ingestion pathway EPZs. This includes demonstration of the capability to **use** familiar landmarks and boundaries to describe protective action areas.

The emergency information should be all-inclusive **by** including previously identified protective action areas that are still valid, as well as new areas. The OROs should demonstrate the capability to ensure that emergency information that **is** no longer valid is rescinded and not repeated by broadcast media. In addition, the OROs should demonstrate the capability to ensure that current emergency information is repeated at pre-established intervals in accordance with the plan **and/or** procedures.

ORO's should demonstrate the capability to develop emergency information in a non-English language when required by the plan **and/or** procedures.

If ingestion pathway measures are exercised, OROs should demonstrate that a system exists for rapid dissemination of ingestion pathway information to pre-determined individuals and businesses in accordance with **the** ORO's plan **and/or** procedures.

ORQs should demonstrate the capability to provide timely, accurate, concise, and coordinated information to the news media for subsequent dissemination to the public. This would include demonstration of the capability **to** conduct timely and pertinent media briefings and distribute media releases **as** the situation warrants. The ORQs should demonstrate the capability to respond appropriately to inquiries from the news media. **All** information presented in media briefings and media releases should be consistent with protective action decisions and other emergency information provided to the public. Copies of pertinent emergency information (for example, Emergency Alert System [EAS] messages and media releases) and media information kits should be available for dissemination to the media.

ORO's should demonstrate that an effective system is in place for dealing with calls to the public inquiry hotline. Hotline staff should demonstrate the capability to provide or obtain accurate information **for** callers **or** refer them to an appropriate information source. Information from the hotline **staff**, including information that corrects false **or** inaccurate information when trends **are** noted, should be included, **as** appropriate, in emergency

information provided to the public, media briefings, and/or media releases.

All activities for this criterion must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent-of-play agreement.

Miami-Dade: EAS messages will be generated in English and Spanish to demonstrate this objective.

Monroe (Ocean Reef): The Monroe County Information Center will be activated and will demonstrate the ability to provide public information and squelch rumors by working with Public Information Officers and EOC staff. One (1) Answer Center operator will be used. Monroe County Public Information Officers will prepare press releases and participate in press conferences held at the ENC. PIO's in the EOC will coordinate the release of media releases with Rumor Control, the ENC, the EOF and the EOC as appropriate. EAS messages will be released from the ENC. Press releases may be released from either the EOC or the EOF with appropriate coordination. EAS messages will be generated in English to demonstrate this objective.

State (FSERT, ENC): In Agreement

6. SUPPORT OPERATION/FACILITIES

6.a – Monitoring and Decontamination of Evacuees and Emergency Workers and Registration of Evacuees:

Criterion 6.a.1: The reception center/emergency worker facility has appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees and/or emergency workers. (NUREG-0654, J.10.h; J.12; K.5.a)

Extent of Play

Radiological monitoring, decontamination, and registration facilities for evacuees/emergency workers should be set up and demonstrated as they would be in an actual emergency or as indicated in the extent-of-play agreement. This would include adequate space for evacuees' vehicles. Expected demonstration should include 1/3 of the monitoring teams/portal monitors required to monitor 20% of the population allocated to the facility within **12** hours. Before using monitoring instrument(s), the monitor(s) should demonstrate the process of checking the instrument(s) for proper operation.

Staff responsible for the radiological monitoring of evacuees should demonstrate the capability to attain and sustain a monitoring productivity rate per hour needed to monitor the 20% emergency planning zone (EPZ) population planning base within about 12 hours. This monitoring productivity rate per hour is the number of evacuees that can be monitored per hour by the total complement of monitors using an appropriate monitoring procedure. A minimum of six individuals per monitoring station should be monitored, using equipment and procedures specified in the plan and/or procedures, to allow demonstration of monitoring, decontamination, and registration capabilities. The monitoring sequences for the first six simulated evacuees per monitoring team will be timed by the evaluators in order to determine whether the twelve-hour requirement can be met. Monitoring of emergency workers does not have to meet the twelve-hour requirement. However, appropriate monitoring procedures should be demonstrated for a minimum of two emergency workers.

