



Final Exercise Report

Farley Nuclear Power Plant

Licensee: **Southern Nuclear Operating Company**

Exercise Date: **August 21,2002**

Report Date: **November 7,2002**

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

TABLE OF CONTENTS

	Page
I. EXECUTIVE SUMMARY	1
II. INTRODUCTION.....	2
III. EXERCISE OVERVIEW	4
A. Plume Emergency Planning Zone 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	9
1. STATE OF ALABAMA	11
1.1 State Emergency Operations Center	11
1.2 Forward Emergency Operations Center	12
1.3 SRMAC - Montgomery	13
1.4 SRMAC - Dothan	13
1.5 Radiological Field Monitoring Teams	14
2. JOINT OPERATIONS	14
2.1 Emergency Operations Facility	14
2.2 Joint Information Center	15
3. RISK JURISDICTION	16
3.1 HOUSTON COUNTY	16
3.1.1 Emergency Operations Center	16
3.1.2 Forward Command Post	16
3.1.3 Protective Action for Schools	17
3.1.4 Traffic and Access Control Points	17
4. STATE OF GEORGIA	18

4.1	Forward Emergency Operations Center	18
4.2	Dose Assessment	18
5.	RISK JURISDICTION	19
5.1	EARLY COUNTY	19
5.1.1	Emergency Operations Center	19
5.1.2	Traffic Control Points	20
5.1.3	Reception Center and Congregate Care	20
5.1.4	Emergency Worker Decontamination	21
6.	STATE OF FLORIDA	22
6.1	FLORIDA STATE LIAISON TEAM	22
6.1.1	Florida State Emergency Response Team	22
7.	SUMMARY OF AREAS REQUIRING CORRECTIVE ACTION	23
7.1	2002 ARCA – IDENTIFIED AND RESOLVED	23
7.1.1	22-02-3.a.1-A-01 Reception/Congregate/Early Co	23
7.2	PRIOR ARCA RESOLVED	23
7.2.1	07-01-11-A-01 SEOC	23

List of Appendices

APPENDIX 1	ACRONYMS AND ABBREVIATIONS	26
APPENDIX 2	EXERCISE EVALUATORS	28
APPENDIX 3	EXERCISE CRITERIA AND EXTENT-OF-PLAY AGREEMENT	30
APPENDIX 4	EXERCISE SCENARIO	31

List of Tables

Table 1-	Exercise Timeline	6
Table 2-	Summary Of Exercise Evaluation	8

I. EXECUTIVE SUMMARY

On August 21, 2002, the Federal Emergency Management Agency (FEMA) conducted a plume exposure pathway exercise in the emergency planning zone (EPZ) around the Farley Nuclear Power Plant. The purpose of the exercise was to assess the level of State and Local preparedness in responding to a radiological emergency. In this exercise the State of Alabama fully participated and the State of Georgia partially participated. The State of Florida is affected by the ingestion pathway **and** sent liaisons to Alabama's Forward Emergency Operations Center (FEOC) to monitor the situation and to provide information to the Florida State Emergency Operations Center (SEOC). This exercise was held in accordance with FEMA's policies and guidance concerning the exercise of State and local radiological emergency response plans (RERP) and procedures.

The previous exercise at **this** site was conducted on September 13, 2000. The qualifying emergency preparedness exercise was conducted on November 19 and 20, 1980.

FEMA wishes to acknowledge the efforts of the many individuals, including volunteers, in the States of Alabama, Florida and Georgia, and Houston County, Alabama, and Early County, Georgia, who participated in this exercise.

Protecting the public health and safety is the full-time job of some of the exercise participants and **an** additional 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 was evident during this exercise. *to* include volunteers.

This report contains the evaluation of the biennial exercise and the following out-of-sequence activities: Protective actions for schools, traffic and access control points (TCP), emergency worker decontamination, reception center-congregate care, forward command post (FCP), special populations and the distribution of potassium iodide (KI).

State and local organizations, except where noted in this report, demonstrated knowledge of their emergency response plans and procedures and implemented them. No Deficiencies were identified. **The** one Area Requiring Corrective Action (ARCA) identified during this exercise concerned the provision of permanent-record dosimetry to emergency workers at a reception center and emergency worker decontamination station in Early County. This ARCA was resolved during the demonstration. **An** ARCA identified during the 2001 Brown's Ferry exercise concerning the timing of the release of protective action information to the public from the Joint Information Center (JIC), was corrected 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 Title 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 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 U.S. Nuclear Regulatory Commission (NRC) pursuant to the Memorandum of Understanding between the NRC and FEMA dated June 17, 1993 (Federal Register, Vol. 58, No. 176, September 14, 1993); and
- 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 Farley Nuclear Power Plant to FEMA Region IV by the State of Alabama and Houston County occurred on November 10, 1980 and by the State of Georgia and Early County on June 9, 1980. Formal approval of the RERP for the State of Alabama and Houston County was granted by FEMA on March 11, 1981, and the approval of the RERP for the State of Georgia and Early County on May 5, 1981, under Title 44 CFR 350.

A REP exercise was conducted on August 21, 2002, 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 Farley 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 in this report are based on the evaluations of the Federal evaluator team, with final determinations made by the Chief Evaluator, FEMA Region IV RAC Chairperson and 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- "Radiological Emergency Preparedness: Exercise of Evaluation Methodology," April 25, 2002.

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 criteria at each jurisdiction or functional entity evaluated in a jurisdiction-based, issues-only format. This section also contains descriptions of all ARCAs assessed during this exercise and recommended corrective actions, and provides space for the State and local governments' response, and descriptions of ARCAs assessed during previous exercises and the status of the ORO's efforts to resolve them.

III. EXERCISE OVERVIEW

Contained in this section *are* data and basic information relevant to the August 21, 2002 exercise to test the offsite emergency response capabilities in the area surrounding the Farley Nuclear Power Plant.

A. Plume Emergency Planning Zone Description

The Farley Nuclear Power Plant is located on the Chattahoochee River in Houston County, approximately 17 miles east of the City of Dothan, Alabama. Parts of Henry and Houston Counties in Alabama, and Early County in Georgia, are located within the 10-mile EPZ. Primary land use within the EPZ is **m a l** and agricultural with **an** estimated population of 10,000 in Alabama and 2,000 in Georgia. The Chattahoochee River runs north to south near the center of the EPZ. No major airports or highways are located within the EPZ and the railroad **runs** through it. There *are* **11** evacuation-planning sub-areas in Alabama and 9 in Georgia.

B. Exercise Participants

The following agencies, organizations, and units of government participated in the Farley Nuclear Power Plant exercise on August 21, 2002.

STATE OF ALABAMA

Emergency Management Agency
Department of Public Health
Department of Environmental Management
Radiation Control Agency

RISK JURISDICTION

Houston County
Houston County under arrangement with Henry County has responsibility for that part of Henry County that is located in the EPZ.

STATE OF GEORGIA

Emergency Management Agency
Department of Natural Resources
Department of Agriculture

RISK JURISDICTION

Early County

STATE OF FLORIDA

Department of Community Affairs, Division of Emergency Management
Department of Health, Bureau of Radiation Control

PRIVATE VOLUNTEER ORGANIZATIONS

American Red Cross
Radio Amateur Civil Emergency Services
Salvation Army

C. Exercise Timeline

Table 1, on the following page, presents the time at which key events and activities occurred during the Farley Nuclear **Power** Plant exercise on August 21, **2002**. Also included are times notifications were made to the participating jurisdictions and functional entities.

Table 1. Exercise Timeline

DATE AND SITE: August 21, 2002 - Farley Nuclear Power Plant

Emergency Classification Level of Event	Time Utility Declared	Time That Notification Was Received or Action Was Taken							
		AL SEOC	AL FEOC	SRMAC Montgomery	SRMAC Dothan	JIC	HOUSTON COUNTY	GA FEOC	EARLY COUNTY
Unusual Event									
Alert	0921	0930	0930	0930	0930	1036	0936	0930	0930
Site Area Emergency	1036	1058	1046	1046	1046	1105	1055	1047	1105
General Emergency	1231	1245	1239		1239	1256	1241	1239	1239
Simulated Rad. Release Started	1036				1239		1222	1155	1126
Simulated Rad. Release Terminated	On-going								
Facility Declared Operational			1106	0715	1130	1114	1002	1032	1010
Declaration of State of Emergency									
State of Alabama		1136					1137		
State of Georgia								1129	1135
Early County									0959
Exercise Terminated		1403	1400	1130	1400	1400	1409	1400	1307
Early Precautionary Actions:									
Evacuate Camp E-Tu-Nake									1045
Clear Zone A2 and River									
Establish TCPs									
Evacuate Special Populations							1110		
1 st Protective Action Decision:									
Relocate Houston County schools							1105		1107
1 st Siren and Tone Alert Radio Activation:							1107		1107
1 st EAS Message							1113		1108 *
2 nd Protective Action Decision:									
Public Warning					1105		1121		
Restrict traffic within 2mi of Plant									
2 nd Siren and Tone Alert Radio Activation							1123		
2 nd EAS Message							1125		
3 rd Protective Action Decision:									
Evacuate: A, E5, F5, E10, AND F10					1245		1250		1250
3 rd Siren and Tone Alert Radio Activation							1255		
3 rd EAS Message							1257		1300 *
4 th Protective Action Decision:									
Restrict consumption of milk & food within 10mi EPZ					1310		1339		
4 th EAS Message							1340		
KI Administration Decision:									
Issue to Emergency Workers									1110

AB Times are Central Daylight Time (CDT)

* EAS Messages for GA only had public warning/stay tuned. no protective actions required.

