Final Exercise Report

CRYSTAL RIVER
NUCLEAR POWER PLANT

Licensee: Florida Power Corporation

Exercise Date: October 18, 2000

Report Date: January 11, 2001

FEDERAL EMERGENCY MANAGEMENT AGENCY
REGION IV
3003 Chamblee-Tucker Road
Atlanta, Georgia 30341

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3003 Chamblee-Tucker Road
Atlanta, Georgia 30341

January 11, 2001

Mr. Luis A. Reyes
Regional Administrator - RII
Nuclear Regulatory Commission
61 Forsyth Street, SW, Suite 23T85
Atlanta, Georgia 30323

Dear Mr. ~~Reyes~~ Luis:

Enclosed is a copy of the final exercise report for the October 18, 2000, full participation plume exposure pathway exercise of the offsite radiological emergency response plans site-specific to the Crystal River Nuclear Power Plant. This report addresses the evaluation of the plans and preparedness for the State of Florida and the Counties within the 10-mile Emergency Planning Zone. The State of Florida and the Risk Counties of Citrus and Levy participated in the exercise. The final exercise report was prepared by the Federal Emergency Management Agency Region IV staff. Copies of this report will be forwarded to the State of Florida, FEMA Headquarters, and NRC Headquarters by my staff.

This exercise was one of four exercises in the country conducted to ascertain the effectiveness of the new Evaluation Area Methodology for reaching a determination of reasonable assurance for the State and County Governments to protect the health and safety of the public, while also meeting the criteria contained in current FEMA regulations and guidance.

No Deficiencies were identified, however, one Areas Requiring Corrective Action was identified during the exercise.

Based on the results of the October 18, 2000, exercise, the offsite radiological emergency response plans and preparedness for the State of Florida and the affected local jurisdictions site-specific to the Crystal River Nuclear Power Plant can be implemented and are adequate to provide a reasonable assurance that appropriate measures can be taken offsite to protect the health and safety of the public in the event of a radiological emergency at the site. The Title 44-CFR, Part 350, approval of the offsite radiological emergency response plans and preparedness for the State of

Florida offsite radiological emergency response plans and preparedness for the State of Florida offsite radiological emergency response plans and preparedness site-specific to the Crystal River Nuclear Power Plant, granted on March 15, 1984 will remain in effect.

Should you have questions, please contact Thomas Reynolds at 770/220-5304.

Sincerely,

John B. Copenhaver
Regional Director

Enclosure

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I. EXECUTIVE SUMMARY

On October 18, 2000, a full participation plume exposure pathway pilot exercise was conducted in the emergency planning zone (EPZ) around the Crystal River Nuclear Power Plant, by the Federal Emergency Management Agency (FEMA), Region IV. The purpose of the exercise was to assess the level of State and local preparedness in responding to a radiological emergency. This pilot exercise was conducted to ascertain the effectiveness of the Evaluation Area Methodology for reaching a determination of reasonable assurance for the State and County governments to protect the health and safety of the public. This pilot exercise was conducted using the new exercise evaluation methodology, while also meeting the criteria contained in current FEMA regulations and guidance. Contained herein is the evaluation of this pilot biennial exercise.

FEMA wishes to express its appreciation to the State at Florida, Citrus and Levy Counties and the Florida Power Corporation in volunteering to conduct one of the pilot exercises.

The most recent exercise at this site was conducted on October 14, 1998. The qualifying emergency preparedness exercise was conducted on March 30, 1982, at the Crystal River Nuclear Power Plant.

FEMA wishes to acknowledge the efforts of the many individuals who participated in this exercise, the State of Florida and the Risk Counties of Citrus and Levy. 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 Emergency Operations Center (EOC) in Tallahassee had limited play in the exercise, but provided support during its on going disaster operations response.

The State and local organizations demonstrated knowledge of, and the ability to implement their emergency response plans and procedures. No Deficiencies, but one Area Requiring Corrective Action (ARCA) was identified as a result of this exercise. An ARCA identified during the 2000 St. Lucie exercise was successfully demonstrated during this exercise.

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 44 Code of Federal Regulations (CFR) Parts 350, 351 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 Title 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
    - 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 Crystal River Nuclear Power Plant to FEMA Region IV by the State of Florida was made on August 26, 1983. Formal approval of these RERPs was granted on February 14, 1984.

A REP pilot exercise was conducted on October 18, 2000, 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 Crystal River Nuclear Power Plant. The purpose of this report is to present the exercise results and preliminary findings on the performance of the offsite response organizations (ORO) during a simulated radiological emergency.

The findings presented are preliminary and based on the evaluations of the Federal evaluator team, with final determinations being made by the FEMA Region IV Regional Assistance Committee Chairperson, the Chief Evaluator and final approval 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-REP-14, "Radiological Emergency Preparedness Exercise Manual," September 1991; and

- FEMA-REP-15, "Radiological Emergency Preparedness Exercise Evaluation Methodology," September 1991.

Section III, entitled "Exercise Overview," presents basic information and data relevant to the exercise. This section 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, entitled "Exercise Evaluation and Results," presents summary information on the demonstration of applicable exercise criterion 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 provides space for 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 October 18, 2000 exercise to test the offsite emergency response capabilities in the area surrounding the Crystal River Nuclear Power Plant.