Decontamination of evacuees/emergency workers may be simulated and conducted by interview. The availability of provisions for separately showering should be demonstrated or explained. The staff should demonstrate provisions for limiting the spread of contamination. Provisions could include floor coverings, signs and appropriate means (for example, partitions, roped-off areas) to separate clean from potentially contaminated areas. Provisions should also exist to separate contaminated and uncontaminated individuals, provide changes of clothing for individuals whose clothing is contaminated, and store contaminated clothing and personal belongings to prevent further contamination of evacuees or facilities. In addition, for any individual found to be contaminated, procedures should be discussed concerning the handling of potential contamination of vehicles and personal belongings.

Monitoring personnel should explain the use of action levels for determining the need for decontamination. They should also explain the procedures for referring evacuees who cannot be adequately decontaminated for assessment and follow up in accordance with the ORO's plans and procedures. Contamination of the individual will be determined by controller inject and not simulated with any low-level radiation source.

The capability to register individuals upon completion of the monitoring and decontamination activities should be demonstrated. The registration activities demonstrated should include the establishment of a registration record for each individual, consisting of the individual's name, address, results of monitoring, and time of decontamination, if any, or as otherwise designated in the plan. Audio recorders, camcorders, or written records are all acceptable means for registration. All activities associated with this criterion must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless otherwise indicated in the extent-of-play agreement.

Miami-Dade: (out of sequence) This objective will be demonstrated on January 8, 2003 at Tamiami Park (anticipated arrival = 77,000), 4 portal monitoring stations will be demonstrated. A minimum of two emergency workers will be

decontaminated. *This activity can be re-demonstrated during the evaluation, if and when necessary, in order to satisfy the requirements of the criteria.*

Monroe: *(out of sequence)* Monroe County will demonstrate EW and evacuee monitoring and decontamination on February 17, 2003 at 6:00 PM at the Key Largo Fire Station. Two workers will also be monitored. One of these workers will be found to be contaminated and will be decontaminated. Reception Center, registration, and decontamination of evacuees will be demonstrated at the same time. *This activity can be re-demonstrated during the evaluation, if and when necessary, in order to satisfy the requirements of the criteria.*

6.b – Monitoring and Decontamination of Emergency Worker Equipment:

Criterion 6.b.1: The facility/ORO has adequate procedures and resources for the accomplishment of monitoring and decontamination of emergency worker equipment, including vehicles. (NUREG-0654, K.5.b)

Extent of Play

The monitoring staff should demonstrate the capability to monitor equipment, including vehicles, for contamination in accordance with the Offsite Response Organization's (ORO's) plans and procedures. Specific attention should be given to equipment, including vehicles, that was in contact with individuals found to be contaminated. The monitoring staff should demonstrate the capability to make decisions on the need for decontamination of equipment, including vehicles, based on guidance levels and procedures stated in the plan and/or procedures.

The area to be used for monitoring and decontamination should be set up as it would be in an actual emergency, with all route markings, instrumentation, record keeping and contamination control measures in place. Monitoring procedures should be demonstrated for a minimum of one vehicle. It is generally not necessary to monitor the entire surface of vehicles. However, the capability to monitor areas such as radiator grills, bumpers, wheel wells, tires, and door handles should be demonstrated. Interior surfaces of vehicles that were in contact with individuals found to be contaminated should also be checked.

Decontamination capabilities, and provisions for vehicles and equipment that cannot be decontaminated, may be simulated and conducted by interview.

All activities associated with this criterion must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent-of-play agreement.

Miami-Dade: (out of sequence) This will be demonstrated during the emergency wash down drill on January 8, 2003 at Tamiami Park. One vehicle will be monitored and decontaminated. ***This activity can be re-demonstrated during the evaluation, if and when necessary, in order to satisfy the requirements of the criteria***

Monroe: (out of sequence) February 17, 2003 at 1800, in agreement.