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 August 21, 2002 exercise to test the offsite emergency response capabilities of State and local governments in the 10-mile EPZ surrounding the Farley 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 objectives 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 exercise criteria scheduled for demonstration during this exercise, by all participating jurisdictions and functional entities. Exercise criteria are 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)

Table 2. Summary of Exercise Evaluation

DATE AND SITE: August 21,2002 - Farley Nuclear Power Plant

ELEMENT/Sub-Element	AL EMA	AL RAD Control	Houston/Henry County	State of GA	Radiation Health	Early County	FL DEM DOH/BRP
1. EMERGENCY OPERATIONS MANAGEMENT							
1.a.1. Mobilization	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
2. PROTECTIVE ACTION DECISION MAKING							
2.a.1. Emergency Worker Exposure Control		M			M	M	
2.b.1. Rad Assessment & PARs & PADs Based on Available Information		M		M	M		M
2.b.2. Decision Making (PADs) for the General Public		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			A*	
3.b.1. Implementation of KI Decisions		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			M	
3.d.2. Impediments to Evacuation and Traffic and Access Control	M		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		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.b.2. Laboratory Operations							
5. EMERGENCY NOTIFICATION & PUBLIC INFO							
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 Info and Instructions for the Public and the Media	M	M	M			M	
6. SUPPORT OPERATIONS/FACILITIES							
6.a.1. Monitoring and Decon of Evacuees and EWs and Registration of Evacuees						M	
6.b.1. Monitoring and Decon of Emergency Worker Equipment						M	
6.c.1. Temporary Care of Evacuees						M	
6.d.1. Transport and Treatment of Contaminated Injured Individuals							

LEGEND: A = Area Requiring Corrective Action; D = Deficiency; M = MET

A* ARCA issued and corrected during exercise

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 criteria 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 criteria 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 criteria under which one or more ARCAs were assessed during the current exercise or ARCAs assessed during prior exercises 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 criteria 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 are 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."

FEMA has developed a standardized system for numbering exercise issues (Deficiencies mid **ARCAs**). This system is used to achieve consistency in numbering exercise issues among FEMA Regions and site-specific exercise reports within each Region. It is also used to expedite tracking of exercise issues on a nationwide basis.

The identifying number for Deficiencies and ARCAs includes the following elements, with each element separated by a hyphen (-).

- **Plant Site Identifier** - A two-digit number corresponding to the Utility Billable Plant Site Codes.
- **Exercise Year** - The **last** two digits of the year the exercise was conducted.
- **Objective Number** - A two-digit number corresponding to the objective numbers in FEMA-REP-14.
- **Issue Classification Identifier** - (D = Deficiency, A = ARCA). Only Deficiencies and ARCAs are included in exercise reports.
- **Exercise Issue Identification Number** - A separate two number assigned to each issue identified in the exercise.

1. STATE OF ALABAMA

1.1 State Emergency Operations Center

The SEOC is located in a self-contained facility in Clanton, Alabama. The purpose of the SEOC was to support requests from Houston County for equipment and personnel beyond their capabilities and to approve news releases. The use of the EM2000 system for support coordination allowed for rapid assessment and deployment of requested assets, and kept personnel apprised of situations within the affected area. Periodic briefings updated the staff on plant conditions as they progressed. The staff worked well as a team and displayed their commitment to doing an outstanding job.

- a. **MET:** Criteria 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:** YES

Issue No.: 07-01-11-A-01

Description: A systematic problem was identified concerning information flow and release of information to the public, therefore, this AKCA has been placed at the SEOC for resolution. At 1226 Emergency Health Orders 3 and 4 were issued. These Health Orders directed the evacuation of zones A-2, B-2, F-2, G-2, A-5 and G-5, as well as, shelter-in-place zones H-10, I-10, J-10, K-10, A-10 and G-10. This information was received by the JIC at 1227 and transmitted to the SEOC, who provided the information to the counties. The JIC was having a briefing at 1230 and this information was communicated to the media during that briefing. AEMA also issued a press release at 1245 detailing the evacuation and shelter information.

At 1238 the counties concurred on the protective actions indicated in the Health Orders and agreed to activation of the sirens at 1248 and issue the EAS messages between 1248 and 1250.

The Code of Alabama and the Alabama Radiological Emergency Response Plan for Nuclear Power Plants (REP Plan) recognize the authority of the Health Officer to determine precautionary and protective actions to protect the public from excessive exposure to radiation. The REP Plan, the Alabama Emergency Management Agency Browns Ferry Nuclear Power Plant Standard Operating Guide (SOG) and the Alabama Emergency Management Agency Fixed Nuclear

Facility Public Information-Education Standard Operating Procedures also address the procedures for the release of information to the public. The latter states (page 1) "Specifically the state's role is **not** to accomplish "first notification" to inform the affected public to evacuate or take protective actions. That responsibility belongs to the affected county PIO." As a corollary, the **SOG** states (page 37) "The decision to shelter or evacuate **will** be made by Radiological Control Agency. The EOC will have the staff function to communicate directions to *Birmingham Weather* -and advise the county EOCs to notify the public."

Corrective Action Demonstrated: The **ARCA** assessed against the State in the 2001 Browns Ferry exercise for early release of protective action decisions (**PAD**) at the JIC was corrected. As required by the Code of Alabama and the Alabama Radiological Response Plan for Nuclear Power Plants, the Radiation Control Agency (RCA) issued the health orders for public warning and restricted access within two miles of the plant and subsequently the evacuation of sectors A, E5, F5, E10 and F10. In each instance the correct standard operating procedures (SOP) were followed. The RCA issued the Health orders, sent them to AEMA, which then coordinated the PADs with Houston County. After the State of Georgia, Houston County and Early County, Georgia, concurred on the PADs, this information was then transmitted to the JIC, which appropriately briefed the media on the PADs. The JIC appropriately briefed the media on the **PADs** after the coordination process had been completed.

f. PRIOR ARCAs - UNRESOLVED: NONE

1.2 Forward Emergency Operations Center

The Alabama Emergency Management Agency (AEMA) FEOC is co-located with the State Radiological Monitoring Assessment Center (SRMAC) and the Dothan-Houston County EOC. The location facilitates this AEMA liaison team in the execution of its forward coordination activities with Houston County, the adjacent States and the SRMAC. In addition to the face-to-face contact with adjacent States' liaisons, SRMAC and county personnel, the FEOC has redundant communications capabilities that support its rapid and timely contact with the utility, the Georgia FEOC, and the Alabama Emergency Operation Center (AEOC) in Clanton. Personnel were well briefed on their functions and ready to provide information to assist in the response activities.

- a. MET: Criteria 1.b.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

1.3 SRMAC - Montgomery

The Radiation Control Agency (RCA) emergency response personnel were pre-assembled in a dedicated area of their Montgomery Headquarters. They established the SRMAC in Montgomery and provided the initial State radiological response. The SRMAC staff, including the Director, were well trained, organized, and prepared. All necessary actions were performed in a highly effective and timely manner. Communications within the SRMAC and with external organizations were productive and communications systems operated flawlessly. SRMAC facilities accommodated the necessary staff and appropriate displays. The SRMAC Director **was** exemplary in his management of operations. Control of the Montgomery SRMAC was transferred to the SRMAC in Dothan at 1130. Although not required by the scenario, the SRMAC in Montgomery was capable of performing dose assessment.

- a. MET: Criteria 1a.1; 1.b.1; 1.c.1; 1.d.1, 1.e.1 and 2.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

1.4 SRMAC - Dothan

The SRMAC in Dothan demonstrated the capability to evaluate radiation hazards and make timely PADs to protect the population. The staff was professional **and** demonstrated the technical ability to perform and interpret dose calculations. The staff coordinated **with** the utility liaison who provided information on changes in plant conditions and provided interpretation of the data. The **staff** also coordinated with the State of Georgia Dose Assessment Team to share information and coordinate decisions made for each State. Regular briefings were given by the SRMAC team leader to update the FEQC and the Houston County Emergency Operations Center (EQC) personnel. The staff performed their assigned duties in a timely and professional manner.

- a. MET: Criteria 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.1 and 2.c.1.
- b. DEFICIENCY: NONE

- e. **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

The two radiological field monitoring teams (FMTs) were pre-positioned at the Houston County Health Department. The FMTs were knowledgeable of their operating procedures and demonstrated the ability to continuously monitor the assigned areas and limit their radiological exposure.

- a. **MET:** Criteria 1.d.1, 1.e.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:** NONE
- f. **PRIOR ARCAs - UNRESOLVED:** NONE

2. JOINT OPERATIONS

2.1 Emergency Operations Facility

The Emergency Operations Facility (EOF) is an excellent facility from which all participating response organizations can effectively manage ongoing emergency operations. Communications, coordination and the flow of technical information between the utility operator and all of the participating State and local government officials were outstanding. All of the State and local government officials who were deployed to the EOF were well trained, followed applicable procedures; and overall, performed their respective responsibilities in an efficient and professional manner. All exercise criteria, as specified in the Extent-of-Play Agreement, were successfully demonstrated.

- a. **MET:** Criteria 1.a.1, 1.b.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**

2.2 Joint Information Center

The JIC in Dothan, Alabama is a well designed, state of the art facility with all the appropriate media-conscious equipment, maps and briefing area. A separate Public Information Officer (PIO) work area is provided for the various utility, State and local officials to prepare for the news media briefings, public inquiries and disseminate news releases.

The PIOs from the utility, the States of Alabama, Florida and Georgia and Houston and Early Counties worked cooperatively and in a timely manner to coordinate the dissemination of information to the public and the news media. Three media briefings were conducted to inform the media of plant conditions, protective actions and public instructions. In addition, rumors identified by the public inquiry personnel were dispelled during the briefings. The representatives of Alabama, Georgia, Florida and Southern Company provided an excellent demonstration of their ability to deal with the media and provide timely and accurate information to the public.

- a. **MET: Criteria 1.a.1, 1.b.1, 1.c.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**

3. RISK JURISDICTION

3.1 HOUSTON COUNTY

3.1.1 Emergency Operations Center

The Emergency Management Director and Assistant Director effectively managed EOC operations and provided excellent direction and control. The Director consistently coordinated with Early County, the States of Georgia and Alabama in the formulation and implementation of PADs. He also involved the staff in the decision making process. The Assistant County Administrator was present and participated in exercise activities. The competent EOC staff were largely volunteers and included representatives from some County agencies. EOC briefings and agency updates were conducted. Radiation Control and utility personnel also provided briefings to the EOC staff. Activation of the Public Notification System (PNS), which included sounding the sirens, activation of tone alert radios and issuance of Emergency Alert System (EAS) messages was professionally accomplished.