A. Plume EPZ Description

The Crystal River Nuclear Power Plant is owned and operated by Florida Power Corporation, which is a wholly owned subsidiary of Florida Progress Corporation, headquartered in St. Petersburg, Florida. The Crystal River Nuclear Power Plant is located at the Crystal River Energy Complex, 7.5 miles northwest of the town of Crystal River, in Citrus County, Florida. The Florida Power Energy Complex contains five power plants; four coal burning and one 825 megawatt pressurized water reactor. Parts of Citrus and Levy Counties lie within the 10-mile EPZ. There are six EPZ zones with a total resident population of 15,065 persons. Land use in the EPZ is a mix of residential, business and agricultural.

B. Exercise Participants

The following agencies, organizations, and units of government participated in the Crystal River Nuclear Power Plant exercise on October 18, 2000.

STATE OF FLORIDA

Division of Emergency Management
Department of Health, Bureau of Radiation Control
Department of Transportation
Department of Environmental Protection
Department of Agriculture and Community Affairs
Department of Insurance
Department of Management Services
Department of Community Affairs
Department of Law Enforcement

RISK JURISDICTIONS

Citrus County
Levy County

PRIVATE/VOLUNTEER ORGANIZATIONS

American Red Cross

C. Exercise Timeline

Table 1, on the following page, presents the time key events and activities occurred during the Crystal River Nuclear Power Plant exercise on October 18, 2000.

Table 1. Exercise Timeline

DATE AND SITE: October 18, 2000 – Crystal River Nuclear Power Plant

Emergency Classification Level or Event	Time Utility Declared	Time That Notification Was Received or Action Was Taken					
		SEOC	F-SERT	MERL	ENC	CITRUS COUNTY	LEVY COUNTY
Unusual Event							
Alert	0823	0850	0823	0842	0925	0836	0835
Site Area Emergency	0941	0950	0941	0956	0939	0942	0941
General Emergency	1101	1120	1101	1120	1117	1107	1115
Rad. Release Started	1050	1100	1050	1100	1120	1107	1115
Release Terminated	1200						
Facility Declared Operational		0850	1025 1100 – Net Control	Pre-positioned	1025	0835	0855
Declaration Of State Of Emergency **State of Florida** **Citrus County** **Levy County**		0950	1230		 0924 0935	 0924	 0935
Exercise Terminated		1330	1330	1330	1338	1333	1335
Early Precautionary Actions:						Buses on stand-by 0915	Relocation of schools 0928
1st Protection Action Decision: Relocation of schools			0928			0928	0928
1st Siren Activation						0935	0935
1st EAS or Message						0936	0936
2nd Protective Action Decision: Stay Tuned Message #4a			0945			0945	0945
2nd Siren Activation						0950	0950
2nd EAS Message						0950	0950
3rd Protective Action Decision: **Evacuate:** Zones 1 **Shelter:** Zone 2 & 3			1125			1125	1125
3rd Siren						1135	1135
3rd EAS Message						1135	1135
4th Protective Action Decision **Evacuate:** Zones 1 **Shelter:** Zone 2 & 3			1238			1238	1238
4th Siren						1245	1245
4th EAS Message						1245	1245
KI Administration:		1119 Decision	1113 Decision			1125 Ingest	1304 Ingest

IV. EXERCISE EVALUATION AND RESULTS

Contained in this section are the results and preliminary findings of the evaluation of all jurisdictions and functional entities which participated in the October 18, 2000, exercise to test the offsite emergency response capabilities of State and local governments within the 10-mile EPZ around the Crystal River Nuclear Power Plant.

Each jurisdiction and functional entity was evaluated on the basis of its' demonstration of criteria delineated in exercise criterion contained in Interim Guidance dated July 14, 2000. Detailed information on the exercise criterion 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 presented in Table 2, on the following page, presents the status of all exercise criterion which were scheduled for demonstration during this exercise, by all participating jurisdictions and functional entities. Exercise criterions are listed by number. The demonstration status of those criterion 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)

TABLE 2. Summary of Exercise Evaluation

DATE AND SITE: October 18, 2000 - Crystal River Nuclear Power Plant

ELEMENT/Sub-Element	STATE	F-SERT	DOSE ASSESSMENT	EOF	ENC	RAD LAB	FIELD TEAMS	CITRUS COUNTY	LEVY COUNTY
1. EMERGENCY OPERATIONS MANAGEMENT									
1.a.1. Mobilization	M	M		M		M	M	M	M
1.b.1. Facilities	M			M	M	M		M	M
1.c.1. Direction and Control	M	M		M				M	M
1.d.1. Communications Equipment	M	M		M		M	M	M	M
1.e.1. Equipment & Supplies to Support Operations	M	M		M	M	M	M	M	M
2. PROTECTIVE ACTION DECISION MAKING									
2.a.1. Emergency Worker Exposure Control		M	M			M	M	M	M
2.b.1. Radiological Assessment & PARs & PADs Based on Available Information		M	M	M				M	M
2.b.2. Radiological 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. Radiological Assessment & Decision Making for Ingestion Exposure								M	M
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	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	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 Information									
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							M		
4.a.2. Plume Phase Field Measurement & Analysis Management							M		
4.a.3. Plume Phase Field Measurements & Analysis Procedures							M		
4.b.1. Post Plume Field Measurement & Analysis									
4.c.1 Laboratory Operations						M			
5. EMERGENCY NOTIFICATION & PUBLIC INFORMATION									
5.a.1. Activation of Prompt Alert and Notification		M						M	M
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 Information and Instructions for the Public and the Media					A			M	M
6. SUPPORT OPERATIONS/FACILITIES									
6.a.1. Monitoring and Decon of Evacuees and EWs and Registration of Evacuees						M		M	M
6.b.1. Monitoring and Decontamination of Emergency Worker Equipment						M		M	M
6.c.1. Temporary Care of Evacuees									M
6.d.1. Transportation and Treatment of Contaminated Injured Individuals									

LEGEND: M = Met A = ARCA D = Deficiency

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 Criterion 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 which were 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 may 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."