6.6: – Temporary Care of Evacuees:

Criterion 6.c.1: Managers of congregate care facilities demonstrate that the centers have resources to provide services and accommodations consistent with American Red Cross planning guidelines. (Found in MASS CARE — Preparedness Operations, ARC 3031). Managers demonstrate the procedures to assure that evacuees have been monitored for contamination and have been decontaminated as appropriate prior to entering congregate care facilities. (NUREG-0654, J.10.h, J.12)

Extent of Play

Under this criterion, demonstration of congregate care centers may be conducted out of sequence with the exercise scenario. The evaluator should conduct a walk-through of the center to determine, through observation and inquiries, that the services and accommodations are consistent with ARC 3031. In this **simulation**, it is not necessary to set up operations as they would be in an actual emergency. Alternatively, capabilities may be demonstrated by setting up stations for various services and providing those services to simulated evacuees. Given the substantial differences between demonstration and simulation of this objective, exercise demonstration expectations should be clearly specified in extent-of-play agreements,

Congregate care staff should also demonstrate the capability to ensure that evacuees have been monitored for contamination, have been decontaminated as appropriate, and have been registered before entering the facility. This capability may be determined through an interview process.

If operations at the center are demonstrated, material that would be difficult or expensive to transport (e.g., cots, blankets, sundries, and large-scale food supplies) need not be physically available at the facility (facilities). However, availability of such items should be verified by providing the evaluator a list of sources with locations and estimates of quantities.

All activities associated with this criterion must be based on the ORO's **plans** and procedures and completed **as** they would be in **an** actual emergency, unless noted above **or** otherwise indicated in the extent-of-play agreement.

Miami-Dade: (*out of sequence*) This will be demonstrated on January 8, 2003 at the Tamiami Park Youth Fair Grounds. Will be accomplished by a walk through. One third of the primary shelters (**5**) will be visited the day of the practice exercise on January 16, 2003. ***This activity can be re-demonstrated during the evaluation, if and when necessary, in order to satisfy the requirements of the criteria.***

Monroe: (*out for sequence*) This will be demonstrated by interview during the exercise on February 19, 2003 at the Key Largo Fire Station: depending on the personnel (school, **ARC**, etc.) needed for interview **by** the evaluators. ***This activity can be re-demonstrated during the evaluation, if and when necessary, in order to satisfy the requirements of the criteria***

6.d – Transportation and Treatment of Contaminated Injured Individuals:

Criterion 6.d.1: The facility/ORO has the appropriate space, adequate resources, and trained personnel to provide transport, monitoring, decontamination, and medical services to contaminated injured individuals. (NUREG-0654 F.2; H.10; K.5.a, b; L.1, 4)

Extent of Play

Monitoring, decontamination, and contamination control efforts will not delay urgent medical care for the victim.

Offsite Response Organizations (OROs) should demonstrate the capability to transport contaminated injured individuals to medical facilities. **An** ambulance should be used for the response to the victim. However, to avoid taking **an** ambulance out of service for an extended time, any vehicle (e.g., car, truck, or van) may be utilized to transport the victim to the medical facility. Normal communications between the ambulance/dispatcher and the receiving medical facility should be demonstrated. **If** a substitute vehicle is used for transport to the medical facility, this communication must occur before releasing the ambulance from the drill. This communication would include reporting radiation monitoring results, if available. Additionally, the ambulance crew should demonstrate, by interview, knowledge **of** where the ambulance and crew would be monitored and decontaminated, if required, or whom to contact for such information.

Monitoring of the victim may be performed before transport, done enroute, or deferred to the medical facility. Before using a monitoring instrument(s), the monitor(s) should demonstrate the process of checking the instrument(s) for **proper** operation. **All**

monitoring activities should be completed as they would be in an actual emergency. Appropriate contamination control measures should be demonstrated before and during transport and at the receiving medical facility.