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

3.1.2 Forward Command Post

The County Forward Command Post (FCP) was demonstrated through an out of sequence interview with the FCP Manager, a captain within the Dothan Police Department and a volunteer firefighter. These individuals were very well versed in their responsibilities. Procedures were thoroughly covered for providing emergency workers entering the FCP with instruction on their specific area of deployment within the EPZ and providing them with the necessary dosimetry, monitoring equipment and KI. Procedures to track all response personnel within the EPZ and to monitor, and if necessary, decontaminate them upon returning to the FCP are in place.

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

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

3.1.3 Protective Action for Schools

Houston County successfully demonstrated school relocation on August 20, 2002. Participants in the demonstration included a Secondary Supervisor from the School Superintendent's office, a counselor from Ashford Elementary School, the Transportation **Bus** Coordinator and the Houston County Emergency Management Director and Assistant Director. Personnel were very knowledgeable of school relocation procedures. Teachers are regularly trained on procedures as part of their in service training. All affected schools have relocation procedures and resources to successfully relocate students.

- 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**

3.1.4 Traffic and Access Control Points

A Captain from the Dothan Police Department demonstrated traffic **and** access control functions out-of-sequence during **an** interview on August 20, 2002 in the Houston County EOC. The TCPs are identified in the Dothan/Houston County plan. The FCP Manager directs a law enforcement lead officer to activate the TCPs. The major TCPs are staffed with **an** officer while a county maintenance crew sets up barricades at the non-staffed locations.

The Captain demonstrated **an** excellent knowledge of traffic and access control functions and impediment removal. He has had extensive experience in situations that routinely occur in the county. He was also knowledgeable of dosimetry, the use of KI and shelter locations. Dosimetry **was** available **for** the officer during the interview.

- 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

4. STATE OF GEORGIA

4.1 Forward Emergency Operations Center

The Georgia Emergency Management Agency (GEMA) FEOC is co-located with the Early County EOC. The GEMA staff, Georgia Department of Agriculture and Department of Natural Resources (DNR) team quickly transformed an empty room into a fully operational direction and control center. The decision-making process coupled with frequent staff briefings was effective and consistent with the extent-of-play. The interaction with Early County and the State of Alabama in coordinating PADs was excellent. Communication systems worked well throughout the exercise.

- a. **MET:** Criteria 1.a.1; 1.b.1; 1.c.1; 1.d.1; 1.e.1; 2.a.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

4.2 Dose Assessment

The Georgia DNR, dose assessment staff operated in the FEOC. They discussed protective action recommendations (PARs) with the GEMA Emergency Response Coordinator (ERC). The PARs were then provided to the Governor's Authorized Representative (GAR) to make a decision. Personnel understood their responsibilities, followed plans, and successfully demonstrated their ability to provide an independent

dose assessment capability and meaningful technical information. Members of the dose assessment staff were professional and displayed a positive attitude.

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

5. RISK JURISDICTION

5.1 EARLY COUNTY

5.1.1 Emergency Operations Center

The EOC staff were knowledgeable of responsibilities, followed plans and successfully demonstrated the ability to respond to an emergency at the Farley Nuclear Power Plant. The Emergency Management Director, County Commissioner, Operations Manager and staff worked efficiently in performing their duties throughout the exercise. Although Early County was not required to evacuate, it coordinated well with the States of Georgia and Alabama and Houston County. EAS messages were disseminated alerting the public to the incident and asking them to stay tuned for additional information.

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

5.1.2 Traffic Control Points

The County Sheriffs Department and Georgia State Patrol cooperatively established a network of manned and unmanned TCPs designed to facilitate evacuation and deny reentry to the area. This information was effectively displayed in the EOC and briefed to the officers manning the TCPs. The officers were issued complete emergency worker kits and were knowledgeable of the kits' uses and reporting requirements. They displayed knowledge of procedures to remove evacuation impediments and turn back people attempting to enter the hazard area. Personnel were also knowledgeable of backup route alerting procedures, policies and routes.

- a. **MET:** Criteria 1.d.1, 3.a.1, 3.b.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

5.1.3 Reception Center and Congregate Case

The reception center and congregate care facility were co-located at the Early County High School. This facility was laid out efficiently, with an effective traffic pattern that isolated decontamination facilities from the main shelter area and insured the best use of the allotted floor space. The Congregate care staff were knowledgeable and enthusiastic, and displayed a broad understanding of shelter management practices. The decontamination staff were knowledgeable of their duties and established an effective decontamination line. Their knowledge of radiation detection equipment and decontamination procedures allowed them to identify all simulated contamination and ensure the proper decontamination procedures were performed. Radiation meters were effectively utilized and low range dosimetry was distributed to the emergency workers, however, thermoluminescent dosimeters (TLD) were not issued.

- a. **MET:** Criteria 1.d.1, 6.a.1, 6.b.1 and 6.c.1.
- b. **DEFICIENCY:** NONE
- e. **AREAS REQUIRING CORRECTIVE ACTION:** YES

Issue No.: 22-02-3.a.1-A-01

Condition: TLDs were not issued to reception center and emergency worker decontamination personnel.

Possible Cause: For this out-of-sequence demonstration, the State Liaison Officer agreed to issue dosimetry to emergency workers for the County. He did not issue TLDs because he did not bring a sufficient supply of them and did not know that the extent-of-play agreement allowed for the use of simulated TLDs.

Reference: NUREG-0654, K.3. and extent-of-play agreement. sub-element 3.a.

Effect: Since TLDs were not issued, emergency workers did not have a permanent record of their radiological exposure.

Recommendation: Issue TLDs to all workers according to established procedures.

Corrective Action Demonstrated: The State Liaison Officer immediately corrected the issue by giving each Emergency Worker a simulated TLD as stated in the EOP.

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

5.1.4 Emergency Worker Decontamination

Monitoring and decontamination of emergency workers and equipment **wits** demonstrated at the Early County High School. The personnel were fully knowledgeable of the plan and procedures they were to follow and performed in **an** excellent manner. The contaminated emergency workers were monitored and transported to the reception center for decontamination. Dosimetry was distributed, however, TLDs (simulated or otherwise) were not given to the personnel working at the emergency worker and equipment monitoring and decontamination functions.

- a. **MET** Criteria 1.d.1, 6.a.1 and 6.b.1.
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** See **ARCA** in the preceding Reception and Congregate *Care* Section.
- d. **NOT DEMONSTRATED:** NONE

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

6. STATE OF FLORIDA

6.1 FLORIDA STATE LIAISON TEAM

6.1.1 Florida State Emergency Response Team

The Florida State Emergency Response Team (FSERT) deployed to the Alabama FEOC. The role of the FSERT in support of an accident at the Farley Nuclear Power Plant is primarily a liaison function, however, the FSERT still retains the capability to assume direction and control if required. This was aptly demonstrated when it was anticipated that an actual airport disaster situation would require the Florida SEOC to discontinue exercise participation. The co-location of the FSERT with the SRMAC and liaisons from AEMA and GEMA facilitates the exchange of information and required coordination. The FSERT communications provides the team with redundancy for both verbal and data transmission. The FSERT personnel were proactive in their coordinating within the FEOC, as well as in their interaction with the Florida SEOC and Florida's 50-mile ingestion counties.

- a. **MET: Criteria 1.c.1, 1.d.1 and 2.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**

7. SUMMARY OF AREAS REQUIRING CORRECTIVE ACTION

7.1 2002 ARCA – IDENTIFIED AND RESOLVED

7.1.1 22-02-3.a.1-A-01
Early County
Reception Center/
Congregate Care

Condition: TLDs were not issued to reception center and emergency worker decontamination personnel

Possible Cause: For this out-of-sequence demonstration, the State Liaison Officer agreed to issue dosimetry to emergency workers for the County. He did not issue **TLDs** because he did not bring a sufficient supply of them and did not know that the extent-of-play agreement allowed for the use of simulated TLDs.

Reference: NUREG-0654, K.3. and extent-of-play agreement, sub-element 3.a.

Effect: Since TLDs were not issued, emergency workers did not have a permanent record of their radiological exposure.

Recommendation: Issue TLDs to all workers according to established procedures.

Corrective Action Demonstrated: The State Liaison Officer immediately corrected the issue by giving each Emergency Worker a simulated TLD as stated in the EOP.

7.2 PRIOR ARCA RESOLVED

7.2.1 07-01-11-A-01
SEOC

Description: A systematic problem was identified concerning information **flow** and release of information to the public, therefore, this ARCA has been placed at the SEOC **for** resolution. **At** 1226 Emergency Health Orders **3** and **4** were issued. These Health Orders directed the evacuation of zones A-2, B-2, F-2, G-2, A-5 and G-5, as well as, shelter-in-place zones H-10, I-10, J-

10, K-10, A-10 and G-10. This information was received by the JIC at 1227 and transmitted to the SEOC, who provided the information to the counties. The JIC was having a briefing at 1230 and this information was communicated to the media during that briefing. AEMA also issued a press release at **1245** detailing the evacuation and shelter information.

At **1238** the counties concurred on the protective actions indicated in the Health Orders and agreed to activation of the sirens at 1248 and issue the EAS messages between **1248** and **1250**.

The *Code of Alabama* and the *Alabama Radiological Emergency Response Plan for Nuclear Power Plants (REP Plan)* recognize the authority of the Health Officer to determine precautionary and protective actions to protect the public from excessive exposure to radiation. The REP Plan, *the Alabama Emergency Management Agency Browns Ferry Nuclear Power Plant Standard Operating Guide (SOG) and the Alabama Emergency Management Agency Fixed Nuclear Facility Public Information-Education Standard Operating Procedures* also address the procedures for the release of information to the public. The latter states (page 1) "Specifically the state's role is **not** to accomplish "first notification" to inform the affected public to evacuate or take protective actions. That responsibility belongs to the affected county PIO." As a corollary, the SOG states (page 37) "The decision to shelter or evacuate will be made by Radiological Control Agency. The EOC will have the staff function to communicate directions to *Birmingham Weather* -and advise the county EOCs to notify the public."