1. STATE OF FLORIDA

1.1 State Emergency Operations Center

The State Emergency Operations Center (SEOC) in Tallahassee is the location for coordination of the State response. The SEOC is a well equipped, professionally staffed, modern facility and is the primary State warning point for Crystal River. The communications capability, equipment and displays, and EM 2000 automated tracking/logging system allows the State to respond effectively to any disaster. The State can take pride in its investment and quality of staff assembled to support this segment of their overall operation.

a. **MET:** Criterion 1.a.1., 1.b.1., 1.c.1., 1.d.1. and 1.e.1.

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

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

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

1.2 Forward State Emergency Response Team

The Forward State Emergency Response Team (F-SERT) responded to the Florida Power Corporation Emergency Operations Facility (EOF) at 1020. Direction and control and net-control were assumed at 1100. Protective action decisions (PAD) were quickly coordinated with both Citrus and Levy Counties after the declaration of the General Emergency (GE). The flow of information was excellent between the utility and the State and locals.

The Department of Health provided dose assessment analysis to the State for PAD decision making. An initiative is applauded by the SEOC for a conference call to the 50 mile EPZ counties to discuss the Crystal River situation. The host counties were informed of the potential for traffic control and evacuation issues. They were told to minimally staff their Emergency Operations Centers (EOC). Also, some agricultural issues were discussed. The F-SERT staff was very professional and performed admirably in a fast-paced situation.

a. **MET:** Criterion 1.a.1., 1.c.1., 1.d.1., 1.e.1., 2.a.1., 2.b.1., 2.b.2. and 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

1.3 Dose Assessment/Emergency Operations Facility

The Utility operator's EOF, located in the Training Center, has sufficient space to accommodate all response organizations and is equipped with all necessary amenities to effectively carry out emergency management operations.

Numerous State and local government officials, including the Governor's Authorized Representative (GAR) were co-located at the EOF with the utility operator's response team. Their principal functions and responsibilities included the direction and control of the State's radiological field monitoring teams (FMT), conduct independent accident analyses to include the calculation and assessment of radiological doses, develop and implement appropriate protective actions, and to interact directly with media representatives.

All evaluation criterion were successfully satisfied, and no issues were noted. All State and local government officials deployed to the EOF were knowledgeable, well trained, followed applicable procedures, and carried out their responsibilities in an efficient and professional manner.

Communication and coordination between and among all State and local government officials, and with the utility's emergency response team were outstanding. The flow of technical information from the EOF to all requesting organizations was accurate and disseminated in a timely fashion.

a. **MET:** Criterion 1.a.1., 1.b.1., 1.c.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. **PRIOR ARCAs – RESOLVED:** NONE

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

1.4 Mobile Emergency Radiological Laboratory

The Mobile Emergency Radiological Laboratory (MERL) and the Sample Preparation Vehicle (SPV) were pre-positioned at the Levy County Sheriff's Office, Inglis Sub-Station. Gamma spectrometry was demonstrated using an air particulate filter and iodine cartridge. Sample preparation and analyses were demonstrated by a professional staff. Capable staff performed contamination control at the Hot Line. One person in protective clothing demonstrated the procedures for removing the protective gear while moving from the Hot Line to the Buffer Zone to the Clean Area.

a. **MET:** Criterion 1.a.1., 1.b.1., 1.d.1., 1.e.1., 2.a.1., 3.a.1., 4.c.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

1.5 Radiological Field Monitoring Teams

All FMTs met their criterion for the exercise. The FMTs had excellent communication equipment and had no difficulty in communicating with the Field Team Director in the EOF. The FMTs were equipped with proper dosimetry and knew both their turn-back value and authorized daily and maximum exposure limits. The FMTs demonstrated the appropriate use of equipment and procedures for determining the field radiation measurements, as well as measurement of airborne radioiodine concentration in the presence of noble gases. The FMTs also corrected an ARCA by the FMTs during the St. Lucie exercise.

a. **MET:** Criterion 1.a.1., 1.d.1., 1.e.1., 2.a.1., 3.a.1., 3.b.1., 4.a.1., 4.a.2. and 4.a.3.

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ARCAs – RESOLVED:**

Issue No.: 55-00-08-A-01 St. (Lucie Exercise February 16, 2000)

Description: Procedures in the SOPs were closely followed. The air sampler was set up and the team collected 13 cubic feet of air. During the air sample collection, only one open and closed measurement was taken. Open and closed measurements with the survey meter should be taken at the beginning, near the middle, and at the completion of taking each air sample (NUREG I.99). The Figure 6-1; FOS Measurement Form (page 14, SOP 6) in the Bureau of Radiation Control, Department of Health, State of Florida, Standard Operating Procedure 1, illustrates three Beta/Gamma Field Measurements spaces to be completed by the FMT, however the SOP does not specify that the team is to make these measurements and at what time.