The medical facility should demonstrate the capability to activate and set up a radiological emergency area for treatment. Equipment and supplies should be available for the treatment of contaminated injured individuals.

The medical facility should demonstrate the capability to make decisions on the need for decontamination of the individual, to follow appropriate decontamination procedures, and to maintain records of all survey measurements and samples taken. All procedures for the collection and analysis of samples and the decontamination of the individual should be demonstrated or described to the evaluator.

All activities associated with this criterion must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent-of-play agreement.

Miami-Dade: Accomplished at Mercy Hospital during the **MS-I** Drill on November 6, 2002.

APPENDIX 4

EXERCISE SCENARIO

Attached is the **summary** of the simulated sequence of events, which was used as the basis for invoking emergency response actions by OROs in the Turkey Point Nuclear Power Plant exercise on February 19, 2003.

(Final Report Only)

32 SCENARIO TIMELINE

- 1300 13 Emergency Containment Filters, Emergency Containment Coolers, and Containment Spray (if required)(“B” CSP fuses are replaced and pump is back in service) have scrubbed and cooled the containment and the reduction in containment pressure is eliminating the release through the containment isolation purge exhaust valves POV-2602 and POV-2603. Plant Vent radiation readings begin to decline. Field monitoring activities continue. The emergency response teams continue to stabilize the reactor, verify safe shutdown and evaluate containment integrity. Discussions of recovery and reentry should begin as the release rate continues to decline.
- 1415 Recovery actions should be considered at this time with the identification of personnel for back shifts, possible de-escalation of the General Emergency, and logistical needs for continued operation of the facility.
- 1515 14 With the completion of all Mate, local and utility objectives, terminate Exercise Play.

3.2 SCENARIO TIMELINE

<u>TIME</u>	<u>EVENT#</u>	<u>EVENT</u>
		The EOF should have been declared operational.
1110	9	<p>Conditions are in place for declaration of a SITE AREA EMERGENCY, based on RCS leakage greater the 50 gpm and greater than charging pump capacity.</p> <p>When the operators respond to the ATWS and the reactor is tripped, three RCCA's stick out.</p> <p><i>(SIMULATOR NOTE - .05 fuel damage ramped in over 5 - 10 minutes)</i></p> <p>Both buses transfer to the Unit 3 Startup Transformer and start all required ECCS Equipment.</p>
1125		The Post Accident Hydrogen Monitor is placed into service (needs to be - 30 minutes after SI).
1200		The damaged fuel region of the core is releasing gas gap activity. Containment High Range radiation Monitors (CHRRMs) will begin to increase.
1215	10	<p>Containment temperature and pressure increase (less than 20 psig). Containment hydrogen concentration continues to increase. CHRRMs indications are rising. The containment isolation purge exhaust valves POV-3-2602 (outside containment) and POV 3-2603 (inside containment) start to leak (leak through due to containment pressure). Efforts begin to confirm containment status with the onset of the leakage.</p>
	11	<p>Conditions are in place for the declaration of a GENERAL EMERGENCY. based on the following conditions: RCS leakage greater than 50 gpm <u>AND</u> RCS leakage greater than available charging pump capacity <u>AND</u> Loss of containment integrity which provides a flowpath to the environment.</p> <p>Protective Action Recommendations (PARs) should be generated on plant conditions.</p>
1220	12	<p>Readings on 8-14 and the plant vent SPING increase as the release initiates.</p> <p>Field teams should be dispatched to find the plume and PARs should be upgraded based (if not already) on significant core damage and the loss of containment integrity.</p>