Corrective Action Demonstrated: The ARCA assessed against the State in the 2001

Browns Ferry exercise for early release of protective action decisions (PAD) at the JIC was corrected. As required by the Code of Alabama and the Alabama Radiological Response Plan for Nuclear Power Plants, the Radiation Control Agency (RCA) issued the health orders for public warning and restricted access within two miles of the plant and subsequently the evacuation of sectors A, E5, F5, E10 and F10. In each instance the correct standard operating procedures (SOP) were followed. The RCA issued the Health orders, sent them to AEMA, which then coordinated the PADs with Houston County. After the State of Georgia, Houston County and Early County, Georgia, concurred on the PADs, this information was then transmitted to the JIC, which appropriately briefed the media on the PADs. The JIC appropriately briefed the media on the PADs after the coordination process had been completed.

APPENDIX 1

ACRONYMS AND ABBREVIATIONS

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

ADPH	Alabama Department of Public Health
ADEM	Alabama Department of Environmental Management
AEMA	Alabama Emergency Management Agency
ARC	American Red Cross
ARCA	Area Requiring Corrective Action
DNR	Department of Natural Resources
EAS	Emergency Alert System
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
EPZ	Emergency Planning Zone
FCPO	Forward Command Post
FEMA	Federal Emergency Management Agency
FEOC	Forward Emergency Operations Center
FMT	Field Monitoring Teams
F-SERT	Florida State Response Team
GE	General Emergency
GEMA	Georgia Emergency Management Agency
JIC	Joint Information Center
KI	Potassium Iodide
NRC	Nuclear Regulatory Commission
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>
ORO	Offsite R esponse Organization
PAD	Protective Action Decision
PAR	Protective Action Recommendation
PIO	Public Information Officer
PNS	Public Notification System

RAC	Regional Assistance Committee
RCA	Radiation Control Agency
RCCC	Reception Center/Congregate Care
REP	Radiological Emergency Preparedness
RERP	Radiological Emergency Response Plan
SAE	Site Area Emergency
SEOC	State Emergency Operations Center
SRMAC	State Radiological Monitoring Assessment Center
T&ACP	Traffic and Access Control Point
TLD	Thermoluminescent Dosimeter
USDA	U. S. Department of Agriculture
USCG	U. S. Coast Guard

APPENDIX 2

EXERCISE EVALUATORS

The following is a list of the personnel who evaluated the Farley Nuclear Power Plant exercise on August 21, 2002. The organization represented by each evaluator is indicated by the following abbreviations:

FEMA	- Federal Emergency Management Agency
ICF	- ICF Incorporated
NRC	- Nuclear Regulatory Commission
USCG	- US. Coast Guard

Lawrence A. Robertson

Co-RAC Chairman

<u>EVALUATION SITE</u>	<u>EVALUATOR</u>	<u>ORGANIZATION</u>
Chief Evaluator	Robert Perdue	FEMA
STATE OF ALABAMA		
SEQC (Clanton, AL)	Lawrence Robertson John Grijak	FEMA FEMA
FEOC (Dothan) & Florida F-SERT	Bill Larrabee	ICF
Emergency Operations Facility	Robert Trojanowski	NRC
Radiation Control (Montgomery)	Charles Phillips	ICF
Dose Assessment (Dothan)	Deborah Blunt	ICF
(2) Rad. Field Monitoring Teams	Walter Gawlak Tommy Brown	ICF ICF
Joint Information Center	Tom Reynolds	FEMA
RISK COUNTY		
HOUSTON COUNTY		
Emergency Operations Center	Robert Perdue David Springer	FEMA USCG

Protective Actions for Schools 8-20-02 (out-of-sequence) 8-20-02	Robert Perdue	FEMA
Forward Command Post (out-of-sequence)	Robert Perdue	FEMA
Traffic Control Points 8-20-02 (out-of-sequence)	David Springer	USCG

STATE OF GEORGIA

Forward Emerg. Operations Center	Eddie Hickman	FEMA
Dose Assessment	Harry Harrison	ICF

RISK COUNTY

EARLY COUNTY

Emergency Operations Center	Helen Wilgus Obhie Robinson	FEMA FEMA
Traffic Control Points	Obhie Robinson	FEMA
Reception Center/Congregate Care Out-of-sequence 8-21-02	Helen Wilgus Obhie Robinson	FEMA FEMA
EW Decontamination Out-of-sequence 8-21-02	Helen Wilgus Obhie Robinson	FEMA FEMA

APPENDIX 3

EXERCISE CRITERIA AND EXTENT-OF-PLAY AGREEMENT

This appendix contains the exercise criterion which were scheduled for demonstration in the Farley Nuclear Power Plant exercise on August 21,2002 and the extent-of-play agreement approved by FEMA Region IV.

A. Exercise Criteria

B. Extent-of-Play Agreement

The extent-of-play agreements on the following pages were submitted by the States of Alabama and Georgia, and were approved by FEMA Region IV, in preparation for the Farley Nuclear Power Plant exercise on August 21,2002.



FEDERAL EMERGENCY MANAGEMENT AGENCY

Region IV
3003 Chamblee-Tucker Road
Atlanta, Georgia 30341

July 25, 2002

Samuel Guerrero, Branch Chief
Alabama Emergency Management Agency
Post Office Drawer 2160
Clanton, Alabama 35046-2160

Dear **Mr. Guerrero**:

The exercise criteria and Extent **of** Play agreement for the Farley Nuclear Power Plant **full** participation **plume** pathway exercise scheduled for August 21, 2002 have been accepted with the following clarifications:

- Sub-element 1.d.1 Communications Equipment.
Under the **EOP** where ORC is listed, we included the Field Monitoring Teams.
- Sub-elements 3.d.I and 3.d.2.
Since impediments to evacuation are normally related to traffic **and** access control, we recommend that Sub-element 3.d.2 be discussed during the demonstration of Sub-element **3.d.1**.
- Sub-element 5.a Activation of the Prompt Alert and Notification System.
We recommend that the Prompt Alerting and Notification system be explained thoroughly at the Federal evaluator's meeting on Tuesday, August 20, 2002.

Should you have questions, please contact me at 770/220-5464

Sincerely,

A handwritten signature in black ink, appearing to read "Robert E. Perdue", is written over the typed name.

Robert E. Perdue, EMPS
Technological Services Branch



DON SIEGELMAN
GOVERNOR

LEE HELMS
ACTING DIRECTOR

STATE OF ALABAMA
EMERGENCY MANAGEMENT AGENCY
5898 COUNTY ROAD 41 • P.O. DRAWER 2160 • CLANTON, AL ABAMA 35046-2160
(205) 280-2200 FAX # (205) 280-2495

July 24, 2002

Dr. Robert Perdue
FEMA Region IV
3003 Chamblee-Tucker Road
Atlanta, Georgia **30341**

Bear Br. Perdue:

Here *is* the revised Extent of Play. Some of the items that you questioned were not under the correct Criterion, but we did address them.

All of the meetings and out of sequence will be held at the Dothan/Houston County EOC.

Please contact me at (205) 280-2474.

Sincerely,


Sam Guerrero
Tech Hazards Branch Chief

State of Alabama
Alabama Emergency Management Agency
Alabama Department of Public Health, Office of Radiation Control
Dothan/Houston County Emergency Management Agency

EXTENT OF PLAY
FARLEY NPP
July 8, 2002

Other than the exceptions noted in the Extent of Play Agreement, all exercise areas will be demonstrated for evaluation in accordance with the Alabama Radiological Emergency Plan, the respective site-

TABLE 1

DATE AND SITE: August 21, 2002 – Farley Nuclear Power Plant (Alabama – Full Participation)(Georgia/Florida - Partial Participation)

ELEMENT/Sub-Element	ALABAMA EMA	ALABAMA RAD CONTROL	HOUSTON/ HENRY COUNTY	GEORGIA EMA	GEORGIA DNR	EARLY COUNTY	FLORIDA DEM	FLORIDA DOH
1. EMERGENCY OPERATIONS MANAGEMENT								
1 a.1. Mobilization	X	X	X	X	NA	X		
1 b.1. Facilities	X	X	X	X	X	X		
1 c.1. Direction and Control	X	X	X	X	NA	X	X	X
1 d.1. Communications Equipment	X	X	X	X	X	X	X	X
1 e.1. Equipment & Supplies to Support Operations	X	X	X	X	X	X		
2. PROTECTIVE ACTION DECISION MAKING								
2 a.1. Emergency Worker Exposure Control	NA	X	NA	X	X	NA	NA	
2 b.1. Radiological Assessment & PARs & PADs Based on Available Information	NA	X	NA	X	X	NA		X
2 b.2. Decision Making (PAD's) for the General Public	NA	X	NA	X	X	NA		
2 c.1. Protective Action Decisions for Special Populations	NA	NA	X	NA	NA	X	NA	
2 d.1. Radiological Assessment & Decision Making for Ingestion Exposure - IPZ								
2 e.1. Rad Assessment & Decision Making for Relocation, Re-entry & Return - IPZ								
3. PROTECTIVE ACTION IMPLEMENTATION								
3 a.1. Implementation of Emergency Worker Control	NA	X	X	X		X	NA	
3 b.1. Implementation of KI Decisions				X		X	NA	
3 c.1. Implementation of PADs for Special Populations	NA	NA	X	NA	NA	X	NA	
3 c.2. Implementation of PADs for Schools	NA	NA	X	NA	NA		NA	
3 d.1. Implementation of Traffic and Access Control	X	NA	X	NA	NA	X	NA	
3 d.2. Impediments to Evacuation and Traffic and Access Control	X	NA	X	NA	NA	X	NA	
3 e.1. Implementation of Ingestion Decisions Using Adequate Information - IPZ								
3 e.2. Implementation of IP Decisions Showing Strategic/ Instructional Materials - IPZ								
3 f.1. Implementation of Relocation, Re-entry and Return Decisions - IPZ								
4. FIELD MEASUREMENT and ANALYSIS								
4 a.1. Plume Phase Field Measurement & Analysis Equipment	NA	X	NA	NA		NA	NA	
4 a.2. Plume Phase Field Measurement & Analysis Management	NA	X	NA	NA		NA	NA	
4 a.3. Plume Phase Field Measurements & Analysis Procedures	NA	X	NA	NA		NA	NA	
4 b.1. Post Plume Field Measurement & Analysis - IPZ							NA	
4 b.2. Laboratory Operations - IPZ							NA	
5. EMERGENCY NOTIFICATION & PUBLIC INFORMATION								
5 a.1. Activation of Prompt Alert and Notification	NA	NA	X	X	NA	X		
5 a.2. Activation of Prompt Alert and Notification 15 Minute (Fast Breaker) -RSV'D	Reserved	Reserved	Reserved	Reserved	Reserved	Reserved	Reserved	Reserved
5 a.3. Activation of Prompt Alert and Notification Backup Alert and Notification	NA	NA	X	NA		NA		
5 b.1. Emergency Information and Instructions for the Public and the Media	X	X	X	X		X		
6. SUPPORT OPERATIONS/FACILITIES								
6 a.1. Monitoring and Decon of Evacuees and EWs and Registration of Evacuees	NA	NA		NA	NA	X	NA	
6 b.1. Monitoring and Decontamination of Emergency Worker Equipment	NA	NA		NA	NA	X	NA	
6 c.1. Temporary Care of Evacuees	NA	NA		NA	NA	X	NA	
6 d.1. Transportation and Treatment of Contaminated Injured Individuals	NA	NA		NA	NA		NA	