Corrective Action Demonstrated. The SOPs for the field monitoring teams have been revised and specifies that the teams are to make these measurements at these times. Both FMTs took open and closed measurements at the beginning, near the middle, and at the completion of collecting the air samples.

f. PRIOR ARCAs – UNRESOLVED: NONE

1.6 Emergency News Center

The Emergency News Center (ENC), at the Florida Power Training Center, provided a central location for the dissemination of information. Representatives of the affected areas (State of Florida, Citrus and Levy Counties) obtained information about activities in their jurisdictions for transmittal to the media in an organized manner. The various staffs worked well together, coordinating in the development and conduct of media briefings. Two media briefings were conducted to explain the situation at the plant and to describe the governmental response to the problems. A concern arose in the exercise dealing with the issuance of inaccurate information to the public. Several rumors surfaced which were investigated to determine validity. Following extensive research they were determined to be just rumors.

a. MET: Criterion 1.b.1. and 1.e.1.

b. DEFICIENCY: NONE

c. AREAS REQUIRING CORRECTIVE ACTION:

Issue No.: 17-00-5.b.1.-A-01

Condition: The State Emergency Response Team News Release #3 did not provide accurate emergency information for the public. The Citrus County Alert and Notification sequence had been initiated at 1135 with Emergency Alert

System (EAS) Message 10a, issued which directed the evacuation of Zone 1 and shelter-in-place for Zones 2 and 3. At 1200 the F-SERT press release #3 was distributed announcing a GE and then stating ("The public is in no danger but should stay tuned to any changes in plant conditions.") The release made no mention of the protective action ordered in Citrus and Levy Counties.

Possible Cause: The State Public Information Officer (PIO) at the ENC hurriedly issued a message without obtaining the necessary review signatures as stated in the State plan, Annex G, III -A -4. Following established procedures may have prevented the issuance of the news release.

Reference: The State Plan, Annex G, III. 3

Effect: The residents of Zone 1 were already notified that evacuation had been ordered and the residents of Zones 2 and 3 told to shelter-in-place. The utility had reached the Protective Action Guidance (PAG) range for significant offsite releases. Public confusion could have resulted from the incorrect press release and could have altered the public response to the evacuation order and in-place-sheltering order.

Recommendation: Train the State ENC staff to follow internal procedures when issuing press releases transmitting information to the public. Further, when pre-scripted messages are being used, extra care and attention needs to be taken to review the proposed press release to assure that it correctly conveys the desired information.

d. **NOT DEMONSTRATED:** NONE

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

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

2. RISK JURISDICTIONS

2.1 CITRUS COUNTY

2.1.1 Emergency Operations Center

The Citrus County EOC is co-located with the 911 center. All criterion were successfully demonstrated in a professional manner. Entrance to the facility was controlled by a Citrus County Deputy Sheriff using sign-in/out logs. Direction and control was exceptionally well directed by the Deputy Director who provided frequent briefings and encouraged the staff to follow their plans and procedures. Additionally, a County Commissioner was present and assisted in the decision making process. A representative

from the utility was present and provided briefings on plant conditions and technical information to the staff as needed. The 911 center is used as a back-up to the EOC and is the primary Public Notification Systems for siren activation for both Citrus and Levy Counties. EM 2000 was used for event tracking and provided a chronological log of events. Status boards and displays were used to record activities and display current operational conditions. The Deputy Director maintained coordination with the Emergency Management Director located at the EOF on all protective action recommendations and decisions. All EOC staff was thoroughly knowledgeable of their duties and responsibilities and preformed exceptionally well as a team.

a. **MET:** Criterion 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., 3.c.2., 3.d.1., 3.d.2., 5.a.1., 5.a.3. 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

2.1.2 Traffic Control Points

The Citrus County Sheriff's Department demonstrated both traffic control and security for the emergency worker decontamination area. They provided two officers and their vehicles for this demonstration. All officers were fully acquainted with the procedures, purpose and action levels of a traffic control point (TCP). They were also given literature that can be handed out regarding the location of shelters. They were in communication with the County EOC and their communication center.

a. **MET:** Criterion 1.d.1., 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

2.1.3 Emergency Worker Decontamination

The Citrus County Sheriff's Department was in charge of operations for emergency worker decontamination, which was demonstrated at the Citrus County Army National Guard Armory. The Crystal River Fire Department, Citrus County HazMat Team, Nature Coast Emergency Medical Services, and members of the Derosa, Cornell and Beverly Hills Fire Departments assisted them. Two vehicles and numerous emergency workers were monitored. One vehicle and one emergency worker, found to be contaminated, were run through the decontamination process. All personnel were wearing appropriate personal protective equipment and each had appropriate dosimetry. Personnel were familiar with their personal dosimetry, call-in and turn-back values and recorded the readings on the self-reading dosimeters every 15 to 30 minutes. All personnel should be commended for their role in this excellent demonstration.

a. **MET:** Criterion 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

2.1.4 Protective Action for Schools

The demonstration of protective action for schools within the 10-mile EPZ was conducted by evaluating actions taken by the school board representative in the County EOC and interviews with staff from Citrus County Primary School and Citrus County High School. All staff interviewed were thoroughly knowledgeable of their plan, duty and responsibilities and worked exceptionally well as a professional team.

a. **MET:** Criterion 3.c.2.

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

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

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

2.2 LEVY COUNTY

2.2.1 Emergency Operations Center

The EOC is a modern well-equipped facility that is staffed with well-trained and dedicated professionals. The EOC Director conferred with a County Commissioner that remained in the EOC during the exercise. He provided excellent direction and control, conducted frequent briefings and encouraged the staff to plan ahead and prepare for actions that would be necessary if plant conditions deteriorated, while emphasizing the need to follow the County's plan. Precautionary and protective action decisions were coordinated with the EOF, the State, and Citrus County. These actions were timely and appropriate based on plant and weather conditions. Alert and notification of the public was timely and frequent throughout the exercise.

a. **MET:** Criterion 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., 3.c.2., 3.d.1., 3.d.2., 5.a.1., 5.a.3. 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

2.2.2 Protective Action for Schools

The Assistant Superintendent of the School Board, Yankeetown School Principal, Director of Transportation/School Resources Officer, a school bus driver and a Levy County Sheriff's Department Officer were knowledgeable of planned protective action strategies to relocate students from the Yankeetown School to the Bronson High School. A walkie-talkie radio provides two-way communications between the Superintendent and the Principal. Buses contain evacuation route maps and a radio that allows for communication among the principal, police department and road department. The Sheriff's Department provides security and traffic control at the Yankeetown School. Information about student evacuation was passed to the County Public Information Officer for inclusion in his media briefings.

a. **MET:** Criterion 3.c.2.