32 SCENARIO TIMELINE

<u>TIME</u>	<u>EVENT#</u>	<u>EVENT</u>
0930		The fire team has arrived on the scene at the Unit 3 CCW Pump Area 2nd finds a fire underway. The fire learn leader advises the Control Room that offsite fire support should be requested (simulated).
	4	Conditions are in place for the declaration of an ALERT EMERGENCY based on an uncontrolled fire potentially affecting safety systems and offsite fire support is necessary. Activation of the Emergency Response Facilities has been initiated.
1000	5	A flange leak develops on the CCW line to the Containment Spray Pump (CSP) Seal Water Heat Exchangers. The water is spraying on the control switches for both CSP's. An operator will be dispatched in response to a Control Room annunciator for low CCW flow to the CSP cooler.
1005	6	A previously unidentified crack in a pipe-to-elbow weld on the 3A Cold Leg begins to leak reactor coolant to the containment at approximately 3 gpm. Within minutes, containment sump level increases. The onsite emergency response facilities (TSC 2nd OSC) should have been declared operational.
1015		The technician performing the LLRT on POV-3-2602 and POV-3-2603 calls and reports that during the test the pressure regulator failed and overpressurized the annulus. A loud "pop" was heard and the annulus depressurized. POV-3-2602 appears to be off its closed seat.
1075		Operators and the STA have conducted RCS leak rate calculations using charging/letdown mismatch and containment sump levels increase. RCS leakage is determined to be greater than the Technical Specification limit of 1 gpm unidentified leakage.
1030		A controlled reactor shutdown will be initiated within the hour. per Tech Specs.
1040		The fire is out, but still smoldering.
1055	7	The cold leg RCS leakage increases to approximately 100 GPM (leak ramps up over - 5 minutes). Additional charging pumps are maintaining Pressurizer (PRZ) level. Efforts to quantify the increase are initiated. Containment coolers are limiting the increase in containment temperature and pressure. Controlled shutdown continues (if already started) but is increased to 5% per minute.
1105	8	Increasing leakage from the failed weld, to approximately 1600 GPM. exceeds charging pump capacity. Operators will attempt to trip the reactor but it fails to trip (Anticipated Transient Without Scram - ATWAS).

**FLORIDA POWER AND LIGHT COMPANY
TURKEY POINT NUCLEAR PLANT
2003 EMERGENCY PREPAREDNESS
NRC EVALUATED EXERCISE
FEBRUARY 19, 2003**

3.2 SCENARIO TIMELINE

<u>TIME</u>	<u>EVENT#</u>	<u>EVENT</u>
0730		<p>Initial conditions establish Unit 4 operating at 100% power, in the middle of core life. Unit 3 power history has been full power operation for the last 180 days. Unit 4 is in Mode 5, Cold Shutdown.</p> <p>Six-month Surveillance Testing is scheduled to be conducted on the containment isolation purge exhaust valves POV-3-2602 and POV-3-2603 and all administrative requirements are in place.</p> <p>4 3 Hi Head Safety Injection (HHSI) Pump is out of service for maintenance.</p> <p>U3 CCW Deluge System is OOS for clapper valve replacement.</p> <p>MOV-536 (PORV Block Valve) has been closed due to PORV-455C leaking</p> <p>PRMS Channel R-15 is out of service. for planned maintenance due to detector failure.</p> <p>Demand on the system is high, with an anticipated peak of 17,500 Mwc. Service area conditions are normal. Weather has been sunny and hot. Forecast is for partly cloudy skies, temperatures in the upper 90's and Occasional showers for the next four days. Current temperature is 92°, with winds from the east at 5 – 10 miles per hour.</p>
0800	I	A Chemistry Technician pulling a SFP sample from SFP Hx Room, trips and fractures his arm. spilling the sample over him.
0810		RCS flow transmitter FT-3-414 fails low. I&C will troubleshoot the failure and determine that the problem is inside containment. (Not recovered during the drill).
0845	2	A TORNADO has been reported within the Owner Controlled Area (located near the Hazardous Material Storage Building, no equipment or structure damage) Conditions are in place for the Declaration of a Notification of Unusual Event .
0915	a	A fire alarm in the Unit 3 CCW Pump area, Alarm Point 28, comes into the Control Room. The Unit 3 Control Room activates the fire team to combat the fire. The fire impacts the 3 8 CCW Pump motor wiring conduit and motor filters, and takes out the 3B CCW Pump (minor damage to the wiring which can be repaired).