LEGEND: M = Met A = ARCA D = Deficiency B = Not Scheduled for Demonstration

State of Alabama
Alabama Emergency Management Agency
Alabama Department of Public Health, Office of Radiation Control
Dothan/Houston County Emergency Management Agency

EXTENT OF PLAY
FARLEY NPP
July 24,2002
Revision 1

Other than the exceptions noted in the Extent of Play Agreement, all exercise areas will be demonstrated for evaluation in accordance with the Alabama Radiological Emergency Plan, the respective site-specific plan and appropriate Standard Operating Procedures **or** Guides

It is requested that any issue or discrepancy arising during exercise play be corrected immediately, at all player locations, if it isn't disruptive to exercise play and if it is mutually agreeable to both the controller and evaluator. This is a very useful and valuable option and offers the opportunity to expand the training benefits available in an "exercise environment."

EVALUATION AREA: 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 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:

- AEMA (Alabama Emergency Management Agency)
AEMA will simulate alerting, notifying and mobilizing emergency personnel. Personnel will be pre-positioned at the Alabama Emergency Operations Center (AEOC), State Liaison Office, Joint Information Center (JIC) and other locations. AEMA will demonstrate ability to receive notification from the licensee (IAW the REP Plan) and verify the notification. The facilities will demonstrate activation in a timely manner scenario dependent. Pre-positioning is necessary due to the compression of the scenario and the distances involved in traveling to the various locations.

- ORC (Alabama Office Of Radiation Control)
The Office of Radiation Control will simulate alerting, notifying and mobilizing emergency personnel. Personnel will be pre-positioned at the Dothan SRMAC room in the Houston County EMA Office, and the Joint Information Center (JIC). Radiation Control will demonstrate the ability to receive notification from the licensee and verify

the notification. The facilities will demonstrate activation in a timely manner scenario dependent.

- DHCEMA (Dothan/Houston County EMA)
The Dothan/Houston County EMA staff will be pre-positioned until 8:00 am, at which time normal duty hours begin.
Staff consists of Shelby Womack, Brenda Dunning, Charles Finney, and Roshanda Walker. Administrative volunteer support personnel will also be pre-positioned along with the Dothan/Houston County staff.

Sub-element 1.b –Facilities

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

EXTENT OF PLAY:

- AEMA
The Alabama Emergency Operations Center, Forward Emergency Operations Center, and Joint Information Center (JIC) will demonstrate facility capabilities, scenario dependent.
- ORC
The Montgomery Emergency Room, the Dothan SRMAC, and the Joint Information Center (JIC) will demonstrate facility capabilities, scenario dependent.
- DHCEMA
The Dothan EOC and the Joint Information Center (JIC) will demonstrate facility capabilities, scenario dependent.

Sub-element 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.,2.a.,b.)

EXTENT OF PLAY

- AEMA
In accordance with the Alabama Radiological Response Plan and the Farley Standard Operating Guide, direction and control will be demonstrated by AEMA, only at the Alabama Emergency Operations Center, scenario dependent.
- ORC
Radiation Control will demonstrate direction and control from the Montgomery Emergency Room and the Dothan SRMAC, scenario dependent.
- DHCEMA
DHCEMA will demonstrate direction and control from the Dothan EOC, scenario dependent.

Sub-Element 1.d- Communications Equipment

Criterion 1.d.1: At least **two** communications systems are available, at least one operates properly, and communications 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

- AEMA
The Alabama Emergency Management Agency will demonstrate communication capabilities at appropriate locations (AEOC, FEOC, and JIC), and between governmental agencies, scenario dependent.
- ORC
Radiation Control will demonstrate communication capabilities at the appropriate locations (Montgomery Emergency Room, the Dothan **SRMAC**, and the JIC), and between governmental agencies, scenario dependent.
- DHCEMA
DHCEMA will demonstrate Communication capabilities from the Dothan EOC and JIC, scenario dependent.

Sub-element 1.e- Equipment and Supplies to Support Operations

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

EXTENT OF PLAY

- AEMA
AEMA will have available equipment, maps, and displays that would be necessary to support emergency operations at the AEOC, FEOC and JIC, scenario dependent. Dosimetry and KI are not applicable.
- ORC
Radiation Control will have available equipment, maps, and displays, that would be necessary to support emergency operations at the Montgomery Emergency Room, Dothan SRMAC, and JIC, scenario dependent. Dosimetry and KI will be available for field teams, scenario dependent.
- DMCEMA
An adequate supply of TLDs and dosimetry are available for the emergency workers. This Evaluation area will be discussed out of sequence in the Dothan EOC during the 2002 FEMA Staff Assistance visit.

EVALUATION AREA 2: PROTECTIVE ACTION DECISION MAKING

Sub-element 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.)

EXTENT OF PLAY

- **AEMA**
Not Applicable
- **ORC**
Radiation Control will demonstrate emergency worker exposure control decision-making, for the State Radiological Monitoring Field Teams only?scenario dependent.
- e **DHCEMA**
Not Applicable. In accordance with the Alabama REP Plan, and the DothadHouston County REP Plan, Houston County Emergency Workers do not contact ORC, directly, if they are to exceed designated exposure limits.

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

Criterion 2bB: 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. and Supplement 3.)

EXTENT OF PLAY

- **AEMA**
Not Applicable
- **ORC**
Radiation Control will demonstrate radiological assessment for the plume phase of the emergency, scenario dependent.
- e **DHCEMA**
Not Applicable

Criterion 2.h.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)

EXTENT OF PLAY

- AEMA
Not Applicable. In Accordance with the Alabama REP Plan, Pages A-2, A-3, B-1, B-10, B-16. The ORC is responsible for issuing the PADs. However after a PAD is issued, AEMA reserves the right to review, and or recommend the PAD be changed due to any mitigating circumstances (road conditions, weather condition, etc.)
- ORC
Radiation Control will demonstrate the decision-making process to make protective action decisions for the general public, scenario dependent.
- DHCEMA
Not Applicable Not Applicable. In Accordance with the Alabama REP Plan, Pages A-2, A-3, B-1, B-10, B-16. The ORC is responsible for issuing the PADs. However after a PAD *is* issued, D/HC EMA reserves the right to review, and or recommend the PAD be changed due to any mitigating circumstances (road conditions, weather condition, etc.)

Sub-element 2.c-Protective Action Decisions Consideration for the Protection of Special Populations

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

EXTENT OF PLAY

- AEMA
Not Applicable
- ORC
Not Applicable
- DHCEMA
DHCEMA will demonstrate from the Dothan EOC, scenario dependent.

Sub-element 2.d-Radiological Assessment and Decision-Making for the Ingestion Exposure Pathway

This Sub-element will not be evaluated this exercise (ingestion element).

Criterion 2.d.1: Radiological consequences for the ingestion pathway are assessed and appropriate protective action decisions are made based on the ORO planning criteria. (NUREG-0654, I.8, J.11)

Sub-element 2.e- Radiological Assessment and Decision-Making (Concerning Relocation, Re-entry, and Return

This Sub-element will not be evaluated this exercise (ingestion element)

(Criterion 2.e.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 OROs

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 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. (NWREG-0654, K.3.)

EXTENT OF PLAY

- **AEMA**
Not Applicable
- **OKC**
Radiation Control will demonstrate the implementation of emergency worker exposure control, for State Radiological Monitoring Field Teams only. scenario dependent.
- **DHCEMA**
Emergency workers will discuss usage of equipment (as described in 1.e.1), out of sequence, Tuesday, August 20, 2002 at 5:30 PM, in the DothadHouston County EOC. The Forward Command Post Director is responsible for issuance of appropriate dosimetry to DothadHouston County EMA emergency workers.

Sub-element 3.h- Implementation of KI Decision

Criterion 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** to emergency workers and institutionalized individuals **is** maintained. (NUREG-0654, E.7., J.10.c.,f.)

EXTENT OF PLAY

- **AEMA**
Not Applicable. AEMA does not issue KI or make decisions pertaining to issuance of KI.
- **ORC**
Radiation Control **will** demonstrate the decision **making** capability for making KI available to the State Radiological Monitoring Field Teams only, scenario dependent.
- **DHCEMA**
This element will not be demonstrated. Dothan/HC EMA does not make the decision to issue KI.

Sub-element 3.c.1- 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, E.7., J.9., 10.c.d.e.g.)

EXTENT OF PLAY

- **AEMA**
Not Applicable
- **ORC**
Not Applicable
- **DHCEMA**
Will be discussed with applicable personnel from the Dothan EOC, scenario dependent. Contact with special populations, reception facilities, and transportation providers will be simulated.

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

EXTENT OF PLAY

- **AEMA**
Not Applicable
- **ORC**
Not Applicable
- **DHCEMA**
This Evaluation Area will be discussed out of sequence, with applicable personnel, in the Dothan EOC, Tuesday, August 20, 2002, at 6:30 PM.