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

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

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

2.2.3 Emergency Worker Decontamination

On Thursday, October 19th, Levy County demonstrated the Lebanon Station Emergency Worker Decontamination Center at Hwy 19 and 121. The number of volunteers present was overwhelming with seven fire departments, one Emergency Medical Services unit, Levy County Sheriff's Department and helicopter fly-over and landing.

Three vehicles and personnel were processed through the site. Excellent monitoring techniques and appropriate dosimetry were used. Two vehicles were contaminated with one being cleaned and the other set aside in the contamination area for future use or decontamination. Two contaminated personnel were processed and released out of the area.

a. **MET:** Criterion 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

2.2.4 Traffic Control Points

The Levy County Sheriffs Department demonstrated the establishment of TCPs on Highway 19 at Lebanon Station. Three staffed TCPs were established. All officers were fully acquainted with the procedures and purpose of the TCPs, as well as radiological exposure control. They were in communication with the County EOC and their communication center. The Levy County Road Department provides the traffic control devices needed to establish the TCPs. The Road Department personnel were also well prepared to establish the TCPs and were fully aware of the functions and purpose of the dosimetry equipment.

a. **MET:** Criterion 1.d.1, 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

2.2.5 Reception and Congregate Care

On Tuesday, October 17th at Bronson High School, numerous Levy County Fire Departments, EMS units and volunteer organizations demonstrated the reception of evacuees. Six persons were processed by three monitoring teams. The monitors wore the appropriate dosimetry and used good monitoring techniques. Two contaminated persons were processed through the shower facility and were released for congregate care. The turnout, professionalism and level of training was impressive. Levy County fully demonstrated their reception center capabilities.

Congregate care capability was also demonstrated at the Bronson High School, where mock evacuees (having completed the monitoring process) were registered into the shelter by American Red Cross personnel. Managers and support staff such as nurses, counselors, etc., were knowledgeable and enthusiastic. Particularly impressive was the demonstration of a special needs shelter under the direction of the Levy County Health Department. Teamwork displayed between participating agencies and organizations was outstanding.

a. **MET:** Criterion 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 2000 ARCAs

3.1.1 17-00-5.b.1.-A-01

Issue No.: 17-00-5.b.1.-A-01

Condition: The State Emergency Response Team News Release #3 did not provide accurate emergency information for the public. The Citrus County Alert and Notification sequence had been initiated at 1135 with Emergency Alert System (EAS) Message 10a, issued which directed the evacuation of Zone 1 and shelter-in-place for Zones 2 and 3. At 1200 the F-SERT press release #3 was distributed announcing a GE and then stating ("The public is in no danger but should stay tuned to any changes in plant conditions.") The release made no mention of the protective action ordered in Citrus and Levy Counties.

Possible Cause: The State PIO at the ENC hurriedly issued a message without obtaining the necessary review signatures as stated in the State plan, Annex G, III -A -4. Following established procedures may have prevented the issuance of the news release.

Reference: The State Plan, Annex G, III. 3

Effect: The residents of Zone 1 were already notified that evacuation had been ordered and the residents of Zones 2 and 3 told to shelter-in-place. The utility had reached the Protective Action Guidance (PAG) range for significant offsite releases. Public confusion could have resulted from the incorrect press release and could have altered the public response to the evacuation order and in-place-sheltering order.

Recommendation: Train the State ENC staff to follow internal procedures when issuing press releases transmitting information to the public. Further, when pre-scripted messages are being used, extra care and attention needs to be taken to review

the proposed press release to assure that it correctly conveys the desired information.

3.2 PRIOR ARCAs RESOLVED

3.2.1 55-00-08-A-01 St. Lucie Field Teams

Issue No.: 55-00-08-A-01

Description: Procedures in the SOPs were closely followed. The air sampler was set up and the team collected 13 cubic feet of air. During the air sample collection, only one open and closed measurement was taken. Open and closed measurements with the survey meter should be taken at the beginning, near the middle, and at the completion of taking each air sample. (NUREG I.9.). The Figure 6-1; FOS Measurement Form (page 14, SOP 6) in the Bureau of Radiation Control, Department of Health, State of Florida, Standard Operating Procedure 1, illustrates three Beta/Gamma Field Measurements spaces to be completed by the FMT, however the SOP does not specify that the team is to make these measurements and at what time.

Corrective Action Demonstrated: The SOPs for the FMTs have been revised and specifies that the teams are to make these measurements at these times. Both FMTs took open and closed measurements at the beginning, near the middle, and at the completion of collecting the air samples.