Sub-element 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., k.)

EXTENT OF PLAY

- **AEMA**
Will simulate contacting applicable rail and air traffic authorities, scenario dependent at the AEOC.
- **ORC**
Not Applicable
- **DHCEMA**

This criterion will be discussed out of sequence with applicable personnel, in our EOC, Tuesday, August 20, 2002, at 6:30 PM. Houston County Sheriff's Department, Houston County Road and Bridge Department, Alabama Department of Public Safety, and Ashford PD (if available) will participate.

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

EXTENT OF PLAY

- AEMA
AEMA will demonstrate coordination of state resources assistance as needed by the County at the AEOC, scenario dependent.
- ORC
Not Applicable
- DHCEMA
The director of DHCEMA or his designee will discuss applicable procedures at the Dothan EOC, scenario dependent. Actual demonstrations will not be performed.

Sub-element 3.e- Implementation of Ingestion Pathway Decisions

Sub-element 3.e. - Implementation of Ingestion Pathway Decisions

This Sub-element will not be evaluated this exercise (ingestion element).

Criterion 3.e.1: The ORO demonstrates the availability and appropriate **use** of adequate information regarding water, food supplies, milk, and agricultural production within the ingestion exposure pathway emergency planning zone for implementation of protective actions.

Criterion 3.e.2: Appropriate measures, strategies, and pre-printed instructional material are developed for implementing protective action decisions for contaminated water, food products, milk and agricultural production.

Sub-element 3.f.- Implementation of Relocation, Re-entry and Return Decisions

This Sub-element will not be evaluated this exercise (ingestion element).

Criterion 3.f.1: Decisions regarding controlled re-entry of emergency workers and relocation and return of the public are coordinated with appropriate organizations and implemented. (NUREG-0654, M.1, 3.)

EVALUATION AREA 4: FIELD MEASUREMENT AND ANALYSIS

Sub-element 4.a- Plume Phase Field Measurements and Analyses

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.8., 9., 11**)

EXTENT OF PLAY

- AEMA
Not Applicable
- ORC
Radiation Control will demonstrate plume phase field measurements and analyses, scenario dependent. Two field teams will be evaluated. Field teams will simulate using booties and gloves for contamination control. All Field Monitoring equipment **will** be available for the federal evaluators to examine. Field teams will be pre-positioned at the Houston County Health Department parking lot.
- DHCEMA
Not Applicable

Criterion 4.a.2: Field measurement 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**)

EXTENT OF PLAY

- AEMA
Not Applicable
- ORC
Radiation Control will demonstrate plume phase field measurements and analyses, scenario dependent. Two field teams **will** be evaluated. **Field** teams will simulate using booties and gloves for contamination control.
- DHCEMA
Not Applicable

Criterion 4.a.3: Ambient radiation measurements are made **and** recorded at appropriate locations, and radioiodine **and** particulates samples are collected. Team will move **to** an appropriate **low** background location **to** determine whether 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.**)

EXTENT OF PLAY

- AEMA
Not Applicable
- ORC
Radiation Control will demonstrate plume phase field measurements and analysis procedures, scenario dependent. Radioiodine sample procedures will be demonstrated in the parking lot of the Houston County Health Department before being deployed into the field. Due to the compression of the scenario, radioiodine sampling will be simulated in the field during the exercise, scenario dependent. Field teams will simulate using booties and gloves for contamination control.
- DHCEMA
Not Applicable

Sub-element 4.b-Post Plume Phase Field Measurement and Sampling

This Sub-element will not be evaluated this exercise (ingestion element).

Criterion 4.b.1: The field teams demonstrate the capability to make appropriate measurements and to collect appropriate samples (e.g. food crops, milk, water, vegetation, and soil) to support adequate assessments and protective action decision-making. (NUREG-0654, I.8., J.11.)

Sub-element 4.c-Laboratory Operations

This Sub-element will not be evaluated this exercise (ingestion element).

Criterion 4.c.1: The laboratory is capable of performing required radiological analyses to support protective action decisions. (NUREG-0654, C.3., I.8., Y, J.11)

EVALUATION AREA 5: EMERGENCY NOTIFICATION & PUBLIC INFORMATION

Sub-element 5.a- 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 must include the elements required by current FEMA **REP** guidance. (10 CFR part 50, Appendix E & NUREG-0654, E.1., 4., 5., 6., 7.)

EXTENT OF PLAY

- **AEMA**
Not Applicable
- **ORC**
Not Applicable
- **DHCEMA**
Sirens will actually be activated **for** the initial PNS activation (a test message will be read prior to the actual siren activation and will not **be** counted as any part of the timing of the actual activation process) and simulated for any and all subsequent messages. EAS message distribution to applicable EAS stations will be provided to applicable stations. Reading **of** the message will be simulated at the Dothan EOC. The testing of tone alert radios is accomplished on a weekly basis. This **will** be demonstrated out of sequence at approximately 11:00 AM CDT, August 21, 2002 **at** the D/HC EOC.

Sub- element 5.a.2-RESERVED

Sub-element 5.a.3

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-0644, E.6., Appendix 3.b.2.c)

- e **AEMA**
Not Applicable
- **ORC**
Not Applicable
- e **DHCEMA**
This Evaluation Area will be demonstrated by a discussion between the evaluator and the Dothan/Houston County EMA Director or his designee only in case of PNS failure.

Sub-element **5.b.1**- 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.a., b., c.**)

EXTENT OF PLAY

- **AEMA**
Evaluation Area **5, 5.b.1**, will be demonstrated. Actual message distribution to the public and media will simulated, scenario dependent.
- **ORC**
Evaluation Area **5, 5.b.1**, will be demonstrated. Actual message distribution to the public and media will be simulated, scenario dependent.
- **DHCEMA**
Evaluation Area **5. 5.b.1**, will be demonstrated. Actual message distribution to the public and media will be simulated, scenario dependent.

EVALUATION AREA 6: SUPPORT OPERATIONS/ FACILITIES

This Evaluation Area will not be demonstrated for this exercise.

Sub-element 6.a- Monitoring and Decontamination of Evacuees and Emergency Workers, and Registration of Evacuees

Criterion 6.a.1: The reception center/emergency worker facility

appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees and/or emergency workers. (NUREG-0654, J.10.h.; K.5.b)

Sub-element 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)

Sub-element 6.c- 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-Preparation 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., 12.)

Sub-element 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)



GEORGIA

TABLE 2

DATE AND SITE: August 21, 2002 Farley Nuclear Power Plant (Georgia Partial Participation)

ELEMENT/Sub-Element	STATE GA	RADIATION HEALTH	JIC	EARLY COUNTY
1. EMERGENCY OPERATIONS MANAGEMENT				
1.a.1. Mobilization	X			X
1.b.1. Facilities	X	X	X	X
1.c.1. Direction and Control	X			X
1.d.1. Communications Equipment	X	X	X	X
1.e.1. Equipment & Supplies to Support Operations	X	X		X
2. PROTECTIVE ACTION DECISION MAKING				
2.a.1. Emergency Worker Exposure Control	X	X		
2.b.1. Radiological Assessment & PARs & PADs Based on Available Information	X	X		
2.b.2. Radiological Assessment and PARs and PADs for the General Public	X	X		
2.c.1. Protective Action Decisions for Special Populations				X
2.d.1. Radiological 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	X			X
3.b.1. Implementation of KI Decisions	X			X
3.c.1. Implementation of PADs for Special Populations				X
3.c.2. Implementation of PADs for Schools				X
3.d.1. Implementation of Traffic and Access Control				X
3.d.2. Impediments to Evacuation and Traffic and Access Control				X
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				
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 INFORMATION				
5.a.1. Activation of Prompt Alert and Notification	X			X
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				
5.b.1. Emergency Information and Instructions for the Public and the Media			X	X
6. SUPPORT OPERATIONS/FACILITIES				
6.a.1. Monitoring and Decon of Evacuees and EWs and Registration of Evacuees				X
6.b.1. Monitoring and Decontamination of Emergency Worker Equipment				X
6.c.1. Temporary Care of Evacuees				X
6.d.1. Transportation and Treatment of Contaminated Injured Individuals				

LEGEND: M = Met A = ARCA D = Deficiency B = Not Scheduled for Demonstration

Extent of Play Agreement
Farley
June 12, 2002

Other than the exceptions noted *in* the Extent of Play Agreement, all exercise areas will be demonstrated for evaluation in accordance with the Georgia Radiological Emergency Base Plan, the respective site-specific plan and appropriate Standard Operating Procedures.

It is requested that any issue or discrepancy arising during exercise play be corrected immediately, at all player locations, if it isn't disruptive to exercise play and if it is mutually agreeable to both the controller and evaluator. This is a very useful and valuable option and offers **the** opportunity to expand the training benefits available in an "exercise environment."

(1) Emergency Operations Management

Mobilization (1.a)

(Criterion **1.a.1**) State personnel will be pre-positioned.

Facilities (1.b)

(Criterion **1.b.7**)

Direction and Control (1.c)

(Criterion **7.c.1**) Simulated Direction and Control **will** occur through the State Operations Center (SOC) in Atlanta until the Forward Emergency Operations Center (FEOC) in Blakely, Early County is operational.

Communications Equipment (1.d)

(Criterion **1.d.1**)

Equipment and Supplies to Support Operations (1.e)

(Criterion **1.e.1**) Practice or simulated **TLDs** will be furnished to the emergency workers and KI will be simulated.

(2) Protective Action Decision Making

Emergency Worker Exposure Control (2.a)

(Criterion **2.a.1**)

Radiological Assessment and Protective Recommendations and Decisions for the **Plume Phase of the Emergency (2.b)**

(Criterion **2.b.1.**)

(Criterion **2.b.2.**)

Protective Action Decisions Consideration for the Protection of Special Populations **(2.c)**

(Criterion **2.c.1**)

Radiological **Assessment and decision-Making for the Ingestion Pathway (2.d)**

[Criterion **2.d.1**] This Evaluation Area **will** not be demonstrated.

Radiological assessment and Decision-Making Concerning Relocation, **Re-entry** and Return **(2.e)**

(Criterion **2.e.1**) This Evaluation Area **will** not be demonstrated

(3) Protective Action Implementation

Implementation of Emergency Worker Exposure Control **(3.a)**

(Criterion **3.a.1.**) Emergency workers in **Bow** exposure rate areas **will** be furnished practice or simulated **TLDS** (as described in 1.e.1) and may place a direct reading dosimeters in a centralized area as a area monitor. **KI** will be simulated.

Implementation of **KI** Decision **(3.b)**

(Criterion **3.b.1.**)

Implementation ~~of~~ Protective Actions for special **Populations (3.c)**

(Criterion **3.c.1.**)

(Criterion **3.c.2**) This Evaluation Area will not be demonstrated.

Implementation of Traffic and **Access Control (3.d)**

(Criterion **3.d.1.**) This criterion will be evaluated by interview of law enforcement officers in the Blakely, Early County EOC. Actual demonstrations will not be performed.

(Criterion **3.d.2.**) Should an impediment occur, **the** Blakely, Early County EMA Director or his designee will discuss procedures. Actual demonstrations will not be performed.

Implementation of ingestion Pathway Decisions (3.e)

(Criterion 3.e.1) This Evaluation Area will not be demonstrated.

(Criterion 3.e.2) This Evaluation Area will not be demonstrated.

Implementation of Relocation, Re-entry and Return Decisions (3.f)

(Criterion 3.f.1) This Evaluation Area will not be demonstrated.

(4) Field Measurement and Analysis

Plume Phase **Field** Measurement and Analysis (4.a)

(Criterion 4.a.1)

(Criterion 4.a.2)

(Criterion 4.a.3)

Post Plume Phase Field Measurements and Sampling (4.b)

(Criterion 4.b.1) This Evaluation Area will not be demonstrated

Laboratory Operations (4.c)

(Criterion 4.c.1) This Evaluation Area will not be demonstrated

(5) Emergency Notification and Public Information

Activation of the **Prompt Alert and Notification System (5.a)**

(Criterion 5.a.1.)

(Criterion 5.a.2.) This Evaluation Area will not be demonstrated

(Criterion 5.a.3.) This Evaluation Area will be demonstrated by a discussion between the evaluator and the Early County EMA Director.

Emergency Information and Instructions for the Public **and** the Media (5.b)

(Criterion 5.b.1.)

(6) Support Operations/ Facilities

Monitoring and Decontamination of Evacuees and Emergency Workers **and** Registration of Evacuees (6.a)

(Criterion 6.a.1.) This criterion will be demonstrated out of sequence at 5:00 pm on August 21, 2002. 6 évacuees will be monitored. The Reception Center is located at Early County High School, Hwy 62, Blakely, GA

Monitoring and Decontamination of Emergency Worker Equipment (6.b)

(Criterion 6.b.1.) This item will be demonstrated out of sequence as described in 6.a.1. 2 vehicles will be monitored.

Temporary Care of Evacuees (6.c)

(Criterion 6.c.1.) This item will be demonstrated by interview, out of sequence as described in 6.a.1.

Transportation and Treatment of Contaminated Individuals (6.d)

[Criterion 6.d.1.) Early Memorial Hospital MS-I Exercise is not due demonstration.

FLORIDA



STATE OF FLORIDA
DEPARTMENT OF COMMUNITY AFFAIRS

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 Governor

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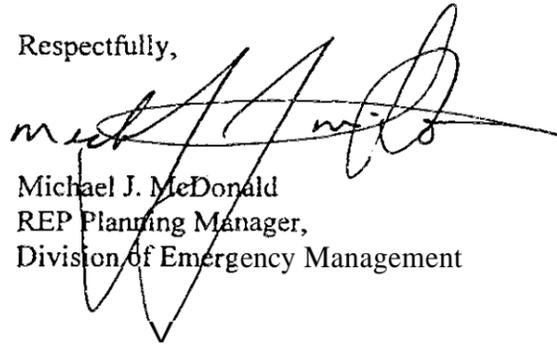
June 10, 2002

Dr. Robert Perdue
 Regional Director, Region IV
 Federal Emergency Management Agency
 3003 Chamblee-Tucker Road
 Atlanta, Georgia 30341

Dear Dr. Purdue:

Attached are **the** Florida, Farley Nuclear Power Plant objectives and Extent of Play for the **August** exercise. Although the spreadsheet also shows Alabama and Georgia, it is meant only to represent the Florida objectives. Please contact Scott Nelson at 850-413-9896 or by e-mail at scott.nelson@dca.state.fl.us if you have any questions.

Respectfully,



Michael J. McDonald
 REP Planning Manager,
 Division of Emergency Management

MJD/sn

cc: Helen Wilgus
 Jerry Eakins
 Walt Lee

Enclosures

2555 SHUMARD OAK BOULEVARD • TALLAHASSEE, FLORIDA 32399-2100
 Phone: 850.488.8466/Suncom 278.8466 FAX: 850.921.0781/Suncom 291.0781
 Internet address: <http://www.dca.state.fl.us>

CRITICAL STATE CONCERN FIELD OFFICE
 2796 Overseas Highway, Suite 212
 Marathon, FL 33050-2227
 (305) 289-2402

COMMUNITY PLANNING EMERGENCY MANAGEMENT
 2555 Shumard Oak Boulevard
 Tallahassee, FL 32399-2100
 (850) 488-2156

HOUSING & COMMUNITY DEVELOPMENT
 2555 Shumard Oak Boulevard
 Tallahassee, FL 32399-2100
 (850) 488-7052

TABLE 1

DATE AND SITE: August 21, 2002 – Farley Nuclear Power Plant (Alabama – Full Participation)(Georgia/Florida – Partial Participation)

ELEMENT/Sub-Element	ALABAMA EMA	ALABAMA RAD CONTROL	HOUSTON/ HENRY COUNTY	GEORGIA EMA EMA	GEORGIA DNR DNR	EARLY COUNTY	FLORIDA DEM DEM	FLORIDA DOH DOH
1. EMERGENCY OPERATIONS MANAGEMENT								
1.a.1. Mobilization	X	X	X	X	X	X		
1.b.1. Facilities	X	X	X	X	X	X		
1.c.1. Direction and Control	X	X	X	X	X	X	X	X
1.d.1. Communications Equipment	X	X	X	X	X	X	X	X
1.e.1. Equipment & Supplies to Support Operations	X	X	X	X	X	X		
2. PROTECTIVE ACTION DECISION MAKING								
2.a.1. Emergency Worker Exposure Control	NA	X	NA	X	X	NA	NA	
2.b.1. Radiological Assessment & PARs & PADs Based on Available Information	NA	X	NA	X	X	NA		X
2.b.2. Decision Making (PAD's) for the General Public	NA	X	NA	X	X	X		
2.c.1. Protective Action Decisions for Special Populations	NA	NA	X	NA	NA	X	NA	
2.d.1. Radiological Assessment & Decision Making for Ingestion Exposure - IPZ								
2.e.1. Rad Assessment & Decision Making for Relocation, Re-entry & Return - IPZ								
3. PROTECTIVE ACTION IMPLEMENTATION								
3.a.1. Implementation of Emergency Worker Control	NA	X	X	NA		X	NA	
3.b.1. Implementation of KI Decisions				X		X	NA	
3.c.1. Implementation of PADs for Special Populations	NA	NA	X	NA	NA	X	NA	
3.c.2. Implementation of PADs for Schools	NA	NA	X	NA	NA	X	NA	
3.d.1. Implementation of Traffic and Access Control	NA	NA	X	NA	NA	X	NA	
3.d.2. Impediments to Evacuation and Traffic and Access Control	X	NA	X	X	NA	X	NA	
3.e.1. Implementation of Ingestion Decisions Using Adequate Info - IPZ								
3.e.2. Implementation of IP Decisions Showing Strategic/ Inst Materials - IPZ								
3.f.1. Implementation of Relocation, Re-entry and Return Decisions - IPZ								
4. FIELD MEASUREMENT and ANALYSIS								
4.a.1. Plume Phase Field Measurement & Analysis Equipment	NA	X	NA	NA		NA	NA	
4.a.2. Plume Phase Field Measurement & Analysis Management	NA	X	NA	NA		NA	NA	
4.a.3. Plume Phase Field Measurements & Analysis Procedures	NA	X	NA	NA		NA	NA	
4.b.1. Post Plume Field Measurement & Analysis - IPZ							NA	
4.b.2. Laboratory Operations - IPZ							NA	
5. EMERGENCY NOTIFICATION & PUBLIC INFORMATION								
5.a.1. Activation of Prompt Alert and Notification	NA	NA	X	X	NA	X		
5.a.2. Activation of Prompt Alert and Notification 15 Min (Fast Breaker) -RSV'D	Reserved	Reserved	Reserved	Reserved	Reserved	Reserved	Reserved	Reserved
5.a.3. Activation of Prompt Alert and Notification Backup Alert and Notification	NA	NA	X	X		X		
5.b.1. Emergency Information and Instructions for the Public and the Media	X	X	X	X		X		
6. SUPPORT OPERATIONS/FACILITIES								
6.a.1. Monitoring and Decon of Evacuees and EWs and Registration of Evacuees	NA	NA		NA	NA	X	NA	
6.b.1. Monitoring and Decontamination of Emergency Worker Equipment	NA	NA		NA	NA	X	NA	
6.c.1. Temporary Care of Evacuees	NA	NA		NA	NA	X	NA	
6.d.1. Transportation and Treatment of Contaminated Injured Individuals	NA	NA		NA	NA		NA	

1. EMERGENCY OPERATIONS MANAGEMENT

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:

FSERT: Will be pre-positioned in the Houston County EOC. The F-SERT will consist of an F-SERT Chief, PIO, ESF 5 (Information and Planning Chief), and ESF 8 (Department of Health/Bureau of Radiation Control). Decisions will be made jointly between the F-SERT and the State EOC.