APPENDIX 1

ACRONYMS AND ABBREVIATIONS

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

ARC	American Red Cross
ARCA	Area Requiring Corrective Action
A&N	Alert and Notification
CCC	Congregate Care Center
CFR	Code of Federal Regulations
CPM	Counts Per Minute
DEM	Division of Emergency Management
DHHS	Department of Health and Human Services
DOC	Department of Commerce
DOE	Department of Energy
DOI	Department of the Interior
DOT	Department of Transportation
DRD	Direct Reading Dosimeter
EAS	Emergency Alert System
EEM	Exercise Evaluation Methodology
ENC	Emergency News Center
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
EPA	Environmental Protection Agency
EPZ	Emergency Planning Zone
EW	Emergency Worker
EWMDS	Emergency Worker Monitoring and Decontamination Station
FAA	Federal Aviation Administration
FDA	Food and Drug Administration
FEMA	Federal Emergency Management Agency
FR	Federal Register
F-SERT	Forward State Emergency Response Team
FMTs	Field Monitoring Teams
GAR	Governor's Authorized Representative
GE	General Emergency
KI	Potassium Iodide

mR	milliroentgen
mR/h	milliroentgen per hour
MERL	Mobile Emergency Radiological Laboratory
NRC	Nuclear Regulatory Commission
NUREG-0654	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*
OEM	Office of Emergency Management
ORO	Offsite Response Organization
PAD	Protective Action Decision
PAG	Protective Action Guide
PAR	Protective Action Recommendation
PIO	Public Information Officer
RAC	Regional Assistance Committee
RC	Relocation Center
REP	Radiological Emergency Preparedness
RERP	Radiological Emergency Response Plan
R/h	Roentgen(s) per hour
SAE	Site Area Emergency
SEOC	State Emergency Operations Center
SPV	Sample Preparation Vehicle
SOP	Standard Operating Procedure
TCP	Traffic Control Point
TLD	Thermoluminescent Dosimeter
USDA	U.S. Department of Agriculture

APPENDIX 2.

EXERCISE EVALUATORS

The following is a list of the personnel who evaluated the Crystal River Nuclear Power Plant pilot exercise on October 18, 2000. The organization represented by each evaluator is abbreviated below.

FEMA - Federal Emergency Management Agency
ANL - Argonne National Laboratory
NRC - Nuclear Regulatory Commission

EVALUATION SITE	EVALUATOR	ORGANIZATION
STATE OF FLORIDA		
State Emergency Operations Center	Conrad Burnside	FEMA
Forward State Emergency Response Team	Tom Reynolds	FEMA
Emergency News Center	Sandra Bailey Jim Sutch	FEMA ANL
Mobile Emergency Radiological Laboratory (MERL)	Eddie Fuente	ANL
Radiological Field Monitoring Team #1	George Goforth	ANL
Radiological Field Monitoring Team #2	Bernie Hannah	ANL
Dose Assessment/Emergency Operations Facility	Robert Trojanowski	NRC
CITRUS COUNTY		
Emergency Operations Center	Eddie Hickman Don Cornell	FEMA FEMA
Schools	Eddie Hickman	FEMA
Traffic Control Points	Doug Wenger	FEMA
Emergency Worker Decontamination	Joseph Canoles	FEMA

EVALUATION SITE	EVALUATOR	ORGANIZATION
LEVY COUNTY		
Emergency Operations Center	Joseph Canoles	FEMA
	Tami Sanders	FEMA
Protective Action for Schools	Sandra Bailey	ANL
Emergency Worker Decontamination	Joe Canoles	FEMA
	Tom Reynolds	FEMA
Traffic Control Points	Doug Wenger	FEMA
Reception and Congregate Care	Tom Reynolds	FEMA
	Virginia Baker	ANL

Federal Observers

Steve Borth	Instructor - FEMA Training/EMI
Stephanie Joiner	FEMA Region IV PT-TE
Bill McNutt/Ernesto Condado	FEMA HQ/CRP Div
Larry Moore	FEMA Region X
Don Newsom	Instructor - Argonne National Lab
O.C. Payne	FEMA HQ/CRP Div
Bob Poole	Instructor - FEMA Region I
Tamara Sanders	FEMA HQ/CRP Div
William Wark	FEMA HQ/Deputy Director CRP
Ken Wierman	FEMA HQ/CRP Div
Gary Naskrant	FEMA R V
Susan Khoury	NRC IG
William King	FEMA R V
Kelly Kelkenberg	FEMA R IV/PT Div Director

APPENDIX 3.

EXERCISE CRITERION AND EXTENT-OF-PLAY AGREEMENT

This appendix lists the exercise criterion scheduled for demonstration in the Crystal River Nuclear Power Plant exercise on October 18, 2000 and the extent-of-play agreement approved by FEMA Region IV.

A. Exercise Criterion

Attached are the specific radiological emergency preparedness criterion 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 was approved by FEMA Region IV.

CRYSTAL RIVER NUCLEAR POWER PLANT
PARTIAL PARTICIPATION EXERCISE

October 18, 2000

EXTENT OF PLAY 1.a - Mobilization

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)

CITRUS COUNTY: Personnel will be prepositioned

LEVY COUNTY: Six personnel will be prepositioned; the balance will await callout.

STATE: Prepositioned (Need Roster for 2 shifts, 24 Hours) Will report to EOF no earlier than 10:45 a.m.

FSERT and DOH/BRC after EOF operational.. Counties may be reported to at 10:00 a.m.

STATE HEALTH:BRC will preposition the field teams and the MERL. EOF personnel will arrive within one hour after the Alert emergency classification.

1.b – Facilities

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

CITRUS County: In Agreement

LEVY County: In Agreement

STATE: In Agreement

1.c – Direction and Control

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.2.a.b.)

CITRUS County: In Agreement

LEVY COUNTY: In Agreement

STATE (FSERT): In Agreement

1.d – Communications Equipment

1.d.1: At least two communication systems with one operating properly are established with appropriate locations. Communication capabilities are managed in support of emergency operations. (NUREG-0654 F.1.2.)