DOH/BRC: 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:

FSERT: In agreement

DOH/BRC: In agreement

2. PROTECTIVE ACTIONS DECISION MAKING

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

EXTENT OF PLAY:

FSERT: In agreement

DOH/BRC: In agreement

APPENDIX 4

EXERCISE SCENARIO

This appendix contains a summary of the simulated sequence of events, exercise scenario, which was used **as** the basis for invoking emergency response actions by OROs in the Farley Nuclear Power Plant exercise on **August** 21,2002.

II. SCENARIO

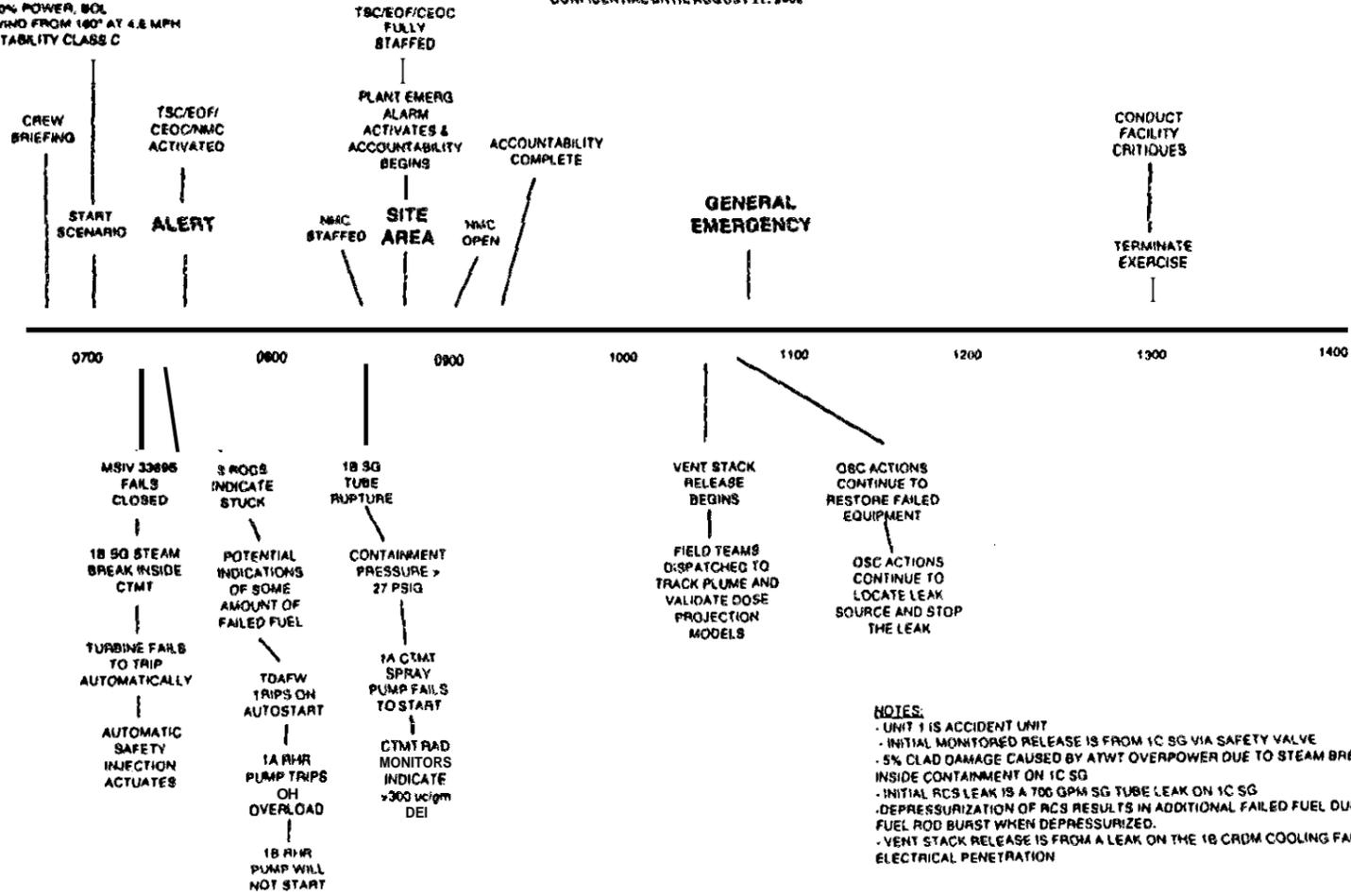
Timeline

2

FARLEY NUCLEAR PLANT RADIOLOGICAL EMERGENCY EXERCISE SCENARIO TIMELINE

CONFIDENTIAL UNTIL AUGUST 11, 2003

INITIAL CONDITIONS
 - UNIT 1 OPERATING NORMALLY AT 100% POWER, MOL
 - UNIT 2 OPERATING NORMALLY AT 100% POWER, BOL
 - WIND FROM 180° AT 4.8 MPH
 - STABILITY CLASS C



**SCENARIO
NARRATIVE SUMMARY
August 21,2002**

The Exercise **starts** at 0700. **At 0715 Main Steam** Isolation Valve (MSIV) HV-3369B fails closed **and** the main turbine **fails** to automatically trip. The closure of the MSIV results in a high main **steam** pressure on the 1B Steam Generator (SG). The pressure transient **results** in a small steam break (fault) **or** the 1B SG inside Containment and an automatic Safety Injection (SI). The failure **of** the main turbine to **automatically** trip on closure of the MSIV results in a high steam flow condition and possible indications of some amount of failed fuel **as** indicated by radiation monitors RE-2 and 7 alarming. Additionally, **several** control rods fail to fully insert when the Safety Injection reactor trip **occurs**.

By approximately 0718, the Crew has indications that the 1A Residual Heat Removal (RHR) pump has tripped **on** overload and that the 1B RHR pup has failed to automatically start. When the crew attempts to **manually** start the 1B RHR pump it will not start.

At approximately 0721, the crew has indications that the Turbine Driven Auxiliary Feed Water (TDAFW) pump is tripped.

By approximately 0733 the Control **Room staff** should declare **an ALERT** based on Emergency Implementing Procedure (EIP) 9.0, EAL **A5.2**. "Equipment Failure - **Loss** of both **trains of** RHR". Plant **staff will start** taking actions for **an ALERT** per EIP-9.0 guideline 3 and **the** TSC and EOF staffs **will** be called in to the plant. Within approximately 15 minutes. State **and/or** local notifications should be complete. Within 65 minutes, ERDS should **be** activated and NRC notifications complete. Within **75** minutes of the declaration. the **TSC** and EOF should have **minimum staff in** place and **start** turning over to **perform** designated functions. The CEOC in Birmingham will also have staff available to support plant operations **and** news release generation. The Control Room crew will continue to restore non-operable equipment to service **while** performing the procedurally directed actions of emergency procedures EEP-0, EEP-2, **EEP-1, and ESP 1.1**

At approximately 0830 the crew should have indications of a Reactor Coolant System (RCS) transient **as** indicated by lowering RCS pressure and inventory. Per procedure. the crew is expected to **reinitiate** SI, re-enter EEP-0, **and** secure the Reactor Coolant **Pumps** in response to the plant changes.

By approximately 0835 the crew should have indications that the probable source **of** the leak is a Steam Generator **Tube** Rupture (SGTR) in the faulted 1B SG.

By approximately 0848. Containment pressure has risen to greater than 27 psig resulting in Containment Spray and Phase B Containment isolation. When the Main Control **Board** is checked to verify proper spray operation, the 1A Containment Spray Pump is found to tripped. The Control Room crew will continue to restore Non-operable equipment to service **while**

- performing the procedurally directed actions of emergency procedures EEP-0, FRP-Z.1, ECP-3.1, and FRP-P.1.

By approximately 0850 the Control Room staff should declare a **SITE AREA EMERGENCY** based on Emergency Implementing Procedure (EIP) 9.0, EAL S1.1, "RCS Fault - A major loss of primary coolant" or EAL ~~S3.9~~ - "Degraded Core/Fuel Fault - RCS activity > 300 μ Ci/gram dose equivalent I-131 with potential excessive RCS leakage or potential loss of containment". Plant staff will start taking actions for an SAE per EIP-9.0 guideline 2. If not already operational, the EOF staff will activate within 75 minutes of the declaration. Protected area accountability should be complete within 30 minutes of the Plant Emergency Alarm (PEA) sounding.

At approximately 1030, the 1B CRDM Cooling fan trips on overload and the crew starts the 1A CRDM Cooling fan by procedure. Additionally radiation monitors E-10, 14, and 22 alarm indicating a potential radioactive effluent release from the Containment into the Penetration Room of the Auxiliary Building and out the plant vent stack to the environment.

By approximately 1045 the staff should determine the need to upgrade the emergency classification to a **GENERAL EMERGENCY** based on EIP-9.0, EAL G2.1, "fission Product Barriers - Loss of two of three fission product barriers with a potential loss of the third." Once declared the plant staff should begin taking actions for a General Emergency per EIP-9 guideline 1 while the crew continues actions per ECP-3.1 or 3.2. Within approximately 15 minutes. State and local notifications should be complete. PARs should include at a minimum the recommendation to evacuate zones A2, E5, F5 and Shelter E10, F10. Within approximately 60 minutes, NRC notifications should have been completed.

The release path to environment is from the failed 1B CRDM Cooling fan electrical penetration. It is anticipated that the actual leak source may not be identified prior to the end of the scenario due to the high energy release that is taking place in the electrical penetration room. It is also, therefore, not anticipated that the leak from containment can be stopped prior to the end of the exercise due to the identification problems caused by the high energy releases and high dose rates in the area where work would need to be performed.

The News Media Center (NMC) will be activated and staffed by representatives from SNC, APC, the State of Alabama, the State of Georgia, the State of Florida, Houston/Henry County, and Early County. Media and public interest will be simulated and news releases will be prepared and released.

The exercise will terminate once the radiation monitoring teams have tracked the plume, the EOF has been staffed and is performing EOF activities and the NMC has conducted a press conference. The termination will be coordinated with the States of Alabama, Georgia, and Florida if occurring prior to 1300 Central time to ensure that all objectives have been demonstrated and that adequate training time has been allowed.