CITRUS County: In Agreement

LEVY County: In Agreement

STATE: In Agreement

1.e – Equipment and Supplies to Support Operations
1,e, 1: Equipment, maps, displays, dosimetry, potassium iodide (KI), and other supplies are sufficient to support emergency operations. (NUREG-0654, H., J.10.a.b.e.f.j.k. 11, K3a.)
CITRUS County: In Agreement (See below statement).

LEVY County: Candy will be substituted for KI, paper for TLD, Dosimeter will be checked prior to exercise.

STATE: In agreement.

2.a. – Emergency Worker Exposure Control

2.a.1: OROs use a decision making process, considering relevant factors and appropriate coordination, to insure 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 of protective action guides (NUREG-0654, K.4)

CITRUS County: In Agreement.

LEVY County : In Agreement.

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 on-site and off-site environmental conditions. (NUREG-0654, I.8. 10. 11. & Supplement 3)

CITRUS County: In Agreement

LEVY County: In Agreement. STATE HEALTH: BRC will perform plume dose projections in the EOF using RASCAL. Procedures will be IAW current SOPs.

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

CITRUS County: In Agreement

LEVY County: In Agreement

STATE Health: See Above.

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

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

CITRUS: In Agreement

LEVY: In Agreement

2.d.1 – ORO/School officials decide upon and implement protective actions for schools. (NUREG-0654, J.10.c.,d.g.)

CITRUS County: In Agreement

LEVY County: In Agreement

2.c.1 - Timely relocation, re-entry and return decisions are made and coordinated as appropriate, based on assessments of the radiological conditions and criteria in the ORO's plan and/or procedures. (NUREG-0654, A.1.b., I.10., M)

N/A

3.a – Implementation of Emergency Worker Exposure Control

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.)

CITRUS County: In agreement. Will demonstrate this objective during the emergency wash down drill on October 17, 2000. All emergency workers will receive the appropriate dosimetry as specified in the REP Plan. This will be done out of sequence.

STATE: Radiation Health will demonstrate this is the field.

LEVY: In agreement. As above, except will be demonstrated on October 19 at 6:00 p.m.

3.b – Implementation of KI Decision

3.b.1: KI and appropriate instructions are available should a decision to recommend use of KI be made. Appropriate record keeping of the administration of KI for emergency workers and institutionalized individuals (not the general public) is maintained. (NUREG-0654, E.7, J.10.e, F)

CITRUS County: will demonstrate the ability to issue K I to emergency workers on October 17, 2000 during the emergency wash down drill out of sequence.

LEVY: Will demonstrate this during the wash down drill.

3.c – Implementation of Protective Actions for Special Populations

3.c.1: Protective action decisions are implemented for special population groups within areas subject to protective actions. (NUREG-0654, E.7, J.9, 10.c,d,e,g)

CITRUS: A current list of special needs population will be provided to the Citrus county evaluator for evaluator for evaluation. Evacuation/relocation requirements will be demonstrated through Discussions at the EOC, based on the scenario and county implementation procedures.

LEVY: In agreement. Yankeetown School will be visited out of sequence at 8:00 p.m. on October 17, 2000.

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

LEVY: In agreement.

3.d – Implementation of Traffic and Access Control

LEVY: Will demonstrate this objective in conjunction with the wash down on October 19 at 6:00 p.m.

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., k.)

CITRUS: Will demonstrate this objective in conjunction with the wash down drill on October 17, 2000. This will be done out of sequence.

3.d.2: Impediments to evacuation are identified and resolved. (NUREG-0654, J.10.j., k.)

CITRUS: In Agreement.

LEVY: In Agreement.

3.e – Implementation of Ingestion Pathway Decisions
N/A

3.f – Implementation of Relocation, Re-entry, and Return Decisions
N/A

4.a – Plume Phase Field Measurements and Analysis

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 particulate. (NUREG-0654, H.10. I.8. 9., 11.) Note: Calibration stickers will be on each instrument.

STATE HEALTH: BRC field teams will locate the plume edges and track the plume movement. Procedures will be IAW current SOPs. The State Field Teams will re-demonstrate air sampling procedures to correct the 2000 St. Lucie ARCA.

4.a.2: Field teams are managed to obtain sufficient information to help characterize the release and to control radiation exposure. (NUREG-0654, I.8. 11. J.10.a.)

STATE: In agreement

CITRUS: N/A

LEVY: N/A

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.8., 9., 11.)

CITRUS: N/A

LEVY: N/A

STATE: In Agreement.

4.b – Post Plume Phase Field Measurements and Sampling

CITRUS: N/A

LEVY: N/A

4.c – Laboratory Operations

4.c.1: The laboratory is capable of performing required radiological analysis to support protective action decisions. (NUREG-0654, C.3. I.8.,9.)

CITRUS: N/A

LEVY: N/A

STATE: In agreement

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

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: (1) identification of the commercial nuclear power plant and a statement that an emergency situation exists at the plant; (2) identification of the commercial nuclear power plant and a statement that an emergency situation exists at the plant; (3) reference to REP-specific emergency information (e.g., brochures and information in telephone books) for use by the general public during an emergency; and (4) a closing statement asking the affected and potentially affected population to stay tuned for additional information. (10 CFR [art 50, Appendix E & NUREG-0654, E.1. 4., 5., 6., 7.)

CITRUS: Once the final decision to implement protective actions is made, Citrus county will (simulate) sounding sirens and issue the appropriate EAS message within the fifteen minute time frame.

LEVY: In agreement.

STATE: In agreement.

5.a.2: Activities associated with FEMA approved exception areas (where applicable) are 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.VB.2.c.)

CITRUS & LEVY: After Citrus County simulates siren sounding. If there is a siren site down in Citrus or Levy county this objective will be demonstrated (back up route alerting around that site), by discussion at the EOC.

STATE: In agreement

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

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.a.b.c.)

CITRUS: In agreement

LEVY: In agreement.

STATE: In agreement.

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

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

CITRUS: N/A

LEVY: Will demonstrate this at Bronson High school on October 19, at 6:30 p.m.

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.)

CITRUS: Will demonstrate this during the emergency wash down drill on October 17, 2000, and will be done out of sequence.
LEVY: Will demonstrate this during the emergency wash down drill on October 19, 2000 at 6:00 p.m.

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. 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., 12.) One clean, and one dirty will be monitored.

CITRUS: N/A

LEVY: Out of sequence at 6:30 p.m. on October 17.

APPENDIX 4.

EXERCISE SCENARIO

This appendix contains the exercise scenario submitted by the State of Florida and approved by FEMA Region IV.

OFFSITE TIMELINE of STATE/COUNTY ACTIVITIES

October 18, 2000 Exercise
Crystal River Nuclear Plant
Florida Power Corporation

SCENARIO DESCRIPTION

Partial interaction with the Simulator may slightly alter the timing of certain operational events. The times listed are an approximation and will be used if the Simulator fails.

0700 **INITIAL CONDITIONS:** Initial conditions and ground rules are presented to the operating crew in the Simulator Control Room and participants in the plant shops.

0800 **FIRE:** A transformer malfunctions and ignites a fire in a CR-3 Switchgear room.

810 **ALERT** (approximate time): An alert is declared based on the fire. Technical Support Center and Operational Support Center staffing is initiated and in-shop accountability begins.

840 **TSC OPERATIONAL:** The TSC should be declared operational by this time (required 60 minutes from the Alert declaration).

920 **LOCA:** A 750 gpm Loss of Coolant Accident (LOCA) develops on the pressurizer surge line and the reactor trips offline.

930 **SITE AREA EMERGENCY:** A Site Area Emergency is declared based on the loss of the fuel clad and RCS barriers. The site evacuation alarm is sounded initiating Protected Area evacuation and accountability. **ROF staffing is initiated.**

1000 **MEDICAL EVENT:** A fire brigade member complains of chest pains after securing from the fire and reporting to the Control Room for the SAE.

1030 **EOF OPERATIONAL:** The EOF is required to be operational by this time (or 60 minutes from the Site Area Emergency).

1035 **INGLIS TRAFFIC BLOCKAGE:** The Levy County EOC is notified that a truck (semi) pulling a 60 foot mobile home has stalled at intersection US 19 & C-40 blocking northbound traffic in one lane and blocking traffic turning east to Dunnellon.

1040 **COAL TRAIN/TRAFFIC ACCIDENT:** The Citrus EOC is notified that a coal train leaving Florida Power's Crystal River Energy Complex has hit a car on US 19 that tried to drive around the barrier; accident is blocking north and southbound traffic.

1045 **STATE SERT ARRIVE @ EOF:** The State DEM, DOH, Citrus County and Levy County responders arrive at the EOF.

1055 **GENERAL EMERGENCY:** A General Emergency is declared based on the loss of all three fission product barriers. **A protective action recommendation should be made by FPC to evacuate Zone 1 and shelter Zones 2 & 3.**

1130 **NEWS CREW:** A message is received by the FPC PIO in the ENC that a TV news crew from Channel 99 has setup at the Homossassa Shopping Center and is reporting that workers from the Home Depot construction site have gone home sick; possibly as a result from the event at the plant.

1145 **COAL TRAIN CLEARED:** Information is received at the Citrus EOC that the coal train is clear of US 19 and traffic flow is restored in both north and southbound lanes.

1100 **BOY SCOUTS STRANDED:** Message received by Citrus EOC that 15 Boy Scouts and 1 adult are stranded on Shell Island - their boat sank.

1150 **RELEASE STOPS:** The radioactive release to the environment from CR-3 has stopped.

1200 **MOBILE HOME CLEAR:** Information is received at the Levy EOC that the truck and mobile home have been cleared from the intersection of US 19 and C-40. Traffic flow has been restored on US 19 and on C-40 to Dunnellon.

1215 **BRUSH FIRE:** Message received at the Citrus EOC that a small brush fire is burning behind the Honda motorcycle dealership north of the Mall (along Turkey Oak) and is moving west toward US 19. There is some smoke but visibility is not affected yet.

1220 **NEWS CREW:** Information is received by the FPC PIO in the ENC that Channel 99 did not report that worker went home sick. It was found to be a rumor.

1225 **BOY SCOUTS SAFE:** Message received by Citrus EOC that Boy Scouts have been rescued from Shell Island by a local shrimp boat and have been taken to MacRaes Marina in Homosassa.

1245 **PROTESTORS:** Message received at Citrus EOC and Levy EOC that there are about six (6) anti-nuclear protestors on the Withlacoochee Bridge near Inglis hindering north and southbound traffic. Also, there are three (3) protestors on the Barge Canal Bridge hindering traffic in both lanes.

1300 **NEWS VAN ARRIVES:** A television news van (Channel 99) manages to bypass traffic control and arrives outside Nuclear Security Operations Center (guardhouse) at CR-3. A camera crew gets out and begins taping.

1305 **FIRE OUT:** Citrus EOC receives update that fire is under control along US 19 and most of smoke has cleared.